

PRELIMINARY STORMWATER MANAGEMENT REPORT -

Amlin Crossing

Cosgray Road Franklin County, Dublin, Ohio

Prepared by: Kimley-Horn and Associates, Inc. 7965 North High Street, Suite 200 Columbus, OH 43235 Contact: Brian Prenger, PE

Prepared on: June 8th, 2023





TABLE OF CONTENTS

Project Description	2
Pre-Development Conditions	2
Post-Development Conditions	3
Water Quality	4
Basin Details	4
Soils Map	5-7
Routing Diagram	8

EXHIBITS

Exhibit 1. Pre-Development Release Rates Exhibit 2. Allowable Discharge Rate Summary Exhibit 3. Water Quality Calculations Exhibit 4. Post-Developed Watershed Characteristics Exhibit 5. Outlet Capacity Calculations Exhibit 6. Pre-developed Trib Map & Post-Developed Trib Map Exhibit 7. Post-Developed Release Rates

1. PROJECT DESCRIPTION

Amlin Crossing is located on the east side of Cosgray Road, north of Myrick Road, south of Rings Road, and west of Avery Road in Franklin County Ohio. The development is bordered on the south by single family residential lots, the north and west sides by rural single family lots, and existing railroad tracks and agricultural land on the east side. The development site consists of four drainage areas that flow southeast, southwest, and west. Watershed A flows west to Cosgray ditch, enters a storm sewer which flows west under Cosgray Road and ultimately discharges into Hayden Run. Watershed B flows southeast into an existing 24" storm sewer that discharges into the stormwater management basins in the Hayden Farms Section 5 development. Watershed C flows southwest into an existing 24" culvert in Cosgray ditch and flows south into the stormwater management basins in the Hayden Run. Watershed D flows west to Cosgray ditch and also ultimately discharges west into Hayden Run.

The proposed development will consist of 371 residential units to be built on public streets with associated stormwater, sanitary sewer and water utilities. Proposed detention basins to be built within the development will provide stormwater management and water quality treatment for the new development. The basins will meet the current requirements set forth by the City of Dublin and the Ohio Environmental Protection Agency (EPA) General Permit OHC000006.

2. PRE-DEVELOPMENT CONDITIONS

The proposed Amlin Crossing development site is approximately 105 acres of mostly undeveloped land used for agricultural purposes along with wooded areas. Existing soils are Type C/D with gradual slopes. The eastern portion of the site drains southeast and the western portion of the site drains west and southwest. There are two offsite areas to the north that flow onto the site.

See Exhibit 1 for pre-developed release rates and Exhibit 6 for the pre-developed tributary area map.

r le Developed Matershed Onardoteristios									
Watershed ID	Area (Acres)	Weighted CN	TC (Minutes)						
Watershed A	22.4	82	82						
Watershed B	62.5	75	134.4						
Watershed C	21.3	82	58.2						
Watershed D	1.7	82	20.9						
Offsite Watershed A	4.1	79	14.6						
Offsite Watershed B1	5.9	80	22.8						
Offsite Watershed B2	2.8	79	9.7						

Pre-Developed Watershed Characteristics

3. POST-DEVELOPMENT CONDITIONS

The post-developed stormwater management will be based on the requirements of the City of Dublin and the Ohio Environmental Protection Agency (EPA) General Permit OHC000006. The City of Dublin developed a master stormwater management plan in 2004 for this area titled "Hydrologic Report for Sewer Line Extension and Preliminary Master Plan for Stormwater Detention for Avery / Hayden Run / Cosgray Road Development" and "Addendum 1" revised May 18, 2004 which dictates pre and post developed release rates for watersheds B and C. Watershed A uses the critical storm method to determine post developed release rates. Watershed D is a small area draining west towards Cosgray Road which will be directed to the southeast through watershed C as part of this development. The proposed development will include seven dry basins and two wet extended detention basins to provide detention and water quality with outlet structures to control the release rates. The basins will also provide sediment control during construction activities.

The critical storm method shows the peak rate of runoff for the 10-year storm shall not be greater than the peak rate of runoff for a 1-year storm in watershed A. Watershed B is being diverted to watershed A. Watershed C will be direct release to the southeast and has a post-developed release rate that is less than the pre-developed release rate in the 1-year storm event. Watershed D releases southwest of the site and will detain the 100-year storm to the peak rate of runoff for the 1-year storm. Post-developed watershed characteristics are shown below and in exhibit 4.

Watershed ID	Area (Acres)	Weighted CN	TC (Minutes)
Offsite A	4.1	79	14.6
Watershed A1	6.0	93	20
Watershed A2	14.5	92	20
Offsite B1	5.9	80	5.9
Offsite B2	2.8	79	9.7
Watershed B1	6.9	92	20
Watershed B2	21.4	79	53.7
Watershed B3	7.9	92	20
Watershed B4	18.1	92	30
Watershed C1	10.2	93	20
Watershed C2	4.3	93	20
Watershed C3	8.6	93	20
Watershed C4	3.0	93	20

Post-Developed Watershed Characteristics

The proposed basins for Sycamore Grove will be designed using HydroCAD software to accomplish the detention and water quality requirements for the development. An SCS Type II 24-hour storm will be modeled using rainfall depths obtained from the National Oceanic and Atmospheric Administration Atlas 14 precipitation frequency estimates.

4. WATER QUALITY

The water quality volume (WQv) was calculated based on specific site characteristics to utilize the equation WQv=Rv*P*A provided in the Ohio EPA General Permit Authorization for Stormwater Discharges with Construction Activity where Rv is the volumetric runoff coefficient calculated using the equation Rv=0.05 + 0.9i (i=fraction of post-construction impervious surface), P is 0.90 inch precipitation depth and A is the area draining to the BMP in acres. The outlet structures were designed to release the WQv over a 24-hour drawdown period, limiting 50% of the WQv to be released duing the first third of the required drawdown time.

Proposed Basins A, E, and F will provide the required WQv for the post-developed site conditions and will provide temporary sediment storage during construction for the Amlin Crossing development.

The temporary sediment storage volumes provided are based on the Ohio EPA General Stormwater Permit. The basin will include 1,800 cubic feet per acre of drainage area for the dewatering zone and 1,000 cubic feet per acre of drainage area for the sediment storage zone. The basin shall be cleaned when sediment reaches 75% of its designed storage volume. Refer to Exhibit 3 for water quality calculations.

5. BASIN DETAILS

Basins A, B, C, D, F, H, and I will be dry extended detention basins with underdrains per the requirements of the City of Dublin and the Ohio EPA. Basins E and G will be wet detention bains per the requirements of the City of Dublin and the Ohio EPA.



USDA Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey

MAP L	EGEND	MAP INFORMATION		
Area of Interest (AOI)	🗃 Spoil Area	The soil surveys that comprise your AOI were mapped at		
Area of Interest (AOI)	Stony Spot	1:15,800.		
Soils	M Very Stony Spot	Warning: Soil Map may not be valid at this scale.		
Soil Map Unit Polygons	www.Wet Spot	Enlargement of maps beyond the scale of mapping can cause		
Soil Map Unit Lines	or other ∆	misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of		
Soil Map Unit Points	Special Line Features	contrasting soils that could have been shown at a more detailed		
Special Point Features	Water Features	scale.		
Image: Blowout	Streams and Canals	Please rely on the bar scale on each map sheet for map		
Borrow Pit	Transportation	measurements.		
💥 Clay Spot	+++ Rails	Source of Map: Natural Resources Conservation Service Web Soil Survey URL:		
Closed Depression	nterstate Highways	Coordinate System: Web Mercator (EPSG:3857)		
Gravel Pit	JS Routes	Maps from the Web Soil Survey are based on the Web Mercato		
Gravelly Spot	对 Major Roads	projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as th		
🔇 Landfill	Local Roads	Albers equal-area conic projection, should be used if more		
🙏 🛛 Lava Flow	Background	accurate calculations of distance or area are required.		
Arsh or swamp	Aerial Photography	This product is generated from the USDA-NRCS certified data of the version date(s) listed below.		
Mine or Quarry		Soil Survey Area: Franklin County, Ohio		
Miscellaneous Water		Survey Area Data: Version 21, Sep 8, 2022		
O Perennial Water		Soil map units are labeled (as space allows) for map scales		
Nock Outcrop		1:50,000 or larger.		
Saline Spot		Date(s) aerial images were photographed: Feb 27, 2012—Au 27, 2014		
Sandy Spot		The orthophoto or other base map on which the soil lines were		
Severely Eroded Spot		compiled and digitized probably differs from the background		
Sinkhole		imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.		
Slide or Slip				
 ∭ Sodic Spot				

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CrA	Crosby silt loam, Southern Ohio Till Plain, 0 to 2 percent slopes	15.2	12.3%
CrB	Crosby silt loam, Southern Ohio Till Plain, 2 to 6 percent slopes	5.2	4.2%
Ко	Kokomo silty clay loam, 0 to 2 percent slopes	63.1	51.0%
LeB	Lewisburg-Crosby complex, 2 to 6 percent slopes	40.1	32.5%
Totals for Area of Interest		123.6	100.0%

Map Unit Legend

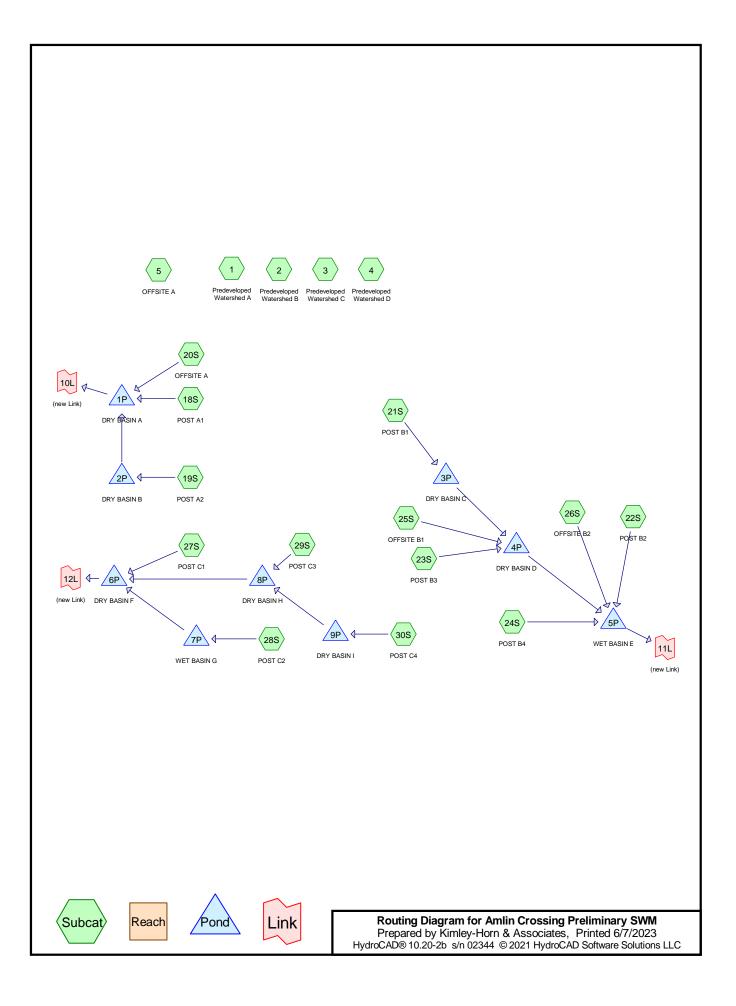




Exhibit 1 – Pre-Development Release Rates



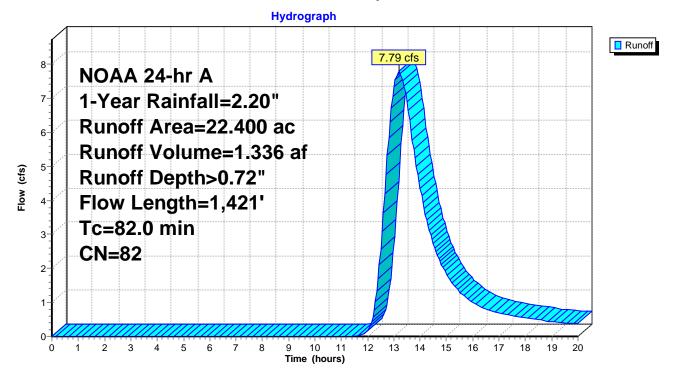
Summary for Subcatchment 1: Predeveloped Watershed A

Runoff = 7.79 cfs @ 13.20 hrs, Volume= 1.336 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

	Area	(ac) C	N Desc	cription						
	22.400 82 Row crops, SR + CR, Good, HSG C									
22.400 100.00% Pervious Area										
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
-	8.2	100	0.0065	0.20		Sheet Flow,				
	73.8	1,321	0.0011	0.30		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps				
-	82.0	1,421	Total							

Subcatchment 1: Predeveloped Watershed A



Summary for Subcatchment 2: Predeveloped Watershed B

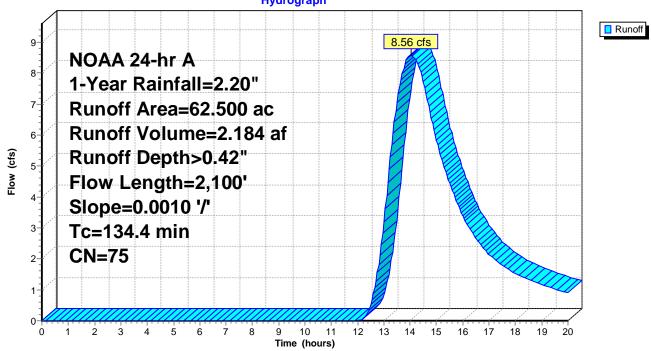
Runoff 8.56 cfs @ 14.03 hrs, Volume= 2.184 af, Depth> 0.42" =

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

_	Area ((ac) C	N Des	cription			
	34.	500 8	32 Rov	v crops, SF	R + CR, Goo	od, HSG C	
	12.4	400 7	70 Wo	ods, Good,	HSG C		
_	15.600 65 Brush, Good, HSG C						
	62.500 75 Weighted Average						
	62.	500	100	.00% Pervi	ous Area		
	Тс	Length	Slope	Velocity	Capacity	Description	
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)		
	17.3	100	0.0010	0.10		Sheet Flow,	
						Cultivated: Residue<=20% n= 0.060 P2= 2.60"	
	117.1	2,000	0.0010	0.28		Shallow Concentrated Flow,	
		-				Cultivated Straight Rows Kv= 9.0 fps	
-	4044	0.400	T . (.)				

134.4 2,100 Total

Subcatchment 2: Predeveloped Watershed B



Hydrograph

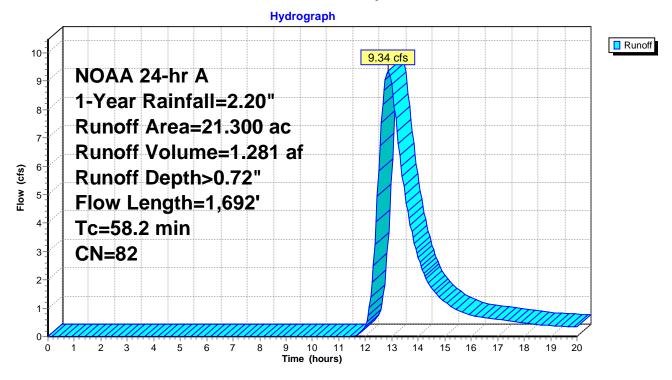
Summary for Subcatchment 3: Predeveloped Watershed C

Runoff = 9.34 cfs @ 12.86 hrs, Volume= 1.281 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

Area	(ac) C	N Desc	cription					
21.	21.300 82 Row crops, SR + CR, Good, HSG C							
21.300 100.00% Pervious Area								
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
6.9	100	0.0100	0.24		Sheet Flow,			
51.3	1,592	0.0033	0.52		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps			
58.2	1,692	Total						

Subcatchment 3: Predeveloped Watershed C



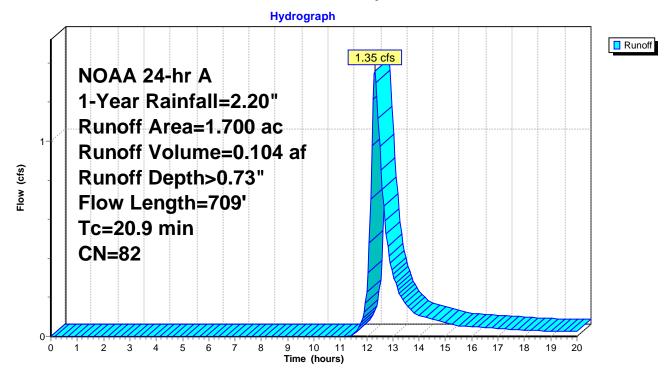
Summary for Subcatchment 4: Predeveloped Watershed D

Runoff = 1.35 cfs @ 12.33 hrs, Volume= 0.104 af, Depth> 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

_	Area	(ac) C	N Desc	cription						
	1.700 82 Row crops, SR + CR, Good, HSG C									
1.700 100.00% Pervious Area										
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
-	6.9	100	0.0100	0.24		Sheet Flow,				
	14.0	609	0.0065	0.73		Cultivated: Residue<= 20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps				
-	20.9	709	Total							

Subcatchment 4: Predeveloped Watershed D



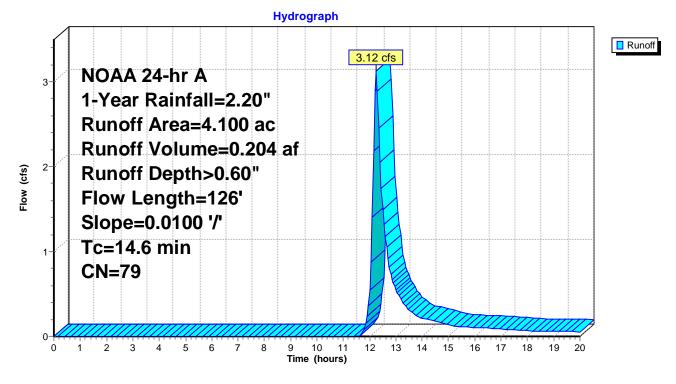
Summary for Subcatchment 5: OFFSITE A

Runoff = 3.12 cfs @ 12.25 hrs, Volume= 0.204 af, Depth> 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

_	Area	(ac) C	N Dese	cription					
	4.100 79 50-75% Grass cover, Fair, HSG C								
4.100 100.00% Pervious Area									
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
-	14.3	100	0.0100	0.12		Sheet Flow,			
	0.3	26	0.0100	1.50		Grass: Short n= 0.150 P2= 2.60" Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps			
-	14.6	126	Total						

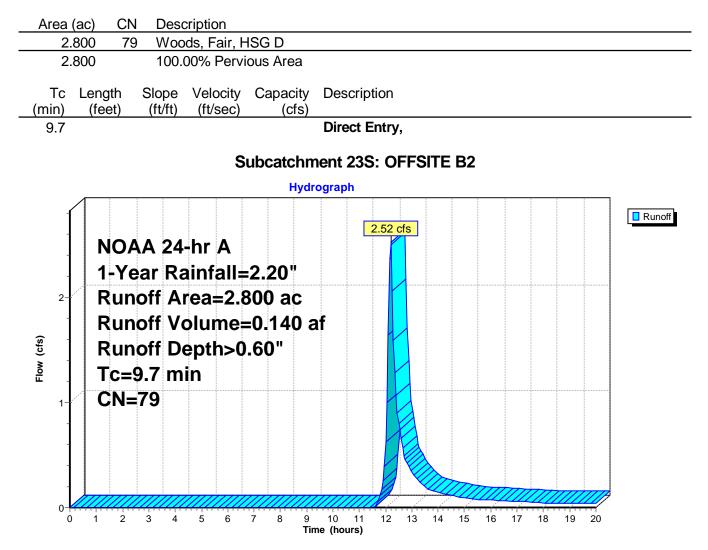
Subcatchment 5: OFFSITE A



Summary for Subcatchment 23S: OFFSITE B2

Runoff = 2.52 cfs @ 12.19 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.140 af, Depth> 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"



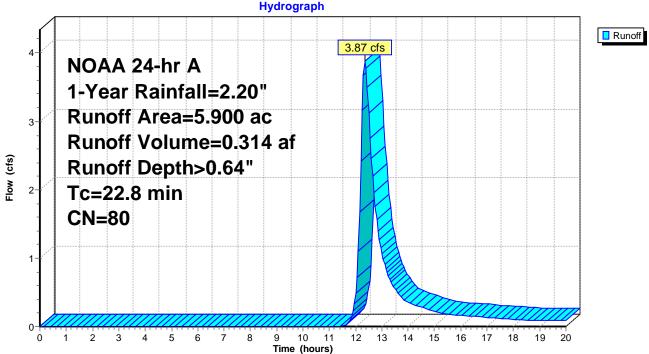
0.314 af, Depth> 0.64"

Summary for Subcatchment 25S: OFFSITE B1

Runoff = 3.87 cfs @ 12.36 hrs, Volume= Routed to Pond 4P : DRY BASIN D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

Area (ac)	Area (ac) CN Description									
5.900	5.900 80 >75% Grass cover, Good, HSG D									
5.900	5.900 100.00% Pervious Area									
22.8	22.8 Direct Entry,									
Subcatchment 25S: OFFSITE B1										
	Hudrogroph									



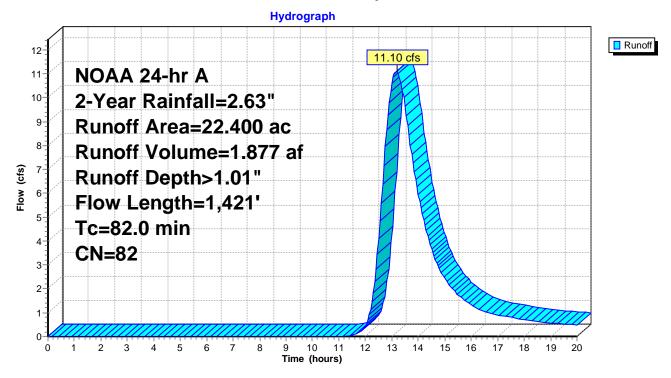
Summary for Subcatchment 1: Predeveloped Watershed A

Runoff = 11.10 cfs @ 13.18 hrs, Volume= 1.877 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area	(ac) C	N Desc	cription						
22.	22.400 82 Row crops, SR + CR, Good, HSG C								
22.400 100.00% Pervious Area									
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description				
8.2	100	0.0065	0.20		Sheet Flow,				
73.8	1,321	0.0011	0.30		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps				
82.0	1,421	Total							

Subcatchment 1: Predeveloped Watershed A



Summary for Subcatchment 2: Predeveloped Watershed B

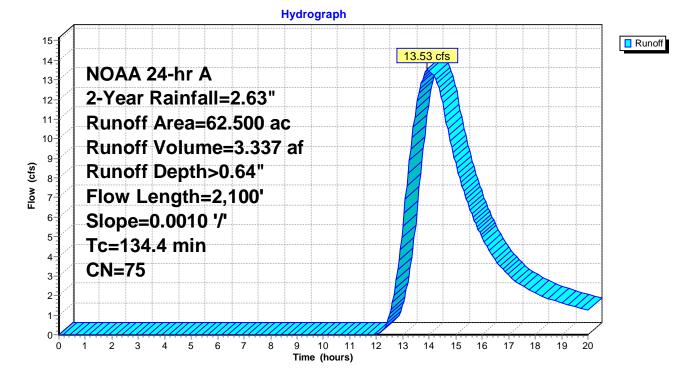
Runoff = 13.53 cfs @ 13.92 hrs, Volume= 3.337 af, Depth> 0.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

_	Area ((ac) C	N De	scription		
	34.	500 8	82 Ro	w crops, SF	R + CR, Go	od, HSG C
	12.4	400	70 Wo	ods, Good,	HSG C	
_	15.	600	65 Bru	ish, Good, I	HSG C	
	62.	500	75 We	eighted Ave	rage	
	62.	500	100	0.00% Pervi	ious Area	
	Tc	Length	Slope	e Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft) (ft/sec)	(cfs)	
	17.3	100	0.0010	0.10		Sheet Flow,
						Cultivated: Residue<=20% n= 0.060 P2= 2.60"
	117.1	2,000	0.0010	0.28		Shallow Concentrated Flow,
						Cultivated Straight Rows Kv= 9.0 fps
_	4044	0 4 0 0	Tatal			

134.4 2,100 Total

Subcatchment 2: Predeveloped Watershed B



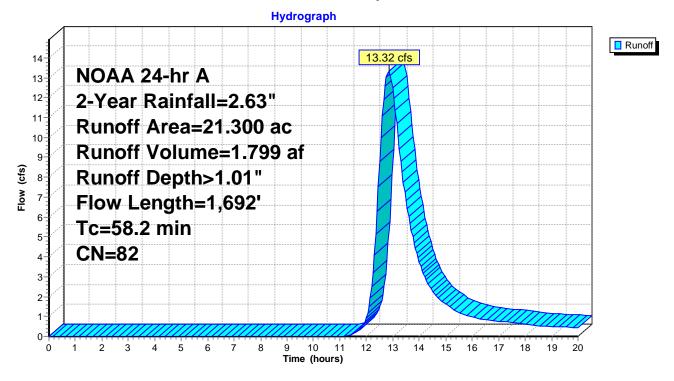
Summary for Subcatchment 3: Predeveloped Watershed C

Runoff = 13.32 cfs @ 12.84 hrs, Volume= 1.799 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area	(ac) C	N Desc	cription		
21.	300 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
21.	300	100.	00% Pervi	ous Area	
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0100	0.24		Sheet Flow,
51.3	1,592	0.0033	0.52		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
58.2	1,692	Total			

Subcatchment 3: Predeveloped Watershed C



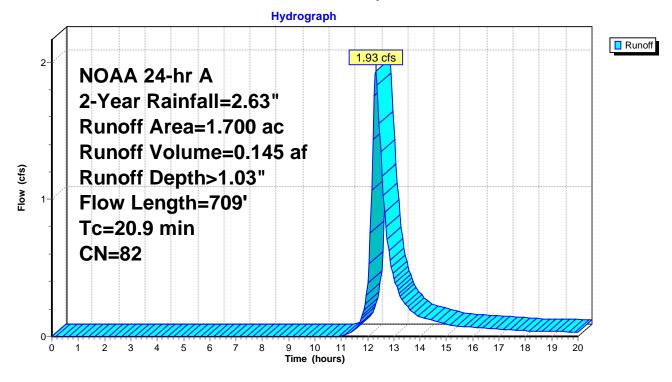
Summary for Subcatchment 4: Predeveloped Watershed D

Runoff = 1.93 cfs @ 12.32 hrs, Volume= 0.145 af, Depth> 1.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

_	Area	(ac) C	N Desc	cription		
-	1.	700 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
-	1.	700	100.	00% Pervi	ous Area	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	6.9	100	0.0100	0.24	X	Sheet Flow,
	14.0	609	0.0065	0.73		Cultivated: Residue<= 20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
-	20.9	709	Total			

Subcatchment 4: Predeveloped Watershed D



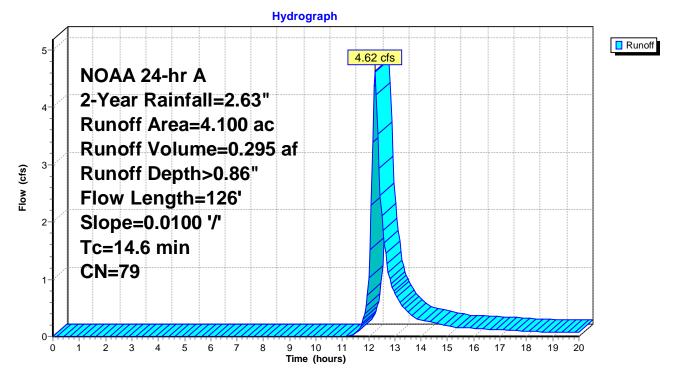
Summary for Subcatchment 5: OFFSITE A

Runoff = 4.62 cfs @ 12.24 hrs, Volume= 0.295 af, Depth> 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

_	Area	(ac) C	N Desc	cription		
	4.	100 7	9 50-7	5% Grass	cover, Fair	, HSG C
	4.	100	100.	00% Pervi	ous Area	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	14.3	100	0.0100	0.12	<u> </u>	Sheet Flow,
	0.3	26	0.0100	1.50		Grass: Short n= 0.150 P2= 2.60" Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
-	14.6	126	Total			

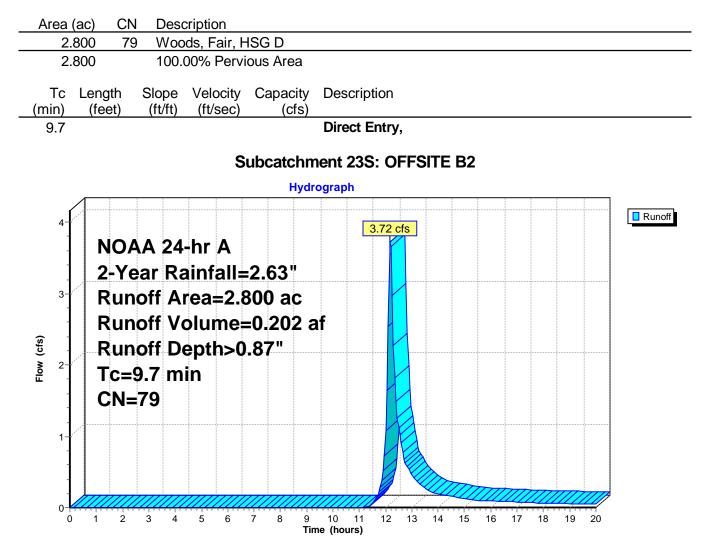
Subcatchment 5: OFFSITE A



Summary for Subcatchment 23S: OFFSITE B2

Runoff = 3.72 cfs @ 12.18 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.202 af, Depth> 0.87"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"



Summary for Subcatchment 25S: OFFSITE B1

Runoff = 5.67 cfs @ 12.35 hrs, Volume= Routed to Pond 4P : DRY BASIN D 0.450 af, Depth> 0.91"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area (5.9	ac) CN 900 80		cription % Grass c	over, Good,	HSG D	
5.9	900	100.	00% Pervi	ious Area		
Tc min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
22.8					Direct Entry,	
			S	ubcatchm	ent 25S: OFFSITE B1	
				Hydro	ograph	
						Runof
6	NOA	A 24	-hr A		5.67 cfs	
5-	2-Ye	ear Ra	ainfall=	2.63"		
-	Run	off A	rea=5.9	900 ac		
4-	Run	off V	olume	=0.450 a	f	
	Run	off D	epth>0	.91"		
o 3-(22.8 r	nin			
2-	CN=	80				
-						
1-						
1						
0-44	1 2	3 4	5 6	7 8 9	10 11 12 13 14 15 16 17 18 19 20	

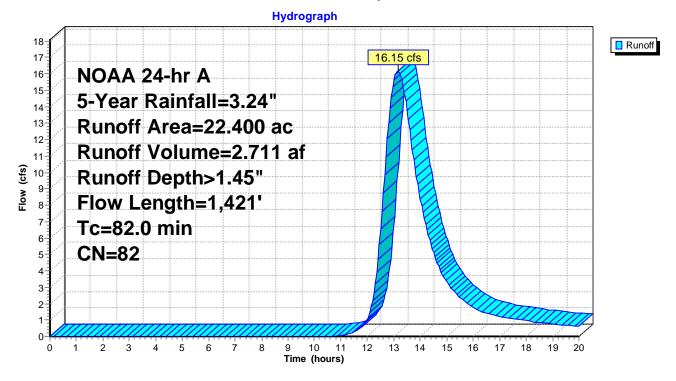
Summary for Subcatchment 1: Predeveloped Watershed A

Runoff = 16.15 cfs @ 13.16 hrs, Volume= 2.711 af, Depth> 1.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area	(ac) C	N Desc	cription		
22.	400 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
22.	400	100.	00% Pervi	ous Area	
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0065	0.20		Sheet Flow,
73.8	1,321	0.0011	0.30		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
82.0	1,421	Total			

Subcatchment 1: Predeveloped Watershed A



Summary for Subcatchment 2: Predeveloped Watershed B

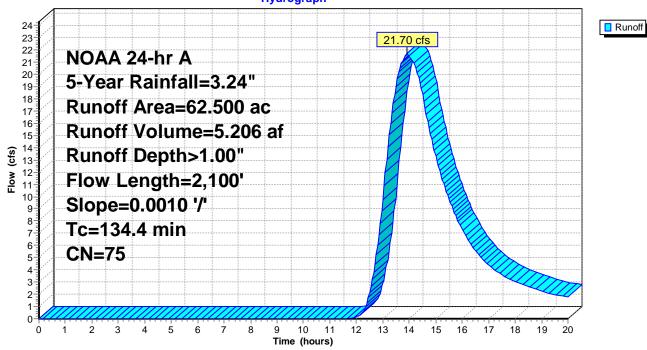
Runoff = 21.70 cfs @ 13.91 hrs, Volume= 5.206 af, Depth> 1.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

_	Area ((ac) C	N Des	scription		
	34.	500 8	32 Rov	w crops, SF	R + CR, Go	od, HSG C
	12.4	400	70 Wo	ods, Good,	HSG C	
_	15.	600	65 Bru	sh, Good, I	HSG C	
	62.	500	75 We	ighted Ave	rage	
	62.	500	100	0.00% Pervi	ious Area	
	Тс	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	17.3	100	0.0010	0.10		Sheet Flow,
						Cultivated: Residue<=20% n= 0.060 P2= 2.60"
	117.1	2,000	0.0010	0.28		Shallow Concentrated Flow,
						Cultivated Straight Rows Kv= 9.0 fps
_	404.4	0 4 0 0	Tatal			

134.4 2,100 Total

Subcatchment 2: Predeveloped Watershed B



Hydrograph

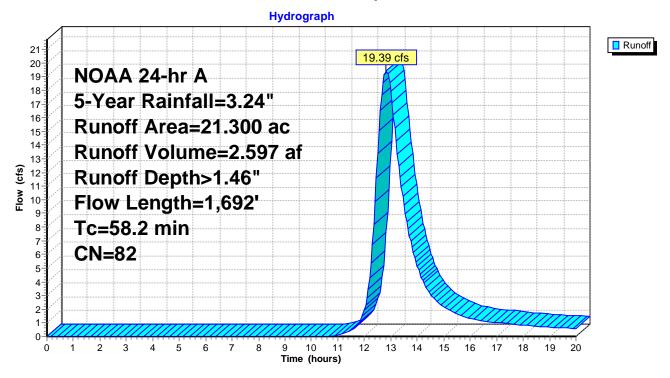
Summary for Subcatchment 3: Predeveloped Watershed C

Runoff = 19.39 cfs @ 12.83 hrs, Volume= 2.597 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area	(ac) C	N Desc	cription		
21.	300 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
21.	300	100.	00% Pervi	ous Area	
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0100	0.24	(010)	Sheet Flow,
51.3	1,592	0.0033	0.52		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
58.2	1,692	Total			

Subcatchment 3: Predeveloped Watershed C



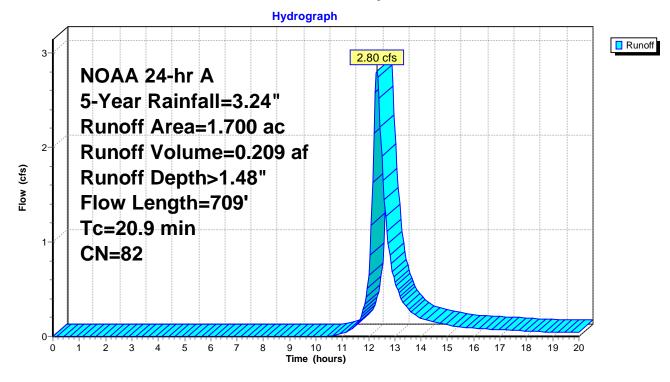
Summary for Subcatchment 4: Predeveloped Watershed D

Runoff = 2.80 cfs @ 12.32 hrs, Volume= 0.209 af, Depth> 1.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

_	Area	(ac) C	N Desc	cription		
	1.	700 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
1.700 100.00% Pervious Area						
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	6.9	100	0.0100	0.24	,	Sheet Flow,
	14.0	609	0.0065	0.73		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
-	20.9	709	Total			

Subcatchment 4: Predeveloped Watershed D



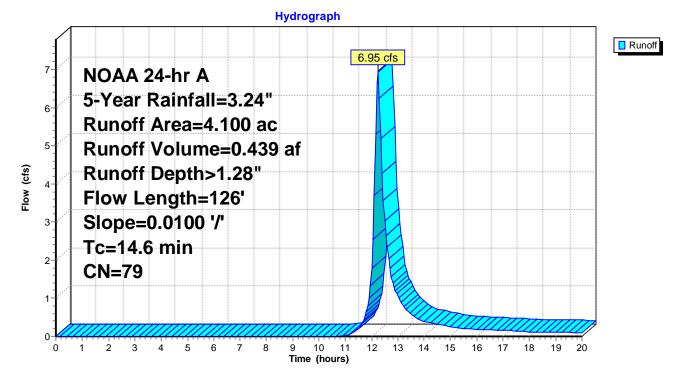
Summary for Subcatchment 5: OFFSITE A

Runoff = 6.95 cfs @ 12.24 hrs, Volume= 0.439 af, Depth> 1.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

_	Area	(ac) C	N Dese	cription		
	4.	100 7	9 50-7	5% Grass	cover, Fair	, HSG C
	4.	100	100.	00% Pervi	ous Area	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	14.3	100	0.0100	0.12	X <i>Y</i>	Sheet Flow,
	0.3	26	0.0100	1.50		Grass: Short n= 0.150 P2= 2.60" Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
-	14.6	126	Total			

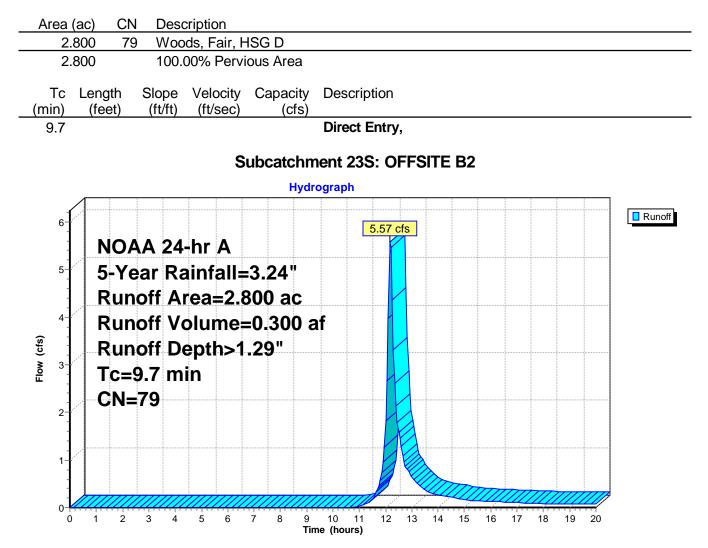
Subcatchment 5: OFFSITE A



Summary for Subcatchment 23S: OFFSITE B2

Runoff = 5.57 cfs @ 12.18 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.300 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

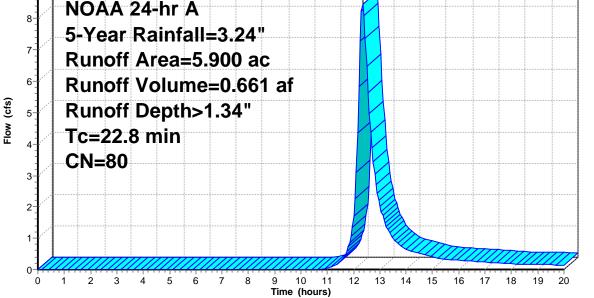


Summary for Subcatchment 25S: OFFSITE B1

Runoff = 8.45 cfs @ 12.34 hrs, Volume= Routed to Pond 4P : DRY BASIN D 0.661 af, Depth> 1.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area (ac) CN Description	
5.900 80 >75% Grass cover, Good, HS	SG D
5.900 100.00% Pervious Area	
Tc Length Slope Velocity Capacity De (min) (feet) (ft/ft) (ft/sec) (cfs)	escription
22.8 Di	rect Entry,
Subcatchmen	t 25S: OFFSITE B1
9	8.45 cfs
NOAA 24-hr A	
5-Year Rainfall=3.24"	



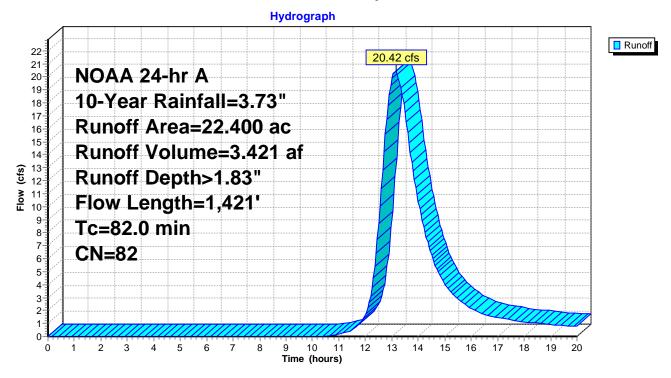
Summary for Subcatchment 1: Predeveloped Watershed A

Runoff = 20.42 cfs @ 13.14 hrs, Volume= 3.421 af, Depth> 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	(ac) C	N Desc	cription		
22.	400 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
22.	400	100.	00% Pervi	ous Area	
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0065	0.20		Sheet Flow,
73.8	1,321	0.0011	0.30		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
82.0	1,421	Total			

Subcatchment 1: Predeveloped Watershed A



Summary for Subcatchment 2: Predeveloped Watershed B

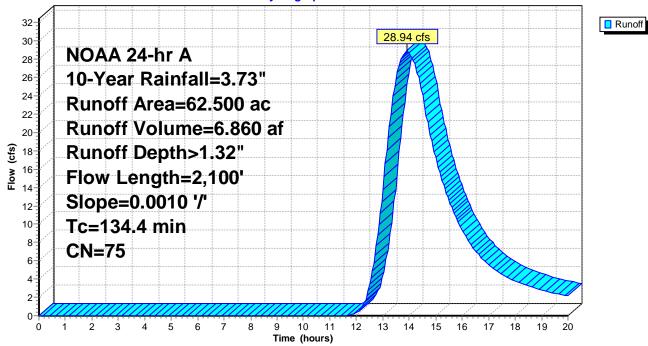
Runoff = 28.94 cfs @ 13.90 hrs, Volume= 6.860 af, Depth> 1.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

_	Area ((ac) C	N De	scription		
34.500 82 Row crops, SR + CR, Goo					R + CR, Go	od, HSG C
12.400 70 Woods, Good, HSG C						
15.600 65 Brush, Good, HSG C						
	62.500 75 Weighted Average					
62.500 100.00% Pervious Area						
	Tc	Length	Slope	e Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft) (ft/sec)	(cfs)	
	17.3	100	0.0010	0.10		Sheet Flow,
						Cultivated: Residue<=20% n= 0.060 P2= 2.60"
	117.1	2,000	0.0010	0.28		Shallow Concentrated Flow,
						Cultivated Straight Rows Kv= 9.0 fps
_	4044	0 4 0 0	Tatal			

134.4 2,100 Total

Subcatchment 2: Predeveloped Watershed B



Hydrograph

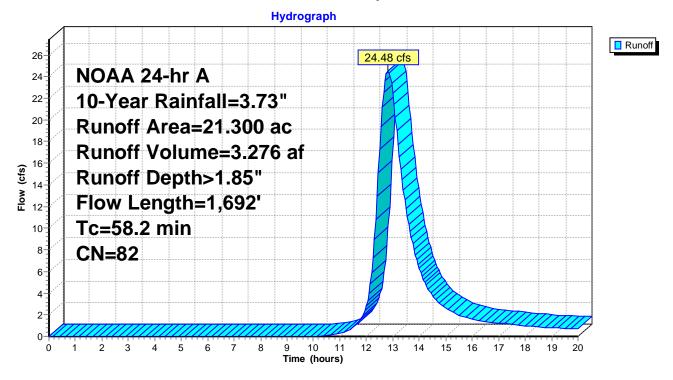
Summary for Subcatchment 3: Predeveloped Watershed C

Runoff = 24.48 cfs @ 12.82 hrs, Volume= 3.276 af, Depth> 1.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	(ac) C	N Desc	cription		
21.	od, HSG C				
21.300 100.00% Pervious Area					
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0100	0.24		Sheet Flow,
51.3	1,592	0.0033	0.52		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
58.2	1,692	Total			

Subcatchment 3: Predeveloped Watershed C



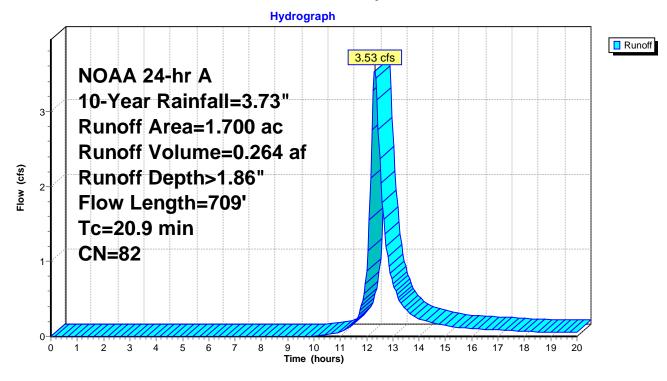
Summary for Subcatchment 4: Predeveloped Watershed D

Runoff = 3.53 cfs @ 12.31 hrs, Volume= 0.264 af, Depth> 1.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

_	Area	(ac) C	N Dese	cription		
1.700 82 Row crops, SR + CR, Good, HSG C						od, HSG C
	1.	700	100.	00% Pervi	ious Area	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	6.9	100	0.0100	0.24		Sheet Flow,
	14.0	609	0.0065	0.73		Cultivated: Residue<= 20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
-	20.9	709	Total			

Subcatchment 4: Predeveloped Watershed D



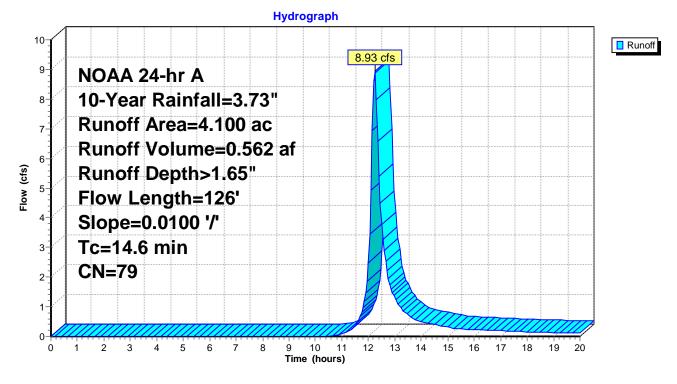
Summary for Subcatchment 5: OFFSITE A

Runoff = 8.93 cfs @ 12.24 hrs, Volume= 0.562 af, Depth> 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

_	Area	(ac) C	N Dese	cription		
_	4.	100 7	' 9 50-7	5% Grass	, HSG C	
	4.100 100.00% Pervious Area					
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	14.3	100	0.0100	0.12		Sheet Flow,
	0.3	26	0.0100	1.50		Grass: Short n= 0.150 P2= 2.60" Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
-	14.6	126	Total			

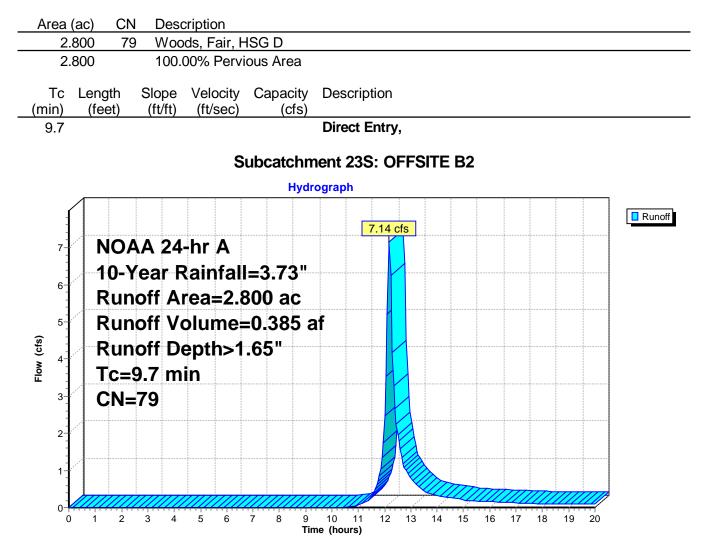
Subcatchment 5: OFFSITE A



Summary for Subcatchment 23S: OFFSITE B2

Runoff = 7.14 cfs @ 12.18 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.385 af, Depth> 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"



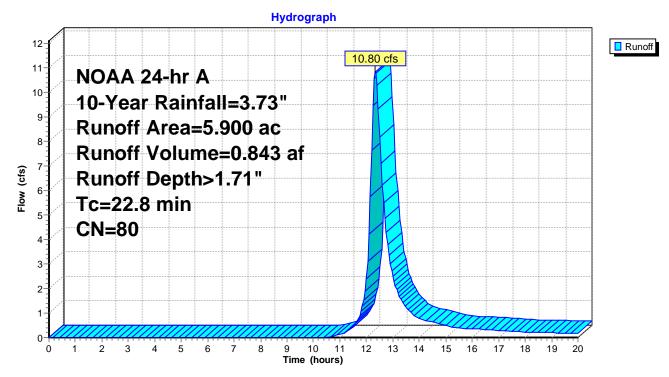
Summary for Subcatchment 25S: OFFSITE B1

Runoff = 10.80 cfs @ 12.34 hrs, Volume= Routed to Pond 4P : DRY BASIN D 0.843 af, Depth> 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	(ac)	CN	Desc	ription				
5.	900	000 80 >75% Grass cover, Good, HSG D						
5.	5.900 100.00% Pervious Area							
Та	ا م م م	-	Clana	Valacity	Canaaitu	Description		
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
22.8		-/	(((0.0)	Direct Entry,		

Subcatchment 25S: OFFSITE B1



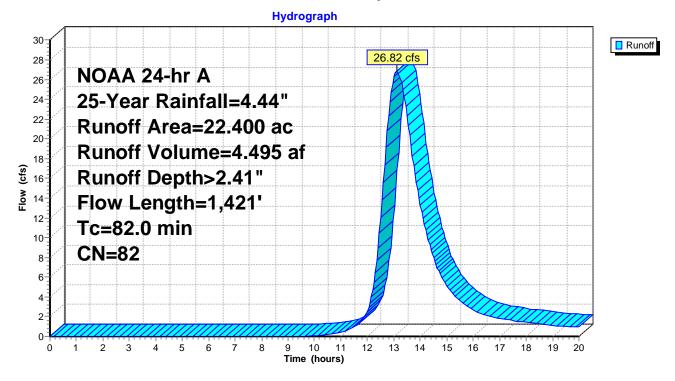
Summary for Subcatchment 1: Predeveloped Watershed A

Runoff = 26.82 cfs @ 13.12 hrs, Volume= 4.495 af, Depth> 2.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

_	Area	(ac) C	N Desc	cription					
_	22.400 82 Row crops, SR + CR, Good, HSG C								
	22.								
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
-	8.2	100	0.0065	0.20		Sheet Flow,			
	73.8	1,321	0.0011	0.30		Cultivated: Residue<= 20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps			
-	82.0	1,421	Total						

Subcatchment 1: Predeveloped Watershed A



Summary for Subcatchment 2: Predeveloped Watershed B

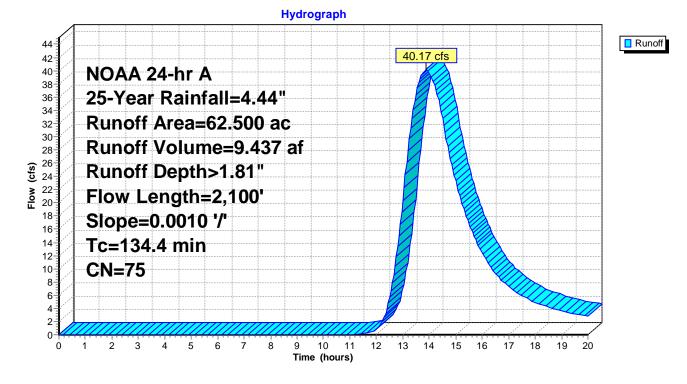
Runoff = 40.17 cfs @ 13.89 hrs, Volume= 9.437 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

_	Area	(ac) C	N Des	scription		
	34.	500	82 Rov	v crops, SF	R + CR, Go	od, HSG C
	12.	400	70 Wo	ods, Good,	HSG C	
_	15.					
	62.	500	75 We	ighted Ave	rage	
	62.	500	100	.00% Pervi	ous Area	
	Тс	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	17.3	100	0.0010	0.10		Sheet Flow,
						Cultivated: Residue<=20% n= 0.060 P2= 2.60"
	117.1	2,000	0.0010	0.28		Shallow Concentrated Flow,
						Cultivated Straight Rows Kv= 9.0 fps
	124 4	2 100	Total			

134.4 2,100 Total

Subcatchment 2: Predeveloped Watershed B



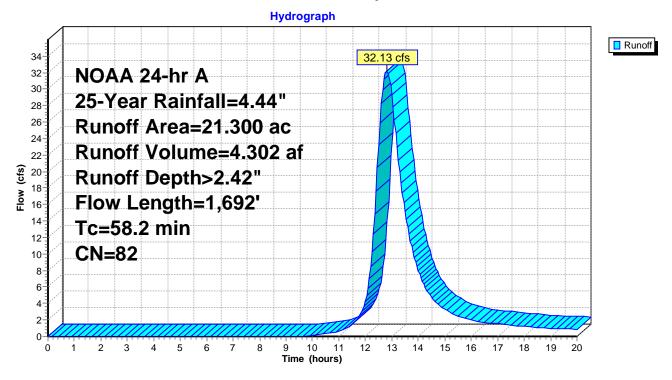
Summary for Subcatchment 3: Predeveloped Watershed C

Runoff = 32.13 cfs @ 12.80 hrs, Volume= 4.302 af, Depth> 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area	(ac) C	N Desc	cription		
21.	300 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
21.	300	100.	00% Pervi	ous Area	
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0100	0.24		Sheet Flow,
51.3	1,592	0.0033	0.52		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
58.2	1,692	Total			

Subcatchment 3: Predeveloped Watershed C



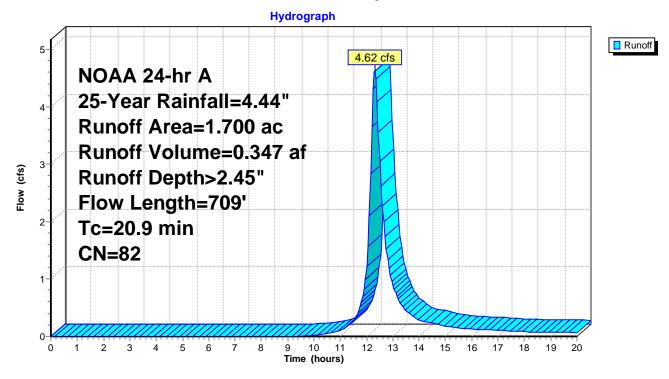
Summary for Subcatchment 4: Predeveloped Watershed D

Runoff = 4.62 cfs @ 12.31 hrs, Volume= 0.347 af, Depth> 2.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

_	Area	(ac) C	N Dese	cription					
	1.700 82 Row crops, SR + CR, Good, HSG C								
1.700 100.00% Pervious Area									
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
-	6.9	100	0.0100	0.24		Sheet Flow,			
	14.0	609	0.0065	0.73		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps			
-	20.9	709	Total						

Subcatchment 4: Predeveloped Watershed D



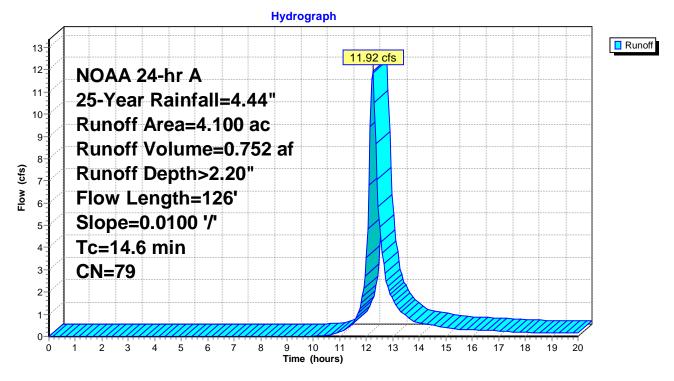
Summary for Subcatchment 5: OFFSITE A

Runoff = 11.92 cfs @ 12.23 hrs, Volume= 0.752 af, Depth> 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

_	Area	(ac) C	N Dese	cription			
4.100 79 50-75% Grass cover, Fair, HSG C							
4.100 100.00% Pervious Area							
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
-	14.3	100	0.0100	0.12	X <i>Y</i>	Sheet Flow,	
	0.3	26	0.0100	1.50		Grass: Short n= 0.150 P2= 2.60" Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps	
-	14.6	126	Total				

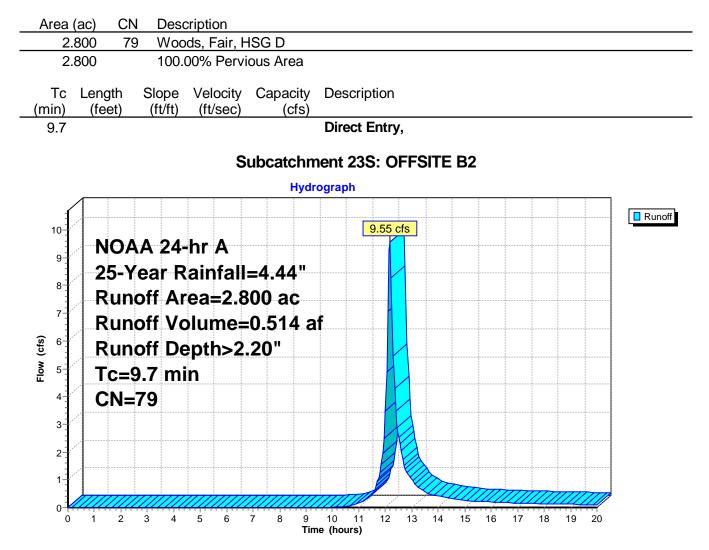
Subcatchment 5: OFFSITE A



Summary for Subcatchment 23S: OFFSITE B2

Runoff = 9.55 cfs @ 12.17 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.514 af, Depth> 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"



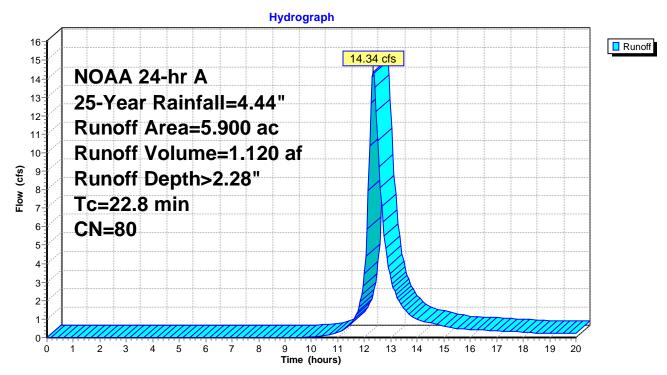
Summary for Subcatchment 25S: OFFSITE B1

Runoff = 14.34 cfs @ 12.34 hrs, Volume= Routed to Pond 4P : DRY BASIN D 1.120 af, Depth> 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area	(ac)	CN	Desc	Description					
5.	900	80	>75%	6 Grass co	over, Good,	, HSG D			
5.	5.900 100.00% Pervious Area								
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
22.8						Direct Entry,			

Subcatchment 25S: OFFSITE B1



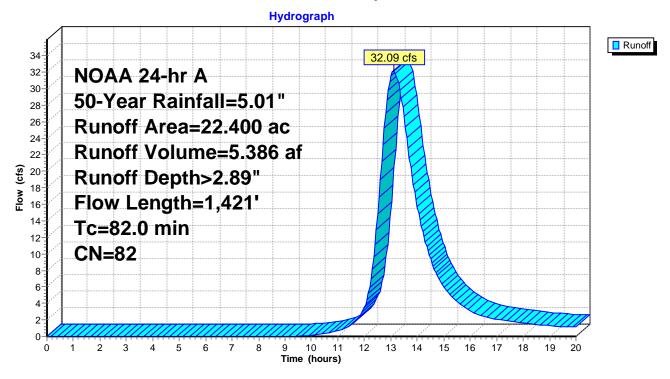
Summary for Subcatchment 1: Predeveloped Watershed A

Runoff = 32.09 cfs @ 13.10 hrs, Volume= 5.386 af, Depth> 2.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area	(ac) C	N Desc	cription					
22.	22.400 82 Row crops, SR + CR, Good, HSG C							
22.	400	100.	00% Pervi	ous Area				
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
8.2	100	0.0065	0.20		Sheet Flow,			
73.8	1,321	0.0011	0.30		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps			
82.0	1,421	Total						

Subcatchment 1: Predeveloped Watershed A



Summary for Subcatchment 2: Predeveloped Watershed B

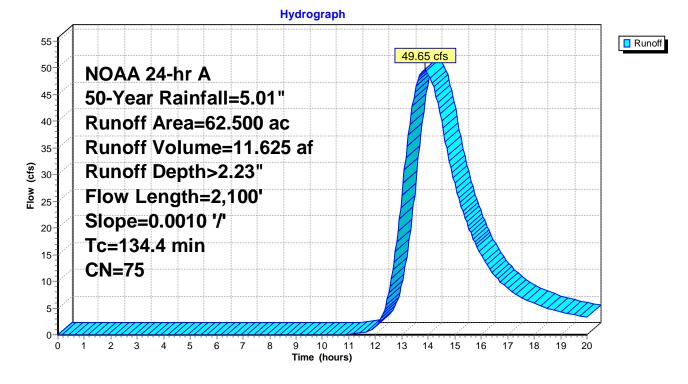
Runoff = 49.65 cfs @ 13.88 hrs, Volume= 11.625 af, Depth> 2.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

_	Area ((ac) C	N Des	scription		
	34.	500	32 Rov	v crops, SF	R + CR, Go	od, HSG C
	12.4	400	70 Wo	ods, Good,	HSG C	
15.600 65 Brush, Good, HSG C						
	62.	500	75 We	ighted Ave	rage	
	62.	500	100	.00% Pervi	ous Area	
	Тс	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	17.3	100	0.0010	0.10		Sheet Flow,
						Cultivated: Residue<=20% n= 0.060 P2= 2.60"
	117.1	2,000	0.0010	0.28		Shallow Concentrated Flow,
						Cultivated Straight Rows Kv= 9.0 fps
_	404.4	0 4 0 0	Tatal			

134.4 2,100 Total

Subcatchment 2: Predeveloped Watershed B



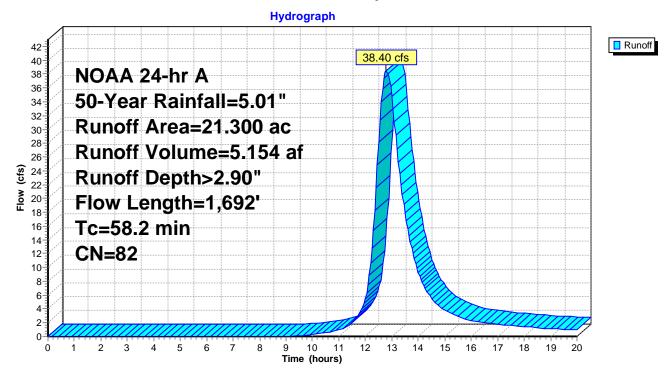
Summary for Subcatchment 3: Predeveloped Watershed C

Runoff = 38.40 cfs @ 12.79 hrs, Volume= 5.154 af, Depth> 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area	(ac) C	N Desc	cription		
21.	300 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
21.	300	100.	00% Pervi	ous Area	
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.9	100	0.0100	0.24		Sheet Flow,
51.3	1,592	0.0033	0.52		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
58.2	1,692	Total			

Subcatchment 3: Predeveloped Watershed C



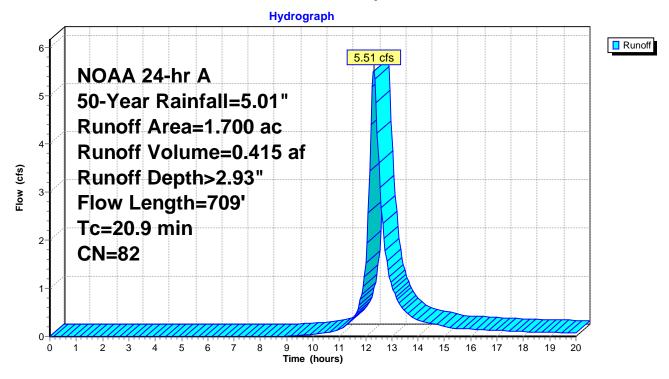
Summary for Subcatchment 4: Predeveloped Watershed D

Runoff = 5.51 cfs @ 12.31 hrs, Volume= 0.415 af, Depth> 2.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

_	Area	(ac) C	N Dese	cription					
	1.700 82 Row crops, SR + CR, Good, HSG C								
1.700 100.00% Pervious Area									
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
-	6.9	100	0.0100	0.24		Sheet Flow,			
	14.0	609	0.0065	0.73		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps			
-	20.9	709	Total						

Subcatchment 4: Predeveloped Watershed D



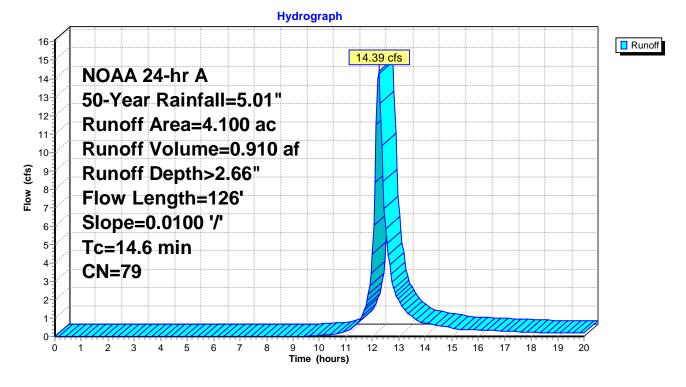
Summary for Subcatchment 5: OFFSITE A

Runoff = 14.39 cfs @ 12.23 hrs, Volume= 0.910 af, Depth> 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

_	Area	(ac) C	N Dese	cription			
4.100 79 50-75% Grass cover, Fair, HSG C							
4.100 100.00% Pervious Area							
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
-	14.3	100	0.0100	0.12	X <i>Y</i>	Sheet Flow,	
	0.3	26	0.0100	1.50		Grass: Short n= 0.150 P2= 2.60" Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps	
-	14.6	126	Total				

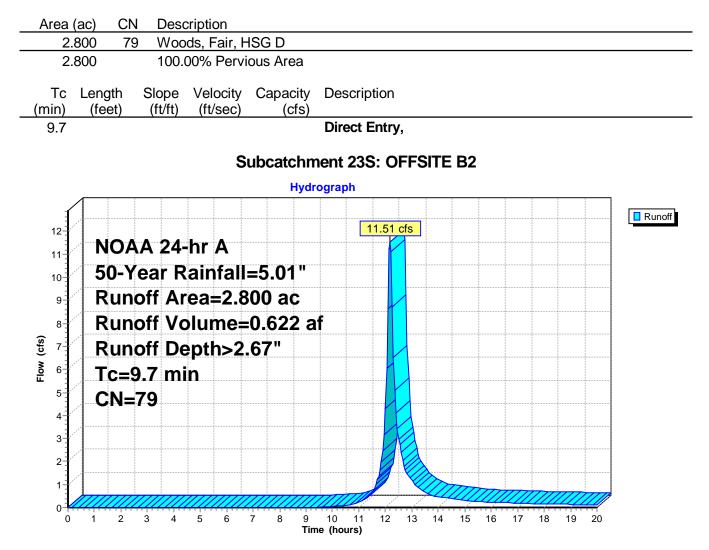
Subcatchment 5: OFFSITE A



Summary for Subcatchment 23S: OFFSITE B2

Runoff = 11.51 cfs @ 12.17 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.622 af, Depth> 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"



1.351 af, Depth> 2.75"

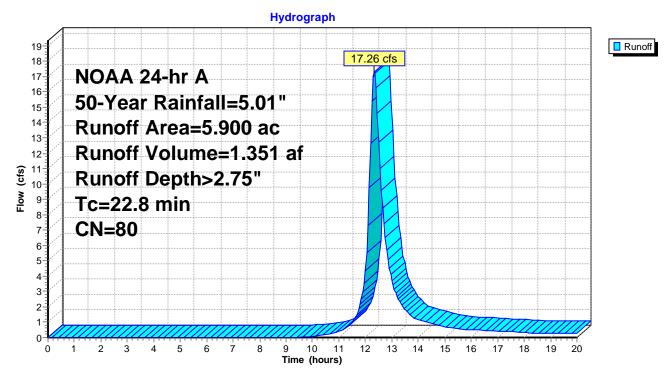
Summary for Subcatchment 25S: OFFSITE B1

Runoff = 17.26 cfs @ 12.33 hrs, Volume= Routed to Pond 4P : DRY BASIN D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area	(ac)	CN	Desc	ription		
5.	.900	80	>75%	6 Grass co	over, Good,	, HSG D
5.	.900		100.0	00% Pervi	ous Area	
т.	ا می می	L (N	Valasit.	Ormersite	Description
Tc	Lengt		Slope		Capacity	Description
(min)	(fee	t)	(ft/ft)	(ft/sec)	(cfs)	
22.8						Direct Entry,

Subcatchment 25S: OFFSITE B1



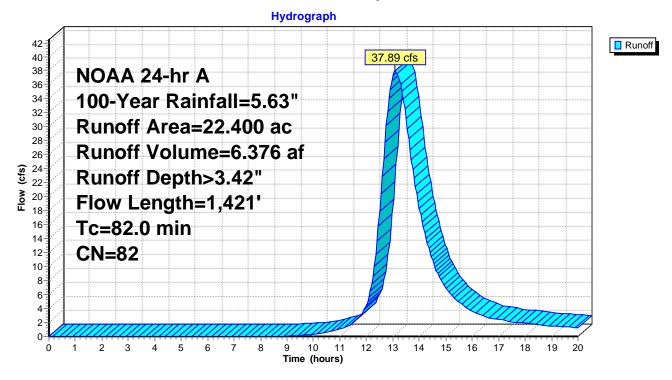
Summary for Subcatchment 1: Predeveloped Watershed A

Runoff = 37.89 cfs @ 13.09 hrs, Volume= 6.376 af, Depth> 3.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area	(ac) C	N Desc	cription		
22.	400 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
22.	400	100.	00% Pervi	ous Area	
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.2	100	0.0065	0.20		Sheet Flow,
73.8	1,321	0.0011	0.30		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
82.0	1,421	Total			

Subcatchment 1: Predeveloped Watershed A



Summary for Subcatchment 2: Predeveloped Watershed B

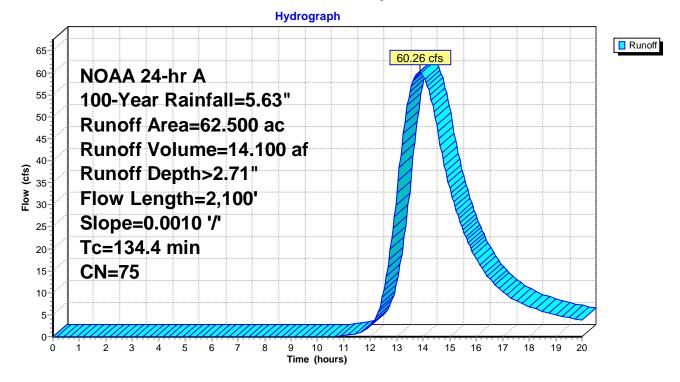
Runoff = 60.26 cfs @ 13.87 hrs, Volume= 14.100 af, Depth> 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

_	Area ((ac) C	N Des	cription		
	34.	500 8	32 Rov	v crops, SF	R + CR, Goo	od, HSG C
	12.4	400	70 Wo	ods, Good,	HSG C	
_	15.	600 (65 Bru	sh, Good, H	ISG C	
	62.	500	75 Wei	ghted Ave	age	
	62.	500	100	.00% Pervi	ous Area	
	Тс	Length	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	17.3	100	0.0010	0.10		Sheet Flow,
						Cultivated: Residue<=20% n= 0.060 P2= 2.60"
	117.1	2,000	0.0010	0.28		Shallow Concentrated Flow,
_						Cultivated Straight Rows Kv= 9.0 fps
	4044	0.400	T . (.)			

134.4 2,100 Total

Subcatchment 2: Predeveloped Watershed B



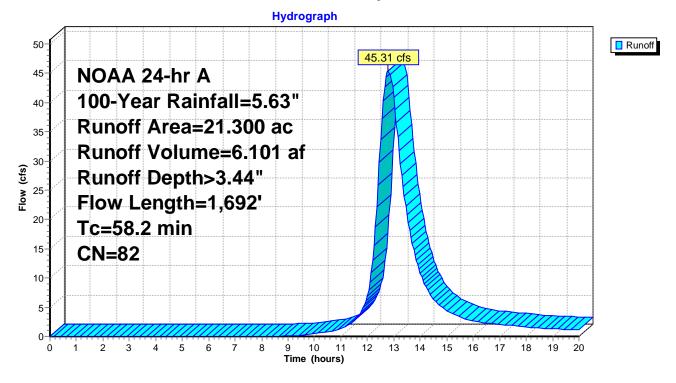
Summary for Subcatchment 3: Predeveloped Watershed C

Runoff = 45.31 cfs @ 12.79 hrs, Volume= 6.101 af, Depth> 3.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

	Area	(ac) C	N Desc	cription		
-	21.	300 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
	21.	300	100.	00% Pervi	ous Area	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	6.9	100	0.0100	0.24		Sheet Flow,
	51.3	1,592	0.0033	0.52		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
-	58.2	1,692	Total			

Subcatchment 3: Predeveloped Watershed C



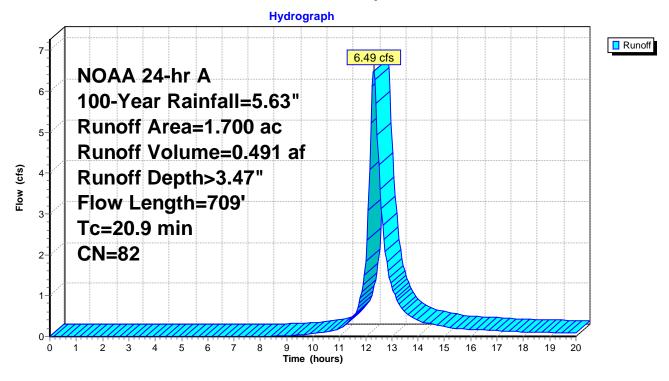
Summary for Subcatchment 4: Predeveloped Watershed D

Runoff = 6.49 cfs @ 12.31 hrs, Volume= 0.491 af, Depth> 3.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

_	Area	(ac) C	N Dese	cription		
-	1.	700 8	2 Row	crops, SF	R + CR, Goo	od, HSG C
-	1.	700	100.	00% Pervi	ous Area	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	6.9	100	0.0100	0.24		Sheet Flow,
	14.0	609	0.0065	0.73		Cultivated: Residue<=20% n= 0.060 P2= 2.60" Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
-	20.9	709	Total			

Subcatchment 4: Predeveloped Watershed D



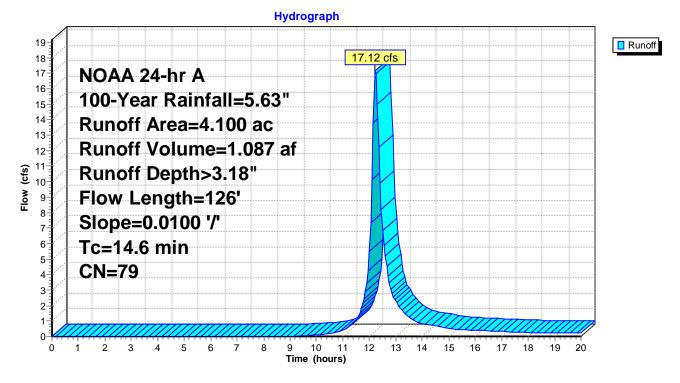
Summary for Subcatchment 5: OFFSITE A

Runoff = 17.12 cfs @ 12.23 hrs, Volume= 1.087 af, Depth> 3.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

_	Area	(ac) C	N Desc	cription		
	4.	100 7	'9 50-7	5% Grass	cover, Fair	, HSG C
	4.	100	100.	00% Pervi	ous Area	
	Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
-	14.3	100	0.0100	0.12	<u> </u>	Sheet Flow,
	0.3	26	0.0100	1.50		Grass: Short n= 0.150 P2= 2.60" Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
-	14.6	126	Total			

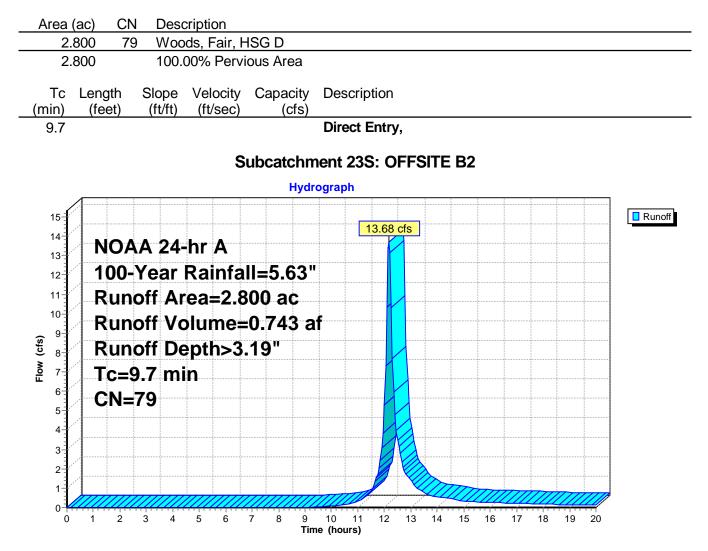
Subcatchment 5: OFFSITE A



Summary for Subcatchment 23S: OFFSITE B2

Runoff = 13.68 cfs @ 12.17 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.743 af, Depth> 3.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"



Summary for Subcatchment 25S: OFFSITE B1

Runoff = 20.47 cfs @ 12.33 hrs, Volume= Routed to Pond 4P : DRY BASIN D 1.608 af, Depth> 3.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area	(ac)	CN	Desc	ription		
5.	.900	80	>75%	6 Grass co	over, Good,	I, HSG D
5.	.900		100.0	00% Pervi	ous Area	
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.8						Direct Entry,

Subcatchment 25S: OFFSITE B1

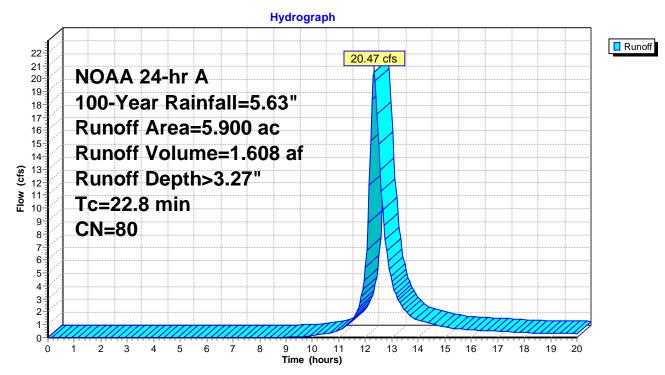




Exhibit 2 – Allowable Discharge Rate Summary



I

1-Year Pre-Developed Runoff Volume =	1.336	AC-FT
1-Year Post-Developed Runoff Volume =	2.658	AC-FT

Volume % Increase = 99.0%

Critical Storm = 10-Year

Allowable Release Rate - Watershed A

Storm Event (yr)	Pre-Developed Onsite Peak Flow Rates (CFS)	Allowable Release Rate (CFS)	Post-Developed Release Rates (CFS)	Basin A WSE
1	7.79	7.79	3.05	936.61
2	11.10	7.79	3.50	936.96
5	16.15	7.79	4.07	937.47
10	20.42	7.79	4.47	937.88
25	26.82	26.82	4.99	938.47
50	32.09	32.09	5.37	938.94
100	37.89	37.89	5.75	939.45

1-Year Pre-Developed Runoff Volume =	2.184	AC-FT
1-Year Post-Developed Runoff Volume =	3.999	AC-FT

Volume % Increase = 83.1%

Critical Storm = 10-Year

Allowable Release Rate - Watershed B

Storm Event (yr)	Pre-Developed Onsite Peak Flow Rates (CFS)	Allowable Release Rate (CFS)*	Post-Developed Release Rates (CFS)	Basin E WSE
1	13.09	1.00	1.00	935.40
2	19.19	1.70	1.20	935.85
5	28.67	2.60	1.49	936.56
10	36.77	3.40	3.13	937.01
25	49.00	4.80	4.74	937.63
50	59.13	6.00	5.71	938.18
100	70.37	7.30	7.11	938.69

*See Pg. 3 of May. 2004 Addendum to Prelim Master Plan for release rates

1-Year Pre-Developed Runoff Volume =	1.28 Ac-Ft
1-Year Post-Developed Runoff Volume =	2.534 Ac-Ft

Volume % Increase = 97.8%

Critical Storm = 10-Year

	Allowable Release Rate - Watershed C							
Storm Event (yr)	Pre-Developed Onsite Peak Flow Rates (cfs)	Total Allowable Release Rates (cfs)*	Post-Developed Release Rates (CFS)	Basin F WSE				
1	11.54	N/A	0.43	936.77				
2	15.84	N/A	1.09	937.00				
5	22.26	2.69	2.30	937.24				
10	27.59	N/A	3.04	937.42				
25	35.47	N/A	4.83	937.63				
50	41.87	N/A	6.89	937.73				
100	48.95	13.45	10.80	937.89				

See Pg. 9 of Jan. 2004 Prelim Master Plan for release rates

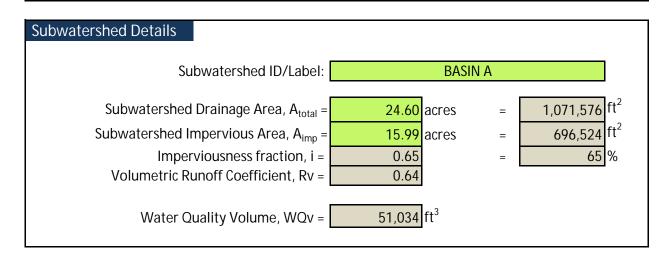


Exhibit 3 – Water Quality Calculations



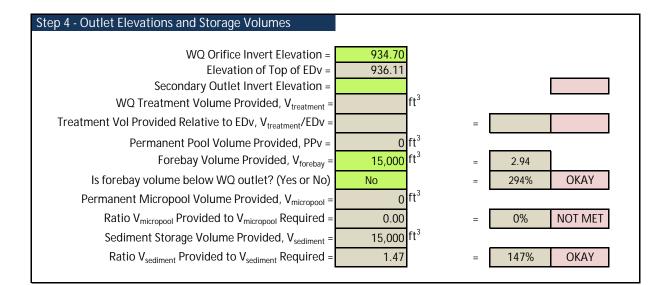
Project and Watershed Information; WQv Calculation

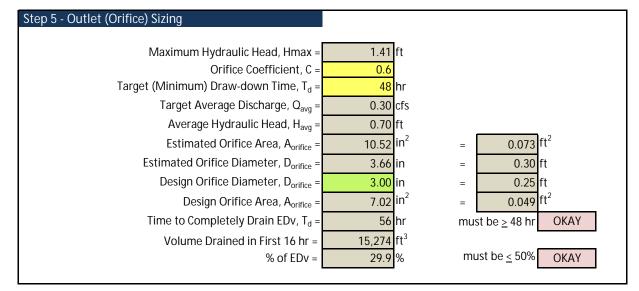
	version 3.1 2018-10-
Project Details	
Project Name:	Amlin Property
Project Location:	Dublin
Dreject Letitude.	
Project Latitude: Project Longitude:	
NPDES Permit Applicant:	Schottenstein
Submitted by:	Brian Prenger
Date:	6/5/2023

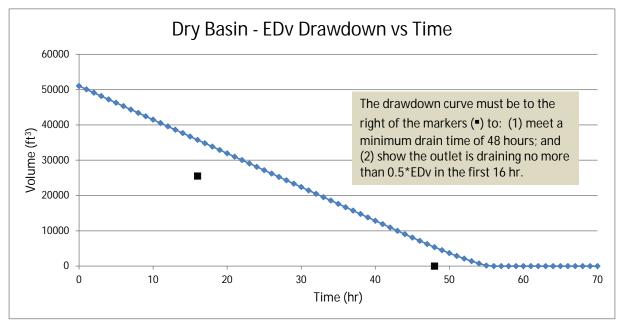


Dry Extended Detention B	asin WQv Compliance Tool
	version 3.1 2018-10-25
Subwatershed ID/Label: Submitted by:	Amlin Property BASIN A Brian Prenger 6/5/2023
Subwatershed Drainage Area, A _{total} = Subwatershed Impervious Area, A _{imp} = Imperviousness fraction, i = Water Quality Volume, WQv =	15.99 acres = 696,524 ft2 0.65 65 %
Step 1 - Soil Suitability Soil Series	HSG D
Step 2 - Dry ED Basin Volume Requirements Extended Detention Volume, EDv =	51034 ft ³
Minimum Sediment Storage Volume, V _{sediment} = Minimum Forebay Volume, V _{forebay} = Minimum Permanent Micropool Volume, V _{micropool} =	10207 ft3 5103 ft3

Bottom of Permanent Micropool = 934.70 0 (include forebay area if below EDv) 936.10 20,000 9,333 9,333 Image: Second Seco	Step 3 - Basin Stage-Storage Relationship	Elevation ft	Area ft ²	Incremental Volume ft ³	Cumulative Volume ft ³
(include forebay area if below EDv) 936.10 20,000 9,333 9,333 Image: Imag	Bottom of Permanent Micropool =	934.70	0		
	(include forebay area if below EDv)	936.10	20,000	9,333	9,333

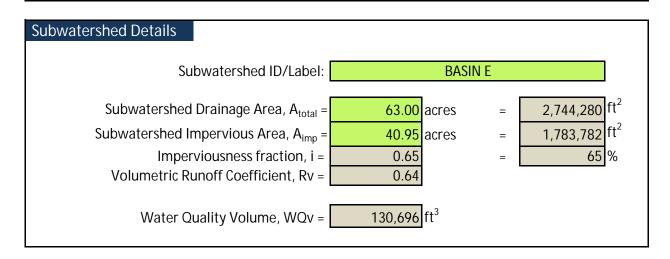






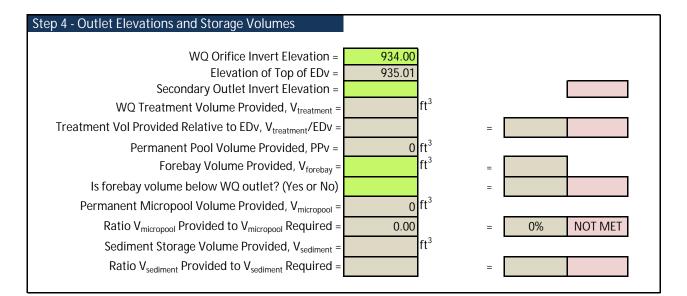
Project and Watershed Information; WQv Calculation

	version 3.1 2018-10-
Project Details	
Project Name:	Amlin Property
Project Location:	Dublin
Dreject Letitude.	
Project Latitude: Project Longitude:	
NPDES Permit Applicant:	Schottenstein
Submitted by:	Brian Prenger
Date:	6/5/2023

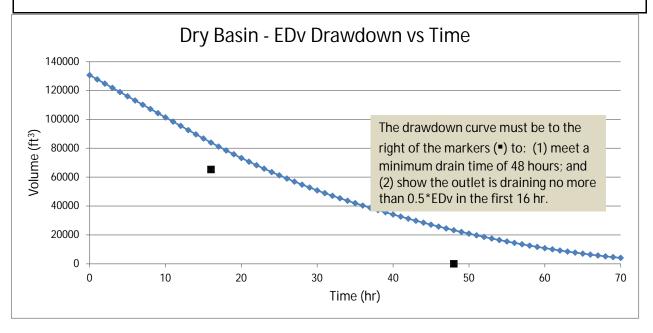


Dry Extended Detention B	asin WQv Compliance	Tool
		version 3.1 2018-10-25
Project Summary		
Subwatershed ID/Label: Submitted by:		
Subwatershed Drainage Area, A _{total} = Subwatershed Impervious Area, A _{imp} = Imperviousness fraction, i = Water Quality Volume, WQv =	63.00 acres 40.95 acres 0.65 130,696 ft ³	= 2,744,280 ft2 = 1,783,782 ft2
Step 1 - Soil Suitability		
Soil Series		HSG D
Step 2 - Dry ED Basin Volume Requirements		
Extended Detention Volume, EDv = Minimum Sediment Storage Volume, V _{sediment} = Minimum Forebay Volume, V _{forebay} = Minimum Permanent Micropool Volume, V _{micropool} =	130696 ft ³ 26139 ft ³ 13070 ft ³ 13070 ft ³	

Step 3 - Basin Stage-Storage Relationship	Elevation ft	Area ft ²	Incremental Volume ft ³	Cumulative Volume ft ³
Bottom of Permanent Micropool =	934.00	87,482		
(include forebay area if below EDv)	935.00	93,958	90,701	90,701
[
l				

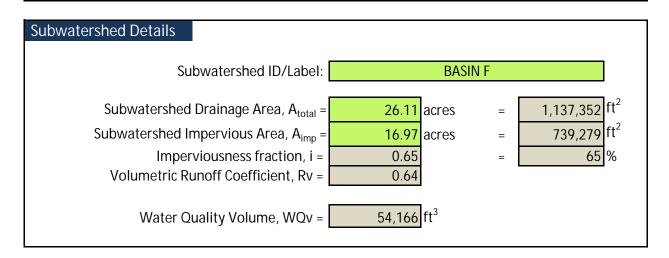


Step 5 - Outlet (Orifice) Sizing Maximum Hydraulic Head, Hmax = 1.01 ft Orifice Coefficient, C = 0.6 Target (Minimum) Draw-down Time, T_d = 48 hr Target Average Discharge, Qavg = 0.76 cfs Average Hydraulic Head, Havg = 0.50 ft 31.83 in² 0.221 ft Estimated Orifice Area, Aorifice = = Estimated Orifice Diameter, Dorifice = 6.37 in 0.53 ft = Design Orifice Diameter, Dorifice = 6.00 in 0.50 ft = 0.195 ft² Design Orifice Area, Aorifice = 28.09 in² = Time to Completely Drain EDv, T_d = >72 hr must be > 48 hr OKAY Volume Drained in First 16 hr = 46,720 ft³ must be <u><</u> 50% 35.7 % OKAY % of EDv =



Project and Watershed Information; WQv Calculation

	version 3.1 2018-10
Project Details	
Project Name:	Amlin Property
Project Location:	Dublin
Desired stitute	
Project Latitude:	
Project Longitude: NPDES Permit Applicant:	Schottenstein
Submitted by:	Brian Prenger
Date:	6/5/2023



Dry Extended Detention B	asin WQv Compliance Tool
	version 3.1 2018-10-25
Project Summary	
Subwatershed ID/Label: Submitted by:	
Subwatershed Drainage Area, A _{total} = Subwatershed Impervious Area, A _{imp} = Imperviousness fraction, i = Water Quality Volume, WQv =	26.11acres= $1,137,352$ ft216.97acres= $739,279$ ft20.6565%54,166ft3= 1.24 ac-ft
Step 1 - Soil Suitability	
Soil Series	HSG D
Step 2 - Dry ED Basin Volume Requirements	
Extended Detention Volume, EDv = Minimum Sediment Storage Volume, V _{sediment} = Minimum Forebay Volume, V _{forebay} = Minimum Permanent Micropool Volume, V _{micropool} =	54166 ft ³ 10833 ft ³ 5417 ft ³ 5417 ft ³

Step 3 - Basin Stage-Storage Relationship	Elevation ft	Area ft ²	Incremental Volume ft ³	Cumulative Volume ft ³
Bottom of Permanent Micropool =	935.00	0		
(include forebay area if below EDv)	936.00	40,000	13,333	13,333

Step 4 - Outlet Elevations and Storage Volumes	
	005.00
WQ Orifice Invert Elevation =	935.00
Elevation of Top of EDv =	936.01
Secondary Outlet Invert Elevation =	
WQ Treatment Volume Provided, V _{treatment} =	ft ³
Treatment Vol Provided Relative to EDv, $V_{treatment}$ /EDv =	=
Permanent Pool Volume Provided, PPv =	0 ft ³
Forebay Volume Provided, V _{forebay} =	12,000 ft ³ = 2.22
Is forebay volume below WQ outlet? (Yes or No)	
Permanent Micropool Volume Provided, $V_{micropool} =$	0 ft ³
Ratio $V_{micropool}$ Provided to $V_{micropool}$ Required =	
Sediment Storage Volume Provided, V _{sediment} =	12,000 ft ³
Ratio V _{sediment} Provided to V _{sediment} Required =	1.11 = 111% OKAY

Step 5 - Outlet (Orifice) Sizing Maximum Hydraulic Head, Hmax = 1.01 ft Orifice Coefficient, C = 0.6 Target (Minimum) Draw-down Time, T_d = 48 hr Target Average Discharge, Qavg = 0.31 cfs Average Hydraulic Head, Havg = 0.50 ft 13.19 in² Estimated Orifice Area, A_{orifice} = 0.092 ft² = Estimated Orifice Diameter, Dorifice = 0.34 4.10 in = ft Design Orifice Diameter, Dorifice = 3.50 in 0.29 ft = 0.066 ft² 9.56 in² Design Orifice Area, A_{orifice} = = Time to Completely Drain EDv, $T_d =$ 54 hr OKAY must be > 48 hr Volume Drained in First 16 hr = 17,016 ft³ must be <u><</u> 50% OKAY % of EDv = 31.4 %

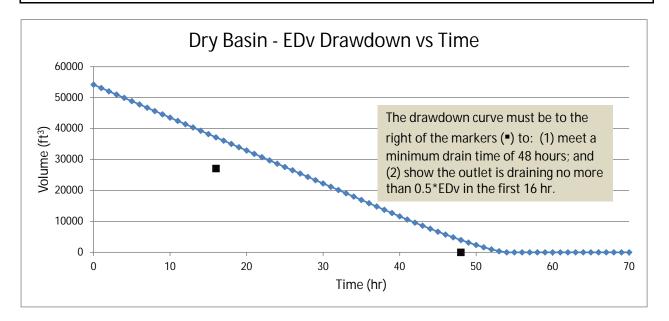




Exhibit 4 – Post-Developed Watershed Characteristics



0.714 af, Depth> 1.43"

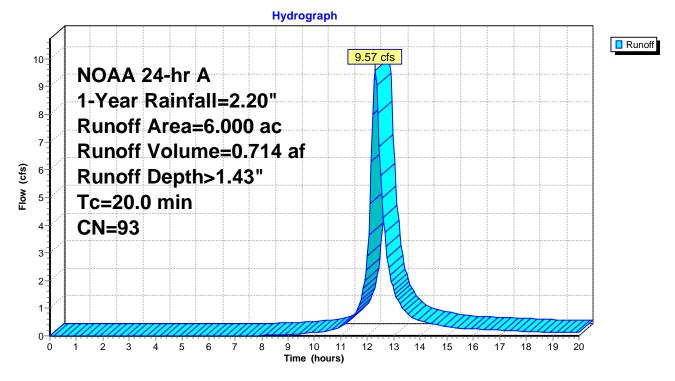
Summary for Subcatchment 18S: POST A1

Runoff = 9.57 cfs @ 12.29 hrs, Volume= Routed to Pond 1P : DRY BASIN A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

Area	(ac)	CN	Desc	cription		
0.	.800	98	Wate	er Surface	HSG D	
5.	.200	92	1/8 a	cre lots, 6	5% imp, HS	ISG D
6.	.000	93	Weig	ghted Aver	age	
1.	.820		30.3	3% Pervio	us Area	
4.	.180		69.67	7% Imperv	vious Area	
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	I
20.0						Direct Entry,

Subcatchment 18S: POST A1



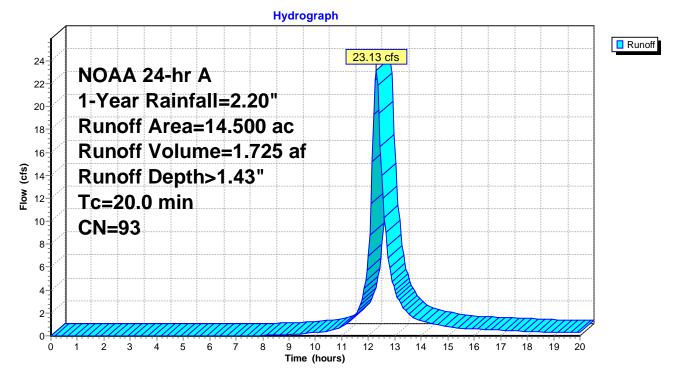
Summary for Subcatchment 19S: POST A2

Runoff = 23.13 cfs @ 12.29 hrs, Volume= 1.725 af, Depth> 1.43" Routed to Pond 2P : DRY BASIN B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

(ac)	CN	Desc	ription		
400	98	Wate	er Surface,	HSG D	
100	92	1/8 a	cre lots, 6	5% imp, HS	SG D
500	93	Weig	hted Aver	age	
4.585 31.62% Pervious Area					
915		68.38	3% Imperv	vious Area	
•			Velocity	Capacity	Description
(100)	<u> </u>		(10300)	(013)	Direct Entry,
	400 100 500 585 915 Lengt	400 98 100 92 500 93 585 915	400 98 Wate 100 92 1/8 a 500 93 Weig 585 31.62 915 68.38 Length Slope	40098Water Surface,100921/8 acre lots, 650093Weighted Aver58531.62% Pervio91568.38% ImpervLengthSlopeVelocity	40098Water Surface, HSG D100921/8 acre lots, 65% imp, H50093Weighted Average58531.62% Pervious Area91568.38% Impervious AreaLengthSlopeVelocityCapacity

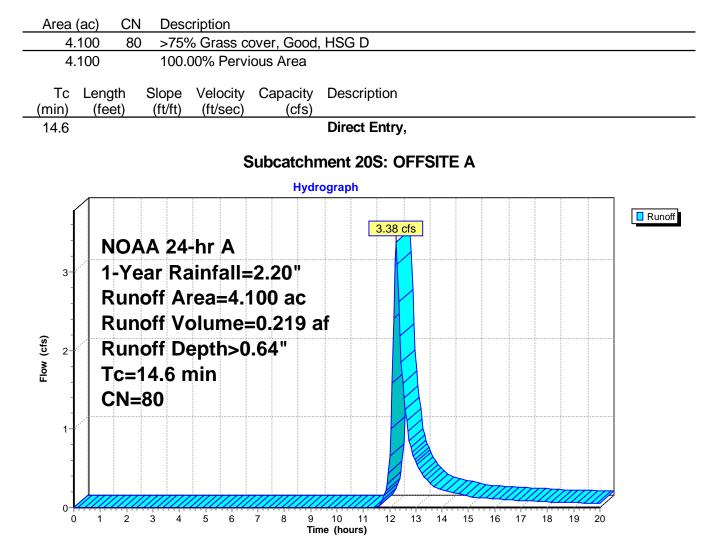
Subcatchment 19S: POST A2



Summary for Subcatchment 20S: OFFSITE A

Runoff = 3.38 cfs @ 12.25 hrs, Volume= Routed to Pond 1P : DRY BASIN A

= 0.219 af, Depth> 0.64"



Summary for Subcatchment 21S: POST B1

Runoff = 10.47 cfs @ 12.30 hrs, Volume= Routed to Pond 3P : DRY BASIN C 0.775 af, Depth> 1.35"

Area (ac) CN Description 6.900 92 1/8 acre lots, 65% imp, HSG I	
2.415 35.00% Pervious Area	~
4.485 65.00% Impervious Area	
Tc Length Slope Velocity Capacity De min) (feet) (ft/ft) (ft/sec) (cfs)	scription
	rect Entry,
Subcatchme	nt 21S: POST B1
Hydrogra	ph
NOAA 24-hr A	10.47 cfs
1-Year Rainfall=2.20"	
[§] Runoff Area=6.900 ac	
, Runoff Volume=0.775 af	
Runoff Depth>1.35"	
5 Tc=20.0 min	
4 CN=92	
3	
2	
	11 12 13 14 15 16 17 18 19 20

Summary for Subcatchment 22S: POST B2

Runoff	=	7.79 cfs @	12.82 hrs,	Volume=
Route	d to Po	nd 5P : WET B	ASIN E	

1.050 af, Depth> 0.59"

Area (ac)CNDescription8.10080>75% Grass cover, Good, HSG D13.30079Woods, Fair, HSG D21.40079Weighted Average21.400100.00% Pervious AreaTcLengthSlopeVelocityCapacityDescription	
(min) (feet) (ft/ft) (ft/sec) (cfs)	
53.7 Direct Entry,	
Subcatchment 22S: POST B2	
Hydrograph	
NOAA 24-hr A 1-Year Rainfall=2.20" Runoff Area=21.400 ac Runoff Volume=1.050 af Runoff Depth>0.59" Tc=53.7 min CN=79	noff
0 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Time (hours)	

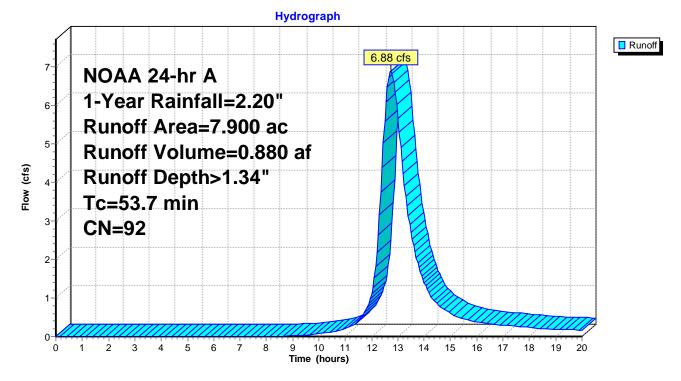
Summary for Subcatchment 23S: POST B3

Runoff	=	6.88 cfs @	12.72 hrs,	Volume=	0.880 af,	Depth>	1.34"
Route	d to Po	nd 4P : DRY B/	ASIN D			-	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

	Area (ac)	CN	Description	
	2.700	80	>75% Grass cover, G	ood, HSG D
	2.900	98	Water Surface, HSG	D
	2.300	98	Paved roads w/curbs	& sewers, HSG D
	7.900	92	Weighted Average	
	2.700		34.18% Pervious Are	a
	5.200		65.82% Impervious A	rea
(Tc Len (min) (fe	igth s eet)	Slope Velocity Capa (ft/ft) (ft/sec) (city Description ofs)
	53.7			Direct Entry,

Subcatchment 23S: POST B3



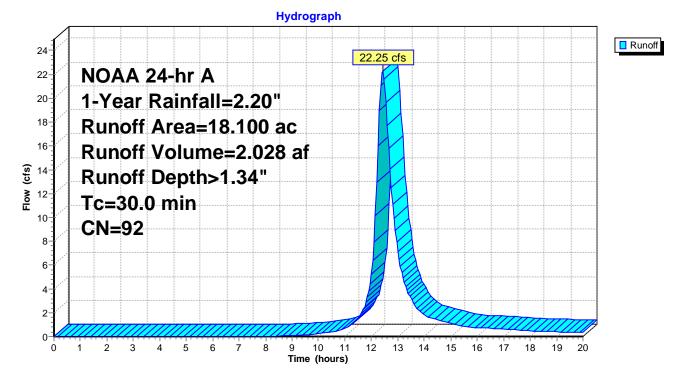
Summary for Subcatchment 24S: POST B4

Runoff = 22.25 cfs @ 12.42 hrs, Volume= 2.028 af, Depth> 1.34" Routed to Pond 5P : WET BASIN E

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

Area ((ac)	CN	Desc	Description				
13.0	000	92	1/8 a	cre lots, 6	5% imp, HS	ISG D		
1.0	600	80	>75%	6 Grass co	over, Good,	d, HSG D		
3.	500	98	Wate	er Surface	HSG D			
18.1	100	92	Weig	hted Aver	age			
6.	150		33.98	3% Pervio	us Area			
11.9	950		66.02	2% Imperv	vious Area			
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)			
30.0						Direct Entry,		

Subcatchment 24S: POST B4

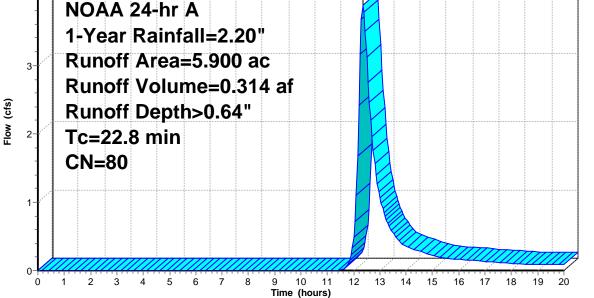


0.314 af, Depth> 0.64"

Summary for Subcatchment 25S: OFFSITE B1

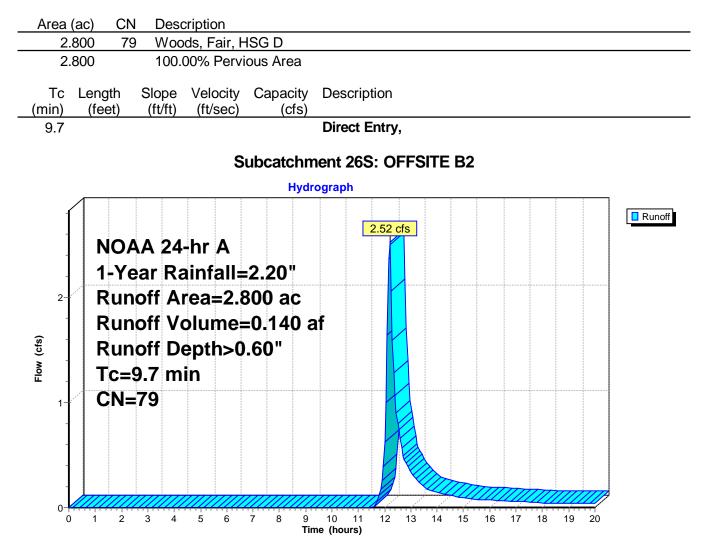
Runoff = 3.87 cfs @ 12.36 hrs, Volume= Routed to Pond 4P : DRY BASIN D

Area (ac) CN Description	
5.900 80 >75% Grass cover, Good, HSG D	
5.900 100.00% Pervious Area	
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	
22.8 Direct Entry,	
Subcatchment 25S: OFFSITE B1	
⁴ NOAA 24-hr A 1-Year Rainfall=2.20"	Runoff



Summary for Subcatchment 26S: OFFSITE B2

Runoff = 2.52 cfs @ 12.19 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.140 af, Depth> 0.60"



1.280 af, Depth> 1.51"

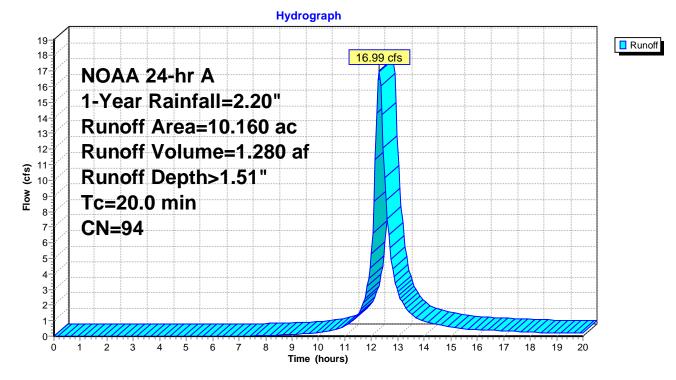
Summary for Subcatchment 27S: POST C1

Runoff	=	16.99 cfs @	12.29 hrs,	Volume=
Route	d to Po	nd 6P : DRY BA	ASIN F	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

Area (ac)	CN	Description
1.200	98	Paved roads w/curbs & sewers, HSG D
2.800	98	Water Surface, HSG D
5.500	92	1/8 acre lots, 65% imp, HSG D
0.660	80	>75% Grass cover, Good, HSG D
10.160	94	Weighted Average
2.585		25.44% Pervious Area
7.575		74.56% Impervious Area
Tc Leng (min) (fee		Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)
20.0		Direct Entry,

Subcatchment 27S: POST C1



0.512 af, Depth> 1.43"

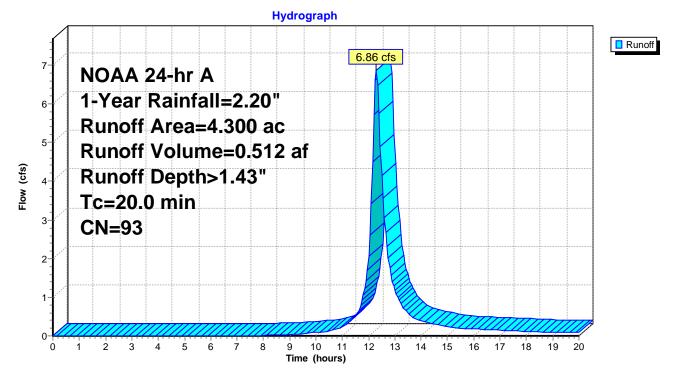
Summary for Subcatchment 28S: POST C2

Runoff = 6.86 cfs @ 12.29 hrs, Volume= Routed to Pond 7P : WET BASIN G

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

Area	(ac)	CN	Desc	cription							
3.	700	92	1/8 a	8 acre lots, 65% imp, HSG D							
0.	600										
4.300 93 Weighted Average											
1.	1.295 30.12% Pervious Area										
3.	3.005			8% Imperv	vious Area						
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
20.0						Direct Entry,					

Subcatchment 28S: POST C2



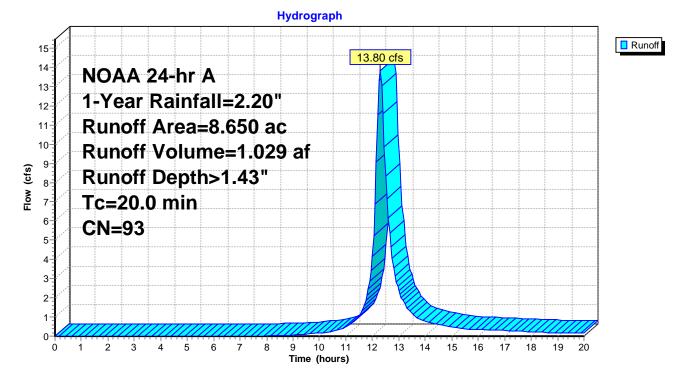
Summary for Subcatchment 29S: POST C3

Runoff	=	13.80 cfs @	12.29 hrs,	Volume=	1.029 af,	Depth>	1.43"
Route	d to Po	ond 8P : DRY B	ASIN H				

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

Area	(ac)	CN	Desc	ription									
1.	400	98	Pave	Paved roads w/curbs & sewers, HSG D									
1.	600	98	Wate	er Surface	, HSG D								
4.	900	92	1/8 a	cre lots, 6	5% imp, HS	SG D							
0.	750	80	>75%	6 Grass co	over, Good,	, HSG D							
8.	650	93	Weig	hted Aver	age								
2	465		28.50	0% Pervio	us Area								
6.	185		71.50	0% Imperv	vious Area								
-			~		a	D							
Tc	Leng		Slope	Velocity	Capacity	Description							
(min)	(fee	et)	(ft/ft)	(ft/sec)	(cfs)								
20.0						Direct Entry,							

Subcatchment 29S: POST C3



0.357 af, Depth> 1.43"

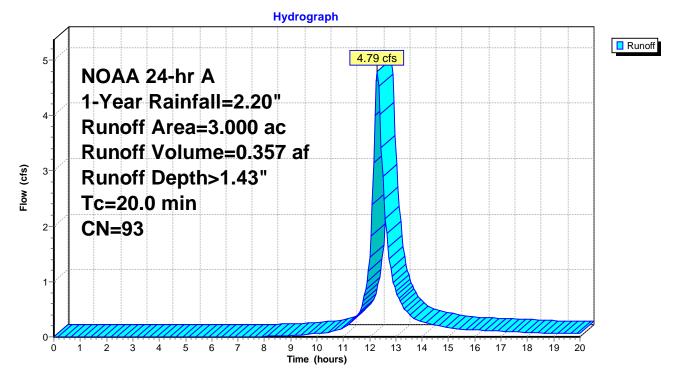
Summary for Subcatchment 30S: POST C4

Runoff	=	4.79 cfs @	12.29 hrs,	Volume=
Route	d to Po	nd 9P : DRY BA	ASIN I	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 1-Year Rainfall=2.20"

Area	(ac)	CN	Desc	cription							
2.	600	92	1/8 a	cre lots, 6	5% imp, HS	SG D					
0.	400	98	Wate	ater Surface, HSG D							
3.	.000	93	Weig	ghted Aver	age						
0.	0.910 30.33% Pervious Area										
2.	2.090 69.67% Impervious Area										
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
20.0						Direct Entry,					

Subcatchment 30S: POST C4



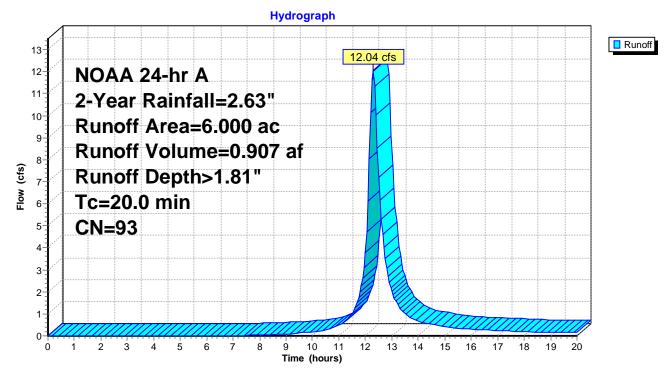
Summary for Subcatchment 18S: POST A1

Runoff = 12.04 cfs @ 12.29 hrs, Volume= Routed to Pond 1P : DRY BASIN A 0.907 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area	(ac)	CN	Desc	ription								
0.	.800	98	Wate	Vater Surface, HSG D								
5.	200	92	1/8 a	cre lots, 6	5% imp, HS	SG D						
6.	6.000 93 Weighted Average											
1.	1.820 30.33% Pervious Area											
4.	4.180 69.67% Impervious Area											
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description						
20.0						Direct Entry,						

Subcatchment 18S: POST A1



2.193 af, Depth> 1.81"

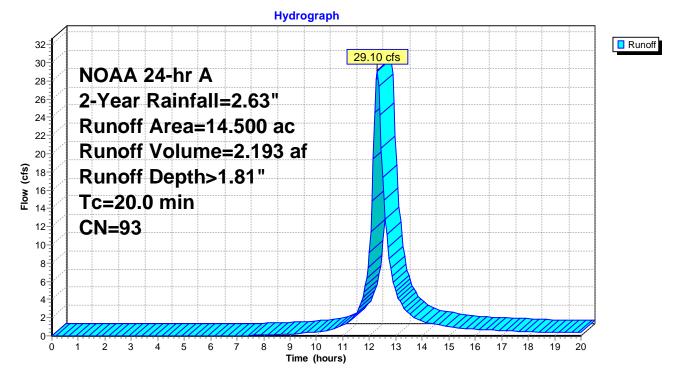
Summary for Subcatchment 19S: POST A2

Runoff = 29.10 cfs @ 12.29 hrs, Volume= Routed to Pond 2P : DRY BASIN B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area	(ac)	CN	Desc	cription								
1.	.400	98	Wate	Vater Surface, HSG D								
13.	.100	92	1/8 a	cre lots, 6	5% imp, HS	ISG D						
14.	14.500 93 Weighted Average											
4.	4.585 31.62% Pervious Area											
9.	9.915 68.38% Impervious Area											
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description						
20.0						Direct Entry,						

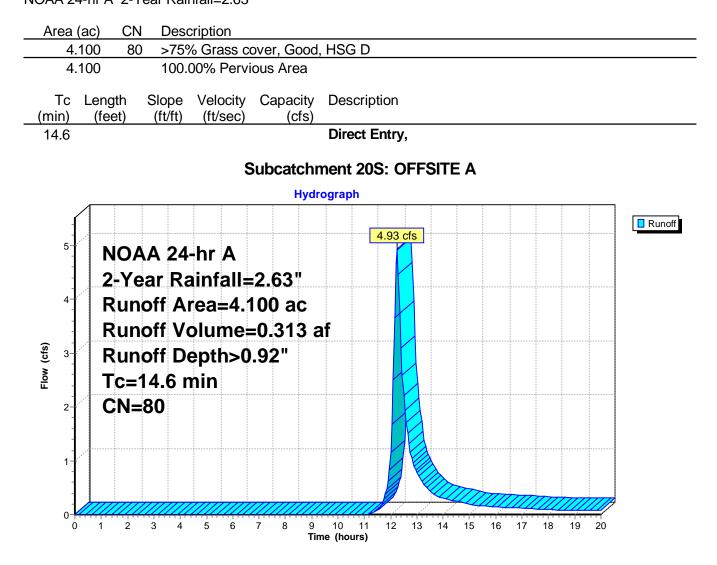
Subcatchment 19S: POST A2



0.313 af, Depth> 0.92"

Summary for Subcatchment 20S: OFFSITE A

Runoff = 4.93 cfs @ 12.24 hrs, Volume= Routed to Pond 1P : DRY BASIN A



Summary for Subcatchment 21S: POST B1

Runoff = 13.30 cfs @ 12.29 hrs, Volume= Routed to Pond 3P : DRY BASIN C 0.994 af, Depth> 1.73"

Area (ac) CN Description	
6.900 92 1/8 acre lots, 65% imp, HSG D	
2.415 35.00% Pervious Area	
4.485 65.00% Impervious Area	
Tc Length Slope Velocity Capacity Des	cription
(min) (feet) (ft/ft) (ft/sec) (cfs)	
20.0 Dire	ct Entry,
Subcatchmen	t 21S: POST B1
Hydrograpi	
	Runof
14	13.30 cfs
13 NOAA 24-hr A	
¹² 2-Year Rainfall=2.63"	
¹¹ Runoff Area=6.900 ac	
10-1	
Runoff Volume=0.994 af	
[€] 8 Runoff Depth>1.73" [№] 7 Tc=20.0 min	
2 CN=92	
3	
2	
0	
0 1 2 3 4 5 6 7 8 9 10 Time (hou	11 12 13 14 15 16 17 18 19 20 r s)

Summary for Subcatchment 22S: POST B2

11.61 cfs @ 12.79 hrs, Volume= 1.521 af, Depth> 0.85" Runoff = Routed to Pond 5P : WET BASIN E

Area (ac) CN Description	
8.100 80 >75% Grass cover, Good, HSG	D
13.300 79 Woods, Fair, HSG D	
21.400 79 Weighted Average	
21.400 100.00% Pervious Area	
Tc Length Slope Velocity Capacity Desc	cription
(min) (feet) (ft/ft) (ft/sec) (cfs)	
53.7 Direc	ct Entry,
Subcatchment	t 22S: POST B2
Hydrograph	
	11.61 cfs
¹² NOAA 24-hr A	
10 2-Year Rainfall=2.63"	
Image: second system Runoff Area=21.400 ac	
Runoff Volume=1.521 af	
َ ¶ Runoff Depth>0.85"	
ଞି 7 Runoff Depth>0.85" ଛୁ ଜ Tc=53.7 min	
⁵ CN=79	
3	
0 1 2 3 4 5 6 7 8 9 10 Time (hour	11 12 13 14 15 16 17 18 19 20

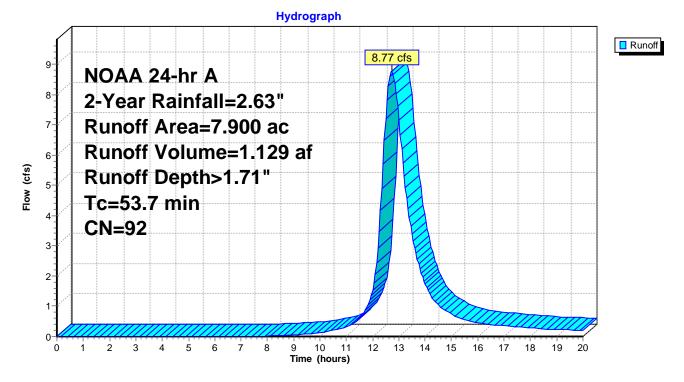
Summary for Subcatchment 23S: POST B3

Runoff	=	8.77 cfs @	12.72 hrs,	Volume=	1.129 af,	Depth>	1.71"
Routed	l to Ponc	d 4P : DRY B/	ASIN D			-	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area	(ac)	CN	Desc	ription								
2.	700	80	>75%	75% Grass cover, Good, HSG D								
2.	900	98	Wate	er Surface	, HSG D							
2.3	300	98	Pave	ed roads w	/curbs & se	ewers, HSG D						
7.	7.900 92 Weighted Average											
2.	2.700 34.18% Pervious Area											
5.	200		65.82	2% Imperv	vious Area							
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description						
53.7						Direct Entry,						

Subcatchment 23S: POST B3



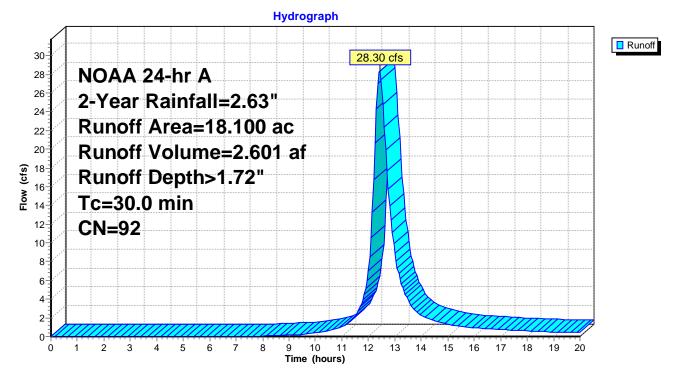
Summary for Subcatchment 24S: POST B4

Runoff = 28.30 cfs @ 12.42 hrs, Volume= 2.601 af, Depth> 1.72" Routed to Pond 5P : WET BASIN E

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area (ac) CN	Description	on								
13.000) 92	1/8 acre l	/8 acre lots, 65% imp, HSG D								
1.600) 80	>75% Gr	ass cover, (Good	, HSG D						
3.500) 98	Water Su	irface, HSG	D							
18.100	18.100 92 Weighted Average										
6.150	6.150 33.98% Pervious Area										
11.950)	66.02% lı	mpervious	Area							
	ength (feet)		ocity Cap /sec)	acity (cfs)	Description						
30.0					Direct Entry,						

Subcatchment 24S: POST B4



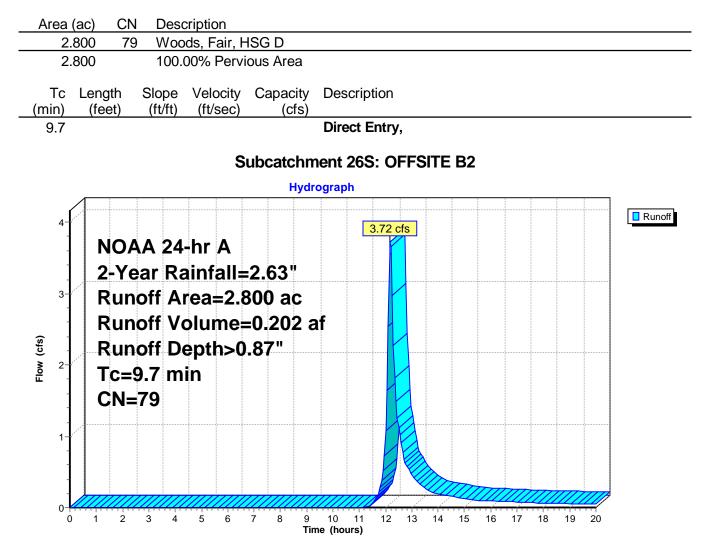
Summary for Subcatchment 25S: OFFSITE B1

Runoff = 5.67 cfs @ 12.35 hrs, Volume= Routed to Pond 4P : DRY BASIN D 0.450 af, Depth> 0.91"

Area (5.9	ac) CN 900 80		cription % Grass c	over, Good,	HSG D	
5.9	900	100.	00% Pervi	ious Area		
Tc min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
22.8					Direct Entry,	
			S	ubcatchm	ent 25S: OFFSITE B1	
				Hydro	ograph	
						Runof
6	NOA	A 24	-hr A		5.67 cfs	
5-	2-Ye	ear Ra	ainfall=	2.63"		
-	Run	off A	rea=5.9	900 ac		
4-	Run	off V	olume	=0.450 a	f	
	Run	off D	epth>0	.91"		
o 3-(22.8 r	nin			
2-	CN=	80				
-						
1-						
1						
0-44	1 2	3 4	5 6	7 8 9	10 11 12 13 14 15 16 17 18 19 20	

Summary for Subcatchment 26S: OFFSITE B2

Runoff = 3.72 cfs @ 12.18 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.202 af, Depth> 0.87"



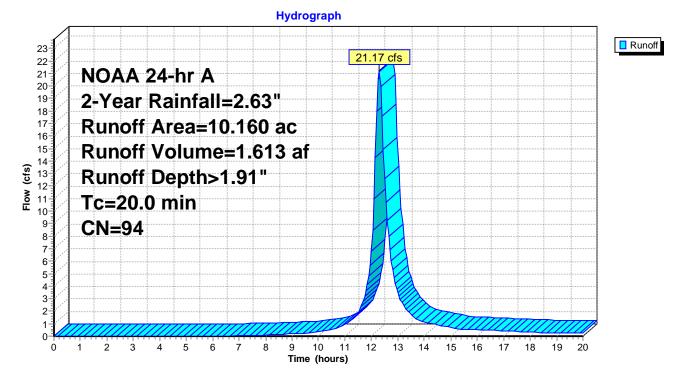
Summary for Subcatchment 27S: POST C1

Runoff = 21.17 cfs @ 12.29 hrs, Volume= 1.613 af, Depth> 1.91" Routed to Pond 6P : DRY BASIN F

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area (a	ac) (CN	Desc	ription		
1.2	200	98	Pave	d roads w	/curbs & se	ewers, HSG D
2.8	00	98	Wate	r Surface,	HSG D	
5.5	00	92	1/8 a	cre lots, 6	5% imp, HS	ISG D
0.6	60	80	>75%	Grass co	over, Good,	d, HSG D
10.1	60	94	Weig	hted Aver	age	
2.5	85		25.44	% Pervio	us Area	
7.5	75		74.56	5% Imperv	vious Area	
_					- ·	
Тс	Length		Slope	Velocity	Capacity	Description
<u>(min)</u>	(feet))	(ft/ft)	(ft/sec)	(cfs)	
20.0						Direct Entry,

Subcatchment 27S: POST C1



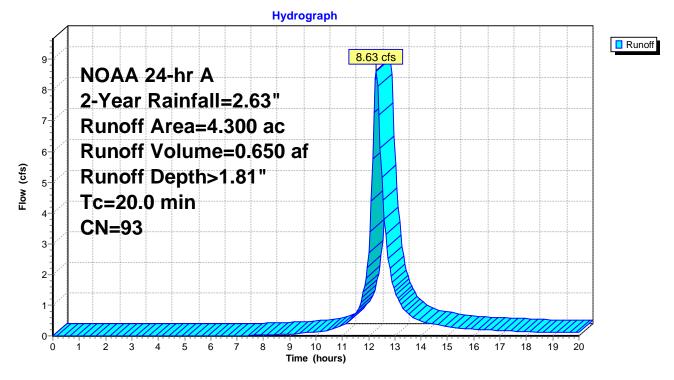
Summary for Subcatchment 28S: POST C2

Runoff = 8.63 cfs @ 12.29 hrs, Volume= Routed to Pond 7P : WET BASIN G 0.650 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area	(ac)	CN	Desc	cription		
3.	700	92	1/8 a	cre lots, 6	5% imp, HS	ISG D
0.	.600	98	Wate	er Surface	HSG D	
4.	.300	93	Weig	ghted Aver	age	
1.	295		30.12	2% Pervio	us Area	
3.	.005		69.88	3% Imperv	vious Area	
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 28S: POST C2



Summary for Subcatchment 29S: POST C3

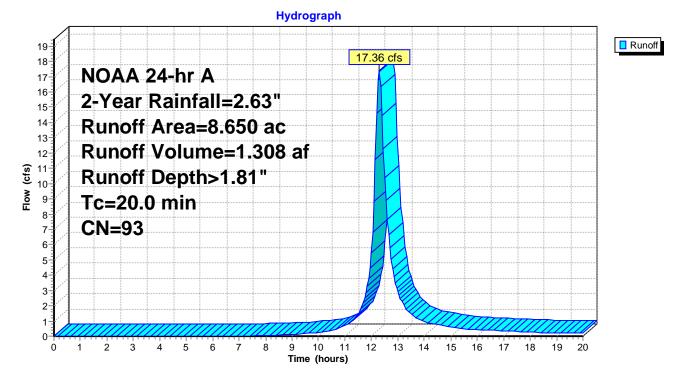
Runoff = 17.36 cfs @ 12.29 hrs, Volume= Routed to Pond 8P : DRY BASIN H

1.308 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area (a	ac)	CN	Desc	ription			
1.4	100	98	Pave	d roads w	/curbs & se	wers, HSG D	
1.6	600	98	Wate	er Surface,	HSG D		
4.9	900	92	1/8 a	cre lots, 6	5% imp, HS	SG D	
0.7	750	80	>75%	6 Grass co	over, Good,	HSG D	
8.6	650	93	Weig	hted Aver	age		
2.4	165		28.50	0% Pervio	us Area		
6.1	85		71.50)% Imperv	vious Area		
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
20.0						Direct Entry,	

Subcatchment 29S: POST C3



Summary for Subcatchment 30S: POST C4

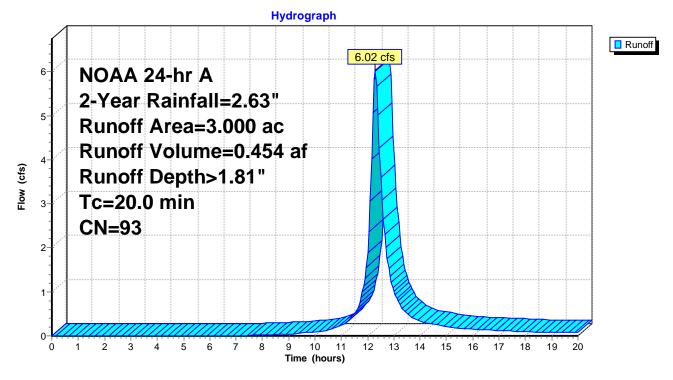
Runoff	=	6.02 cfs @	12.29 hrs,	Volume=
Route	d to Po	ond 9P : DRY BA	ASIN I	

0.454 af, Depth> 1.81"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 2-Year Rainfall=2.63"

Area	(ac)	CN	Desc	cription		
2.	.600	92	1/8 a	cre lots, 6	5% imp, HS	SG D
0.	.400	98	Wate	er Surface	HSG D	
3.	.000	93	Weig	ghted Aver	age	
0.	.910		30.3	3% Pervio	us Area	
2.	.090		69.67	7% Imperv	vious Area	
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 30S: POST C4



1.188 af, Depth> 2.38"

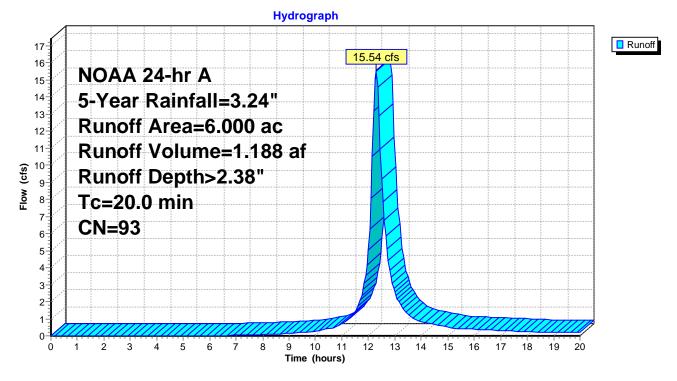
Summary for Subcatchment 18S: POST A1

Runoff = 15.54 cfs @ 12.29 hrs, Volume= Routed to Pond 1P : DRY BASIN A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area	a (ac)	CN	Desc	cription		
	0.800	98	Wate	er Surface	, HSG D	
	5.200	92	1/8 a	cre lots, 6	5% imp, H	ISG D
	6.000	93	Weig	ghted Aver	age	
	1.820		30.3	3% Pervio	us Area	
	4.180		69.6	7% Imper\	vious Area	
To (min)			Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	•
20.0						Direct Entry,

Subcatchment 18S: POST A1



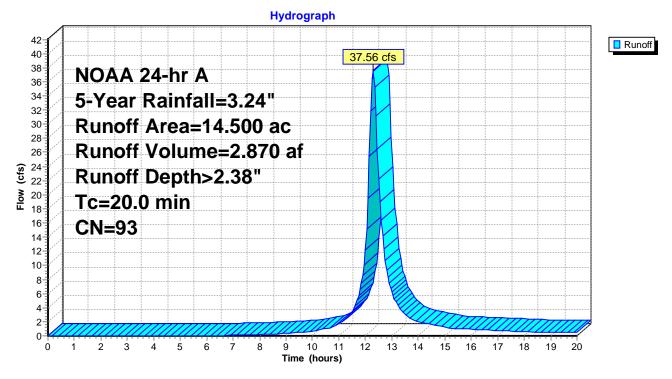
Summary for Subcatchment 19S: POST A2

Runoff = 37.56 cfs @ 12.29 hrs, Volume= Routed to Pond 2P : DRY BASIN B 2.870 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area	(ac)	CN	Desc	cription		
1	.400	98	Wate	er Surface	HSG D	
13	.100	92	1/8 a	cre lots, 6	5% imp, HS	ISG D
14	.500	93	Weig	ghted Aver	age	
4	4.585 31.62% Pervious Area					
9	.915		68.38	8% Imperv	vious Area	
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 19S: POST A2



Summary for Subcatchment 20S: OFFSITE A

Runoff = 7.31 cfs @ 12.24 hrs, Volume= Routed to Pond 1P : DRY BASIN A

0.460 af, Depth> 1.35"

4.1			otion Grass co	over, Good	, HSG D			
4.1	00	100.009	% Pervi	ous Area				
Tc min)			/elocity (ft/sec)	Capacity (cfs)	Description			
14.6					Direct Entry,			
			S	Subcatchr	nent 20S: OFFSIT	ΈA		
				Hydr	ograph			
8-	1							Runof
_	NOAA	24-h	rΔ		7.31 cfs			
7-**	5-Year			3.24"				
6	Runof							
5-	Runof	f Vol	ume=	=0.460 a	ef 👘			
	Runof	f Der	oth>1	.35"				
(cio) 4	Tc=14							
3	CN=80)						
2-								
۲ _ -								
1						m		
-		1.					11111111	TTT

1.311 af, Depth> 2.28"

Summary for Subcatchment 21S: POST B1

Runoff = 17.33 cfs @ 12.29 hrs, Volume= Routed to Pond 3P : DRY BASIN C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area		
	900 92 1/8 acre lots, 65% imp, HSG D	
	415 35.00% Pervious Area	
4.4	485 65.00% Impervious Area	
Tc (min)	(feet) (ft/ft) (ft/sec) (cfs)	cription
20.0	Dire	ect Entry,
	Subcatchmen	t 21S: POST B1
	Hydrograp	h
19-		Runoff
18		17.33 cfs
17	NOAA 24-hr A	
16-1 15-1	5-Year Rainfall=3.24"	
14	Runoff Area=6.900 ac	
13		
12- 6 11-	Runoff Volume=1.311 af	
ت 10 ¹	Runoff Depth>2.28"	
How 9	Tc=20.0 min	
8-	CN=92	
7-1	-GN=32	
5		
4]	
3		
2-1		
	1 2 3 4 5 6 7 8 9 10	11 12 13 14 15 16 17 18 19 20
0	1 2 3 4 5 6 7 8 9 10 Time (here)	

Time (hours)

Summary for Subcatchment 22S: POST B2

Runoff = 17.57 cfs @ 12.77 hrs, Volume= Routed to Pond 5P : WET BASIN E 2.262 af, Depth> 1.27"

Area (ac) CN Description	
8.100 80 >75% Grass cover, Good, HSG	D
13.30079Woods, Fair, HSG D21.40079Weighted Average	
21.400 100.00% Pervious Area	
Tc Length Slope Velocity Capacity Descr (min) (feet) (ft/ft) (ft/sec) (cfs)	ription
	t Entry,
Cubactaburgant	ANC: DOCT DO
Subcatchment	225: PUST B2
Hydrograph	
19	Runoff
18 17 NOAA 24-hr A	17.57 cfs
¹⁷ NOAA 24-11 A ¹⁶ 5-Year Rainfall=3.24"	
15	
¹⁴ Runoff Area=21.400 ac	
12 Runoff Volume=2.262 af	
[€] ¹¹ Runoff Depth>1.27" ⁸ ⁹ Tc=53.7 min	
⁸ 7 CN=79	
6	
5	
3	
0 1 2 3 4 5 6 7 8 9 10 1 0 1 2 3 4 5 6 7 8 9 10 1 Time (hours	11 12 13 14 15 16 17 18 19 20 5)

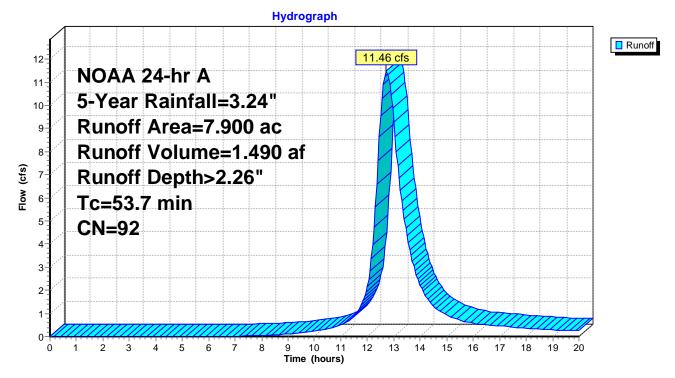
Summary for Subcatchment 23S: POST B3

Runoff	=	11.46 cfs @	12.72 hrs,	Volume=	1.490 af,	Depth>	2.26"
Routed	d to Poi	nd 4P : DRY B/	ASIN D			-	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

	Area (ac)) CN	Desc	Description							
	2.700) 80	>75% Grass cover, Good, HSG D								
	2.900) 98	Wate	Water Surface, HSG D							
	2.300	2.300 98 Paved roads w/curbs & sewers, HSG D									
	7.900 92 Weighted Average										
2.700 34.18% Pervious Area											
5.200 65.82% Impervious Area					vious Area						
		ength feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description					
	53.7					Direct Entry,					

Subcatchment 23S: POST B3



3.433 af, Depth> 2.28"

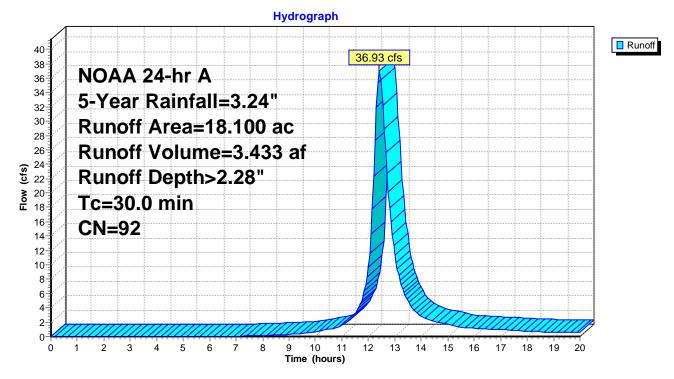
Summary for Subcatchment 24S: POST B4

Runoff = 36.93 cfs @ 12.42 hrs, Volume= Routed to Pond 5P : WET BASIN E

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area (ac)	CN	Description						
13.0	000	92	1/8 a	ISG D					
1.600 80 >75% Grass cover, Good, HSG D									
3.500 98 Water Surface, HSG D									
18.1	18.100 92 Weighted Average								
6.150 33.98% Pervious Area									
11.950 66.02% Impervious Area				2% Imperv	vious Area	l			
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)				
30.0						Direct Entry,			

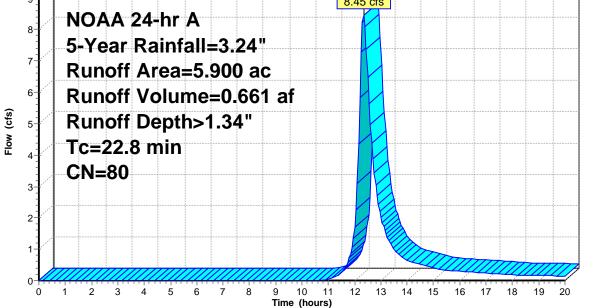
Subcatchment 24S: POST B4



Summary for Subcatchment 25S: OFFSITE B1

Runoff = 8.45 cfs @ 12.34 hrs, Volume= Routed to Pond 4P : DRY BASIN D 0.661 af, Depth> 1.34"

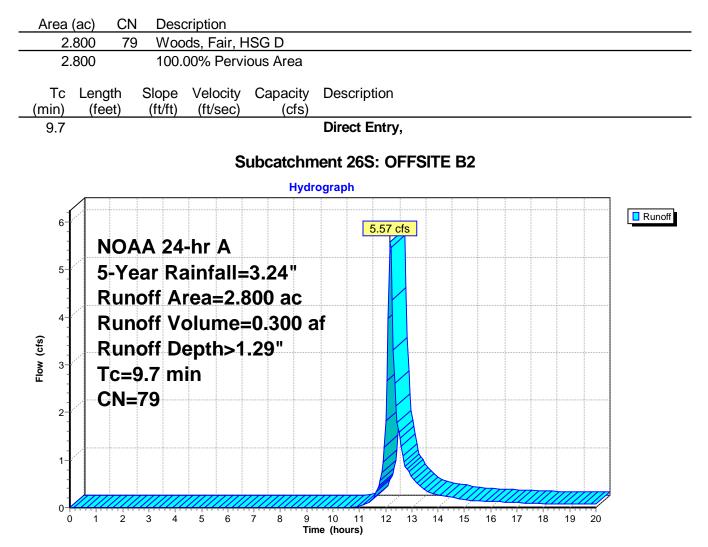
Area (ac) CN Description								
5.900 80 >75% Grass cover, Good, HSG D								
5.900 100.00% Pervious Area								
Tc Length Slope Velocity Capaci (min) (feet) (ft/ft) (ft/sec) (cfs								
22.8 Direct Entry,								
Subcatchment 25S: OFFSITE B1								
Hydrograph								
» NOAA 24-hr A	8.45 cfs							



Summary for Subcatchment 26S: OFFSITE B2

Runoff = 5.57 cfs @ 12.18 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.300 af, Depth> 1.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"



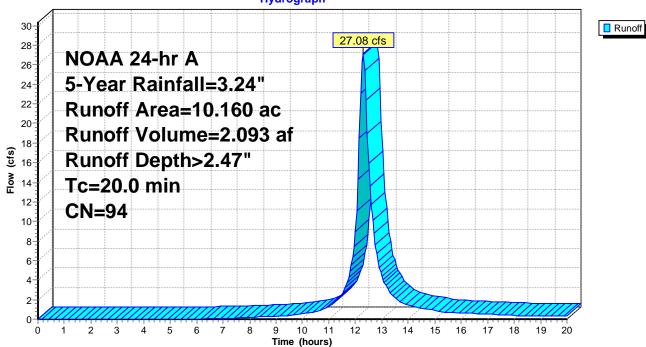
Summary for Subcatchment 27S: POST C1

Runoff = 27.08 cfs @ 12.29 hrs, Volume= Routed to Pond 6P : DRY BASIN F 2.093 af, Depth> 2.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area (ac)	CN	Description				
1.200	98	Paved roads	w/curbs & se	sewers, HSG D		
2.800	98	Water Surface	e, HSG D			
5.500	92	1/8 acre lots,	65% imp, HS	ISG D		
0.660	80	>75% Grass	cover, Good,	d, HSG D		
10.160	60 94 Weighted Average					
2.585		25.44% Perv	ious Area			
7.575		74.56% Impe	rvious Area			
- ·			o			
	ngth	Slope Velocit		•		
<u>(min)</u> (f	eet)	(ft/ft) (ft/sec) (cfs)			
20.0				Direct Entry,		

Subcatchment 27S: POST C1



Hydrograph

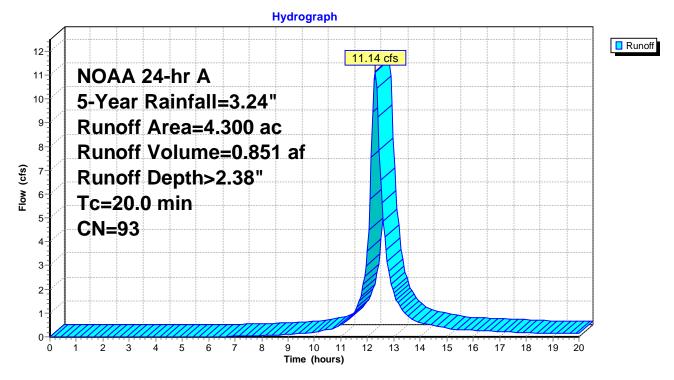
Summary for Subcatchment 28S: POST C2

Runoff = 11.14 cfs @ 12.29 hrs, Volume= Routed to Pond 7P : WET BASIN G 0.851 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area	(ac)	CN	Desc	cription			
3.	.700	92	1/8 a	cre lots, 6	5% imp, HS	SG D	
0	.600	98	Wate	er Surface	HSG D		
4	.300 93 Weighted Average						
1.	1.295 30.12% Pervious Area						
3.	3.005 69.88% Impervious Area						
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
20.0						Direct Entry,	

Subcatchment 28S: POST C2



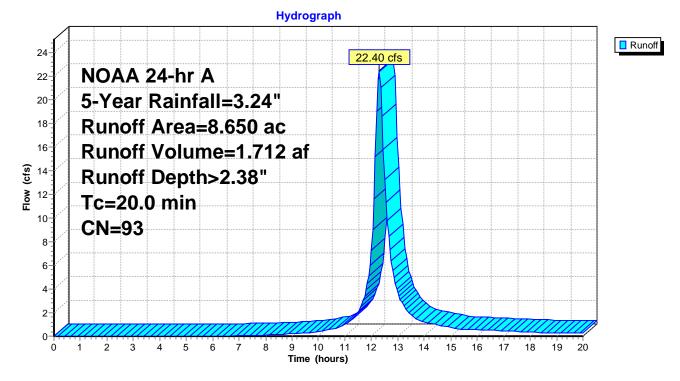
Summary for Subcatchment 29S: POST C3

Runoff = 22.40 cfs @ 12.29 hrs, Volume= 1.712 af, Depth> 2.38" Routed to Pond 8P : DRY BASIN H

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area	a (ac)	CN	Desc	ription			
	1.400	98	Pave	d roads w	/curbs & se	wers, HSG D	
	1.600	98	Wate	er Surface,	HSG D		
4	4.900	92	1/8 a	cre lots, 6	5% imp, HS	SG D	
	0.750	80	>75%	6 Grass co	over, Good,	HSG D	
	8.650	93	Weig	hted Aver	age		
	2.465		28.50	% Pervio	us Area		
(6.185		71.50)% Imperv	vious Area		
To (min)			Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
20.0)		``` <i>\</i>	· · /		Direct Entry,	

Subcatchment 29S: POST C3



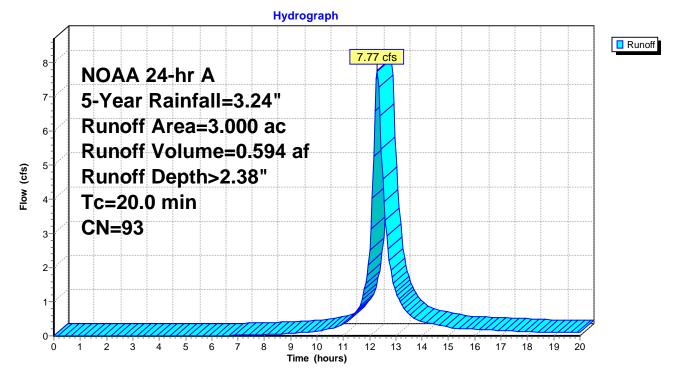
Summary for Subcatchment 30S: POST C4

Runoff = 7.77 cfs @ 12.29 hrs, Volume= Routed to Pond 9P : DRY BASIN I 0.594 af, Depth> 2.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 5-Year Rainfall=3.24"

Area	(ac)	CN	Desc	cription				
2.	600	92	1/8 a	cre lots, 6	5% imp, HS	ISG D		
0.	400	98	Wate	er Surface	HSG D			
3.	000	000 93 Weighted Average						
0.	0.910 30.33% Pervious Area							
2.	090		69.67	7% Imperv	vious Area			
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
20.0						Direct Entry,		

Subcatchment 30S: POST C4



1.415 af, Depth> 2.83"

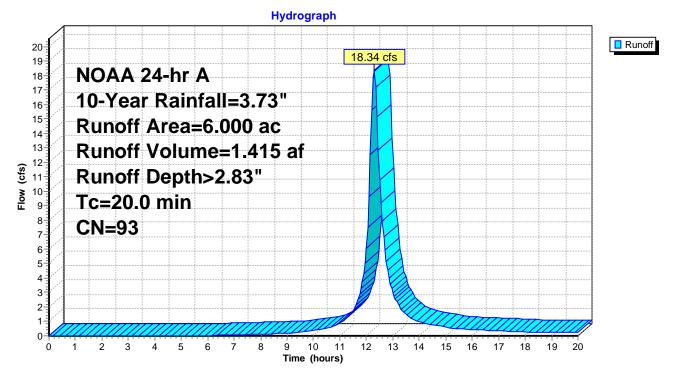
Summary for Subcatchment 18S: POST A1

Runoff = 18.34 cfs @ 12.29 hrs, Volume= Routed to Pond 1P : DRY BASIN A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	(ac)	CN	Desc	cription				
0.	800	98	Wate	er Surface	HSG D			
5.	200	92	1/8 a	cre lots, 6	5% imp, HS	SG D		
6.	.000	000 93 Weighted Average						
1.	1.820 30.33% Pervious Area							
4.	180		69.67	7% Imperv	vious Area			
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
20.0						Direct Entry,		

Subcatchment 18S: POST A1



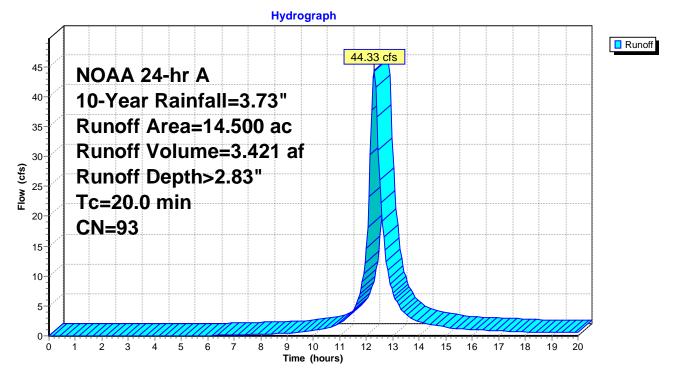
Summary for Subcatchment 19S: POST A2

Runoff = 44.33 cfs @ 12.29 hrs, Volume= Routed to Pond 2P : DRY BASIN B 3.421 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	(ac)	CN	Desc	cription				
1	.400	98	Wate	er Surface	HSG D			
13	.100	92	1/8 a	cre lots, 6	5% imp, HS	SG D		
14	.500	00 93 Weighted Average						
4	.585 31.62% Pervious Area							
9	.915		68.38	8% Imperv	vious Area			
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description		
20.0						Direct Entry,		

Subcatchment 19S: POST A2



0.587 af, Depth> 1.72"

Summary for Subcatchment 20S: OFFSITE A

Runoff = 9.33 cfs @ 12.24 hrs, Volume= Routed to Pond 1P : DRY BASIN A

4-

3-

2-

1-

0-

0

1

2 3

4 5

6 7

8

9

10 11

Time (hours)

CN=80

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area (ac)CNDescription4.10080>75% Grass cover, Good, HS4.100100.00% Pervious Area	G D						
Tc Length Slope Velocity Capacity De (min) (feet) (ft/ft) (ft/sec) (cfs)	escription						
Subcatchment 20S: OFFSITE A Hydrograph							
¹⁰ 9 NOAA 24-hr A	9.33 cfs	f					
⁸ 10-Year Rainfall=3.73" 7 Runoff Area=4.100 ac							
ଞ୍ଚି Runoff Volume=0.587 af ଅତ୍ୟୁ ଅତ୍ୟୁ Tc=14.6 min							

12 13 14

15 16 17

18

19

20

1.571 af, Depth> 2.73"

Summary for Subcatchment 21S: POST B1

Runoff = 20.56 cfs @ 12.29 hrs, Volume= Routed to Pond 3P : DRY BASIN C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

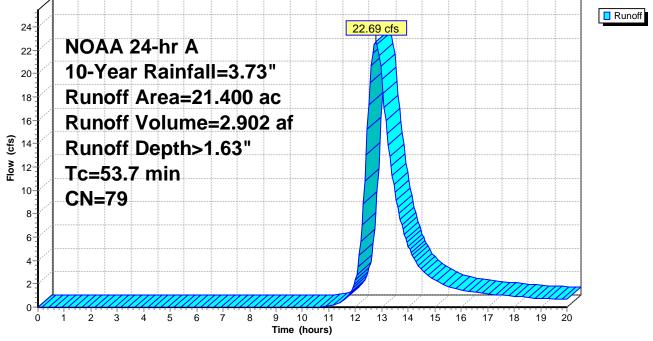
Area (ac) CN Description 6.900 92 1/8 acre lots, 65%		
2.415 35.00% Pervious 4.485 65.00% Imperviou		
·		
Tc Length Slope Velocity C (min) (feet) (ft/ft) (ft/sec)	apacity Description (cfs)	
20.0	Direct Entry,	
Su	bcatchment 21S: POST B1	
	Hydrograph	
23		Runoff
22	20.56 cfs	
NOAA 24-hr A		
10-Year Rainfall=3	.73"	
16 Runoff Area=6.900		
¹⁵ 14 Runoff Volume=1.	571 af	
Runoff Depth>2.7	3"	
⁸ 11 Tc=20.0 min		
CN=92		
7		
5		
4 3		
0 1 2 3 4 5 6 7	8 9 10 11 12 13 14 15 16 17 18 19 20 Time (hours)	

Summary for Subcatchment 22S: POST B2

Runoff = 22.69 cfs @ 12.76 hrs, Volume= Routed to Pond 5P : WET BASIN E 2.902 af, Depth> 1.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area (ac)	CN	Description	Description							
8.100	80	>75% Grass c	>75% Grass cover, Good, HSG D							
13.300	79	Woods, Fair, F	ISG D							
21.400	79	Weighted Ave	rage							
21.400		100.00% Pervi	ious Area							
53.7				Direct Entry,						
	Subcatchment 22S: POST B2 Hydrograph									



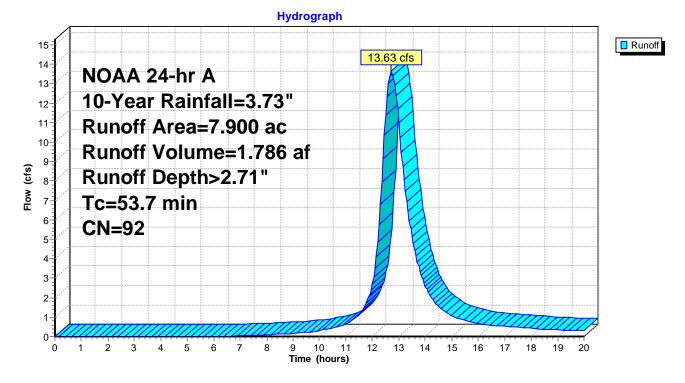
Summary for Subcatchment 23S: POST B3

Runoff	=	13.63 cfs @	12.71 hrs,	Volume=	1.786 af,	Depth>	2.71"
Route	d to Po	ond 4P : DRY B	ASIN D			-	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	ı (ac)	CN	Desc	Description						
2	2.700	80	>75%	6 Grass co	over, Good,	HSG D				
2	2.900	98	Wate	er Surface	, HSG D					
2	2.300	98	Pave	ed roads w	/curbs & se	ewers, HSG D				
7	7.900	.900 92 Weighted Average								
2	2.700 34.18% Pervious Area									
5	5.200		65.82	2% Imperv	vious Area					
Та	Long	ith	Slope	Volocity	Conocity	Description				
Tc (min)	- 0		Slope	Velocity	Capacity	Description				
(min)	(fee	et)	(ft/ft)	(ft/sec)	(cfs)					
53.7						Direct Entry,				

Subcatchment 23S: POST B3



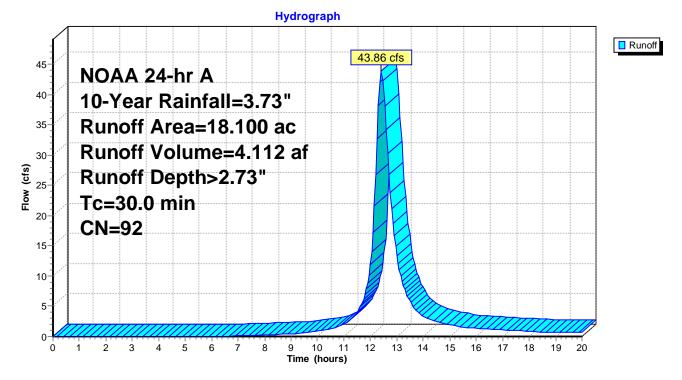
Summary for Subcatchment 24S: POST B4

Runoff = 43.86 cfs @ 12.42 hrs, Volume= 4.112 af, Depth> 2.73" Routed to Pond 5P : WET BASIN E

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	(ac)	CN	Desc	ription				
13.	000	92	1/8 a	cre lots, 6	5% imp, HS	ISG D		
1.	600	80	>75%	6 Grass co	over, Good,	d, HSG D		
3.	500	98	Wate	er Surface	, HSG D			
18.	100	0 92 Weighted Average						
6.	150	0 33.98% Pervious Area						
11.	950		66.02	2% Imperv	1			
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)			
30.0						Direct Entry,		

Subcatchment 24S: POST B4



Summary for Subcatchment 25S: OFFSITE B1

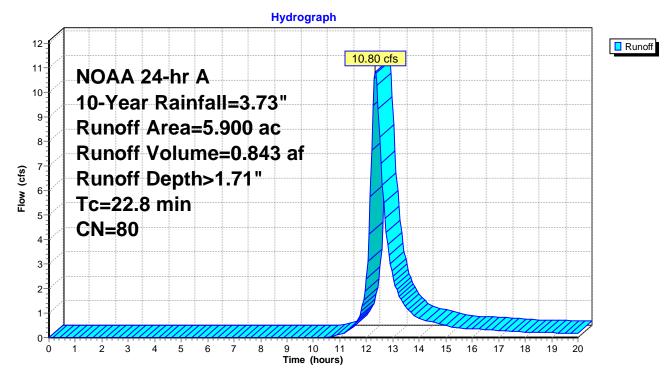
Runoff = 10.80 cfs @ 12.34 hrs, Volume= Routed to Pond 4P : DRY BASIN D

0.843 af, Depth> 1.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	(ac)	CN	Desc	cription		
5.	900	80	>75%	6 Grass co	over, Good,	, HSG D
5.	900		100.0	00% Pervi	ous Area	
Tc _(min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.8						Direct Entry,

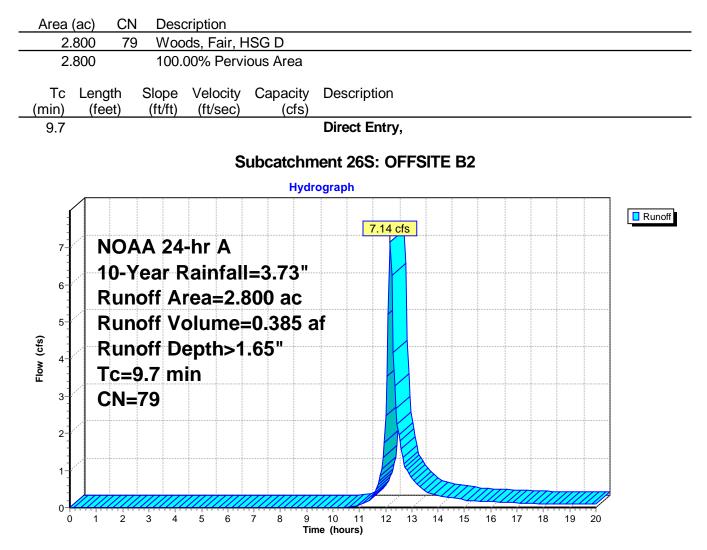
Subcatchment 25S: OFFSITE B1



Summary for Subcatchment 26S: OFFSITE B2

Runoff = 7.14 cfs @ 12.18 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.385 af, Depth> 1.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"



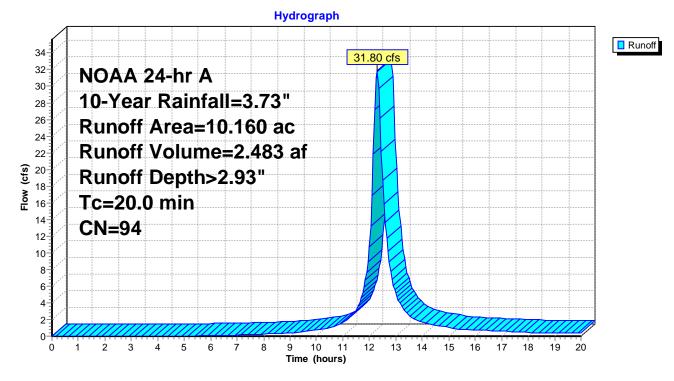
Summary for Subcatchment 27S: POST C1

Runoff = 31.80 cfs @ 12.29 hrs, Volume= Routed to Pond 6P : DRY BASIN F 2.483 af, Depth> 2.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area (a	ac) (CN	Desc	ription			
1.2	200	98	Pave	d roads w	/curbs & se	wers, HSG D	
2.8	00	98	Wate	r Surface,	HSG D		
5.5	00	92	1/8 a	cre lots, 6	5% imp, HS	SG D	
0.6	60	80	>75%	6 Grass co	over, Good,	HSG D	
10.1	60	94	Weig	hted Aver	age		
2.5	85		25.44	1% Pervio	us Area		
7.5	75		74.56	3% Imperv	vious Area		
Тс	Length		Slope	Velocity	Capacity	Description	
(min)	(feet)		(ft/ft)	(ft/sec)	(cfs)		
20.0						Direct Entry,	

Subcatchment 27S: POST C1



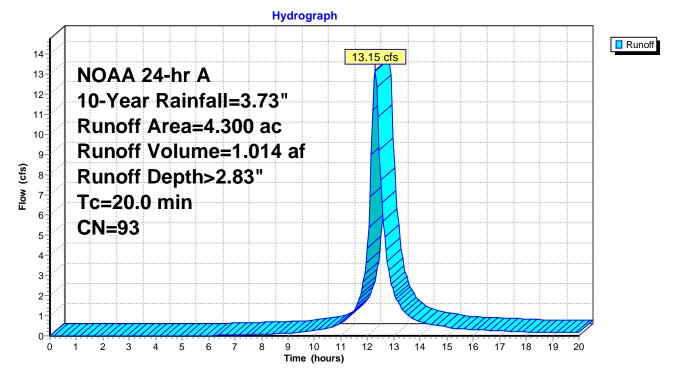
Summary for Subcatchment 28S: POST C2

Runoff = 13.15 cfs @ 12.29 hrs, Volume= Routed to Pond 7P : WET BASIN G 1.014 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	(ac)	CN	Desc	ription		
3.	700	92	1/8 a	cre lots, 6	5% imp, HS	ISG D
0.	600	98	Wate	er Surface	HSG D	
4.	300	93	Weig	hted Aver	age	
1.	295		30.12	2% Pervio	us Area	
3.	005		69.88	3% Imperv	vious Area	
Tc (min)	Lengt (feet		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 28S: POST C2



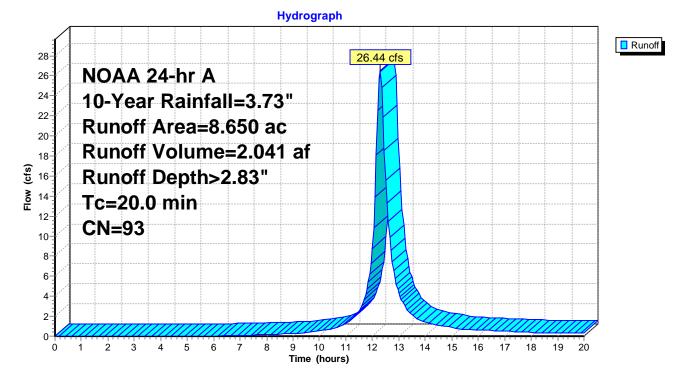
Summary for Subcatchment 29S: POST C3

Runoff	=	26.44 cfs @	12.29 hrs,	Volume=	2.041 af,	Depth>	2.83"
Route	d to Po	ond 8P : DRY B	ASIN H			-	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area (ac)	CN	Description
1.400	98	Paved roads w/curbs & sewers, HSG D
1.600	98	Water Surface, HSG D
4.900	92	1/8 acre lots, 65% imp, HSG D
0.750	80	>75% Grass cover, Good, HSG D
8.650	93	Weighted Average
2.465		28.50% Pervious Area
6.185		71.50% Impervious Area
Tc Ler	orth (Slope Velocity Capacity Description
	ngth 3 eet)	(ft/ft) (ft/sec) (cfs)
20.0		Direct Entry,

Subcatchment 29S: POST C3



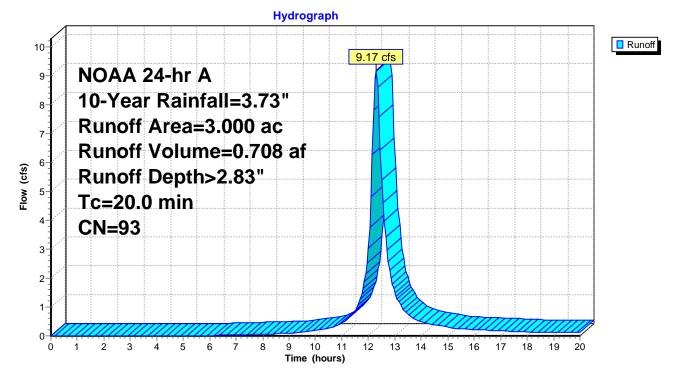
Summary for Subcatchment 30S: POST C4

Runoff = 9.17 cfs @ 12.29 hrs, Volume= Routed to Pond 9P : DRY BASIN I 0.708 af, Depth> 2.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 10-Year Rainfall=3.73"

Area	(ac)	CN	Desc	cription		
2.	600	92	1/8 a	cre lots, 6	5% imp, HS	SG D
0.	400	98	Wate	er Surface	HSG D	
3.	.000	93	Weig	ghted Aver	age	
0.	.910		30.3	3% Pervio	us Area	
2.	.090		69.6	7% Imperv	vious Area	
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 30S: POST C4



1.748 af, Depth> 3.50"

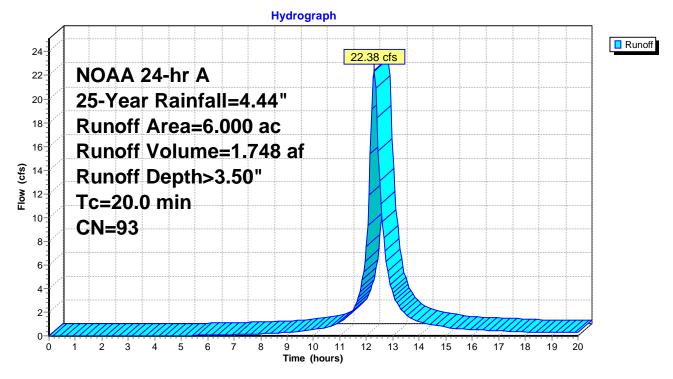
Summary for Subcatchment 18S: POST A1

Runoff = 22.38 cfs @ 12.29 hrs, Volume= Routed to Pond 1P : DRY BASIN A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area	(ac)	CN	Desc	cription		
0.	800	98	Wate	er Surface	HSG D	
5.	200	92	1/8 a	cre lots, 6	5% imp, H	SG D
6.	000	93	Weig	ghted Aver	age	
1.	820		30.3	3% Pervio	us Area	
4.	180		69.67	7% Imperv	vious Area	
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0	•		, <i>,</i>	. , , , , , , , , , , , , , , , , , , ,	· · · · ·	Direct Entry,

Subcatchment 18S: POST A1



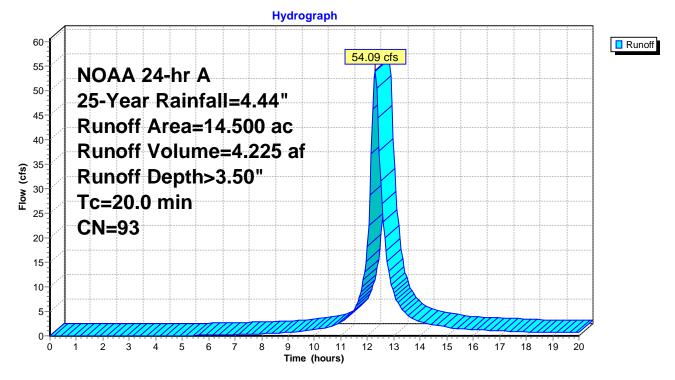
Summary for Subcatchment 19S: POST A2

Runoff = 54.09 cfs @ 12.29 hrs, Volume= Routed to Pond 2P : DRY BASIN B 4.225 af, Depth> 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area	(ac)	CN	Desc	cription		
1	.400	98	Wate	er Surface	HSG D	
13	.100	92	1/8 a	cre lots, 6	5% imp, HS	SG D
14	.500	93	Weig	ghted Aver	age	
4	.585		31.6	2% Pervio	us Area	
9	.915		68.3	8% Imperv	vious Area	
Тс	Leng	th (Slope	Velocity	Capacity	Description
(min)	(fee		(ft/ft)	(ft/sec)	(cfs)	Description
				(10360)	(013)	Direct Entry
20.0						Direct Entry,

Subcatchment 19S: POST A2



Summary for Subcatchment 20S: OFFSITE A

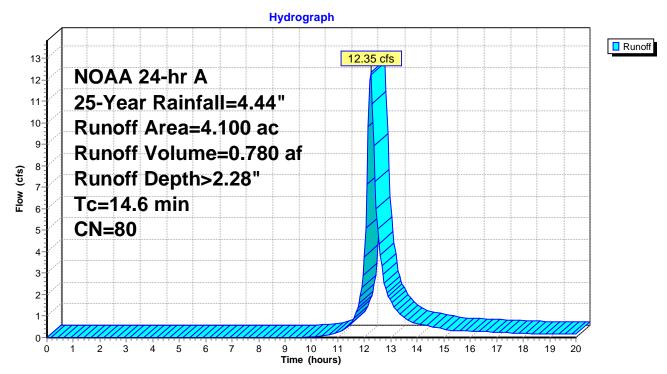
Runoff = 12.35 cfs @ 12.23 hrs, Volume= Routed to Pond 1P : DRY BASIN A

0.780 af, Depth> 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area	(ac)	CN	Desc	ription		
4.	100	80	>75%	6 Grass co	over, Good,	I, HSG D
4.	100		100.0	00% Pervi	ous Area	
Тс	Leng	:h	Slope	Velocity	Capacity	Description
(min)	(fee	t)	(ft/ft)	(ft/sec)	(cfs)	
14.6						Direct Entry,

Subcatchment 20S: OFFSITE A



Summary for Subcatchment 21S: POST B1

25.23 cfs @ 12.29 hrs, Volume= 1.951 af, Depth> 3.39" Runoff = Routed to Pond 3P : DRY BASIN C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

6.900 92 1/8 acre lots, 65% imp, HSG I)
2.415 35.00% Pervious Area 4.485 65.00% Impervious Area	
Tc Length Slope Velocity Capacity De hin) (feet) (ft/ft) (ft/sec) (cfs)	scription
0.0 Dir	rect Entry,
Subcatchme	nt 21S: POST B1
Hydrogra	ph
28-	
	25.23 cfs
NOAA 24-hr A	
22- 25-Year Rainfall=4.44"	
²⁰ Runoff Area=6.900 ac	
¹⁸ Runoff Volume=1.951 af	
Runoff Depth>3.39	
12 Tc=20.0 min	
10 CN=92	
8	
6	
4	
2	

Summary for Subcatchment 22S: POST B2

Runoff = 30.45 cfs @ 12.75 hrs, Volume= Routed to Pond 5P : WET BASIN E 3.882 af, Depth> 2.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area (ac) CN Description	
8.100 80 >75% Grass cover, Good, HSC	G D
13.300 79 Woods, Fair, HSG D	
21.400 79 Weighted Average	
21.400 100.00% Pervious Area	
Tc Length Slope Velocity Capacity Des	scription
(min) (feet) (ft/ft) (ft/sec) (cfs)	
53.7 Dire	ect Entry,
Subastahmar	nt 22S: POST B2
Hydrograp	bh
34	Runoff
32	30.45 cfs
³⁰ NOAA 24-hr A	
²⁸ 25-Year Rainfall=4.44"	
²⁰ 24 Runoff Area=21.400 ac	
²² Runoff Volume=3.882 af	
[⊕] 18 Runoff Depth>2.18" [№] 16 Tc=53.7 min	
ể ¹⁶ Tc=53.7 min	
¹⁴ 12 CN=79	
12- CN=79	
8	
6	
4	
2	
0 1 2 3 4 5 6 7 8 9 10 Time (hou	11 12 13 14 15 16 17 18 19 20 urs)

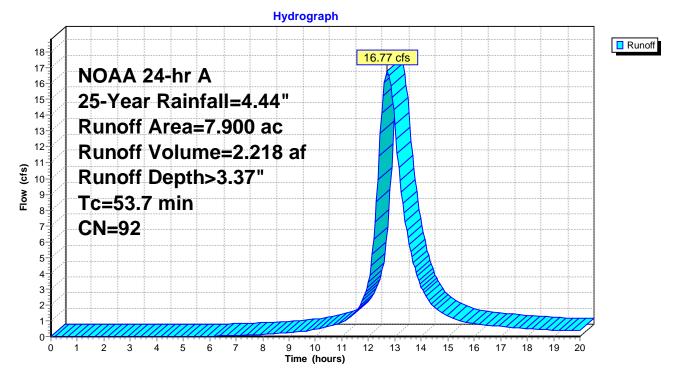
Summary for Subcatchment 23S: POST B3

Runoff	=	16.77 cfs @	12.71 hrs,	Volume=	2.218 af,	Depth>	3.37"
Routed	d to Por	nd 4P : DRY BA	ASIN D				

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

	Area (ac)	CN	Description	
	2.700	80	>75% Grass cover, G	ood, HSG D
	2.900	98	Water Surface, HSG	D
	2.300	98	Paved roads w/curbs	& sewers, HSG D
	7.900	92	Weighted Average	
	2.700		34.18% Pervious Are	a
	5.200		65.82% Impervious A	rea
(Tc Len (min) (fe	igth s eet)	Slope Velocity Capa (ft/ft) (ft/sec) (city Description ofs)
	53.7			Direct Entry,

Subcatchment 23S: POST B3



5.107 af, Depth> 3.39"

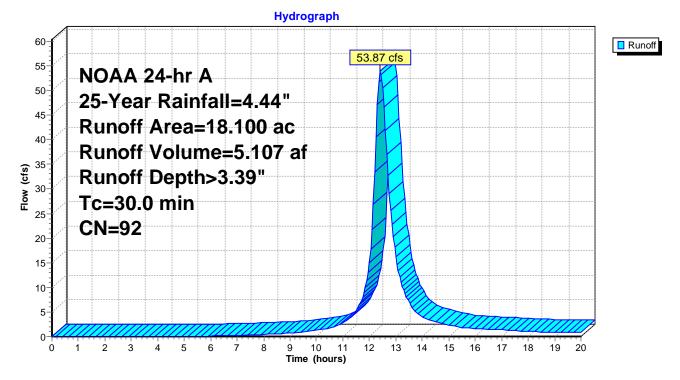
Summary for Subcatchment 24S: POST B4

Runoff = 53.87 cfs @ 12.41 hrs, Volume= Routed to Pond 5P : WET BASIN E

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area (ac	c) CN	Desc	cription			
13.00	0 92	2 1/8 a	acre lots, 6	5% imp, H	SG D	
1.60	0 80) >75%	% Grass co	over, Good,	HSG D	
3.50	0 98	8 Wate	er Surface	, HSG D		
18.10	0 92	2 Weig	ghted Avei	age		
6.15	0	33.9	8% Pervio	us Area		
11.95	0	66.02	2% Imperv	ious Area		
	ength (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
30.0					Direct Entry,	

Subcatchment 24S: POST B4



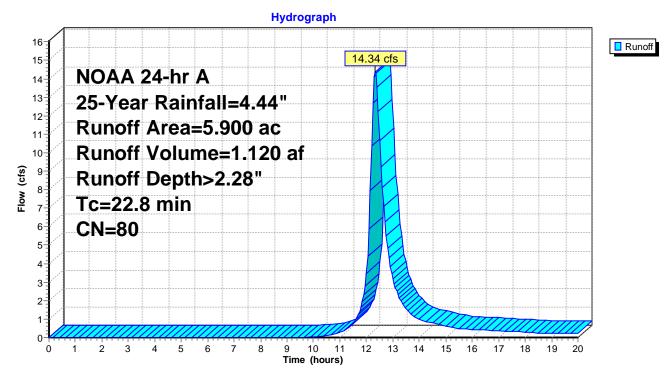
Summary for Subcatchment 25S: OFFSITE B1

Runoff = 14.34 cfs @ 12.34 hrs, Volume= Routed to Pond 4P : DRY BASIN D 1.120 af, Depth> 2.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area	(ac)	CN	Desc	cription		
5.	900	80	>75%	6 Grass co	over, Good,	, HSG D
5.	900		100.0	00% Pervi	ous Area	
Tc _(min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.8						Direct Entry,

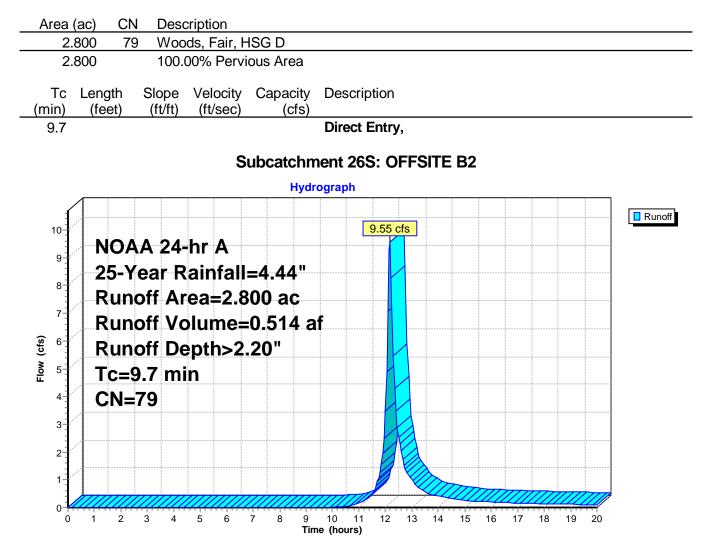
Subcatchment 25S: OFFSITE B1



Summary for Subcatchment 26S: OFFSITE B2

Runoff = 9.55 cfs @ 12.17 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.514 af, Depth> 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"



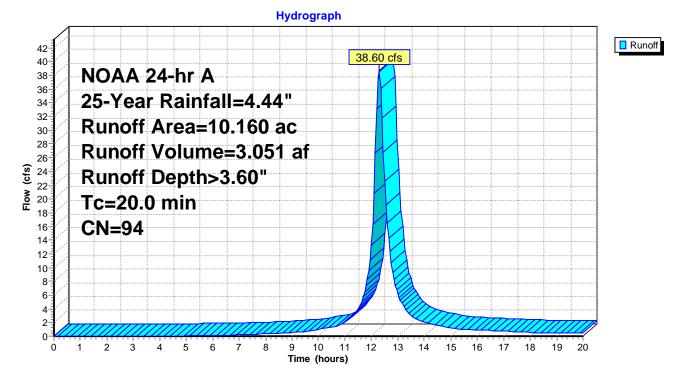
Summary for Subcatchment 27S: POST C1

Runoff = 38.60 cfs @ 12.29 hrs, Volume= Routed to Pond 6P : DRY BASIN F 3.051 af, Depth> 3.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

 Area (ac)	CN	Desc	ription					
1.200	98	Pave	Paved roads w/curbs & sewers, HSG D					
2.800	98	Wate	er Surface,	HSG D				
5.500	92	1/8 a	cre lots, 6	5% imp, HS	SG D			
 0.660	80	>75%	6 Grass co	over, Good,	HSG D			
10.160	94	Weig	hted Aver	age				
2.585		25.44	4% Pervio	us Area				
7.575		74.56	5% Imperv	vious Area				
	ngth eet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
 20.0	001)	(1011)	(10300)	(013)	Direct Entry,			
20.0								

Subcatchment 27S: POST C1



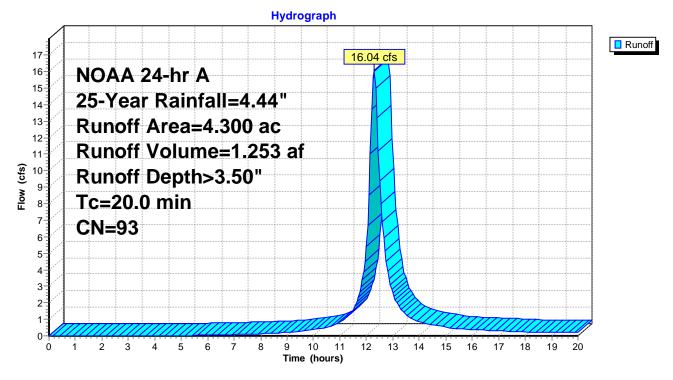
Summary for Subcatchment 28S: POST C2

Runoff = 16.04 cfs @ 12.29 hrs, Volume= Routed to Pond 7P : WET BASIN G 1.253 af, Depth> 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area	(ac)	CN	Desc	cription		
3.	700	92	1/8 a	cre lots, 6	5% imp, HS	SG D
0.	600	98	Wate	er Surface	HSG D	
4.	300	93	Weig	ghted Aver	age	
1.	295		30.12	2% Pervio	us Area	
3.	3.005			8% Imperv	vious Area	
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 28S: POST C2



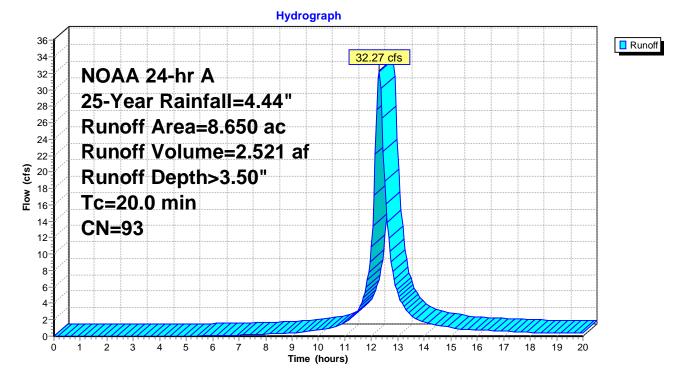
Summary for Subcatchment 29S: POST C3

Runoff = 32.27 cfs @ 12.29 hrs, Volume= 2.521 af, Depth> 3.50" Routed to Pond 8P : DRY BASIN H

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area (ac)	CN	Description
1.400	98	Paved roads w/curbs & sewers, HSG D
1.600	98	Water Surface, HSG D
4.900	92	1/8 acre lots, 65% imp, HSG D
0.750	80	>75% Grass cover, Good, HSG D
8.650	93	Weighted Average
2.465		28.50% Pervious Area
6.185		71.50% Impervious Area
Tc Leng (min) (fe	gth S et)	Slope Velocity Capacity Description (ft/ft) (ft/sec) (cfs)
20.0		Direct Entry,

Subcatchment 29S: POST C3



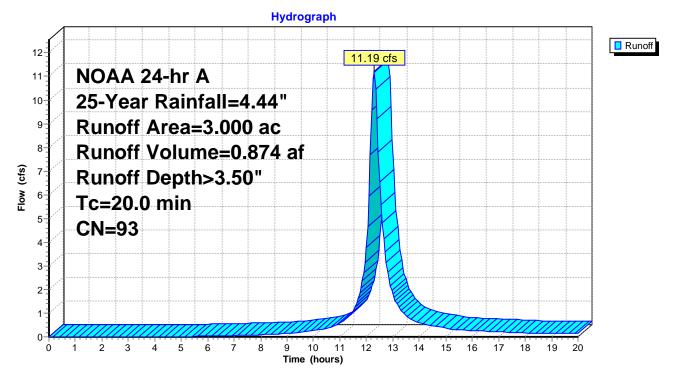
Summary for Subcatchment 30S: POST C4

Runoff = 11.19 cfs @ 12.29 hrs, Volume= Routed to Pond 9P : DRY BASIN I 0.874 af, Depth> 3.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 25-Year Rainfall=4.44"

Area	(ac)	CN	Desc	cription					
2.	600	92	1/8 a	cre lots, 6	5% imp, HS	SG D			
0.	400	98	Wate	er Surface	HSG D				
3.	.000	93	Weig	ghted Aver	age				
0.	910		30.33	30.33% Pervious Area					
2.	2.090			69.67% Impervious Area					
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
20.0						Direct Entry,			

Subcatchment 30S: POST C4



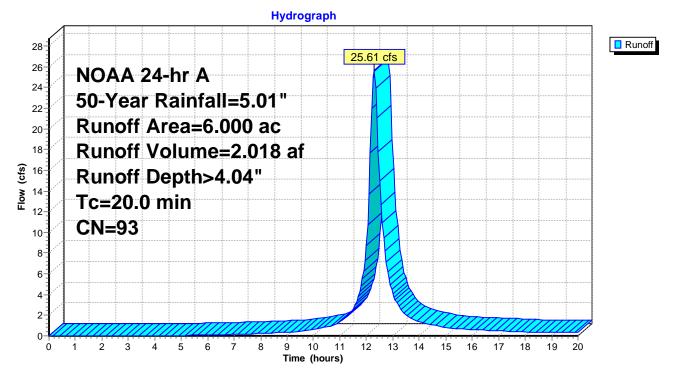
Summary for Subcatchment 18S: POST A1

Runoff = 25.61 cfs @ 12.29 hrs, Volume= Routed to Pond 1P : DRY BASIN A 2.018 af, Depth> 4.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area	(ac)	CN	Desc	cription		
0.	.800	98	Wate	er Surface	HSG D	
5.	.200	92	1/8 a	cre lots, 6	5% imp, H	SG D
6.	.000	93	Weig	ghted Aver	age	
1.	.820		30.3	3% Pervio	us Area	
4.	.180		69.6	7% Imperv	vious Area	
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 18S: POST A1



4.876 af, Depth> 4.04"

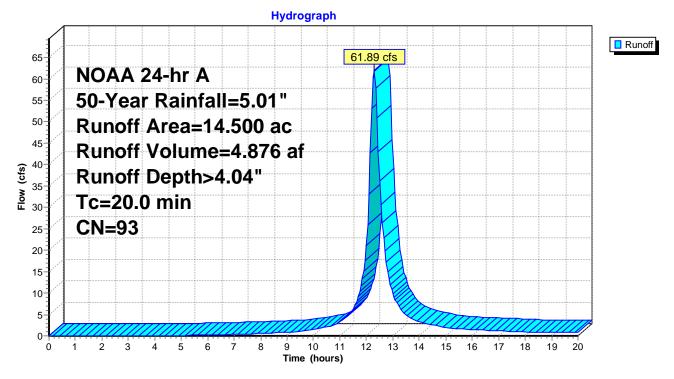
Summary for Subcatchment 19S: POST A2

Runoff = 61.89 cfs @ 12.29 hrs, Volume= Routed to Pond 2P : DRY BASIN B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area	(ac)	CN	Desc	cription					
1.	400	98	Wate	er Surface	HSG D				
13.	100	92	1/8 a	cre lots, 6	5% imp, HS	SG D			
14.	500	93	Weig	ghted Aver	age				
4.	585		31.62	31.62% Pervious Area					
9.	9.915		68.38	8% Imperv	vious Area				
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description			
20.0						Direct Entry,			

Subcatchment 19S: POST A2



Summary for Subcatchment 20S: OFFSITE A

Runoff = 14.84 cfs @ 12.23 hrs, Volume= Routed to Pond 1P : DRY BASIN A

n

2 3

4 5

6 7

8

9

10 11

Time (hours)

0.940 af, Depth> 2.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area (ac) CN Description	
4.100 80 >75% Grass cover, Good, H	
4.100 100.00% Pervious Area	
Tc Length Slope Velocity Capacity E (min) (feet) (ft/ft) (ft/sec) (cfs)	Description
14.6 E	Direct Entry,
Subcatchme	ent 20S: OFFSITE A
Hydrog	jraph
16	14.84 cfs
¹⁵ NOAA 24-hr A	
¹³ 50-Year Rainfall=5.01"	
¹² Runoff Area=4.100 ac	
Runoff Volume=0.940 af	
ີ [ື] Bunoff Depth>2.75"	
[№] ⁸ / ₇ Tc=14.6 min	
6 CN=80	
5	
4	
3	

12 13 14

15 16 17

18

19

20

2.258 af, Depth> 3.93"

Summary for Subcatchment 21S: POST B1

Runoff = 28.96 cfs @ 12.29 hrs, Volume= Routed to Pond 3P : DRY BASIN C

CN=92

1

0

2 3

5

4

7

6

8

9

10 11

Time (hours)

12 13 14

15 16

17

18 19

20

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

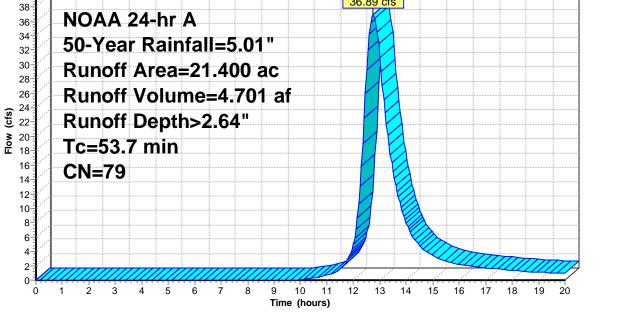
Area (ac) CN Description	
6.900 92 1/8 acre lots, 65% imp, HSG I)
2.415 35.00% Pervious Area	
4.485 65.00% Impervious Area	
	scription
(min) (feet) (ft/ft) (ft/sec) (cfs) 20.0 Dir	ect Entry,
20.0	oot =:
Subcatchme	nt 21S: POST B1
Hydrogra	ph
32	Runoff
	28.96 cfs
28 NOAA 24-hr A	
²⁶ 50-Year Rainfall=5.01"	
Runoff Area=6.900 ac	
²⁰ Runoff Volume=2.258 af	
[∰] ¹⁸ Runoff Depth>3.93" [№] 14 Tc=20.0 min	
⁸ ¹⁶ Tc=20.0 min	

Summary for Subcatchment 22S: POST B2

Runoff = 36.89 cfs @ 12.74 hrs, Volume= Routed to Pond 5P : WET BASIN E 4.701 af, Depth> 2.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area (ac) CN	Description
8.100 80	
13.300 79	Woods, Fair, HSG D
21.400 79	Weighted Average
21.400	100.00% Pervious Area
- 1 4	
Tc Length	Slope Velocity Capacity Description
(min) (feet)	(ft/ft) (ft/sec) (cfs)
53.7	Direct Entry,
	Subcatchment 22S: POST B2
	Hydrograph
40	36.89 cfs
38 36 NOA	A 24-hr A



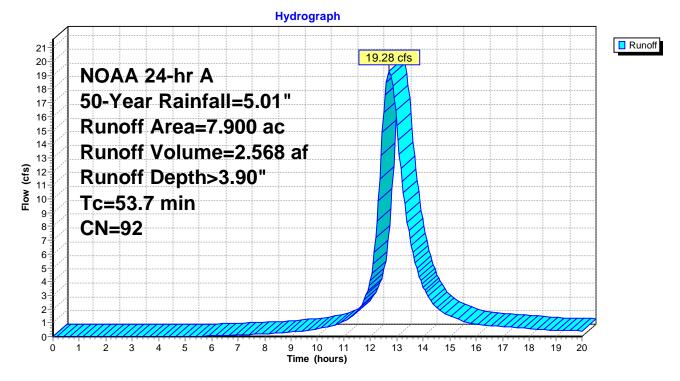
Summary for Subcatchment 23S: POST B3

Runoff	=	19.28 cfs @	12.71 hrs,	Volume=	2.568 af,	Depth>	3.90"
Route	d to Po	ond 4P : DRY B	ASIN D			-	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

A	Area (ac)	CN	Descr	ription			
	2.700	80	>75%	Grass co	over, Good,	HSG D	
	2.900	98	Wate	r Surface,	HSG D		
	2.300	98	Paved	d roads w	/curbs & se	wers, HSG D	
	7.900	92	Weigl	hted Aver	age		
	2.700		34.18	% Pervio	us Area		
	5.200		65.82	% Imperv	vious Area		
<u>(n</u>	Tc Lenç nin) (fe		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description	
5	3.7					Direct Entry,	

Subcatchment 23S: POST B3



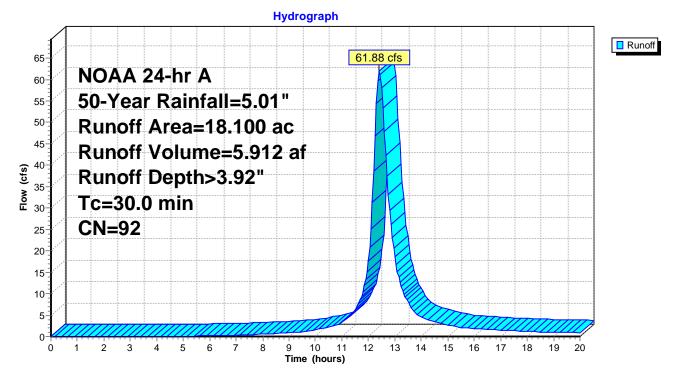
Summary for Subcatchment 24S: POST B4

Runoff = 61.88 cfs @ 12.41 hrs, Volume= 5.912 af, Depth> 3.92" Routed to Pond 5P : WET BASIN E

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area ((ac)	CN	Desc	ription		
13.0	000	92	1/8 a	cre lots, 6	5% imp, HS	ISG D
1.0	600	80	>75%	6 Grass co	over, Good,	d, HSG D
3.	500	98	Wate	er Surface	HSG D	
18.1	100	92	Weig	hted Aver	age	
6.	150		33.98	3% Pervio	us Area	
11.9	950		66.02	2% Imperv	vious Area	
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	
30.0						Direct Entry,

Subcatchment 24S: POST B4



1.351 af, Depth> 2.75"

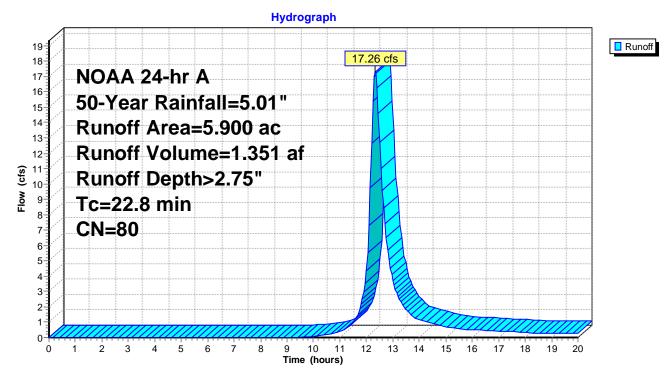
Summary for Subcatchment 25S: OFFSITE B1

Runoff = 17.26 cfs @ 12.33 hrs, Volume= Routed to Pond 4P : DRY BASIN D

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area	(ac)	CN	Desc	cription		
5.	900	80	>75%	6 Grass co	over, Good,	, HSG D
5.	900		100.0	00% Pervi	ous Area	
Τ.	1				0	Description
Тс	Lengt	n t	Slope	Velocity	Capacity	Description
(min)	(fee	t)	(ft/ft)	(ft/sec)	(cfs)	
22.8						Direct Entry,

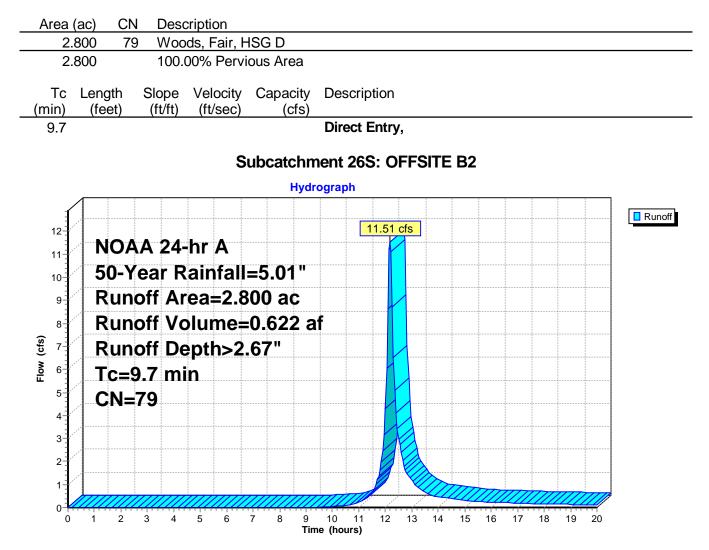
Subcatchment 25S: OFFSITE B1



Summary for Subcatchment 26S: OFFSITE B2

Runoff = 11.51 cfs @ 12.17 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.622 af, Depth> 2.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"



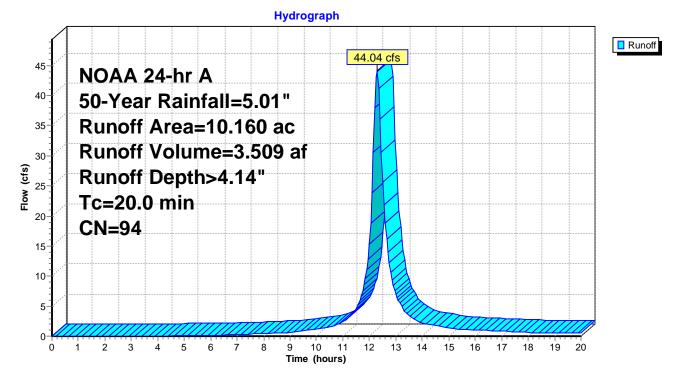
Summary for Subcatchment 27S: POST C1

Runoff = 44.04 cfs @ 12.29 hrs, Volume= Routed to Pond 6P : DRY BASIN F 3.509 af, Depth> 4.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area (ac)	CN	Description		
1.200	98	Paved roads w	/curbs & se	ewers, HSG D
2.800	98	Water Surface	, HSG D	
5.500	92	1/8 acre lots, 6	5% imp, HS	ISG D
0.660	80	>75% Grass c	over, Good,	d, HSG D
10.160	94	Weighted Ave	rage	
2.585		25.44% Pervio	us Area	
7.575		74.56% Imperv	vious Area	
Tc Ler	ngth	Slope Velocity	Capacity	Description
(min) (f	eet)	(ft/ft) (ft/sec)	(cfs)	
20.0				Direct Entry,

Subcatchment 27S: POST C1



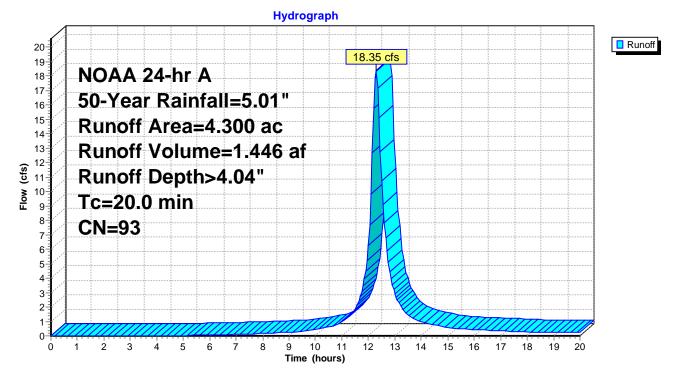
Summary for Subcatchment 28S: POST C2

Runoff = 18.35 cfs @ 12.29 hrs, Volume= Routed to Pond 7P : WET BASIN G 1.446 af, Depth> 4.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area	(ac)	CN	Desc	cription		
3.	700	92	1/8 a	cre lots, 6	5% imp, HS	SG D
0.	600	98	Wate	er Surface	HSG D	
4.	300	93	Weig	ghted Aver	age	
1.	295		30.12	2% Pervio	us Area	
3.	005		69.88	8% Imperv	vious Area	
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 28S: POST C2



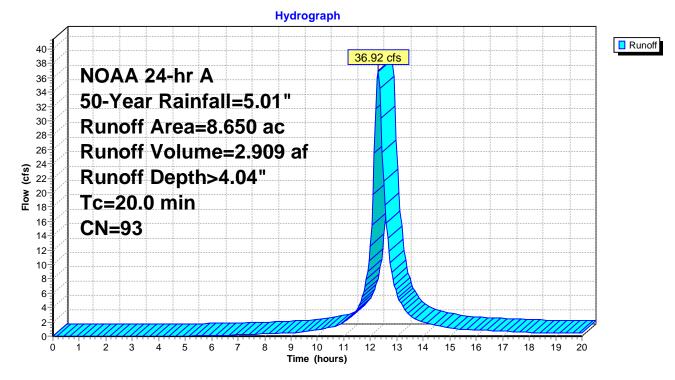
Summary for Subcatchment 29S: POST C3

Runoff = 36.92 cfs @ 12.29 hrs, Volume= Routed to Pond 8P : DRY BASIN H 2.909 af, Depth> 4.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area	(ac)	CN	Desc	ription			
1.4	400	98	Pave	d roads w	/curbs & se	ewers, HSG D	
1.	600	98	Wate	er Surface	HSG D		
4.9	900	92	1/8 a	cre lots, 6	5% imp, HS	SG D	
0.1	750	80	>75%	6 Grass co	over, Good,	HSG D	
8.	650	93	Weig	hted Aver	age		
2.4	465		28.50	0% Pervio	us Area		
6.	185		71.50)% Imperv	vious Area		
_							
Tc	Lengt		Slope	Velocity	Capacity	Description	
(min)	(fee	t)	(ft/ft)	(ft/sec)	(cfs)		
20.0						Direct Entry,	

Subcatchment 29S: POST C3



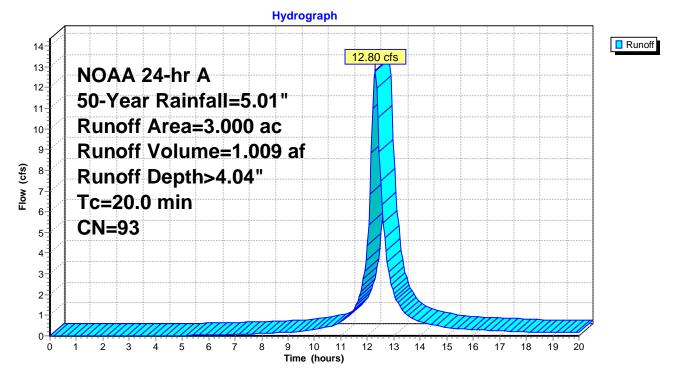
Summary for Subcatchment 30S: POST C4

Runoff = 12.80 cfs @ 12.29 hrs, Volume= Routed to Pond 9P : DRY BASIN I 1.009 af, Depth> 4.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 50-Year Rainfall=5.01"

Area	(ac)	CN	Desc	cription		
2.	600	92	1/8 a	cre lots, 6	5% imp, HS	SG D
0.	400	98	Wate	er Surface	HSG D	
3.	000	93	Weig	ghted Aver	age	
0.	910		30.3	3% Pervio	us Area	
2.	090		69.67	7% Imperv	ious Area	
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 30S: POST C4



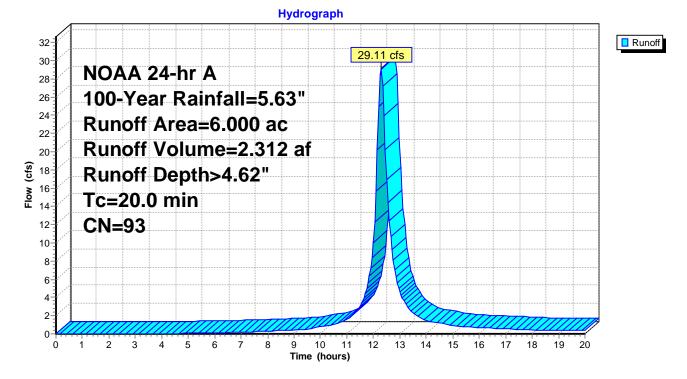
Summary for Subcatchment 18S: POST A1

Runoff = 29.11 cfs @ 12.29 hrs, Volume= 2.312 af, Depth> 4.62" Routed to Pond 1P : DRY BASIN A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area	(ac)	CN	Desc	cription		
0.	.800	98	Wate	er Surface	HSG D	
5.	.200	92	1/8 a	cre lots, 6	5% imp, HS	ISG D
6.	.000	93	Weig	ghted Aver	age	
1.	.820		30.3	3% Pervio	us Area	
4.	.180		69.67	7% Imperv	vious Area	
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	I
20.0						Direct Entry,

Subcatchment 18S: POST A1



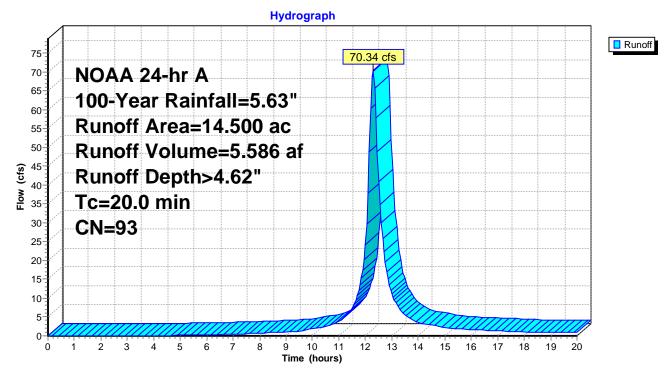
Summary for Subcatchment 19S: POST A2

Runoff = 70.34 cfs @ 12.29 hrs, Volume= Routed to Pond 2P : DRY BASIN B 5.586 af, Depth> 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area	(ac)	CN	Desc	ription		
1.	400	98	Wate	er Surface	HSG D	
13.	100	92	1/8 a	cre lots, 6	5% imp, HS	SG D
14.	500	93	Weig	hted Aver	age	
4.	585		31.62	2% Pervio	us Area	
9.	915		68.38	3% Imperv	vious Area	
Tc	Lengt		Slope	Velocity	Capacity	Description
(min)	(fee	τ)	(ft/ft)	(ft/sec)	(cfs)	
20.0						Direct Entry,

Subcatchment 19S: POST A2



1.120 af, Depth> 3.28"

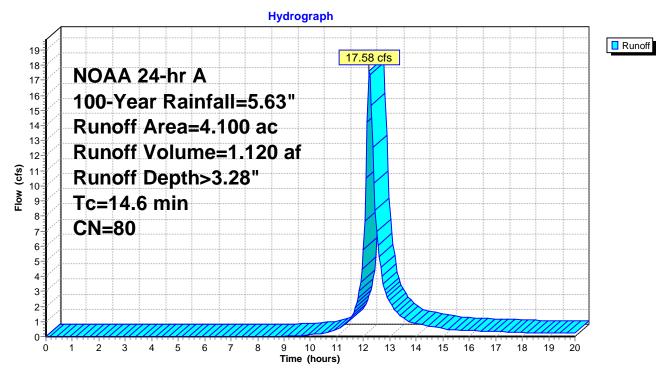
Summary for Subcatchment 20S: OFFSITE A

Runoff = 17.58 cfs @ 12.23 hrs, Volume= Routed to Pond 1P : DRY BASIN A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area	(ac)	CN	Desc	ription		
4	.100	80	>75%	6 Grass co	over, Good,	I, HSG D
4	.100		100.0	00% Pervi	ous Area	
Tc (min)	Leng (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.6						Direct Entry,





Summary for Subcatchment 21S: POST B1

33.00 cfs @ 12.29 hrs, Volume= 2.595 af, Depth> 4.51" Runoff = Routed to Pond 3P : DRY BASIN C

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

6.900 92 1/8 acre lots, 65% imp, HSG D	
2.415 35.00% Pervious Area 4.485 65.00% Impervious Area	
	scription
.0 Dire	ect Entry,
Subcatchmer	nt 21S: POST B1
Hydrograp	uh and a second s
6 4	33.00 cfs
NOAA 24-hr A	
100-Year Rainfall=5.63	
Runoff Area=6.900 ac	
Runoff Volume=2.595 af	
Runoff Depth>4.51	
Tc=20.0 min	
4 CN=92	
2	
8	
6	
2	

Summary for Subcatchment 22S: POST B2

Runoff = 44.03 cfs @ 12.73 hrs, Volume= Routed to Pond 5P : WET BASIN E

20-

15

10-

5

0-

0 1

CN=79

3

4 5

6 7 8

9 10 11

Time (hours)

12

13 14

15 16

17 18

19 20

2

5.618 af, Depth> 3.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area (ac)CNDescription8.10080>75% Grass cover, Good, HSG D13.30079Woods, Fair, HSG D	
21.40079Weighted Average21.400100.00% Pervious Area	
Tc Length Slope Velocity Capacity Description (min) (feet) (ft/ft) (ft/sec) (cfs)	
53.7 Direct Entry,	
Subcatchment 22S: POST B2	
Hydrograph	· · · · · · · · · · · · · · · · · · ·
44.03 cfs	Runoff
⁴⁵ NOAA 24-hr A	
⁴⁰ 100-Year Rainfall=5.63"	
³⁵ Runoff Area=21.400 ac	
_ ₃₀ Runoff Volume=5.618 af	
ଞି ₂₅ Runoff Depth>3.15" Tc=53.7 min	
훈 Tc=53.7 min	

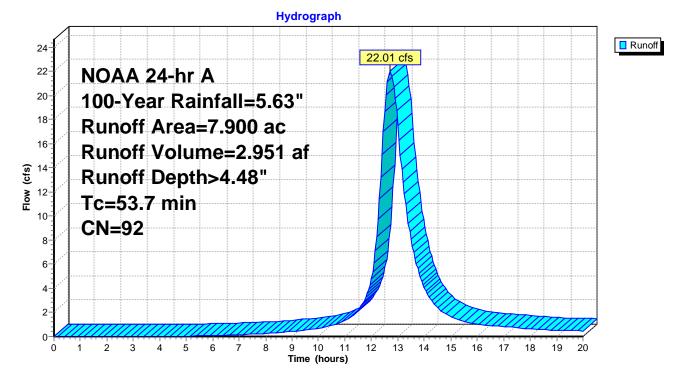
Summary for Subcatchment 23S: POST B3

Runoff	=	22.01 cfs @	12.71 hrs,	Volume=	2.951 af,	Depth>	4.48"
Routed	d to Po	nd 4P : DRY B	ASIN D			-	

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area ((ac)	CN	Desc	ription		
2.7	700	80	>75%	6 Grass co	over, Good,	d, HSG D
2.9	900	98	Wate	er Surface	, HSG D	
2.3	300	98	Pave	ed roads w	/curbs & se	sewers, HSG D
7.9	900	92	Weig	hted Aver	age	
2.7	700		34.18	3% Pervio	us Area	
5.2	200		65.82	2% Imperv	vious Area	l
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	
53.7						Direct Entry,

Subcatchment 23S: POST B3



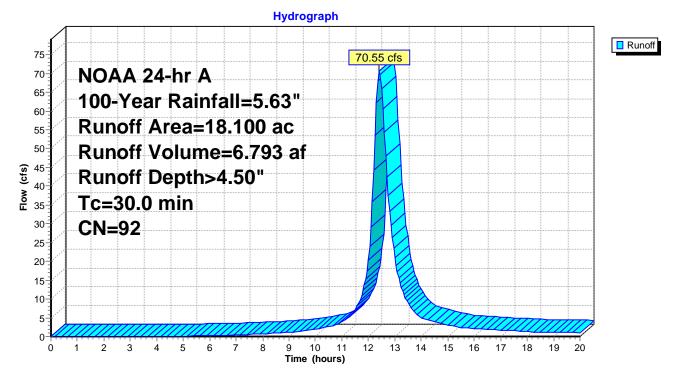
Summary for Subcatchment 24S: POST B4

Runoff = 70.55 cfs @ 12.41 hrs, Volume= Routed to Pond 5P : WET BASIN E 6.793 af, Depth> 4.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area	(ac)	CN	Desc	ription		
13.	000	92	1/8 a	cre lots, 6	5% imp, HS	ISG D
1.	600	80	>75%	6 Grass co	over, Good,	d, HSG D
3.	500	98	Wate	er Surface	HSG D	
18.	100	92	Weig	hted Aver	age	
6.	150		33.98	3% Pervio	us Area	
11.9	950		66.02	2% Imperv	vious Area	1
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	
30.0						Direct Entry,

Subcatchment 24S: POST B4



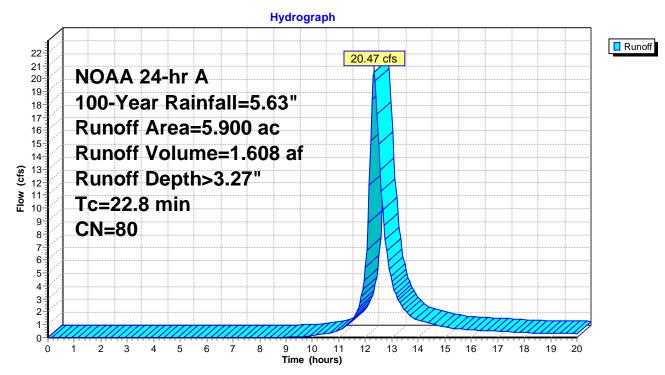
Summary for Subcatchment 25S: OFFSITE B1

Runoff = 20.47 cfs @ 12.33 hrs, Volume= Routed to Pond 4P : DRY BASIN D 1.608 af, Depth> 3.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area	(ac)	CN	Desc	ription		
5.	900	80	>75%	6 Grass co	over, Good,	I, HSG D
5.	900		100.0	00% Pervi	ous Area	
Та	Long	h (Slope	Vologity	Conosity	Description
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.8			/	· · · /		Direct Entry,

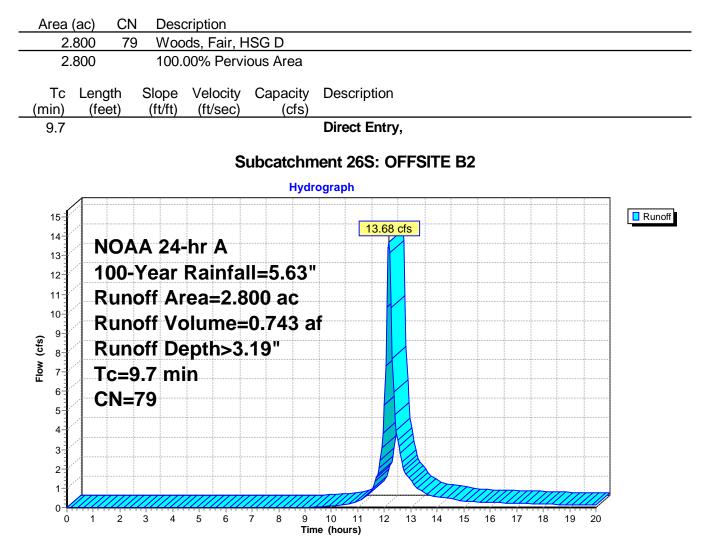
Subcatchment 25S: OFFSITE B1



Summary for Subcatchment 26S: OFFSITE B2

Runoff = 13.68 cfs @ 12.17 hrs, Volume= Routed to Pond 5P : WET BASIN E 0.743 af, Depth> 3.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"



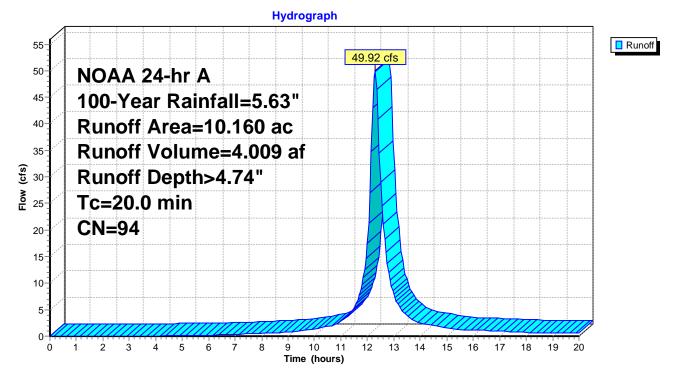
Summary for Subcatchment 27S: POST C1

Runoff = 49.92 cfs @ 12.29 hrs, Volume= Routed to Pond 6P : DRY BASIN F 4.009 af, Depth> 4.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area (ac) CN	Description		
1.200	D 98	Paved roads w	/curbs & se	ewers, HSG D
2.800) 98	Water Surface	, HSG D	
5.500) 92	1/8 acre lots, 6	5% imp, HS	ISG D
0.660	0 80	>75% Grass c	over, Good,	I, HSG D
10.160	0 94	Weighted Ave	rage	
2.585	5	25.44% Pervic	us Area	
7.575	5	74.56% Imper	vious Area	
	ength (feet)	Slope Velocity (ft/ft) (ft/sec)	Capacity (cfs)	Description
20.0				Direct Entry,

Subcatchment 27S: POST C1



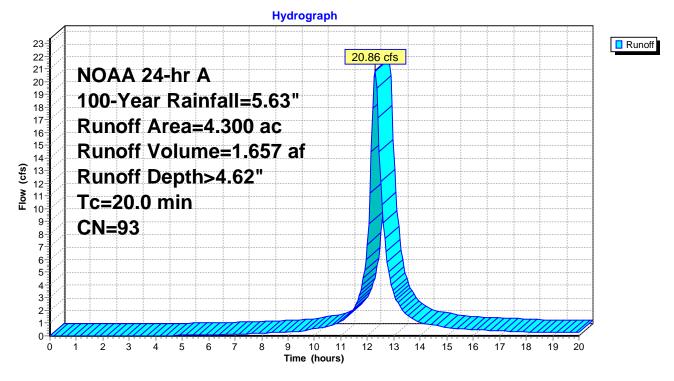
Summary for Subcatchment 28S: POST C2

Runoff = 20.86 cfs @ 12.29 hrs, Volume= Routed to Pond 7P : WET BASIN G 1.657 af, Depth> 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area	(ac)	CN	Desc	ription		
3.	700	92	1/8 a	cre lots, 6	5% imp, HS	SG D
0.	600	98	Wate	er Surface	HSG D	
4.	300	93	Weig	hted Aver	age	
1.	295		30.12	2% Pervio	us Area	
3.	005		69.88	3% Imperv	vious Area	
Tc (min)	Lengt (feet		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.0						Direct Entry,

Subcatchment 28S: POST C2



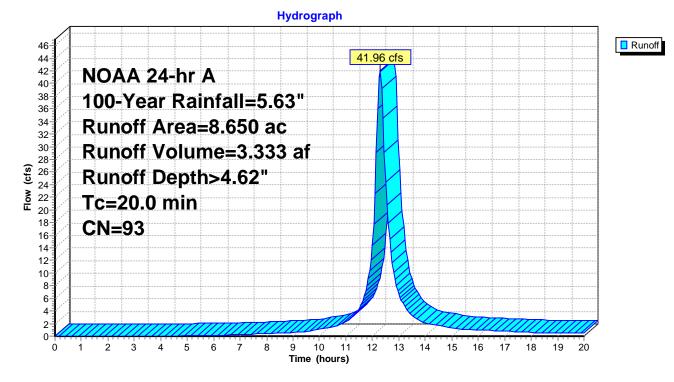
Summary for Subcatchment 29S: POST C3

Runoff = 41.96 cfs @ 12.29 hrs, Volume= Routed to Pond 8P : DRY BASIN H 3.333 af, Depth> 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area (ac)) CN	Description			
1.400) 98	Paved roads w	/curbs & se	ewers, HSG D	
1.600) 98	Water Surface	, HSG D		
4.900) 92	1/8 acre lots, 6	5% imp, H	SG D	
0.750) 80	>75% Grass c	over, Good,	, HSG D	
8.650) 93	Weighted Ave	age		
2.465	5	28.50% Pervio	us Area		
6.185	5	71.50% Imper	ious Area/		
Tc Le	ength	Slope Velocity	Capacity	Description	
(min) ((feet)	(ft/ft) (ft/sec)	(cfs)	•	
20.0				Direct Entry,	

Subcatchment 29S: POST C3



Summary for Subcatchment 30S: POST C4

Runoff = 14.55 cfs @ 12.29 hrs, Volume= Routed to Pond 9P : DRY BASIN I 1.156 af, Depth> 4.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs NOAA 24-hr A 100-Year Rainfall=5.63"

Area	(ac)	CN	Desc	cription		
2.	600	92	1/8 a	cre lots, 6	5% imp, HS	ISG D
0.	400	98	Wate	er Surface	HSG D	
3.	000	93	Weig	ghted Aver	age	
0.	910		30.33	3% Pervio	us Area	
2.	090		69.67	7% Imperv	vious Area	
Tc (min)	Lengt (fee		Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	
20.0						Direct Entry,

Subcatchment 30S: POST C4

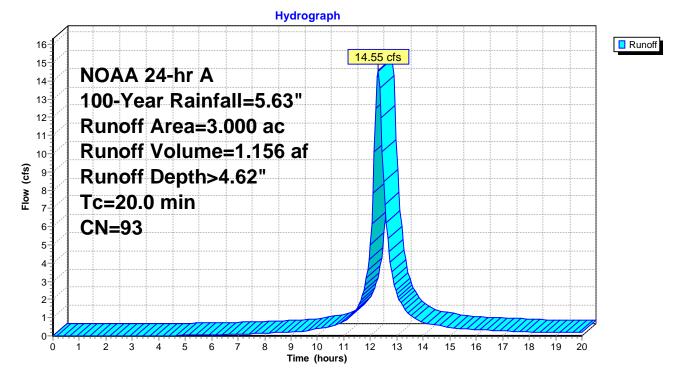




Exhibit 5 – Outlet Capacity Calculations



Summary for Pond 1P: DRY BASIN A

Inflow Area	a =	24.600 ac, 8	57.30% Impervious	s, Inflow Depth > 0.92" for 1-Year event	
Inflow	=	13.52 cfs @	12.27 hrs, Volum	ne= 1.895 af	
Outflow	=	3.05 cfs @	13.47 hrs, Volum	ne= 1.516 af, Atten= 77%, Lag= 71.8 m	in
Primary	=	3.05 cfs @	13.47 hrs, Volum	ne= 1.516 af	
Routed	to Link	: 12L : (new Li	nk)		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 936.61' @ 13.47 hrs Surf.Area= 21,399 sf Storage= 24,855 cf

Plug-Flow detention time= 120.2 min calculated for 1.516 af (80% of inflow) Center-of-Mass det. time= 64.8 min (926.7 - 861.9)

Volume	Invei	rt Avail.Sto	rage Storage	Description	
#1	934.70)' 109,7 <u></u>	50 cf Custom	Stage Data (Pr	rismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.7	70	0	0	0	
935.0	00	3,347	502	502	
936.0	00	20,147	11,747	12,249	
937.0	00	22,210	21,179	33,428	
938.0	00	24,332	23,271	56,699	
939.0	00	26,511	25,422	82,120	
940.0	00	28,749	27,630	109,750	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	934.70'	12.0" Round	Culvert L= 10	00.0' Ke= 0.600
			Inlet / Outlet I	nvert= 934.70' /	/ 934.50' S= 0.0020 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 s	sf
#2	Device 1	934.70'	3.0" Vert. Ori	fice C= 0.600	Limited to weir flow at low heads
#3	Device 1	936.10'	24.0" W x 8.0	" H Vert. Windo	ows X 3.00 C= 0.600
			Limited to we	ir flow at low he	eads
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate	C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.05 cfs @ 13.47 hrs HW=936.61' TW=0.00' (Dynamic Tailwater)

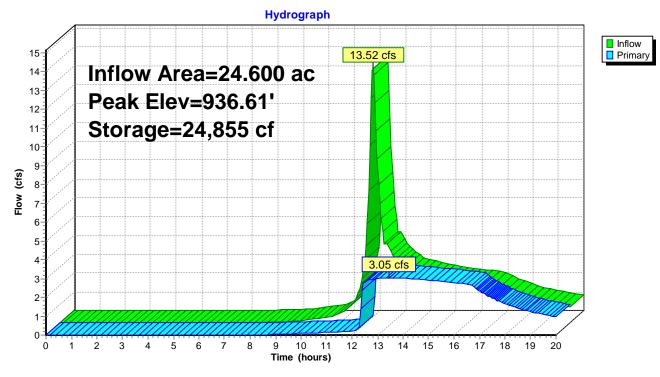
1=Culvert (Barrel Controls 3.05 cfs @ 3.88 fps)

2=Orifice (Passes < 0.32 cfs potential flow)

-3=Windows (Passes < 6.95 cfs potential flow)

-4=Grate (Controls 0.00 cfs)

Prepared by Kimley-Horn & Associates HydroCAD® 10.20-2b s/n 02344 © 2021 HydroCAD Software Solutions LLC



Pond 1P: DRY BASIN A

Summary for Pond 2P: DRY BASIN B

Inflow Are	ea =	14.500 ac, 6	8.38% Impervious	, Inflow Depth >	1.43" for 1-Year event
Inflow	=	23.13 cfs @	12.29 hrs, Volum	e= 1.725 a	f
Outflow	=	1.93 cfs @	14.22 hrs, Volum	e= 0.962 a	f, Atten= 92%, Lag= 115.8 min
Primary	=	1.93 cfs @	14.22 hrs, Volum	e= 0.962 a	f
Routed	d to Por	nd 1P : DRY BA	ASIN A		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 936.65' @ 13.58 hrs Surf.Area= 47,285 sf Storage= 53,187 cf

Plug-Flow detention time= 215.3 min calculated for 0.962 af (56% of inflow) Center-of-Mass det. time= 158.0 min (936.5 - 778.5)

Volume	Inver	rt Avail.Sto	rage Storage	Description		
#1	935.00)' 223,47	79 cf Custom	Stage Data (Pri	i smatic) Li	isted below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
935.0	00	0	0	0		
936.0	00	45,956	22,978	22,978		
937.0	00	48,007	46,982	69,960		
938.0	00	50,097	49,052	119,012		
939.0	00	52,226	51,162	170,173		
940.0	00	54,386	53,306	223,479		
Device	Deutine	la		_		
Device	Routing	Invert	Outlet Device	-		
#1	Primary	935.00'	24.0" Round	Culvert L= 15	0.0' Ke=	0.600
			Inlet / Outlet I	nvert= 935.00' /	934.70' \$	S= 0.0020 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 3.14 st	f	
#2	Device 1	935.00'	24.0" Vert. Or	rifice/Grate C=	= 0.600 L	imited to weir flow at low heads
#3	Device 1	937.00'	24.0" W x 6.0	" H Vert. Windo	w C= 0.0	600
			Limited to we	ir flow at low he	ads	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate	C= 0.600	Limited to weir flow at low heads

Primary OutFlow Max=1.99 cfs @ 14.22 hrs HW=936.62' TW=936.57' (Dynamic Tailwater)

1=**Culvert** (Outlet Controls 1.99 cfs @ 1.00 fps)

2=Orifice/Grate (Passes 1.99 cfs of 2.92 cfs potential flow)

-3=Window (Controls 0.00 cfs)

4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 23.13 cfs Primary Inflow Area=14.500 ac 24 22-Peak Elev=936.65' 20 Storage=53,187 cf 18-16 **How (cfs)** 10-8-6 4 1.93 cfs 2 0-Ó 1 2 ż 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 2P: DRY BASIN B

Summary for Pond 3P: DRY BASIN C

Inflow Are	a =	6.900 ac, 6	65.00% Impervious,	Inflow Depth > 1.35" for 1-Year event		
Inflow	=	10.47 cfs @	12.30 hrs, Volume	= 0.775 af		
Outflow	=	0.96 cfs @	13.42 hrs, Volume	= 0.382 af, Atten= 91%, Lag= 67.6 min		
Primary	=	0.96 cfs @	13.42 hrs, Volume	= 0.382 af		
Routed to Pond 4P : DRY BASIN D						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.23' @ 13.48 hrs Surf.Area= 14,101 sf Storage= 21,941 cf

Plug-Flow detention time= 181.1 min calculated for 0.381 af (49% of inflow) Center-of-Mass det. time= 121.1 min (902.9 - 781.8)

Volume	Inve	rt Avail.Sto	rage Storage	Description	
#1	935.00	0' 49,84	47 cf Custom	Stage Data (Prismati	c) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0	0	0	0	0	
936.0	0	11,869	5,935	5,935	
937.0	0	13,659	12,764	18,699	
938.0	0	15,549	14,604	33,303	
939.0	0	17,539	16,544	49,847	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	935.00'	24.0" Round	Culvert L= 350.0' k	Ke= 0.600
	-		Inlet / Outlet	nvert= 935.00' / 934.5	0' S= 0.0014 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 3.14 sf	
#2	Device 1	935.00'	4.0" Vert. Ori	ice/Grate C= 0.600	Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	H Vert. Windows	C= 0.600
			Limited to we	r flow at low heads	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate C= 0.6	00 Limited to weir flow at low heads

Primary OutFlow Max=0.96 cfs @ 13.42 hrs HW=937.23' TW=935.95' (Dynamic Tailwater)

1=Culvert (Passes 0.96 cfs of 10.41 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.48 cfs @ 5.45 fps)

-3=Windows (Orifice Controls 0.48 cfs @ 1.55 fps)

-4=Grate (Controls 0.00 cfs)

11

10-

9-

8-

2 3 4

5

6 7

8 9

10 11

Time (hours)

12 13 14 15 16 17 18 19

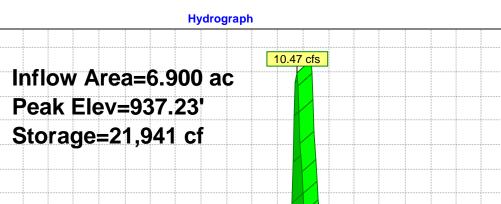
Elow (cts)

20

Inflow

Primary

Prepared by Kimley-Horn & Associates HydroCAD® 10.20-2b s/n 02344 © 2021 HydroCAD Software Solutions LLC



0.96 cfs

Pond 3P: DRY BASIN C

Summary for Pond 4P: DRY BASIN D

Inflow Area	=	20.700 ac, 4	46.79% Imperviou	s, Inflow Depth >	• 0.91"	for 1-Ye	ear event
Inflow =	=	9.44 cfs @	12.62 hrs, Volum	ne= 1.576	6 af		
Outflow =	=	0.41 cfs @	12.74 hrs, Volum	ie= 0.278	3 af, Atte	en= 96%,	Lag= 7.2 min
Primary =	=	0.41 cfs @	12.74 hrs, Volum	ne= 0.278	3 af		
Routed to Pond 5P : WET BASIN E							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 936.28' @ 20.00 hrs Surf.Area= 61,724 sf Storage= 56,535 cf

Plug-Flow detention time= 223.5 min calculated for 0.278 af (18% of inflow) Center-of-Mass det. time= 107.5 min (940.3 - 832.9)

Volume	Inve	rt Avail.Sto	rage Storage	e Description		
#1	934.50	0' 237,62	28 cf Custon	n Stage Data (Pri	Prismatic) Listed below (Recalc)	_
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store)	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
934.5	60	0	0	0)	
935.0	0	12,225	3,056	3,056	3	
936.0	0	60,758	36,492	39,548	3	
937.0	0	64,240	62,499	102,047	7	
938.0	0	67,771	66,006	168,052	2	
939.0	0	71,380	69,576	237,628	}	
Device	Routing	Invert	Outlet Device	es		_
#1	Primary	934.50'	24.0" Round	d Culvert L= 40	00.0' Ke= 0.600	
			Inlet / Outlet	Invert= 934.50' /	/ 934.00' S= 0.0013 '/' Cc= 0.900	
			n= 0.013, Fl	ow Area= 3.14 st	sf	
#2	Device 1	934.50'	4.0" Vert. Or	ifice/Grate C=	= 0.600 Limited to weir flow at low heads	
#3	Device 1	937.00'	16.0" W x 6.0	0" H Vert. Windo	lows C= 0.600	
			Limited to we	eir flow at low he	ieads	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate (C= 0.600 Limited to weir flow at low heads	

Primary OutFlow Max=0.40 cfs @ 12.74 hrs HW=935.64' TW=934.73' (Dynamic Tailwater)

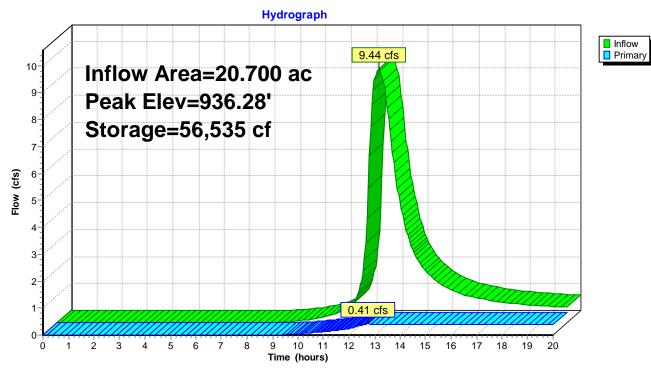
1=Culvert (Passes 0.40 cfs of 3.34 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.40 cfs @ 4.57 fps)

-3=Windows (Controls 0.00 cfs)

4=Grate (Controls 0.00 cfs)

Prepared by Kimley-Horn & Associates HydroCAD® 10.20-2b s/n 02344 © 2021 HydroCAD Software Solutions LLC



Pond 4P: DRY BASIN D

Summary for Pond 5P: WET BASIN E

Inflow Are	a =	63.000 ac, 34.34% Impervious, Inflow Depth > 0.67" for 1-	Year event			
Inflow	=	27.75 cfs @ 12.46 hrs, Volume= 3.495 af				
Outflow	=	1.01 cfs @ 20.00 hrs, Volume= 0.602 af, Atten= 96%	, Lag= 452.2 min			
Primary	=	1.01 cfs @ 20.00 hrs, Volume= 0.602 af				
Routed to Link 10L : (new Link)						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 935.40' @ 20.00 hrs Surf.Area= 94,280 sf Storage= 125,986 cf

Plug-Flow detention time= 270.2 min calculated for 0.602 af (17% of inflow) Center-of-Mass det. time= 164.4 min (981.8 - 817.4)

Volume	Inve	rt Avail.Sto	rage Storage	e Description	
#1	934.00	D' 507,64	47 cf Custor	n Stage Data (Pri	rismatic) Listed below (Recalc)
Elevatio	n S	Surf.Area	Inc.Store	Cum.Store	
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.0	0	85,433	0	0	
935.0	0	91,702	88,568	88,568	
936.0	0	98,109	94,906	183,473	
937.0	0	104,658	101,384	284,857	
938.0	0	111,356	108,007	392,864	
939.0	0	118,210	114,783	507,647	
Device	Routing	Invert	Outlet Devic	es	
#1	Primary	934.00'	24.0" Roun	d Culvert L= 100	00.0' Ke= 0.600
	-		Inlet / Outlet	Invert= 934.00' /	/ 933.43' S= 0.0057 '/' Cc= 0.900
			n= 0.013, Fl	low Area= 3.14 st	sf
#2	Device 1	934.00'	6.0" Vert. 6"	Orifice C= 0.60	500 Limited to weir flow at low heads
#3	Device 1	936.50'	16.0" W x 6.	0" H Vert. Windo	ow C= 0.600
			Limited to w	eir flow at low he	eads
#4	Device 1	938.60'	24.0" x 24.0'	' Horiz. Grate (C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.01 cfs @ 20.00 hrs HW=935.40' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 1.01 cfs of 7.71 cfs potential flow)

2=6" Orifice (Orifice Controls 1.01 cfs @ 5.17 fps)

4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 27.75 cfs Primary 30 Inflow Area=63.000 ac 28-26 Peak Elev=935.40' 24 Storage=125,986 cf 22-20 18-Flow (cfs) 16 14 12-10 8-6 4 1.01 cfs 2 0-Ó 1 2 3 4 5 6 7 8 ģ 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 5P: WET BASIN E

Summary for Pond 6P: DRY BASIN F

Inflow Are	a =	26.110 ac, 72.21% Impervious, Inflow Depth > 0.91" for 1-Year event				
Inflow	=	17.61 cfs @ 12.29 hrs, Volume= 1.986 af				
Outflow	=	0.43 cfs @ 20.00 hrs, Volume= 0.282 af, Atten= 98%, Lag= 462.4 min				
Primary	=	0.43 cfs @ 20.00 hrs, Volume= 0.282 af				
Routed to Link 11L : (new Link)						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 936.77' @ 20.00 hrs Surf.Area= 61,278 sf Storage= 74,218 cf

Plug-Flow detention time= 268.5 min calculated for 0.281 af (14% of inflow) Center-of-Mass det. time= 118.7 min (939.4 - 820.7)

Volume	Inve	rt Avail.Sto	rage Storage	Description	
#1	935.0	D' 188,5 <u>4</u>	46 cf Custom	Stage Data (Prism	natic) Listed below (Recalc)
_		~ ~ ^		a a	
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0	0	0	0	0	
936.0	0	56,901	28,451	28,451	
937.0	0	62,552	59,727	88,177	
938.0	0	68,273	65,413	153,590	
938.5	0	71,552	34,956	188,546	
Device	Routing	Invert	Outlet Device	6	
#1	Primary	935.00'	24.0" Round	Culvert L= 100.0)' Ke= 0.600
	-		Inlet / Outlet Ir	nvert= 935.00' / 93	34.50' S= 0.0050 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 3.14 sf	
#2	Device 1	935.00'	3.5" Vert. Orif	ice C= 0.600 Li	imited to weir flow at low heads
#3	Device 1	936.75'	20.0" W x 6.0'	H Vert. Window	C= 0.600
			Limited to wei	r flow at low heads	S
#4	Device 1	937.50'	24.0" x 24.0"	Horiz. Grate C=	0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.43 cfs @ 20.00 hrs HW=936.77' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.43 cfs of 10.70 cfs potential flow)

2=Orifice (Orifice Controls 0.41 cfs @ 6.14 fps)

-3=Window (Orifice Controls 0.02 cfs @ 0.50 fps)

-4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 17.61 cfs Primary 19-Inflow Area=26.110 ac 18-17-Peak Elev=936.77' 16 15 Storage=74,218 cf 14 13-12 Flow (cfs) 11 10-9-8 7. 6 5 4 3-2 0.43 cfs 1 0-Ó 1 2 ż 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 6P: DRY BASIN F

Summary for Pond 7P: WET BASIN G

Inflow Are	a =	4.300 ac, 6	69.88% Impervious	, Inflow Depth >	1.43"	for 1-Ye	ear event
Inflow	=	6.86 cfs @	12.29 hrs, Volum	e= 0.512	af		
Outflow	=	0.58 cfs @	13.40 hrs, Volum	e= 0.287	af, Atte	en= 92%,	Lag= 66.4 min
Primary	=	0.58 cfs @	13.40 hrs, Volum	e= 0.287	af		
Routed to Pond 6P : DRY BASIN F							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.13' @ 13.54 hrs Surf.Area= 21,411 sf Storage= 13,038 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 93.0 min (871.5 - 778.5)

Volume	Inver	t Avail.Sto	rage Storage	Description		
#1	936.50)' 57,56	66 cf Custom	Stage Data (Pri	smatic) [_isted below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
936.5	50	19,817	0	0		
937.0	00	21,069	10,222	10,222		
938.0	00	23,647	22,358	32,580		
939.0	00	26,326	24,987	57,566		
Device	Routing	Invert	Outlet Device	s		
#1	Primary	935.00'	12.0" Round	Culvert L= 300).0' Ke=	: 0.600
	-		Inlet / Outlet I	nvert= 935.00' /	934.50'	S= 0.0017 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 sf		
#2	Device 1	935.00'	4.0" Vert. Ori	fice C= 0.600	Limited	to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Windo	ws C=	0.600
			Limited to we	ir flow at low hea	ads	
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate C	C= 0.600	Limited to weir flow at low heads

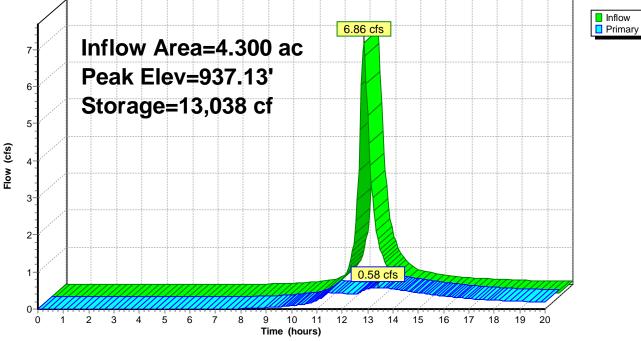
Primary OutFlow Max=0.57 cfs @ 13.40 hrs HW=937.13' TW=936.35' (Dynamic Tailwater)

1=Culvert (Passes 0.57 cfs of 1.68 cfs potential flow)

2=Orifice (Orifice Controls 0.37 cfs @ 4.25 fps)

-3=Windows (Orifice Controls 0.20 cfs @ 1.16 fps) -4=Grate (Controls 0.00 cfs)

HydroCAD® 10.20-2b s/n 02344 © 2021 HydroCAD Software Solutions LLC Pond 7P: WET BASIN G Hydrograph 6.86 cfs



Summary for Pond 8P: DRY BASIN H

Inflow Are	ea =	11.650 ac, 71.03% Impervious, Inflow Depth > 1.32" for 1-Y	ear event
Inflow	=	14.47 cfs @ 12.30 hrs, Volume= 1.281 af	
Outflow	=	0.98 cfs @ 14.42 hrs, Volume= 0.419 af, Atten= 93%,	, Lag= 127.5 min
Primary	=	0.98 cfs @ 14.42 hrs, Volume= 0.419 af	
Routed	d to Por	nd 6P : DRY BASIN F	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 936.81' @ 14.72 hrs Surf.Area= 31,311 sf Storage= 38,427 cf

Plug-Flow detention time= 217.4 min calculated for 0.418 af (33% of inflow) Center-of-Mass det. time= 129.7 min (926.5 - 796.8)

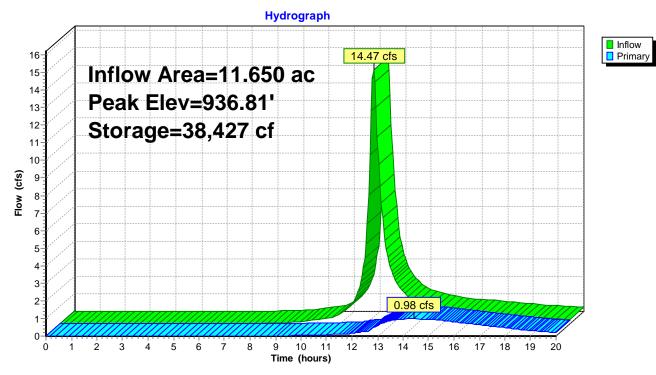
Volume	Inve	rt Avail.Sto	rage Storage	Description	
#1	935.0	0' 115,60	07 cf Custom	Stage Data (Pri	ismatic) Listed below (Recalc)
Elevatio	ND (Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0)0	0	0	0	
936.0	00	28,411	14,206	14,206	
937.0	0	31,986	30,199	44,404	
938.0	00	35,583	33,785	78,189	
939.0	00	39,254	37,419	115,607	
Device	Routing	Invert	Outlet Device	s	
#1	Primary	934.50'	24.0" Round	Culvert L= 20	0.0' Ke= 0.600
	-		Inlet / Outlet I	nvert= 934.50' /	934.50' S= 0.0000 '/' Cc= 0.900
			n= 0.013. Flo	ow Area= 3.14 s	f
#2	Device 1	934.50'			0.600 Limited to weir flow at low heads
#3	Device 1	936.50'		" H Vert. Windo	
				ir flow at low he	
#4	Device 1	938.50'			C= 0.600 Limited to weir flow at low heads
	2011001	500,000			

Primary OutFlow Max=0.98 cfs @ 14.42 hrs HW=936.81' TW=936.49' (Dynamic Tailwater)

1=Culvert (Passes 0.98 cfs of 7.00 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.24 cfs @ 2.73 fps)

-3=Window (Orifice Controls 0.74 cfs @ 1.79 fps)



Pond 8P: DRY BASIN H

Summary for Pond 9P: DRY BASIN I

Inflow Area	a =	3.000 ac, 6	69.67% Impervious	, Inflow Depth >	1.43"	for 1-Ye	ear event
Inflow	=	4.79 cfs @	12.29 hrs, Volum	e= 0.357	af		
Outflow	=	0.75 cfs @	12.44 hrs, Volum	e= 0.252	af, Atte	n= 84%,	Lag= 8.8 min
Primary	=	0.75 cfs @	12.44 hrs, Volum	e= 0.252	af		
Routed	to Pond	3 8P : DRY B	ASIN H				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.05' @ 13.20 hrs Surf.Area= 14,860 sf Storage= 8,182 cf

Plug-Flow detention time= 142.7 min calculated for 0.252 af (71% of inflow) Center-of-Mass det. time= 93.4 min (871.9 - 778.5)

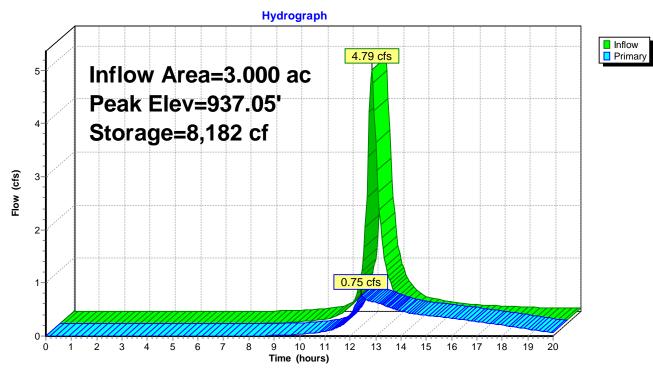
Volume	Inve	rt Avail.Stor	rage Storage	e Description
#1	936.00	0' 40,96	65 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)
936.0)0	0	0	0
937.0	00	14,750	7,375	7,375
938.0	00	16,770	15,760	23,135
939.0	00	18,890	17,830	40,965
Device	Routing	Invert	Outlet Device	es
#1	Primary	936.00'	12.0" Round	Culvert L= 250.0' Ke= 0.600
			Inlet / Outlet I	Invert= 936.00' / 935.00' S= 0.0040 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 sf
#2	Device 1	936.00'	6.0" Vert. Ori	ifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0)" H Vert. Window C= 0.600
			Limited to we	eir flow at low heads
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.72 cfs @ 12.44 hrs HW=936.90' TW=936.33' (Dynamic Tailwater)

1=Culvert (Passes 0.72 cfs of 1.22 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.72 cfs @ 3.64 fps)

-3=Window (Controls 0.00 cfs) **-4=Grate** (Controls 0.00 cfs)



Pond 9P: DRY BASIN I

Summary for Pond 1P: DRY BASIN A

Inflow Are	a =	24.600 ac, 5	57.30% Impervious,	Inflow Depth >	1.22"	for 2-Ye	ear event
Inflow	=	16.71 cfs @	12.27 hrs, Volume	e 2.492 a	af		
Outflow	=	3.50 cfs @	13.55 hrs, Volume	e= 2.063 a	af, Attei	n= 79%,	Lag= 76.9 min
Primary	=	3.50 cfs @	13.55 hrs, Volume	e= 2.063 a	af		
Routed	l to Link	: 12L : (new Li	nk)				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 936.96' @ 13.55 hrs Surf.Area= 22,129 sf Storage= 32,553 cf

Plug-Flow detention time= 129.1 min calculated for 2.058 af (83% of inflow) Center-of-Mass det. time= 76.7 min (950.3 - 873.7)

Volume	Inve	rt Avail.Sto	rage Storage	Description	
#1	934.70	D' 109,75	50 cf Custom	Stage Data (Pr	ismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.7	70	0	0	0	
935.0	00	3,347	502	502	
936.0	00	20,147	11,747	12,249	
937.0	00	22,210	21,179	33,428	
938.0	00	24,332	23,271	56,699	
939.0	00	26,511	25,422	82,120	
940.0	00	28,749	27,630	109,750	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	934.70'	12.0" Round	Culvert L= 10	0.0' Ke= 0.600
	2		Inlet / Outlet I	nvert= 934.70' /	'934.50' S= 0.0020 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 0.79 s	f
#2	Device 1	934.70'	3.0" Vert. Ori	fice C= 0.600	Limited to weir flow at low heads
#3	Device 1	936.10'	24.0" W x 8.0	" H Vert. Windo	ows X 3.00 C= 0.600
			Limited to we	ir flow at low he	ads
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate (C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.50 cfs @ 13.55 hrs HW=936.96' TW=0.00' (Dynamic Tailwater)

1=Culvert (Barrel Controls 3.50 cfs @ 4.45 fps)

2=Orifice (Passes < 0.35 cfs potential flow)

-3=Windows (Passes < 13.73 cfs potential flow)

Hydrograph Inflow 16.71 cfs Primary 18-Inflow Area=24.600 ac 17-16-Peak Elev=936.96' 15 14 Storage=32,553 cf 13-12 11 **Flow (cfs)** 8-7. 6-5-3.50 cfs 4-3-2 1 0-Ó 1 2 ż 4 5 6 7 8 ģ 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 1P: DRY BASIN A

Summary for Pond 2P: DRY BASIN B

Inflow Are	ea =	14.500 ac, 6	38.38% Impervious,	, Inflow Depth > 1.81" for 2-Year event
Inflow	=	29.10 cfs @	12.29 hrs, Volume	e= 2.193 af
Outflow	=	2.21 cfs @	14.37 hrs, Volume	e= 1.272 af, Atten= 92%, Lag= 124.6 min
Primary	=	2.21 cfs @	14.37 hrs, Volume	e= 1.272 af
Routed	d to Por	nd 1P : DRY B	ASIN A	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 936.99' @ 13.64 hrs Surf.Area= 47,995 sf Storage= 69,688 cf

Plug-Flow detention time= 244.4 min calculated for 1.272 af (58% of inflow) Center-of-Mass det. time= 188.2 min (962.6 - 774.4)

Volume	Inver	t Avail.Sto	rage Storage	Description		
#1	935.00)' 223,47	79 cf Custom	n Stage Data (Pri	ismatic) ∟	isted below (Recalc)
	_					
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
935.0	0	0	0	0		
936.0	0	45,956	22,978	22,978		
937.0	0	48,007	46,982	69,960		
938.0	0	50,097	49,052	119,012		
939.0	0	52,226	51,162	170,173		
940.0	0	54,386	53,306	223,479		
Device	Pouting	Invert	Outlet Device			
	Routing					
#1	Primary	935.00'	24.0" Round	I Culvert L= 15	0.0' Ke=	0.600
			Inlet / Outlet	Invert= 935.00' /	934.70'	S= 0.0020 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 st	f	
#2	Device 1	935.00'	24.0" Vert. O	rifice/Grate C=	= 0.600 L	imited to weir flow at low heads
#3	Device 1	937.00'	24.0" W x 6.0	" H Vert. Windo	w C= 0.	.600
			Limited to we	eir flow at low he	ads	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate (C= 0.600	Limited to weir flow at low heads

Primary OutFlow Max=2.31 cfs @ 14.37 hrs HW=936.96' TW=936.92' (Dynamic Tailwater)

1=**Culvert** (Outlet Controls 2.31 cfs @ 0.93 fps)

2=Orifice/Grate (Passes 2.31 cfs of 3.05 cfs potential flow)

-3=Window (Controls 0.00 cfs)

Hydrograph Inflow 29.10 cfs 32 Primary Inflow Area=14.500 ac 30 28 Peak Elev=936.99' 26 Storage=69,688 cf 24 22 20 **(cts)** 18 16 16 14 12 10-8-6 4 2.21 cfs 2 0-Ó 1 2 ż 4 5 6 7 8 ģ 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 2P: DRY BASIN B

Summary for Pond 3P: DRY BASIN C

Inflow Area	a =	6.900 ac, 6	35.00% Impervious	Inflow Depth > 1.73" f	or 2-Year event
Inflow	=	13.30 cfs @	12.29 hrs, Volume	e= 0.994 af	
Outflow	=	2.10 cfs @	13.02 hrs, Volume	e= 0.560 af, Atten=	= 84%, Lag= 43.4 min
Primary	=	2.10 cfs @	13.02 hrs, Volume	e= 0.560 af	
Routed	to Por	nd 4P : DRY B	ASIN D		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.52' @ 13.05 hrs Surf.Area= 14,636 sf Storage= 26,015 cf

Plug-Flow detention time= 147.6 min calculated for 0.560 af (56% of inflow) Center-of-Mass det. time= 90.6 min (868.3 - 777.7)

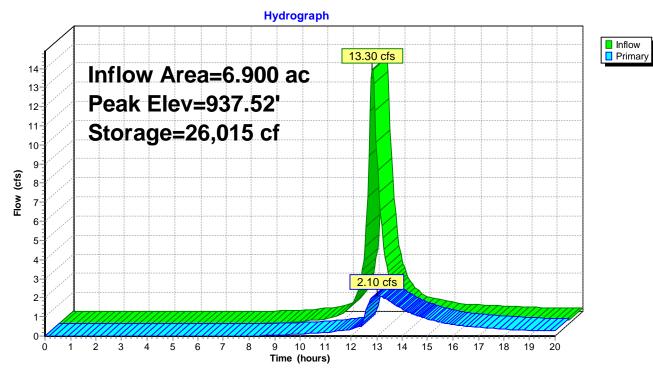
Volume	Inve	ert Avail.Sto	rage Storage	Description	
#1	935.0	0' 49,84	47 cf Custom	Stage Data (Pri	smatic) Listed below (Recalc)
Eleventia		Overf Anna a	las Otana	Ourse Otherse	
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0	00	0	0	0	
936.0	00	11,869	5,935	5,935	
937.0	00	13,659	12,764	18,699	
938.0	00	15,549	14,604	33,303	
939.0	00	17,539	16,544	49,847	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	935.00'	24.0" Round	Culvert L= 35	0.0' Ke= 0.600
			Inlet / Outlet I	nvert= 935.00' /	934.50' S= 0.0014 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 3.14 st	:
#2	Device 1	935.00'	'		0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Windo	ws C= 0.600
			Limited to we	ir flow at low he	ads
#4	Device 1	938.00'			= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=2.09 cfs @ 13.02 hrs HW=937.52' TW=936.03' (Dynamic Tailwater)

1=Culvert (Passes 2.09 cfs of 11.48 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.51 cfs @ 5.87 fps)

-3=Windows (Orifice Controls 1.58 cfs @ 2.37 fps)



Pond 3P: DRY BASIN C

Summary for Pond 4P: DRY BASIN D

Inflow Area :	=	20.700 ac, 4	46.79% Impervious	, Inflow Depth >	1.24"	for 2-Year event
Inflow =	=	13.26 cfs @	12.67 hrs, Volum	e= 2.139	af	
Outflow =	=	0.41 cfs @	12.55 hrs, Volum	e= 0.281	af, Atter	n= 97%, Lag= 0.0 min
Primary =	=	0.41 cfs @	12.55 hrs, Volum	e= 0.281	af	
Routed to	o Pon	d 5P : WET B	ASIN E			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 936.67' @ 20.00 hrs Surf.Area= 63,084 sf Storage= 80,917 cf

Plug-Flow detention time= 225.6 min calculated for 0.281 af (13% of inflow) Center-of-Mass det. time= 102.6 min (925.0 - 822.3)

Volume	Inve	rt Avail.Sto	rage Storage	e Description	
#1	934.50	0' 237,62	28 cf Custon	n Stage Data (Pri	rismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.5	60	0	0	0	
935.0	0	12,225	3,056	3,056	
936.0	0	60,758	36,492	39,548	
937.0	0	64,240	62,499	102,047	
938.0	0	67,771	66,006	168,052	
939.0	0	71,380	69,576	237,628	
Device	Routing	Invert	Outlet Devic	es	
#1	Primary	934.50'	24.0" Round	d Culvert L= 40)0.0' Ke= 0.600
			Inlet / Outlet	Invert= 934.50' /	/ 934.00' S= 0.0013 '/' Cc= 0.900
			n= 0.013, Fl	ow Area= 3.14 st	sf
#2	Device 1	934.50'	4.0" Vert. Or	ifice/Grate C=	= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	0" H Vert. Windo	ows C= 0.600
			Limited to we	eir flow at low he	eads
#4	Device 1	938.00'	24.0" x 24.0"	' Horiz. Grate (C= 0.600 Limited to weir flow at low heads

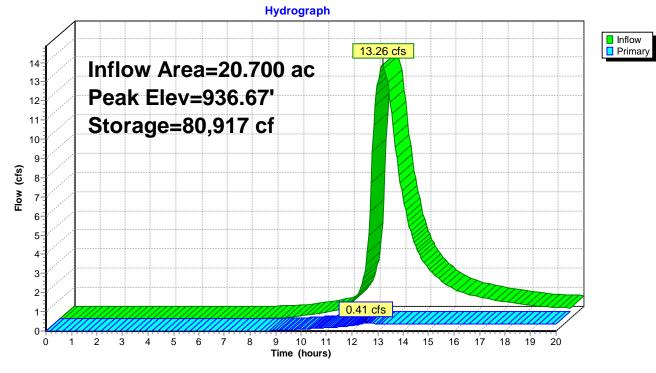
Primary OutFlow Max=0.39 cfs @ 12.55 hrs HW=935.65' TW=934.77' (Dynamic Tailwater)

1=Culvert (Passes 0.39 cfs of 3.40 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.39 cfs @ 4.51 fps)

-3=Windows (Controls 0.00 cfs)

HydroCAD® 10.20-2b s/n 02344 © 2021 HydroCAD Software Solutions LLC Pond 4P: DRY BASIN D



Summary for Pond 5P: WET BASIN E

Inflow Are	a =	63.000 ac, 34.34% Impervious, Inflow Depth > 0.88" for 2-Year event				
Inflow	=	36.83 cfs @ 12.46 hrs, Volume= 4.605 af				
Outflow	=	1.20 cfs @ 20.00 hrs, Volume= 0.721 af, Atten= 97%, Lag= 452.1 mi	n			
Primary	=	1.20 cfs @ 20.00 hrs, Volume= 0.721 af				
Routed to Link 10L : (new Link)						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 935.85' @ 20.00 hrs Surf.Area= 97,171 sf Storage= 169,180 cf

Plug-Flow detention time= 277.0 min calculated for 0.719 af (16% of inflow) Center-of-Mass det. time= 168.1 min (978.8 - 810.7)

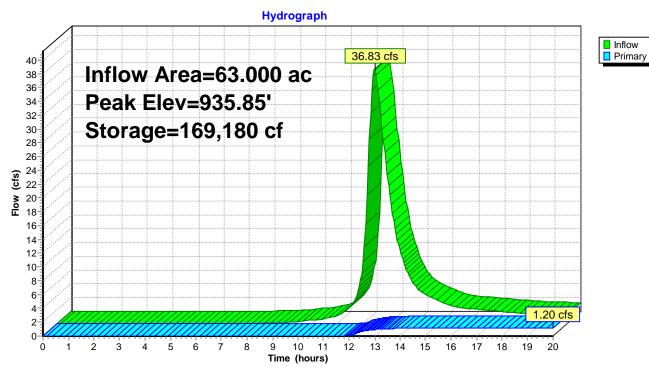
Volume	Inve	rt Avail.Sto	rage Storag	e Description	
#1	934.0	D' 507,6₄	47 cf Custor	n Stage Data (Pri	rismatic) Listed below (Recalc)
Elevatio	n S	Surf.Area	Inc.Store	Cum.Store	
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.0	0	85,433	0	0	
935.0	0	91,702	88,568	88,568	
936.0	0	98,109	94,906	183,473	
937.0	0	104,658	101,384	284,857	
938.0	0	111,356	108,007	392,864	
939.0	0	118,210	114,783	507,647	
Device	Routing	Invert	Outlet Devic	es	
#1	Primary	934.00'	24.0" Roun	d Culvert L= 100	00.0' Ke= 0.600
	-		Inlet / Outlet	Invert= 934.00' /	/ 933.43' S= 0.0057 '/' Cc= 0.900
			n= 0.013, F	low Area= 3.14 sf	sf
#2	Device 1	934.00'	6.0" Vert. 6"	Orifice C= 0.60	600 Limited to weir flow at low heads
#3	Device 1	936.50'	16.0" W x 6.	0" H Vert. Windo	ow C= 0.600
			Limited to w	eir flow at low hea	eads
#4	Device 1	938.60'	24.0" x 24.0	" Horiz. Grate C	C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.20 cfs @ 20.00 hrs HW=935.85' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 1.20 cfs of 11.80 cfs potential flow)

2=6" Orifice (Orifice Controls 1.20 cfs @ 6.10 fps)

-3=Window (Controls 0.00 cfs)



Pond 5P: WET BASIN E

Summary for Pond 6P: DRY BASIN F

Inflow Are	a =	26.110 ac, 72.21% Impervious, Inflow Depth > 1.18" for 2-Year event				
Inflow	=	21.82 cfs @ 12.29 hrs, Volume= 2.572 af				
Outflow	=	1.09 cfs @ 17.76 hrs, Volume= 0.575 af, Atten= 95%, Lag= 328.4 min	ſ			
Primary	=	1.09 cfs @ 17.76 hrs, Volume= 0.575 af				
Routed to Link 11L : (new Link)						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.00' @ 17.76 hrs Surf.Area= 62,531 sf Storage= 87,944 cf

Plug-Flow detention time= 298.4 min calculated for 0.573 af (22% of inflow) Center-of-Mass det. time= 170.0 min (982.5 - 812.4)

Volume	Inve	rt Avail.Sto	rage Storage	Description
#1	935.0	0' 188,54	46 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)
935.0	00	0	0	0
936.0	00	56,901	28,451	28,451
937.0	00	62,552	59,727	88,177
938.0	00	68,273	65,413	153,590
938.5	50	71,552	34,956	188,546
Device	Routing	Invert	Outlet Device	es
#1	Primary	935.00'	24.0" Round	I Culvert L= 100.0' Ke= 0.600
	-		Inlet / Outlet I	Invert= 935.00' / 934.50' S= 0.0050 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 sf
#2	Device 1	935.00'		ifice C= 0.600 Limited to weir flow at low heads
#3	Device 1	936.75'	20.0" W x 6.0)" H Vert. Window C= 0.600
			Limited to wei	eir flow at low heads
#4	Device 1	937.50'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.09 cfs @ 17.76 hrs HW=937.00' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 1.09 cfs of 12.62 cfs potential flow)

2=Orifice (Orifice Controls 0.44 cfs @ 6.55 fps)

-3=Window (Orifice Controls 0.65 cfs @ 1.59 fps)

Hydrograph Inflow 21.82 cfs 24 Primary Inflow Area=26.110 ac 22-Peak Elev=937.00' 20 Storage=87,944 cf 18-16-14 Flow (cfs) 12-10-8 6-4-1.09 cfs 2-0-Ó 1 2 ż 4 5 6 7 8 ģ 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 6P: DRY BASIN F

Summary for Pond 7P: WET BASIN G

Inflow Area =	4.300 ac, 69.88% Impervious, Inflow	v Depth > 1.81" for 2-Year event				
Inflow =	8.63 cfs @ 12.29 hrs, Volume=	0.650 af				
Outflow =	0.99 cfs @ 13.17 hrs, Volume=	0.385 af, Atten= 89%, Lag= 52.4 min				
Primary =	0.99 cfs @ 13.17 hrs, Volume=	0.385 af				
Routed to Pond 6P : DRY BASIN F						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.28' @ 13.25 hrs Surf.Area= 21,789 sf Storage= 16,205 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 83.8 min (858.2 - 774.4)

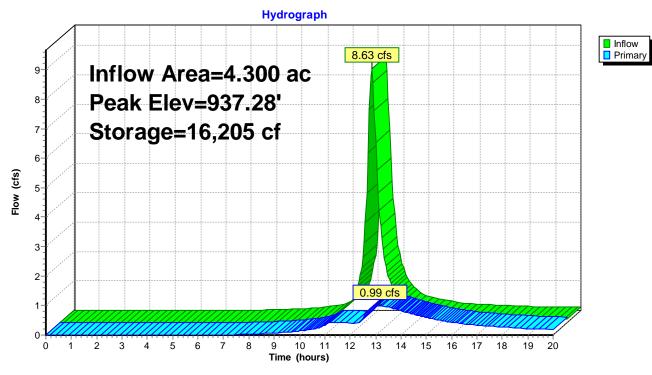
Volume	Inver	t Avail.Sto	rage Storage	Description	
#1	936.50)' 57,56	66 cf Custom	Stage Data (Prismatic) Listed	below (Recalc)
-	-				
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
936.5	50	19,817	0	0	
937.0	00	21,069	10,222	10,222	
938.0)0	23,647	22,358	32,580	
939.0	00	26,326	24,987	57,566	
Device	Routing	Invert	Outlet Device	5	
#1	Primary	935.00'	12.0" Round	Culvert L= 300.0' Ke= 0.600	
			Inlet / Outlet	nvert= 935.00' / 934.50' S= 0.0	0017 '/' Cc= 0.900
			n= 0.013. Fl	w Area= 0.79 sf	
#2	Device 1	935.00'	,	ice C= 0.600 Limited to wei	r flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	'H Vert. Windows C= 0.600	
			Limited to we	r flow at low heads	
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limite	ed to weir flow at low heads

Primary OutFlow Max=0.98 cfs @ 13.17 hrs HW=937.28' TW=936.56' (Dynamic Tailwater)

1=Culvert (Passes 0.98 cfs of 1.60 cfs potential flow)

-2=Orifice (Orifice Controls 0.36 cfs @ 4.07 fps)

-3=Windows (Orifice Controls 0.63 cfs @ 1.69 fps) -4=Grate (Controls 0.00 cfs)



Pond 7P: WET BASIN G

Summary for Pond 8P: DRY BASIN H

Inflow Are	a =	11.650 ac, 7	71.03% Impervious,	Inflow Depth >	1.64" for	2-Year event
Inflow	=	18.10 cfs @	12.29 hrs, Volume	e= 1.590 a	ıf	
Outflow	=	1.81 cfs @	13.44 hrs, Volume	e= 0.574 a	if, Atten= 9	0%, Lag= 68.8 min
Primary	=	1.81 cfs @	13.44 hrs, Volume	e= 0.574 a	ıf	-
Routed to Pond 6P : DRY BASIN F						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.03' @ 13.81 hrs Surf.Area= 32,088 sf Storage= 45,313 cf

Plug-Flow detention time= 193.6 min calculated for 0.572 af (36% of inflow) Center-of-Mass det. time= 111.8 min (898.9 - 787.1)

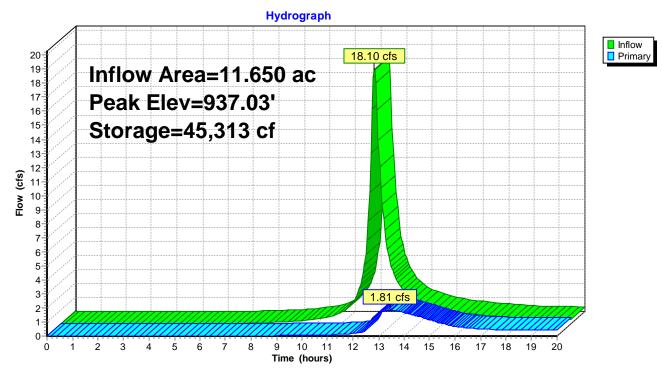
Volume	Inve	ert Avail.Sto	rage Storage	Description	
#1	935.0	0' 115,6	07 cf Custom	Stage Data (Pri	smatic) Listed below (Recalc)
Elevatio	on a	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0)0	0	0	0	
936.0	00	28,411	14,206	14,206	
937.0	00	31,986	30,199	44,404	
938.0		35,583	33,785	78,189	
939.0	00	39,254	37,419	115,607	
Device	Routing	Invert	Outlet Devices	S	
#1	Primary	934.50'	24.0" Round	Culvert L= 200	0.0' Ke= 0.600
					934.50' S= 0.0000 '/' Cc= 0.900
			'	w Area= 3.14 st	
#2	Device 1	934.50'			0.600 Limited to weir flow at low heads
#3	Device 1	936.50'		' H Vert. Windo	
	.			r flow at low he	
#4	Device 1	938.50'	24.0" x 24.0" l	Horiz. Grate	C= 0.600 Limited to weir flow at low heads
			~		

Primary OutFlow Max=1.80 cfs @ 13.44 hrs HW=937.02' TW=936.64' (Dynamic Tailwater)

1=Culvert (Passes 1.80 cfs of 7.92 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.26 cfs @ 2.96 fps)

-3=Window (Orifice Controls 1.54 cfs @ 2.31 fps)



Pond 8P: DRY BASIN H

Summary for Pond 9P: DRY BASIN I

Inflow Area =	3.000 ac, 69.67% Impervious, Inflov	w Depth > 1.81" for 2-Year event			
Inflow =	6.02 cfs @ 12.29 hrs, Volume=	0.454 af			
Outflow =	0.91 cfs @ 12.86 hrs, Volume=	0.281 af, Atten= 85%, Lag= 33.9 min			
Primary =	0.91 cfs @ 12.86 hrs, Volume=	0.281 af			
Routed to Pond 8P : DRY BASIN H					

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.21' @ 13.09 hrs Surf.Area= 15,174 sf Storage= 10,513 cf

Plug-Flow detention time= 125.9 min calculated for 0.281 af (62% of inflow) Center-of-Mass det. time= 71.9 min (846.3 - 774.4)

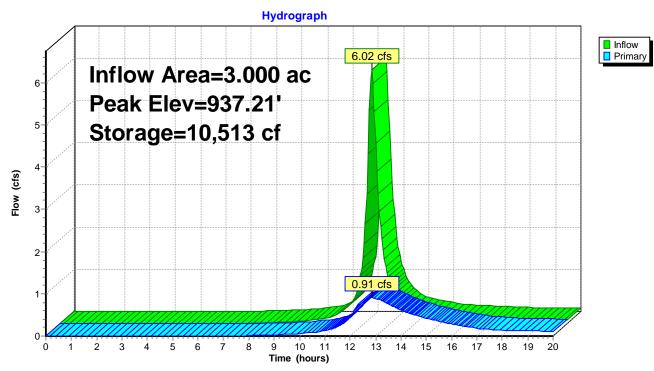
Volume	Inver	t Avail.Stor	rage Storage	Description		
#1	936.00)' 40,96	65 cf Custom	Stage Data (Prism	natic) Lis	sted below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
936.0	00	0	0	0		
937.0	00	14,750	7,375	7,375		
938.0	00	16,770	15,760	23,135		
939.0	00	18,890	17,830	40,965		
Device	Routing	Invert	Outlet Device	S		
#1	Primary	936.00'	12.0" Round	Culvert L= 250.0)' Ke= (0.600
	-		Inlet / Outlet I	nvert= 936.00' / 93	5.00' S	S= 0.0040 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 0.79 sf		
#2	Device 1	936.00'	6.0" Vert. Ori	fice/Grate C= 0.6	300 Lin	nited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Window	C= 0.6	500
			Limited to we	ir flow at low heads	S	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate C=	0.600	Limited to weir flow at low heads

Primary OutFlow Max=0.89 cfs @ 12.86 hrs HW=937.20' TW=936.91' (Dynamic Tailwater)

1=**Culvert** (Passes 0.89 cfs of 1.14 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.51 cfs @ 2.58 fps)

-3=Window (Orifice Controls 0.38 cfs @ 1.44 fps) -4=Grate (Controls 0.00 cfs)



Pond 9P: DRY BASIN I

Summary for Pond 1P: DRY BASIN A

Inflow Are	a =	24.600 ac, 3	57.30% Impervious	, Inflow Depth >	1.53"	for 5-Ye	ear event
Inflow	=	22.55 cfs @	12.27 hrs, Volume	e= 3.131	af		
Outflow	=	4.07 cfs @	13.64 hrs, Volume	e= 2.490	af, Atte	n= 82%,	Lag= 82.3 min
Primary	=	4.07 cfs @	13.64 hrs, Volume	e= 2.490	af		
Routed to Link 12L : (new Link)							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.47' @ 13.64 hrs Surf.Area= 23,215 sf Storage= 44,181 cf

Plug-Flow detention time= 146.6 min calculated for 2.484 af (79% of inflow) Center-of-Mass det. time= 83.7 min (950.7 - 867.0)

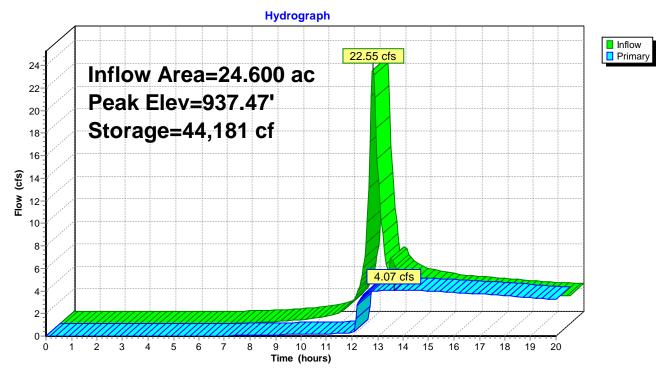
Volume	Invei	rt Avail.Sto	rage Storage	Description	
#1	934.70)' 109,7 <u></u>	50 cf Custom	Stage Data (Pr	rismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.7	70	0	0	0	
935.0	00	3,347	502	502	
936.0	00	20,147	11,747	12,249	
937.0	00	22,210	21,179	33,428	
938.0	00	24,332	23,271	56,699	
939.0	00	26,511	25,422	82,120	
940.0	00	28,749	27,630	109,750	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	934.70'	12.0" Round	Culvert L= 10	00.0' Ke= 0.600
			Inlet / Outlet I	nvert= 934.70' /	/ 934.50' S= 0.0020 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 s	sf
#2	Device 1	934.70'	3.0" Vert. Ori	fice C= 0.600	Limited to weir flow at low heads
#3	Device 1	936.10'	24.0" W x 8.0	" H Vert. Windo	ows X 3.00 C= 0.600
			Limited to we	ir flow at low he	eads
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate	C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.07 cfs @ 13.64 hrs HW=937.47' TW=0.00' (Dynamic Tailwater)

1=Culvert (Barrel Controls 4.07 cfs @ 5.18 fps)

2=Orifice (Passes < 0.38 cfs potential flow)

-3=Windows (Passes < 19.56 cfs potential flow)



Pond 1P: DRY BASIN A

Summary for Pond 2P: DRY BASIN B

Inflow Are	ea =	14.500 ac, 68.38% Impervious, Inflow Depth > 2.38"	for 5-Year event	
Inflow	=	37.56 cfs @ 12.29 hrs, Volume= 2.870 af		
Outflow	=	2.56 cfs @ 15.13 hrs, Volume= 1.483 af, Atte	en= 93%, Lag= 170.4 min	
Primary	=	2.56 cfs @ 15.13 hrs, Volume= 1.483 af		
Routed to Pond 1P : DRY BASIN A				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.50' @ 13.73 hrs Surf.Area= 49,062 sf Storage= 94,449 cf

Plug-Flow detention time= 258.0 min calculated for 1.479 af (52% of inflow) Center-of-Mass det. time= 197.7 min (967.5 - 769.8)

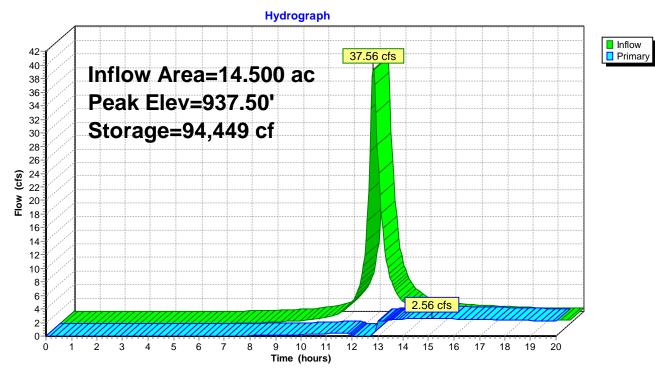
Volume	Inver	t Avail.Sto	rage Storage	Description		
#1	935.00)' 223,47	79 cf Custom	Stage Data (Pri	ismatic) L	isted below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
935.0	00	0	0	0		
936.0	00	45,956	22,978	22,978		
937.0	00	48,007	46,982	69,960		
938.0	00	50,097	49,052	119,012		
939.0	00	52,226	51,162	170,173		
940.0)0	54,386	53,306	223,479		
Device	Routing	Invert	Outlet Device	S		
#1	Primary	935.00'	24.0" Round	Culvert L= 15	0.0' Ke=	0.600
			Inlet / Outlet I	nvert= 935.00' /	934.70'	S= 0.0020 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 3.14 st	f	
#2	Device 1	935.00'	24.0" Vert. Or	rifice/Grate C=	= 0.600 L	imited to weir flow at low heads
#3	Device 1	937.00'	24.0" W x 6.0	" H Vert. Windo	w C= 0.	.600
			Limited to we	ir flow at low he	ads	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate	C= 0.600	Limited to weir flow at low heads

Primary OutFlow Max=2.74 cfs @ 15.13 hrs HW=937.42' TW=937.38' (Dynamic Tailwater)

1=**Culvert** (Outlet Controls 2.74 cfs @ 0.92 fps)

2=Orifice/Grate (Passes < 3.03 cfs potential flow)

—3=Window (Passes < 0.78 cfs potential flow)



Pond 2P: DRY BASIN B

Summary for Pond 3P: DRY BASIN C

Inflow Are	a =	6.900 ac, 6	35.00% Impervious	, Inflow Depth >	2.28" for 5-Year event	
Inflow	=	17.33 cfs @	12.29 hrs, Volum	e= 1.311 a	af	
Outflow	=	3.26 cfs @	12.89 hrs, Volum	e= 0.821 a	af, Atten= 81%, Lag= 35.8 min	
Primary	=	3.26 cfs @	12.89 hrs, Volum	e= 0.821 a	af	
Routed to Pond 4P : DRY BASIN D						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.96' @ 12.93 hrs Surf.Area= 15,482 sf Storage= 32,749 cf

Plug-Flow detention time= 125.3 min calculated for 0.819 af (62% of inflow) Center-of-Mass det. time= 72.5 min (845.4 - 773.0)

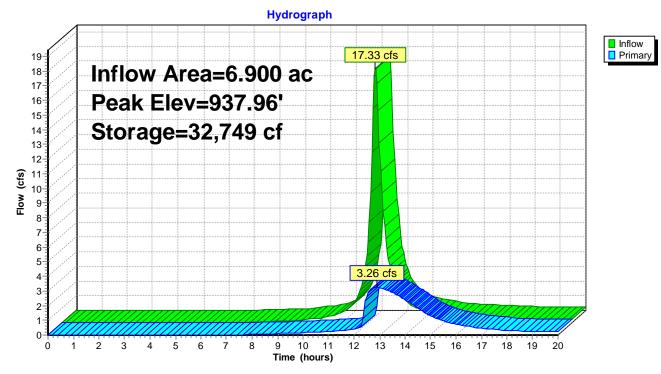
Inve	ert Avail.Sto	rage Storage	e Description	
935.0	0' 49,84	47 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)	
-	Curf Aree	Inc Store	Cum Store	
t)	(sq-ft)	(cubic-feet)	(cubic-feet)	
0	0	0	0	
0	11,869	5,935	5,935	
0	13,659	12,764	18,699	
0	15,549	14,604	33,303	
0	17,539	16,544	49,847	
Routing	Invert	Outlet Device	es	
Primary	935.00'	24.0" Round	Culvert L= 350.0' Ke= 0.600	
		Inlet / Outlet I	Invert= 935.00' / 934.50' S= 0.0014 '/' Cc= 0.900	
		n= 0.013, Flo	ow Area= 3.14 sf	
Device 1	935.00'	4.0" Vert. Ori	ifice/Grate C= 0.600 Limited to weir flow at low heads	
Device 1	937.00'	16.0" W x 6.0)" H Vert. Windows C= 0.600	
		Limited to we	eir flow at low heads	
Device 1	938.00'			;
	935.0 935.0 00 00 00 00 00 00 00 00 00	935.00' 49,8- on Surf.Area (t) (sq-ft) 00 0 00 11,869 00 13,659 00 15,549 00 17,539 Routing Invert Primary 935.00' Device 1 935.00' Device 1 937.00'	935.00' 49,847 cf Custon on Surf.Area Inc.Store (t) (sq-ft) (cubic-feet) 00 0 0 00 11,869 5,935 00 13,659 12,764 00 15,549 14,604 00 17,539 16,544 Routing Invert Outlet Device Primary 935.00' 24.0" Round Inlet / Outlet n= 0.013, Fl Device 1 935.00' 4.0" Vert. Or Device 1 937.00' 16.0" W x 6.0	935.00' 49,847 cf Custom Stage Data (Prismatic) Listed below (Recalc) on Surf.Area Inc.Store Cum.Store t) (sq-ft) (cubic-feet) (cubic-feet) 00 0 0 0 01 11,869 5,935 5,935 02 13,659 12,764 18,699 03 15,549 14,604 33,303 03 17,539 16,544 49,847 Routing Invert Outlet Devices Primary 935.00' 24.0" Round Culvert L= 350.0' Ke= 0.600 Inlet / Outlet Invert= 935.00' / 934.50' S= 0.0014 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf 4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads Device 1 937.00' 16.0" W x 6.0" H Vert. Windows C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.25 cfs @ 12.89 hrs HW=937.96' TW=936.23' (Dynamic Tailwater)

1=Culvert (Passes 3.25 cfs of 12.49 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.55 cfs @ 6.34 fps)

-3=Windows (Orifice Controls 2.70 cfs @ 4.04 fps)



Pond 3P: DRY BASIN C

Summary for Pond 4P: DRY BASIN D

Inflow Are	a =	20.700 ac, 4	46.79% Impervious,	Inflow Depth > 1.72" for 5-Year event	
Inflow	=	18.87 cfs @	12.59 hrs, Volume	= 2.972 af	
Outflow	=	0.64 cfs @	19.40 hrs, Volume:	= 0.371 af, Atten= 97%, Lag= 408.8 min	
Primary	=	0.64 cfs @	19.40 hrs, Volume:	= 0.371 af	
Routed to Pond 5P : WET BASIN E					

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.17' @ 19.86 hrs Surf.Area= 64,856 sf Storage= 113,299 cf

Plug-Flow detention time= 259.4 min calculated for 0.371 af (12% of inflow) Center-of-Mass det. time= 132.1 min (945.4 - 813.3)

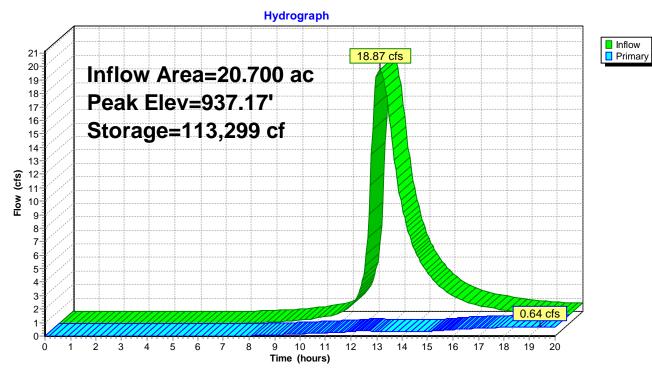
Volume	Inver	rt Avail.Sto	rage Storage	Description	
#1	934.50)' 237,62	28 cf Custom	Stage Data (Pri	Prismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store)
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	<u>)</u>
934.5	50	0	0	0)
935.0	00	12,225	3,056	3,056	5
936.0	00	60,758	36,492	39,548	3
937.0	00	64,240	62,499	102,047	,
938.0	00	67,771	66,006	168,052) -
939.0	00	71,380	69,576	237,628	5
Device	Routing	Invert	Outlet Device	es	
#1	Primary	934.50'	24.0" Round	I Culvert L= 400	00.0' Ke= 0.600
			Inlet / Outlet I	Invert= 934.50' /	/ 934.00' S= 0.0013 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 st	sf
#2	Device 1	934.50'	4.0" Vert. Ori	fice/Grate C=	= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Windo	lows C= 0.600
				eir flow at low he	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate	C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.64 cfs @ 19.40 hrs HW=937.17' TW=936.55' (Dynamic Tailwater)

1=Culvert (Passes 0.64 cfs of 7.78 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.33 cfs @ 3.81 fps)

-3=Windows (Orifice Controls 0.31 cfs @ 1.34 fps)



Pond 4P: DRY BASIN D

Summary for Pond 5P: WET BASIN E

Inflow Are	a =	63.000 ac, 34.34% Impervious, Inflow Depth > 1.21" for 5-Year event				
Inflow	=	50.25 cfs @ 12.47 hrs, Volume= 6.366 af				
Outflow	=	1.49 cfs @ 20.00 hrs, Volume= 0.879 af, Atten= 97%, Lag= 452.1 min				
Primary	=	1.49 cfs @ 20.00 hrs, Volume= 0.879 af				
Routed to Link 10L : (new Link)						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 936.56' @ 20.00 hrs Surf.Area= 101,746 sf Storage= 238,960 cf

Plug-Flow detention time= 289.8 min calculated for 0.879 af (14% of inflow) Center-of-Mass det. time= 168.9 min (976.7 - 807.8)

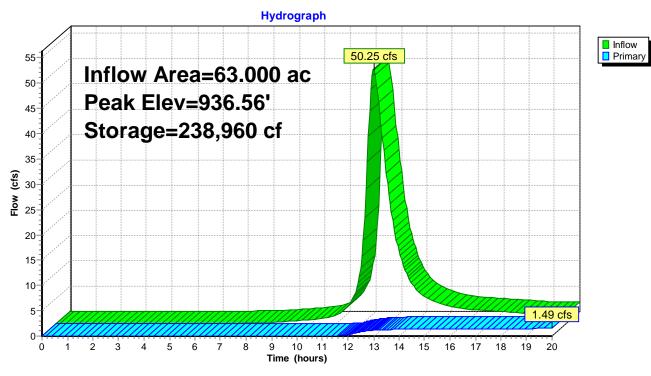
Volume	Inve	rt Avail.Sto	rage Storag	e Description		
#1	934.00	D' 507,64	47 cf Custo	m Stage Data (Pri	ismatic) L	isted below (Recalc)
Elevatio	n S	Surf.Area	Inc.Store	Cum.Store		
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)		
934.0	0	85,433	0	0		
935.0	0	91,702	88,568	88,568		
936.0	0	98,109	94,906	183,473		
937.0	0	104,658	101,384	284,857		
938.0	0	111,356	108,007	392,864		
939.0	0	118,210	114,783	507,647		
Device	Routing	Invert	Outlet Device	ces		
#1	Primary	934.00'	24.0" Roun	d Culvert L= 10	0.0' Ke=	0.600
	-		Inlet / Outle	t Invert= 934.00' /	933.43'	S= 0.0057 '/' Cc= 0.900
			n= 0.013, F	low Area= 3.14 st	f	
#2	Device 1	934.00'	6.0" Vert. 6	' Orifice C= 0.6	00 Limite	ed to weir flow at low heads
#3	Device 1	936.50'	16.0" W x 6	.0" H Vert. Windo	w C= 0.	.600
			Limited to w	veir flow at low he	ads	
#4	Device 1	938.60'	24.0" x 24.0	" Horiz. Grate (C= 0.600	Limited to weir flow at low heads

Primary OutFlow Max=1.49 cfs @ 20.00 hrs HW=936.56' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 1.49 cfs of 16.77 cfs potential flow)

2=6" Orifice (Orifice Controls 1.44 cfs @ 7.31 fps)

-3=Window (Orifice Controls 0.06 cfs @ 0.75 fps)



Pond 5P: WET BASIN E

Summary for Pond 6P: DRY BASIN F

Inflow Are	a =	26.110 ac, 72.21% Impervious, Inflow Depth > 1.61" for 5-Year event				
Inflow	=	27.86 cfs @ 12.30 hrs, Volume= 3.498 af				
Outflow	=	2.30 cfs @ 16.06 hrs, Volume= 1.241 af, Atten= 92%, Lag= 225.8	min			
Primary	=	2.30 cfs @ 16.06 hrs, Volume= 1.241 af				
Routed to Link 11L : (new Link)						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.24' @ 16.06 hrs Surf.Area= 63,925 sf Storage= 103,357 cf

Plug-Flow detention time= 278.4 min calculated for 1.238 af (35% of inflow) Center-of-Mass det. time= 161.0 min (977.7 - 816.7)

Volume	Inve	rt Avail.Sto	rage Storage	Description		
#1	935.00	D' 188,5 <u>4</u>	46 cf Custom	Stage Data (Pri	i smatic) Lie	sted below (Recalc)
				0		
Elevatio		Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
935.0	00	0	0	0		
936.0	00	56,901	28,451	28,451		
937.0	00	62,552	59,727	88,177		
938.0	00	68,273	65,413	153,590		
938.5	50	71,552	34,956	188,546		
Device	Routing	Invert	Outlet Device	s		
#1	Primary	935.00'	24.0" Round	Culvert L= 10	0.0' Ke= 0	0.600
	2		Inlet / Outlet I	nvert= 935.00' /	934.50' S	S= 0.0050 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 st	f	
#2	Device 1	935.00'	,			o weir flow at low heads
#3	Device 1	936.75'	20.0" W x 6.0	" H Vert. Windo	w C= 0.6	600
			Limited to we	ir flow at low he	ads	
#4	Device 1	937.50'	24.0" x 24.0"	Horiz. Grate	C= 0.600 l	Limited to weir flow at low heads

Primary OutFlow Max=2.30 cfs @ 16.06 hrs HW=937.24' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 2.30 cfs of 14.54 cfs potential flow)

2=Orifice (Orifice Controls 0.47 cfs @ 6.97 fps)

-3=Window (Orifice Controls 1.84 cfs @ 2.25 fps)

Hydrograph Inflow 27.86 cfs Primary 30 Inflow Area=26.110 ac 28-Peak Elev=937.24' 26 24 Storage=103,357 cf 22-20 **How (cfs)** 16-14-18 12-10-8-6 2.30 cfs 4 2 0-Ó 1 2 ż 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 6P: DRY BASIN F

Summary for Pond 7P: WET BASIN G

Inflow Are	a =	4.300 ac, 6	39.88% Impervious,	Inflow Depth > 2	.38" for 5-Year event	
Inflow	=	11.14 cfs @	12.29 hrs, Volume	e= 0.851 af		
Outflow	=	1.64 cfs @	12.77 hrs, Volume	e= 0.522 af,	, Atten= 85%, Lag= 28.6 min	
Primary	=	1.64 cfs @	12.77 hrs, Volume	e= 0.522 af		
Routed to Pond 6P : DRY BASIN F						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.48' @ 13.15 hrs Surf.Area= 22,310 sf Storage= 20,663 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 83.5 min (853.2 - 769.8)

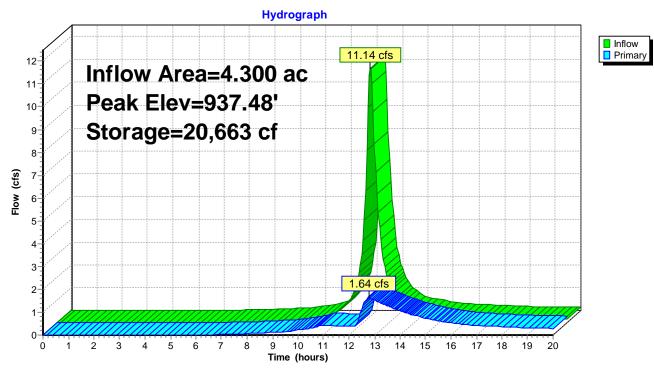
Volume	Inver	t Avail.Sto	rage Storage	Description		
#1	936.50)' 57,56	66 cf Custom	n Stage Data (Pri	ismatic) L	Listed below (Recalc)
- 1						
Elevatio	-	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
936.5	50	19,817	0	0		
937.0	0	21,069	10,222	10,222		
938.0	0	23,647	22,358	32,580		
939.0	0	26,326	24,987	57,566		
		la sut				
Device	Routing	Invert	Outlet Device	es		
#1	Primary	935.00'	12.0" Round	I Culvert L= 30	0.0' Ke=	0.600
	-		Inlet / Outlet	Invert= 935.00' /	934.50'	S= 0.0017 '/' Cc= 0.900
			n= 0.013. Flo	ow Area= 0.79 s	f	
#2	Device 1	935.00'	,			to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Windo	ws C=	0.600
			l imited to we	eir flow at low he	ads	
#4	Device 1	938.50'			0.0.0	Limited to weir flow at low heads

Primary OutFlow Max=1.61 cfs @ 12.77 hrs HW=937.45' TW=936.73' (Dynamic Tailwater)

1=Culvert (Outlet Controls 1.61 cfs @ 2.05 fps)

2=Orifice (Passes < 0.36 cfs potential flow)

3=Windows (Passes < 1.29 cfs potential flow) **4=Grate** (Controls 0.00 cfs)



Pond 7P: WET BASIN G

Summary for Pond 8P: DRY BASIN H

Inflow Area =	11.650 ac,	71.03% Impervious,	Inflow Depth > 2.12" for 5-Year event	
Inflow =	23.12 cfs @	12.29 hrs, Volume	≅ 2.059 af	
Outflow =	2.48 cfs @	12.88 hrs, Volume	e= 0.882 af, Atten= 89%, Lag= 35.4 mir	n
Primary =	2.48 cfs @	12.88 hrs, Volume	e= 0.882 af	
Routed to	Pond 6P : DRY B	ASIN F		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.38' @ 13.82 hrs Surf.Area= 33,344 sf Storage= 56,733 cf

Plug-Flow detention time= 211.3 min calculated for 0.882 af (43% of inflow) Center-of-Mass det. time= 128.7 min (914.8 - 786.0)

Volume	Inve	rt Avail.Sto	rage Storage	Description	
#1	935.0	0' 115,60	07 cf Custom	Stage Data (Pri	smatic) Listed below (Recalc)
Elevatio	n s	Surf.Area	Inc.Store	Cum.Store	
(fee		(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0	0	0	0	0	
936.0)0	28,411	14,206	14,206	
937.0		31,986	30,199	44,404	
938.0	-	35,583	33,785	78,189	
939.0)0	39,254	37,419	115,607	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	934.50'	24.0" Round	Culvert L= 20	0.0' Ke= 0.600
					934.50' S= 0.0000 '/' Cc= 0.900
				w Area= 3.14 s	
#2	Device 1	934.50'			0.600 Limited to weir flow at low heads
#3	Device 1	936.50'		" H Vert. Windo	
				ir flow at low he	
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate (C= 0.600 Limited to weir flow at low heads
			_		

Primary OutFlow Max=2.44 cfs @ 12.88 hrs HW=937.29' TW=936.80' (Dynamic Tailwater)

1=Culvert (Passes 2.44 cfs of 8.71 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.29 cfs @ 3.37 fps)

-3=Window (Orifice Controls 2.14 cfs @ 3.21 fps)

-4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 23.12 cfs Primary Inflow Area=11.650 ac 24 22 Peak Elev=937.38' 20 Storage=56,733 cf 18-16 **How (cfs)** 10-8-6 4 2.48 cfs 2 0-Ó 1 2 ż 4 5 6 7 8 ģ 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 8P: DRY BASIN H

Summary for Pond 9P: DRY BASIN I

Inflow Area	a =	3.000 ac, 69.67% Impervious, Inflow Depth > 2.38" for 5-Ye	ear event			
Inflow	=	7.77 cfs @ 12.29 hrs, Volume= 0.594 af				
Outflow	=	1.20 cfs @ 12.53 hrs, Volume= 0.347 af, Atten= 85%,	Lag= 14.1 min			
Primary	=	1.20 cfs @ 12.53 hrs, Volume= 0.347 af				
Routed to Pond 8P : DRY BASIN H						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.47' @ 13.48 hrs Surf.Area= 15,706 sf Storage= 14,583 cf

Plug-Flow detention time= 152.8 min calculated for 0.347 af (58% of inflow) Center-of-Mass det. time= 96.5 min (866.2 - 769.8)

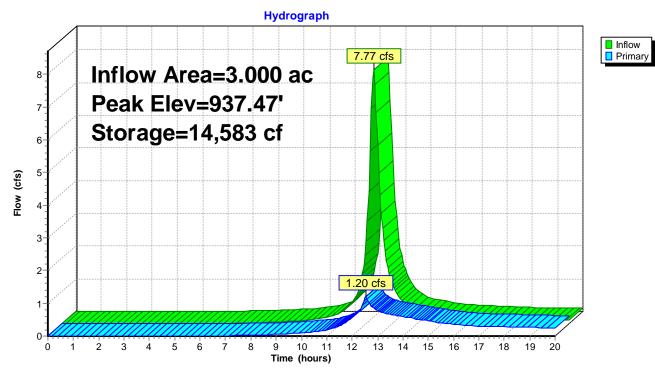
Volume	Inver	t Avail.Sto	rage Storage	e Description
#1	936.00)' 40,96	65 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)
936.0	00	0	0	0
937.0	00	14,750	7,375	7,375
938.0	00	16,770	15,760	23,135
939.0	00	18,890	17,830	40,965
Device	Routing	Invert	Outlet Device	es
#1	Primary	936.00'	12.0" Round	d Culvert L= 250.0' Ke= 0.600
	-		Inlet / Outlet I	Invert= 936.00' / 935.00' S= 0.0040 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 sf
#2	Device 1	936.00'	6.0" Vert. Ori	ifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0)" H Vert. Window C= 0.600
			Limited to we	eir flow at low heads
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.09 cfs @ 12.53 hrs HW=937.29' TW=937.04' (Dynamic Tailwater)

1=Culvert (Outlet Controls 1.09 cfs @ 1.40 fps)

2=Orifice/Grate (Passes < 0.48 cfs potential flow)

--3=Window (Passes < 0.68 cfs potential flow) **-4=Grate** (Controls 0.00 cfs)



Pond 9P: DRY BASIN I

Summary for Pond 1P: DRY BASIN A

Inflow Are	a =	24.600 ac, 3	57.30% Impervious,	Inflow Depth > 1.77"	for 10-Year event
Inflow	=	27.28 cfs @	12.27 hrs, Volume	= 3.625 af	
Outflow	=	4.47 cfs @	13.69 hrs, Volume	= 2.792 af, At	ten= 84%, Lag= 85.6 min
Primary	=	4.47 cfs @	13.69 hrs, Volume	= 2.792 af	-
Routed	l to Link	< 12L : (new Li	nk)		

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.88' @ 13.69 hrs Surf.Area= 24,083 sf Storage= 53,859 cf

Plug-Flow detention time= 158.8 min calculated for 2.792 af (77% of inflow) Center-of-Mass det. time= 88.1 min (950.0 - 861.9)

Volume	Invei	rt Avail.Sto	rage Storage	e Description	
#1	934.70)' 109,7	50 cf Custom	n Stage Data (Pri	ismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.7	70	0	0	0	
935.0	00	3,347	502	502	
936.0	00	20,147	11,747	12,249	
937.0	00	22,210	21,179	33,428	
938.0	00	24,332	23,271	56,699	
939.0	00	26,511	25,422	82,120	
940.0	00	28,749	27,630	109,750	
Device	Routing	Invert	Outlet Device	es	
#1	Primary	934.70'	12.0" Round	I Culvert L= 10	0.0' Ke= 0.600
			Inlet / Outlet	Invert= 934.70' /	'934.50' S= 0.0020 '/' Cc= 0.900
			,	ow Area= 0.79 s	
#2	Device 1	934.70'			Limited to weir flow at low heads
#3	Device 1	936.10'			ows X 3.00 C= 0.600
				eir flow at low he	
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate (C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=4.47 cfs @ 13.69 hrs HW=937.88' TW=0.00' (Dynamic Tailwater)

1=Culvert (Barrel Controls 4.47 cfs @ 5.69 fps)

2=Orifice (Passes < 0.41 cfs potential flow)

-3=Windows (Passes < 23.13 cfs potential flow)

-4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 27.28 cfs 30 Primary Inflow Area=24.600 ac 28 26-Peak Elev=937.88' 24 Storage=53,859 cf 22-20-18 18⁻ 16⁻ 14⁻ 12 10 8-4.47 cfs 6 4 2 0-Ó 1 2 ż 4 5 6 7 8 ģ 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 1P: DRY BASIN A

Summary for Pond 2P: DRY BASIN B

Inflow Are	ea =	14.500 ac, 68.38% Impervious, Inflow Depth > 2.83" for 10-Year even	ent
Inflow	=	44.33 cfs @ 12.29 hrs, Volume= 3.421 af	
Outflow	=	2.81 cfs @ 15.44 hrs, Volume= 1.623 af, Atten= 94%, Lag= 16	88.9 min
Primary	=	2.81 cfs @ 15.44 hrs, Volume= 1.623 af	
Routed	d to Por	1 1P : DRY BASIN A	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.92' @ 13.80 hrs Surf.Area= 49,933 sf Storage= 115,085 cf

Plug-Flow detention time= 268.7 min calculated for 1.619 af (47% of inflow) Center-of-Mass det. time= 204.1 min (970.9 - 766.7)

Volume	Invei	rt Avail.Sto	rage Storage	e Description	
#1	935.00)' 223,47	79 cf Custon	n Stage Data (Pri	rismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store))
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	-
935.0	00	0	0	0	
936.0	00	45,956	22,978	22,978	
937.0	00	48,007	46,982	69,960	
938.0	00	50,097	49,052	119,012	۱ -
939.0	00	52,226	51,162	170,173	
940.0	00	54,386	53,306	223,479	
		Le sut			
Device	Routing	Invert	Outlet Device		
#1	Primary	935.00'	24.0" Round	d Culvert L= 15	50.0' Ke= 0.600
			Inlet / Outlet	Invert= 935.00' /	/ 934.70' S= 0.0020 '/' Cc= 0.900
			n= 0.013, Fl	ow Area= 3.14 st	sf
#2	Device 1	935.00'	24.0" Vert. O	rifice/Grate C=	C= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	24.0" W x 6.0)" H Vert. Windo	ow C= 0.600
			Limited to we	eir flow at low he	eads
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate (C= 0.600 Limited to weir flow at low heads

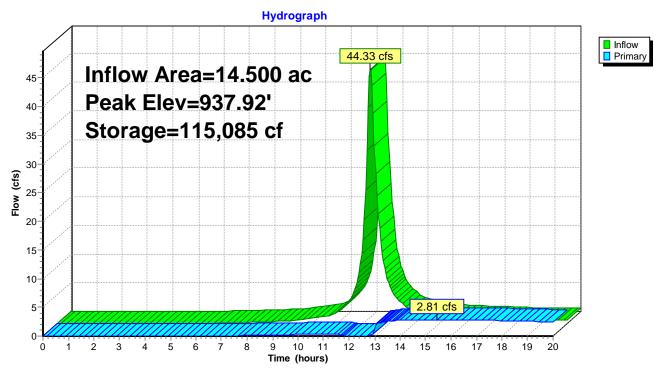
Primary OutFlow Max=3.00 cfs @ 15.44 hrs HW=937.81' TW=937.76' (Dynamic Tailwater)

1=Culvert (Outlet Controls 3.00 cfs @ 0.95 fps)

2=Orifice/Grate (Passes < 3.35 cfs potential flow)

—3=Window (Passes < 1.07 cfs potential flow)

4=Grate (Controls 0.00 cfs)



Pond 2P: DRY BASIN B

Summary for Pond 3P: DRY BASIN C

Inflow Are	ea =	6.900 ac, 6	65.00% Impervious	, Inflow Depth >	2.73"	for 10-Y	ear event
Inflow	=	20.56 cfs @	12.29 hrs, Volume	e= 1.571 a	af		
Outflow	=	6.38 cfs @	12.72 hrs, Volume	e= 1.020 a	af, Attei	n= 69%,	Lag= 25.8 min
Primary	=	6.38 cfs @	12.72 hrs, Volume	e= 1.020 a	af		
Routed	d to Por	nd 4P : DRY B	ASIN D				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.22' @ 12.72 hrs Surf.Area= 15,980 sf Storage= 36,719 cf

Plug-Flow detention time= 116.8 min calculated for 1.020 af (65% of inflow) Center-of-Mass det. time= 64.5 min (834.4 - 769.9)

Volume	Inve	ert Avail.Sto	rage Storage	Description	
#1	935.0	0' 49,8	47 cf Custon	Stage Data (Prismatic) Li	isted below (Recalc)
Floyetic		Curf Aree	Inc Store	Cum Store	
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0	00	0	0	0	
936.0	00	11,869	5,935	5,935	
937.0	00	13,659	12,764	18,699	
938.0	00	15,549	14,604	33,303	
939.0	00	17,539	16,544	49,847	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	935.00'	24.0" Round	Culvert L= 350.0' Ke=	0.600
	-		Inlet / Outlet	nvert= 935.00' / 934.50'	S= 0.0014 '/' Cc= 0.900
			n= 0.013. Fl	w Area= 3.14 sf	
#2	Device 1	935.00'			mited to weir flow at low heads
#3	Device 1	937.00'		" H Vert. Windows C= 0	
			Limited to we	ir flow at low heads	
#4	Device 1	938.00'			Limited to weir flow at low heads
			_		

Primary OutFlow Max=6.34 cfs @ 12.72 hrs HW=938.22' TW=936.28' (Dynamic Tailwater)

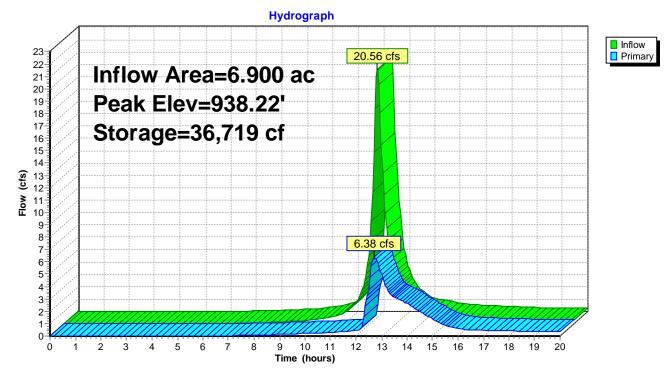
1=Culvert (Passes 6.34 cfs of 13.52 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.58 cfs @ 6.70 fps)

-3=Windows (Orifice Controls 3.14 cfs @ 4.72 fps)

-4=Grate (Weir Controls 2.61 cfs @ 1.52 fps)

Pond 3P: DRY BASIN C



Summary for Pond 4P: DRY BASIN D

Inflow Are	a =	20.700 ac, 46.79% Impervious, Inflow Depth > 2.12" for 10-Year event					
Inflow	=	25.05 cfs @ 12.65 hrs, Volume= 3.649 af					
Outflow	=	1.43 cfs @ 16.27 hrs, Volume= 0.768 af, Atten= 94%, Lag= 217.5 mir	n				
Primary	=	1.43 cfs @ 16.27 hrs, Volume= 0.768 af					
Routed to Pond 5P : WET BASIN E							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.42' @ 16.45 hrs Surf.Area= 65,708 sf Storage= 129,055 cf

Plug-Flow detention time= 267.9 min calculated for 0.766 af (21% of inflow) Center-of-Mass det. time= 162.7 min (970.7 - 808.0)

Volume	Inver	rt Avail.Sto	rage Storage	Description	
#1	934.50)' 237,62	28 cf Custom	Stage Data (Pri	Prismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store	}
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	<u>)</u>
934.5	50	0	0	0)
935.0	00	12,225	3,056	3,056	5
936.0	00	60,758	36,492	39,548	3
937.0	00	64,240	62,499	102,047	,
938.0	00	67,771	66,006	168,052)
939.0	00	71,380	69,576	237,628	5
Device	Routing	Invert	Outlet Device	es	
#1	Primary	934.50'	24.0" Round	I Culvert L= 400	00.0' Ke= 0.600
			Inlet / Outlet I	Invert= 934.50' /	/ 934.00' S= 0.0013 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 st	sf
#2	Device 1	934.50'	4.0" Vert. Ori	fice/Grate C=	= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Windo	lows C= 0.600
				eir flow at low he	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate	C= 0.600 Limited to weir flow at low heads

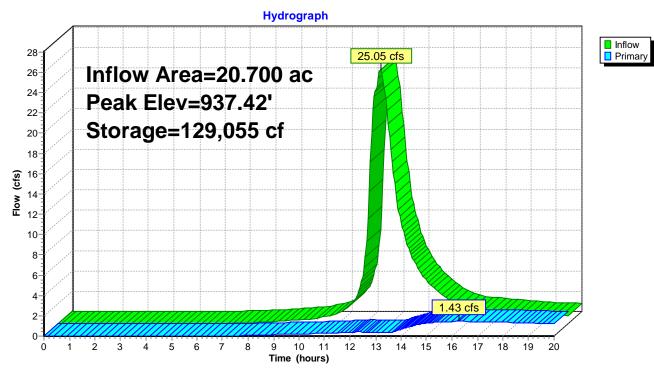
Primary OutFlow Max=1.43 cfs @ 16.27 hrs HW=937.42' TW=936.97' (Dynamic Tailwater)

1=Culvert (Passes 1.43 cfs of 6.56 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.28 cfs @ 3.22 fps)

-3=Windows (Orifice Controls 1.15 cfs @ 2.07 fps)

4=Grate (Controls 0.00 cfs)



Pond 4P: DRY BASIN D

Summary for Pond 5P: WET BASIN E

Inflow Are	ea =	63.000 ac, 34.34% Impervious, Inflow Depth > 1.56" for 10-Year event					
Inflow	=	61.33 cfs @ 12.47 hrs, Volume= 8.166 af					
Outflow	=	3.13 cfs @ 18.25 hrs, Volume= 1.643 af, Atten= 95%, Lag= 346.9 min					
Primary	=	3.13 cfs @ 18.25 hrs, Volume= 1.643 af					
Routed to Link 10L : (new Link)							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.01' @ 18.25 hrs Surf.Area= 104,727 sf Storage= 285,937 cf

Plug-Flow detention time= 300.6 min calculated for 1.643 af (20% of inflow) Center-of-Mass det. time= 185.9 min (998.8 - 813.0)

Volume	Inve	rt Avail.Sto	rage Storage	e Description		
#1	934.00	D' 507,64	47 cf Custon	n Stage Data (Pri	ismatic) L	Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
934.0	00	85,433	0	0		
935.0	00	91,702	88,568	88,568		
936.0	00	98,109	94,906	183,473		
937.0	00	104,658	101,384	284,857		
938.0	00	111,356	108,007	392,864		
939.0	00	118,210	114,783	507,647		
Device	Routing	Invert	Outlet Devic	es		
#1	Primary	934.00'	24.0" Round	d Culvert L= 100	0.0' Ke=	0.600
	2		Inlet / Outlet	Invert= 934.00' /	933.43'	S= 0.0057 '/' Cc= 0.900
			n= 0.013, Fl	ow Area= 3.14 st	f	
#2	Device 1	934.00'	6.0" Vert. 6"	Orifice C= 0.6	00 Limit	ed to weir flow at low heads
#3	Device 1	936.50'	16.0" W x 6.0	0" H Vert. Windo	w C= 0	.600
			Limited to we	eir flow at low he	ads	
#4	Device 1	938.60'	24.0" x 24.0"	Horiz. Grate	C= 0.600	Limited to weir flow at low heads

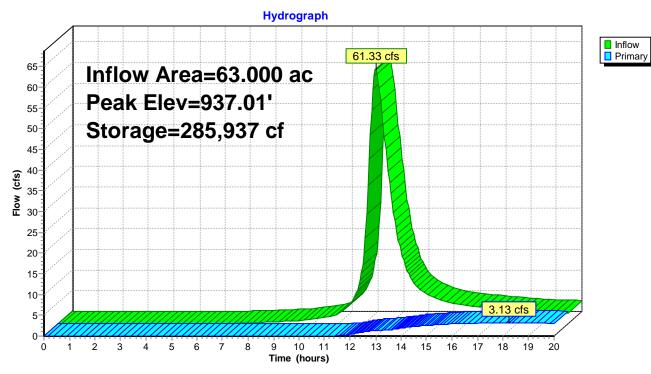
Primary OutFlow Max=3.13 cfs @ 18.25 hrs HW=937.01' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 3.13 cfs of 18.79 cfs potential flow)

2=6" Orifice (Orifice Controls 1.57 cfs @ 8.00 fps)

-3=Window (Orifice Controls 1.56 cfs @ 2.33 fps)

4=Grate (Controls 0.00 cfs)



Pond 5P: WET BASIN E

Summary for Pond 6P: DRY BASIN F

Inflow Are	a =	26.110 ac, 72.21% Impervious, Inflow Depth > 1.93" for 10-Year event				
Inflow	=	33.49 cfs @ 12.30 hrs, Volume= 4.204 af				
Outflow	=	3.04 cfs @ 15.80 hrs, Volume= 1.746 af, Atten= 91%, Lag= 209.6 mi	in			
Primary	=	3.04 cfs @ 15.80 hrs, Volume= 1.746 af				
Routed to Link 11L : (new Link)						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.42' @ 15.80 hrs Surf.Area= 64,944 sf Storage= 114,829 cf

Plug-Flow detention time= 269.1 min calculated for 1.746 af (42% of inflow) Center-of-Mass det. time= 152.1 min (971.6 - 819.6)

Volume	Inve	rt Avail.Sto	rage Storage	Description
#1	935.0	0' 188,54	46 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)
935.0	00	0	0	0
936.0	00	56,901	28,451	28,451
937.0	00	62,552	59,727	88,177
938.0	00	68,273	65,413	153,590
938.5	50	71,552	34,956	188,546
Device	Routing	Invert	Outlet Device	es
#1	Primary	935.00'	24.0" Round	I Culvert L= 100.0' Ke= 0.600
	-		Inlet / Outlet I	Invert= 935.00' / 934.50' S= 0.0050 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 sf
#2	Device 1	935.00'		ifice C= 0.600 Limited to weir flow at low heads
#3	Device 1	936.75'	20.0" W x 6.0)" H Vert. Window C= 0.600
			Limited to wei	eir flow at low heads
#4	Device 1	937.50'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=3.04 cfs @ 15.80 hrs HW=937.42' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 3.04 cfs of 15.69 cfs potential flow)

2=Orifice (Orifice Controls 0.48 cfs @ 7.26 fps)

-3=Window (Orifice Controls 2.55 cfs @ 3.06 fps)

-4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 33.49 cfs Primary 36 Inflow Area=26.110 ac 34 32-Peak Elev=937.42' 30 28 Storage=114,829 cf 26-24 22 (sj) 20-**N** 18-**I** 16-16 14 12 10-8-6-3.04 cfs 4 2 0-Ó 1 2 ż 4 5 6 7 8 ģ 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 6P: DRY BASIN F

Summary for Pond 7P: WET BASIN G

Inflow Are	a =	4.300 ac, 6	39.88% Impervious	, Inflow Depth > 2	2.83" for 10-Year event	
Inflow	=	13.15 cfs @	12.29 hrs, Volum	e= 1.014 af	f	
Outflow	=	1.75 cfs @	12.52 hrs, Volum	e= 0.607 af	f, Atten= 87%, Lag= 13.7 min	
Primary	=	1.75 cfs @	12.52 hrs, Volum	e= 0.607 af	f	
Routed to Pond 6P : DRY BASIN F						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.69' @ 13.31 hrs Surf.Area= 22,847 sf Storage= 25,369 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 95.0 min (861.8 - 766.7)

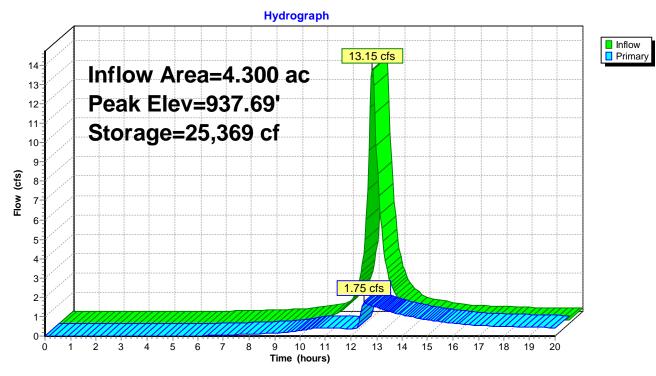
Volume	Inver	rt Avail.Sto	rage Storage	Description	
#1	936.50)' 57,56	66 cf Custon	Stage Data (Prismatic) Listed b	elow (Recalc)
Flowetic		Struct Arrow	In a Chara	Curre Charles	
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
936.5	50	19,817	0	0	
937.0)0	21,069	10,222	10,222	
938.0	00	23,647		32,580	
939.0	00	26,326	24,987	57,566	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	935.00'	12.0" Round	Culvert L= 300.0' Ke= 0.600	
			Inlet / Outlet	nvert= 935.00' / 934.50' S= 0.0	017 '/' Cc= 0.900
			n= 0.013. Fl	w Area= 0.79 sf	
#2	Device 1	935.00'	,		flow at low heads
					non actor house
110	201100 1	507.00			
# Δ	Device 1	938 50'			d to weir flow at low heads
<i>n</i> -		000.00			a to won now at low neads
939.0 <u>Device</u>	00 Routing	Invert	Outlet Device 12.0" Round Inlet / Outlet n= 0.013, Fl 4.0" Vert. Or 16.0" W x 6.0 Limited to we	s Culvert L= 300.0' Ke= 0.600	flow at low heads

Primary OutFlow Max=1.65 cfs @ 12.52 hrs HW=937.49' TW=936.73' (Dynamic Tailwater)

1=Culvert (Outlet Controls 1.65 cfs @ 2.11 fps)

2=Orifice (Passes < 0.37 cfs potential flow)

3=Windows (Passes < 1.47 cfs potential flow) **4=Grate** (Controls 0.00 cfs)



Pond 7P: WET BASIN G

Summary for Pond 8P: DRY BASIN H

Inflow Are	a =	11.650 ac, 7	71.03% Impervious	s, Inflow Depth > 2.50" for 10-Year event		
Inflow	=	27.28 cfs @	12.29 hrs, Volum	e= 2.430 af		
Outflow	=	2.81 cfs @	12.70 hrs, Volum	e= 1.114 af, Atten= 90%, Lag= 24.5 min		
Primary	=	2.81 cfs @	12.70 hrs, Volum	e= 1.114 af		
Routed to Pond 6P : DRY BASIN F						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.67' @ 13.72 hrs Surf.Area= 34,399 sf Storage= 66,669 cf

Plug-Flow detention time= 220.4 min calculated for 1.111 af (46% of inflow) Center-of-Mass det. time= 137.0 min (922.2 - 785.2)

Volume	Inve	ert Avail.Sto	rage Storage	Description	
#1	935.0	0' 115,6	07 cf Custom	Stage Data (Pri	smatic) Listed below (Recalc)
Elevatio	on a	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0)0	0	0	0	
936.0	00	28,411	14,206	14,206	
937.0	00	31,986	30,199	44,404	
938.0		35,583	33,785	78,189	
939.0	00	39,254	37,419	115,607	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	934.50'	24.0" Round	Culvert L= 20	0.0' Ke= 0.600
					934.50' S= 0.0000 '/' Cc= 0.900
				w Area= 3.14 st	
#2	Device 1	934.50'			0.600 Limited to weir flow at low heads
#3	Device 1	936.50'		" H Vert. Windo	
	.			ir flow at low he	
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate (C= 0.600 Limited to weir flow at low heads
			• • • • • • •		

Primary OutFlow Max=2.72 cfs @ 12.70 hrs HW=937.49' TW=936.92' (Dynamic Tailwater)

1=Culvert (Passes 2.72 cfs of 9.39 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.32 cfs @ 3.63 fps)

-3=Window (Orifice Controls 2.41 cfs @ 3.61 fps)

-4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 27.28 cfs 30 Primary Inflow Area=11.650 ac 28 26-Peak Elev=937.67' 24 Storage=66,669 cf 22-20-18 18⁻ 16⁻ 14⁻ 12 10 8-6 2.81 cfs 4 2 0-Ó 1 2 3 4 5 6 7 8 ģ 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 8P: DRY BASIN H

Summary for Pond 9P: DRY BASIN I

Inflow Are	a =	3.000 ac, 6	69.67% Impervious	, Inflow Depth >	2.83"	for 10-Year event	
Inflow	=	9.17 cfs @	12.29 hrs, Volum	e= 0.708	af		
Outflow	=	1.27 cfs @	12.40 hrs, Volum	e= 0.390	af, Atter	n= 86%, Lag= 6.8 min	
Primary	=	1.27 cfs @	12.40 hrs, Volum	e= 0.390	af	-	
Routed to Pond 8P : DRY BASIN H							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.74' @ 13.82 hrs Surf.Area= 16,246 sf Storage= 18,853 cf

Plug-Flow detention time= 174.4 min calculated for 0.390 af (55% of inflow) Center-of-Mass det. time= 115.2 min (881.9 - 766.7)

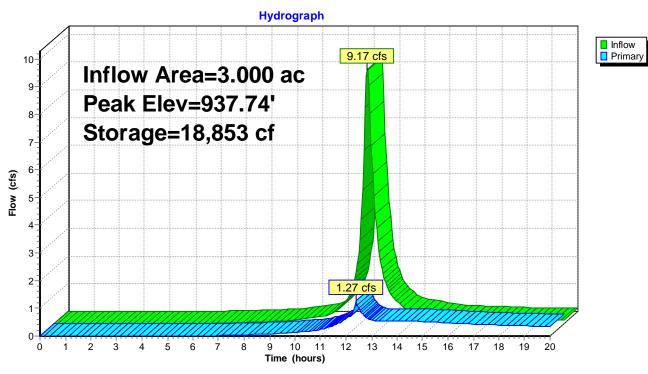
Volume	Inver	rt Avail.Stor	rage Storage	e Description
#1	936.00	0' 40,96	65 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)
936.0	00	0	0	0
937.0	00	14,750	7,375	7,375
938.0	00	16,770	15,760	23,135
939.0	00	18,890	17,830	40,965
Device	Routing	Invert	Outlet Device	es
#1	Primary	936.00'	12.0" Round	d Culvert L= 250.0' Ke= 0.600
	,		Inlet / Outlet I	Invert= 936.00' / 935.00' S= 0.0040 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 sf
#2	Device 1	936.00'	6.0" Vert. Ori	ifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0)" H Vert. Window C= 0.600
			Limited to we	eir flow at low heads
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.01 cfs @ 12.40 hrs HW=937.31' TW=937.09' (Dynamic Tailwater)

1=Culvert (Outlet Controls 1.01 cfs @ 1.29 fps)

2=Orifice/Grate (Passes < 0.45 cfs potential flow)

-3=Window (Passes < 0.73 cfs potential flow) **-4=Grate** (Controls 0.00 cfs)



Pond 9P: DRY BASIN I

Summary for Pond 1P: DRY BASIN A

Inflow Are	a =	24.600 ac, 3	57.30% Impervious	, Inflow Depth >	2.11"	for 25-1	lear event
Inflow	=	34.19 cfs @	12.26 hrs, Volum	e= 4.321	af		
Outflow	=	4.99 cfs @	13.77 hrs, Volum	e= 3.193	af, Atte	n= 85%,	Lag= 90.5 min
Primary	=	4.99 cfs @	13.77 hrs, Volum	e= 3.193	af		
Routed to Link 12L : (new Link)							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.47' @ 13.77 hrs Surf.Area= 25,364 sf Storage= 68,470 cf

Plug-Flow detention time= 173.9 min calculated for 3.185 af (74% of inflow) Center-of-Mass det. time= 93.6 min (948.2 - 854.6)

Volume	Inve	rt Avail.Sto	rage Storage	Description	
#1	934.70	D' 109,75	50 cf Custom	Stage Data (Pr	ismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.7	70	0	0	0	
935.0	00	3,347	502	502	
936.0	00	20,147	11,747	12,249	
937.0	00	22,210	21,179	33,428	
938.0	00	24,332	23,271	56,699	
939.0	00	26,511	25,422	82,120	
940.0	00	28,749	27,630	109,750	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	934.70'	12.0" Round	Culvert L= 10	0.0' Ke= 0.600
	2		Inlet / Outlet I	nvert= 934.70' /	'934.50' S= 0.0020 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 0.79 s	f
#2	Device 1	934.70'	3.0" Vert. Ori	fice C= 0.600	Limited to weir flow at low heads
#3	Device 1	936.10'	24.0" W x 8.0	" H Vert. Windo	ows X 3.00 C= 0.600
			Limited to we	ir flow at low he	ads
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate (C= 0.600 Limited to weir flow at low heads

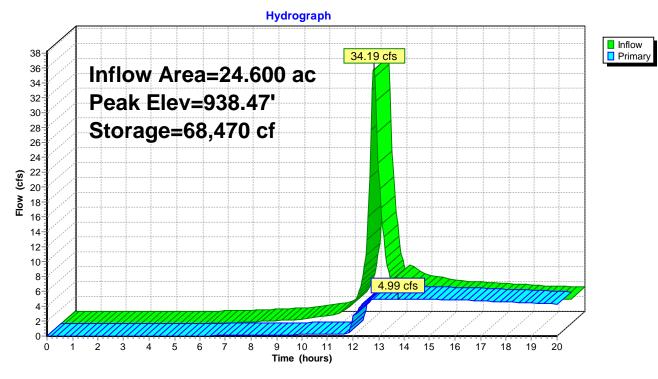
Primary OutFlow Max=4.99 cfs @ 13.77 hrs HW=938.47' TW=0.00' (Dynamic Tailwater)

1=Culvert (Barrel Controls 4.99 cfs @ 6.36 fps)

2=Orifice (Passes < 0.45 cfs potential flow)

-3=Windows (Passes < 27.48 cfs potential flow)

-4=Grate (Controls 0.00 cfs)



Pond 1P: DRY BASIN A

Summary for Pond 2P: DRY BASIN B

Inflow Are	a =	14.500 ac, 68.38% Impervious, Infl	ow Depth > 3.50" for 25-Year event
Inflow	=	54.09 cfs @ 12.29 hrs, Volume=	4.225 af
Outflow	=	3.12 cfs @ 15.53 hrs, Volume=	1.793 af, Atten= 94%, Lag= 194.2 min
Primary	=	3.12 cfs @ 15.53 hrs, Volume=	1.793 af
Routed	to Por	d 1P : DRY BASIN A	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.52' @ 13.90 hrs Surf.Area= 51,207 sf Storage= 145,426 cf

Plug-Flow detention time= 282.5 min calculated for 1.793 af (42% of inflow) Center-of-Mass det. time= 210.9 min (973.9 - 763.0)

Volume	Invei	rt Avail.Sto	rage Storage	e Description	
#1	935.00)' 223,47	79 cf Custon	n Stage Data (Pri	rismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store)
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	-
935.0	00	0	0	0	
936.0	00	45,956	22,978	22,978	
937.0	00	48,007	46,982	69,960	
938.0	00	50,097	49,052	119,012	۱
939.0	00	52,226	51,162	170,173	
940.0	00	54,386	53,306	223,479	
		Le sut			
Device	Routing	Invert	Outlet Device		
#1	Primary	935.00'	24.0" Round	d Culvert L= 15	50.0' Ke= 0.600
			Inlet / Outlet	Invert= 935.00' /	/ 934.70' S= 0.0020 '/' Cc= 0.900
			n= 0.013, Fl	ow Area= 3.14 st	sf
#2	Device 1	935.00'	24.0" Vert. O	rifice/Grate C=	C= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	24.0" W x 6.0)" H Vert. Windo	ow C= 0.600
			Limited to we	eir flow at low he	eads
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate (C= 0.600 Limited to weir flow at low heads

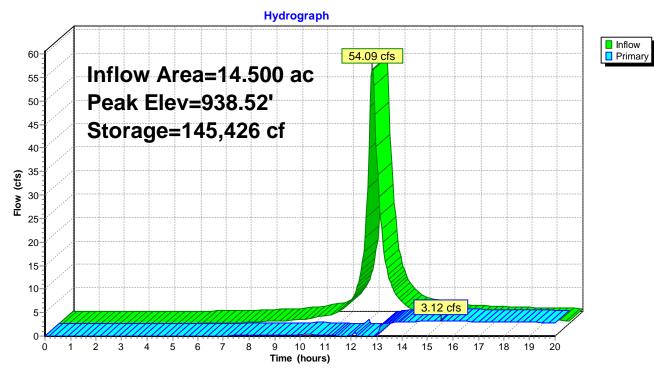
Primary OutFlow Max=3.30 cfs @ 15.53 hrs HW=938.41' TW=938.35' (Dynamic Tailwater)

1=**Culvert** (Outlet Controls 3.30 cfs @ 1.05 fps)

2=Orifice/Grate (Passes < 3.68 cfs potential flow)

--3=Window (Passes < 1.17 cfs potential flow)

4=Grate (Passes < 3.73 cfs potential flow)



Pond 2P: DRY BASIN B

Summary for Pond 3P: DRY BASIN C

Inflow Are	a =	6.900 ac, 6	65.00% Impervious,	Inflow Depth >	3.39"	for 25-Y	'ear event
Inflow	=	25.23 cfs @	12.29 hrs, Volume	e= 1.951	af		
Outflow	=	12.12 cfs @	12.57 hrs, Volume	e= 1.262	af, Atte	n= 52%,	Lag= 16.7 min
Primary	=	12.12 cfs @	12.57 hrs, Volume	e= 1.262	af		
Routed	to Por	nd 4P : DRY B	ASIN D				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.45' @ 12.57 hrs Surf.Area= 16,451 sf Storage= 40,554 cf

Plug-Flow detention time= 103.3 min calculated for 1.259 af (65% of inflow) Center-of-Mass det. time= 51.4 min (817.5 - 766.1)

Volume	Inve	ert Avail.Sto	rage Storage	Description	
#1	935.0	0' 49,8	47 cf Custom	Stage Data (Pri	smatic) Listed below (Recalc)
Elevatio	מר	Surf.Area	Inc.Store	Cum.Store	
(fee		(sq-ft)	(cubic-feet)	(cubic-feet)	
			1 1		
935.0		0	0	0	
936.0		11,869	5,935	5,935	
937.0	00	13,659	12,764	18,699	
938.0	00	15,549	14,604	33,303	
939.0	00	17,539	16,544	49,847	
Device	Routing	Invert	Outlet Device	s	
#1	Primary	935.00'	24.0" Round	Culvert L= 350	0.0' Ke= 0.600
			Inlet / Outlet I	nvert= 935.00' /	934.50' S= 0.0014 '/' Cc= 0.900
			n = 0.013. Flo	ow Area= 3.14 sf	
#2	Device 1	935.00'	,		0.600 Limited to weir flow at low heads
#3	Device 1	937.00'		" H Vert. Windo	
	2011001	501100		ir flow at low hea	
#4	Device 1	938.00'			C= 0.600 Limited to weir flow at low heads
	2011001	000.00			
— ·			0 40 1		

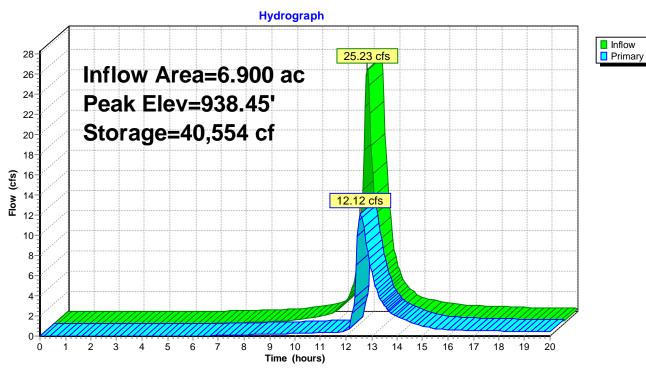
Primary OutFlow Max=12.02 cfs @ 12.57 hrs HW=938.45' TW=936.37' (Dynamic Tailwater)

1=**Culvert** (Passes 12.02 cfs of 14.42 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.61 cfs @ 6.94 fps)

-3=Windows (Orifice Controls 3.51 cfs @ 5.27 fps)

-4=Grate (Weir Controls 7.91 cfs @ 2.19 fps)



Pond 3P: DRY BASIN C

Summary for Pond 4P: DRY BASIN D

Inflow Are	a =	20.700 ac, 4	46.79% Impervious	, Inflow Depth >	2.67" for	25-Year event
Inflow	=	36.55 cfs @	12.54 hrs, Volum	e= 4.599 a	af	
Outflow	=	1.96 cfs @	13.89 hrs, Volum	e= 1.100 a	af, Atten=	95%, Lag= 81.0 min
Primary	=	1.96 cfs @	13.89 hrs, Volum	e= 1.100 a	af	
Routed	to Por	nd 5P : WET B	ASIN E			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.84' @ 16.52 hrs Surf.Area= 67,216 sf Storage= 157,436 cf

Plug-Flow detention time= 253.4 min calculated for 1.097 af (24% of inflow) Center-of-Mass det. time= 154.0 min (954.3 - 800.3)

Volume	Inver	t Avail.Sto	rage Storage	e Description		
#1	934.50)' 237,62	28 cf Custon	n Stage Data (Pri	ismatic) L	isted below (Recalc)
Elevatio	n S	Surf.Area	Inc.Store	Cum.Store		
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)		
934.5	0	0	0	0		
935.0	0	12,225	3,056	3,056		
936.0	0	60,758	36,492	39,548		
937.0	0	64,240	62,499	102,047		
938.0	0	67,771	66,006	168,052		
939.0	0	71,380	69,576	237,628		
Device	Routing	Invert	Outlet Devic	es		
#1	Primary	934.50'	24.0" Round	d Culvert L= 40	0.0' Ke=	0.600
	-		Inlet / Outlet	Invert= 934.50' /	934.00'	S= 0.0013 '/' Cc= 0.900
			n= 0.013, Fl	ow Area= 3.14 st	f	
#2	Device 1	934.50'	4.0" Vert. Or	ifice/Grate C=	0.600 Li	mited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	0" H Vert. Windo	ws C=	0.600
			Limited to we	eir flow at low he	ads	
#4	Device 1	938.00'	24.0" x 24.0"	' Horiz. Grate (C= 0.600	Limited to weir flow at low heads

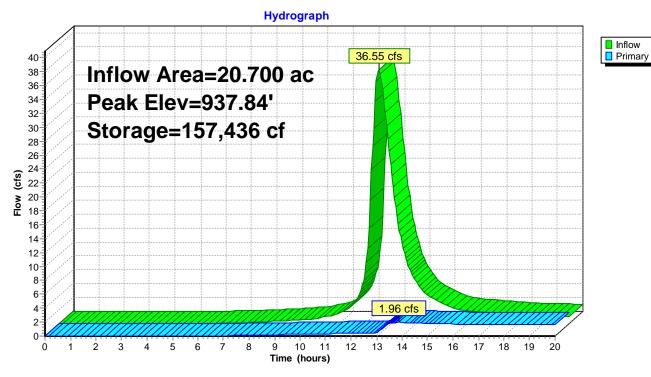
Primary OutFlow Max=1.91 cfs @ 13.89 hrs HW=937.66' TW=937.37' (Dynamic Tailwater)

1=Culvert (Passes 1.91 cfs of 5.33 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.23 cfs @ 2.61 fps)

-3=Windows (Orifice Controls 1.69 cfs @ 2.53 fps)

4=Grate (Controls 0.00 cfs)



Pond 4P: DRY BASIN D

Summary for Pond 5P: WET BASIN E

Inflow Are	a =	63.000 ac, 34.34% Impervious, Inflow Depth > 2.02" for 25-Year event						
Inflow	=	77.70 cfs @ 12.47 hrs, Volume= 10.603 af						
Outflow	=	4.74 cfs @ 16.84 hrs, Volume= 2.721 af, Atten= 94%, Lag= 262.6	min					
Primary	=	4.74 cfs @ 16.84 hrs, Volume= 2.721 af						
Routed	Routed to Link 10L : (new Link)							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.63' @ 16.84 hrs Surf.Area= 108,877 sf Storage= 352,112 cf

Plug-Flow detention time= 284.9 min calculated for 2.721 af (26% of inflow) Center-of-Mass det. time= 177.3 min (987.4 - 810.0)

Volume	Inve	rt Avail.Sto	rage Storag	ge Description	
#1	934.00	D' 507,64	47 cf Custor	m Stage Data (Prismatic) Listed below (Recalc)	
Elevatio	n S	Surf.Area	Inc.Store	Cum.Store	
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.0	0	85,433	0	0	
935.0	0	91,702	88,568	88,568	
936.0	0	98,109	94,906	183,473	
937.0	0	104,658	101,384	284,857	
938.0	0	111,356	108,007	392,864	
939.0	0	118,210	114,783	507,647	
Device	Routing	Invert	Outlet Devic	ces	
#1	Primary	934.00'	24.0" Roun	nd Culvert L= 100.0' Ke= 0.600	
			Inlet / Outlet	t Invert= 934.00' / 933.43' S= 0.0057 '/' Cc= 0.900	
			n= 0.013, F	Flow Area= 3.14 sf	
#2	Device 1	934.00'	6.0" Vert. 6"	" Orifice C= 0.600 Limited to weir flow at low heads	
#3	Device 1	936.50'	16.0" W x 6.	.0" H Vert. Window C= 0.600	
			Limited to w	veir flow at low heads	
#4	Device 1	938.60'	24.0" x 24.0)" Horiz. Grate C= 0.600 Limited to weir flow at low he	ads

Primary OutFlow Max=4.74 cfs @ 16.84 hrs HW=937.63' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 4.74 cfs of 22.16 cfs potential flow)

2=6" Orifice (Orifice Controls 1.74 cfs @ 8.85 fps)

-3=Window (Orifice Controls 3.00 cfs @ 4.50 fps)

4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 77.70 cfs Primary 85 Inflow Area=63.000 ac 80 75 Peak Elev=937.63' 70-65 Storage=352,112 cf 60-55-**(cts)** 45 40 35 30 25 20-15 4.74 cfs 10-5 0-Ó 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 5P: WET BASIN E

Summary for Pond 6P: DRY BASIN F

Inflow Are	a =	26.110 ac, 72.21% Impervious, Inflow Depth > 2.41" for 25-Year event	
Inflow	=	42.08 cfs @ 12.30 hrs, Volume= 5.246 af	
Outflow	=	4.83 cfs @ 14.78 hrs, Volume= 2.523 af, Atten= 89%, Lag= 148.6 min	۱
Primary	=	4.83 cfs @ 14.78 hrs, Volume= 2.523 af	
Routed	l to Linł	11L : (new Link)	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.63' @ 14.78 hrs Surf.Area= 66,135 sf Storage= 128,476 cf

Plug-Flow detention time= 252.2 min calculated for 2.523 af (48% of inflow) Center-of-Mass det. time= 135.7 min (958.4 - 822.7)

Volume	Inve	rt Avail.Sto	rage Storage	Description	
#1	935.0	D' 188,5 <u>4</u>	46 cf Custom	Stage Data (Prismatic) Listed below (Recalc)	
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0	00	0	0	0	
936.0	00	56,901	28,451	28,451	
937.0	00	62,552	59,727	88,177	
938.0	00	68,273	65,413	153,590	
938.5	50	71,552	34,956	188,546	
Device	Routing	Invert	Outlet Devices	S	
#1	Primary	935.00'	24.0" Round	Culvert L= 100.0' Ke= 0.600	
	-		Inlet / Outlet Ir	nvert= 935.00' / 934.50' S= 0.0050 '/' Cc= 0.900	
			n= 0.013, Flo	ow Area= 3.14 sf	
#2	Device 1	935.00'	3.5" Vert. Orif	fice C= 0.600 Limited to weir flow at low heads	
#3	Device 1	936.75'	20.0" W x 6.0'	" H Vert. Window C= 0.600	
			Limited to wei	ir flow at low heads	
#4	Device 1	937.50'	24.0" x 24.0" l	Horiz. Grate C= 0.600 Limited to weir flow at low hea	ads

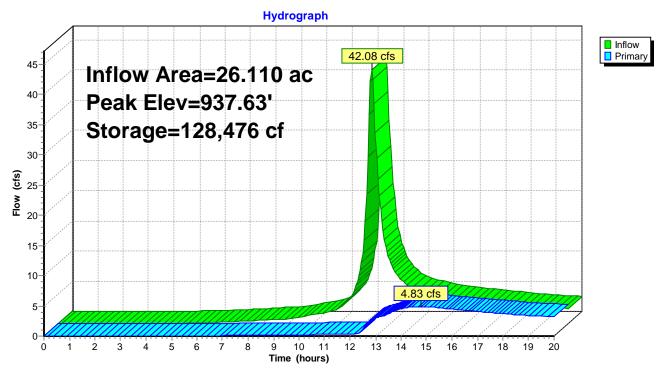
Primary OutFlow Max=4.83 cfs @ 14.78 hrs HW=937.63' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 4.83 cfs of 16.38 cfs potential flow)

2=Orifice (Orifice Controls 0.51 cfs @ 7.58 fps)

-3=Window (Orifice Controls 3.15 cfs @ 3.78 fps)

-4=Grate (Weir Controls 1.17 cfs @ 1.16 fps)



Pond 6P: DRY BASIN F

Summary for Pond 7P: WET BASIN G

Inflow Are	a =	4.300 ac, 6	69.88% Impervious	, Inflow Depth >	3.50"	for 25-Ye	ear event
Inflow	=	16.04 cfs @	12.29 hrs, Volum	e= 1.253	af		
Outflow	=	1.76 cfs @	12.38 hrs, Volum	e= 0.740	af, Atte	en= 89%, l	_ag= 5.8 min
Primary	=	1.76 cfs @	12.38 hrs, Volum	e= 0.740	af		
Routed	to Por	nd 6P : DRY B	ASIN F				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.01' @ 13.50 hrs Surf.Area= 23,676 sf Storage= 32,834 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 108.3 min (871.4 - 763.0)

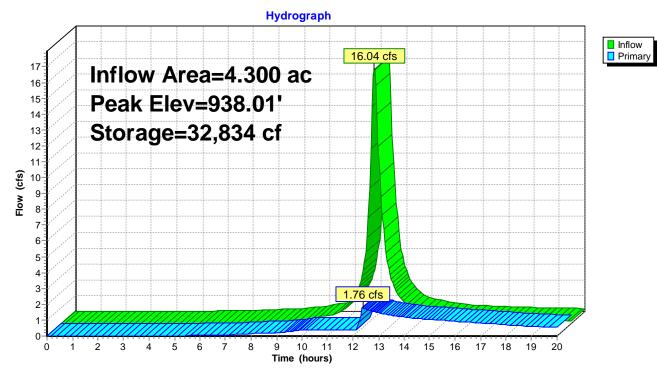
Volume	Inver	rt Avail.Sto	rage Storage	e Description		
#1	936.50)' 57,56	66 cf Custom	n Stage Data (Pri	smatic) Li	sted below (Recalc)
F lourstin			la a Otana	Ourse Otherse		
Elevatio		Surf.Area	Inc.Store	Cum.Store		
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)		
936.5	0	19,817	0	0		
937.0	0	21,069	10,222	10,222		
938.0	0	23,647	22,358	32,580		
939.0	0	26,326	24,987	57,566		
Device	Routing	Invert	Outlet Device	es		
#1	Primary	935.00'	12.0" Round	d Culvert L= 300	0.0' Ke=	0.600
			Inlet / Outlet	Invert= 935.00' /	934.50' \$	S= 0.0017 '/' Cc= 0.900
			n= 0.013. Flo	ow Area= 0.79 sf	:	
#2	Device 1	935.00'	,			o weir flow at low heads
#3	Device 1	937.00')" H Vert. Windo		
	201100	501100		eir flow at low he		
#4	Device 1	938.50'				Limited to weir flow at low heads
	_ 01100 1	000.00			0.000	

Primary OutFlow Max=1.64 cfs @ 12.38 hrs HW=937.53' TW=936.79' (Dynamic Tailwater)

1=Culvert (Outlet Controls 1.64 cfs @ 2.09 fps)

2=Orifice (Passes < 0.36 cfs potential flow)

3=Windows (Passes < 1.64 cfs potential flow) **4=Grate** (Controls 0.00 cfs)



Pond 7P: WET BASIN G

Summary for Pond 8P: DRY BASIN H

Inflow Are	ea =	11.650 ac, 7	71.03% Imp	ervious,	Inflow Depth >	3.06"	for 25-1	lear event
Inflow	=	33.51 cfs @	12.29 hrs,	Volume	= 2.972	af		
Outflow	=	3.11 cfs @	12.54 hrs,	Volume	= 1.455	af, Atte	en= 91%,	Lag= 14.9 min
Primary	=	3.11 cfs @	12.54 hrs,	Volume	= 1.455	af		
Routed	d to Por	nd 6P : DRY B	ASIN F					

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.09' @ 13.68 hrs Surf.Area= 35,913 sf Storage= 81,398 cf

Plug-Flow detention time= 232.1 min calculated for 1.455 af (49% of inflow) Center-of-Mass det. time= 146.0 min (930.3 - 784.4)

Volume	Inve	ert Avail.Sto	rage Storage	Description	
#1	935.0	0' 115,6	07 cf Custom	Stage Data (Pri	smatic) Listed below (Recalc)
Elevatio	on a	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0)0	0	0	0	
936.0	00	28,411	14,206	14,206	
937.0	00	31,986	30,199	44,404	
938.0		35,583	33,785	78,189	
939.0	00	39,254	37,419	115,607	
Device	Routing	Invert	Outlet Device:	S	
#1	Primary	934.50'	24.0" Round	Culvert L= 20	0.0' Ke= 0.600
					934.50' S= 0.0000 '/' Cc= 0.900
			,	w Area= 3.14 st	
#2	Device 1	934.50'			0.600 Limited to weir flow at low heads
#3	Device 1	936.50'		" H Vert. Windo	
	.			ir flow at low he	
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate	C= 0.600 Limited to weir flow at low heads
			• • • • • • • •		

Primary OutFlow Max=2.95 cfs @ 12.54 hrs HW=937.72' TW=937.06' (Dynamic Tailwater)

1=Culvert (Passes 2.95 cfs of 10.13 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.34 cfs @ 3.92 fps)

-3=Window (Orifice Controls 2.61 cfs @ 3.92 fps)

-4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 33.51 cfs Primary 36 Inflow Area=11.650 ac 34 32-Peak Elev=938.09' 30-28 Storage=81,398 cf 26 24 22 (classification) 22-20-18-18-16-16 14 12 10-8-6-3.11 cfs 4 2 0-Ó 1 2 ż 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 8P: DRY BASIN H

Summary for Pond 9P: DRY BASIN I

Inflow Are	a =	3.000 ac, 6	69.67% Impervious	, Inflow Depth >	3.50"	for 25-Ye	ear event
Inflow	=	11.19 cfs @	12.29 hrs, Volum	e= 0.874	af		
Outflow	=	1.27 cfs @	12.31 hrs, Volum	e= 0.451	af, Atte	en= 89%, I	_ag= 1.2 min
Primary	=	1.27 cfs @	12.31 hrs, Volum	e= 0.451	af		
Routed	to Por	nd 8P : DRY B	ASIN H				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.15' @ 14.13 hrs Surf.Area= 17,090 sf Storage= 25,693 cf

Plug-Flow detention time= 202.7 min calculated for 0.450 af (51% of inflow) Center-of-Mass det. time= 140.4 min (903.4 - 763.0)

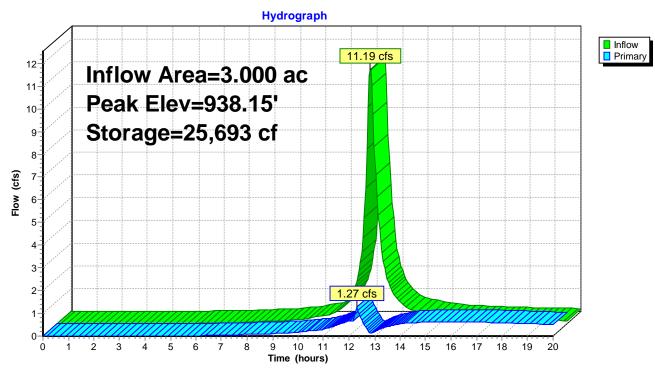
Volume	Inver	rt Avail.Sto	rage Storage	Description		
#1	936.00	0' 40,96	65 cf Custom	Stage Data (Pri	smatic) [_isted below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
936.0	00	0	0	0		
937.0	00	14,750	7,375	7,375		
938.0	00	16,770	15,760	23,135		
939.0	00	18,890	17,830	40,965		
Device	Routing	Invert	Outlet Device	es		
#1	Primary	936.00'	12.0" Round	Culvert L= 250	0.0' Ke=	0.600
	-		Inlet / Outlet I	Invert= 936.00' /	935.00'	S= 0.0040 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 sf	:	
#2	Device 1	936.00'	6.0" Vert. Ori	fice/Grate C=	0.600 Li	imited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Windo	w C= 0	.600
			Limited to we	ir flow at low hea	ads	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate C	C= 0.600	Limited to weir flow at low heads

Primary OutFlow Max=0.86 cfs @ 12.31 hrs HW=937.32' TW=937.16' (Dynamic Tailwater)

1=Culvert (Outlet Controls 0.86 cfs @ 1.10 fps)

2=Orifice/Grate (Passes < 0.39 cfs potential flow)

--3=Window (Passes < 0.70 cfs potential flow) **-4=Grate** (Controls 0.00 cfs)



Pond 9P: DRY BASIN I

Summary for Pond 1P: DRY BASIN A

Inflow Are	a =	24.600 ac, 5	57.30% Imperviou	s, Inflow Depth >	2.38"	for 50-Year event
Inflow	=	39.82 cfs @	12.26 hrs, Volur	ne= 4.871	af	
Outflow	=	5.37 cfs @	13.85 hrs, Volur	ne= 3.490	af, Atte	en= 87%, Lag= 95.2 min
Primary	=	5.37 cfs @	13.85 hrs, Volur	ne= 3.490	af	-
Routed	to Link	< 12L : (new Li	nk)			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.94' @ 13.85 hrs Surf.Area= 26,387 sf Storage= 80,612 cf

Plug-Flow detention time= 184.1 min calculated for 3.482 af (71% of inflow) Center-of-Mass det. time= 97.3 min (946.5 - 849.2)

Volume	Invei	rt Avail.Sto	rage Storage	Description	
#1	934.70)' 109,7 <u></u>	50 cf Custom	Stage Data (Pr	rismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.7	70	0	0	0	
935.0	00	3,347	502	502	
936.0	00	20,147	11,747	12,249	
937.0	00	22,210	21,179	33,428	
938.0	00	24,332	23,271	56,699	
939.0	00	26,511	25,422	82,120	
940.0	00	28,749	27,630	109,750	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	934.70'	12.0" Round	Culvert L= 10	00.0' Ke= 0.600
			Inlet / Outlet I	nvert= 934.70' /	/ 934.50' S= 0.0020 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 s	sf
#2	Device 1	934.70'	3.0" Vert. Ori	fice C= 0.600	Limited to weir flow at low heads
#3	Device 1	936.10'	24.0" W x 8.0	" H Vert. Windo	ows X 3.00 C= 0.600
			Limited to we	ir flow at low he	eads
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate	C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=5.37 cfs @ 13.85 hrs HW=938.94' TW=0.00' (Dynamic Tailwater)

1=Culvert (Barrel Controls 5.37 cfs @ 6.84 fps)

2=Orifice (Passes < 0.48 cfs potential flow)

-3=Windows (Passes < 30.49 cfs potential flow)

-4=Grate (Passes < 7.71 cfs potential flow)

Hydrograph Inflow 39.82 cfs 44 Primary 42 Inflow Area=24.600 ac 40 38 Peak Elev=938.94' 36 34 Storage=80,612 cf 32-30-28-26 26-24-22-20-18-16-14 12-10-8 5.37 cfs 6 4 2 0-Ó 1 2 ż 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 1P: DRY BASIN A

Summary for Pond 2P: DRY BASIN B

Inflow Are	ea =	14.500 ac, 68.38% Impervious, Inflow Depth > 4.04" for 50-Year e	vent
Inflow	=	61.89 cfs @ 12.29 hrs, Volume= 4.876 af	
Outflow	=	3.35 cfs @ 15.58 hrs, Volume= 1.913 af, Atten= 95%, Lag=	197.8 min
Primary	=	3.35 cfs @ 15.58 hrs, Volume= 1.913 af	
Routed	d to Por	d 1P : DRY BASIN A	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 939.00' @ 13.99 hrs Surf.Area= 52,222 sf Storage= 170,072 cf

Plug-Flow detention time= 291.7 min calculated for 1.908 af (39% of inflow) Center-of-Mass det. time= 214.8 min (975.4 - 760.5)

Volume	Inver	rt Avail.Sto	rage Storage	Description		
#1	935.00)' 223,47	79 cf Custom	Stage Data (Pri	i smatic) Li	isted below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
935.0	00	0	0	0		
936.0	00	45,956	22,978	22,978		
937.0	00	48,007	46,982	69,960		
938.0	00	50,097	49,052	119,012		
939.0	00	52,226	51,162	170,173		
940.0	00	54,386	53,306	223,479		
Device	Deutine	la		_		
Device	Routing	Invert	Outlet Device	-		
#1	Primary	935.00'	24.0" Round	Culvert L= 15	0.0' Ke=	0.600
			Inlet / Outlet I	nvert= 935.00' /	934.70' \$	S= 0.0020 '/' Cc= 0.900
				w Area= 3.14 st		
#2	Device 1	935.00'	24.0" Vert. Or	rifice/Grate C=	= 0.600 L	imited to weir flow at low heads
#3	Device 1	937.00'	24.0" W x 6.0	" H Vert. Windo	w C= 0.0	600
			Limited to we	ir flow at low he	ads	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate	C= 0.600	Limited to weir flow at low heads

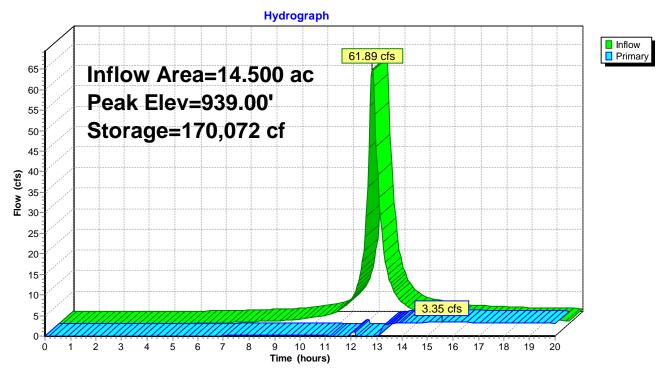
Primary OutFlow Max=3.51 cfs @ 15.58 hrs HW=938.89' TW=938.82' (Dynamic Tailwater)

1=**Culvert** (Outlet Controls 3.51 cfs @ 1.12 fps)

2=Orifice/Grate (Passes < 3.92 cfs potential flow)

--3=Window (Passes < 1.25 cfs potential flow)

4=Grate (Passes < 5.00 cfs potential flow)



Pond 2P: DRY BASIN B

Summary for Pond 3P: DRY BASIN C

Inflow Are	a =	6.900 ac, 6	65.00% Impervious	, Inflow Depth >	3.93"	for 50-Yea	ar event
Inflow	=	28.96 cfs @	12.29 hrs, Volum	e= 2.258	af		
Outflow	=	15.17 cfs @	12.53 hrs, Volume	e= 1.447	af, Atte	n= 48%, La	ag= 14.3 min
Primary	=	15.17 cfs @	12.53 hrs, Volum	e= 1.447	af		
Routed	to Por	nd 4P : DRY B	ASIN D				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.65' @ 12.54 hrs Surf.Area= 16,835 sf Storage= 43,766 cf

Plug-Flow detention time= 96.8 min calculated for 1.447 af (64% of inflow) Center-of-Mass det. time= 43.3 min (806.8 - 763.5)

Volume	Inve	rt Avail.Sto	rage Storage	e Description	
#1	935.0	0' 49,84	47 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)	
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0	00	0	0	0	
936.0	00	11,869	5,935	5,935	
937.0	00	13,659	12,764	18,699	
938.0	00	15,549	14,604	33,303	
939.0	00	17,539	16,544	49,847	
Device	Routing	Invert	Outlet Device	es	
#1	Primary	935.00'	24.0" Round	d Culvert L= 350.0' Ke= 0.600	
	-		Inlet / Outlet I	Invert= 935.00' / 934.50' S= 0.0014 '/' Cc= 0.900	
			n= 0.013, Flo	low Area= 3.14 sf	
#2	Device 1	935.00'	4.0" Vert. Ori	rifice/Grate C= 0.600 Limited to weir flow at low heads	
#3	Device 1	937.00'	16.0" W x 6.0	0" H Vert. Windows C= 0.600	
			Limited to we	eir flow at low heads	
#4	Device 1	938.00'	24.0" x 24.0"	"Horiz. Grate C= 0.600 Limited to weir flow at low heads	s

Primary OutFlow Max=14.98 cfs @ 12.53 hrs HW=938.64' TW=936.54' (Dynamic Tailwater)

1=Culvert (Outlet Controls 14.98 cfs @ 4.77 fps)

2=Orifice/Grate (Passes < 0.61 cfs potential flow)

-3=Windows (Passes < 3.78 cfs potential flow)

-4=Grate (Passes < 13.48 cfs potential flow)

(cts) 18-16-14-

14-12 10-8-6 4 2 0-Ó 1 2 ż

20

Inflow

Primary

Pond 3P: DRY BASIN C Hydrograph 28.96 cfs 32 Inflow Area=6.900 ac 30-28 Peak Elev=938.65' 26 24 Storage=43,766 cf 22-20

15.17 cfs

14 15 16 17 18 19

4 5 6 7 8 ģ 10 11 12 13 Time (hours)

Summary for Pond 4P: DRY BASIN D

Inflow Are	a =	20.700 ac, 46.79% Impervious, Inflow Depth > 3.11" f	or 50-Year event
Inflow	=	44.46 cfs @ 12.46 hrs, Volume= 5.365 af	
Outflow	=	2.68 cfs @ 14.34 hrs, Volume= 1.310 af, Atten:	= 94%, Lag= 112.6 min
Primary	=	2.68 cfs @ 14.34 hrs, Volume= 1.310 af	
Routed	to Por	d 5P : WET BASIN E	

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.22' @ 16.63 hrs Surf.Area= 68,548 sf Storage= 182,731 cf

Plug-Flow detention time= 251.3 min calculated for 1.307 af (24% of inflow) Center-of-Mass det. time= 152.7 min (948.0 - 795.3)

Volume	Inver	rt Avail.Sto	rage Storage	Description	
#1	934.50)' 237,62	28 cf Custom	Stage Data (Pri	Prismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store)
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	<u>)</u>
934.5	50	0	0	0)
935.0	00	12,225	3,056	3,056	5
936.0	00	60,758	36,492	39,548	3
937.0	00	64,240	62,499	102,047	,
938.0	00	67,771	66,006	168,052) -
939.0	00	71,380	69,576	237,628	5
Device	Routing	Invert	Outlet Device	es	
#1	Primary	934.50'	24.0" Round	I Culvert L= 400	00.0' Ke= 0.600
			Inlet / Outlet I	Invert= 934.50' /	/ 934.00' S= 0.0013 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 st	sf
#2	Device 1	934.50'	4.0" Vert. Ori	fice/Grate C=	= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Windo	lows C= 0.600
				eir flow at low he	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate	C= 0.600 Limited to weir flow at low heads

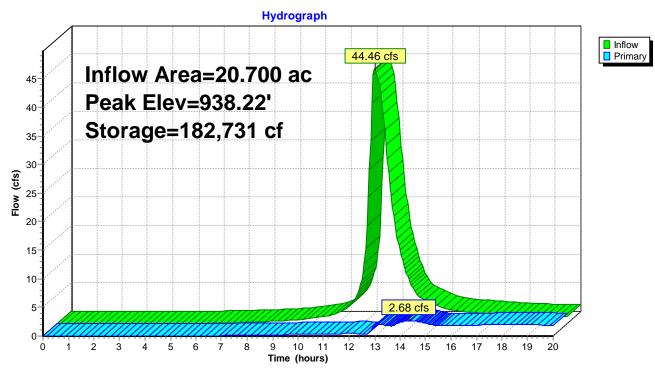
Primary OutFlow Max=2.59 cfs @ 14.34 hrs HW=938.15' TW=938.03' (Dynamic Tailwater)

1=Culvert (Passes 2.59 cfs of 3.27 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.14 cfs @ 1.60 fps)

-3=Windows (Orifice Controls 1.07 cfs @ 1.60 fps)

4=Grate (Weir Controls 1.38 cfs @ 1.19 fps)



Pond 4P: DRY BASIN D

Summary for Pond 5P: WET BASIN E

Inflow Are	ea =	63.000 ac, 34.34% Impervious, Inflow Depth > 2.39" for 50-Year event					
Inflow	=	91.03 cfs @ 12.47 hrs, Volume= 12.546 af					
Outflow	=	5.71 cfs @ 16.38 hrs, Volume= 3.361 af, Atten= 94%, Lag= 234.6 r	min				
Primary	=	5.71 cfs @ 16.38 hrs, Volume= 3.361 af					
Routed to Link 10L : (new Link)							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.18' @ 16.38 hrs Surf.Area= 112,592 sf Storage= 413,054 cf

Plug-Flow detention time= 282.2 min calculated for 3.361 af (27% of inflow) Center-of-Mass det. time= 175.1 min (982.6 - 807.4)

Volume	Inve	rt Avail.Sto	rage Storage	Description		
#1	934.0	D' 507,6₄	47 cf Custom	n Stage Data (Pri	smatic) Listed below (F	Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
934.0	00	85,433	0	0		
935.0	00	91,702	88,568	88,568		
936.0	00	98,109	94,906	183,473		
937.0	00	104,658	101,384	284,857		
938.0	00	111,356	108,007	392,864		
939.0	00	118,210	114,783	507,647		
Device	Routing	Invert	Outlet Device	es		
#1	Primary	934.00'	24.0" Round	I Culvert L= 100).0' Ke= 0.600	
	-		Inlet / Outlet	Invert= 934.00' /	933.43' S= 0.0057 '/'	Cc= 0.900
			n= 0.013, Fl	ow Area= 3.14 sf		
#2	Device 1	934.00'	6.0" Vert. 6"	Orifice C= 0.60	00 Limited to weir flow	/ at low heads
#3	Device 1	936.50'	16.0" W x 6.0	" H Vert. Windo	v C= 0.600	
			Limited to we	eir flow at low hea	ads	
#4	Device 1	938.60'	24.0" x 24.0"	Horiz. Grate C	= 0.600 Limited to we	eir flow at low heads

Primary OutFlow Max=5.71 cfs @ 16.38 hrs HW=938.18' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 5.71 cfs of 24.78 cfs potential flow)

2=6" Orifice (Orifice Controls 1.87 cfs @ 9.55 fps)

-3=Window (Orifice Controls 3.83 cfs @ 5.75 fps)

4=Grate (Controls 0.00 cfs)

Hydrograph Inflow 91.03 cfs 100 Primary Inflow Area=63.000 ac 95 90 Peak Elev=938.18' 85 80 Storage=413,054 cf 75 70 65 60 Flow (cfs) 55 50 45 40 35 30-25 20-15 5.71 cfs 10 5 0ò 1 2 ż 4 5 6 7 8 ģ 10 11 12 13 14 15 16 17 18 19 20 Time (hours)

Pond 5P: WET BASIN E

Summary for Pond 6P: DRY BASIN F

Inflow Are	a =	26.110 ac, 7	72.21% Impervious,	Inflow Depth >	2.83"	for 50-Year event	
Inflow	=	48.55 cfs @	12.30 hrs, Volume	e= 6.150 a	af		
Outflow	=	6.89 cfs @	13.82 hrs, Volume	e= 3.329 a	af, Atter	n= 86%, Lag= 91.5 min	
Primary	=	6.89 cfs @	13.82 hrs, Volume	e= 3.329 a	af		
Routed to Link 11L : (new Link)							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.73' @ 13.82 hrs Surf.Area= 66,749 sf Storage= 135,605 cf

Plug-Flow detention time= 234.1 min calculated for 3.329 af (54% of inflow) Center-of-Mass det. time= 120.3 min (946.4 - 826.1)

Volume	Inve	rt Avail.Sto	rage Storage	Description
#1	935.0	0' 188,54	46 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)
935.0	00	0	0	0
936.0	00	56,901	28,451	28,451
937.0	00	62,552	59,727	88,177
938.0	00	68,273	65,413	153,590
938.5	50	71,552	34,956	188,546
Device	Routing	Invert	Outlet Device	es
#1	Primary	935.00'	24.0" Round	I Culvert L= 100.0' Ke= 0.600
	-		Inlet / Outlet I	Invert= 935.00' / 934.50' S= 0.0050 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 sf
#2	Device 1	935.00'		ifice C= 0.600 Limited to weir flow at low heads
#3	Device 1	936.75'	20.0" W x 6.0)" H Vert. Window C= 0.600
			Limited to wei	eir flow at low heads
#4	Device 1	937.50'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limited to weir flow at low heads

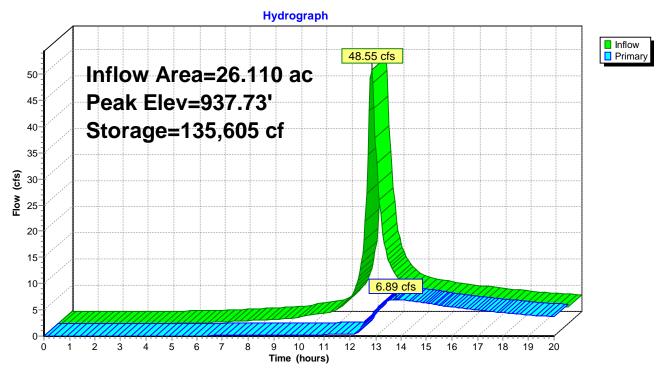
Primary OutFlow Max=6.89 cfs @ 13.82 hrs HW=937.73' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 6.89 cfs of 16.60 cfs potential flow)

2=Orifice (Orifice Controls 0.52 cfs @ 7.75 fps)

-3=Window (Orifice Controls 3.42 cfs @ 4.10 fps)

-4=Grate (Weir Controls 2.95 cfs @ 1.58 fps)



Pond 6P: DRY BASIN F

Summary for Pond 7P: WET BASIN G

Inflow Area	=	4.300 ac, 6	9.88% Impervious,	Inflow Depth >	4.04" for 50-Ye	ar event	
Inflow	=	18.35 cfs @	12.29 hrs, Volume	= 1.446 a	f		
Outflow	=	1.77 cfs @	12.30 hrs, Volume	= 0.876 a	f, Atten= 90%, L	.ag= 0.7 min	
Primary	=	1.77 cfs @	12.30 hrs, Volume	= 0.876 a	f		
Routed to Pond 6P : DRY BASIN F							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.27' @ 13.55 hrs Surf.Area= 24,366 sf Storage= 39,024 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 120.3 min (880.8 - 760.5)

Volume	Inver	rt Avail.Sto	rage Storage	e Description		
#1	936.50)' 57,56	66 cf Custon	n Stage Data (Pri	i smatic) L	isted below (Recalc)
Elevatio	n c	Surf.Area	Inc.Store	Cum.Store		
(fee	/	(sq-ft)	(cubic-feet)	(cubic-feet)		
936.5	50	19,817	0	0		
937.0	00	21,069	10,222	10,222		
938.0)0	23,647	22,358	32,580		
939.0	00	26,326	24,987	57,566		
Device	Routing	Invert	Outlet Device	es		
#1	Primary	935.00'	12.0" Round	d Culvert L= 30	0.0' Ke=	0.600
	,		Inlet / Outlet	Invert= 935.00' /	934.50'	S= 0.0017 '/' Cc= 0.900
			n= 0.013 Fl	ow Area= 0.79 s	f	
#2	Device 1	935.00'	,			to weir flow at low heads
#3	Device 1	937.00')" H Vert. Windo		
#3	DEVICE I	337.00		eir flow at low he	•	0.000
	Davis 4					Lington day under flager at large barrels
#4	Device 1	938.50'	24.0" X 24.0"	Horiz. Grate (- 0.600	Limited to weir flow at low heads

Primary OutFlow Max=1.62 cfs @ 12.30 hrs HW=937.50' TW=936.77' (Dynamic Tailwater)

1=Culvert (Outlet Controls 1.62 cfs @ 2.07 fps)

2=Orifice (Passes < 0.36 cfs potential flow)

3=Windows (Passes < 1.51 cfs potential flow) **4=Grate** (Controls 0.00 cfs)

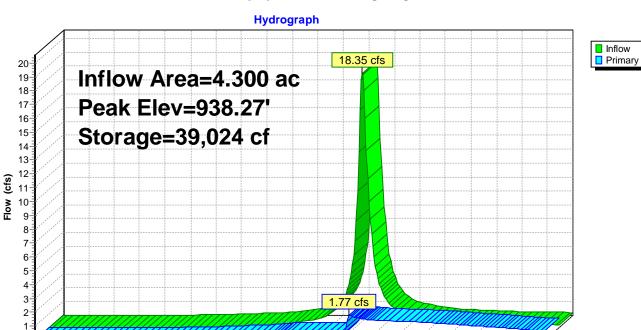
4 5 6 7

8 9

0 1 2 3

20

Prepared by Kimley-Horn & Associates HydroCAD® 10.20-2b s/n 02344 © 2021 HydroCAD Software Solutions LLC



10 11

Time (hours)

12 13 14 15 16 17 18 19

Pond 7P: WET BASIN G

Summary for Pond 8P: DRY BASIN H

Inflow Are	a =	11.650 ac, 7	71.03% Impervious	Inflow Depth > 3	3.52" for 50-Year event	
Inflow	=	38.01 cfs @	12.29 hrs, Volum	e= 3.416 af		
Outflow	=	3.28 cfs @	12.49 hrs, Volum	e= 1.765 af	, Atten= 91%, Lag= 12.4 min	
Primary	=	3.28 cfs @	12.49 hrs, Volum	e= 1.765 af		
Routed to Pond 6P : DRY BASIN F						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.42' @ 13.62 hrs Surf.Area= 37,108 sf Storage= 93,290 cf

Plug-Flow detention time= 238.9 min calculated for 1.765 af (52% of inflow) Center-of-Mass det. time= 151.8 min (935.8 - 784.1)

#1 935.00' 115,607 cf Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation Surf.Area Inc.Store Cum.Store	
(feet) (sq-ft) (cubic-feet) (cubic-feet)	
935.00 0 0 0	
936.00 28,411 14,206 14,206	
937.00 31,986 30,199 44,404	
938.00 35,583 33,785 78,189	
939.00 39,254 37,419 115,607	
Device Routing Invert Outlet Devices	
#1 Primary 934.50' 24.0" Round Culvert L= 200.0' Ke= 0.600	
Inlet / Outlet Invert= 934.50' / 934.50' S= 0.0000 '/' Cc= 0.900	
n= 0.013, Flow Area= 3.14 sf	
#2 Device 1 934.50' 4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low I	eads
#3 Device 1 936.50' 16.0" W x 6.0" H Vert. Window C= 0.600	
Limited to weir flow at low heads	
#4 Device 1 938.50' 24.0" x 24.0" Horiz. Grate C= 0.600 Limited to weir flow at lo	v heads

Primary OutFlow Max=3.09 cfs @ 12.49 hrs HW=937.93' TW=937.21' (Dynamic Tailwater)

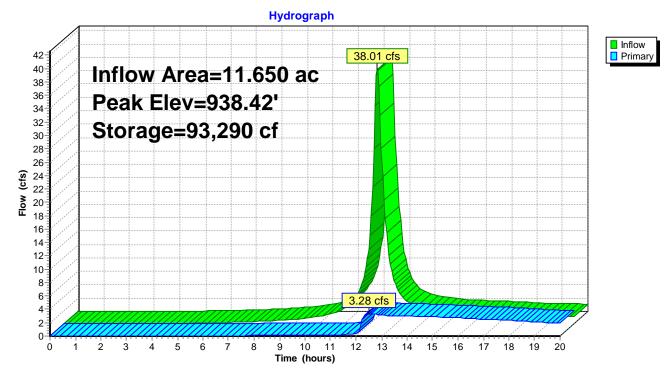
1=Culvert (Passes 3.09 cfs of 10.62 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.36 cfs @ 4.10 fps)

-3=Window (Orifice Controls 2.73 cfs @ 4.10 fps)

-4=Grate (Controls 0.00 cfs)

Pond 8P: DRY BASIN H



Summary for Pond 9P: DRY BASIN I

Inflow Are	a =	3.000 ac, 6	69.67% Impervious	, Inflow Depth >	4.04"	for 50-Year even	nt
Inflow	=	12.80 cfs @	12.29 hrs, Volume	e= 1.009	af		
Outflow	=	1.20 cfs @	12.26 hrs, Volume	e= 0.507	af, Atte	n= 91%, Lag= 0.0) min
Primary	=	1.20 cfs @	12.26 hrs, Volume	e= 0.507	af		
Routed to Pond 8P : DRY BASIN H							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.48' @ 14.24 hrs Surf.Area= 17,779 sf Storage= 31,353 cf

Plug-Flow detention time= 223.8 min calculated for 0.507 af (50% of inflow) Center-of-Mass det. time= 158.6 min (919.1 - 760.5)

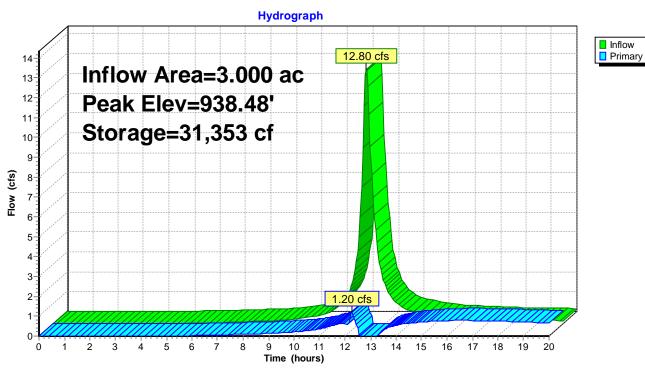
Volume	Inver	t Avail.Sto	rage Storage	e Description
#1	936.00)' 40,96	65 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)
936.0	00	0	0	0
937.0	00	14,750	7,375	7,375
938.0	00	16,770	15,760	23,135
939.0	00	18,890	17,830	40,965
Device	Routing	Invert	Outlet Device	es
#1	Primary	936.00'	12.0" Round	d Culvert L= 250.0' Ke= 0.600
	-		Inlet / Outlet I	Invert= 936.00' / 935.00' S= 0.0040 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 sf
#2	Device 1	936.00'	6.0" Vert. Ori	ifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0)" H Vert. Window C= 0.600
			Limited to we	eir flow at low heads
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.71 cfs @ 12.26 hrs HW=937.34' TW=937.22' (Dynamic Tailwater)

1=Culvert (Outlet Controls 0.71 cfs @ 0.91 fps)

2=Orifice/Grate (Passes < 0.33 cfs potential flow)

3=Window (Passes < 0.66 cfs potential flow) **4=Grate** (Controls 0.00 cfs)



Pond 9P: DRY BASIN I

Summary for Pond 1P: DRY BASIN A

Inflow Are	a =	24.600 ac, 57.30% Impervious, Inflow Depth > 2.66" for 100-Year event					
Inflow	=	45.94 cfs @ 12.26 hrs, Volume= 5.462 af					
Outflow	=	5.75 cfs @ 13.96 hrs, Volume= 3.795 af, Atten= 87%, Lag= 101.8 min					
Primary	=	5.75 cfs @ 13.96 hrs, Volume= 3.795 af					
Routed to Link 12L : (new Link)							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 939.45' @ 13.96 hrs Surf.Area= 27,511 sf Storage= 94,185 cf

Plug-Flow detention time= 193.4 min calculated for 3.786 af (69% of inflow) Center-of-Mass det. time= 100.8 min (944.5 - 843.8)

Volume	Inver	t Avail.Sto	rage Storage	Description		
#1	934.70)' 109,75	50 cf Custom	Stage Data (P	Prismatic) L	isted below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	<u> </u>	
934.7	70	0	0	C)	
935.0	00	3,347	502	502	2	
936.0	00	20,147	11,747	12,249)	
937.0	00	22,210	21,179	33,428	3	
938.0	00	24,332	23,271	56,699)	
939.0	00	26,511	25,422	82,120)	
940.0	00	28,749	27,630	109,750)	
Device	Routing	Invert	Outlet Devices	S		
#1	Primary	934.70'	12.0" Round	Culvert L= 1	00.0' Ke=	0.600
			Inlet / Outlet Ir	nvert= 934.70'	/ 934.50'	S= 0.0020 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 0.79	sf	
#2	Device 1	934.70'	3.0" Vert. Orif	ice C= 0.600	0 Limited	to weir flow at low heads
#3	Device 1	936.10'	24.0" W x 8.0'	' H Vert. Wind	lows X 3.00	C = 0.600
			Limited to wei	r flow at low h	eads	
#4	Device 1	938.50'	24.0" x 24.0" l	Horiz. Grate	C= 0.600	Limited to weir flow at low heads

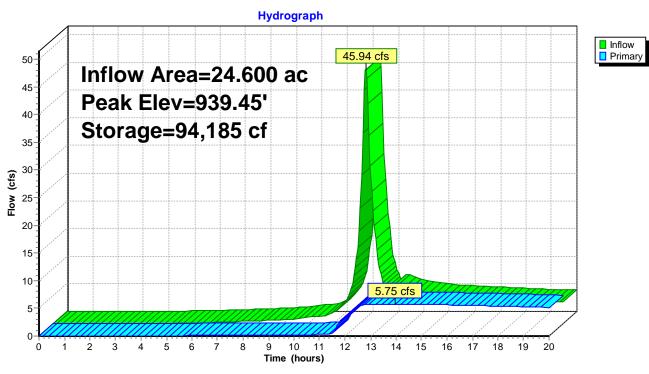
Primary OutFlow Max=5.75 cfs @ 13.96 hrs HW=939.45' TW=0.00' (Dynamic Tailwater)

1=Culvert (Barrel Controls 5.75 cfs @ 7.32 fps)

2=Orifice (Passes < 0.51 cfs potential flow)

-3=Windows (Passes < 33.42 cfs potential flow)

-4=Grate (Passes < 18.74 cfs potential flow)



Pond 1P: DRY BASIN A

Summary for Pond 2P: DRY BASIN B

Inflow Are	ea =	14.500 ac, 68.38% l	mpervious, Inflow D	Depth > 4.62"	for 100-Year event
Inflow	=	70.34 cfs @ 12.29 h	rs, Volume=	5.586 af	
Outflow	=	3.57 cfs @ 15.64 h	rs, Volume=	2.031 af, Atte	en= 95%, Lag= 201.4 min
Primary	=	3.57 cfs @ 15.64 h	rs, Volume=	2.031 af	
Routed	d to Por	d 1P : DRY BASIN A			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 939.51' @ 14.11 hrs Surf.Area= 53,327 sf Storage= 197,077 cf

Plug-Flow detention time= 301.4 min calculated for 2.026 af (36% of inflow) Center-of-Mass det. time= 218.2 min (976.4 - 758.2)

Volume	Inver	t Avail.Sto	rage Storag	e Description	
#1	935.00)' 223,47	79 cf Custor	m Stage Data (Pri	smatic) Listed below (Recalc)
Elevatio	n S	Surf.Area	Inc.Store	Cum.Store	
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0	0	0	0	0	
936.0	0	45,956	22,978	22,978	
937.0	0	48,007	46,982	69,960	
938.0	0	50,097	49,052	119,012	
939.0	0	52,226	51,162	170,173	
940.0	0	54,386	53,306	223,479	
Device	Routing	Invert	Outlet Devic	ces	
#1	Primary	935.00'	24.0" Roun	d Culvert L= 150	0.0' Ke= 0.600
	-		Inlet / Outlet	Invert= 935.00' /	934.70' S= 0.0020 '/' Cc= 0.900
			n= 0.013, F	low Area= 3.14 st	i
#2	Device 1	935.00'	24.0" Vert. 0	Drifice/Grate C=	= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	24.0" W x 6.	0" H Vert. Windo	w C= 0.600
			Limited to w	eir flow at low he	ads
#4	Device 1	938.00'	24.0" x 24.0	" Horiz. Grate C	C= 0.600 Limited to weir flow at low heads

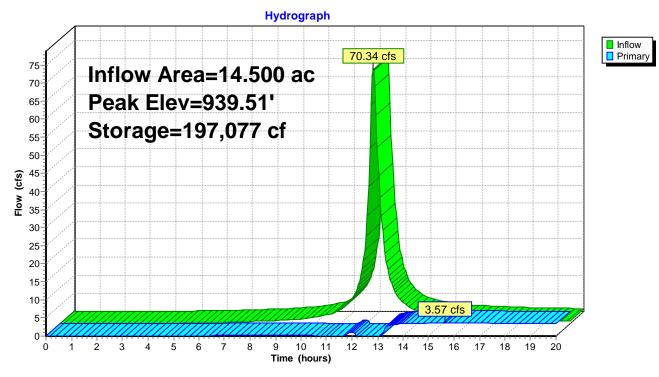
Primary OutFlow Max=3.72 cfs @ 15.64 hrs HW=939.40' TW=939.33' (Dynamic Tailwater)

1=**Culvert** (Outlet Controls 3.72 cfs @ 1.18 fps)

2=Orifice/Grate (Passes < 4.16 cfs potential flow)

--3=Window (Passes < 1.32 cfs potential flow)

4=Grate (Passes < 5.29 cfs potential flow)



Pond 2P: DRY BASIN B

Summary for Pond 3P: DRY BASIN C

Inflow Are	a =	6.900 ac, 6	65.00% Impervious	, Inflow Depth >	4.51" for 10	0-Year event
Inflow	=	33.00 cfs @	12.29 hrs, Volum	e= 2.595 a	af	
Outflow	=	15.96 cfs @	12.47 hrs, Volum	e= 1.601 a	af, Atten= 52%	, Lag= 10.7 min
Primary	=	15.96 cfs @	12.47 hrs, Volum	e= 1.601 a	af	
Routed	to Por	nd 4P : DRY B	ASIN D			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.96' @ 12.58 hrs Surf.Area= 17,464 sf Storage= 49,191 cf

Plug-Flow detention time= 97.8 min calculated for 1.601 af (62% of inflow) Center-of-Mass det. time= 42.2 min (803.3 - 761.1)

Volume	Inve	rt Avail.Sto	rage Storage	e Description
#1	935.0	0' 49,84	47 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)
935.0	00	0	0	0
936.0	00	11,869	5,935	5,935
937.0	00	13,659	12,764	18,699
938.0	00	15,549	14,604	33,303
939.0	00	17,539	16,544	49,847
Device	Routing	Invert	Outlet Device	es
#1	Primary	935.00'	24.0" Round	d Culvert L= 350.0' Ke= 0.600
	2		Inlet / Outlet I	Invert= 935.00' / 934.50' S= 0.0014 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 sf
#2	Device 1	935.00'	4.0" Vert. Ori	ifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	0" H Vert. Windows C= 0.600
			Limited to we	eir flow at low heads
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limited to weir flow at low heads

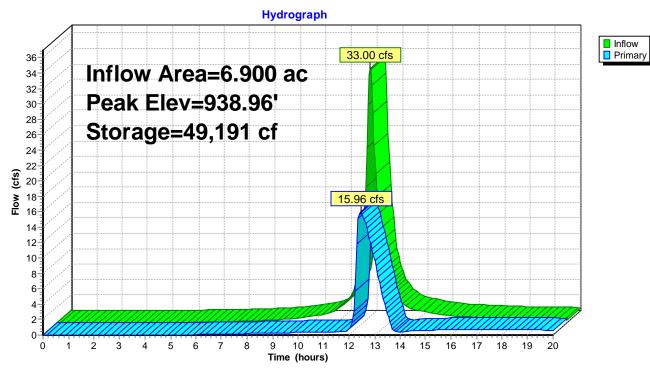
Primary OutFlow Max=15.59 cfs @ 12.47 hrs HW=938.90' TW=936.62' (Dynamic Tailwater)

1=Culvert (Outlet Controls 15.59 cfs @ 4.96 fps)

2=Orifice/Grate (Passes < 0.63 cfs potential flow)

-3=Windows (Passes < 4.12 cfs potential flow)

-4=Grate (Passes < 18.28 cfs potential flow)



Pond 3P: DRY BASIN C

Summary for Pond 4P: DRY BASIN D

Inflow Are	a =	20.700 ac, 4	46.79% Imperviou	s, Inflow Depth >	3.57"	for 100-Y	'ear event
Inflow	=	50.22 cfs @	12.44 hrs, Volun	ne= 6.160	af		
Outflow	=	3.78 cfs @	13.33 hrs, Volun	ne= 1.334	af, Atter	า= 92%, L	.ag= 53.4 min
Primary	=	3.78 cfs @	13.33 hrs, Volun	ne= 1.334	af		
Routed	to Por	nd 5P : WET B	ASIN E				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.73' @ 16.40 hrs Surf.Area= 70,413 sf Storage= 218,631 cf

Plug-Flow detention time= 277.5 min calculated for 1.334 af (22% of inflow) Center-of-Mass det. time= 169.4 min (961.8 - 792.4)

Volume	Inver	t Avail.Sto	rage Storage	e Description	
#1	934.50)' 237,62	28 cf Custon	n Stage Data (Pri	ismatic) Listed below (Recalc)
Elevatio	n S	Surf.Area	Inc.Store	Cum.Store	
(fee	t)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.5	0	0	0	0	
935.0	0	12,225	3,056	3,056	
936.0	0	60,758	36,492	39,548	
937.0	0	64,240	62,499	102,047	
938.0	0	67,771	66,006	168,052	
939.0	0	71,380	69,576	237,628	
Device	Routing	Invert	Outlet Device	es	
#1	Primary	934.50'	24.0" Round	d Culvert L= 40	0.0' Ke= 0.600
			Inlet / Outlet	Invert= 934.50' /	934.00' S= 0.0013 '/' Cc= 0.900
			n= 0.013, Fl	ow Area= 3.14 st	f
#2	Device 1	934.50'	4.0" Vert. Or	ifice/Grate C=	0.600 Limited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0)" H Vert. Windo	ws C= 0.600
			Limited to we	eir flow at low he	ads
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate	C= 0.600 Limited to weir flow at low heads

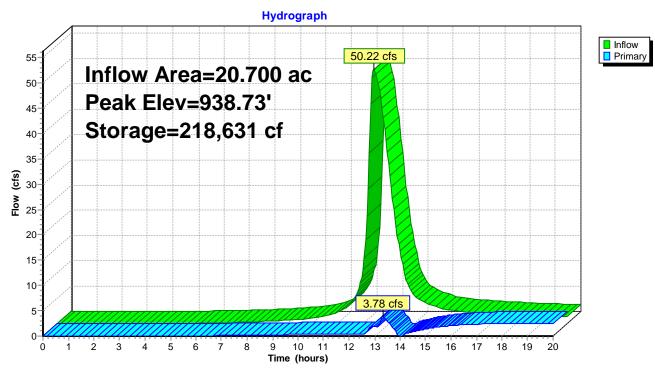
Primary OutFlow Max=3.10 cfs @ 13.33 hrs HW=938.22' TW=938.12' (Dynamic Tailwater)

1=**Culvert** (Outlet Controls 3.10 cfs @ 0.99 fps)

2=Orifice/Grate (Passes < 0.13 cfs potential flow)

--3=Windows (Passes < 1.01 cfs potential flow)

4=Grate (Passes < 2.20 cfs potential flow)



Pond 4P: DRY BASIN D

Summary for Pond 5P: WET BASIN E

Inflow Are	ea =	63.000 ac, 34.3	34% Impervious	, Inflow Depth >	2.76"	for 100-	Year event
Inflow	=	105.65 cfs @ 12	2.47 hrs, Volum	e= 14.488	af		
Outflow	=	7.11 cfs @ 15	5.77 hrs, Volum	e= 4.034	af, Atter	า= 93%,	Lag= 197.8 min
Primary	=	7.11 cfs @ 15	5.77 hrs, Volum	e= 4.034	af		
Routed	d to Lir	nk 10L : (new Link))				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.69' @ 15.77 hrs Surf.Area= 116,058 sf Storage= 470,862 cf

Plug-Flow detention time= 280.4 min calculated for 4.034 af (28% of inflow) Center-of-Mass det. time= 173.3 min (978.1 - 804.8)

Volume	Inve	rt Avail.Sto	rage Storage	Description	
#1	934.00	D' 507,64	47 cf Custom	Stage Data (Pris	smatic) Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
934.0	00	85,433	0	0	
935.0	00	91,702	88,568	88,568	
936.0	00	98,109	94,906	183,473	
937.0	00	104,658	101,384	284,857	
938.0	00	111,356	108,007	392,864	
939.0	00	118,210	114,783	507,647	
Device	Routing	Invert	Outlet Device	S	
#1	Primary	934.00'	24.0" Round	Culvert L= 100	0.0' Ke= 0.600
	-		Inlet / Outlet I	nvert= 934.00' / 9	933.43' S= 0.0057 '/' Cc= 0.900
			n= 0.013, Flo	w Area= 3.14 sf	
#2	Device 1	934.00'	6.0" Vert. 6"	Orifice C= 0.60	00 Limited to weir flow at low heads
#3	Device 1	936.50'	16.0" W x 6.0	" H Vert. Window	w C= 0.600
			Limited to we	ir flow at low hea	ads
#4	Device 1	938.60'	24.0" x 24.0"	Horiz. Grate C	= 0.600 Limited to weir flow at low heads

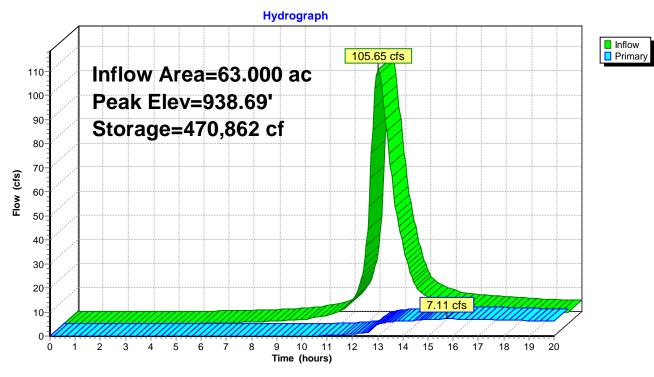
Primary OutFlow Max=7.11 cfs @ 15.77 hrs HW=938.69' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 7.11 cfs of 26.96 cfs potential flow)

2=6" Orifice (Orifice Controls 1.99 cfs @ 10.14 fps)

-3=Window (Orifice Controls 4.46 cfs @ 6.69 fps)

4=Grate (Weir Controls 0.66 cfs @ 0.96 fps)



Pond 5P: WET BASIN E

Summary for Pond 6P: DRY BASIN F

Inflow Are	a =	26.110 ac, 7	72.21% Impervious	Inflow Depth >	3.31" for 100)-Year event
Inflow	=	54.84 cfs @	12.29 hrs, Volume	e= 7.192 a	ıf	
Outflow	=	10.80 cfs @	13.42 hrs, Volume	e= 4.308 a	f, Atten= 80%,	, Lag= 68.1 min
Primary	=	10.80 cfs @	13.42 hrs, Volume	e= 4.308 a	ıf	-
Routed	l to Linł	11L : (new Li	nk)			

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 937.89' @ 13.42 hrs Surf.Area= 67,671 sf Storage= 146,436 cf

Plug-Flow detention time= 210.3 min calculated for 4.297 af (60% of inflow) Center-of-Mass det. time= 105.7 min (931.0 - 825.3)

Volume	Inve	rt Avail.Sto	rage Storage	Description
#1	935.0	0' 188,54	46 cf Custom	n Stage Data (Prismatic) Listed below (Recalc)
Elevatio		Surf.Area	Inc.Store	Cum.Store
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)
935.0	00	0	0	0
936.0	00	56,901	28,451	28,451
937.0	00	62,552	59,727	88,177
938.0	00	68,273	65,413	153,590
938.5	50	71,552	34,956	188,546
Device	Routing	Invert	Outlet Device	es
#1	Primary	935.00'	24.0" Round	I Culvert L= 100.0' Ke= 0.600
	-		Inlet / Outlet I	Invert= 935.00' / 934.50' S= 0.0050 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 3.14 sf
#2	Device 1	935.00'		ifice C= 0.600 Limited to weir flow at low heads
#3	Device 1	936.75'	20.0" W x 6.0)" H Vert. Window C= 0.600
			Limited to wei	eir flow at low heads
#4	Device 1	937.50'	24.0" x 24.0"	Horiz. Grate C= 0.600 Limited to weir flow at low heads

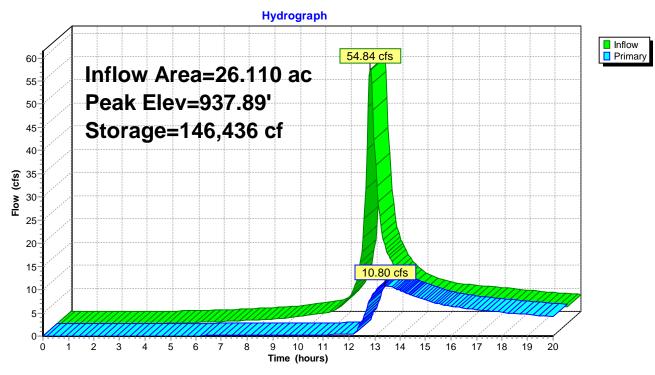
Primary OutFlow Max=10.80 cfs @ 13.42 hrs HW=937.89' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 10.80 cfs of 17.65 cfs potential flow)

2=Orifice (Orifice Controls 0.53 cfs @ 7.98 fps)

-3=Window (Orifice Controls 3.78 cfs @ 4.54 fps)

-4=Grate (Weir Controls 6.49 cfs @ 2.05 fps)



Pond 6P: DRY BASIN F

Summary for Pond 7P: WET BASIN G

Inflow Are	a =	4.300 ac, 6	69.88% Impervious,	Inflow Depth >	4.62"	for 100-	Year event
Inflow	=	20.86 cfs @	12.29 hrs, Volume	= 1.657	af		
Outflow	=	1.75 cfs @	12.29 hrs, Volume	= 1.022	af, Atter	า= 92%,	Lag= 0.0 min
Primary	=	1.75 cfs @	12.29 hrs, Volume	= 1.022	af		
Routed	to Por	nd 6P : DRY B/	ASIN F				

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.54' @ 13.58 hrs Surf.Area= 25,099 sf Storage= 45,791 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow) Center-of-Mass det. time= 130.8 min (888.9 - 758.2)

Volume	Inver	rt Avail.Sto	rage Storage	Description	
#1	936.50	D' 57,50	66 cf Custon	n Stage Data (Prisma	atic) Listed below (Recalc)
_	_				
Elevatio		Surf.Area	Inc.Store	Cum.Store	
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)	
936.5	50	19,817	0	0	
937.0	00	21,069	10,222	10,222	
938.0	00	23,647	22,358	32,580	
939.0	00	26,326	24,987	57,566	
Device	Routing	Invert	Outlet Device	es	
#1	Primary	935.00'	12.0" Round	I Culvert L= 300.0'	Ke= 0.600
	-		Inlet / Outlet	Invert= 935.00' / 934	.50' S= 0.0017 '/' Cc= 0.900
			n= 0.013, Fl	ow Area= 0.79 sf	
#2	Device 1	935.00'	4.0" Vert. Or	ifice C= 0.600 Lin	nited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Windows	C= 0.600
			Limited to we	eir flow at low heads	
#4	Device 1	938.50'	24.0" x 24.0"	Horiz. Grate C= 0	.600 Limited to weir flow at low heads

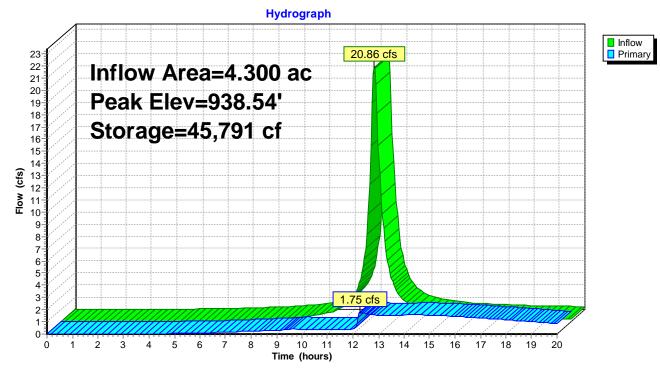
Primary OutFlow Max=1.58 cfs @ 12.29 hrs HW=937.62' TW=936.93' (Dynamic Tailwater)

1=Culvert (Outlet Controls 1.58 cfs @ 2.02 fps)

2=Orifice (Passes < 0.35 cfs potential flow)

3=Windows (Passes < 1.92 cfs potential flow) **4=Grate** (Controls 0.00 cfs)





Summary for Pond 8P: DRY BASIN H

Inflow Are	a =	11.650 ac, 7	71.03% Impervious	, Inflow Depth >	4.04"	for 100-	Year event
Inflow	=	42.88 cfs @	12.29 hrs, Volum	e= 3.920 a	af		
Outflow	=	5.41 cfs @	13.10 hrs, Volum	e= 2.160 a	af, Atte	n= 87%,	Lag= 48.9 min
Primary	=	5.41 cfs @	13.10 hrs, Volum	e= 2.160 a	af		
Routed to Pond 6P : DRY BASIN F							

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.69' @ 13.13 hrs Surf.Area= 38,104 sf Storage= 103,489 cf

Plug-Flow detention time= 229.0 min calculated for 2.160 af (55% of inflow) Center-of-Mass det. time= 143.6 min (925.8 - 782.2)

Volume	Inve	rt Avail.Sto	rage Storage	Description	
#1	935.0	0' 115,60	07 cf Custom	Stage Data (Pri	ismatic) Listed below (Recalc)
Elevatio	.	Surf.Area	Inc.Store	Cum.Store	
(fee	/	(sq-ft)	(cubic-feet)	(cubic-feet)	
935.0	00	0	0	0	
936.0	00	28,411	14,206	14,206	
937.0	00	31,986	30,199	44,404	
938.0	00	35,583	33,785	78,189	
939.0	00	39,254	37,419	115,607	
		La suf		_	
Device	Routing	Invert	Outlet Devices	5	
#1	Primary	934.50'	24.0" Round	Culvert L= 20	0.0' Ke= 0.600
			Inlet / Outlet Ir	nvert= 934.50' /	934.50' S= 0.0000 '/' Cc= 0.900
			n= 0.013, Flov	w Area= 3.14 s	f
#2	Device 1	934.50'	4.0" Vert. Orif	ice/Grate C=	0.600 Limited to weir flow at low heads
#3	Device 1	936.50'	16.0" W x 6.0"	' H Vert. Windo	w C= 0.600
			Limited to wei	r flow at low he	ads
#4	Device 1	938.50'	24.0" x 24.0" l	Horiz. Grate (C= 0.600 Limited to weir flow at low heads
	- · -				

Primary OutFlow Max=5.39 cfs @ 13.10 hrs HW=938.69' TW=937.87' (Dynamic Tailwater)

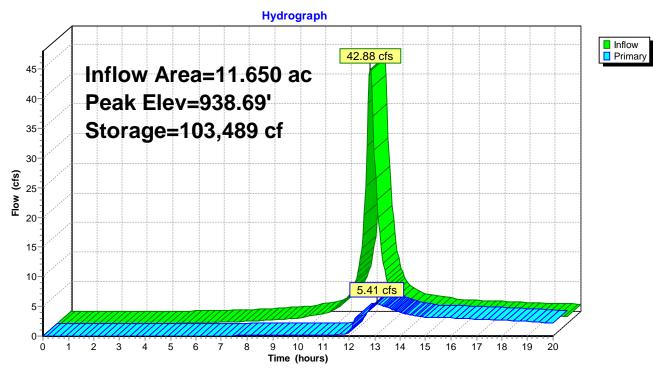
1=Culvert (Passes 5.39 cfs of 11.27 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.38 cfs @ 4.35 fps)

-3=Window (Orifice Controls 2.90 cfs @ 4.35 fps)

-4=Grate (Weir Controls 2.11 cfs @ 1.41 fps)

Prepared by Kimley-Horn & Associates HydroCAD® 10.20-2b s/n 02344 © 2021 HydroCAD Software Solutions LLC



Pond 8P: DRY BASIN H

Summary for Pond 9P: DRY BASIN I

Inflow Are	a =	3.000 ac, 6	69.67% Impervious,	Inflow Depth >	4.62" f	or 100-Year event
Inflow	=	14.55 cfs @	12.29 hrs, Volume	= 1.156	af	
Outflow	=	1.11 cfs @	12.21 hrs, Volume	e 0.588	af, Atten	= 92%, Lag= 0.0 min
Primary	=	1.11 cfs @	12.21 hrs, Volume	= 0.588	af	
Routed to Pond 8P : DRY BASIN H						

Routing by Dyn-Stor-Ind method, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs Peak Elev= 938.74' @ 14.00 hrs Surf.Area= 18,341 sf Storage= 36,145 cf

Plug-Flow detention time= 226.3 min calculated for 0.588 af (51% of inflow) Center-of-Mass det. time= 160.7 min (918.8 - 758.2)

Volume	Inver	t Avail.Stor	rage Storage	Description		
#1	936.00)' 40,96	65 cf Custom	Stage Data (Pri	smatic) L	Listed below (Recalc)
Elevatio	on S	Surf.Area	Inc.Store	Cum.Store		
(fee	et)	(sq-ft)	(cubic-feet)	(cubic-feet)		
936.0	00	0	0	0		
937.0	00	14,750	7,375	7,375		
938.0	00	16,770	15,760	23,135		
939.0	00	18,890	17,830	40,965		
Device	Routing	Invert	Outlet Device	es		
#1	Primary	936.00'	12.0" Round	Culvert L= 250).0' Ke=	0.600
	-		Inlet / Outlet I	Invert= 936.00' /	935.00'	S= 0.0040 '/' Cc= 0.900
			n= 0.013, Flo	ow Area= 0.79 sf		
#2	Device 1	936.00'	6.0" Vert. Ori	fice/Grate C=	0.600 Li	mited to weir flow at low heads
#3	Device 1	937.00'	16.0" W x 6.0	" H Vert. Window	v C= 0	.600
			Limited to we	eir flow at low hea	ads	
#4	Device 1	938.00'	24.0" x 24.0"	Horiz. Grate C	= 0.600	Limited to weir flow at low heads

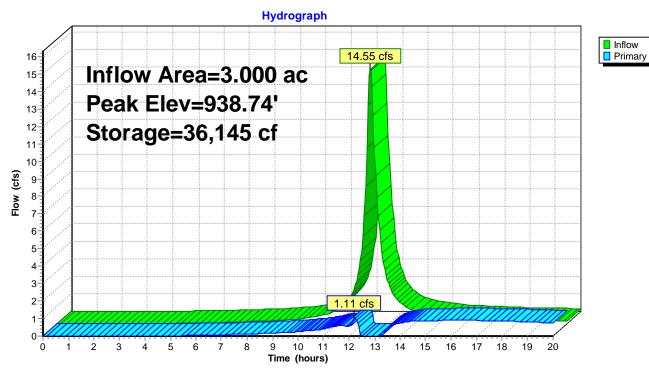
Primary OutFlow Max=0.58 cfs @ 12.21 hrs HW=937.34' TW=937.26' (Dynamic Tailwater)

1=Culvert (Outlet Controls 0.58 cfs @ 0.74 fps)

2=Orifice/Grate (Passes < 0.27 cfs potential flow)

--3=Window (Passes < 0.56 cfs potential flow) **-4=Grate** (Controls 0.00 cfs)

Prepared by Kimley-Horn & Associates HydroCAD® 10.20-2b s/n 02344 © 2021 HydroCAD Software Solutions LLC



Pond 9P: DRY BASIN I



Exhibit 6 – Pre-developed Tributary Map Post-developed Tributary Map



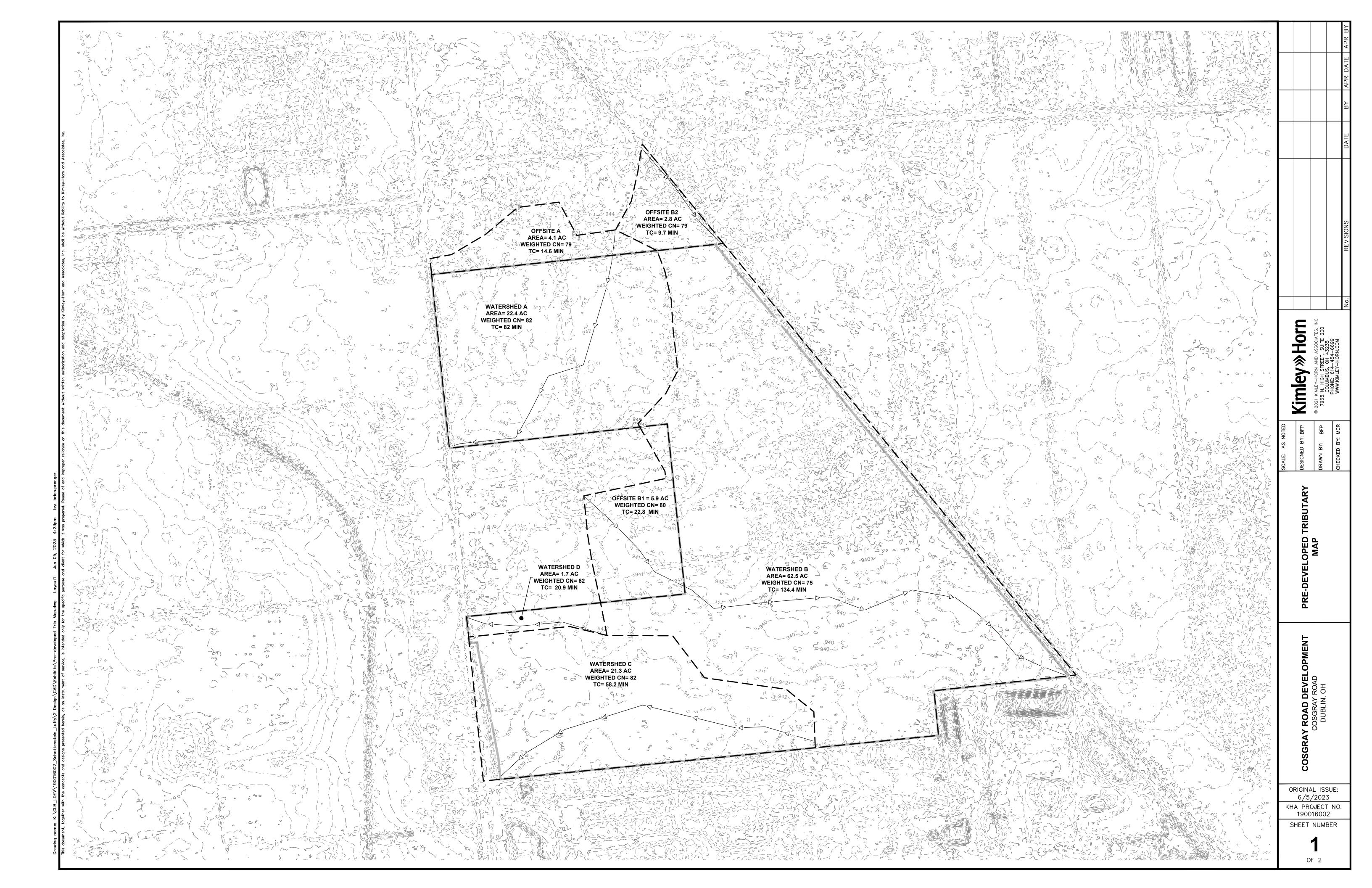






Exhibit 7 – Post-Developed Release Rates



Amlin Crossing Preliminary SWM Prepared by Kimley-Horn & Associates HydroCAD® 10.20-2b s/n 02344 © 2021 HydroCAD Software Solutions LLC

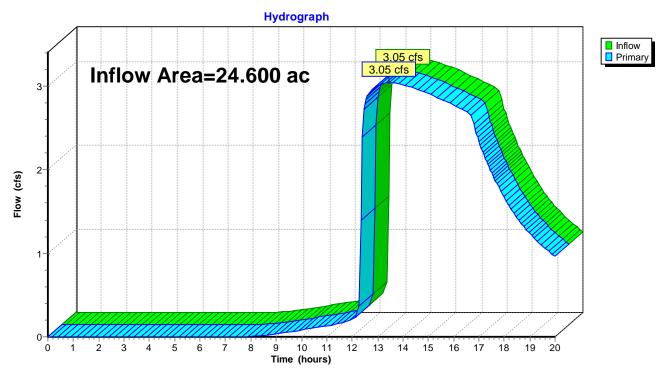
Printed 6/7/2023 Page 1

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	NOAA 24-hr	А	Default	24.00	1	2.20	2
2	2-Year	NOAA 24-hr	А	Default	24.00	1	2.63	2
3	5-Year	NOAA 24-hr	А	Default	24.00	1	3.24	2
4	10-Year	NOAA 24-hr	А	Default	24.00	1	3.73	2
5	25-Year	NOAA 24-hr	А	Default	24.00	1	4.44	2
6	50-Year	NOAA 24-hr	А	Default	24.00	1	5.01	2
7	100-Year	NOAA 24-hr	А	Default	24.00	1	5.63	2

Rainfall Events Listing

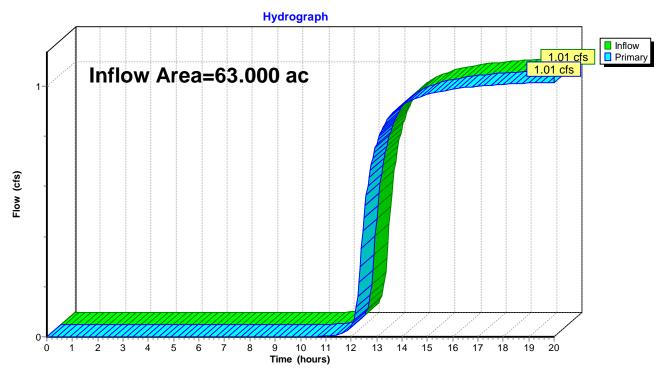
Inflow Area =	24.600 ac, 57.30% Impervious, Inflow	Depth > 0.74" for 1-Year event
Inflow =	3.05 cfs @ 13.47 hrs, Volume=	1.516 af
Primary =	3.05 cfs @ 13.47 hrs, Volume=	1.516 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



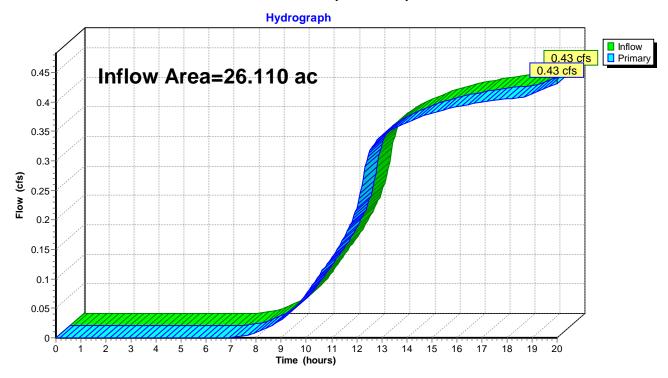
Inflow Area =	63.000 ac, 34.34% Impervious, Inflow I	Depth > 0.11" for 1-Year event
Inflow =	1.01 cfs @ 20.00 hrs, Volume=	0.602 af
Primary =	1.01 cfs @ 20.00 hrs, Volume=	0.602 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



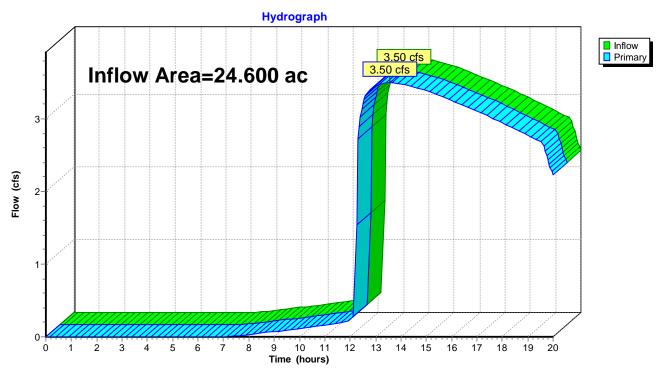
Inflow Area =	26.110 ac, 72.21% Impervious, Inflow D	Pepth > 0.13" for 1-Year event
Inflow =	0.43 cfs @ 20.00 hrs, Volume=	0.282 af
Primary =	0.43 cfs @ 20.00 hrs, Volume=	0.282 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



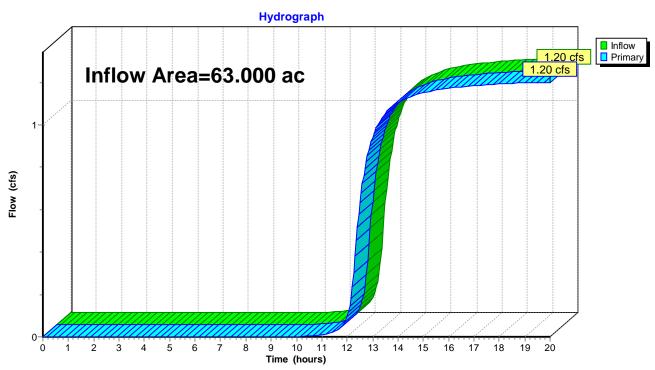
Inflow Area =	24.600 ac, 57.30	% Impervious, Inflow Depth	th > 1.01" for 2-Year event
Inflow =	3.50 cfs @ 13.5	5 hrs, Volume= 2.0	063 af
Primary =	3.50 cfs @ 13.5	5 hrs, Volume= 2.0	.063 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



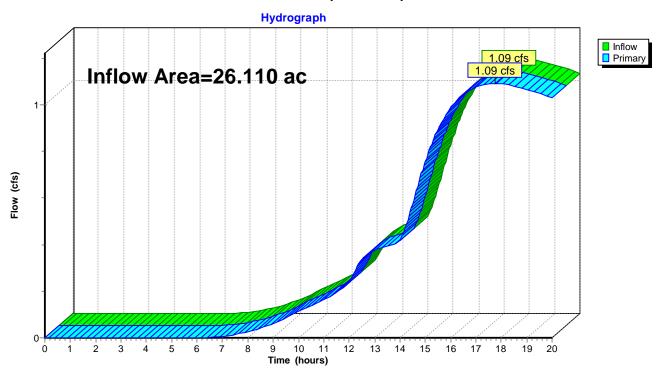
Inflow Area =	63.000 ac, 34.34% Impervious, Inflow D	Depth > 0.14" for 2-Year event
Inflow =	1.20 cfs @ 20.00 hrs, Volume=	0.721 af
Primary =	1.20 cfs @ 20.00 hrs, Volume=	0.721 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



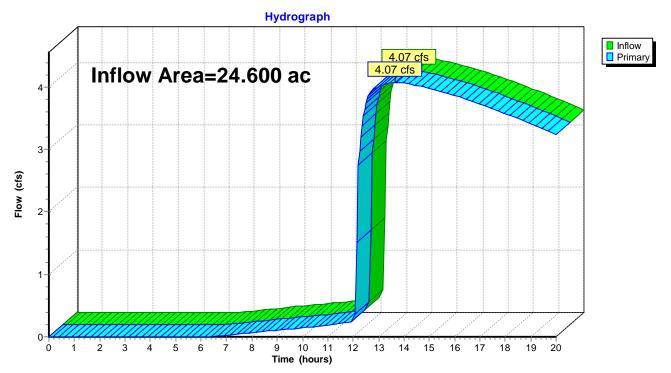
Inflow Area =	26.110 ac, 72.21% Impervious, Inflow D	Depth > 0.26" for 2-Year event
Inflow =	1.09 cfs @ 17.76 hrs, Volume=	0.575 af
Primary =	1.09 cfs @ 17.76 hrs, Volume=	0.575 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



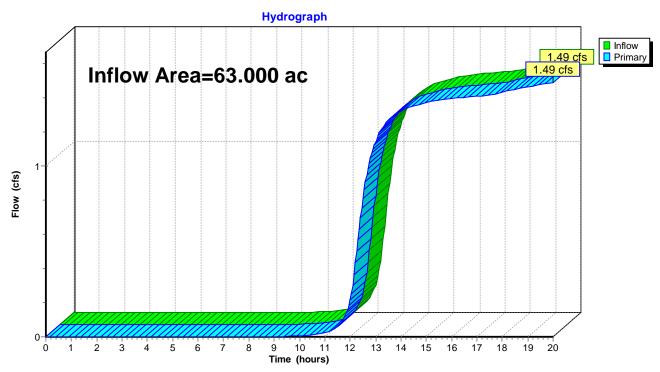
Inflow Area =	24.600 ac, 57.30% Impervious, Inflow D	Depth > 1.21" for 5-Year event
Inflow =	4.07 cfs @ 13.64 hrs, Volume=	2.490 af
Primary =	4.07 cfs @ 13.64 hrs, Volume=	2.490 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



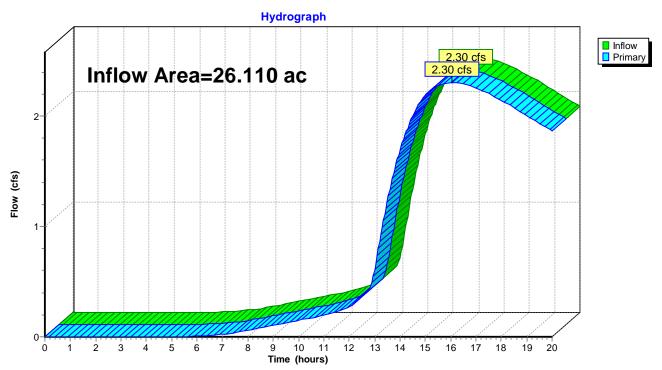
Inflow Area =	63.000 ac, 34.34% Impervious, Inflow D	Depth > 0.17" for 5-Year event
Inflow =	1.49 cfs @ 20.00 hrs, Volume=	0.879 af
Primary =	1.49 cfs @ 20.00 hrs, Volume=	0.879 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



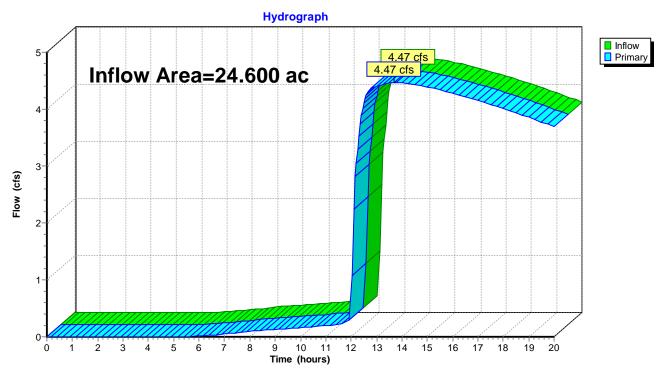
Inflow Area =	26.110 ac, 72.21% Impervious, Inflow I	Depth > 0.57" for 5-Year event
Inflow =	2.30 cfs @ 16.06 hrs, Volume=	1.241 af
Primary =	2.30 cfs @ 16.06 hrs, Volume=	1.241 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



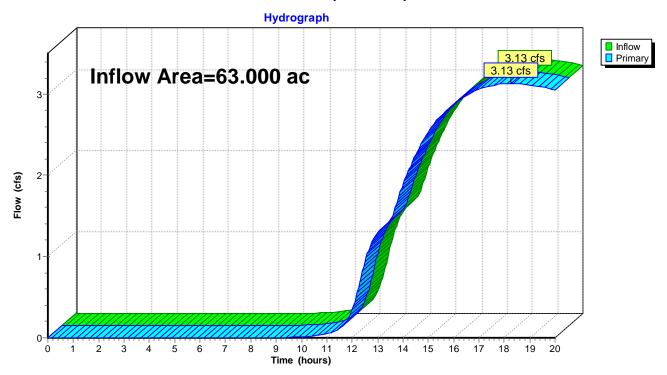
Inflow Area =	24.600 ac, 57.30% Impervious, Inflow D	Depth > 1.36" for 10-Year event
Inflow =	4.47 cfs @ 13.69 hrs, Volume=	2.792 af
Primary =	4.47 cfs @ 13.69 hrs, Volume=	2.792 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



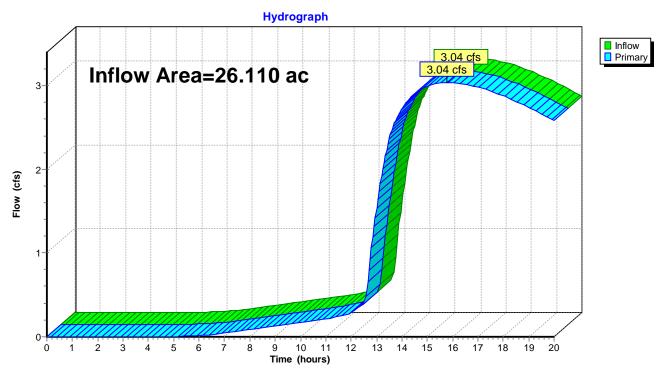
Inflow Area =	63.000 ac, 34.34% Impervious, Inflow D	Depth > 0.31" for 10-Year event
Inflow =	3.13 cfs @ 18.25 hrs, Volume=	1.643 af
Primary =	3.13 cfs @ 18.25 hrs, Volume=	1.643 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



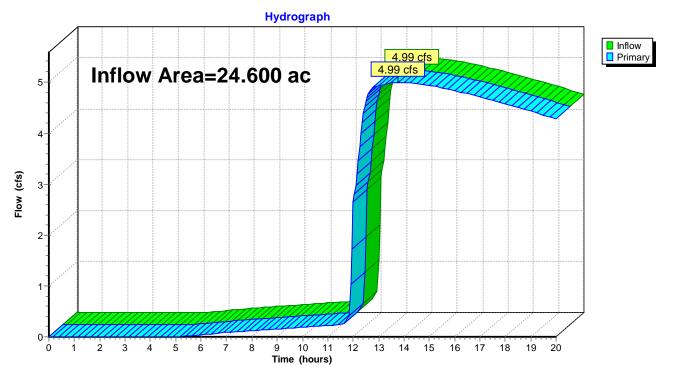
Inflow Area =	26.110 ac, 72.21% Impervious, Inflow D	Depth > 0.80" for 10-Year event
Inflow =	3.04 cfs @ 15.80 hrs, Volume=	1.746 af
Primary =	3.04 cfs @ 15.80 hrs, Volume=	1.746 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



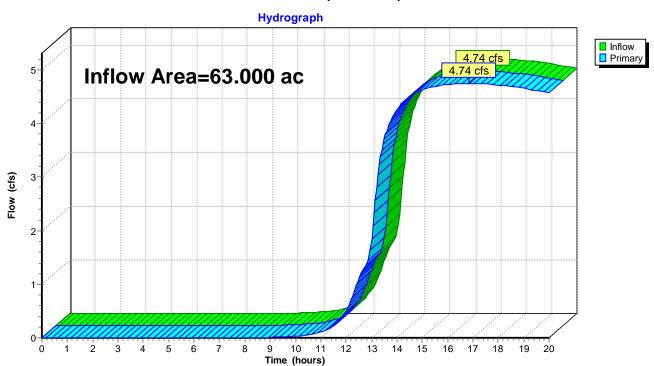
Inflow Area =	24.600 ac, 57.30% Impervious, Inflow D	Depth > 1.56" for 25-Year event
Inflow =	4.99 cfs @ 13.77 hrs, Volume=	3.193 af
Primary =	4.99 cfs @ 13.77 hrs, Volume=	3.193 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



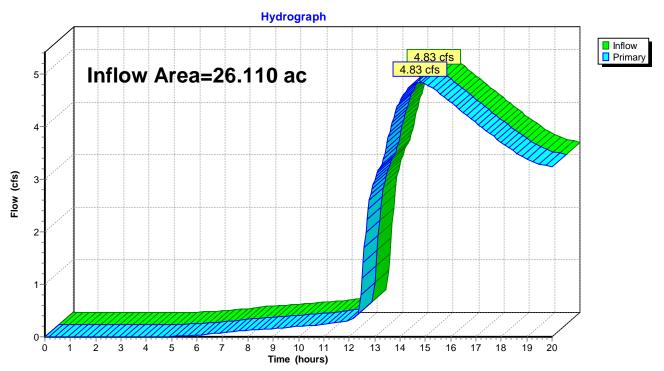
Inflow Area =	63.000 ac, 34.34% Impervious, Inflow D	Depth > 0.52" for 25-Year event
Inflow =	4.74 cfs @ 16.84 hrs, Volume=	2.721 af
Primary =	4.74 cfs @ 16.84 hrs, Volume=	2.721 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



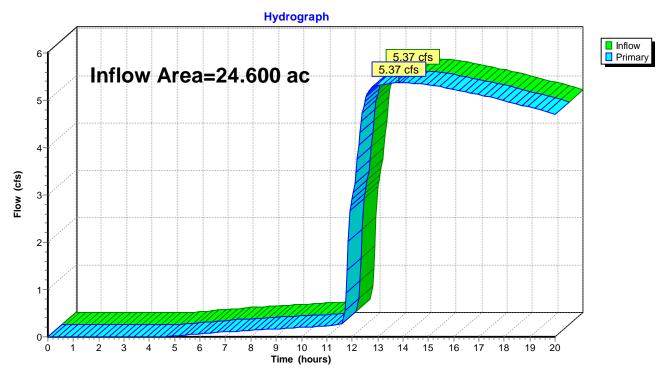
Inflow Area =	26.110 ac, 72.21% Impervious, Inflow D	Depth > 1.16" for 25-Year event
Inflow =	4.83 cfs @ 14.78 hrs, Volume=	2.523 af
Primary =	4.83 cfs @ 14.78 hrs, Volume=	2.523 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



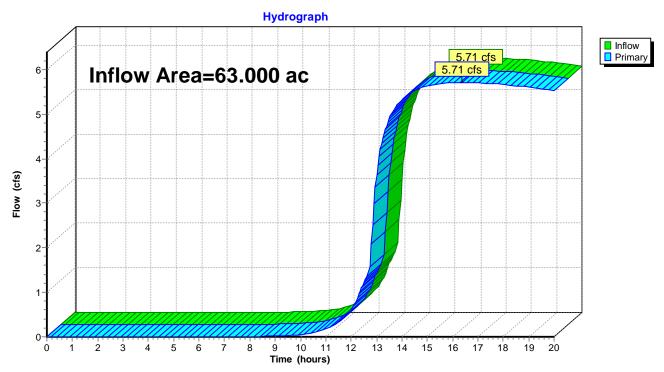
Inflow Area =	24.600 ac, 57.30% Impervious, Inflow E	Depth > 1.70" for 50-Year event
Inflow =	5.37 cfs @ 13.85 hrs, Volume=	3.490 af
Primary =	5.37 cfs @ 13.85 hrs, Volume=	3.490 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



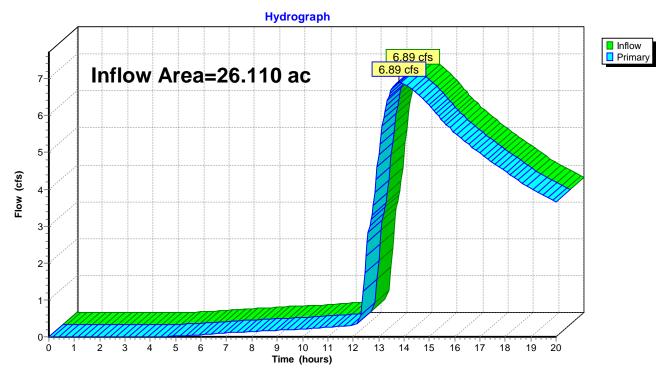
Inflow Area =	63.000 ac, 34.34% Impervious, Inflow D	Depth > 0.64" for 50-Year event
Inflow =	5.71 cfs @ 16.38 hrs, Volume=	3.361 af
Primary =	5.71 cfs @ 16.38 hrs, Volume=	3.361 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



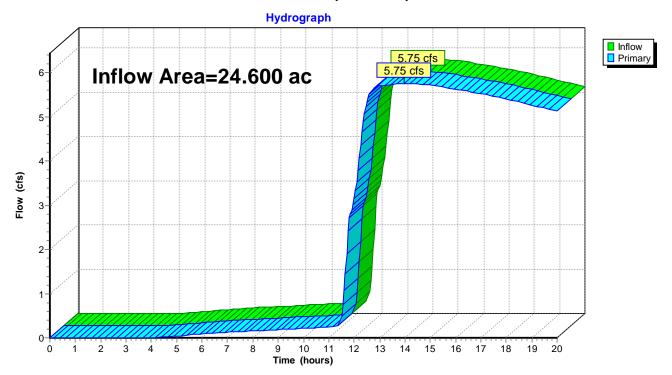
Inflow Area =	26.110 ac, 72.21% Impervious, Inflow D	Depth > 1.53" for 50-Year event
Inflow =	6.89 cfs @ 13.82 hrs, Volume=	3.329 af
Primary =	6.89 cfs @ 13.82 hrs, Volume=	3.329 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



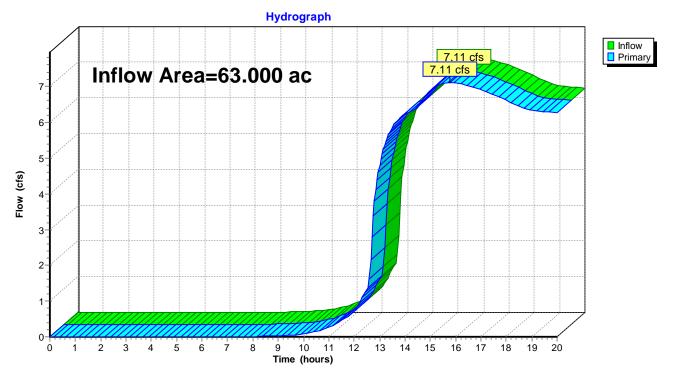
Inflow Area =	24.600 ac, 57.30% Impervious, Inflow D	Depth > 1.85" for 100-Year event
Inflow =	5.75 cfs @ 13.96 hrs, Volume=	3.795 af
Primary =	5.75 cfs @ 13.96 hrs, Volume=	3.795 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



Inflow Area =	63.000 ac, 34.34% Impervious, Inflow	Depth > 0.77" for 100-Year event
Inflow =	7.11 cfs @ 15.77 hrs, Volume=	4.034 af
Primary =	7.11 cfs @ 15.77 hrs, Volume=	4.034 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs



Inflow Area =	26.110 ac, 72.21% Impervious, Inflow E	Depth > 1.98" for 100-Year event
Inflow =	10.80 cfs @ 13.42 hrs, Volume=	4.308 af
Primary =	10.80 cfs @ 13.42 hrs, Volume=	4.308 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-20.00 hrs, dt= 0.05 hrs

