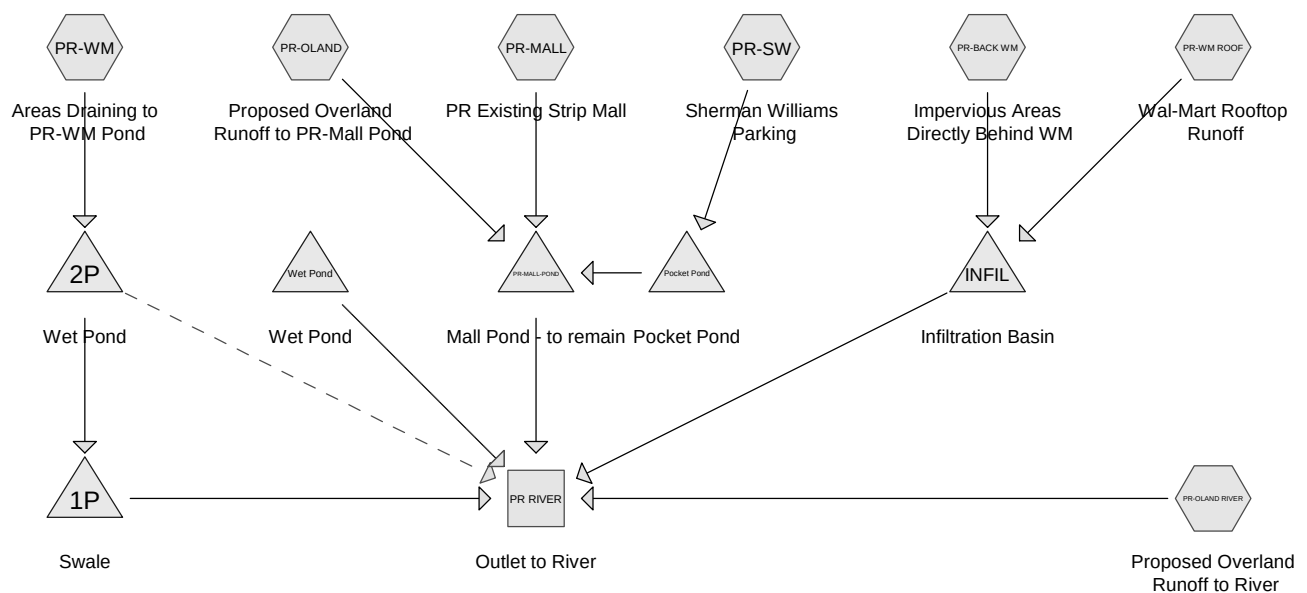
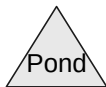


Subcat



Reach



Pond



Link

Drainage Diagram for Pr Conditions Tailwater_Wet Pond&Pocket Pond2

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Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

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Area Listing (all nodes)

<u>Area (sq-ft)</u>	<u>CN</u>	<u>Description (subcats)</u>
602,164	60	Woods, Fair, HSG B (PR-OLAND,PR-OLAND RIVER,PR-WM)
68,241	61	>75% Grass cover, Good, HSG B (PR-BACK WM,PR-MALL,PR-SW)
73,531	61	Landscaping (PR-WM)
66,520	98	Paved areas behind building (PR-BACK WM,PR-SW)
482,543	98	Paved parking & roofs (PR-MALL,PR-OLAND RIVER,PR-WM ROOF)
388,521	98	Pavement/Roofs/Water levels of ponds (PR-WM)
19,790	98	Water level of detention pond counted as impervious (PR-OLAND)
1,701,310		

Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points

Runoff by SCS TR-20 method, UH=SCS

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment PR-BACK WM: Impervious Areas Directly Behi Runoff Area=68,765 sf Runoff Depth=5.06"
Tc=5.0 min CN=85 Runoff=13.93 cfs 29,005 cf

Subcatchment PR-MALL: PR Existing Strip Mall Runoff Area=393,196 sf Runoff Depth=6.32"
Flow Length=440' Tc=13.7 min CN=96 Runoff=68.19 cfs 207,225 cf

Subcatchment PR-OLAND: Proposed Overland Runoff to PR Runoff Area=140,062 sf Runoff Depth=2.95"
Flow Length=350' Slope=0.0070 ' /' Tc=13.9 min CN=65 Runoff=12.70 cfs 34,417 cf

Subcatchment PR-OLAND RIVER: Proposed Overland Runoff Runoff Area=359,477 sf Runoff Depth=2.46"
Flow Length=940' Tc=26.8 min CN=60 Runoff=18.11 cfs 73,783 cf

Subcatchment PR-SW: Sherman Williams Parking Runoff Area=40,750 sf Runoff Depth=4.62"
Tc=5.0 min CN=81 Runoff=7.71 cfs 15,686 cf

Subcatchment PR-WM: Areas Draining to PR-WM Pond Runoff Area=586,934 sf Runoff Depth=5.06"
Flow Length=1,115' Tc=22.0 min CN=85 Runoff=70.43 cfs 247,568 cf

Subcatchment PR-WM ROOF: Wal-Mart Rooftop Runoff Runoff Area=112,126 sf Runoff Depth=6.56"
Tc=5.0 min CN=98 Runoff=25.77 cfs 61,306 cf

Reach PR RIVER: Outlet to River Inflow=142.64 cfs 493,830 cf
Outflow=142.64 cfs 493,830 cf

Pond 1P: Swale Peak Elev=593.10' Storage=13,385 cf Inflow=62.15 cfs 247,568 cf
Outflow=61.96 cfs 247,568 cf

Pond 2P: Wet Pond Peak Elev=592.48' Storage=98,702 cf Inflow=70.43 cfs 247,568 cf
Primary=62.15 cfs 247,568 cf Secondary=0.00 cfs 0 cf Outflow=62.15 cfs 247,568 cf

Pond INFIL: Infiltration Basin Peak Elev=593.38' Storage=24,140 cf Inflow=39.70 cfs 90,311 cf
Discarded=9.47 cfs 90,314 cf Primary=0.00 cfs 0 cf Outflow=9.47 cfs 90,314 cf

Pond Pocket Pond: Pocket Pond Peak Elev=588.61' Storage=5,105 cf Inflow=7.71 cfs 15,686 cf
Outflow=4.98 cfs 15,536 cf

Pond PR-MALL-POND: Mall Pond - to re Peak Elev=588.69' Storage=90,845 cf Inflow=85.58 cfs 257,179 cf
Outflow=84.83 cfs 172,479 cf

Pond Wet Pond: Wet Pond Peak Elev=0.00' Storage=0 cf
Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf

Total Runoff Area = 1,701,310 sf Runoff Volume = 668,991 cf Average Runoff Depth = 4.72"
43.73% Pervious Area = 743,936 sf 56.27% Impervious Area = 957,374 sf

Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Subcatchment PR-BACK WM: Impervious Areas Directly Behind WM

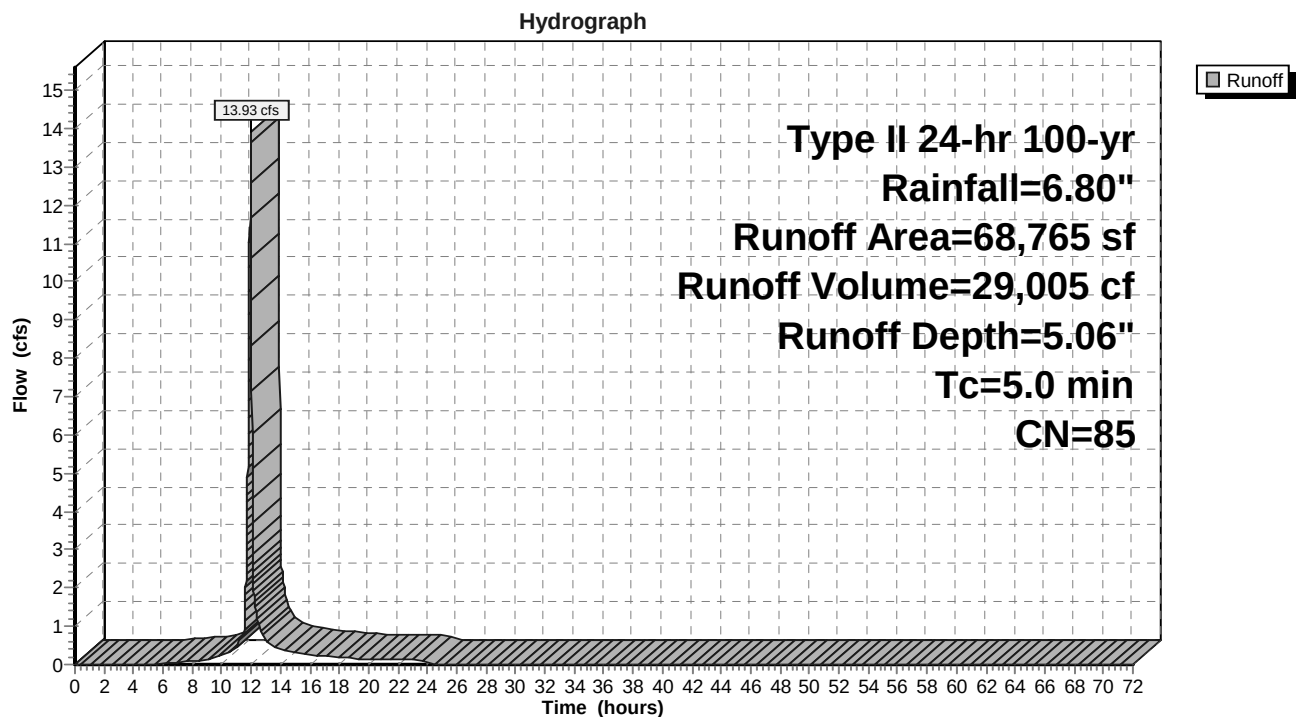
Runoff = 13.93 cfs @ 11.96 hrs, Volume= 29,005 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Type II 24-hr 100-yr Rainfall=6.80"

Area (sf)	CN	Description
44,138	98	Paved areas behind building
24,627	61	>75% Grass cover, Good, HSG B
68,765	85	Weighted Average
24,627		Pervious Area
44,138		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Area behind WM (truckspin, driveway, etc)

Subcatchment PR-BACK WM: Impervious Areas Directly Behind WM

Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Subcatchment PR-MALL: PR Existing Strip Mall

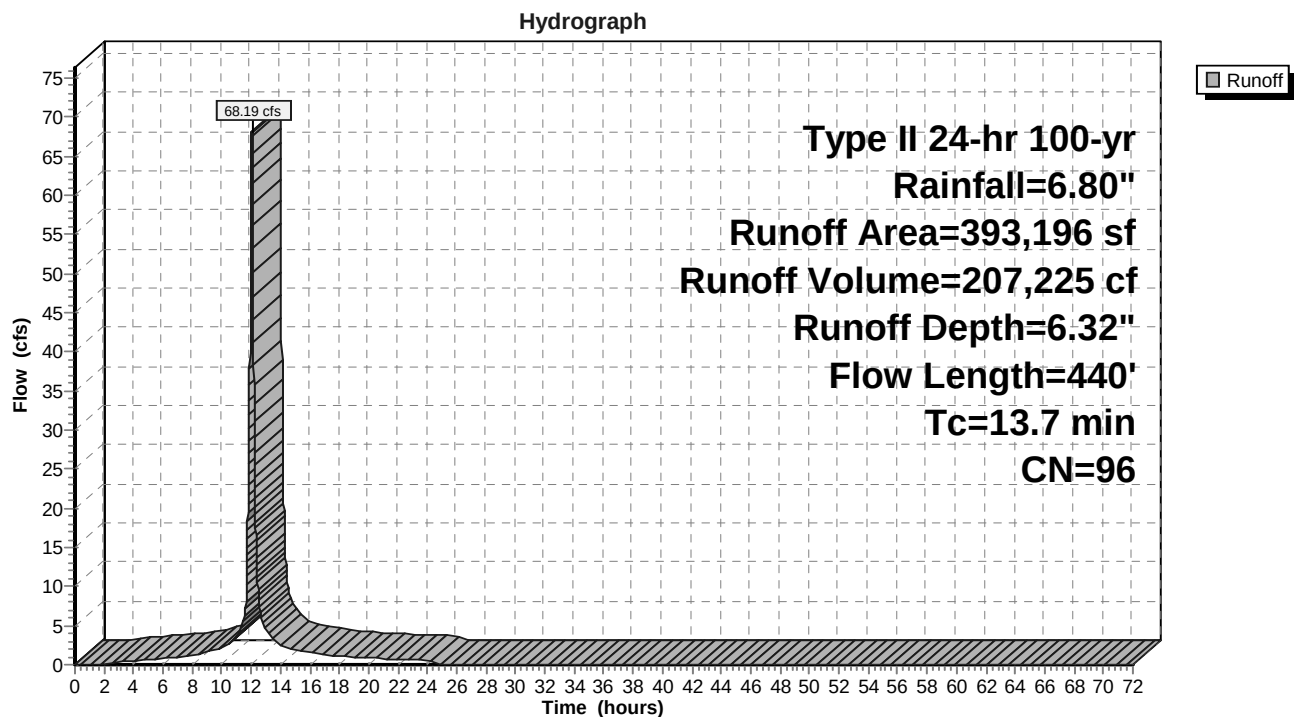
Runoff = 68.19 cfs @ 12.05 hrs, Volume= 207,225 cf, Depth= 6.32"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Type II 24-hr 100-yr Rainfall=6.80"

Area (sf)	CN	Description
367,950	98	Paved parking & roofs
25,246	61	>75% Grass cover, Good, HSG B
393,196	96	Weighted Average
25,246		Pervious Area
367,950		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	100	0.0500	0.23		Sheet Flow, Overland onto Parking Lot From Non Paved Areas Grass: Short n= 0.150 P2= 2.80"
3.9	200	0.0050	0.85		Sheet Flow, Overland Across Parking Lot into Drainage System Smooth surfaces n= 0.011 P2= 2.80"
2.5	140	0.0180	0.94		Shallow Concentrated Flow, Shallow Concentrated to the Pond Short Grass Pasture Kv= 7.0 fps
13.7	440	Total			

Subcatchment PR-MALL: PR Existing Strip Mall

Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Subcatchment PR-OLAND: Proposed Overland Runoff to PR-Mall Pond

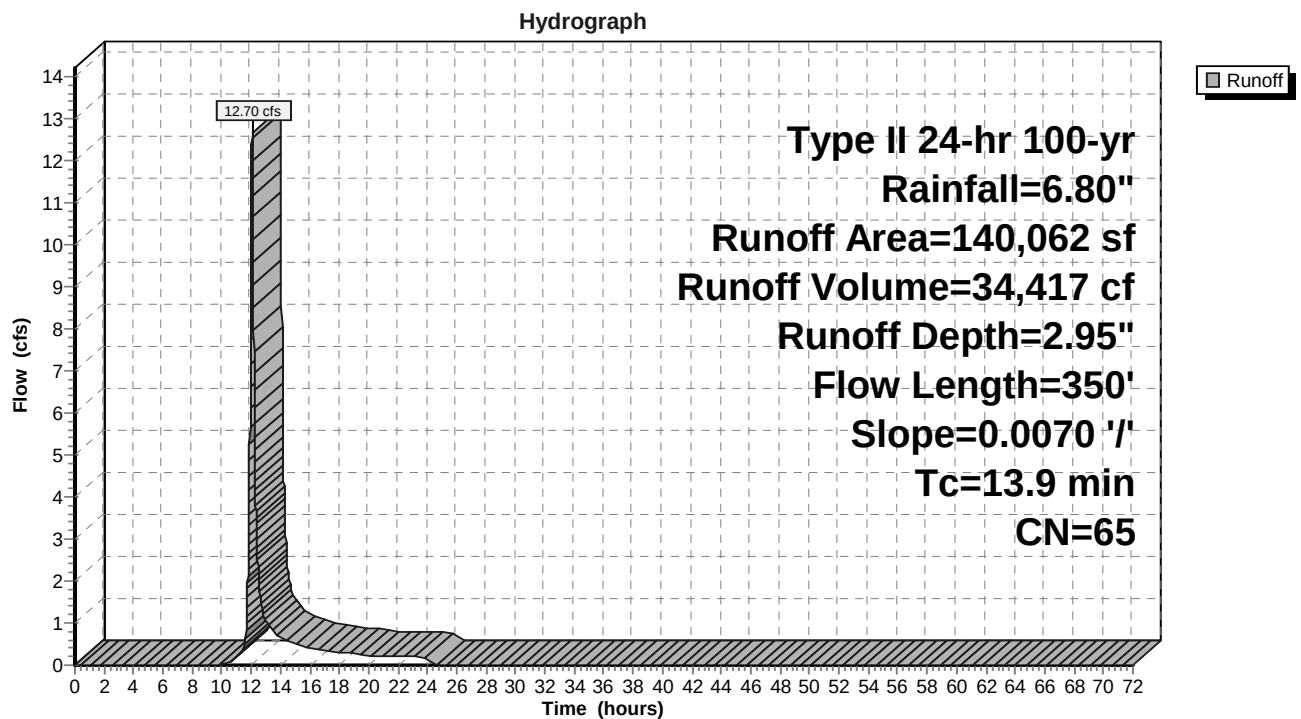
Runoff = 12.70 cfs @ 12.06 hrs, Volume= 34,417 cf, Depth= 2.95"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Type II 24-hr 100-yr Rainfall=6.80"

Area (sf)	CN	Description
120,272	60	Woods, Fair, HSG B
19,790	98	Water level of detention pond counted as impervious
140,062	65	Weighted Average
120,272		Pervious Area
19,790		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.9	350	0.0070	0.42		Shallow Concentrated Flow, Overland behind PR WM Woodland Kv= 5.0 fps

Subcatchment PR-OLAND: Proposed Overland Runoff to PR-Mall Pond

Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Subcatchment PR-OLAND RIVER: Proposed Overland Runoff to River

Runoff = 18.11 cfs @ 12.22 hrs, Volume= 73,783 cf, Depth= 2.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

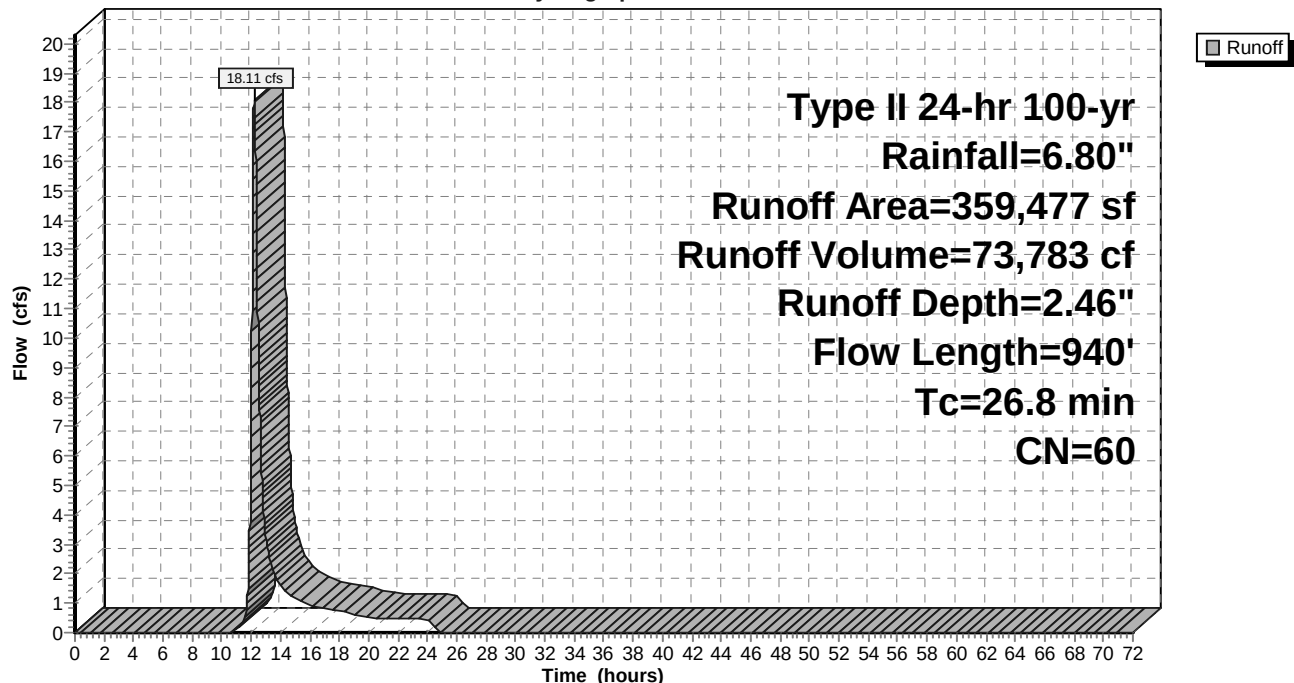
Type II 24-hr 100-yr Rainfall=6.80"

Area (sf)	CN	Description
357,010	60	Woods, Fair, HSG B
2,467	98	Paved parking & roofs
359,477	60	Weighted Average
357,010		Pervious Area
2,467		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.0	400	0.0075	0.61		Shallow Concentrated Flow, Roughly Defined Shallow Channel
					Short Grass Pasture Kv= 7.0 fps
4.8	200	0.0100	0.70		Shallow Concentrated Flow, Overland to Dropoff
					Short Grass Pasture Kv= 7.0 fps
1.6	140	0.0430	1.45		Shallow Concentrated Flow, Down Embankment to Walloomsac R
					Short Grass Pasture Kv= 7.0 fps
9.4	200	0.0050	0.35		Shallow Concentrated Flow, Overland flow
					Woodland Kv= 5.0 fps
26.8	940	Total			

Subcatchment PR-OLAND RIVER: Proposed Overland Runoff to River

Hydrograph



Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Subcatchment PR-SW: Sherman Williams Parking

Runoff = 7.71 cfs @ 11.96 hrs, Volume= 15,686 cf, Depth= 4.62"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

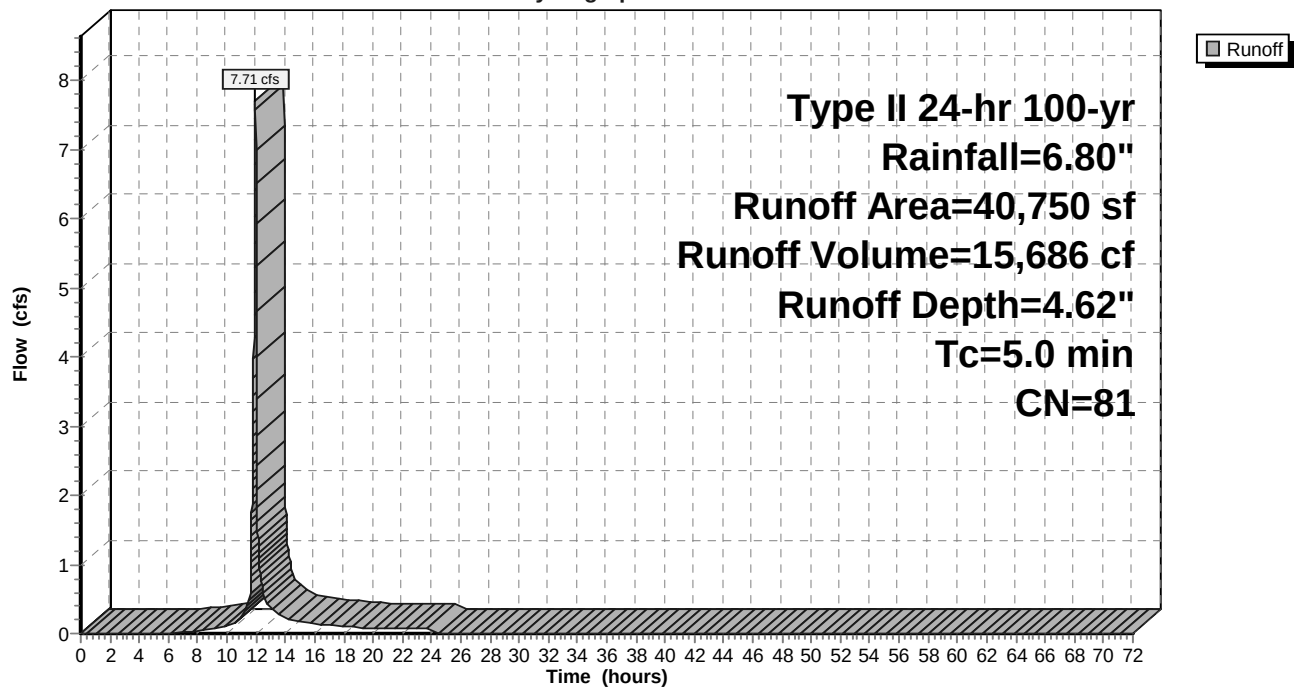
Type II 24-hr 100-yr Rainfall=6.80"

Area (sf)	CN	Description
22,382	98	Paved areas behind building
18,368	61	>75% Grass cover, Good, HSG B
40,750	81	Weighted Average
18,368		Pervious Area
22,382		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry, Area behind WM (truckspin, driveway, etc)

Subcatchment PR-SW: Sherman Williams Parking

Hydrograph



Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Subcatchment PR-WM: Areas Draining to PR-WM Pond

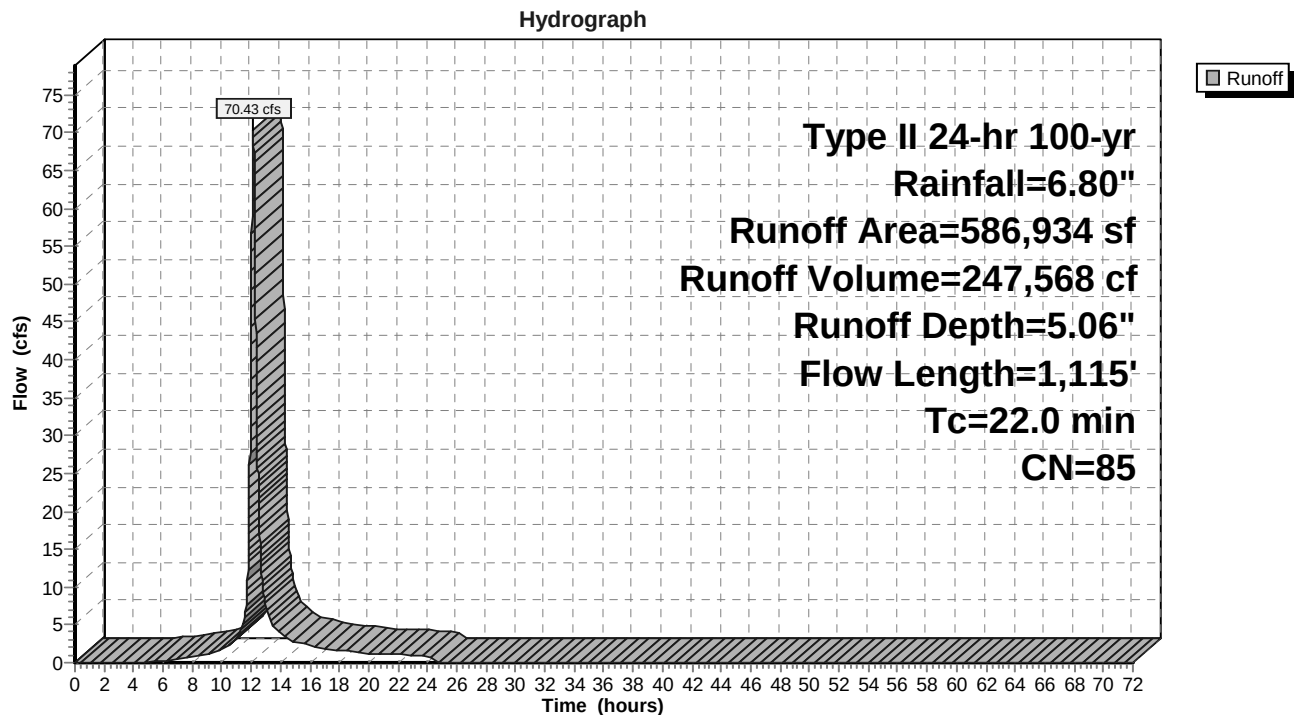
Runoff = 70.43 cfs @ 12.15 hrs, Volume= 247,568 cf, Depth= 5.06"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Type II 24-hr 100-yr Rainfall=6.80"

Area (sf)	CN	Description
124,882	60	Woods, Fair, HSG B
388,521	98	Pavement/Roofs/Water levels of ponds
73,531	61	Landscaping
586,934	85	Weighted Average
198,413		Pervious Area
388,521		Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.8	130	0.0200	0.12		Sheet Flow, Overland to Edge of Pavement Grass: Dense n= 0.240 P2= 2.80"
1.2	151	0.0100	2.03		Shallow Concentrated Flow, Along Pavement to CB Paved Kv= 20.3 fps
2.0	834		6.95		Direct Entry, Assumed Time in Drainage System to Pond
22.0	1,115	Total			

Subcatchment PR-WM: Areas Draining to PR-WM Pond

Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Subcatchment PR-WM ROOF: Wal-Mart Rooftop Runoff

Runoff = 25.77 cfs @ 11.96 hrs, Volume= 61,306 cf, Depth= 6.56"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

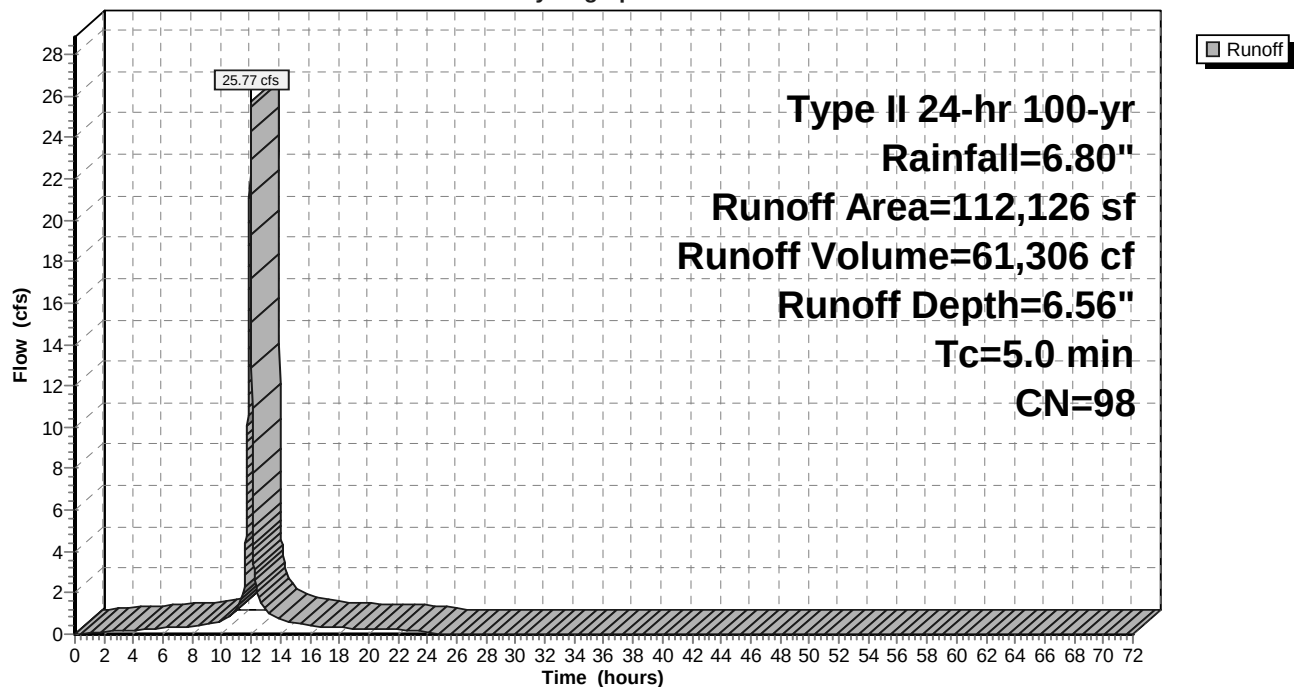
Type II 24-hr 100-yr Rainfall=6.80"

Area (sf)	CN	Description
112,126	98	Paved parking & roofs
112,126		Impervious Area

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

Subcatchment PR-WM ROOF: Wal-Mart Rooftop Runoff

Hydrograph



Reach PR RIVER: Outlet to River

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1,701,310 sf, Inflow Depth = 3.48" for 100-yr event

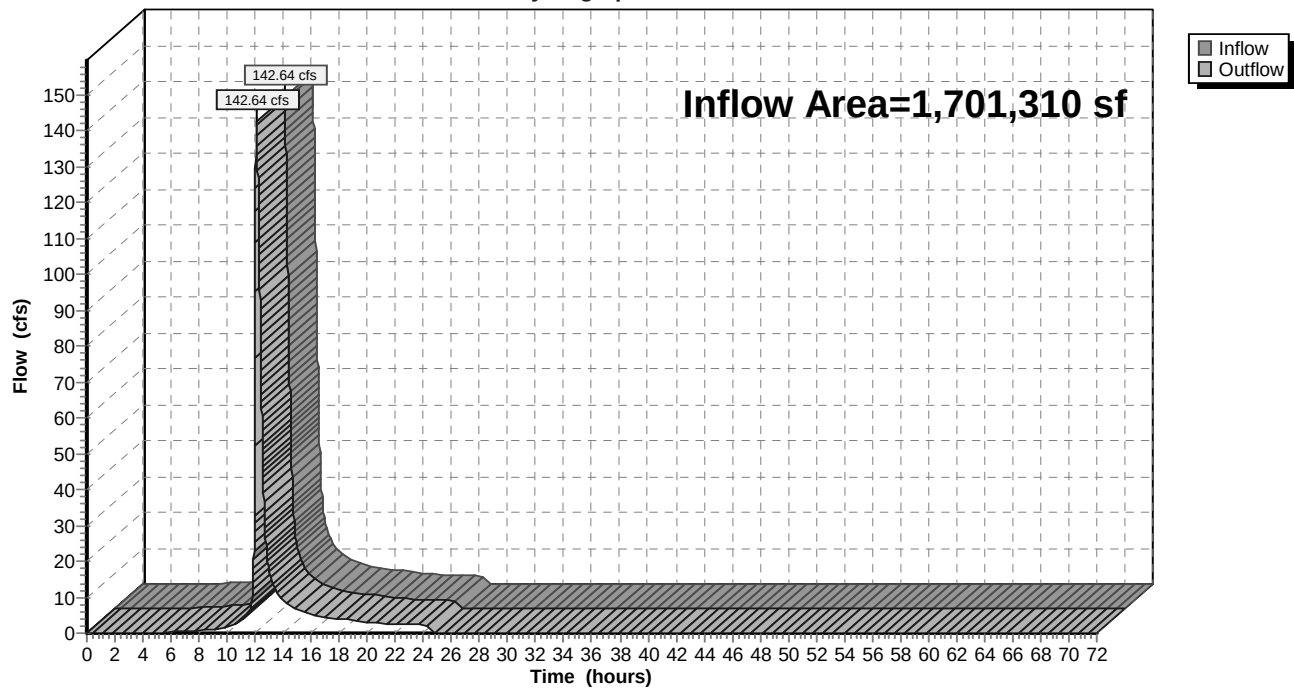
Inflow = 142.64 cfs @ 12.11 hrs, Volume= 493,830 cf

Outflow = 142.64 cfs @ 12.11 hrs, Volume= 493,830 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach PR RIVER: Outlet to River

Hydrograph



Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Pond 1P: Swale

[81] Warning: Exceeded Pond 2P by 0.65' @ 12.37 hrs

Inflow Area = 586,934 sf, Inflow Depth = 5.06" for 100-yr event
 Inflow = 62.15 cfs @ 12.22 hrs, Volume= 247,568 cf
 Outflow = 61.96 cfs @ 12.24 hrs, Volume= 247,568 cf, Atten= 0%, Lag= 0.9 min
 Primary = 61.96 cfs @ 12.24 hrs, Volume= 247,568 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Starting Elev= 592.00' Surf.Area= 4,655 sf Storage= 8,171 cf

Peak Elev= 593.10' @ 12.24 hrs Surf.Area= 4,800 sf Storage= 13,385 cf (5,214 cf above start)

Plug-Flow detention time= 34.2 min calculated for 239,398 cf (97% of inflow)

Center-of-Mass det. time= 2.8 min (813.1 - 810.3)

Volume	Invert	Avail.Storage	Storage Description
#1	589.00'	17,698 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

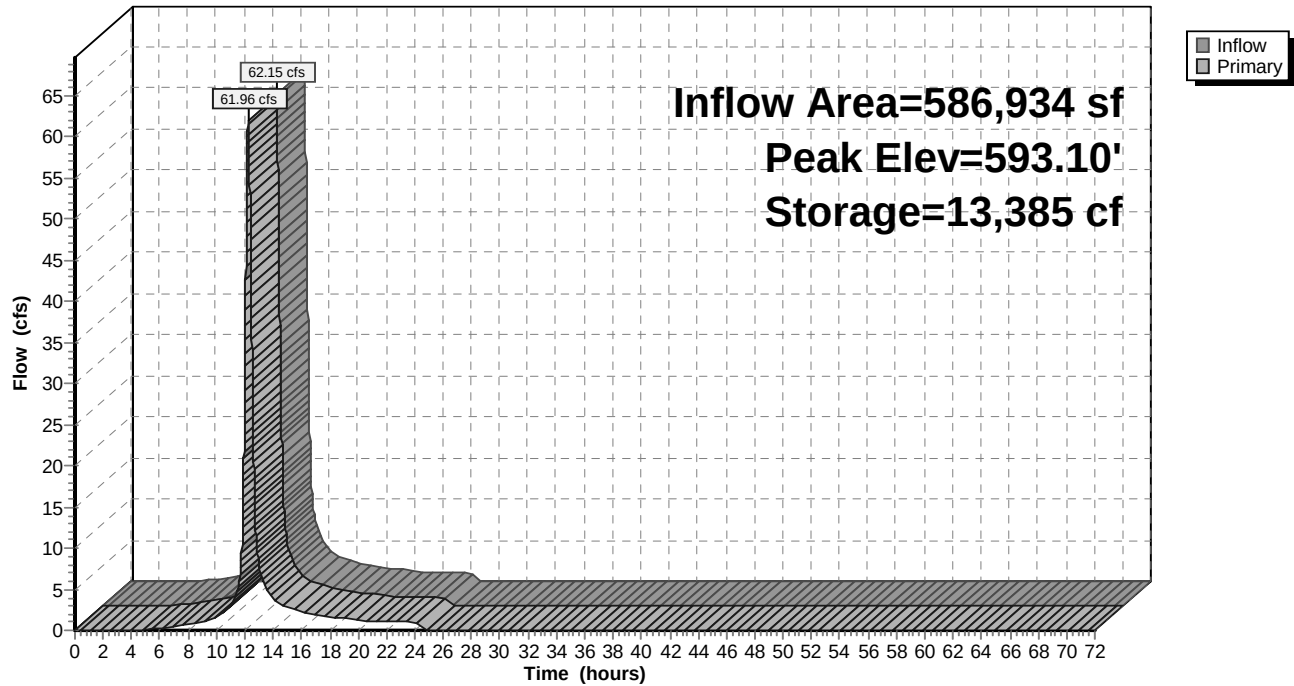
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
589.00	1,100	0	0
590.00	2,138	1,619	1,619
591.00	3,155	2,647	4,266
592.00	4,655	3,905	8,171
593.00	4,800	4,728	12,898
594.00	4,800	4,800	17,698

Device	Routing	Invert	Outlet Devices
#1	Primary	592.00'	20.0' long x 2.0' 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 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=61.96 cfs @ 12.24 hrs HW=593.10' TW=592.00' (Fixed TW Elev= 592.00')↑ **1=Broad-Crested Rectangular Weir** (Weir Controls 61.96 cfs @ 2.81 fps)

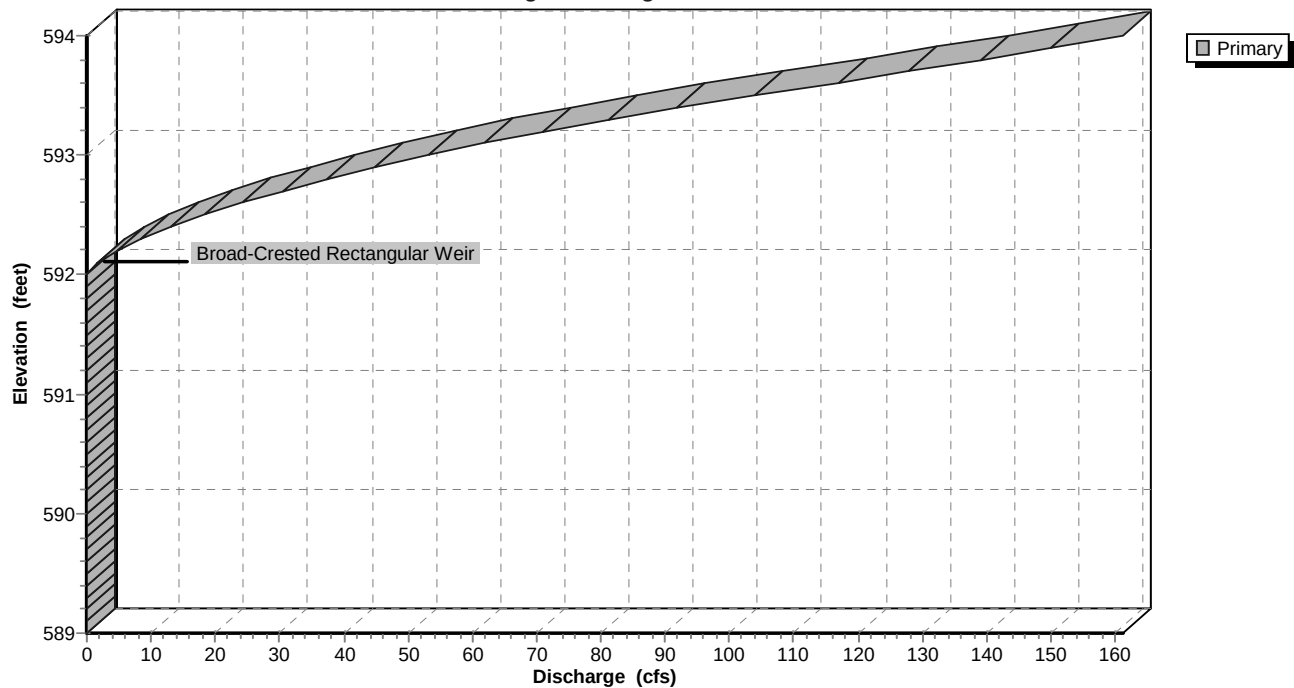
Pond 1P: Swale

Hydrograph



Pond 1P: Swale

Stage-Discharge



Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Pond 2P: Wet Pond

Inflow Area = 586,934 sf, Inflow Depth = 5.06" for 100-yr event
 Inflow = 70.43 cfs @ 12.15 hrs, Volume= 247,568 cf
 Outflow = 62.15 cfs @ 12.22 hrs, Volume= 247,568 cf, Atten= 12%, Lag= 4.7 min
 Primary = 62.15 cfs @ 12.22 hrs, Volume= 247,568 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Starting Elev= 592.00' Surf.Area= 31,341 sf Storage= 82,864 cf

Peak Elev= 592.48' @ 12.22 hrs Surf.Area= 32,849 sf Storage= 98,702 cf (15,838 cf above start)

Plug-Flow detention time= 170.3 min calculated for 164,704 cf (67% of inflow)

Center-of-Mass det. time= 2.5 min (810.3 - 807.8)

Volume	Invert	Avail.Storage	Storage Description
#1	589.00'	189,933 cf	Custom Stage Data (Prismatic) Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
589.00	23,979	0	0
590.00	26,346	25,163	25,163
591.00	28,858	27,602	52,765
592.00	31,341	30,100	82,864
593.00	34,475	32,908	115,772
594.00	37,923	36,199	151,971
595.00	38,000	37,962	189,933

Device	Routing	Invert	Outlet Devices
#1	Primary	589.00'	4.250" Vert. Orifice/Grate C= 0.600
#2	Primary	590.00'	4.00' W x 1.00' H Vert. Orifice/Grate C= 0.600
#3	Primary	591.00'	4.00' x 2.00' Horiz. Orifice/Grate Limited to weir flow C= 0.600
#4	Primary	591.50'	10.0' long x 12.0' 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) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64
#5	Secondary	594.00'	1,000.0' long x 5.0' 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) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Primary OutFlow Max=62.13 cfs @ 12.22 hrs HW=592.48' TW=592.00' (Fixed TW Elev= 592.00')

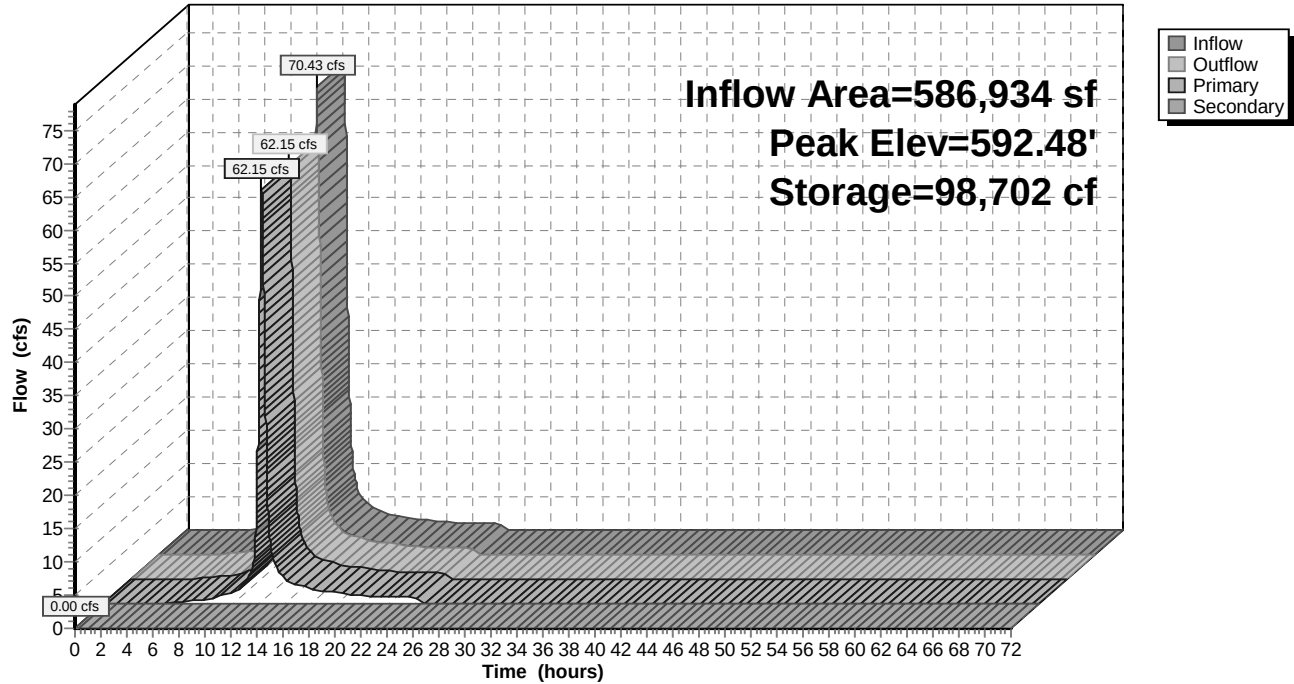
1=Orifice/Grate (Orifice Controls 0.33 cfs @ 3.34 fps)
 2=Orifice/Grate (Orifice Controls 13.36 cfs @ 3.34 fps)
 3=Orifice/Grate (Orifice Controls 26.72 cfs @ 3.34 fps)
 4=Broad-Crested Rectangular Weir (Weir Controls 21.72 cfs @ 2.21 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=592.00' TW=592.00' (Fixed TW Elev= 592.00')

5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

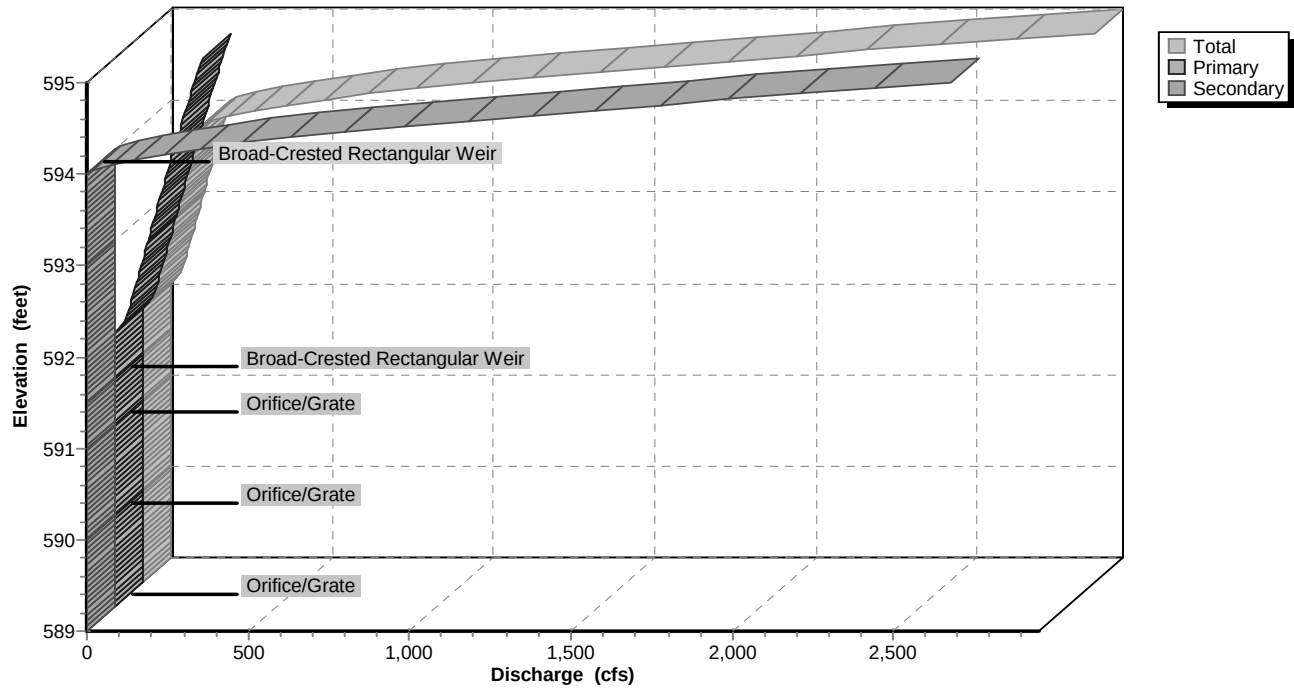
Pond 2P: Wet Pond

Hydrograph



Pond 2P: Wet Pond

Stage-Discharge



Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Pond INFIL: Infiltration Basin

Inflow Area = 180,891 sf, Inflow Depth = 5.99" for 100-yr event
 Inflow = 39.70 cfs @ 11.96 hrs, Volume= 90,311 cf
 Outflow = 9.47 cfs @ 12.09 hrs, Volume= 90,314 cf, Atten= 76%, Lag= 7.8 min
 Discarded = 9.47 cfs @ 12.09 hrs, Volume= 90,314 cf
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 593.38' @ 12.09 hrs Surf.Area= 13,639 sf Storage= 24,140 cf

Plug-Flow detention time= 14.6 min calculated for 90,301 cf (100% of inflow)
 Center-of-Mass det. time= 14.6 min (770.1 - 755.5)

Volume	Invert	Avail.Storage	Storage Description
#1	591.00'	40,303 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

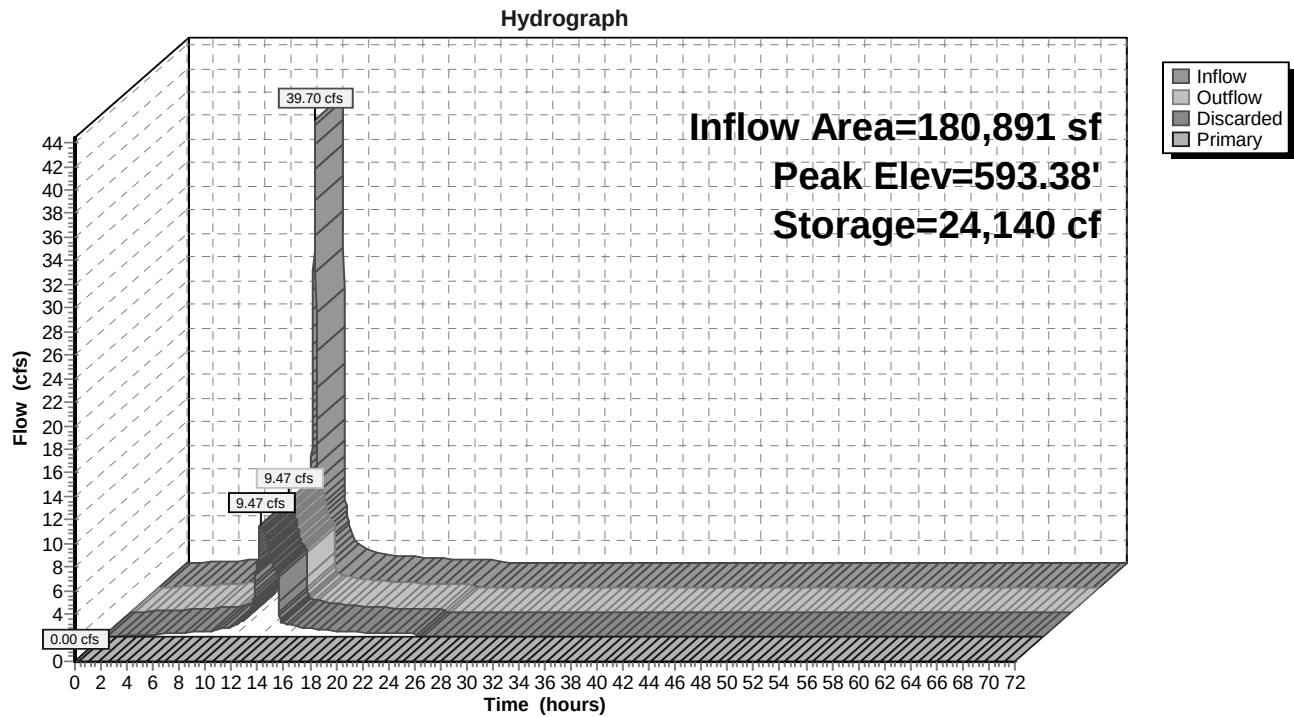
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
591.00	7,393	0	0
592.00	8,799	8,096	8,096
593.00	13,085	10,942	19,038
594.00	14,536	13,811	32,849
594.50	15,283	7,455	40,303

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	30.000 in/hr Exfiltration over Horizontal area
#2	Primary	593.40'	20.0' 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

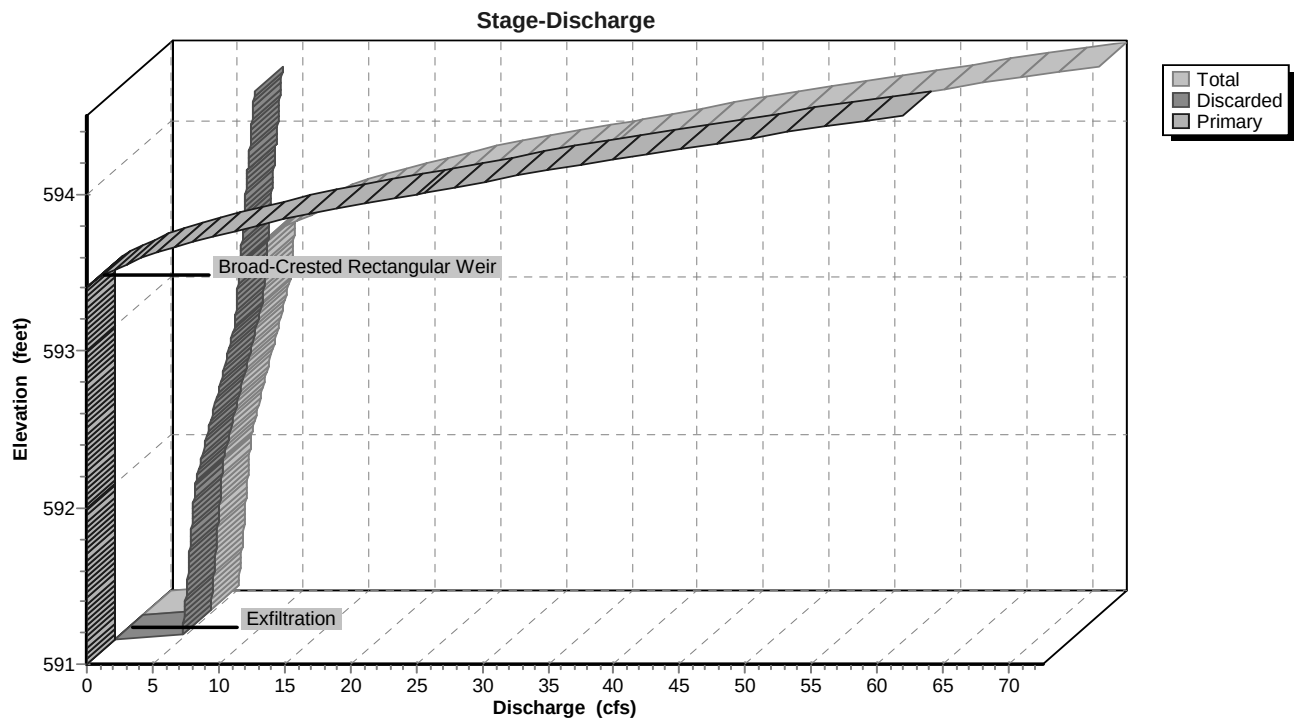
Discarded OutFlow Max=9.47 cfs @ 12.09 hrs HW=593.38' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 9.47 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=591.00' (Free Discharge)
 ↑ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond INFIL: Infiltration Basin



Pond INFIL: Infiltration Basin



Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Pond Pocket Pond: Pocket Pond

Inflow Area = 40,750 sf, Inflow Depth = 4.62" for 100-yr event
 Inflow = 7.71 cfs @ 11.96 hrs, Volume= 15,686 cf
 Outflow = 4.98 cfs @ 12.03 hrs, Volume= 15,536 cf, Atten= 35%, Lag= 4.0 min
 Primary = 4.98 cfs @ 12.03 hrs, Volume= 15,536 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 588.61' @ 12.03 hrs Surf.Area= 7,929 sf Storage= 5,105 cf

Plug-Flow detention time= 177.0 min calculated for 15,536 cf (99% of inflow)
 Center-of-Mass det. time= 171.0 min (973.6 - 802.6)

Volume	Invert	Avail.Storage	Storage Description
#1	587.90'	15,213 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
587.90	5,990	0	0
588.00	6,667	633	633
589.00	8,726	7,697	8,329
589.75	9,630	6,884	15,213

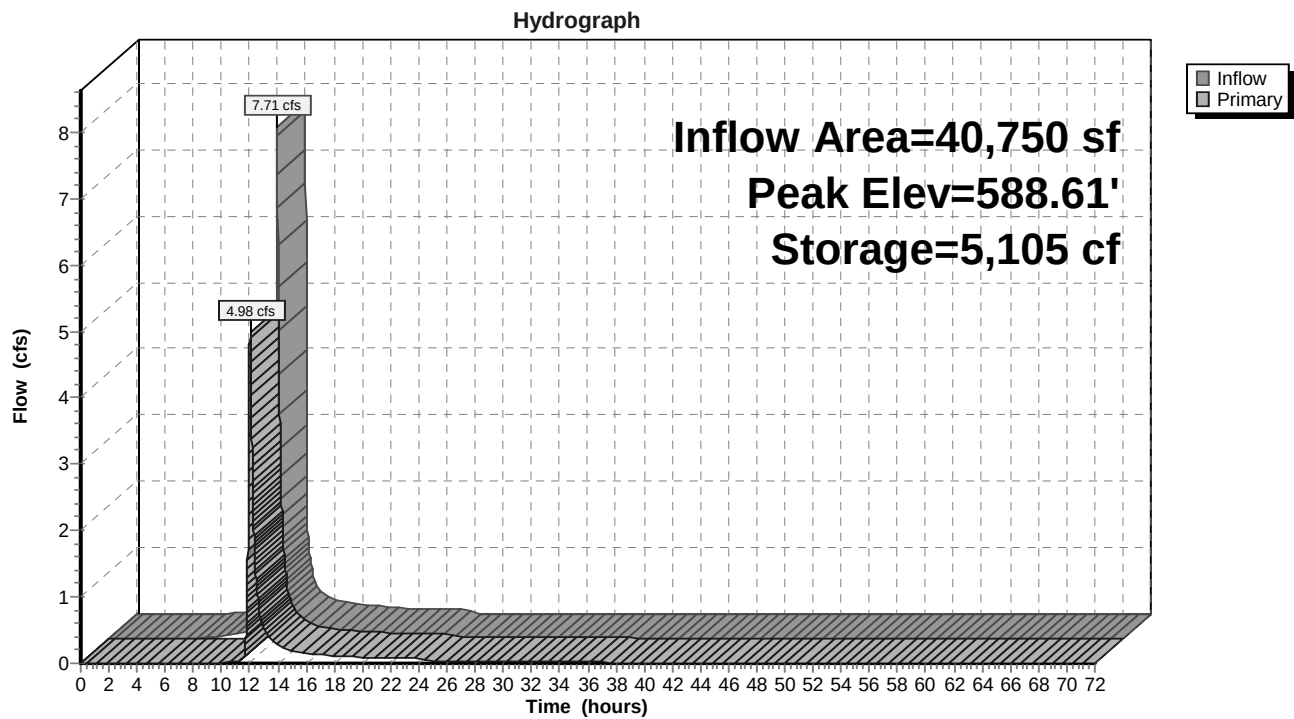
Device	Routing	Invert	Outlet Devices
#1	Primary	587.90'	1.667" Vert. Orifice/Grate C= 0.600
#2	Primary	588.15'	6.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.97 cfs @ 12.03 hrs HW=588.61' (Free Discharge)

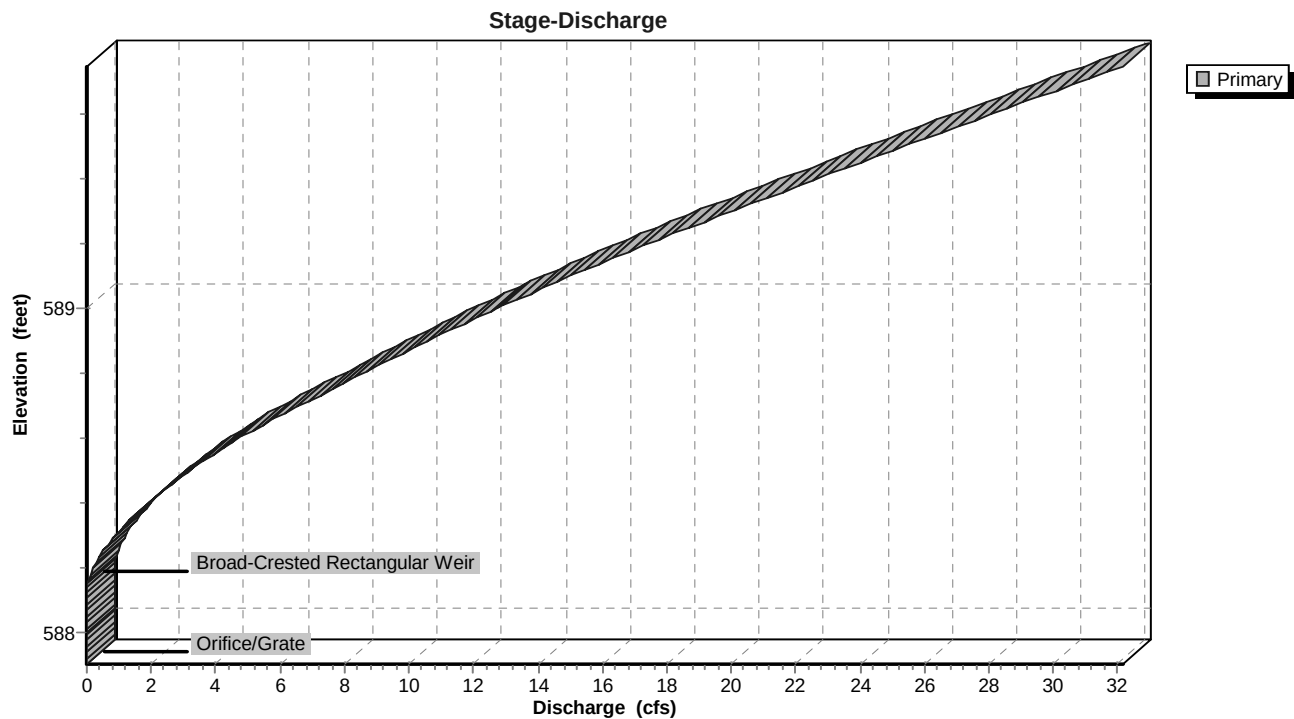
1=Orifice/Grate (Orifice Controls 0.06 cfs @ 3.86 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 4.91 cfs @ 1.77 fps)

Pond Pocket Pond: Pocket Pond



Pond Pocket Pond: Pocket Pond



Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Pond PR-MALL-POND: Mall Pond - to remain

[81] Warning: Exceeded Pond Pocket Pond by 0.58' @ 71.99 hrs

Inflow Area = 574,008 sf, Inflow Depth = 5.38" for 100-yr event
 Inflow = 85.58 cfs @ 12.05 hrs, Volume= 257,179 cf
 Outflow = 84.83 cfs @ 12.06 hrs, Volume= 172,479 cf, Atten= 1%, Lag= 1.0 min
 Primary = 84.83 cfs @ 12.06 hrs, Volume= 172,479 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 588.69' @ 12.06 hrs Surf.Area= 31,853 sf Storage= 90,845 cf

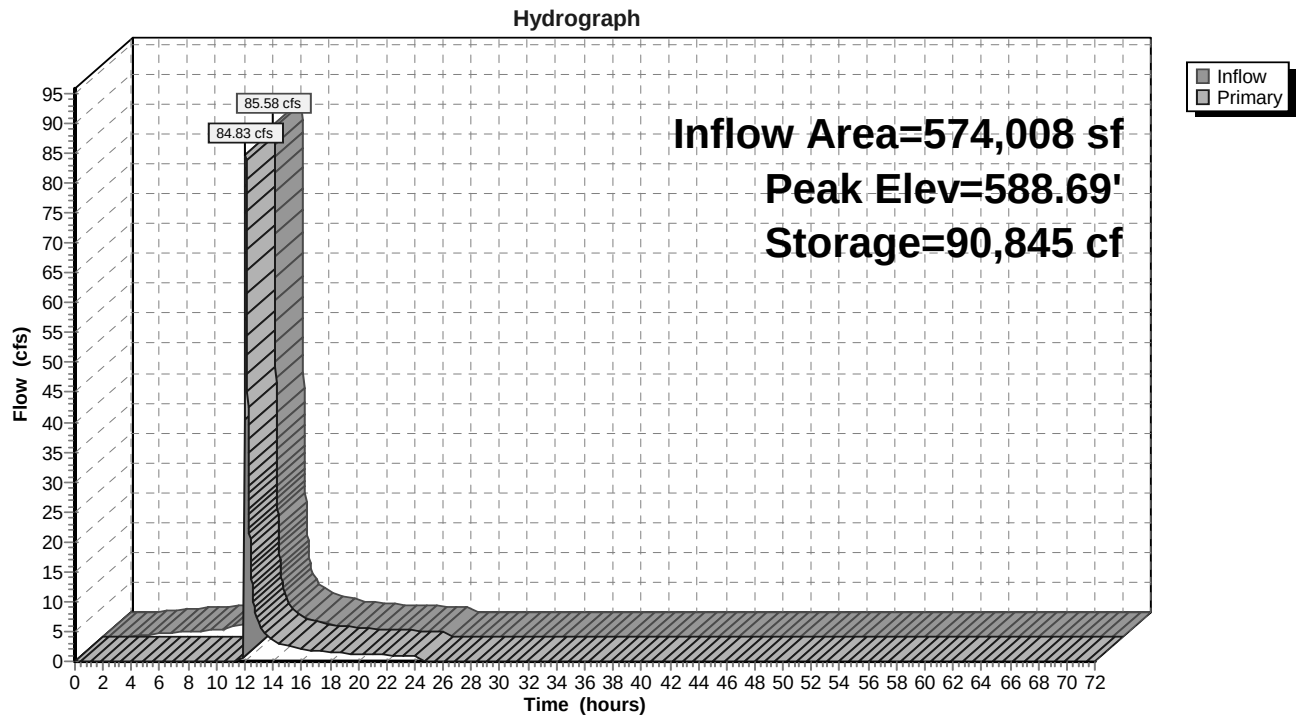
Plug-Flow detention time= 198.2 min calculated for 172,479 cf (67% of inflow)
 Center-of-Mass det. time= 86.7 min (870.3 - 783.6)

Volume	Invert	Avail.Storage	Storage Description
#1	584.50'	100,858 cf	Custom Stage Data (Prismatic) Listed below
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
584.50	13,332	0	0
585.00	15,879	7,303	7,303
586.00	18,924	17,402	24,704
587.00	22,304	20,614	45,318
588.00	27,527	24,916	70,234
588.50	30,280	14,452	84,686
589.00	34,409	16,172	100,858

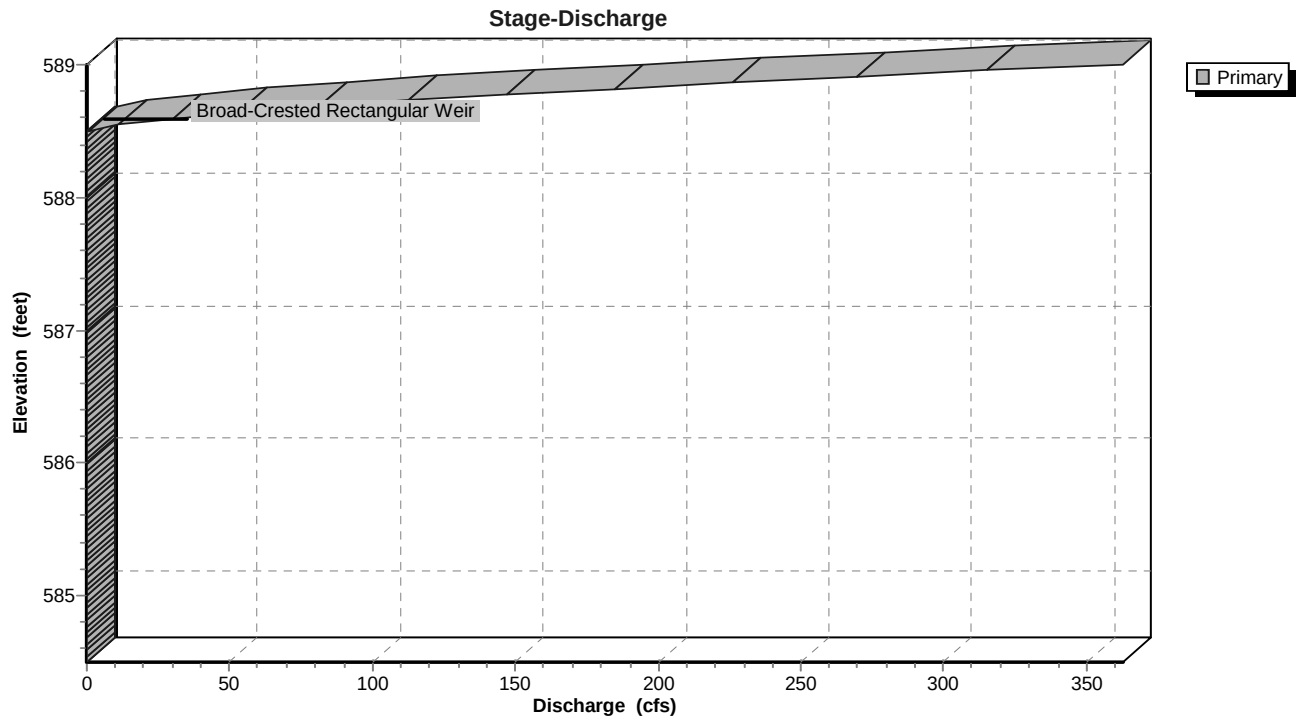
Device	Routing	Invert	Outlet Devices
#1	Primary	588.50'	380.0' long x 20.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=84.55 cfs @ 12.06 hrs HW=588.69' (Free Discharge)
 ↑ **1=Broad-Crested Rectangular Weir** (Weir Controls 84.55 cfs @ 1.17 fps)

Pond PR-MALL-POND: Mall Pond - to remain



Pond PR-MALL-POND: Mall Pond - to remain



Pr Conditions_Tailwater_Wet Pond&Pocket Pond2

Type II 24-hr 100-yr Rainfall=6.80"

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Pond Wet Pond: Wet Pond

[43] Hint: Has no inflow (Outflow=Zero)

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.00' @ 0.00 hrs Surf.Area= 0 sf Storage= 0 cf

Plug-Flow detention time= (not calculated)

Center-of-Mass det. time= (not calculated)

Volume	Invert	Avail.Storage	Storage Description
#1	589.00'	112,213 cf	Custom Stage Data (Prismatic) Listed below

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
589.00	23,979	0	0
590.00	26,346	25,163	25,163
591.00	28,858	27,602	52,765
592.00	31,341	30,100	82,864
592.90	33,880	29,349	112,213

Device	Routing	Invert	Outlet Devices
#1	Primary	589.00'	24.00" Vert. Orifice/Grate X 2.00 C= 0.600
#2	Device 1	589.00'	4.250" Vert. Orifice/Grate C= 0.600
#3	Device 1	590.00'	4.00' W x 1.00' H Vert. Orifice/Grate C= 0.600
#4	Device 1	591.00'	4.00' x 2.00' Horiz. Orifice/Grate Limited to weir flow C= 0.600
#5	Secondary	591.50'	10.0' long x 12.0' 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) 2.57 2.62 2.70 2.67 2.66 2.67 2.66 2.64

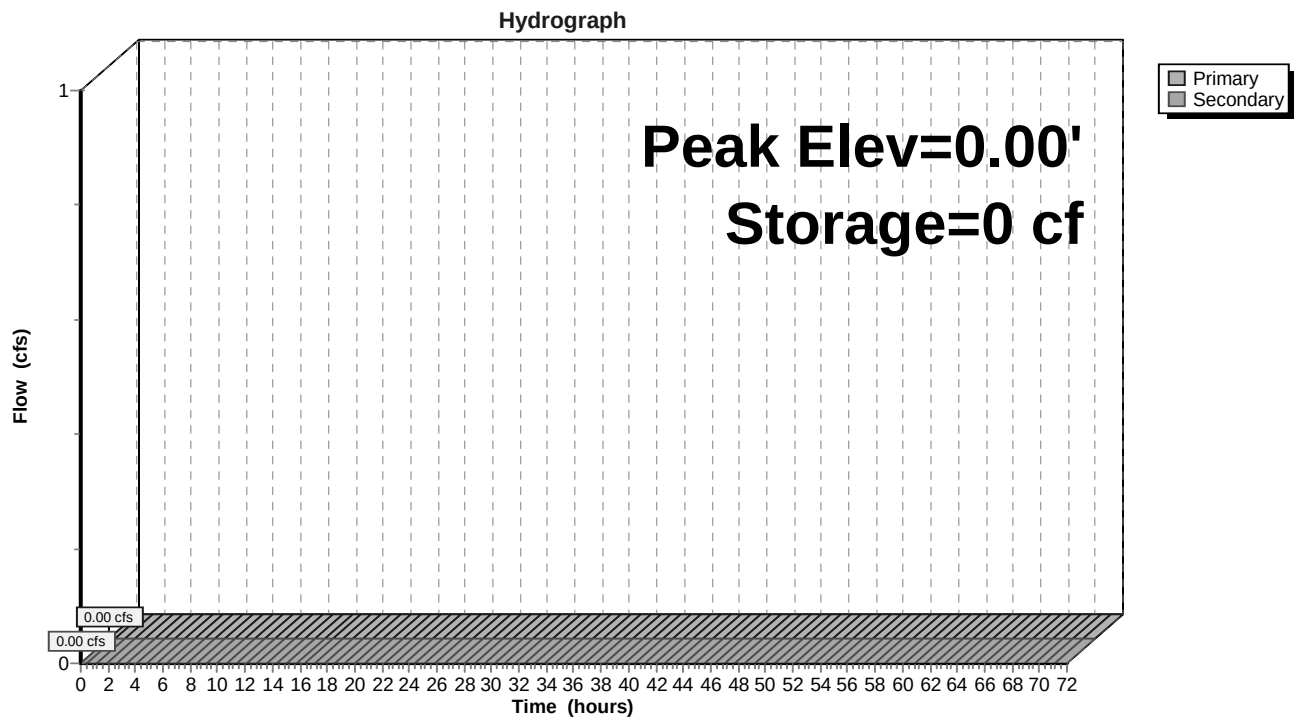
Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)

↑ **1=Orifice/Grate** (Controls 0.00 cfs)
 ↑ **2=Orifice/Grate** (Controls 0.00 cfs)
 ↑ **3=Orifice/Grate** (Controls 0.00 cfs)
 ↑ **4=Orifice/Grate** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)

↑ **5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond Wet Pond: Wet Pond



Pond Wet Pond: Wet Pond

