WALSH
ENGINEERING ASSOCIATES, INC.

STORMWATER MANAGEMENT REPORT
WATSON WOODS
PARSONSFIELD, MAINE

May 22, 2018

Project Description:

This project, located at the corner of Hussey Road and Route 160, is the division of one (1), 55.76-acre lot into eight (8) single-family residential lots and 36.07 acres of remaining land, retained by the owner. The lots average 2.46 acres. The lots are accessed from North Road. No roads will be created with this subdivision.

Surface Water:

The watershed consists of 116 acres. About half of that is on neighboring properties. The watershed has been divided into three (3) subcatchments for analysis.

Subcatchment #1 is along North Road from the start of the proposed lot #1 to the 24" culvert that crosses Hussey Road. This culvert is the first Point of Analysis (POA).

Subcatchment #2 is to the north of subcatchment #1 and covers the middle of proposed lots #6-8 and runs 280 feet along Hussey Road. It discharges at the 15" culvert that crosses Hussey Road. This culvert is POA #2.

Subcatchment #3 is the majority of the site and neighboring lots. The offsite area is wooded. The onsite area was recently logged and has been left to revegetate. This area drains to a 30" culvert that crosses Hussey Road. This culvert is POA #3.

Flooding:

The project is not located within the 100-year flood plain, as shown on the attached FEMA Flood Insurance Rate Map Community Panel 230154 0015 B.

Groundcover, Topography and Soils:

The site consists of Skerry, Brayton, and Becket soils. All three fall into the hydrologic soil group C. The ground cover onsite is naturally being revegetated from being logged. The watershed is the western side of an unnamed hill. The hill slopes from elevation 780 to elevation 518 at Hussey Road.

Alteration of Natural Drainage Ways and Land Cover:

The development of the lots will not alter the natural drainage ways for the site. There is a buffer along the front of the lots that treats stormwater from the project. The natural swale and wetlands down the middle of the site will remain in their existing conditions and will not be impacted. No wetland impacts are anticipated.

Methodology:

HydroCAD version 10.0 developed by HydroCAD Software Solutions LLC of Chocurua, NH is used to model the hydrology and hydraulics of the site and design the hydraulics of stormwater management measures and facilities.

Peak flows for the 2-year (3.3"), 10-year (4.9"), and 25-year (6.2") storm events in a 24-hour period are analyzed for pre- and post-developed conditions. Precipitation values used in the model are taken from the manual: *CHAPTER 500: STORMWATER MANAGEMENT, Appendix H.* The rainfall values used are for York County, Maine.

Times of concentration methods include TR-55 sheet flow and shallow concentrated flow. Runoff curve numbers are selected from Tables 2-2a and 2-2c of the SCS TR-55 manual, which are included in the HydroCAD software. Watershed subcatchments are as delineated on Drawing D1.0 for pre-developed and post-developed conditions. Modeling assumptions made for each subcatchment, culvert, and Best Management Practice (BMP) with the site in its pre- and post-developed conditions are summarized in the HydroCAD reports attached as **Appendices B and C.**

Proposed BMPs:

Standard erosion and sediment control will be used during the development of the lots. No other BMPs are required for this project. A level spreader will be utilized on Lot 5 to control the peak rate of runoff from the site.

Water Quantity:

The development of this project will not have a significant impact on the peak rate of runoff from the site. See Table 1 for POA runoff values. See attached HydroCAD model for clarification.

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TABLE 1

POINT OF ANALYSIS	*PEAK RATE OF RUNOFF (CFS)*					
	2-YR	*10-YR*	*25-YR*	*2-YR*	*10-YR*	*25-YR*
	PRE-DEVELOPMENT CONDITIONS			**POST-DEVELOPMENT CONDITIONS**		
POA # 1	3.81	8.06	11.81	3.29	7.86	11.71
POA # 2	2.13	4.79	6.66	2.13	4.68	6.56
POA # 3	25.89	67.48	106.57	25.89	67.48	106.57

Conclusion:

The HydroCAD model predicts that peak stormwater runoff rates at the points of analyses will remain the same or have an insignificant increase in the peak rate compared to the existing conditions. Therefore, this project will not have a significant impact on adjacent properties or receiving waters.

STATE OF MAINE
THOMAS S. GREER
No. 4206
LICENSED PROFESSIONAL ENGINEER

Thomas S. Greer, P.E.
5/21/18

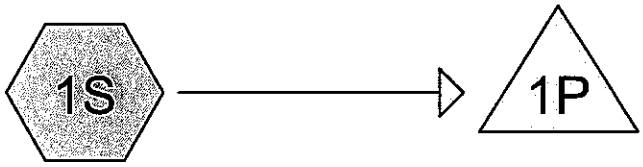
APPENDIX H. 24-hour duration rainfalls for various return periods

COUNTY	Storm Type	1-YR	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR	500-YR
ANDROSCOGGIN	III	2.5	3.0	3.7	4.3	5.4	6.4	7.6	11.1
AROOSTOOK C (Presque Isle Area)	II	1.9	2.3	2.8	3.2	3.9	4.6	5.3	7.6
AROOSTOOK N (Fort Kent Area)	II	1.9	2.2	2.7	3.1	3.7	4.3	5.0	7.0
AROOSTOOK S (Houlton Area)	II	2.1	2.5	3.0	3.4	4.1	4.7	5.4	7.5
CUMBERLAND NW (Bridgton Area)	III	2.5	3.0	3.7	4.3	5.4	6.3	7.5	10.9
CUMBERLAND SE (N Windham Area)	III	2.6	3.1	3.9	4.6	5.8	6.9	8.1	12.1
FRANKLIN	II	2.0	2.4	2.9	3.4	4.2	4.9	5.7	8.2
HANCOCK	III	2.5	2.9	3.6	4.2	5.2	6.1	7.2	10.5
KENNEBEC	III	2.4	2.8	3.5	4.2	5.2	6.1	7.2	10.6
KNOX	III	2.6	3.2	3.9	4.6	5.7	6.7	7.9	11.5
LINCOLN	III	2.5	3.1	3.8	4.5	5.5	6.5	7.6	11.1
OXFORD E (Rumford Area)	II[1]	2.3	2.7	3.3	3.9	4.8	5.7	6.7	9.7
OXFORD W (Gilead Area)	II	2.2	2.7	3.4	4.0	4.9	5.8	6.9	10.1
PENOBSCOT N (Millinocket Area)	II	2.2	2.6	3.2	3.8	4.7	5.6	6.5	9.5
PENOBSCOT S (Hudson Area)	II	2.3	2.7	3.4	3.9	4.9	5.7	6.7	9.7
PISCATAQUIS N (Chesuncook Area)	II	2.0	2.4	2.9	3.4	4.2	5.0	5.8	8.5
PISCATAQUIS S (Monson Area)	II	2.2	2.7	3.3	3.9	4.8	5.7	6.8	10.0
SAGADAHOC	III	2.6	3.2	3.9	4.6	5.7	6.7	7.8	11.4
SOMERSET N (Pittston Farm Area)	II	2.0	2.3	2.8	3.3	4.0	4.7	5.4	7.8
SOMERSET S (Solon Area)	II	2.3	2.7	3.4	3.9	4.9	5.7	6.7	9.8
WALDO	III	2.4	2.9	3.6	4.2	5.2	6.1	7.2	10.5
WASHINGTON	III	2.5	2.8	3.4	3.9	4.8	5.5	6.4	9.0
YORK	III	2.6	3.3	4.1	4.9	6.2	7.3	8.7	13.2

1 Use Type III rainfall for the towns of Brownfield, Buckfield, Denmark, Hartford, Hebron, Hiram, Oxford, and Porter.

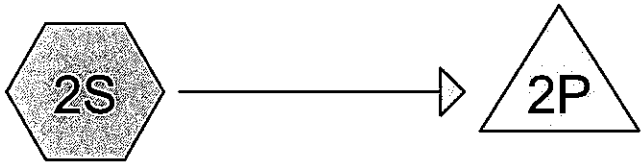
Source: Data extracted by the Maine Department of Environmental Protection from the Northeast Regional Climate Center website (http://precip.eas.cornell.edu), Extreme Precipitation Tables. Data from this website was obtained from the National Oceanic and Atmospheric Administration's Regional Climate Center Program.
June 2014

EXISTING CONDITIONS



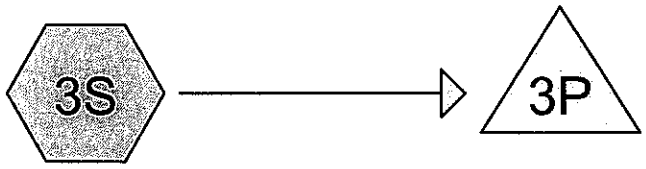
SOUTH SIDE ALONG NORTH ROAD

CULVERT AT HUSSEY ROAD, POA 1



AREA OF LOT 7+, ALONG HUSSEY ROAD

CULVERT AT HUSSEY ROAD 15", POA 2



CENTRAL SITE PLUS OFF SITE

CULVERT AT HUSSEY ROAD 32", POA 3

Routing Diagram for 16149 EX DEV 052118
Prepared by {enter your company name here}, Printed 5/21/2018

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SOUTH SIDE ALONG Runoff Area=223,131 sf 10.11% Impervious Runoff Depth>1.05"
Flow Length=878' Tc=29.4 min CN=75 Runoff=3.81 cfs 0.449 af

Subcatchment2S: AREA OF LOT 7+, Runoff Area=140,510 sf 1.49% Impervious Runoff Depth>0.89"
Flow Length=875' Tc=25.1 min CN=72 Runoff=2.13 cfs 0.240 af

Subcatchment3S: CENTRAL SITE PLUS Runoff Area=4,720,717 sf 0.63% Impervious Runoff Depth>0.68"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=26.52 cfs 6.107 af

Pond 1P: CULVERT AT HUSSEY ROAD, POA 1 Peak Elev=515.34' Storage=79 cf Inflow=3.81 cfs 0.449 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=3.81 cfs 0.449 af

Pond 2P: CULVERT AT HUSSEY ROAD 15", Peak Elev=524.93' Storage=84 cf Inflow=2.13 cfs 0.240 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=2.13 cfs 0.240 af

Pond 3P: CULVERT AT HUSSEY ROAD 32", Peak Elev=520.72' Storage=8,332 cf Inflow=26.52 cfs 6.107 af
Outflow=25.89 cfs 6.079 af

Total Runoff Area = 116.721 ac Runoff Volume = 6.797 af Average Runoff Depth = 0.70"
98.93% Pervious = 115.473 ac 1.07% Impervious = 1.248 ac

Summary for Subcatchment 1S: SOUTH SIDE ALONG NORTH ROAD

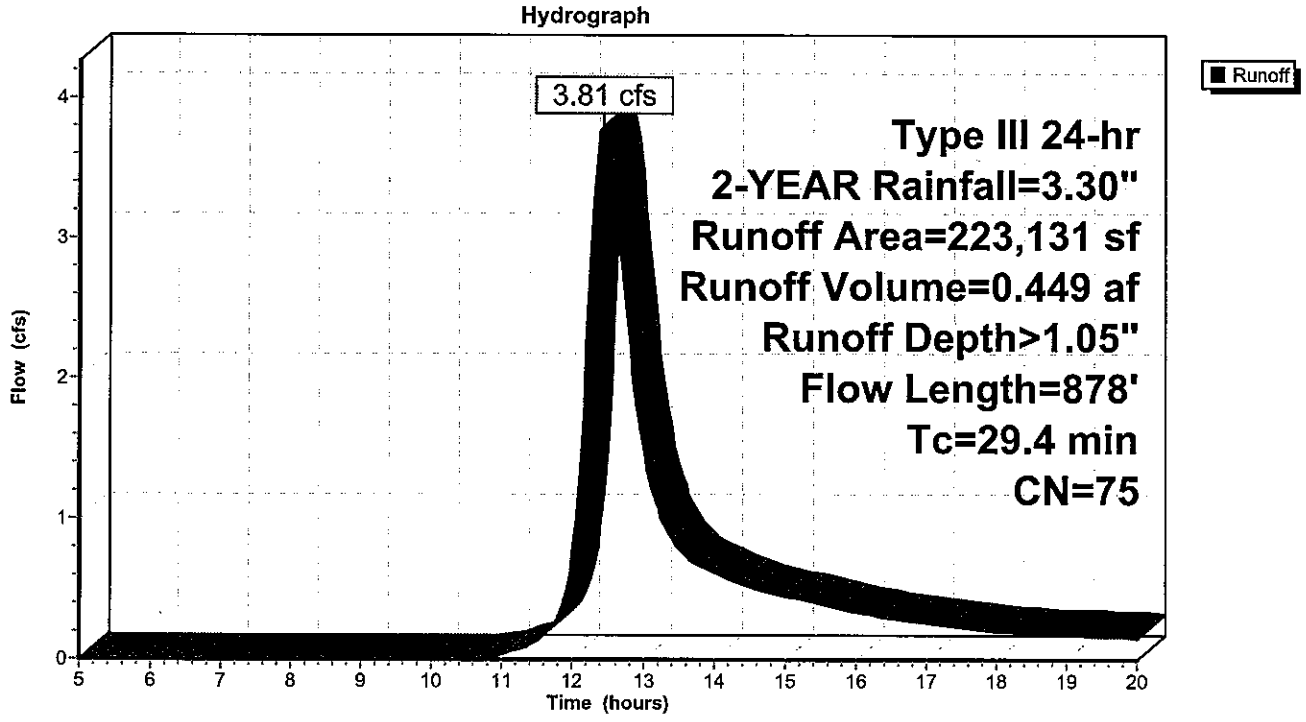
Runoff = 3.81 cfs @ 12.44 hrs, Volume= 0.449 af, Depth> 1.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	22,558	98	Paved road, HSG C
*	200,573	72	Woods, HSG C
	223,131	75	Weighted Average
	200,573		89.89% Pervious Area
	22,558		10.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.1	100	0.0800	0.08		**Sheet Flow, WEST IN WOODS** Woods: Dense underbrush n= 0.800 P2= 3.30"
2.7	157	0.0380	0.97		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
4.2	391	0.0970	1.56		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
1.4	230	0.0350	2.81		**Shallow Concentrated Flow, IN ROAD DITCH** Grassed Waterway Kv= 15.0 fps
29.4	878	Total			

Subcatchment 1S: SOUTH SIDE ALONG NORTH ROAD



Summary for Subcatchment 2S: AREA OF LOT 7+, ALONG HUSSEY ROAD

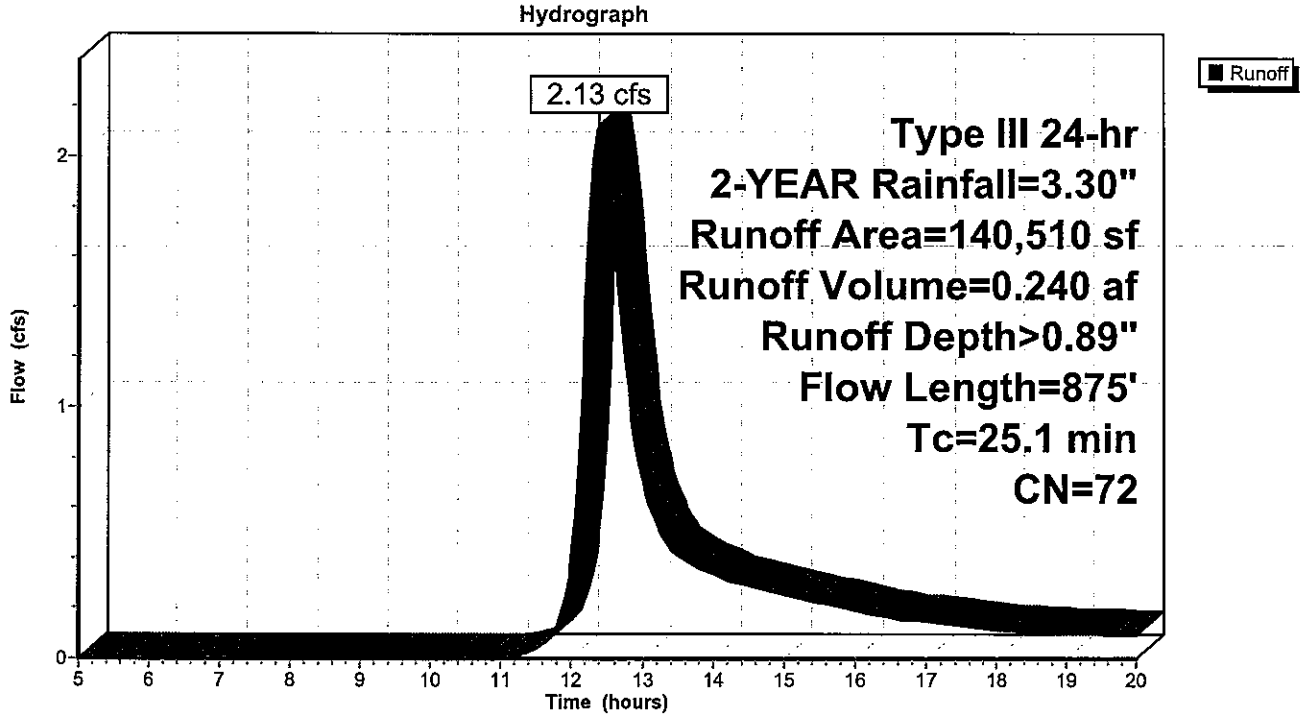
Runoff = 2.13 cfs @ 12.39 hrs, Volume= 0.240 af, Depth> 0.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	2,095	98	Paved road, HSG C
*	138,415	72	Woods, HSG C
	140,510	72	Weighted Average
	138,415		98.51% Pervious Area
	2,095		1.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.7	100	0.0500	0.11		**Sheet Flow, NORTH IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
8.2	625	0.0640	1.26		**Shallow Concentrated Flow, NORTH WEST THROUGH WOOD** Woodland Kv= 5.0 fps
2.2	150	0.0130	1.14		**Shallow Concentrated Flow, SOUTH WEST IN ROAD DITCH** Nearly Bare & Untilled Kv= 10.0 fps
25.1	875	Total			

Subcatchment 2S: AREA OF LOT 7+, ALONG HUSSEY ROAD



Summary for Subcatchment 3S: CENTRAL SITE PLUS OFF SITE

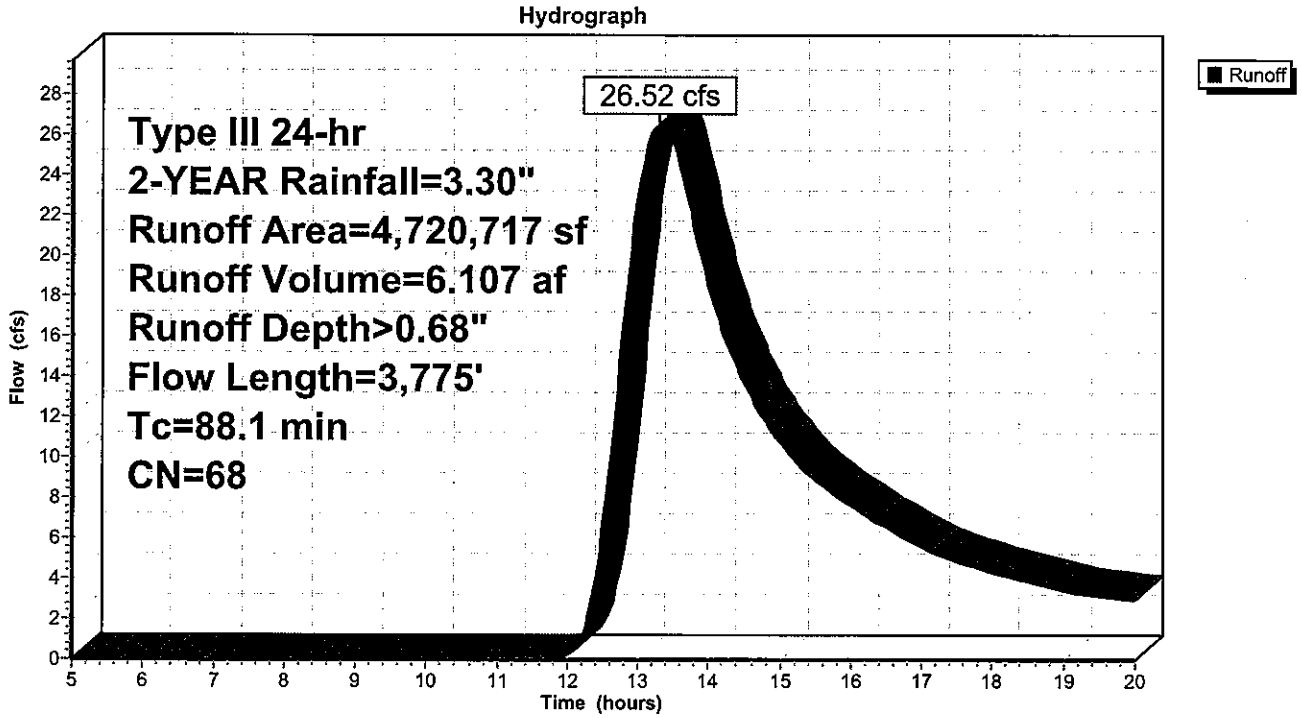
Runoff = 26.52 cfs @ 13.32 hrs, Volume= 6.107 af, Depth> 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	29,709	98	Paved roads, HSG C
*	4,691,008	68	Woods, HSG C
	4,720,717	68	Weighted Average
	4,691,008		99.37% Pervious Area
	29,709		0.63% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.6	150	0.0660	0.08		**Sheet Flow, SOUTH WEST THROUGH WOODS** Woods: Dense underbrush n= 0.800 P2= 3.30"
52.7	1,580	0.0400	0.50		**Shallow Concentrated Flow, WEST THROUGH WOODS** Forest w/Heavy Litter Kv= 2.5 fps
3.8	2,045	0.0420	9.03	162.47	**Trap/Vee/Rect Channel Flow, NORTH WEST IN STREAM** Bot.W=5.00' D=2.00' Z= 2.0 '/' Top.W=13.00' n= 0.040 Winding stream, pools & shoals
88.1	3,775	Total			

Subcatchment 3S: CENTRAL SITE PLUS OFF SITE



Summary for Pond 1P: CULVERT AT HUSSEY ROAD, POA 1

Inflow Area = 5.122 ac, 10.11% Impervious, Inflow Depth > 1.05" for 2-YEAR event
Inflow = 3.81 cfs @ 12.44 hrs, Volume= 0.449 af
Outflow = 3.81 cfs @ 12.44 hrs, Volume= 0.449 af, Atten= 0%, Lag= 0.2 min
Primary = 3.81 cfs @ 12.44 hrs, Volume= 0.449 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 515.34' @ 12.44 hrs Surf.Area= 92 sf Storage= 79 cf

Plug-Flow detention time= 0.9 min calculated for 0.447 af (100% of inflow)
Center-of-Mass det. time= 0.4 min (832.8 - 832.3)

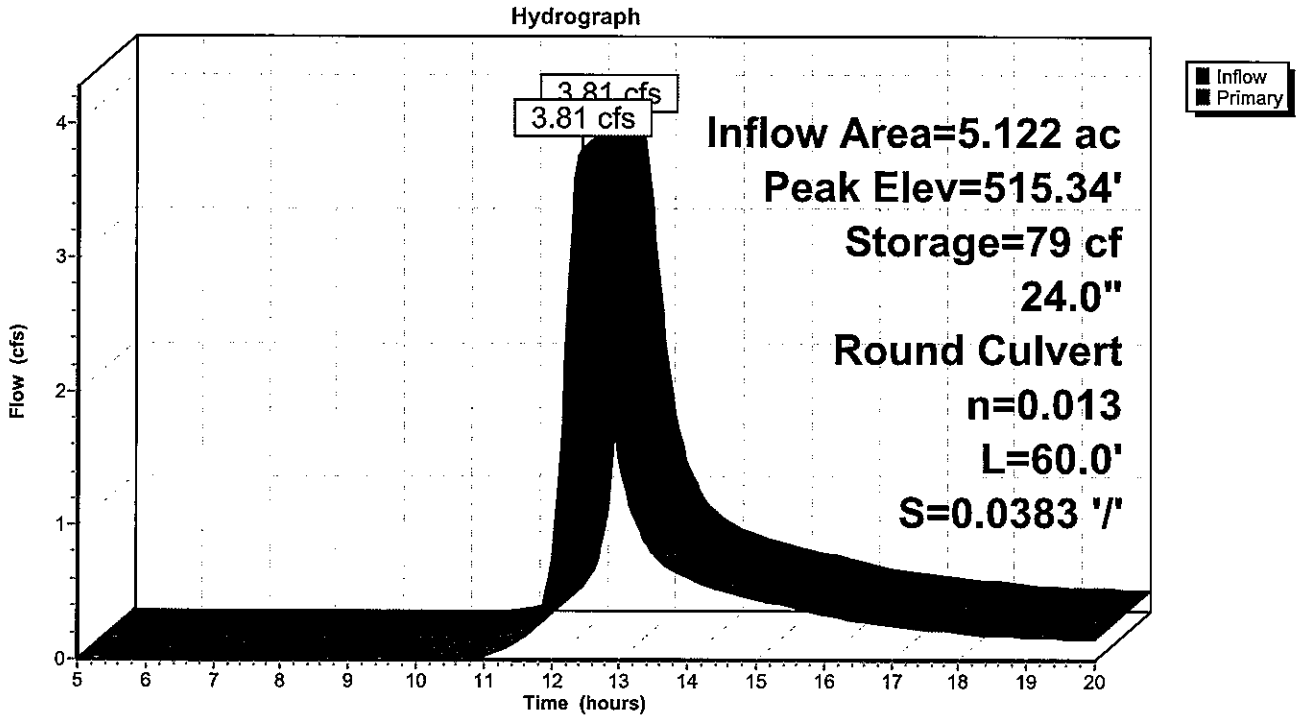
Volume	Invert	Avail.Storage	Storage Description
#1	514.00'	520 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
514.00	25	0	0
516.00	125	150	150
518.00	245	370	520

Device	Routing	Invert	Outlet Devices
#1	Primary	514.40'	**24.0" Round Culvert** L= 60.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 514.40' / 512.10' S= 0.0383 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.80 cfs @ 12.44 hrs HW=515.34' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 3.80 cfs @ 2.61 fps)

Pond 1P: CULVERT AT HUSSEY ROAD, POA 1



Summary for Pond 2P: CULVERT AT HUSSEY ROAD 15", POA 2

Inflow Area = 3.226 ac, 1.49% Impervious, Inflow Depth > 0.89" for 2-YEAR event
Inflow = 2.13 cfs @ 12.39 hrs, Volume= 0.240 af
Outflow = 2.13 cfs @ 12.40 hrs, Volume= 0.240 af, Atten= 0%, Lag= 0.7 min
Primary = 2.13 cfs @ 12.40 hrs, Volume= 0.240 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 524.93' @ 12.40 hrs Surf.Area= 155 sf Storage= 84 cf

Plug-Flow detention time= 1.0 min calculated for 0.239 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (836.7 - 836.1)

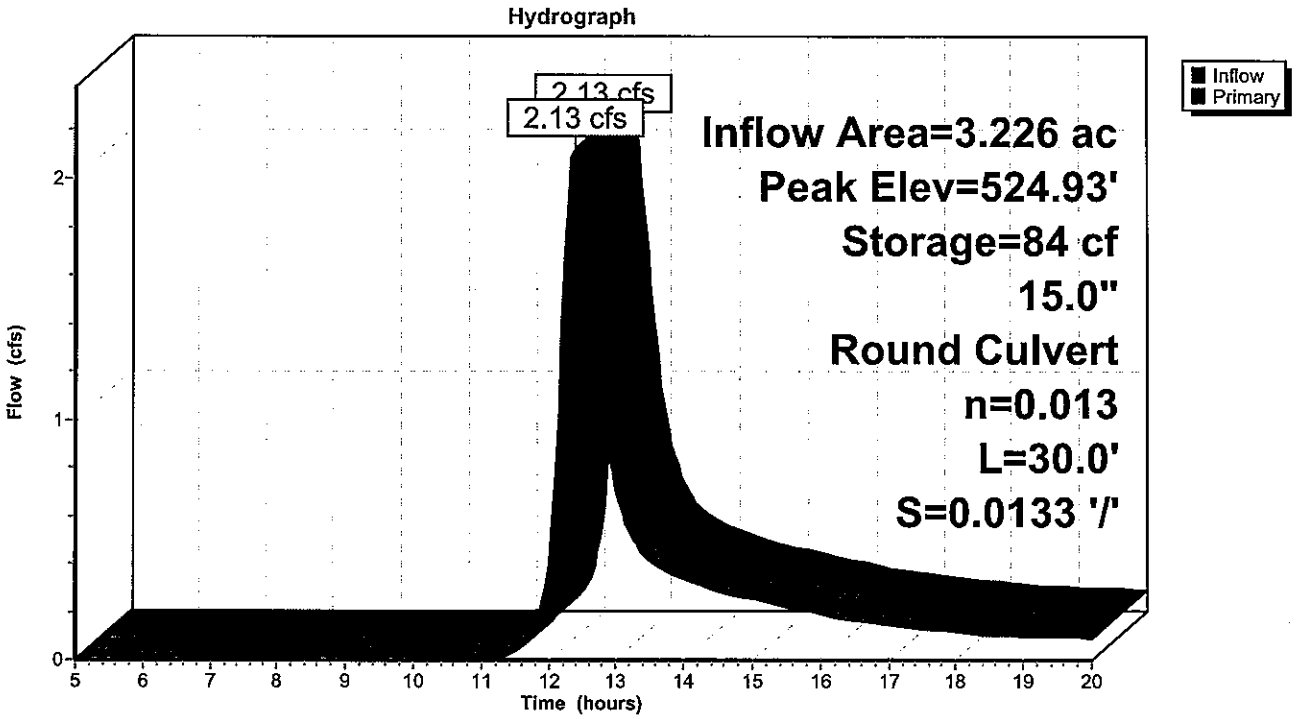
Volume	Invert	Avail.Storage	Storage Description
#1	524.00'	3,549 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
524.00	25	0	0
526.00	304	329	329
528.00	2,916	3,220	3,549

Device	Routing	Invert	Outlet Devices
#1	Primary	524.10'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 524.10' / 523.70' S= 0.0133 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.12 cfs @ 12.40 hrs HW=524.93' (Free Discharge)
↑**1=Culvert** (Inlet Controls 2.12 cfs @ 2.45 fps)

Pond 2P: CULVERT AT HUSSEY ROAD 15", POA 2



Summary for Pond 3P: CULVERT AT HUSSEY ROAD 32", POA 3

Inflow Area = 108.373 ac, 0.63% Impervious, Inflow Depth > 0.68" for 2-YEAR event
Inflow = 26.52 cfs @ 13.32 hrs, Volume= 6.107 af
Outflow = 25.89 cfs @ 13.47 hrs, Volume= 6.079 af, Atten= 2%, Lag= 9.3 min
Primary = 25.89 cfs @ 13.47 hrs, Volume= 6.079 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 520.72' @ 13.47 hrs Surf.Area= 5,216 sf Storage= 8,332 cf

Plug-Flow detention time= 5.2 min calculated for 6.079 af (100% of inflow)
Center-of-Mass det. time= 3.7 min (895.8 - 892.0)

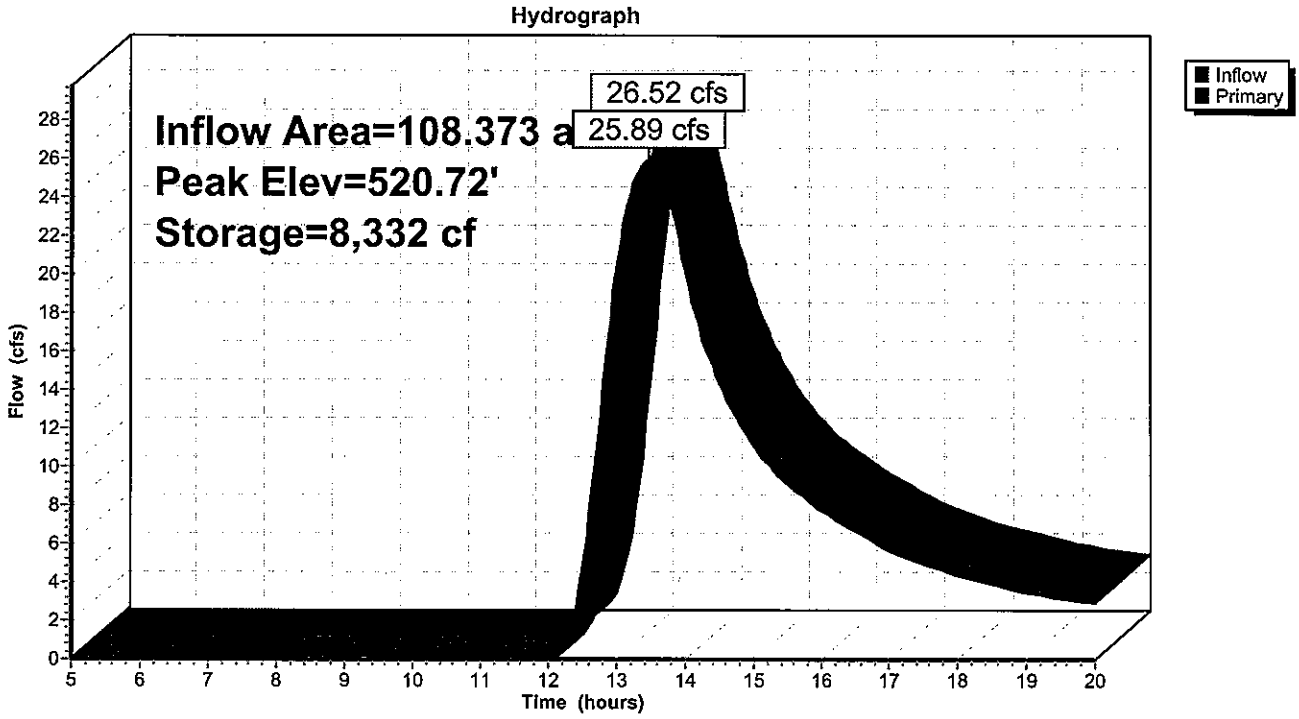
Volume	Invert	Avail.Storage	Storage Description
#1	517.50'	66,975 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
517.50	450	0	0
518.00	925	344	344
520.00	3,810	4,735	5,079
522.00	7,710	11,520	16,599
524.00	12,683	20,393	36,992
526.00	17,300	29,983	66,975

Device	Routing	Invert	Outlet Devices
#1	Primary	517.90'	**32.0" Round Culvert** L= 31.0' Ke= 0.900 Inlet / Outlet Invert= 517.90' / 517.30' S= 0.0194 '/' Cc= 0.900 n= 0.010, Flow Area= 5.59 sf
#2	Primary	522.00'	**10.0' long x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=25.88 cfs @ 13.47 hrs HW=520.72' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 25.88 cfs @ 4.63 fps)
└—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3P: CULVERT AT HUSSEY ROAD 32", POA 3



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SOUTH SIDE ALONG Runoff Area=223,131 sf 10.11% Impervious Runoff Depth>2.18"
Flow Length=878' Tc=29.4 min CN=75 Runoff=8.06 cfs 0.929 af

Subcatchment2S: AREA OF LOT 7+, Runoff Area=140,510 sf 1.49% Impervious Runoff Depth>1.94"
Flow Length=875' Tc=25.1 min CN=72 Runoff=4.83 cfs 0.522 af

Subcatchment3S: CENTRAL SITE PLUS Runoff Area=4,720,717 sf 0.63% Impervious Runoff Depth>1.60"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=67.94 cfs 14.425 af

Pond 1P: CULVERT AT HUSSEY ROAD, POA 1 Peak Elev=515.87' Storage=134 cf Inflow=8.06 cfs 0.929 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=8.06 cfs 0.929 af

Pond 2P: CULVERT AT HUSSEY ROAD 15", Peak Elev=525.78' Storage=265 cf Inflow=4.83 cfs 0.522 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=4.79 cfs 0.522 af

Pond 3P: CULVERT AT HUSSEY ROAD Peak Elev=523.00' Storage=25,539 cf Inflow=67.94 cfs 14.425 af
Outflow=67.48 cfs 14.383 af

Total Runoff Area = 116.721 ac Runoff Volume = 15.877 af Average Runoff Depth = 1.63"
98.93% Pervious = 115.473 ac 1.07% Impervious = 1.248 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: SOUTH SIDE ALONG Runoff Area=223,131 sf 10.11% Impervious Runoff Depth>3.20"
Flow Length=878' Tc=29.4 min CN=75 Runoff=11.82 cfs 1.364 af

Subcatchment2S: AREA OF LOT 7+, Runoff Area=140,510 sf 1.49% Impervious Runoff Depth>2.91"
Flow Length=875' Tc=25.1 min CN=72 Runoff=7.28 cfs 0.783 af

Subcatchment3S: CENTRAL SITE PLUS Runoff Area=4,720,717 sf 0.63% Impervious Runoff Depth>2.48"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=107.26 cfs 22.391 af

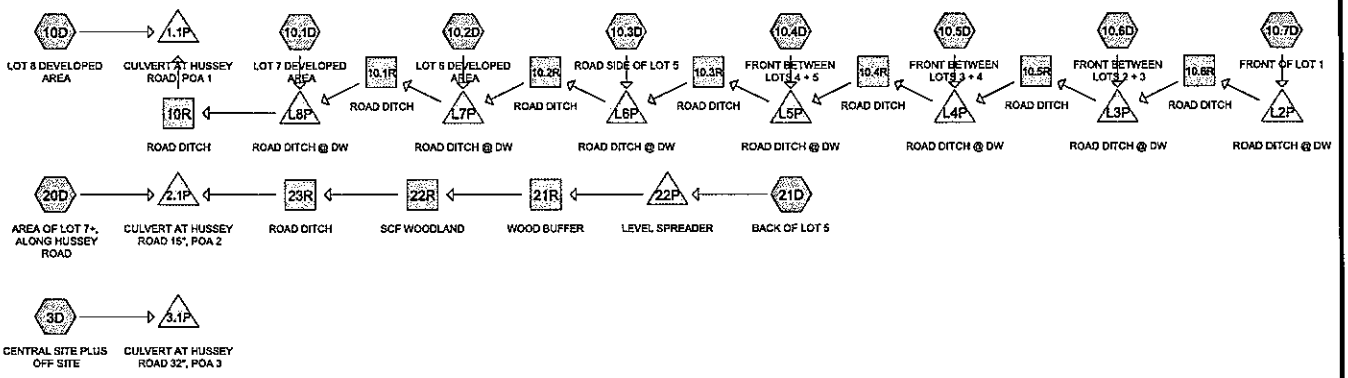
Pond 1P: CULVERT AT HUSSEY ROAD, POA Peak Elev=516.37' Storage=200 cf Inflow=11.82 cfs 1.364 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=11.81 cfs 1.363 af

Pond 2P: CULVERT AT HUSSEY ROAD 15", Peak Elev=526.76' Storage=942 cf Inflow=7.28 cfs 0.783 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=6.66 cfs 0.783 af

Pond 3P: CULVERT AT HUSSEY ROAD Peak Elev=523.76' Storage=34,015 cf Inflow=107.26 cfs 22.391 af
Outflow=106.57 cfs 22.335 af

Total Runoff Area = 116.721 ac Runoff Volume = 24.538 af Average Runoff Depth = 2.52"
98.93% Pervious = 115.473 ac 1.07% Impervious = 1.248 ac

DEVELOPED CONDITIONS



Subcat Reach Pond Link

Routing Diagram for 16149 EX DEV 052118
Prepared by {enter your company name here}, Printed 5/21/2018
HydroCAD® 10.00-20 s/n 02135 © 2017 HydroCAD Software Solutions LLC

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3D: CENTRAL SITE PLUS Runoff Area=4,720,717 sf 0.73% Impervious Runoff Depth>0.68"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=26.52 cfs 6.107 af

Subcatchment10.1D: LOT 7 DEVELOPED Runoff Area=42,557 sf 14.49% Impervious Runoff Depth>1.17"
Flow Length=351' Tc=18.5 min CN=77 Runoff=0.99 cfs 0.096 af

Subcatchment10.2D: LOT 6 DEVELOPED Runoff Area=29,375 sf 10.60% Impervious Runoff Depth>1.12"
Flow Length=283' Tc=12.0 min CN=76 Runoff=0.76 cfs 0.063 af

Subcatchment10.3D: ROAD SIDE OF LOT Runoff Area=23,631 sf 17.29% Impervious Runoff Depth>1.18"
Flow Length=311' Tc=13.9 min CN=77 Runoff=0.61 cfs 0.053 af

Subcatchment10.4D: FRONT BETWEEN Runoff Area=24,133 sf 14.65% Impervious Runoff Depth>1.17"
Flow Length=223' Tc=16.2 min CN=77 Runoff=0.59 cfs 0.054 af

Subcatchment10.5D: FRONT BETWEEN Runoff Area=8,242 sf 21.44% Impervious Runoff Depth>1.24"
Flow Length=60' Tc=5.9 min CN=78 Runoff=0.29 cfs 0.020 af

Subcatchment10.6D: FRONT BETWEEN Runoff Area=8,398 sf 33.83% Impervious Runoff Depth>1.50"
Flow Length=112' Tc=4.5 min CN=82 Runoff=0.37 cfs 0.024 af

Subcatchment10.7D: FRONT OF LOT 1 Runoff Area=26,983 sf 19.04% Impervious Runoff Depth>1.23"
Flow Length=372' Tc=19.5 min CN=78 Runoff=0.65 cfs 0.064 af

Subcatchment10D: LOT 8 DEVELOPED Runoff Area=59,811 sf 9.26% Impervious Runoff Depth>1.05"
Flow Length=495' Tc=34.6 min CN=75 Runoff=0.95 cfs 0.120 af

Subcatchment20D: AREA OF LOT 7+, Runoff Area=136,712 sf 1.53% Impervious Runoff Depth>0.95"
Flow Length=875' Tc=27.3 min CN=73 Runoff=2.13 cfs 0.247 af

Subcatchment21D: BACK OF LOT 5 Runoff Area=3,798 sf 18.43% Impervious Runoff Depth>1.24"
Tc=5.0 min CN=78 Runoff=0.14 cfs 0.009 af

Reach 10.1R: ROAD DITCH Avg. Flow Depth=0.11' Max Vel=2.87 fps Inflow=1.68 cfs 0.086 af
n=0.035 L=335.0' S=0.0952 '/' Capacity=83.14 cfs Outflow=1.66 cfs 0.086 af

Reach 10.2R: ROAD DITCH Avg. Flow Depth=0.11' Max Vel=2.06 fps Inflow=1.24 cfs 0.063 af
n=0.035 L=40.0' S=0.0475 '/' Capacity=58.72 cfs Outflow=1.23 cfs 0.063 af

Reach 10.3R: ROAD DITCH Avg. Flow Depth=0.10' Max Vel=1.55 fps Inflow=0.88 cfs 0.045 af
n=0.035 L=264.0' S=0.0299 '/' Capacity=46.60 cfs Outflow=0.85 cfs 0.045 af

Reach 10.4R: ROAD DITCH Avg. Flow Depth=0.07' Max Vel=1.44 fps Inflow=0.51 cfs 0.026 af
n=0.035 L=225.0' S=0.0440 '/' Capacity=56.51 cfs Outflow=0.51 cfs 0.026 af

Reach 10.5R: ROAD DITCH Avg. Flow Depth=0.08' Max Vel=1.34 fps Inflow=0.53 cfs 0.026 af
n=0.035 L=118.0' S=0.0331 '/' Capacity=48.98 cfs Outflow=0.53 cfs 0.026 af

Reach 10.6R: ROAD DITCH Avg. Flow Depth=0.09' Max Vel=1.09 fps Inflow=0.54 cfs 0.025 af
n=0.035 L=227.0' S=0.0172 '/' Capacity=35.31 cfs Outflow=0.52 cfs 0.025 af

Reach 10R: ROAD DITCH Avg. Flow Depth=0.14' Max Vel=3.32 fps Inflow=2.46 cfs 0.132 af
n=0.035 L=72.0' S=0.0958 '/' Capacity=334.91 cfs Outflow=2.45 cfs 0.132 af

Reach 21R: WOOD BUFFER Avg. Flow Depth=0.03' Max Vel=0.06 fps Inflow=0.18 cfs 0.007 af
n=0.800 L=50.0' S=0.1200 '/' Capacity=1.35 cfs Outflow=0.05 cfs 0.006 af

Reach 22R: SCF WOODLAND Avg. Flow Depth=0.02' Max Vel=0.27 fps Inflow=0.05 cfs 0.006 af
n=0.100 L=596.0' S=0.0671 '/' Capacity=29.12 cfs Outflow=0.03 cfs 0.006 af

Reach 23R: ROAD DITCH Avg. Flow Depth=0.01' Max Vel=0.79 fps Inflow=0.03 cfs 0.006 af
n=0.022 L=150.0' S=0.0260 '/' Capacity=215.22 cfs Outflow=0.03 cfs 0.006 af

Pond 1.1P: CULVERT AT HUSSEY ROAD, POA Peak Elev=515.27' Storage=72 cf Inflow=3.29 cfs 0.252 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=3.29 cfs 0.252 af

Pond 2.1P: CULVERT AT HUSSEY ROAD 15", Peak Elev=524.93' Storage=84 cf Inflow=2.13 cfs 0.253 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=2.13 cfs 0.253 af

Pond 3.1P: CULVERT AT HUSSEY ROAD Peak Elev=520.72' Storage=8,332 cf Inflow=26.52 cfs 6.107 af
Outflow=25.89 cfs 6.079 af

Pond 22P: LEVEL SPREADER Peak Elev=574.02' Storage=108 cf Inflow=0.14 cfs 0.009 af
Outflow=0.18 cfs 0.007 af

Pond L2P: ROAD DITCH @ DW Peak Elev=586.44' Storage=83 cf Inflow=0.65 cfs 0.064 af
Discarded=0.10 cfs 0.039 af Primary=0.54 cfs 0.025 af Outflow=0.64 cfs 0.064 af

Pond L3P: ROAD DITCH @ DW Peak Elev=582.44' Storage=43 cf Inflow=0.64 cfs 0.049 af
Discarded=0.10 cfs 0.023 af Primary=0.53 cfs 0.026 af Outflow=0.63 cfs 0.049 af

Pond L4P: ROAD DITCH @ DW Peak Elev=578.43' Storage=42 cf Inflow=0.62 cfs 0.045 af
Discarded=0.10 cfs 0.020 af Primary=0.51 cfs 0.026 af Outflow=0.61 cfs 0.045 af

Pond L5P: ROAD DITCH @ DW Peak Elev=568.58' Storage=36 cf Inflow=0.98 cfs 0.080 af
Discarded=0.10 cfs 0.035 af Primary=0.88 cfs 0.045 af Outflow=0.98 cfs 0.080 af

Pond L6P: ROAD DITCH @ DW Peak Elev=560.70' Storage=47 cf Inflow=1.35 cfs 0.098 af
Discarded=0.10 cfs 0.035 af Primary=1.24 cfs 0.063 af Outflow=1.34 cfs 0.098 af

Pond L7P: ROAD DITCH @ DW Peak Elev=558.77' Storage=63 cf Inflow=1.78 cfs 0.125 af
Discarded=0.10 cfs 0.039 af Primary=1.68 cfs 0.086 af Outflow=1.78 cfs 0.125 af

Pond L8P: ROAD DITCH @ DW Peak Elev=525.95' Storage=109 cf Inflow=2.56 cfs 0.182 af
Discarded=0.10 cfs 0.050 af Primary=2.46 cfs 0.132 af Outflow=2.56 cfs 0.182 af

Total Runoff Area = 116.721 ac Runoff Volume = 6.857 af Average Runoff Depth = 0.70"
98.64% Pervious = 115.130 ac 1.36% Impervious = 1.591 ac

Summary for Subcatchment 3D: CENTRAL SITE PLUS OFF SITE

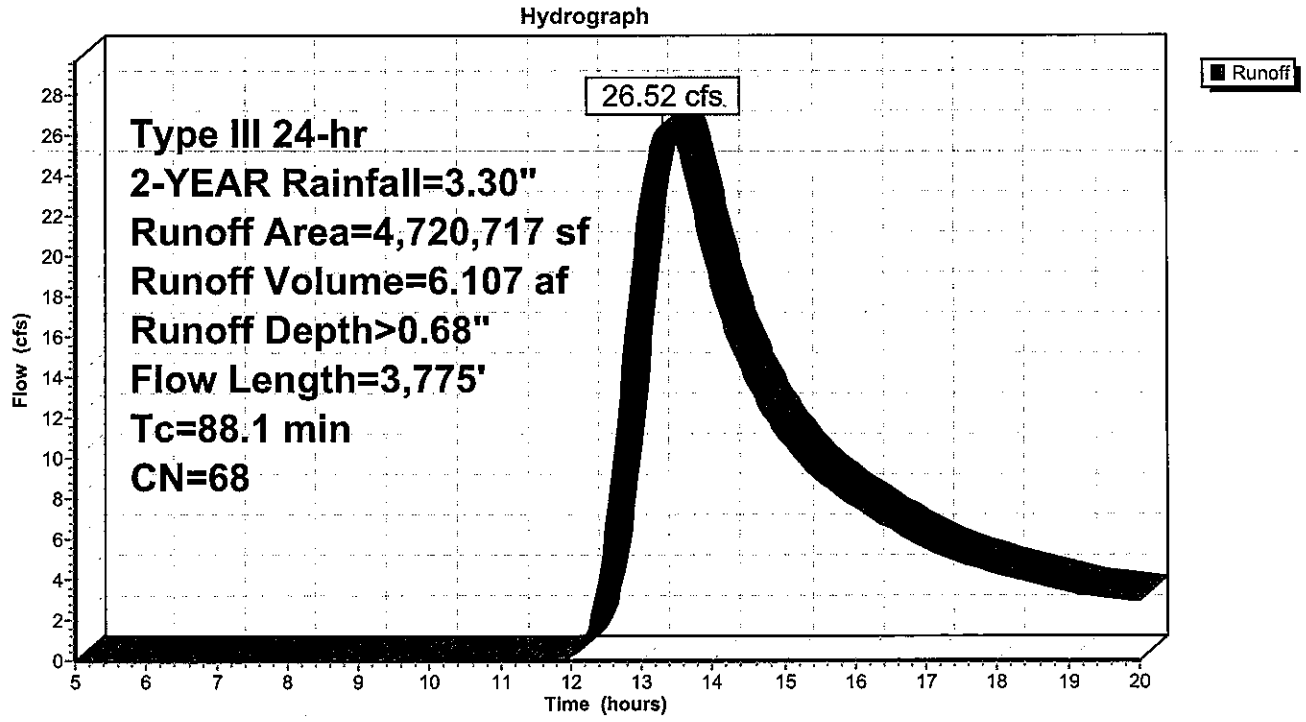
Runoff = 26.52 cfs @ 13.32 hrs, Volume= 6.107 af, Depth> 0.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	29,709	98	Paved roads, HSG C
*	4,672,127	68	Woods, HSG C
*	4,598	98	Roofs & Driveways, HSG C
	14,283	74	>75% Grass cover, Good, HSG C
	4,720,717	68	Weighted Average
	4,686,410		99.27% Pervious Area
	34,307		0.73% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.6	150	0.0660	0.08		**Sheet Flow, SOUTH WEST THROUGH WOODS** Woods: Dense underbrush n= 0.800 P2= 3.30"
52.7	1,580	0.0400	0.50		**Shallow Concentrated Flow, WEST THROUGH WOODS** Forest w/Heavy Litter Kv= 2.5 fps
3.8	2,045	0.0420	9.03	162.47	**Trap/Vee/Rect Channel Flow, NORTH WEST IN STREAM** Bot.W=5.00' D=2.00' Z= 2.0 '/' Top.W=13.00' n= 0.040 Winding stream, pools & shoals
88.1	3,775	Total			

Subcatchment 3D: CENTRAL SITE PLUS OFF SITE



Summary for Subcatchment 10.1D: LOT 7 DEVELOPED AREA

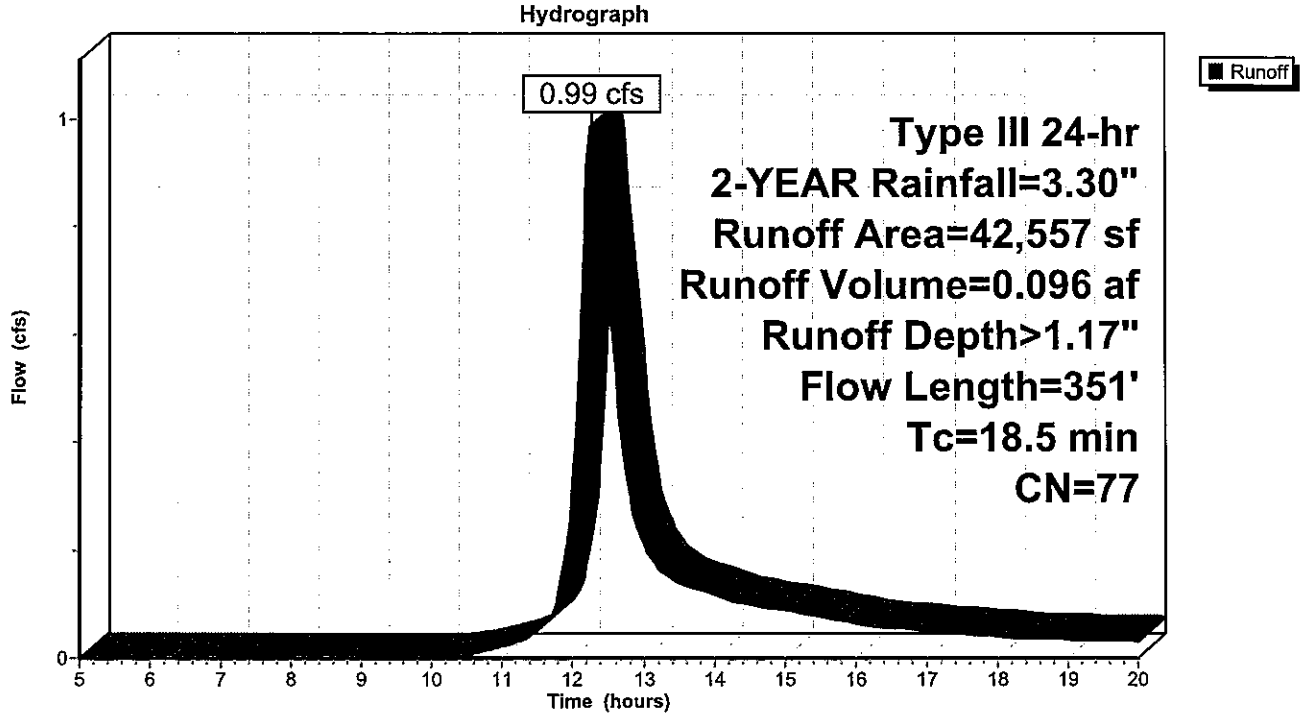
Runoff = 0.99 cfs @ 12.27 hrs, Volume= 0.096 af, Depth> 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	3,823	98	Paved road, HSG C
*	18,790	72	Woods, HSG C
*	2,343	98	Roofs & Driveways, HSG C
	17,601	74	>75% Grass cover, Good, HSG C
	42,557	77	Weighted Average
	36,391		85.51% Pervious Area
	6,166		14.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	150	0.0800	0.15		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
1.6	168	0.1200	1.73		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
0.1	33	0.0610	3.70		**Shallow Concentrated Flow, DW DITCH** Grassed Waterway Kv= 15.0 fps
18.5	351	Total			

Subcatchment 10.1D: LOT 7 DEVELOPED AREA



Summary for Subcatchment 10.2D: LOT 6 DEVELOPED AREA

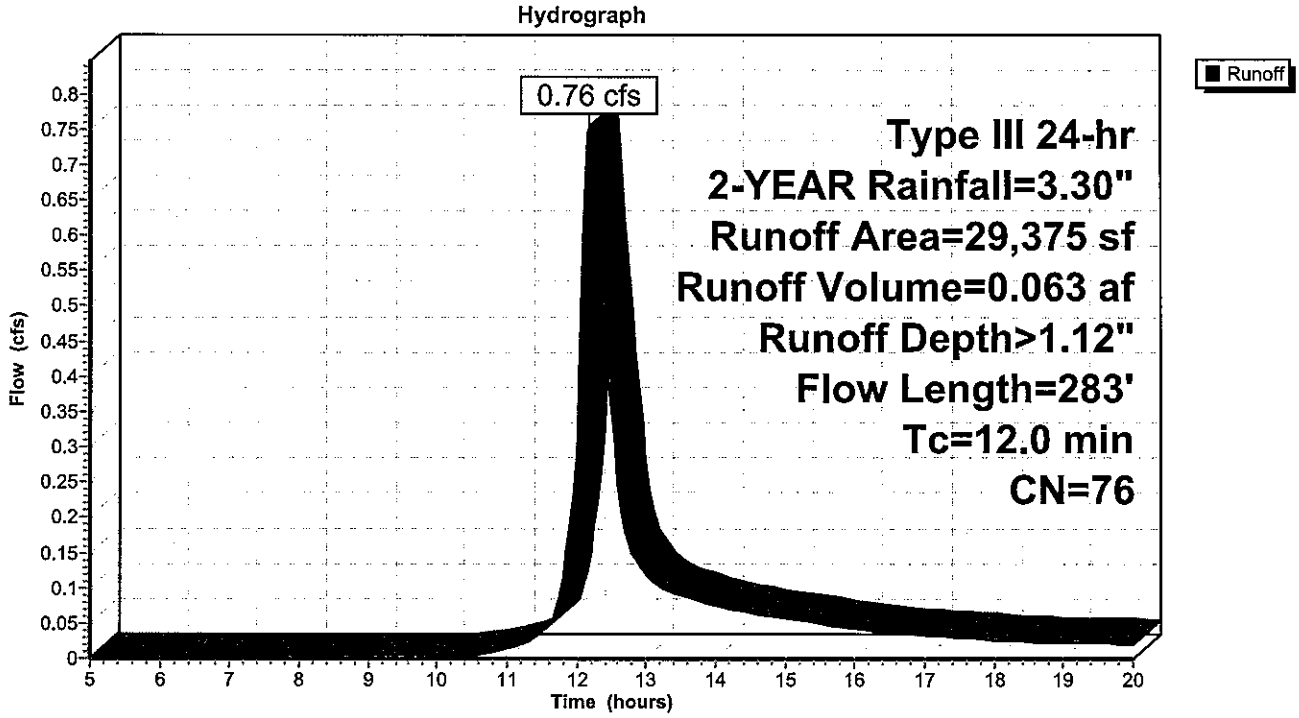
Runoff = 0.76 cfs @ 12.18 hrs, Volume= 0.063 af, Depth> 1.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	725	98	Paved road, HSG C
*	11,117	72	Woods, HSG C
*	2,390	98	Roofs & Driveways, HSG C
	15,143	74	>75% Grass cover, Good, HSG C
	29,375	76	Weighted Average
	26,260		89.40% Pervious Area
	3,115		10.60% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	75	0.0800	0.13		**Sheet Flow, IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	60	0.0500	1.12		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
0.3	30	0.0100	1.61		**Shallow Concentrated Flow, CROSS DW** Unpaved Kv= 16.1 fps
1.0	66	0.0454	1.07		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
0.2	52	0.0770	4.16		**Shallow Concentrated Flow, DW DITCH** Grassed Waterway Kv= 15.0 fps
12.0	283	Total			

Subcatchment 10.2D: LOT 6 DEVELOPED AREA



Summary for Subcatchment 10.3D: ROAD SIDE OF LOT 5

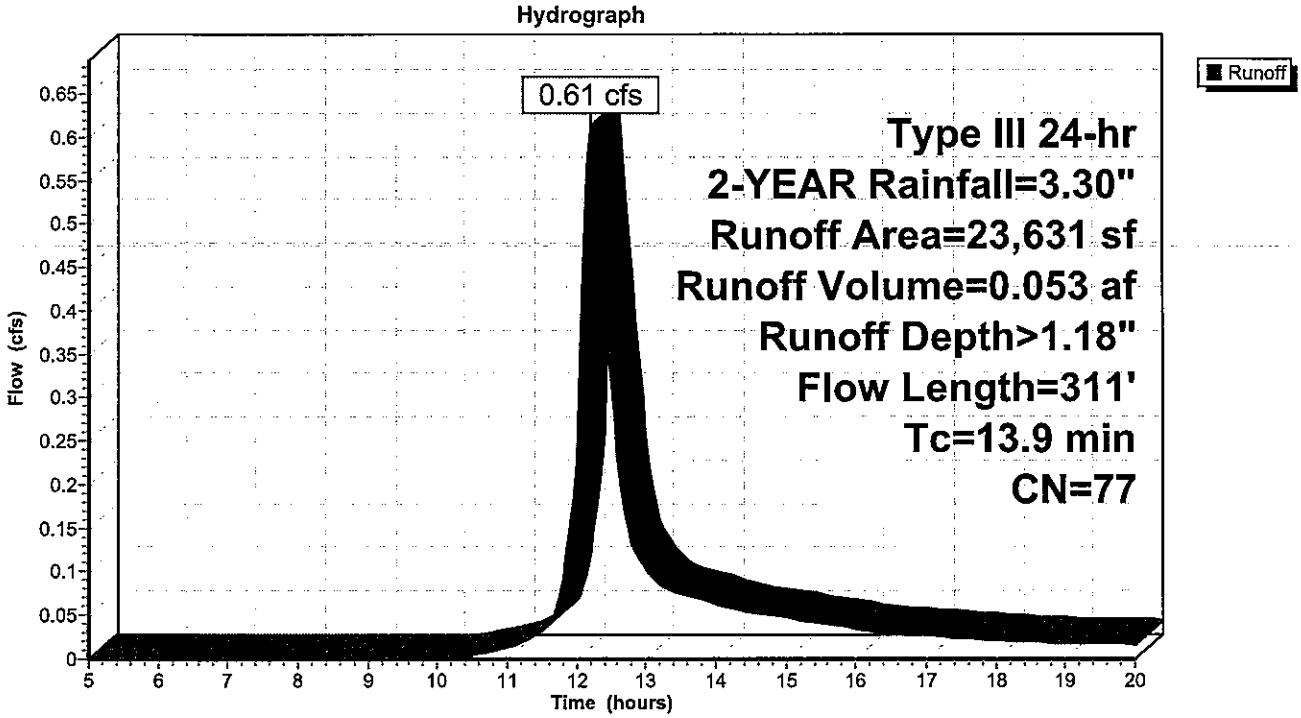
Runoff = 0.61 cfs @ 12.20 hrs, Volume= 0.053 af, Depth> 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	2,935	98	Paved road, HSG C
*	11,677	72	Woods, HSG C
*	1,151	98	Roofs & Driveways, HSG C
	7,868	74	>75% Grass cover, Good, HSG C
	23,631	77	Weighted Average
	19,545		82.71% Pervious Area
	4,086		17.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.1	100	0.0800	0.14		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
1.8	211	0.0379	1.95		**Shallow Concentrated Flow, ROAD DITCH** Nearly Bare & Untilled Kv= 10.0 fps
13.9	311	Total			

Subcatchment 10.3D: ROAD SIDE OF LOT 5



Summary for Subcatchment 10.4D: FRONT BETWEEN LOTS 4 + 5

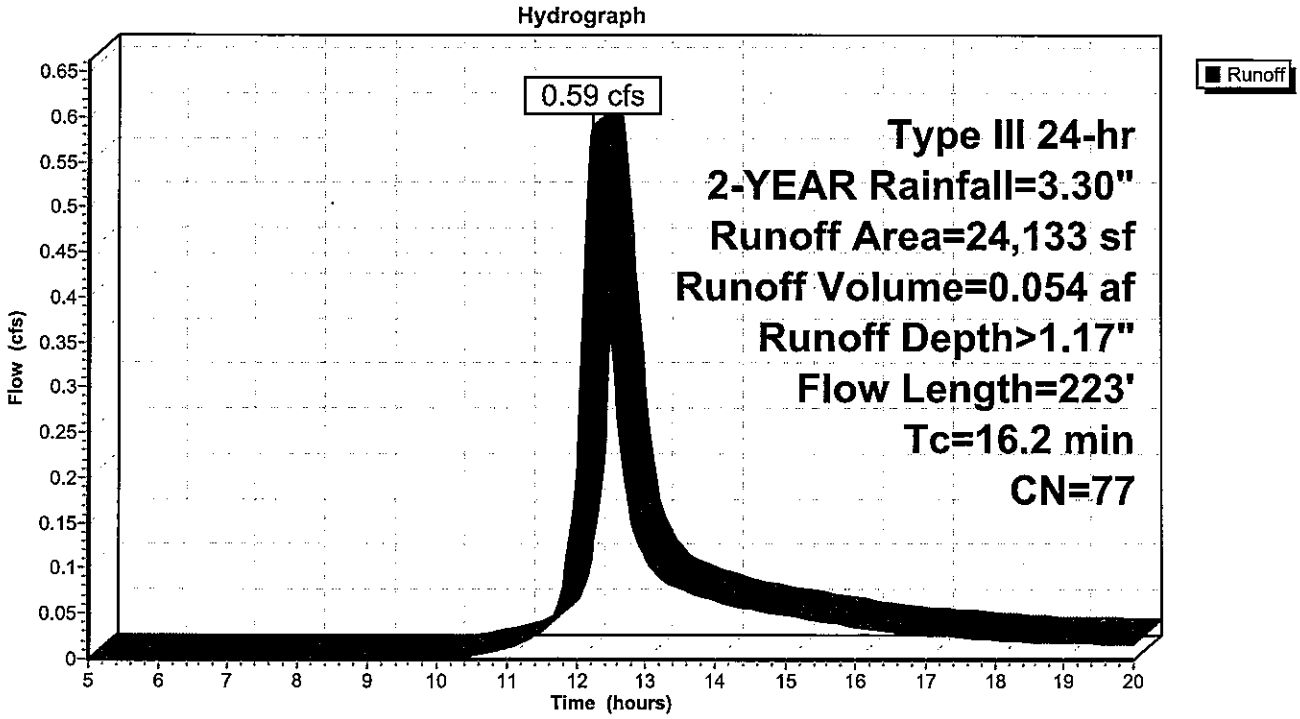
Runoff = 0.59 cfs @ 12.24 hrs, Volume= 0.054 af, Depth> 1.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	2,645	98	Paved road, HSG C
*	10,504	72	Woods, HSG C
*	891	98	Roofs & Driveways, HSG C
	10,093	74	>75% Grass cover, Good, HSG C
	24,133	77	Weighted Average
	20,597		85.35% Pervious Area
	3,536		14.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.6	100	0.0600	0.12		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
2.6	123	0.0240	0.77		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
16.2	223	Total			

Subcatchment 10.4D: FRONT BETWEEN LOTS 4 + 5



Summary for Subcatchment 10.5D: FRONT BETWEEN LOTS 3 + 4

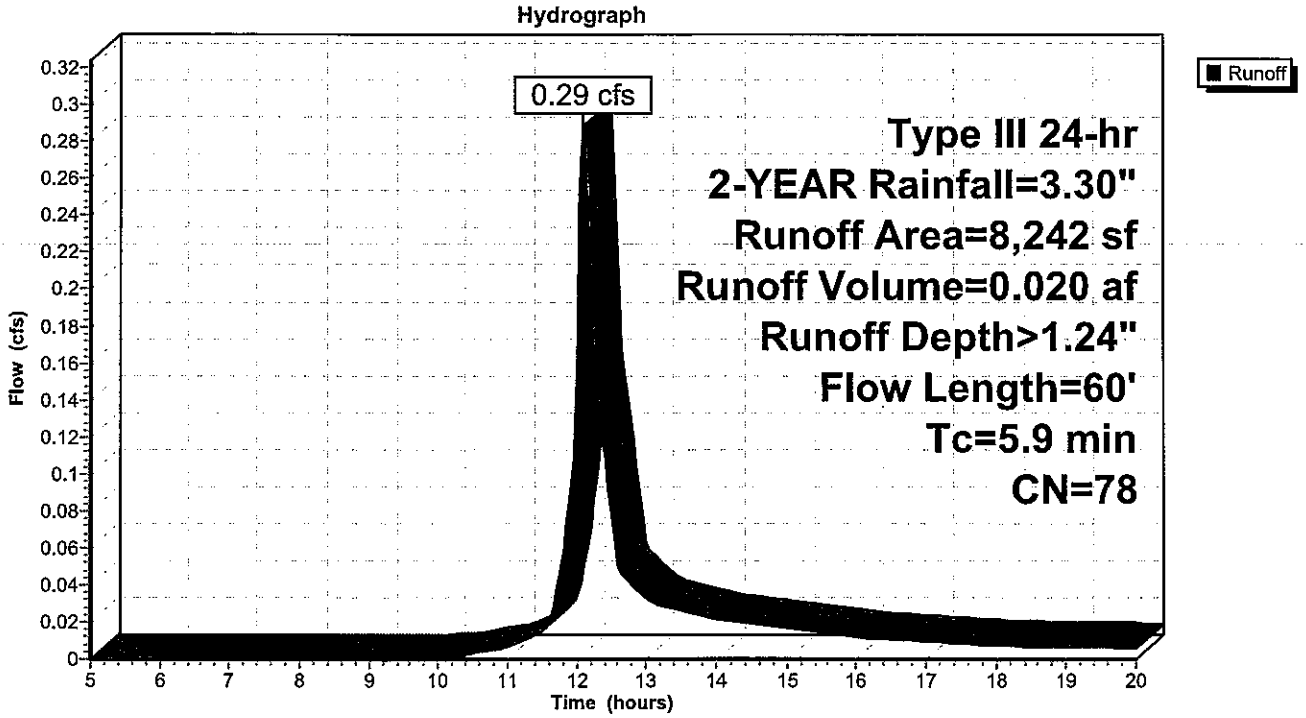
Runoff = 0.29 cfs @ 12.10 hrs, Volume= 0.020 af, Depth> 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	1,430	98	Paved road, HSG C
*	3,067	72	Woods, HSG C
*	337	98	Roofs & Driveways, HSG C
	3,408	74	>75% Grass cover, Good, HSG C
	8,242	78	Weighted Average
	6,475		78.56% Pervious Area
	1,767		21.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.6	30	0.0500	0.09		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
0.3	30	0.0323	1.80		**Shallow Concentrated Flow, TO ROAD DITCH** Nearly Bare & Untilled Kv= 10.0 fps
5.9	60	Total			

Subcatchment 10.5D: FRONT BETWEEN LOTS 3 + 4



Summary for Subcatchment 10.6D: FRONT BETWEEN LOTS 2 + 3

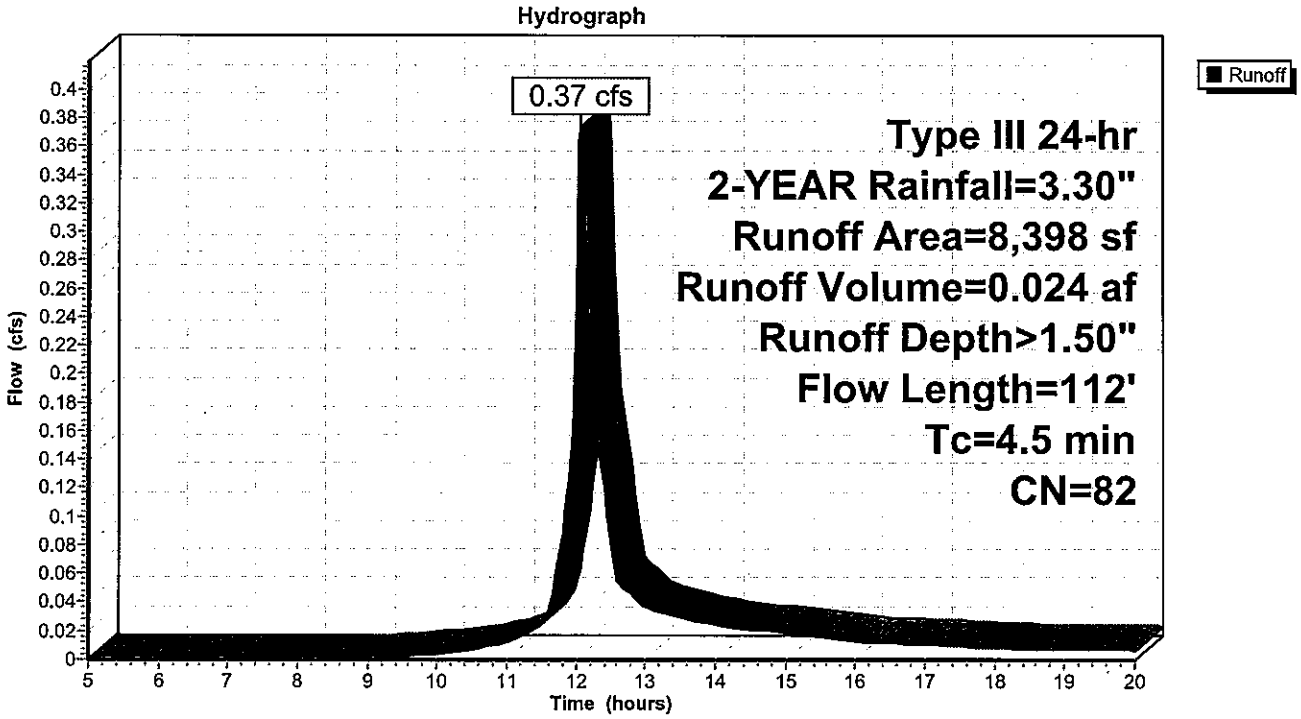
Runoff = 0.37 cfs @ 12.07 hrs, Volume= 0.024 af, Depth> 1.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	2,555	98	Paved road, HSG C
*	899	72	Woods, HSG C
*	286	98	Roofs & Driveways, HSG C
	4,658	74	>75% Grass cover, Good, HSG C
	8,398	82	Weighted Average
	5,557		66.17% Pervious Area
	2,841		33.83% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	30	0.1500	0.14		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
0.9	82	0.0240	1.55		**Shallow Concentrated Flow, ROAD DITCH** Nearly Bare & Untilled Kv= 10.0 fps
4.5	112	Total			

Subcatchment 10.6D: FRONT BETWEEN LOTS 2 + 3



Summary for Subcatchment 10.7D: FRONT OF LOT 1

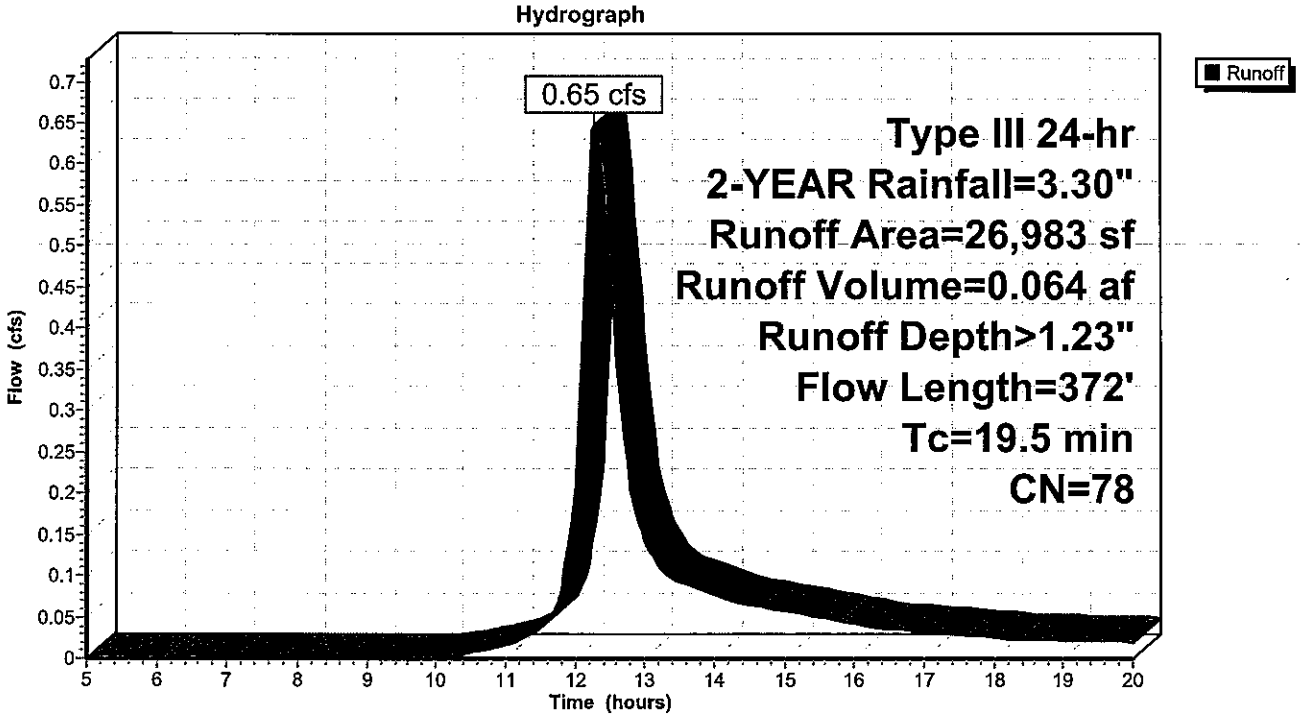
Runoff = 0.65 cfs @ 12.28 hrs, Volume= 0.064 af, Depth> 1.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	4,949	98	Paved road, HSG C
*	10,642	72	Woods, HSG C
*	189	98	Roofs & Driveways, HSG C
	11,203	74	>75% Grass cover, Good, HSG C
	26,983	78	Weighted Average
	21,845		80.96% Pervious Area
	5,138		19.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	95	0.0420	0.10		**Sheet Flow, WEST IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
4.4	277	0.0110	1.05		**Shallow Concentrated Flow, ROAD DITCH** Nearly Bare & Untilled Kv= 10.0 fps
19.5	372	Total			

Subcatchment 10.7D: FRONT OF LOT 1



Summary for Subcatchment 10D: LOT 8 DEVELOPED AREA

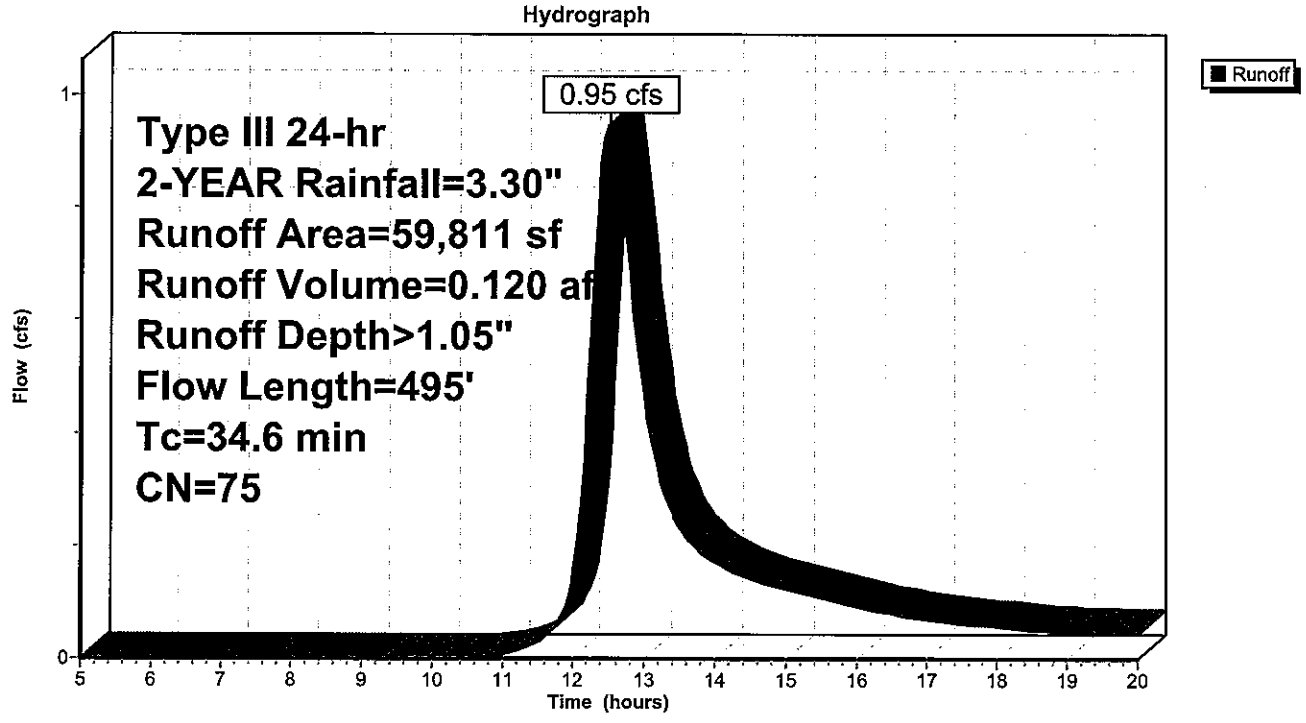
Runoff = 0.95 cfs @ 12.52 hrs, Volume= 0.120 af, Depth> 1.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	3,496	98	Paved road, HSG C
*	35,793	72	Woods, HSG C
*	2,044	98	Roofs & Driveways, HSG C
	18,478	74	>75% Grass cover, Good, HSG C
	59,811	75	Weighted Average
	54,271		90.74% Pervious Area
	5,540		9.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
29.2	150	0.0800	0.09		**Sheet Flow, WEST IN WOODS** Woods: Dense underbrush n= 0.800 P2= 3.30"
1.3	115	0.0860	1.47		**Shallow Concentrated Flow, IN WOODS** Woodland Kv= 5.0 fps
4.1	230	0.0350	0.94		**Shallow Concentrated Flow, ROAD DITCH** Woodland Kv= 5.0 fps
34.6	495	Total			

Subcatchment 10D: LOT 8 DEVELOPED AREA



Summary for Subcatchment 20D: AREA OF LOT 7+, ALONG HUSSEY ROAD

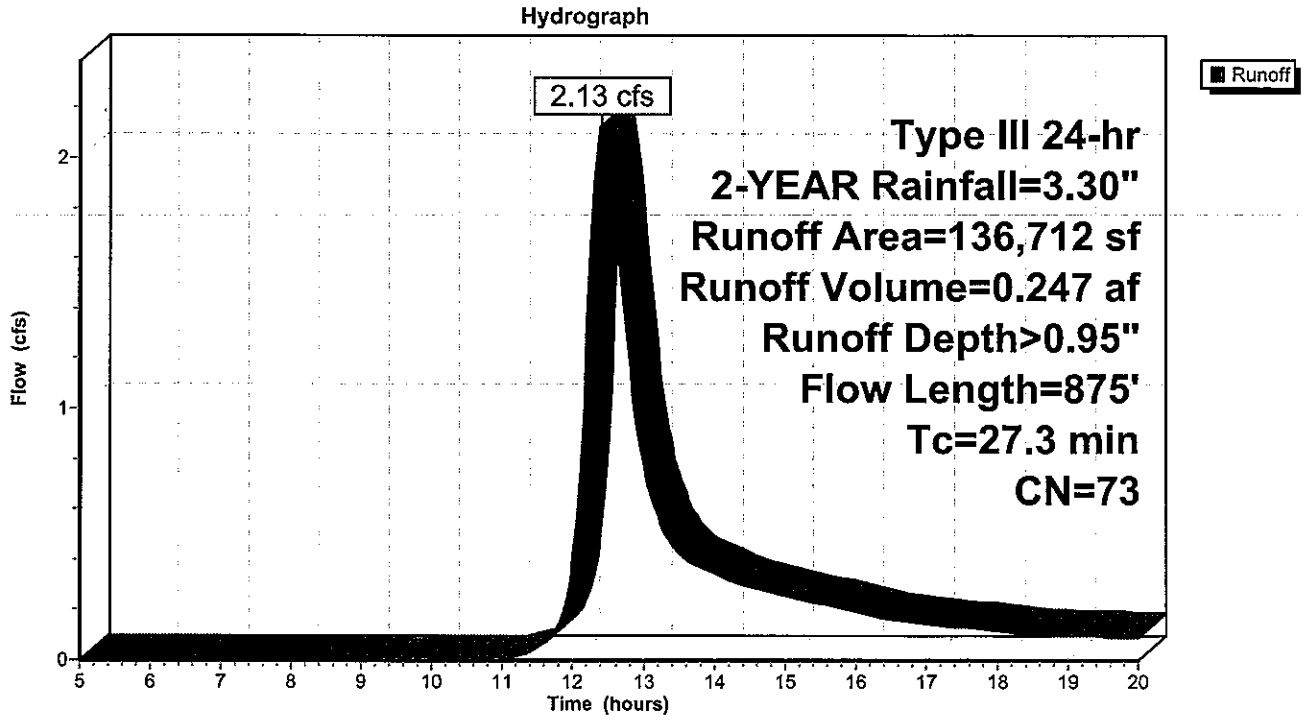
Runoff = 2.13 cfs @ 12.42 hrs, Volume= 0.247 af, Depth> 0.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	2,095	98	Paved road, HSG C
*	124,158	72	Woods, HSG C
	10,459	74	>75% Grass cover, Good, HSG C
	136,712	73	Weighted Average
	134,617		98.47% Pervious Area
	2,095		1.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	100	0.0440	0.11		**Sheet Flow, NORTH IN WOODS** Woods: Light underbrush n= 0.400 P2= 3.30"
8.8	625	0.0560	1.18		**Shallow Concentrated Flow, NORTH WEST THROUGH WOOD** Woodland Kv= 5.0 fps
3.1	150	0.0130	0.80		**Shallow Concentrated Flow, SOUTH WEST IN ROAD DITCH** Short Grass Pasture Kv= 7.0 fps
27.3	875	Total			

Subcatchment 20D: AREA OF LOT 7+, ALONG HUSSEY ROAD



Summary for Subcatchment 21D: BACK OF LOT 5

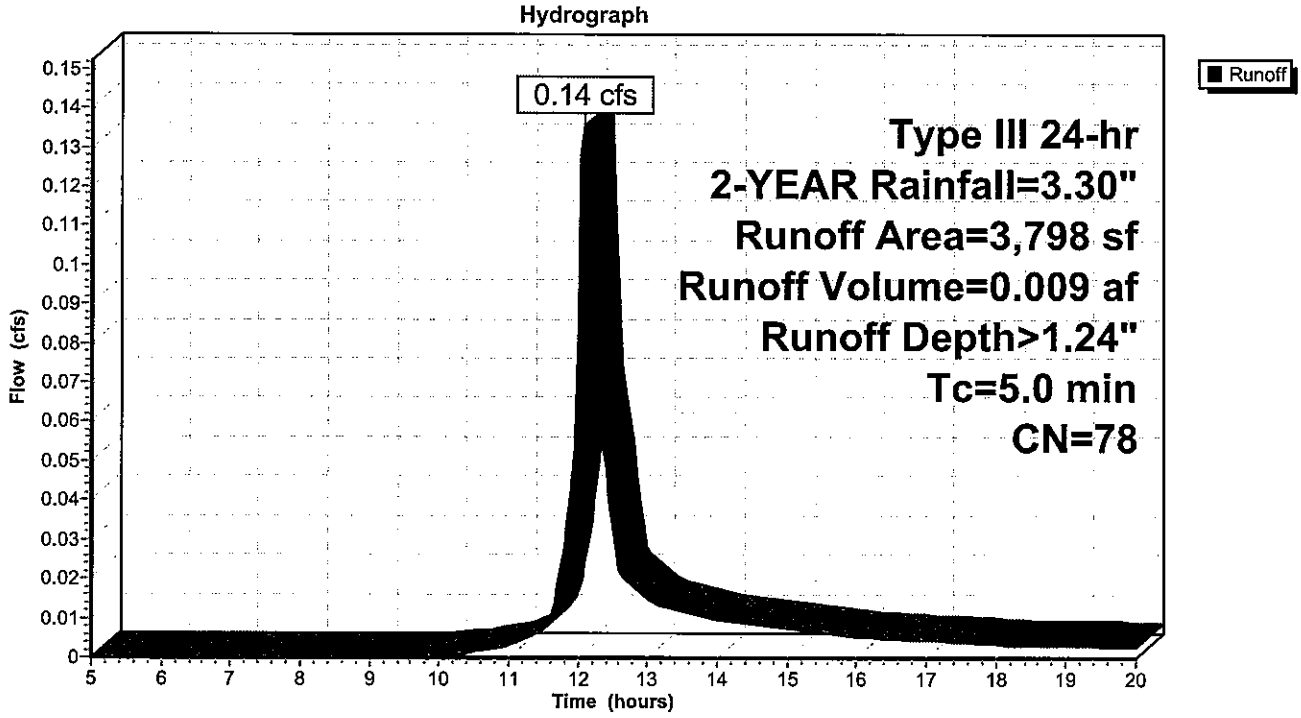
Runoff = 0.14 cfs @ 12.08 hrs, Volume= 0.009 af, Depth> 1.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-YEAR Rainfall=3.30"

	Area (sf)	CN	Description
*	928	72	Woods, HSG C
*	700	98	Roofs & Driveways, HSG C
	2,170	74	>75% Grass cover, Good, HSG C
	3,798	78	Weighted Average
	3,098		81.57% Pervious Area
	700		18.43% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					**Direct Entry,**

Subcatchment 21D: BACK OF LOT 5



Summary for Reach 10.1R: ROAD DITCH

Inflow Area = 2.772 ac, 16.96% Impervious, Inflow Depth > 0.37" for 2-YEAR event
Inflow = 1.68 cfs @ 12.32 hrs, Volume= 0.086 af
Outflow = 1.66 cfs @ 12.37 hrs, Volume= 0.086 af, Atten= 1%, Lag= 3.2 min

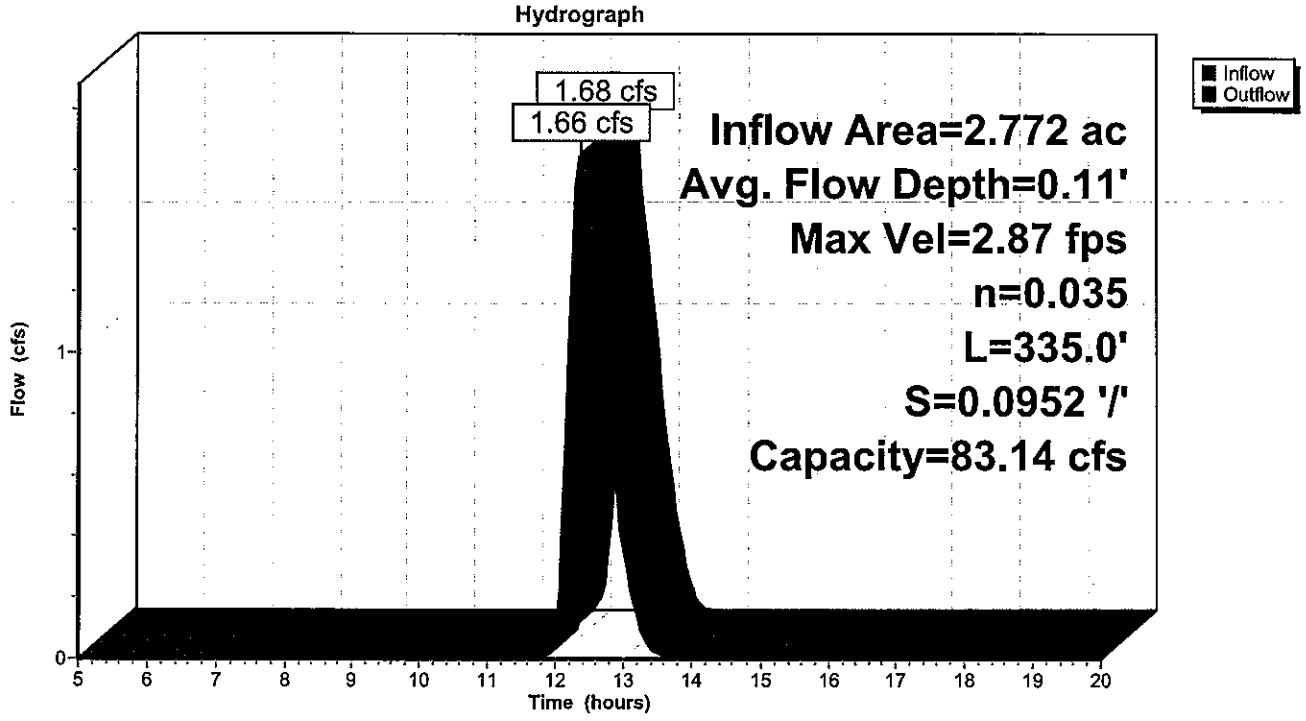
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.87 fps, Min. Travel Time= 1.9 min
Avg. Velocity = 0.80 fps, Avg. Travel Time= 6.9 min

Peak Storage= 195 cf @ 12.34 hrs
Average Depth at Peak Storage= 0.11'
Bank-Full Depth= 1.00' Flow Area= 8.0 sf, Capacity= 83.14 cfs

5.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 '/' Top Width= 11.00'
Length= 335.0' Slope= 0.0952 '/'
Inlet Invert= 557.90', Outlet Invert= 526.00'

‡

Reach 10.1R: ROAD DITCH



Summary for Reach 10.2R: ROAD DITCH

Inflow Area = 2.098 ac, 19.00% Impervious, Inflow Depth > 0.36" for 2-YEAR event
Inflow = 1.24 cfs @ 12.32 hrs, Volume= 0.063 af
Outflow = 1.23 cfs @ 12.34 hrs, Volume= 0.063 af, Atten= 1%, Lag= 0.7 min

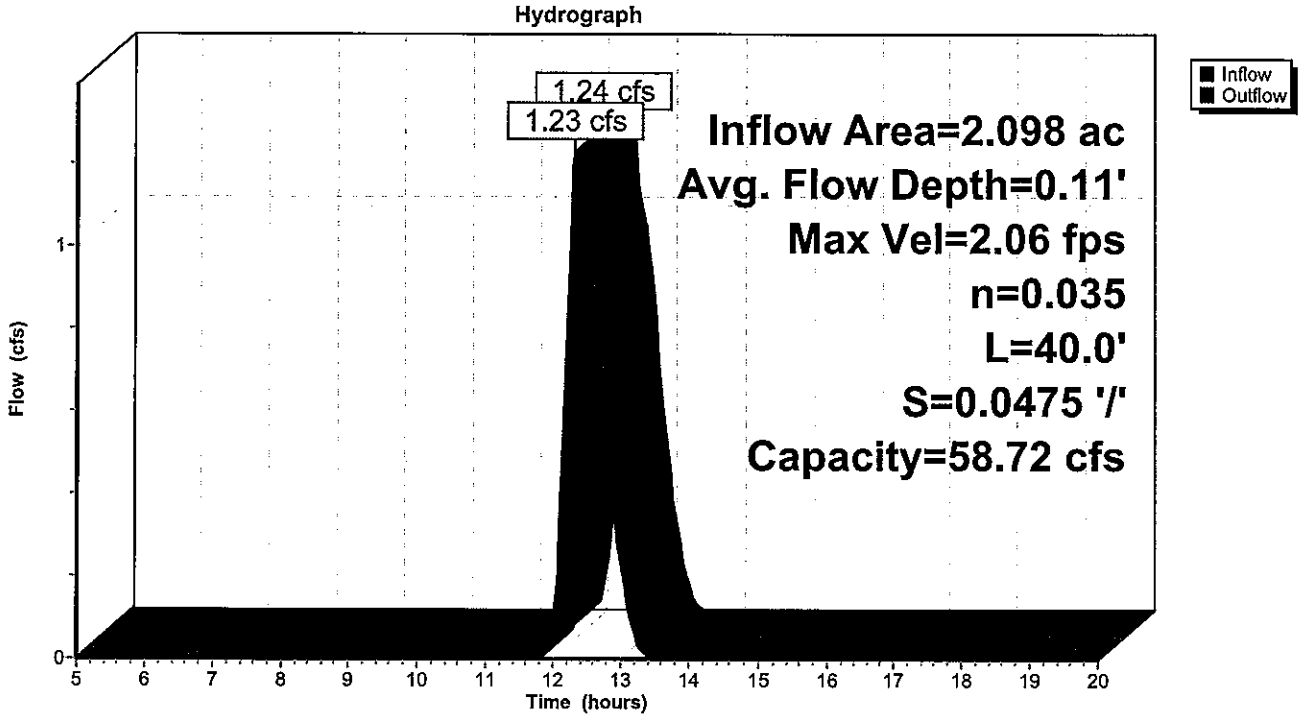
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.06 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 0.56 fps, Avg. Travel Time= 1.2 min

Peak Storage= 24 cf @ 12.33 hrs
Average Depth at Peak Storage= 0.11'
Bank-Full Depth= 1.00' Flow Area= 8.0 sf, Capacity= 58.72 cfs

5.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 '/' Top Width= 11.00'
Length= 40.0' Slope= 0.0475 '/'
Inlet Invert= 559.90', Outlet Invert= 558.00'

‡

Reach 10.2R: ROAD DITCH



Summary for Reach 10.3R: ROAD DITCH

Inflow Area = 1.555 ac, 19.60% Impervious, Inflow Depth > 0.34" for 2-YEAR event
Inflow = 0.88 cfs @ 12.25 hrs, Volume= 0.045 af
Outflow = 0.85 cfs @ 12.34 hrs, Volume= 0.045 af, Atten= 4%, Lag= 5.3 min

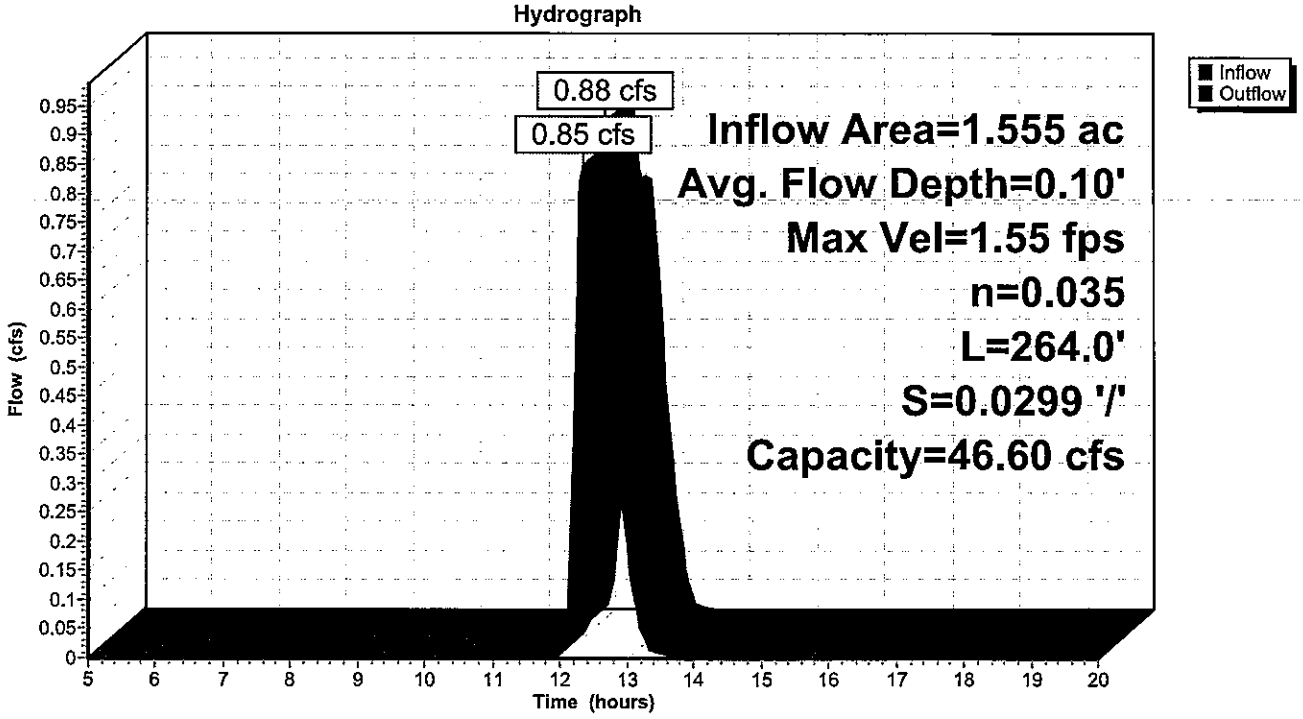
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.55 fps, Min. Travel Time= 2.8 min
Avg. Velocity = 0.44 fps, Avg. Travel Time= 10.0 min

Peak Storage= 145 cf @ 12.29 hrs
Average Depth at Peak Storage= 0.10'
Bank-Full Depth= 1.00' Flow Area= 8.0 sf, Capacity= 46.60 cfs

5.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 '/' Top Width= 11.00'
Length= 264.0' Slope= 0.0299 '/'
Inlet Invert= 567.90', Outlet Invert= 560.00'

‡

Reach 10.3R: ROAD DITCH



Summary for Reach 10.4R: ROAD DITCH

Inflow Area = 1.001 ac, 22.34% Impervious, Inflow Depth > 0.31" for 2-YEAR event
Inflow = 0.51 cfs @ 12.46 hrs, Volume= 0.026 af
Outflow = 0.51 cfs @ 12.54 hrs, Volume= 0.026 af, Atten= 2%, Lag= 4.4 min

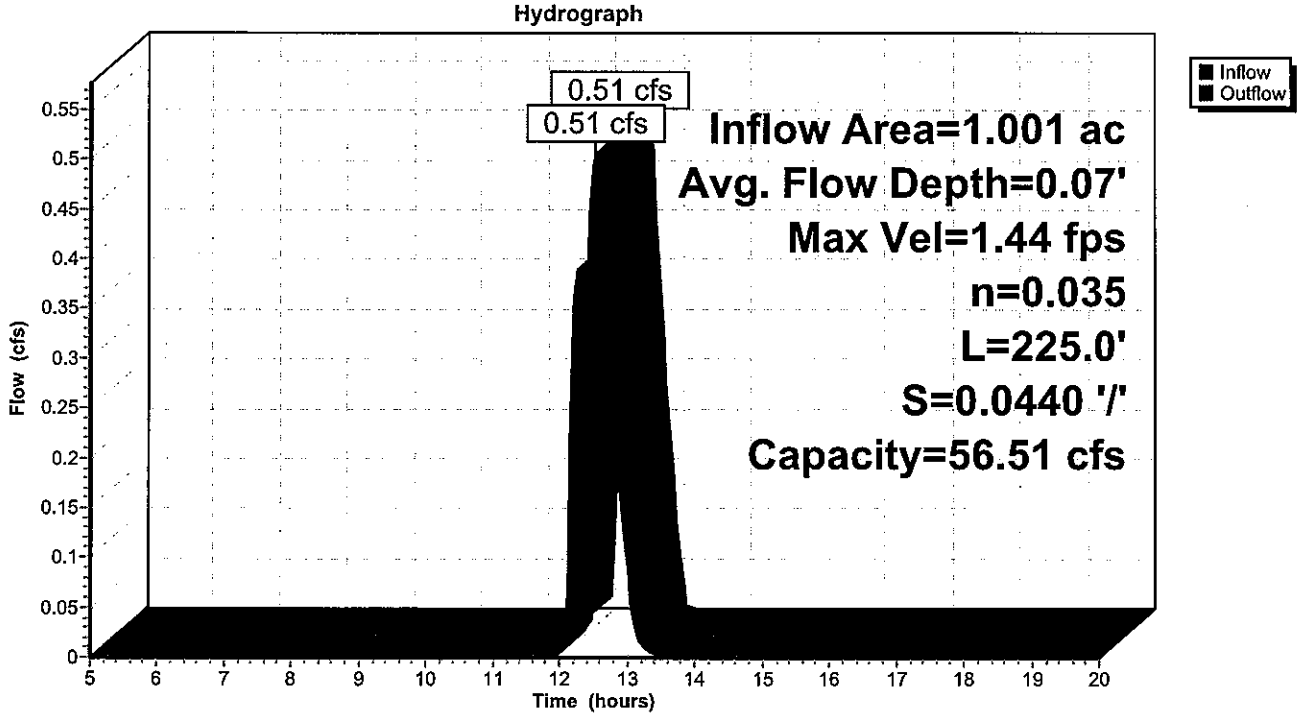
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.44 fps, Min. Travel Time= 2.6 min
Avg. Velocity = 0.49 fps, Avg. Travel Time= 7.7 min

Peak Storage= 79 cf @ 12.49 hrs
Average Depth at Peak Storage= 0.07'
Bank-Full Depth= 1.00' Flow Area= 8.0 sf, Capacity= 56.51 cfs

5.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 '/' Top Width= 11.00'
Length= 225.0' Slope= 0.0440 '/'
Inlet Invert= 577.90', Outlet Invert= 568.00'

‡

Reach 10.4R: ROAD DITCH



Summary for Reach 10.5R: ROAD DITCH

Inflow Area = 0.812 ac, 22.55% Impervious, Inflow Depth > 0.38" for 2-YEAR event
Inflow = 0.53 cfs @ 12.42 hrs, Volume= 0.026 af
Outflow = 0.53 cfs @ 12.46 hrs, Volume= 0.026 af, Atten= 1%, Lag= 2.6 min

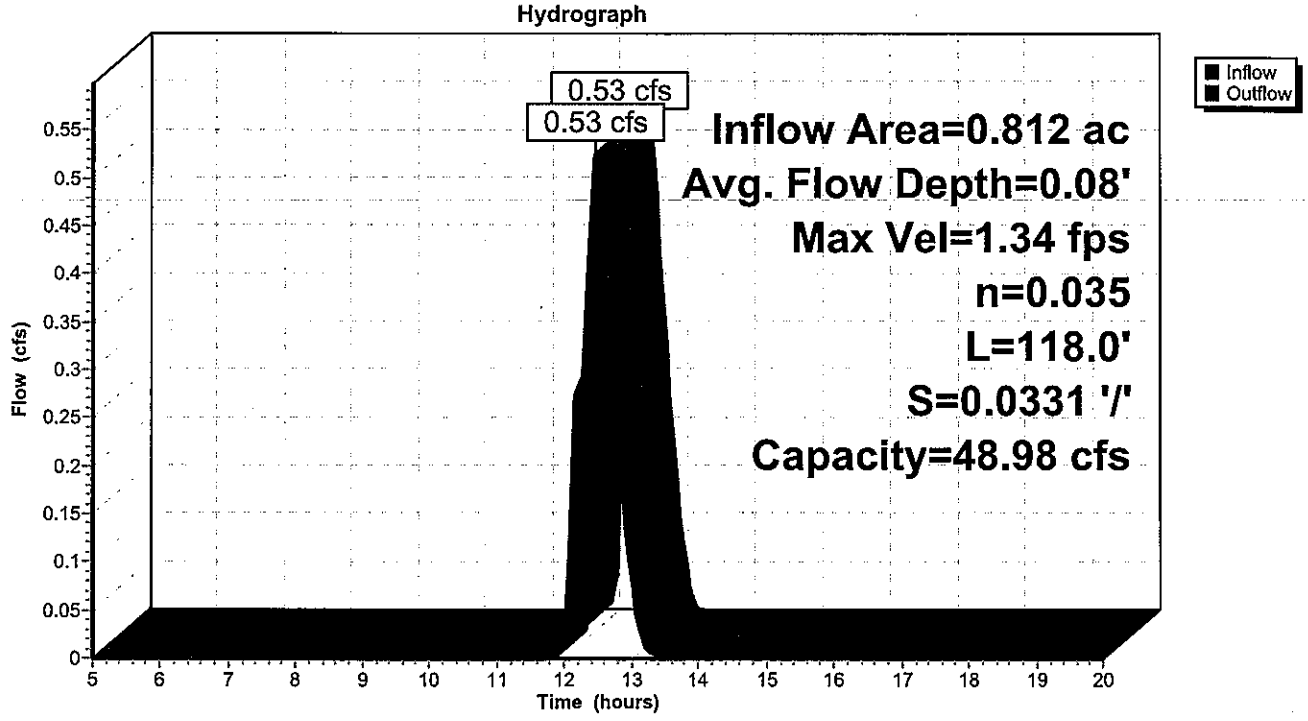
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.34 fps, Min. Travel Time= 1.5 min
Avg. Velocity = 0.42 fps, Avg. Travel Time= 4.6 min

Peak Storage= 47 cf @ 12.44 hrs
Average Depth at Peak Storage= 0.08'
Bank-Full Depth= 1.00' Flow Area= 8.0 sf, Capacity= 48.98 cfs

5.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 '/' Top Width= 11.00'
Length= 118.0' Slope= 0.0331 '/'
Inlet Invert= 581.90', Outlet Invert= 578.00'

‡

Reach 10.5R: ROAD DITCH



Summary for Reach 10.6R: ROAD DITCH

Inflow Area = 0.619 ac, 19.04% Impervious, Inflow Depth > 0.48" for 2-YEAR event
Inflow = 0.54 cfs @ 12.32 hrs, Volume= 0.025 af
Outflow = 0.52 cfs @ 12.42 hrs, Volume= 0.025 af, Atten= 3%, Lag= 6.0 min

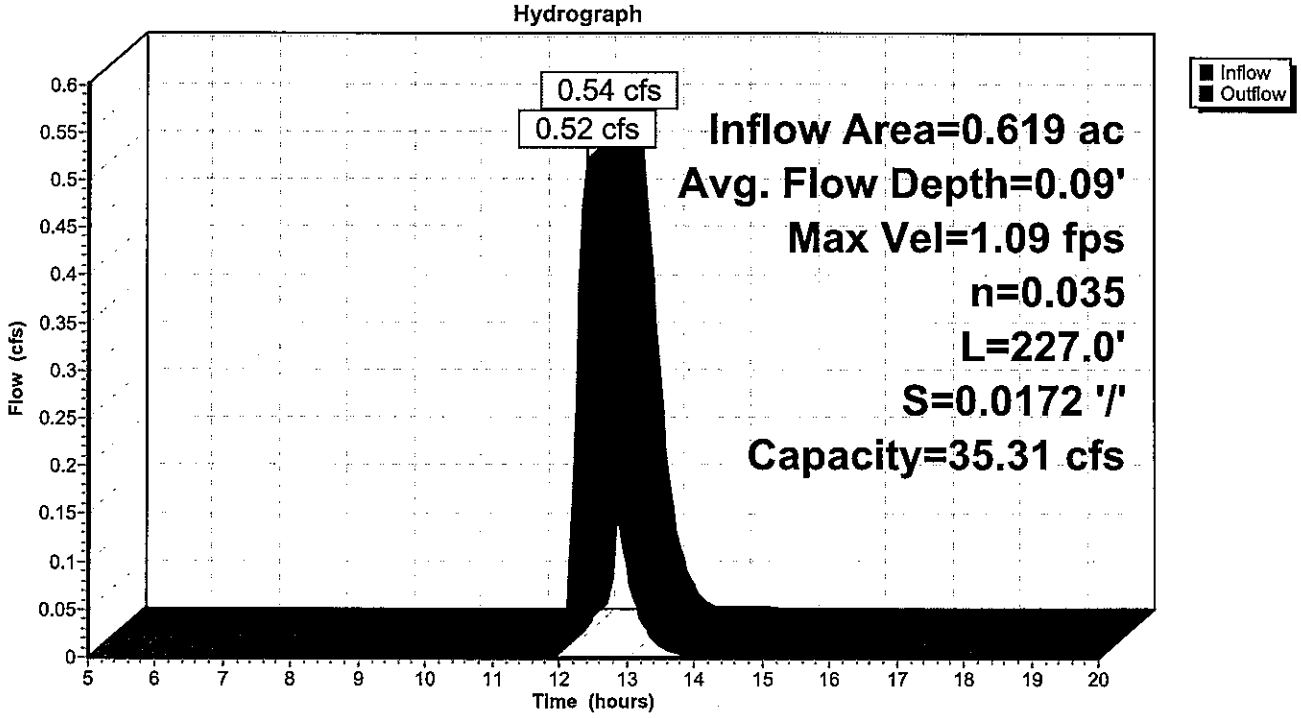
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.09 fps, Min. Travel Time= 3.5 min
Avg. Velocity = 0.32 fps, Avg. Travel Time= 11.9 min

Peak Storage= 110 cf @ 12.37 hrs
Average Depth at Peak Storage= 0.09'
Bank-Full Depth= 1.00' Flow Area= 8.0 sf, Capacity= 35.31 cfs

5.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 '/' Top Width= 11.00'
Length= 227.0' Slope= 0.0172 '/'
Inlet Invert= 585.90', Outlet Invert= 582.00'

‡

Reach 10.6R: ROAD DITCH



Summary for Reach 10R: ROAD DITCH

Inflow Area = 3.749 ac, 16.32% Impervious, Inflow Depth > 0.42" for 2-YEAR event
Inflow = 2.46 cfs @ 12.35 hrs, Volume= 0.132 af
Outflow = 2.45 cfs @ 12.36 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.6 min

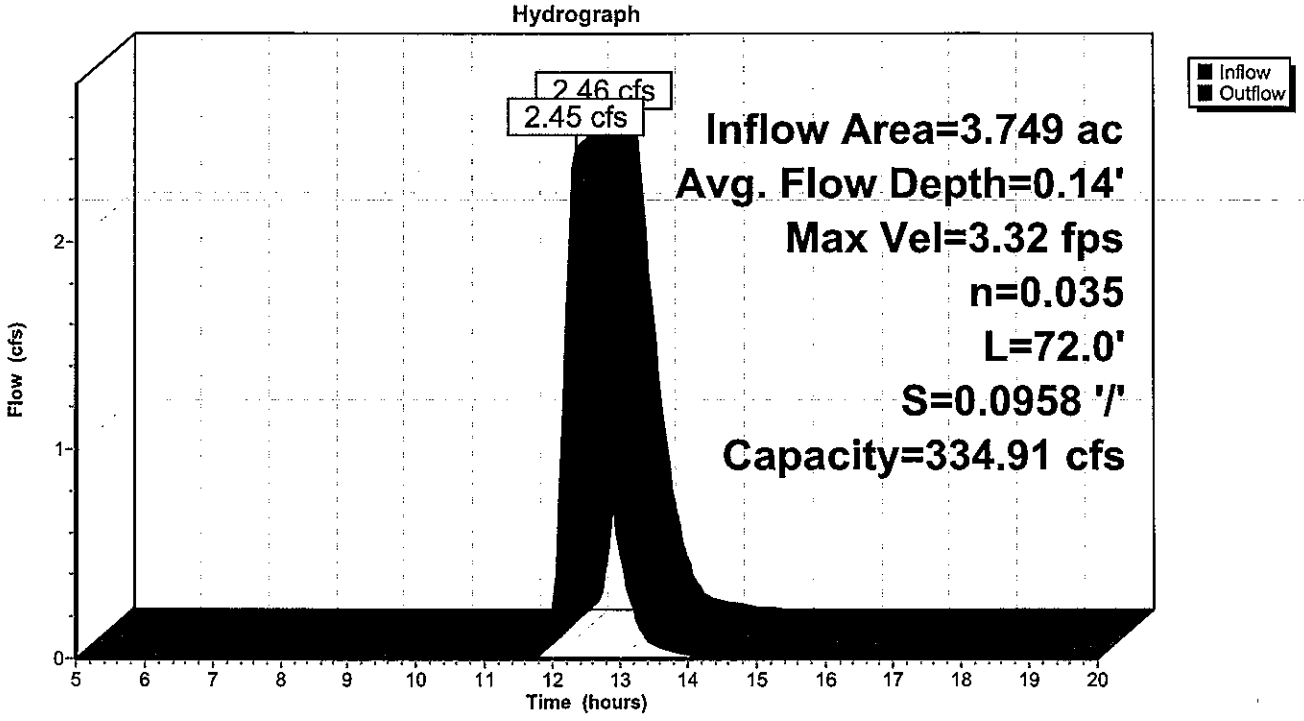
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 3.32 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.15 fps, Avg. Travel Time= 1.0 min

Peak Storage= 53 cf @ 12.35 hrs
Average Depth at Peak Storage= 0.14'
Bank-Full Depth= 2.00' Flow Area= 22.0 sf, Capacity= 334.91 cfs

5.00' x 2.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 3.0 '/' Top Width= 17.00'
Length= 72.0' Slope= 0.0958 '/'
Inlet Invert= 524.90', Outlet Invert= 518.00'

‡

Reach 10R: ROAD DITCH



Summary for Reach 21R: WOOD BUFFER

Inflow Area = 0.087 ac, 18.43% Impervious, Inflow Depth > 0.91" for 2-YEAR event
Inflow = 0.18 cfs @ 12.15 hrs, Volume= 0.007 af
Outflow = 0.05 cfs @ 12.60 hrs, Volume= 0.006 af, Atten= 71%, Lag= 26.9 min

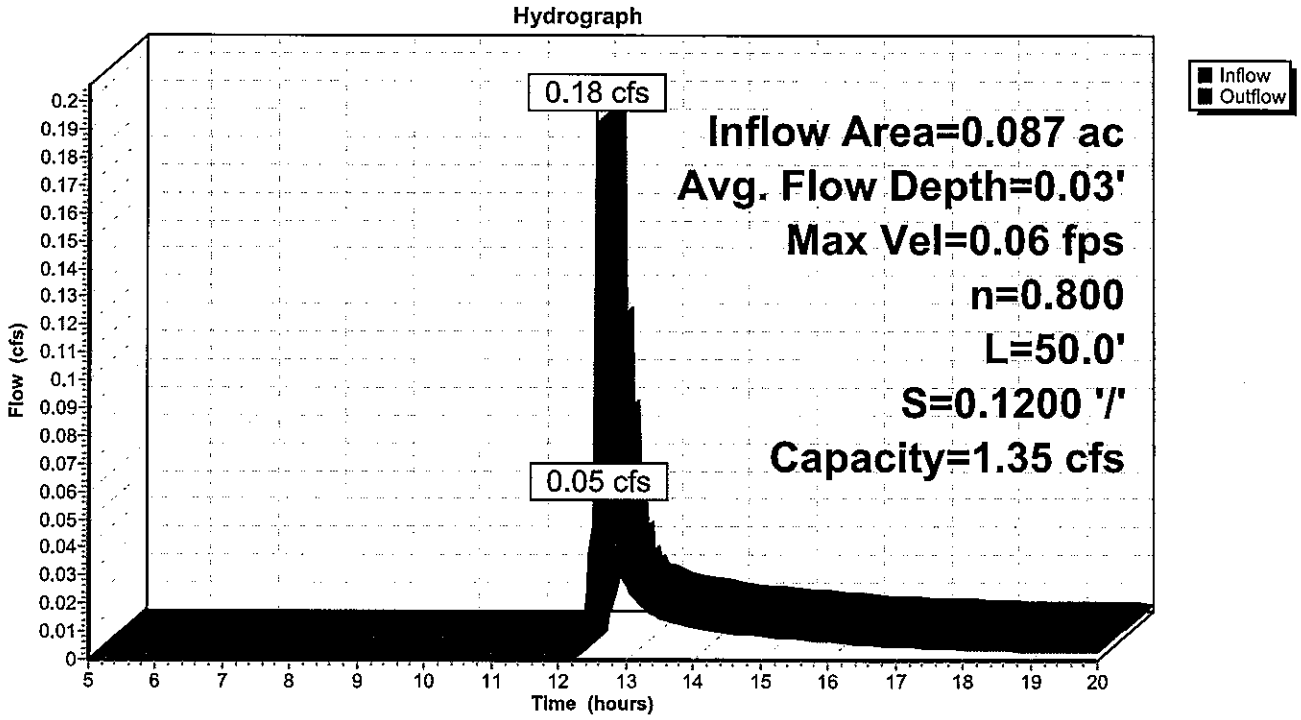
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.06 fps, Min. Travel Time= 13.8 min
Avg. Velocity = 0.03 fps, Avg. Travel Time= 29.4 min

Peak Storage= 44 cf @ 12.38 hrs
Average Depth at Peak Storage= 0.03'
Bank-Full Depth= 0.20' Flow Area= 6.4 sf, Capacity= 1.35 cfs

30.00' x 0.20' deep channel, n= 0.800 Sheet flow: Woods+dense brush
Side Slope Z-value= 10.0 '/' Top Width= 34.00'
Length= 50.0' Slope= 0.1200 '/'
Inlet Invert= 574.00', Outlet Invert= 568.00'

‡

Reach 21R: WOOD BUFFER



Summary for Reach 22R: SCF WOODLAND

Inflow Area = 0.087 ac, 18.43% Impervious, Inflow Depth > 0.88" for 2-YEAR event
Inflow = 0.05 cfs @ 12.60 hrs, Volume= 0.006 af
Outflow = 0.03 cfs @ 13.60 hrs, Volume= 0.006 af, Atten= 50%, Lag= 60.3 min

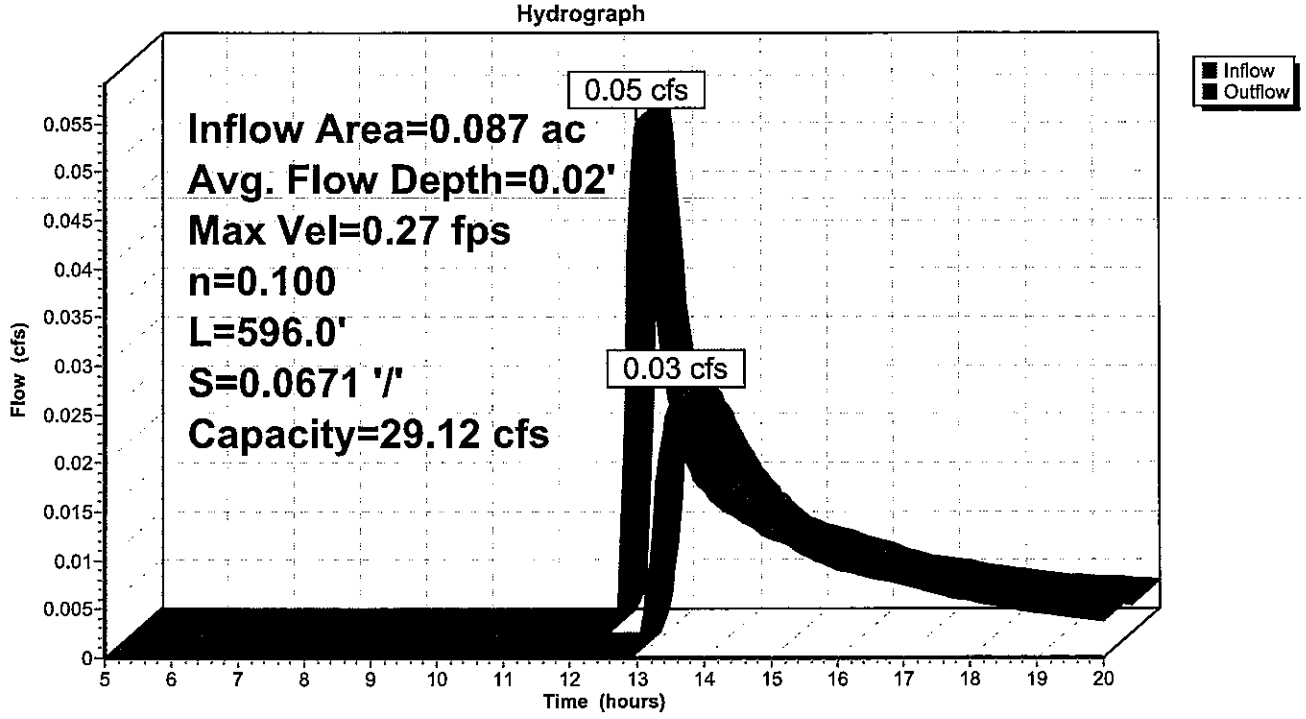
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.27 fps, Min. Travel Time= 36.2 min
Avg. Velocity = 0.20 fps, Avg. Travel Time= 50.7 min

Peak Storage= 58 cf @ 13.00 hrs
Average Depth at Peak Storage= 0.02'
Bank-Full Depth= 1.00' Flow Area= 10.0 sf, Capacity= 29.12 cfs

5.00' x 1.00' deep channel, n= 0.100 Heavy timber, flow below branches
Side Slope Z-value= 5.0 '/' Top Width= 15.00'
Length= 596.0' Slope= 0.0671 '/'
Inlet Invert= 568.00', Outlet Invert= 528.00'

‡

Reach 22R: SCF WOODLAND



Summary for Reach 23R: ROAD DITCH

Inflow Area = 0.087 ac, 18.43% Impervious, Inflow Depth > 0.82" for 2-YEAR event
Inflow = 0.03 cfs @ 13.60 hrs, Volume= 0.006 af
Outflow = 0.03 cfs @ 13.72 hrs, Volume= 0.006 af, Atten= 1%, Lag= 6.9 min

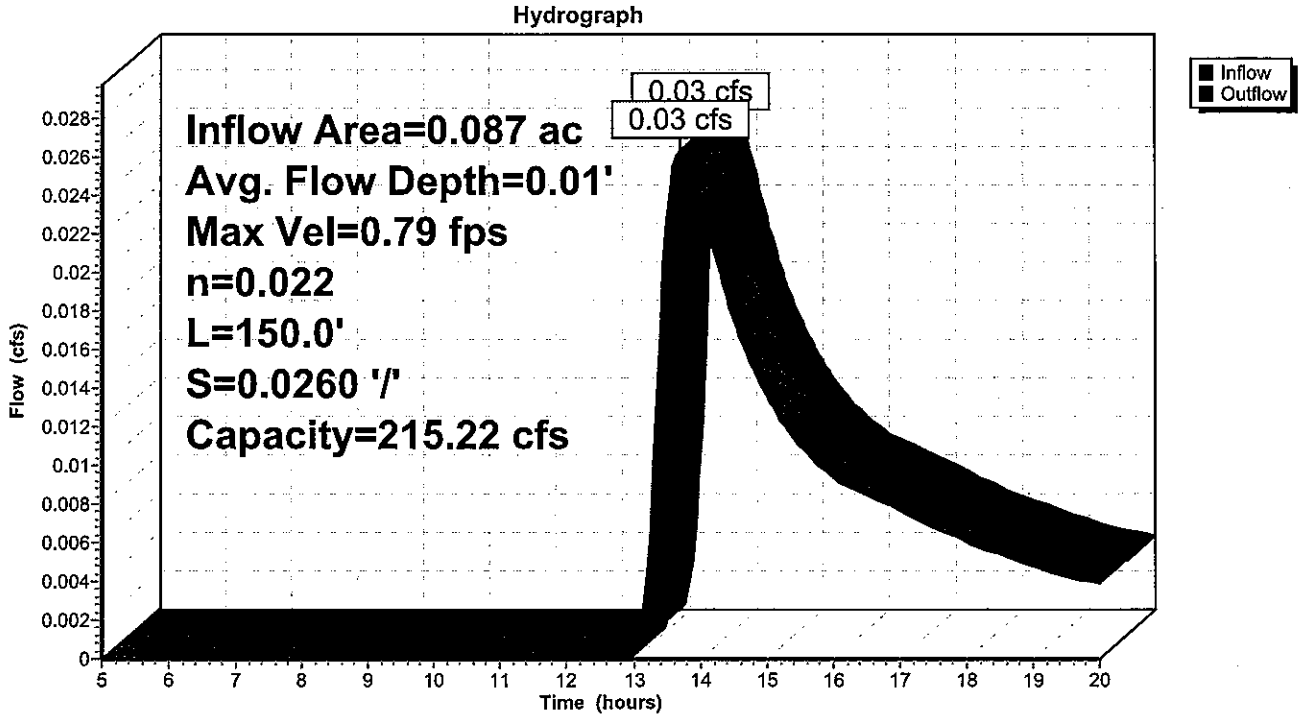
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.79 fps, Min. Travel Time= 3.2 min
Avg. Velocity = 0.79 fps, Avg. Travel Time= 3.2 min

Peak Storage= 5 cf @ 13.66 hrs
Average Depth at Peak Storage= 0.01'
Bank-Full Depth= 2.00' Flow Area= 18.0 sf, Capacity= 215.22 cfs

3.00' x 2.00' deep channel, n= 0.022 Earth, clean & straight
Side Slope Z-value= 3.0 '/' Top Width= 15.00'
Length= 150.0' Slope= 0.0260 '/'
Inlet Invert= 528.00', Outlet Invert= 524.10'

‡

Reach 23R: ROAD DITCH



Summary for Pond 1.1P: CULVERT AT HUSSEY ROAD, POA 1

Inflow Area = 5.122 ac, 14.43% Impervious, Inflow Depth > 0.59" for 2-YEAR event
Inflow = 3.29 cfs @ 12.39 hrs, Volume= 0.252 af
Outflow = 3.29 cfs @ 12.39 hrs, Volume= 0.252 af, Atten= 0%, Lag= 0.2 min
Primary = 3.29 cfs @ 12.39 hrs, Volume= 0.252 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 515.27' @ 12.39 hrs Surf.Area= 89 sf Storage= 72 cf

Plug-Flow detention time= 1.2 min calculated for 0.251 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (793.4 - 792.9)

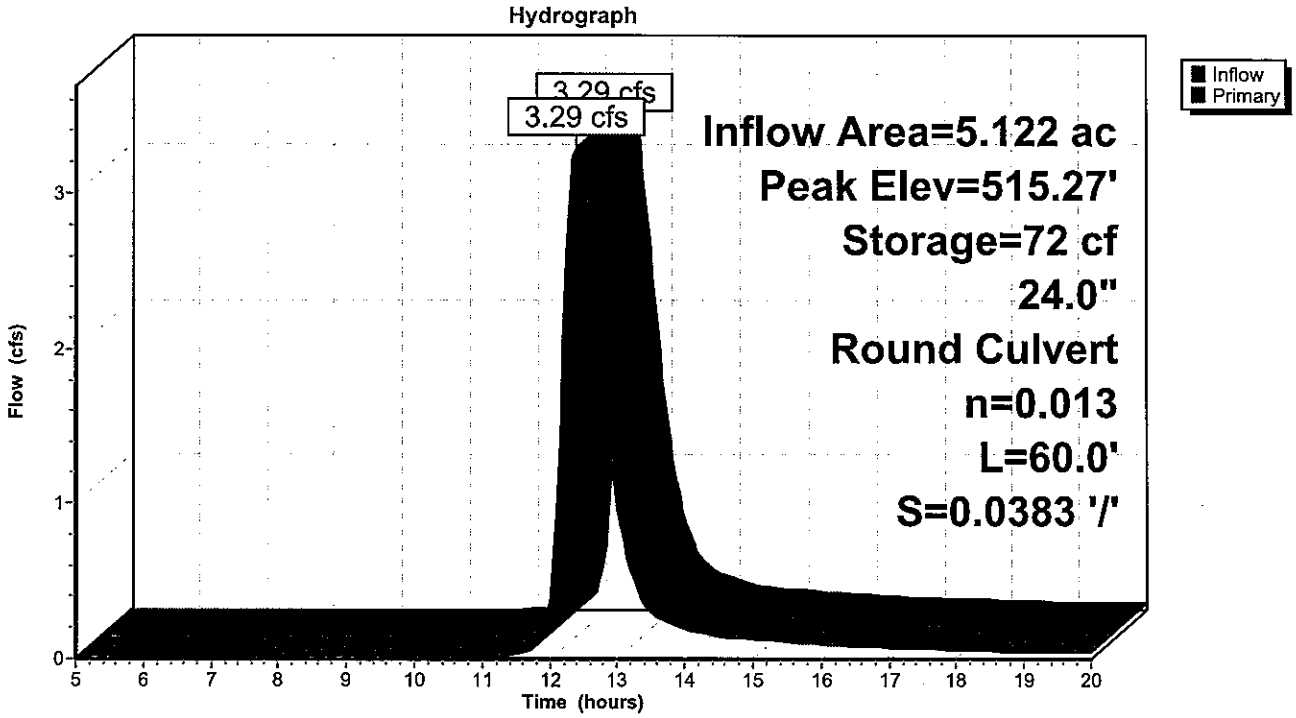
Volume	Invert	Avail.Storage	Storage Description
#1	514.00'	520 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
514.00	25	0	0
516.00	125	150	150
518.00	245	370	520

Device	Routing	Invert	Outlet Devices
#1	Primary	514.40'	**24.0" Round Culvert** L= 60.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 514.40' / 512.10' S= 0.0383 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=3.29 cfs @ 12.39 hrs HW=515.27' (Free Discharge)
↑**1=Culvert** (Inlet Controls 3.29 cfs @ 2.51 fps)

Pond 1.1P: CULVERT AT HUSSEY ROAD, POA 1



Summary for Pond 2.1P: CULVERT AT HUSSEY ROAD 15", POA 2

Inflow Area = 3.226 ac, 1.99% Impervious, Inflow Depth > 0.94" for 2-YEAR event
Inflow = 2.13 cfs @ 12.42 hrs, Volume= 0.253 af
Outflow = 2.13 cfs @ 12.43 hrs, Volume= 0.253 af, Atten= 0%, Lag= 0.6 min
Primary = 2.13 cfs @ 12.43 hrs, Volume= 0.253 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 524.93' @ 12.43 hrs Surf.Area= 155 sf Storage= 84 cf

Plug-Flow detention time= 1.0 min calculated for 0.253 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (838.3 - 837.7)

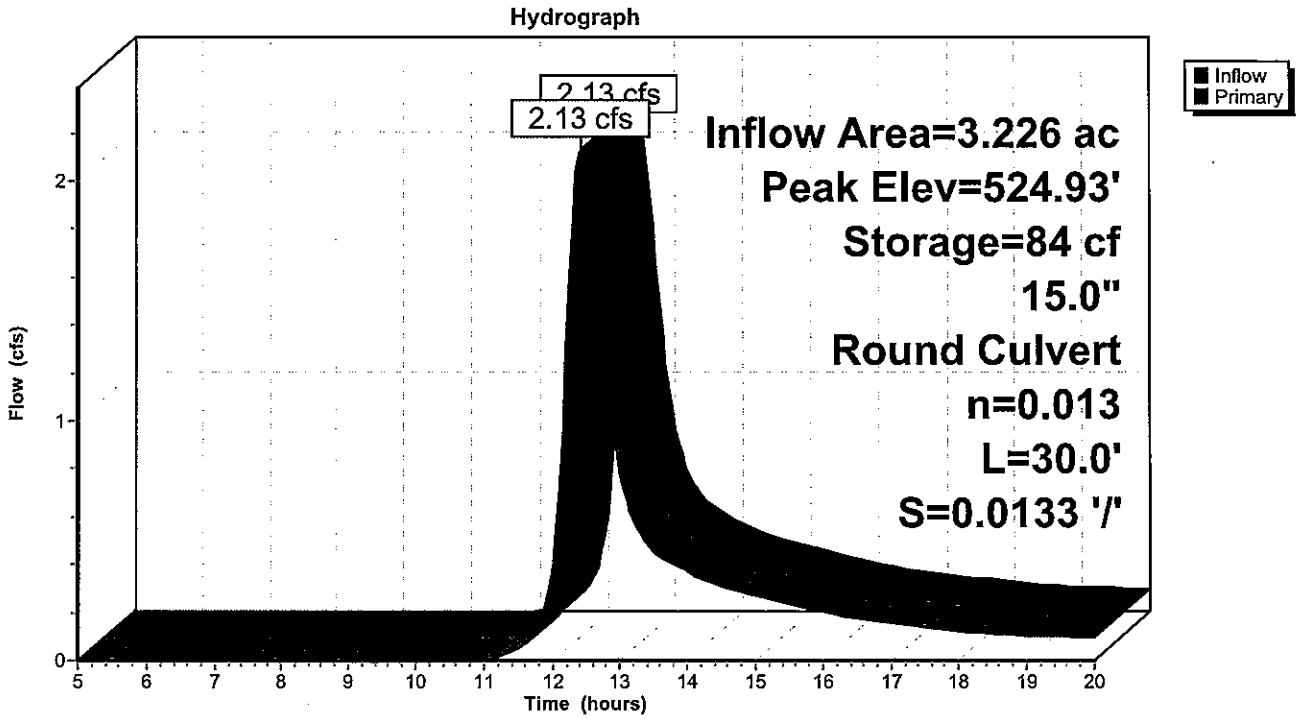
Volume	Invert	Avail.Storage	Storage Description
#1	524.00'	3,549 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
524.00	25	0	0
526.00	304	329	329
528.00	2,916	3,220	3,549

Device	Routing	Invert	Outlet Devices
#1	Primary	524.10'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 524.10' / 523.70' S= 0.0133 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.12 cfs @ 12.43 hrs HW=524.93' (Free Discharge)
↑**1=Culvert** (Inlet Controls 2.12 cfs @ 2.45 fps)

Pond 2.1P: CULVERT AT HUSSEY ROAD 15", POA 2



Summary for Pond 3.1P: CULVERT AT HUSSEY ROAD 32", POA 3

Inflow Area = 108.373 ac, 0.73% Impervious, Inflow Depth > 0.68" for 2-YEAR event
Inflow = 26.52 cfs @ 13.32 hrs, Volume= 6.107 af
Outflow = 25.89 cfs @ 13.47 hrs, Volume= 6.079 af, Atten= 2%, Lag= 9.3 min
Primary = 25.89 cfs @ 13.47 hrs, Volume= 6.079 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 520.72' @ 13.47 hrs Surf.Area= 5,216 sf Storage= 8,332 cf

Plug-Flow detention time= 5.2 min calculated for 6.079 af (100% of inflow)
Center-of-Mass det. time= 3.7 min (895.8 - 892.0)

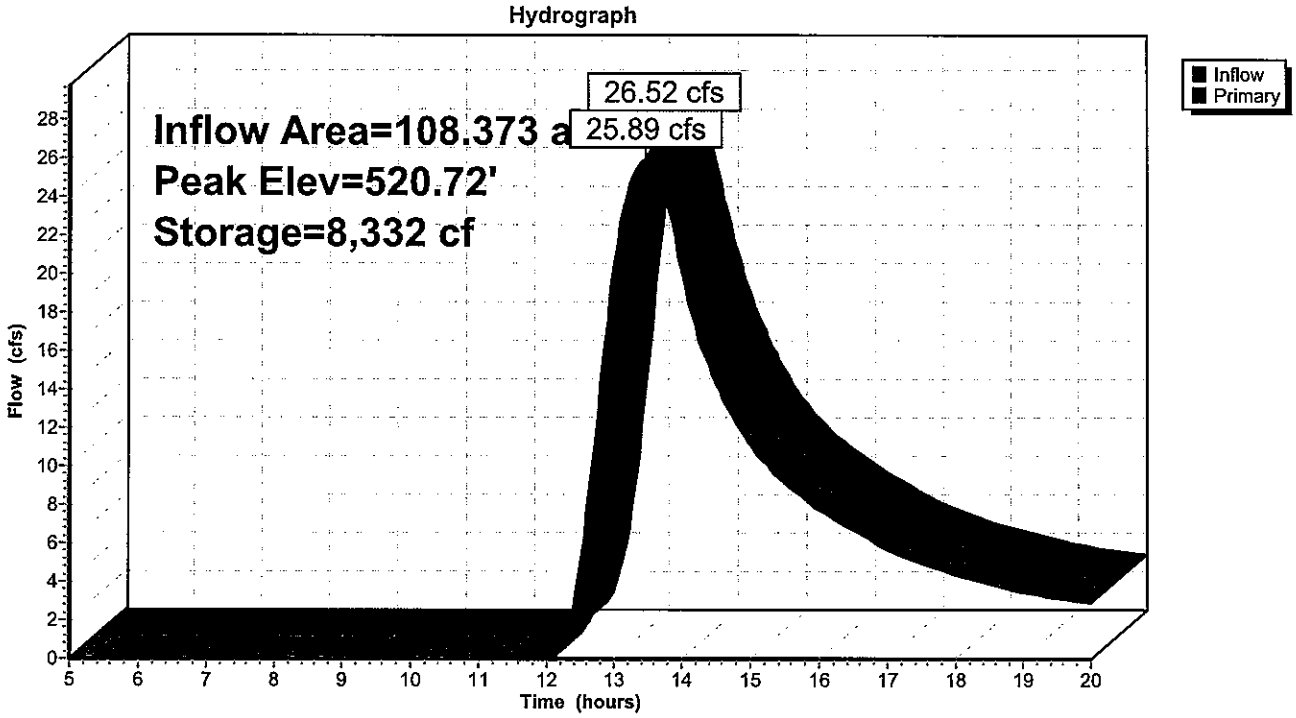
Volume	Invert	Avail.Storage	Storage Description
#1	517.50'	66,975 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
517.50	450	0	0
518.00	925	344	344
520.00	3,810	4,735	5,079
522.00	7,710	11,520	16,599
524.00	12,683	20,393	36,992
526.00	17,300	29,983	66,975

Device	Routing	Invert	Outlet Devices
#1	Primary	517.90'	**32.0" Round Culvert** L= 31.0' Ke= 0.900 Inlet / Outlet Invert= 517.90' / 517.30' S= 0.0194 '/' Cc= 0.900 n= 0.010, Flow Area= 5.59 sf
#2	Primary	522.00'	**10.0' long x 16.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=25.88 cfs @ 13.47 hrs HW=520.72' (Free Discharge)
└**1=Culvert** (Inlet Controls 25.88 cfs @ 4.63 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 3.1P: CULVERT AT HUSSEY ROAD 32", POA 3



Summary for Pond 22P: LEVEL SPREADER

Inflow Area = 0.087 ac, 18.43% Impervious, Inflow Depth > 1.24" for 2-YEAR event
Inflow = 0.14 cfs @ 12.08 hrs, Volume= 0.009 af
Outflow = 0.18 cfs @ 12.15 hrs, Volume= 0.007 af, Atten= 0%, Lag= 4.0 min
Primary = 0.18 cfs @ 12.15 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 574.02' @ 12.15 hrs Surf.Area= 151 sf Storage= 108 cf

Plug-Flow detention time= 100.2 min calculated for 0.007 af (73% of inflow)
Center-of-Mass det. time= 36.1 min (842.7 - 806.6)

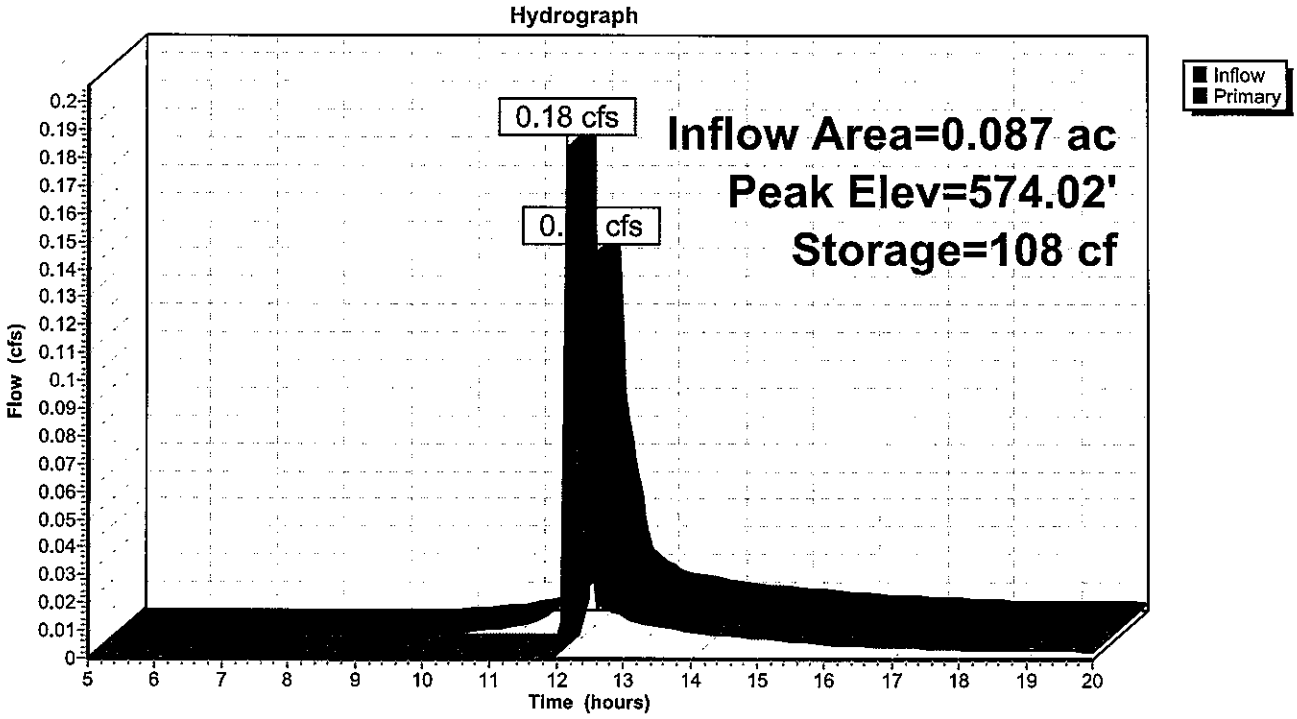
Volume	Invert	Avail.Storage	Storage Description
#1	573.00'	290 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
573.00	60	0	0
574.00	150	105	105
575.00	220	185	290

Device	Routing	Invert	Outlet Devices
#1	Primary	574.00'	**30.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.17 cfs @ 12.15 hrs HW=574.02' (Free Discharge)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 0.17 cfs @ 0.32 fps)

Pond 22P: LEVEL SPREADER



Summary for Pond L2P: ROAD DITCH @ DW

Inflow Area = 0.619 ac, 19.04% Impervious, Inflow Depth > 1.23" for 2-YEAR event
Inflow = 0.65 cfs @ 12.28 hrs, Volume= 0.064 af
Outflow = 0.64 cfs @ 12.32 hrs, Volume= 0.064 af, Atten= 2%, Lag= 2.5 min
Discarded = 0.10 cfs @ 11.85 hrs, Volume= 0.039 af
Primary = 0.54 cfs @ 12.32 hrs, Volume= 0.025 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 586.44' @ 12.32 hrs Surf.Area= 320 sf Storage= 83 cf

Plug-Flow detention time= 1.2 min calculated for 0.064 af (100% of inflow)
Center-of-Mass det. time= 1.2 min (818.9 - 817.7)

Volume	Invert	Avail.Storage	Storage Description
#1	586.00'	2,118 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

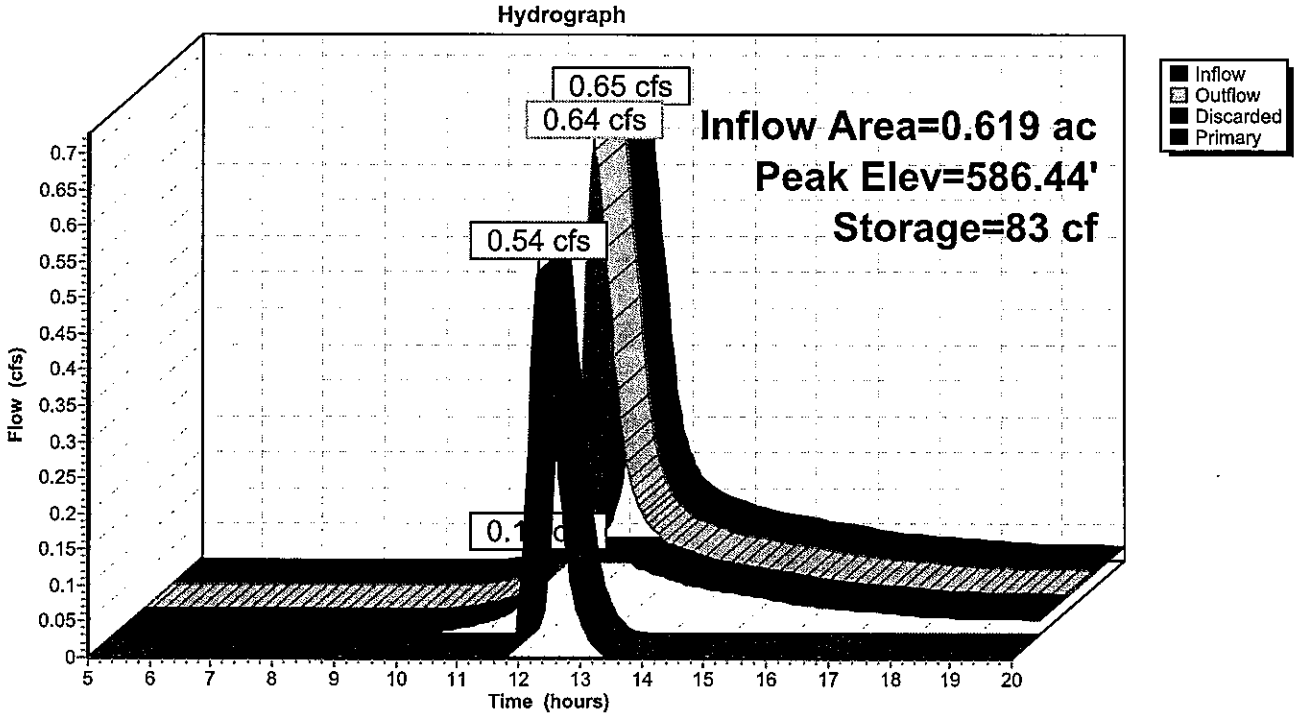
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
586.00	55	0	0
588.00	1,250	1,305	1,305
588.50	2,000	813	2,118

Device	Routing	Invert	Outlet Devices
#1	Primary	586.00'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 586.00' / 585.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Primary	587.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	586.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.85 hrs HW=586.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.53 cfs @ 12.32 hrs HW=586.44' (Free Discharge)
└**1=Culvert** (Barrel Controls 0.53 cfs @ 2.05 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond L2P: ROAD DITCH @ DW



Summary for Pond L3P: ROAD DITCH @ DW

Inflow Area = 0.812 ac, 22.55% Impervious, Inflow Depth > 0.72" for 2-YEAR event
Inflow = 0.64 cfs @ 12.40 hrs, Volume= 0.049 af
Outflow = 0.63 cfs @ 12.42 hrs, Volume= 0.049 af, Atten= 0%, Lag= 1.1 min
Discarded = 0.10 cfs @ 11.85 hrs, Volume= 0.023 af
Primary = 0.53 cfs @ 12.42 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 582.44' @ 12.42 hrs Surf.Area= 154 sf Storage= 43 cf

Plug-Flow detention time= 0.9 min calculated for 0.049 af (100% of inflow)
Center-of-Mass det. time= 0.8 min (777.2 - 776.3)

Volume	Invert	Avail.Storage	Storage Description
#1	582.00'	1,105 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

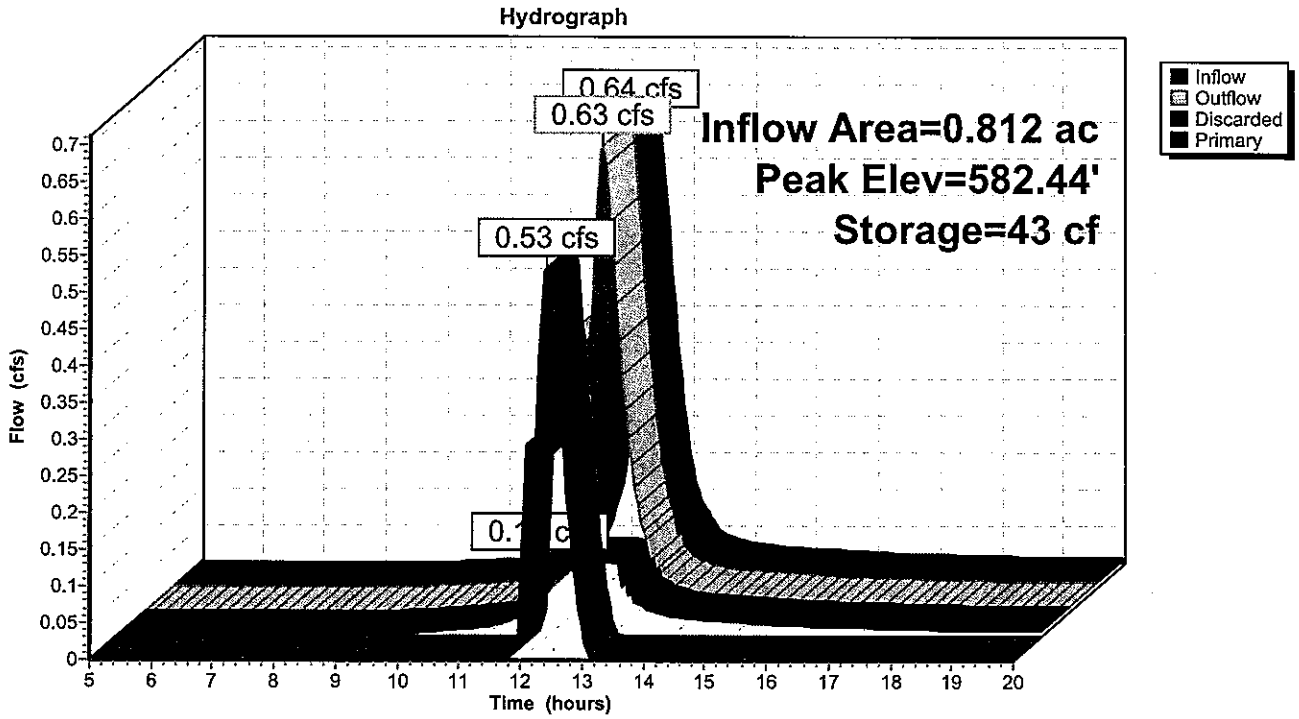
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
582.00	42	0	0
584.00	550	592	592
584.50	1,500	513	1,105

Device	Routing	Invert	Outlet Devices
#1	Primary	582.00'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 582.00' / 581.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Primary	584.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	582.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.85 hrs HW=582.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.53 cfs @ 12.42 hrs HW=582.44' (Free Discharge)
├**1=Culvert** (Barrel Controls 0.53 cfs @ 2.04 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond L3P: ROAD DITCH @ DW



Summary for Pond L4P: ROAD DITCH @ DW

Inflow Area = 1.001 ac, 22.34% Impervious, Inflow Depth > 0.54" for 2-YEAR event
Inflow = 0.62 cfs @ 12.45 hrs, Volume= 0.045 af
Outflow = 0.61 cfs @ 12.46 hrs, Volume= 0.045 af, Atten= 0%, Lag= 1.1 min
Discarded = 0.10 cfs @ 11.95 hrs, Volume= 0.020 af
Primary = 0.51 cfs @ 12.46 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 578.43' @ 12.46 hrs Surf.Area= 152 sf Storage= 42 cf

Plug-Flow detention time= 0.9 min calculated for 0.045 af (100% of inflow)
Center-of-Mass det. time= 0.9 min (776.1 - 775.2)

Volume	Invert	Avail.Storage	Storage Description
#1	578.00'	1,105 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

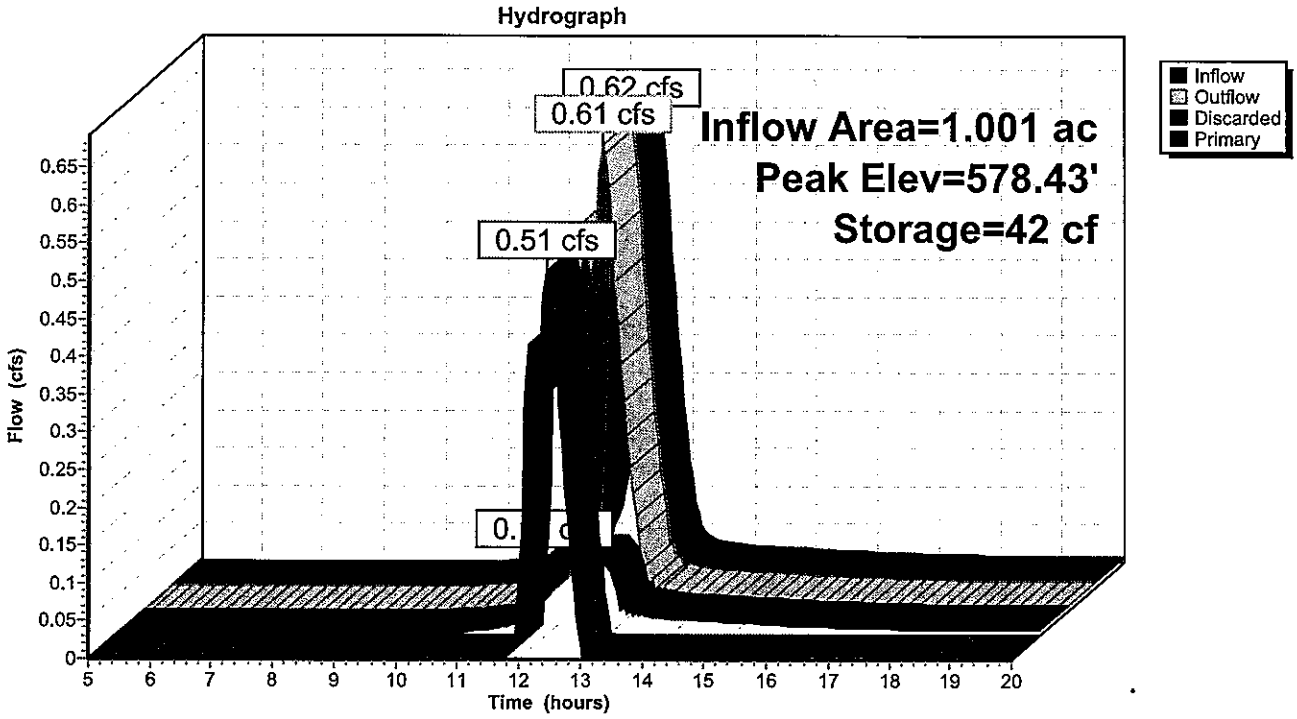
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
578.00	42	0	0
580.00	550	592	592
580.50	1,500	513	1,105

Device	Routing	Invert	Outlet Devices
#1	Primary	578.00'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 578.00' / 577.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Primary	580.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	578.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.95 hrs HW=578.04' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.51 cfs @ 12.46 hrs HW=578.43' (Free Discharge)
├**1=Culvert** (Barrel Controls 0.51 cfs @ 2.02 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond L4P: ROAD DITCH @ DW



Summary for Pond L5P: ROAD DITCH @ DW

Inflow Area = 1.555 ac, 19.60% Impervious, Inflow Depth > 0.62" for 2-YEAR event
Inflow = 0.98 cfs @ 12.24 hrs, Volume= 0.080 af
Outflow = 0.98 cfs @ 12.25 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.6 min
Discarded = 0.10 cfs @ 11.85 hrs, Volume= 0.035 af
Primary = 0.88 cfs @ 12.25 hrs, Volume= 0.045 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 568.58' @ 12.25 hrs Surf.Area= 95 sf Storage= 36 cf

Plug-Flow detention time= 0.5 min calculated for 0.080 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (797.2 - 796.8)

Volume	Invert	Avail.Storage	Storage Description
#1	568.00'	599 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

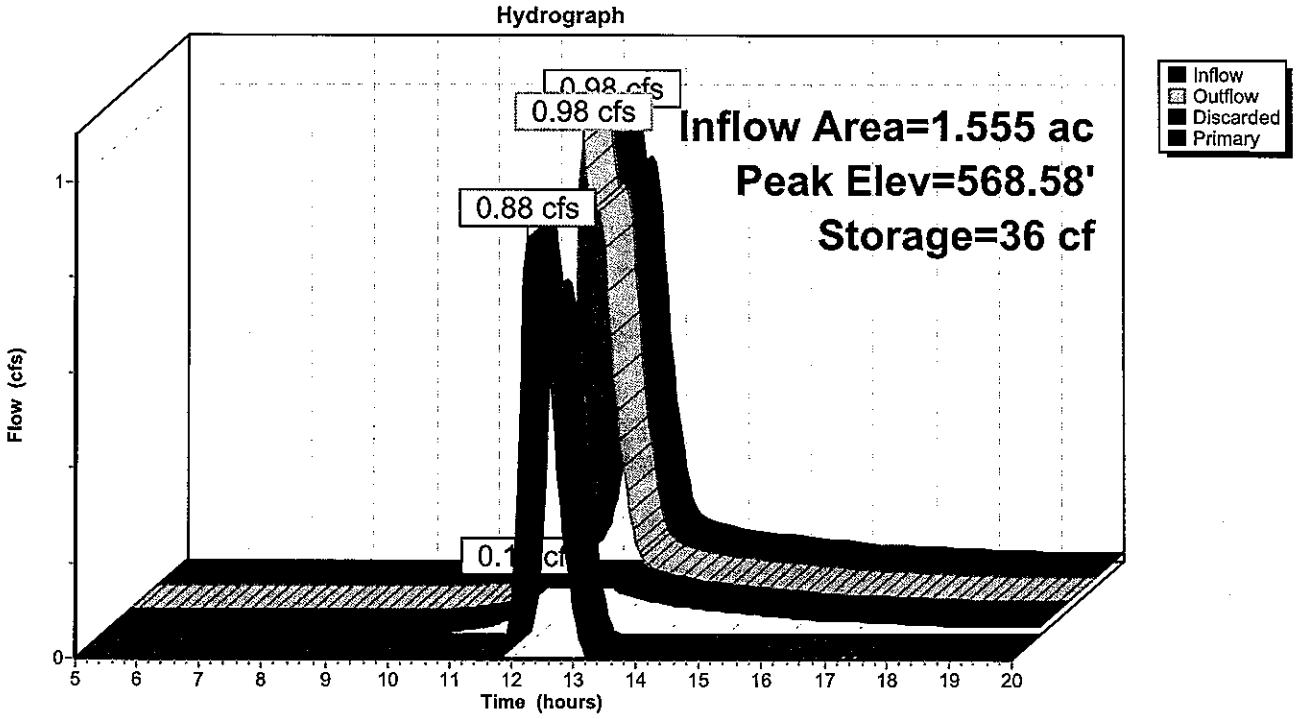
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
568.00	30	0	0
570.00	255	285	285
570.50	1,000	314	599

Device	Routing	Invert	Outlet Devices
#1	Primary	568.00'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 568.00' / 567.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Primary	570.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	568.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.85 hrs HW=568.03' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=0.88 cfs @ 12.25 hrs HW=568.58' (Free Discharge)
├**1=Culvert** (Barrel Controls 0.88 cfs @ 2.33 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond L5P: ROAD DITCH @ DW



Summary for Pond L6P: ROAD DITCH @ DW

Inflow Area = 2.098 ac, 19.00% Impervious, Inflow Depth > 0.56" for 2-YEAR event
Inflow = 1.35 cfs @ 12.32 hrs, Volume= 0.098 af
Outflow = 1.34 cfs @ 12.32 hrs, Volume= 0.098 af, Atten= 0%, Lag= 0.5 min
Discarded = 0.10 cfs @ 11.85 hrs, Volume= 0.035 af
Primary = 1.24 cfs @ 12.32 hrs, Volume= 0.063 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 560.70' @ 12.32 hrs Surf.Area= 103 sf Storage= 47 cf

Plug-Flow detention time= 0.5 min calculated for 0.097 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (788.5 - 788.0)

Volume	Invert	Avail.Storage	Storage Description
#1	560.00'	580 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

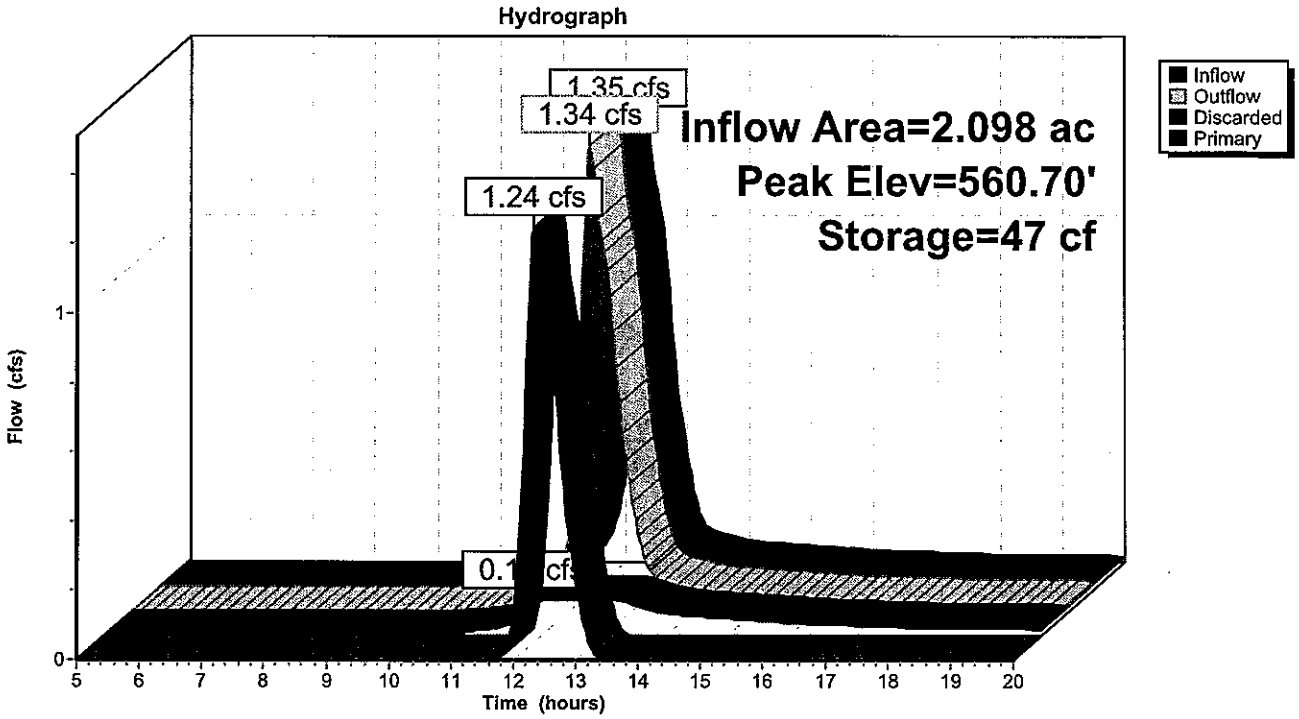
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
560.00	30	0	0
562.00	240	270	270
562.50	1,000	310	580

Device	Routing	Invert	Outlet Devices
#1	Primary	560.00'	**15.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 560.00' / 559.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#2	Primary	562.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	560.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.85 hrs HW=560.05' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=1.22 cfs @ 12.32 hrs HW=560.69' (Free Discharge)
├**1=Culvert** (Barrel Controls 1.22 cfs @ 2.54 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond L6P: ROAD DITCH @ DW



Summary for Pond L7P: ROAD DITCH @ DW

Inflow Area = 2.772 ac, 16.96% Impervious, Inflow Depth > 0.54" for 2-YEAR event
Inflow = 1.78 cfs @ 12.31 hrs, Volume= 0.125 af
Outflow = 1.78 cfs @ 12.32 hrs, Volume= 0.125 af, Atten= 0%, Lag= 0.6 min
Discarded = 0.10 cfs @ 11.80 hrs, Volume= 0.039 af
Primary = 1.68 cfs @ 12.32 hrs, Volume= 0.086 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 558.77' @ 12.32 hrs Surf.Area= 140 sf Storage= 63 cf

Plug-Flow detention time= 0.5 min calculated for 0.125 af (100% of inflow)
Center-of-Mass det. time= 0.5 min (784.2 - 783.8)

Volume	Invert	Avail.Storage	Storage Description
#1	558.00'	681 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

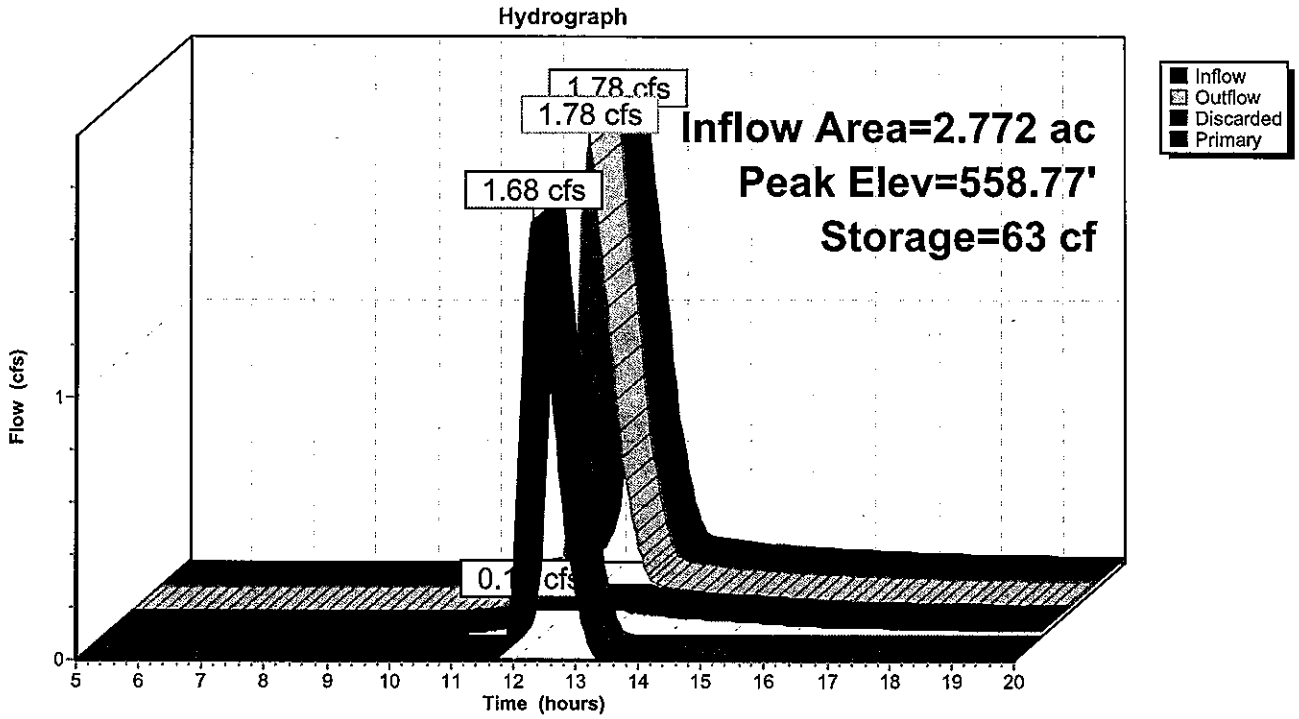
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
558.00	25	0	0
560.00	325	350	350
560.50	1,000	331	681

Device	Routing	Invert	Outlet Devices
#1	Primary	558.00'	**18.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 558.00' / 557.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	560.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	558.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.80 hrs HW=558.05' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=1.67 cfs @ 12.32 hrs HW=558.76' (Free Discharge)
├**1=Culvert** (Barrel Controls 1.67 cfs @ 2.68 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond L7P: ROAD DITCH @ DW



Summary for Pond L8P: ROAD DITCH @ DW

Inflow Area = 3.749 ac, 16.32% Impervious, Inflow Depth > 0.58" for 2-YEAR event
Inflow = 2.56 cfs @ 12.34 hrs, Volume= 0.182 af
Outflow = 2.56 cfs @ 12.35 hrs, Volume= 0.182 af, Atten= 0%, Lag= 0.7 min
Discarded = 0.10 cfs @ 11.80 hrs, Volume= 0.050 af
Primary = 2.46 cfs @ 12.35 hrs, Volume= 0.132 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 525.95' @ 12.35 hrs Surf.Area= 185 sf Storage= 109 cf

Plug-Flow detention time= 0.7 min calculated for 0.181 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (788.1 - 787.5)

Volume	Invert	Avail.Storage	Storage Description
#1	525.00'	1,186 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

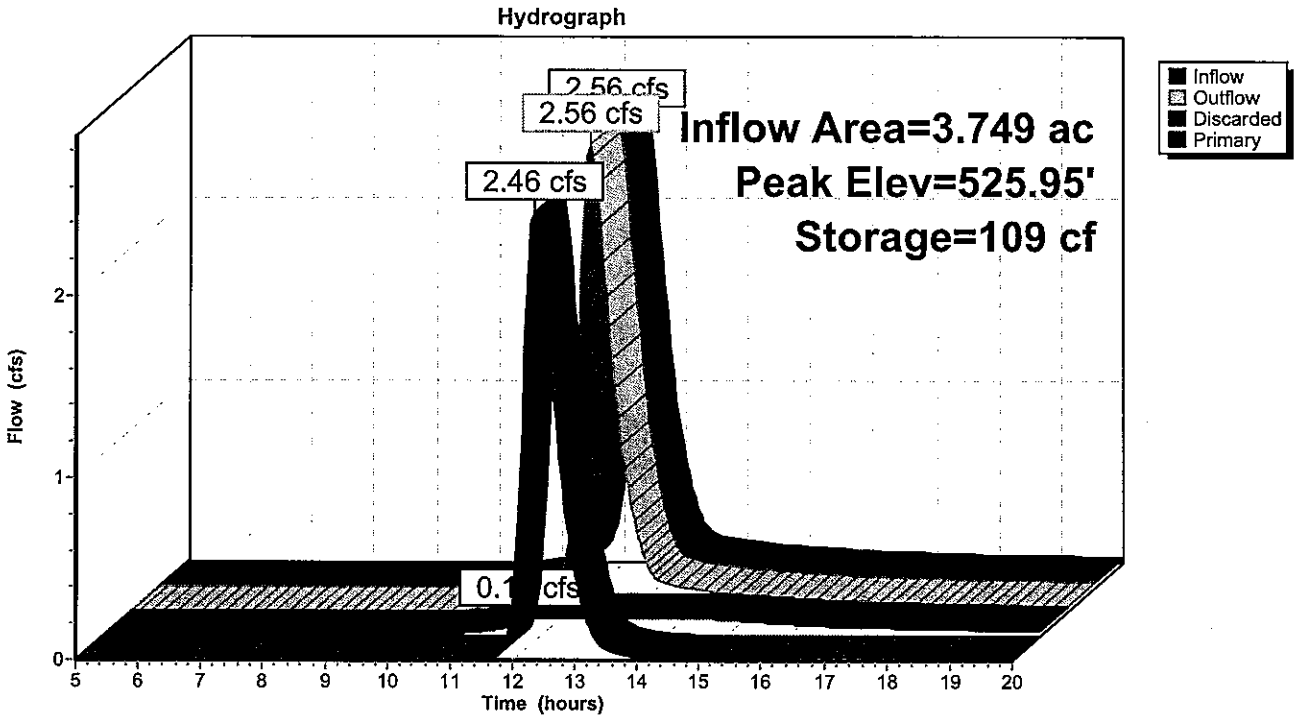
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
525.00	45	0	0
526.00	192	119	119
528.00	500	692	811
528.50	1,000	375	1,186

Device	Routing	Invert	Outlet Devices
#1	Primary	525.00'	**18.0" Round Culvert** L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 525.00' / 524.90' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#2	Primary	528.00'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#3	Discarded	525.00'	**0.10 cfs Exfiltration at all elevations**

Discarded OutFlow Max=0.10 cfs @ 11.80 hrs HW=525.07' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=2.46 cfs @ 12.35 hrs HW=525.95' (Free Discharge)
├**1=Culvert** (Barrel Controls 2.46 cfs @ 2.97 fps)
└**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond L8P: ROAD DITCH @ DW



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3D: CENTRAL SITE PLUS Runoff Area=4,720,717 sf 0.73% Impervious Runoff Depth>1.60"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=67.94 cfs 14.425 af

Subcatchment10.1D: LOT 7 DEVELOPED Runoff Area=42,557 sf 14.49% Impervious Runoff Depth>2.35"
Flow Length=351' Tc=18.5 min CN=77 Runoff=2.02 cfs 0.191 af

Subcatchment10.2D: LOT 6 DEVELOPED Runoff Area=29,375 sf 10.60% Impervious Runoff Depth>2.27"
Flow Length=283' Tc=12.0 min CN=76 Runoff=1.58 cfs 0.128 af

Subcatchment10.3D: ROAD SIDE OF LOT Runoff Area=23,631 sf 17.29% Impervious Runoff Depth>2.36"
Flow Length=311' Tc=13.9 min CN=77 Runoff=1.25 cfs 0.106 af

Subcatchment10.4D: FRONT BETWEEN Runoff Area=24,133 sf 14.65% Impervious Runoff Depth>2.35"
Flow Length=223' Tc=16.2 min CN=77 Runoff=1.20 cfs 0.109 af

Subcatchment10.5D: FRONT BETWEEN Runoff Area=8,242 sf 21.44% Impervious Runoff Depth>2.45"
Flow Length=60' Tc=5.9 min CN=78 Runoff=0.57 cfs 0.039 af

Subcatchment10.6D: FRONT BETWEEN Runoff Area=8,398 sf 33.83% Impervious Runoff Depth>2.80"
Flow Length=112' Tc=4.5 min CN=82 Runoff=0.69 cfs 0.045 af

Subcatchment10.7D: FRONT OF LOT 1 Runoff Area=26,983 sf 19.04% Impervious Runoff Depth>2.44"
Flow Length=372' Tc=19.5 min CN=78 Runoff=1.30 cfs 0.126 af

Subcatchment10D: LOT 8 DEVELOPED Runoff Area=59,811 sf 9.26% Impervious Runoff Depth>2.17"
Flow Length=495' Tc=34.6 min CN=75 Runoff=2.00 cfs 0.249 af

Subcatchment20D: AREA OF LOT 7+, Runoff Area=136,712 sf 1.53% Impervious Runoff Depth>2.02"
Flow Length=875' Tc=27.3 min CN=73 Runoff=4.72 cfs 0.528 af

Subcatchment21D: BACK OF LOT 5 Runoff Area=3,798 sf 18.43% Impervious Runoff Depth>2.45"
Tc=5.0 min CN=78 Runoff=0.27 cfs 0.018 af

Reach 10.1R: ROAD DITCH Avg. Flow Depth=0.19' Max Vel=4.06 fps Inflow=4.40 cfs 0.254 af
n=0.035 L=335.0' S=0.0952 '/' Capacity=83.14 cfs Outflow=4.35 cfs 0.254 af

Reach 10.2R: ROAD DITCH Avg. Flow Depth=0.20' Max Vel=2.92 fps Inflow=3.24 cfs 0.186 af
n=0.035 L=40.0' S=0.0475 '/' Capacity=58.72 cfs Outflow=3.23 cfs 0.186 af

Reach 10.3R: ROAD DITCH Avg. Flow Depth=0.19' Max Vel=2.22 fps Inflow=2.29 cfs 0.135 af
n=0.035 L=264.0' S=0.0299 '/' Capacity=46.60 cfs Outflow=2.26 cfs 0.135 af

Reach 10.4R: ROAD DITCH Avg. Flow Depth=0.12' Max Vel=2.07 fps Inflow=1.34 cfs 0.081 af
n=0.035 L=225.0' S=0.0440 '/' Capacity=56.51 cfs Outflow=1.32 cfs 0.081 af

Reach 10.5R: ROAD DITCH Avg. Flow Depth=0.13' Max Vel=1.85 fps Inflow=1.26 cfs 0.073 af
n=0.035 L=118.0' S=0.0331 '/' Capacity=48.98 cfs Outflow=1.25 cfs 0.073 af

Reach 10.6R: ROAD DITCH Avg. Flow Depth=0.15' Max Vel=1.46 fps Inflow=1.17 cfs 0.066 af
n=0.035 L=227.0' S=0.0172 '/' Capacity=35.31 cfs Outflow=1.15 cfs 0.066 af

Reach 10R: ROAD DITCH Avg. Flow Depth=0.24' Max Vel=4.60 fps Inflow=6.18 cfs 0.374 af
n=0.035 L=72.0' S=0.0958 '/' Capacity=334.91 cfs Outflow=6.17 cfs 0.374 af

Reach 21R: WOOD BUFFER Avg. Flow Depth=0.06' Max Vel=0.10 fps Inflow=0.28 cfs 0.015 af
n=0.800 L=50.0' S=0.1200 '/' Capacity=1.35 cfs Outflow=0.20 cfs 0.015 af

Reach 22R: SCF WOODLAND Avg. Flow Depth=0.05' Max Vel=0.48 fps Inflow=0.20 cfs 0.015 af
n=0.100 L=596.0' S=0.0671 '/' Capacity=29.12 cfs Outflow=0.12 cfs 0.014 af

Reach 23R: ROAD DITCH Avg. Flow Depth=0.03' Max Vel=1.14 fps Inflow=0.12 cfs 0.014 af
n=0.022 L=150.0' S=0.0260 '/' Capacity=215.22 cfs Outflow=0.12 cfs 0.014 af

Pond 1.1P: CULVERT AT HUSSEY ROAD, Peak Elev=515.85' Storage=131 cf Inflow=7.86 cfs 0.623 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=7.86 cfs 0.622 af

Pond 2.1P: CULVERT AT HUSSEY ROAD 15", Peak Elev=525.73' Storage=253 cf Inflow=4.72 cfs 0.543 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=4.68 cfs 0.542 af

Pond 3.1P: CULVERT AT HUSSEY ROAD Peak Elev=523.00' Storage=25,539 cf Inflow=67.94 cfs 14.425 af
Outflow=67.48 cfs 14.383 af

Pond 22P: LEVEL SPREADER Peak Elev=574.02' Storage=109 cf Inflow=0.27 cfs 0.018 af
Outflow=0.28 cfs 0.015 af

Pond L2P: ROAD DITCH @ DW Peak Elev=586.67' Storage=173 cf Inflow=1.30 cfs 0.126 af
Discarded=0.10 cfs 0.060 af Primary=1.17 cfs 0.066 af Outflow=1.27 cfs 0.126 af

Pond L3P: ROAD DITCH @ DW Peak Elev=582.70' Storage=93 cf Inflow=1.37 cfs 0.111 af
Discarded=0.10 cfs 0.038 af Primary=1.26 cfs 0.073 af Outflow=1.36 cfs 0.111 af

Pond L4P: ROAD DITCH @ DW Peak Elev=578.73' Storage=98 cf Inflow=1.44 cfs 0.112 af
Discarded=0.10 cfs 0.031 af Primary=1.34 cfs 0.081 af Outflow=1.44 cfs 0.112 af

Pond L5P: ROAD DITCH @ DW Peak Elev=569.00' Storage=86 cf Inflow=2.42 cfs 0.190 af
Discarded=0.10 cfs 0.055 af Primary=2.29 cfs 0.135 af Outflow=2.39 cfs 0.190 af

Pond L6P: ROAD DITCH @ DW Peak Elev=561.24' Storage=119 cf Inflow=3.36 cfs 0.241 af
Discarded=0.10 cfs 0.055 af Primary=3.24 cfs 0.186 af Outflow=3.34 cfs 0.241 af

Pond L7P: ROAD DITCH @ DW Peak Elev=559.35' Storage=171 cf Inflow=4.51 cfs 0.314 af
Discarded=0.10 cfs 0.060 af Primary=4.40 cfs 0.254 af Outflow=4.50 cfs 0.314 af

Pond L8P: ROAD DITCH @ DW Peak Elev=526.72' Storage=296 cf Inflow=6.31 cfs 0.445 af
Discarded=0.10 cfs 0.071 af Primary=6.18 cfs 0.374 af Outflow=6.28 cfs 0.445 af

Total Runoff Area = 116.721 ac Runoff Volume = 15.964 af Average Runoff Depth = 1.64"
98.64% Pervious = 115.130 ac 1.36% Impervious = 1.591 ac

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment3D: CENTRAL SITE PLUS Runoff Area=4,720,717 sf 0.73% Impervious Runoff Depth>2.48"
Flow Length=3,775' Tc=88.1 min CN=68 Runoff=107.26 cfs 22.391 af

Subcatchment10.1D: LOT 7 DEVELOPED Runoff Area=42,557 sf 14.49% Impervious Runoff Depth>3.40"
Flow Length=351' Tc=18.5 min CN=77 Runoff=2.91 cfs 0.277 af

Subcatchment10.2D: LOT 6 DEVELOPED Runoff Area=29,375 sf 10.60% Impervious Runoff Depth>3.31"
Flow Length=283' Tc=12.0 min CN=76 Runoff=2.29 cfs 0.186 af

Subcatchment10.3D: ROAD SIDE OF LOT Runoff Area=23,631 sf 17.29% Impervious Runoff Depth>3.41"
Flow Length=311' Tc=13.9 min CN=77 Runoff=1.80 cfs 0.154 af

Subcatchment10.4D: FRONT BETWEEN Runoff Area=24,133 sf 14.65% Impervious Runoff Depth>3.40"
Flow Length=223' Tc=16.2 min CN=77 Runoff=1.74 cfs 0.157 af

Subcatchment10.5D: FRONT BETWEEN Runoff Area=8,242 sf 21.44% Impervious Runoff Depth>3.52"
Flow Length=60' Tc=5.9 min CN=78 Runoff=0.82 cfs 0.055 af

Subcatchment10.6D: FRONT BETWEEN Runoff Area=8,398 sf 33.83% Impervious Runoff Depth>3.92"
Flow Length=112' Tc=4.5 min CN=82 Runoff=0.96 cfs 0.063 af

Subcatchment10.7D: FRONT OF LOT 1 Runoff Area=26,983 sf 19.04% Impervious Runoff Depth>3.50"
Flow Length=372' Tc=19.5 min CN=78 Runoff=1.85 cfs 0.181 af

Subcatchment10D: LOT 8 DEVELOPED Runoff Area=59,811 sf 9.26% Impervious Runoff Depth>3.19"
Flow Length=495' Tc=34.6 min CN=75 Runoff=2.94 cfs 0.365 af

Subcatchment20D: AREA OF LOT 7+, Runoff Area=136,712 sf 1.53% Impervious Runoff Depth>3.01"
Flow Length=875' Tc=27.3 min CN=73 Runoff=7.04 cfs 0.786 af

Subcatchment21D: BACK OF LOT 5 Runoff Area=3,798 sf 18.43% Impervious Runoff Depth>3.52"
Tc=5.0 min CN=78 Runoff=0.38 cfs 0.026 af

Reach 10.1R: ROAD DITCH Avg. Flow Depth=0.25' Max Vel=4.70 fps Inflow=6.65 cfs 0.425 af
n=0.035 L=335.0' S=0.0952 '/' Capacity=83.14 cfs Outflow=6.59 cfs 0.425 af

Reach 10.2R: ROAD DITCH Avg. Flow Depth=0.25' Max Vel=3.38 fps Inflow=4.99 cfs 0.312 af
n=0.035 L=40.0' S=0.0475 '/' Capacity=58.72 cfs Outflow=4.94 cfs 0.312 af

Reach 10.3R: ROAD DITCH Avg. Flow Depth=0.24' Max Vel=2.58 fps Inflow=3.51 cfs 0.226 af
n=0.035 L=264.0' S=0.0299 '/' Capacity=46.60 cfs Outflow=3.46 cfs 0.226 af

Reach 10.4R: ROAD DITCH Avg. Flow Depth=0.15' Max Vel=2.40 fps Inflow=2.03 cfs 0.137 af
n=0.035 L=225.0' S=0.0440 '/' Capacity=56.51 cfs Outflow=2.01 cfs 0.137 af

Reach 10.5R: ROAD DITCH Avg. Flow Depth=0.16' Max Vel=2.14 fps Inflow=1.88 cfs 0.122 af
n=0.035 L=118.0' S=0.0331 '/' Capacity=48.98 cfs Outflow=1.86 cfs 0.122 af

Reach 10.6R: ROAD DITCH Avg. Flow Depth=0.18' Max Vel=1.67 fps Inflow=1.70 cfs 0.108 af
n=0.035 L=227.0' S=0.0172 '/' Capacity=35.31 cfs Outflow=1.68 cfs 0.108 af

Reach 10R: ROAD DITCH Avg. Flow Depth=0.29' Max Vel=5.25 fps Inflow=9.12 cfs 0.618 af
n=0.035 L=72.0' S=0.0958 '/' Capacity=334.91 cfs Outflow=9.10 cfs 0.618 af

Reach 21R: WOOD BUFFER Avg. Flow Depth=0.08' Max Vel=0.12 fps Inflow=0.38 cfs 0.023 af
n=0.800 L=50.0' S=0.1200 '/' Capacity=1.35 cfs Outflow=0.31 cfs 0.023 af

Reach 22R: SCF WOODLAND Avg. Flow Depth=0.06' Max Vel=0.60 fps Inflow=0.31 cfs 0.023 af
n=0.100 L=596.0' S=0.0671 '/' Capacity=29.12 cfs Outflow=0.20 cfs 0.022 af

Reach 23R: ROAD DITCH Avg. Flow Depth=0.05' Max Vel=1.39 fps Inflow=0.20 cfs 0.022 af
n=0.022 L=150.0' S=0.0260 '/' Capacity=215.22 cfs Outflow=0.20 cfs 0.022 af

Pond 1.1P: CULVERT AT HUSSEY ROAD, Peak Elev=516.35' Storage=197 cf Inflow=11.72 cfs 0.983 af
24.0" Round Culvert n=0.013 L=60.0' S=0.0383 '/' Outflow=11.71 cfs 0.983 af

Pond 2.1P: CULVERT AT HUSSEY ROAD 15", Peak Elev=526.70' Storage=866 cf Inflow=7.06 cfs 0.808 af
15.0" Round Culvert n=0.013 L=30.0' S=0.0133 '/' Outflow=6.56 cfs 0.808 af

Pond 3.1P: CULVERT AT HUSSEY Peak Elev=523.76' Storage=34,015 cf Inflow=107.26 cfs 22.391 af
Outflow=106.57 cfs 22.335 af

Pond 22P: LEVEL SPREADER Peak Elev=574.03' Storage=110 cf Inflow=0.38 cfs 0.026 af
Outflow=0.38 cfs 0.023 af

Pond L2P: ROAD DITCH @ DW Peak Elev=586.84' Storage=255 cf Inflow=1.85 cfs 0.181 af
Discarded=0.10 cfs 0.072 af Primary=1.70 cfs 0.108 af Outflow=1.80 cfs 0.181 af

Pond L3P: ROAD DITCH @ DW Peak Elev=582.88' Storage=136 cf Inflow=1.99 cfs 0.171 af
Discarded=0.10 cfs 0.049 af Primary=1.88 cfs 0.122 af Outflow=1.98 cfs 0.171 af

Pond L4P: ROAD DITCH @ DW Peak Elev=578.93' Storage=148 cf Inflow=2.14 cfs 0.177 af
Discarded=0.10 cfs 0.041 af Primary=2.03 cfs 0.137 af Outflow=2.13 cfs 0.177 af

Pond L5P: ROAD DITCH @ DW Peak Elev=569.32' Storage=137 cf Inflow=3.65 cfs 0.294 af
Discarded=0.10 cfs 0.068 af Primary=3.51 cfs 0.226 af Outflow=3.61 cfs 0.294 af

Pond L6P: ROAD DITCH @ DW Peak Elev=561.82' Storage=228 cf Inflow=5.08 cfs 0.380 af
Discarded=0.10 cfs 0.068 af Primary=4.99 cfs 0.312 af Outflow=5.09 cfs 0.380 af

Pond L7P: ROAD DITCH @ DW Peak Elev=559.83' Storage=297 cf Inflow=6.81 cfs 0.498 af
Discarded=0.10 cfs 0.073 af Primary=6.65 cfs 0.425 af Outflow=6.75 cfs 0.498 af

Pond L8P: ROAD DITCH @ DW Peak Elev=527.59' Storage=621 cf Inflow=9.42 cfs 0.702 af
Discarded=0.10 cfs 0.084 af Primary=9.12 cfs 0.618 af Outflow=9.22 cfs 0.702 af

Total Runoff Area = 116.721 ac Runoff Volume = 24.641 af Average Runoff Depth = 2.53"
98.64% Pervious = 115.130 ac 1.36% Impervious = 1.591 ac