



Village of Menomonee Falls
W156 N8480 Pilgrim Road
Menomonee Falls, WI 53051-3140
Telephone: (262) 532-4200

STORMWATER MANAGEMENT FACILITIES OPERATION AND INSPECTION REPORT

Quarter Section SE ¼ Sect.1 Name of Business/Subdivision Eaton Corporation
Property Tax ID Number 0052992004 Address of Property W126N7250 Flint Drive Menomonee Falls, WI 53051

Date 09/27/2021

Dry Pond	
Wet Pond	X
Other	

Pond ID: SWP13s025

Location of Pond Eastern Parcel Line; abutting the North Parcel Line

Year Pond Constructed 2012 Year of Last Certification 2016

Compliance Verification	Design	Actual	Compliant Yes No	Comments (Condition of Structure)
Primary Outlet Pipe				Outlet Pipe Material
Opening Diameter (inches)	12"	12"	X	Reinforced Concrete Pipe.
Upstream Invert	791	791.14	X	
Downstream Invert	790.5	790.55	X	
Length (feet)	100	50	X	
Slope (%)	0.1%	1.18%	X	
Secondary Outlet Pipe	(If Applicable)			Outlet Pipe Material
Opening Diameter (inches)				
Upstream Invert				
Downstream Invert				
Length (feet)				
Slope (%)				
Riser	(If Applicable)			Riser Material
Opening Diameter (inches)	N/A	N/A	N/A	Structure was not originally modeled as a riser. The top of the structure is not an open grate.
Elevation	N/A	N/A	N/A	
Upper Discharge Control	(If Applicable)			
Opening Diameter (inches)	5"	4"	X	
Elevation	793	792.67	X	

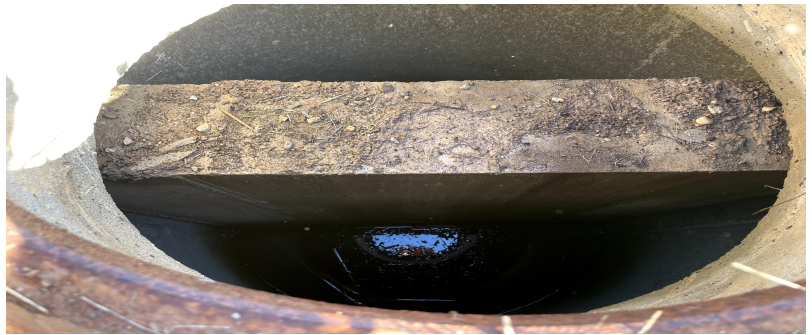
Compliance Verification	Design	Actual	Compliant Yes No		Comments	
Lower Discharge Control	(If Applicable)					
Opening Diameter (inches)	4"	4"	X			
Elevation	791	790.59	X			
Other (Description)						
Opening Type and Size (inches)						
Elevation						
Emergency Spillway						
Elevation	N/A	796.59	X		A spillway was not modeled during original design.	
Length of spillway (feet)	N/A	8.7'	X			
Embankment	Present Yes no		Comments/Maintenance Requirements			
Unauthorized Plantings, trees, or woody vegetation		X				
Animal burrows or slope erosion		X				
Storm Sewer Outfalls	Type & Size		Location		Comments	
Outfall 1	12" RCP		S.Side of Pond		Invert 792.54	
Outfall 2	18" RCP		SW. Side of Pond		Invert 791.43	
Outfall 3	18" RCP		W. Side of Pond		Invert 791.34	
Storage Properties	Design	Actual	Compliant Yes No		Not Applicable	Equipment Used
Normal Water Elevation (Wet Ponds)	791	791	X			
Design High Water Elevation	796.49	796.76	X			
Area at Normal Water Elevation (Ac) (Wet Ponds)	0.194	0.175	X			
Area at Design High Water Elevation (Ac)	0.469	0.450	X			
Active Storage Available (Ac-Ft)*	1.297	1.812	X			
Lowest Elevation at Top of Embankment (If Applicable)	796.5	797	X			
Average Elevation at Top of Embankment (If Applicable)	798	797	X			
Maximum Bottom Elevation	786	785	X			
Average Pond Bottom Elevation	786	785	X			
Pond Bottom Area (Ac)	0.049	0.019	X			
Maximum Pond Depth	12	12	X			
Average Pond Depth	12	12	X			
Average Permanent Pool Depth (Wet Ponds)	5	6	X			

*To Determine Active Storage $V = (H/3)(A1 + A2 + (\sqrt{A1 \cdot A2}))$

Wet Ponds Use H = Height of Section , $A1$ = area at normal water elevation, $A2$ =area at top section

Dry Ponds Use H = Height of Section, A_1 = pond bottom area, A_2 =area at top section

Sketch Outlet or Attach to Document



Place Photograph of Pond or Attach to Document

Place Photograph of Pond or Attach to Document
See the Attached Photographs

Attach As-built Survey to the Document for the first report submission

Inspection Firm: Foth Infrastructure Solutions,
LLC

Inspector Name : Ryan W. Kloth, PE, CFM

Phone Number: 414-336-7908

Inspection Date: 9/16/2021

Address: 7044 S. Ballpark Drive, Suite
200
Franklin, WI 53132

Certifying Professional Name: Ryan W. Kloth, PE, CFM

Phone Number: 414-336-7908

Date: 09/29/21

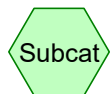
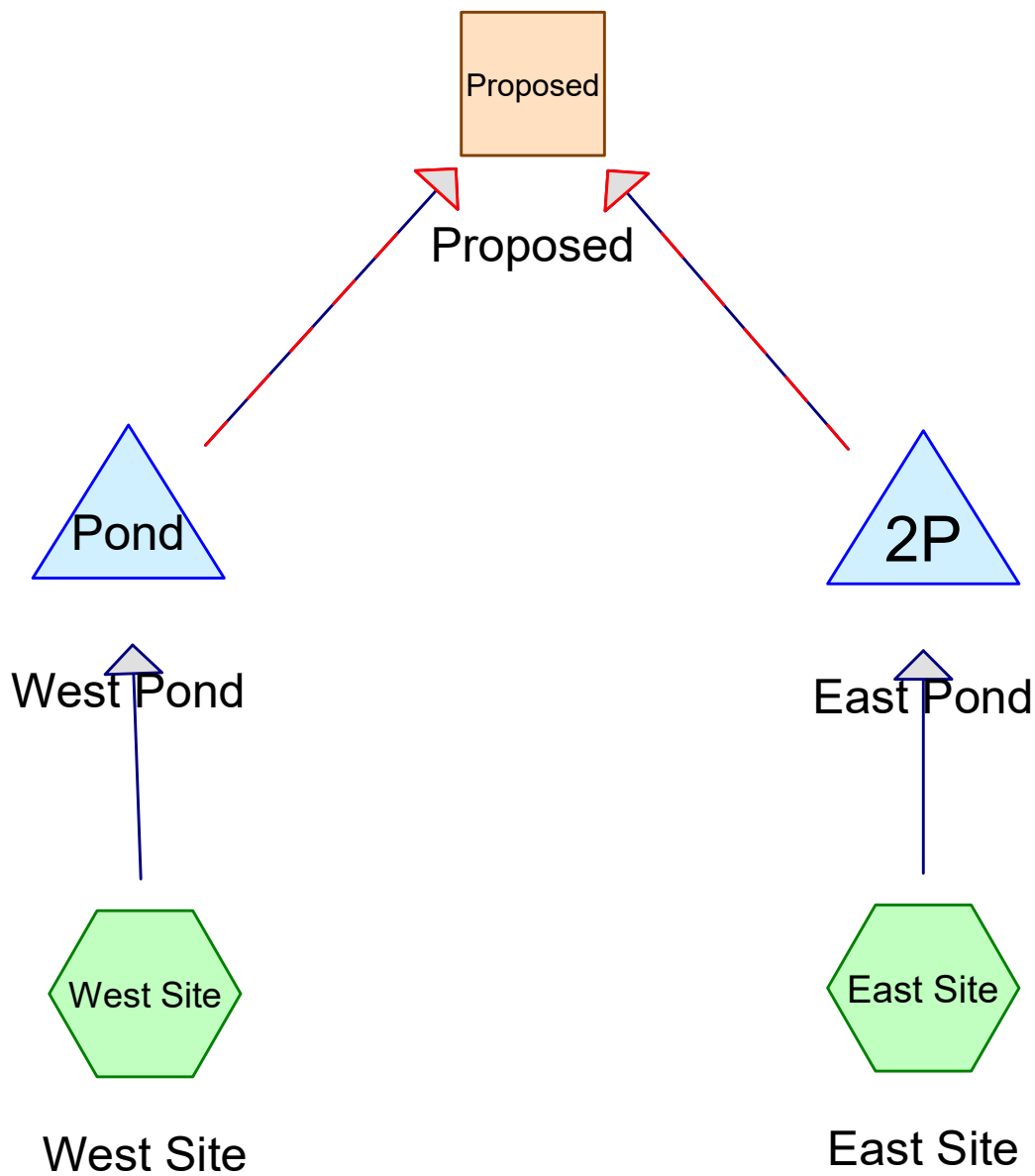
Signature:

Ryan W. Kloth



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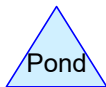
10-3-2012



Subcat



Reach



Pond



Link

Routing Diagram for Eaton Pond Inspection 10-2021

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Eaton Pond Inspection 10-2021

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Project Notes

September 2021-For the Eaton Corporation. This is the revised 2016 model based on recent survey of the ponds and outlet structures. RWK

Rainfall events imported from "NRCS-Rain.txt" for 9184 WI Ozaukee

Rainfall events imported from "NRCS-Rain.txt" for 9184 WI Ozaukee

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	MSE 24-hr	3	Default	24.00	1	2.61	2
2	100-Year	MSE 24-hr	3	Default	24.00	1	6.38	2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
5.940	88	From 2016 Stormwater Inspection Report (East Site)
1.840	86	From 2016 Stormwater Inspection Report (West Site)
7.780	88	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
7.780	Other	East Site, West Site
7.780		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover
0.000	0.000	0.000	0.000	7.780	7.780	From 2016 Stormwater Inspection Report
0.000	0.000	0.000	0.000	7.780	7.780	TOTAL AREA

Subc
Num

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	2P	791.14	790.55	50.0	0.0118	0.014	0.0	12.0	0.0
2	Pond	793.51	792.54	140.0	0.0069	0.014	0.0	12.0	0.0

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MSE 24-hr 3 2-Year Rainfall=2.61"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment East Site: East Site

Runoff Area=5.940 ac 0.00% Impervious Runoff Depth>1.47"
Tc=27.2 min CN=88 Runoff=8.28 cfs 0.729 af

Subcatchment West Site: West Site

Runoff Area=1.840 ac 0.00% Impervious Runoff Depth>1.33"
Tc=26.1 min CN=86 Runoff=2.37 cfs 0.204 af

Reach Proposed: Proposed

Inflow=0.34 cfs 0.283 af
Outflow=0.34 cfs 0.283 af

Pond 2P: East Pond

Peak Elev=793.37' Storage=0.558 af Inflow=8.28 cfs 0.729 af
Primary=0.31 cfs 0.251 af Secondary=0.00 cfs 0.000 af Outflow=0.31 cfs 0.251 af

Pond Pond: West Pond

Peak Elev=795.33' Storage=0.176 af Inflow=2.37 cfs 0.204 af
Primary=0.04 cfs 0.032 af Secondary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.032 af

Total Runoff Area = 7.780 ac Runoff Volume = 0.933 af Average Runoff Depth = 1.44"
100.00% Pervious = 7.780 ac 0.00% Impervious = 0.000 ac

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MSE 24-hr 3 2-Year Rainfall=2.61"

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Summary for Subcatchment East Site: East Site

Runoff = 8.28 cfs @ 12.39 hrs, Volume= 0.729 af, Depth> 1.47"
Routed to Pond 2P : East Pond

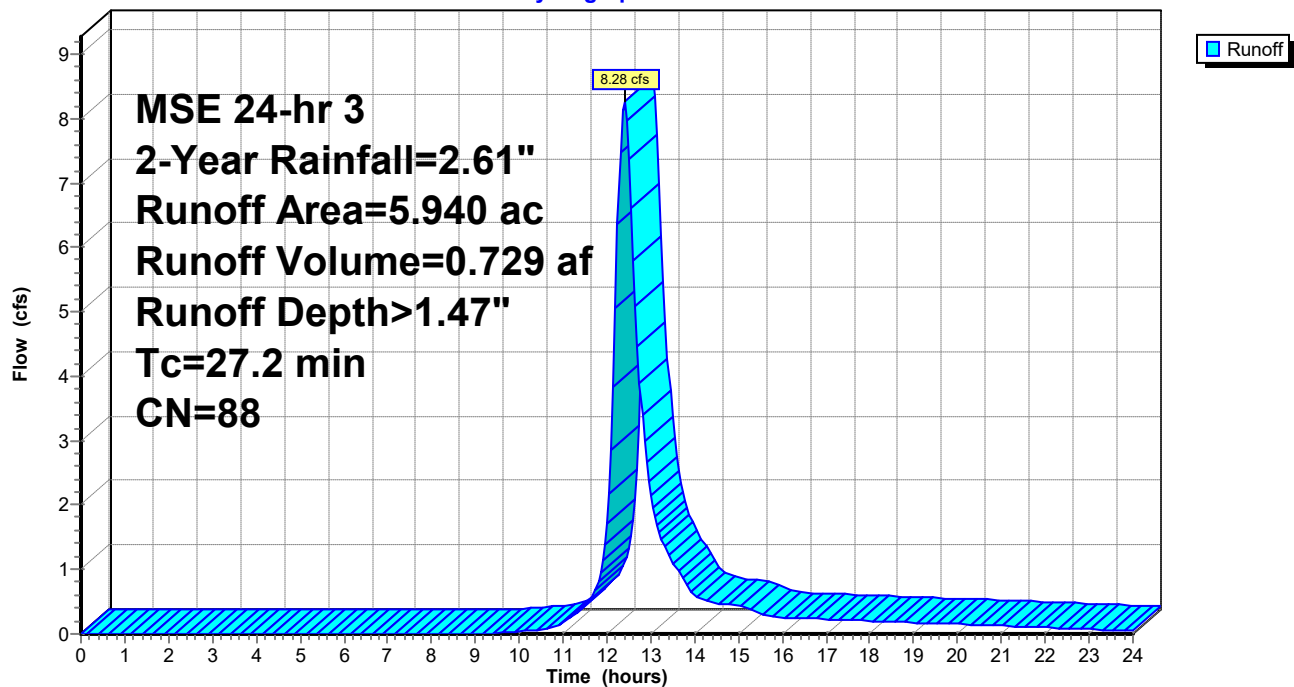
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.61"

Area (ac)	CN	Description
* 5.940	88	From 2016 Stormwater Inspection Report
5.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.2					Direct Entry, From 2016 Stormwater Inspection Report

Subcatchment East Site: East Site

Hydrograph



Eaton Pond Inspection 10-2021

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MSE 24-hr 3 2-Year Rainfall=2.61"

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Summary for Subcatchment West Site: West Site

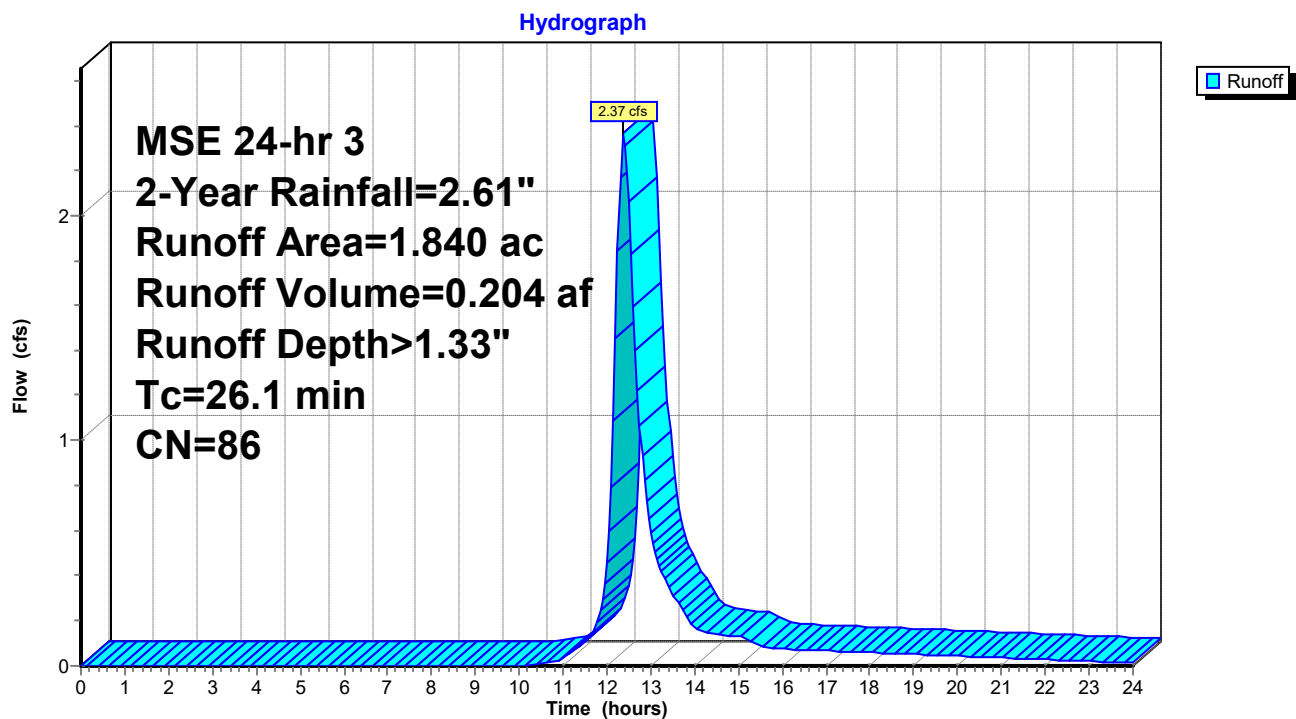
Runoff = 2.37 cfs @ 12.38 hrs, Volume= 0.204 af, Depth> 1.33"
Routed to Pond Pond : West Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.61"

Area (ac)	CN	Description
* 1.840	86	From 2016 Stormwater Inspection Report
1.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.1					Direct Entry, From 2016 Inspection Report

Subcatchment West Site: West Site



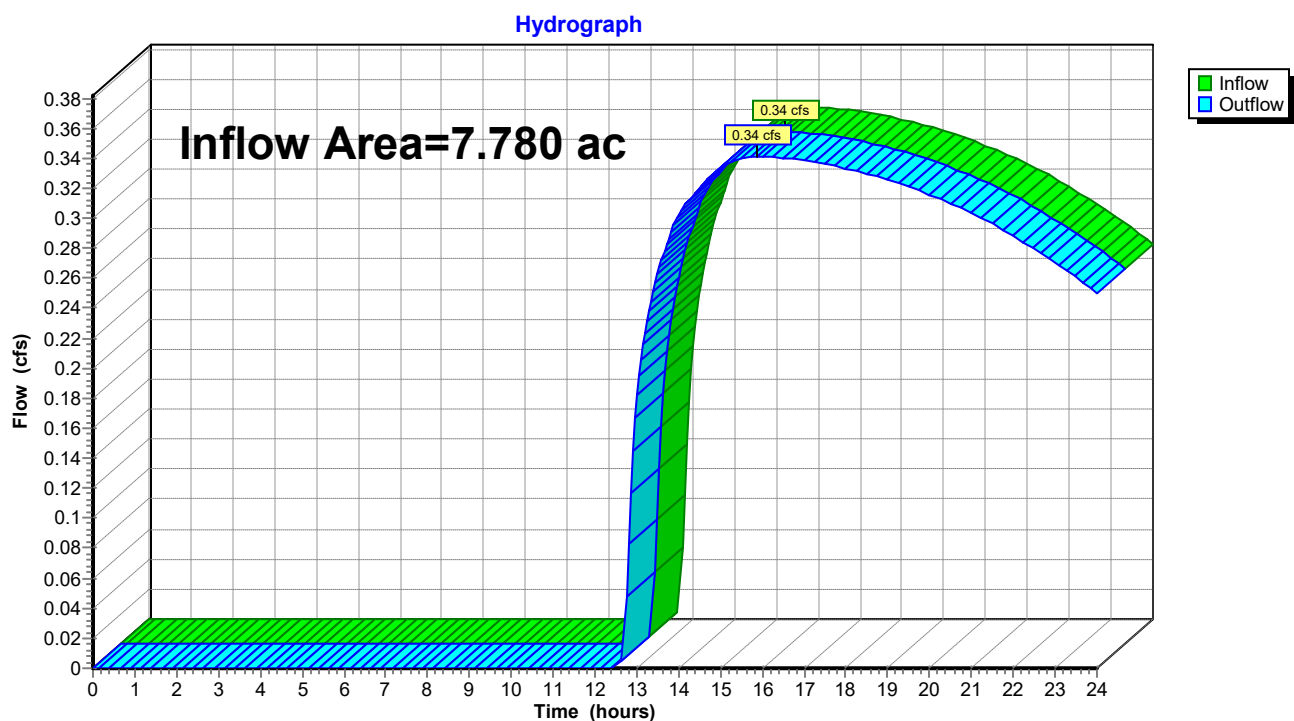
Summary for Reach Proposed: Proposed

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

Inflow Area = 7.780 ac, 0.00% Impervious, Inflow Depth > 0.44" for 2-Year event
 Inflow = 0.34 cfs @ 15.87 hrs, Volume= 0.283 af
 Outflow = 0.34 cfs @ 15.87 hrs, Volume= 0.283 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach Proposed: Proposed



Eaton Pond Inspection 10-2021

MSE 24-hr 3 2-Year Rainfall=2.61"

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Summary for Pond 2P: East Pond

Inflow Area = 5.940 ac, 0.00% Impervious, Inflow Depth > 1.47" for 2-Year event
 Inflow = 8.28 cfs @ 12.39 hrs, Volume= 0.729 af
 Outflow = 0.31 cfs @ 15.52 hrs, Volume= 0.251 af, Atten= 96%, Lag= 187.5 min
 Primary = 0.31 cfs @ 15.52 hrs, Volume= 0.251 af
 Routed to Reach Proposed : Proposed
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach Proposed : Proposed

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 793.37' @ 15.52 hrs Surf.Area= 0.291 ac Storage= 0.558 af

Plug-Flow detention time= 367.5 min calculated for 0.251 af (34% of inflow)
 Center-of-Mass det. time= 275.5 min (1,094.8 - 819.3)

Volume	Invert	Avail.Storage	Storage Description
#1	791.00'	1.922 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
791.00	0.175	0.000	0.000
792.00	0.228	0.201	0.201
793.00	0.276	0.252	0.453
794.00	0.316	0.296	0.749
795.00	0.368	0.342	1.092
796.00	0.416	0.392	1.484
797.00	0.461	0.439	1.922

Device	Routing	Invert	Outlet Devices
#1	Primary	791.14'	12.0" Round RCP_Round 12" L= 50.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 791.14' / 790.55' S= 0.0118 '/' Cc= 0.900 n= 0.014 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	787.71'	12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 2	790.59'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 3	792.67'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	796.59'	8.7' long x 50.0' 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=0.31 cfs @ 15.52 hrs HW=793.37' (Free Discharge)

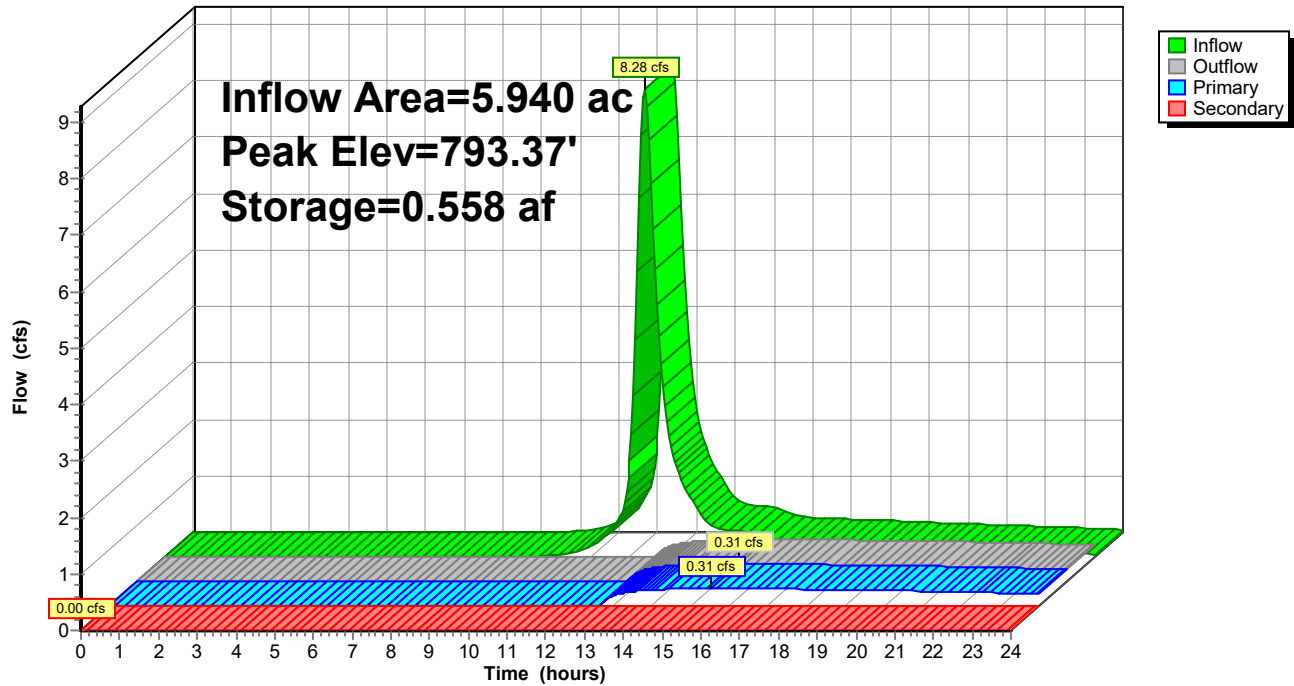
↑ **1=RCP_Round 12"** (Passes 0.31 cfs of 4.66 cfs potential flow)
 ↑ **2=Orifice/Grate** (Passes 0.31 cfs of 5.64 cfs potential flow)
 ↑ **3=Orifice/Grate** (Passes 0.31 cfs of 0.63 cfs potential flow)
 ↑ **4=Orifice/Grate** (Orifice Controls 0.31 cfs @ 3.51 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=791.00' (Free Discharge)

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

Pond 2P: East Pond

Hydrograph



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MSE 24-hr 3 2-Year Rainfall=2.61"

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Summary for Pond Pond: West Pond

Inflow Area = 1.840 ac, 0.00% Impervious, Inflow Depth > 1.33" for 2-Year event
 Inflow = 2.37 cfs @ 12.38 hrs, Volume= 0.204 af
 Outflow = 0.04 cfs @ 20.34 hrs, Volume= 0.032 af, Atten= 98%, Lag= 477.5 min
 Primary = 0.04 cfs @ 20.34 hrs, Volume= 0.032 af
 Routed to Reach Proposed : Proposed
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach Proposed : Proposed

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 795.33' @ 20.34 hrs Surf.Area= 0.158 ac Storage= 0.176 af

Plug-Flow detention time= 436.2 min calculated for 0.032 af (16% of inflow)
 Center-of-Mass det. time= 329.0 min (1,152.9 - 824.0)

Volume	Invert	Avail.Storage	Storage Description
#1	794.00'	0.993 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
794.00	0.103	0.000	0.000
795.00	0.147	0.125	0.125
796.00	0.179	0.163	0.288
797.00	0.215	0.197	0.485
798.00	0.253	0.234	0.719
799.00	0.295	0.274	0.993

Device	Routing	Invert	Outlet Devices
#1	Primary	793.51'	12.0" Round CMP_Round 12" L= 140.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 793.51' / 792.54' S= 0.0069 '/' Cc= 0.900 n= 0.014 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	793.92'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 2	795.09'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	798.83'	11.0' long x 25.0' 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=0.04 cfs @ 20.34 hrs HW=795.33' (Free Discharge)

↑ **1=CMP_Round 12"** (Passes 0.04 cfs of 3.29 cfs potential flow)

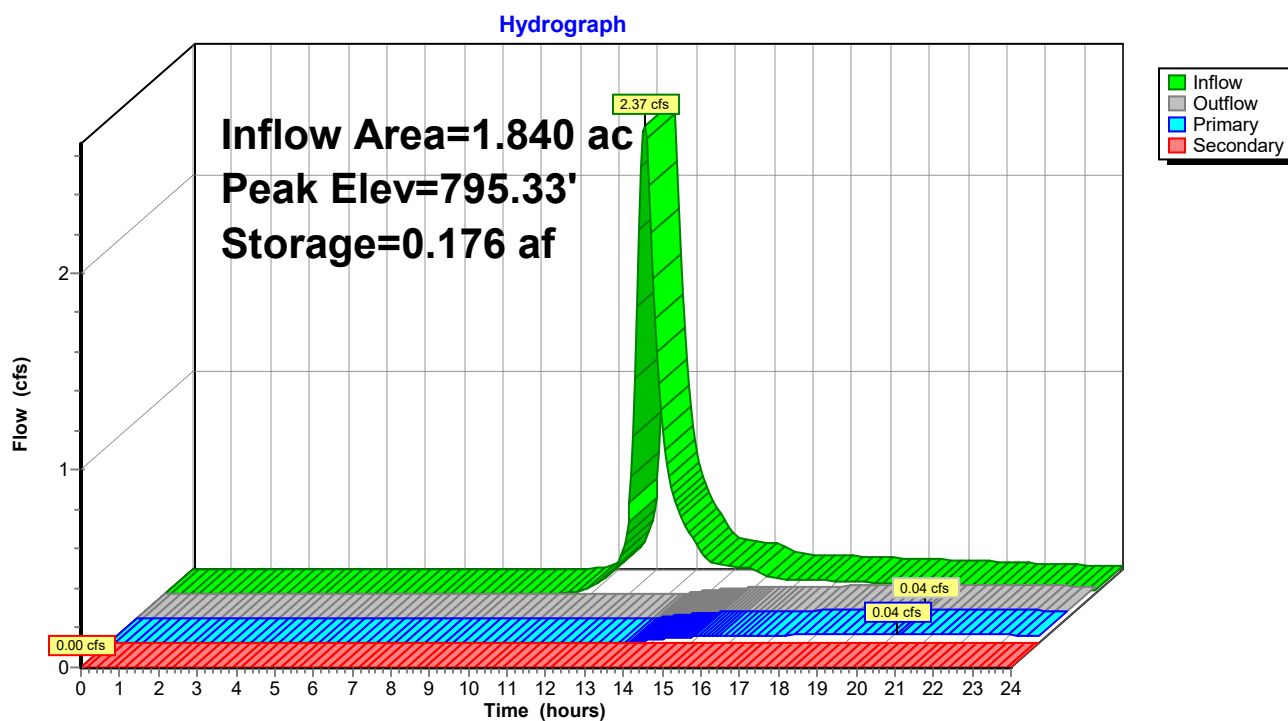
↑ **2=Orifice/Grate** (Passes 0.04 cfs of 0.12 cfs potential flow)

↑ **3=Orifice/Grate** (Orifice Controls 0.04 cfs @ 1.93 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=794.00' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond Pond: West Pond



Eaton Pond Inspection 10-2021

MSE 24-hr 3 100-Year Rainfall=6.38"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment East Site: East Site

Runoff Area=5.940 ac 0.00% Impervious Runoff Depth>4.99"
Tc=27.2 min CN=88 Runoff=27.15 cfs 2.468 af

Subcatchment West Site: West Site

Runoff Area=1.840 ac 0.00% Impervious Runoff Depth>4.76"
Tc=26.1 min CN=86 Runoff=8.31 cfs 0.731 af

Reach Proposed: Proposed

Inflow=2.60 cfs 1.124 af
Outflow=2.60 cfs 1.124 af

Pond 2P: East Pond

Peak Elev=796.76' Storage=1.812 af Inflow=27.15 cfs 2.468 af
Primary=0.83 cfs 0.775 af Secondary=1.62 cfs 0.196 af Outflow=2.45 cfs 0.971 af

Pond Pond: West Pond

Peak Elev=797.54' Storage=0.606 af Inflow=8.31 cfs 0.731 af
Primary=0.16 cfs 0.153 af Secondary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.153 af

Total Runoff Area = 7.780 ac Runoff Volume = 3.198 af Average Runoff Depth = 4.93"
100.00% Pervious = 7.780 ac 0.00% Impervious = 0.000 ac

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MSE 24-hr 3 100-Year Rainfall=6.38"

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Summary for Subcatchment East Site: East Site

Runoff = 27.15 cfs @ 12.38 hrs, Volume= 2.468 af, Depth> 4.99"
Routed to Pond 2P : East Pond

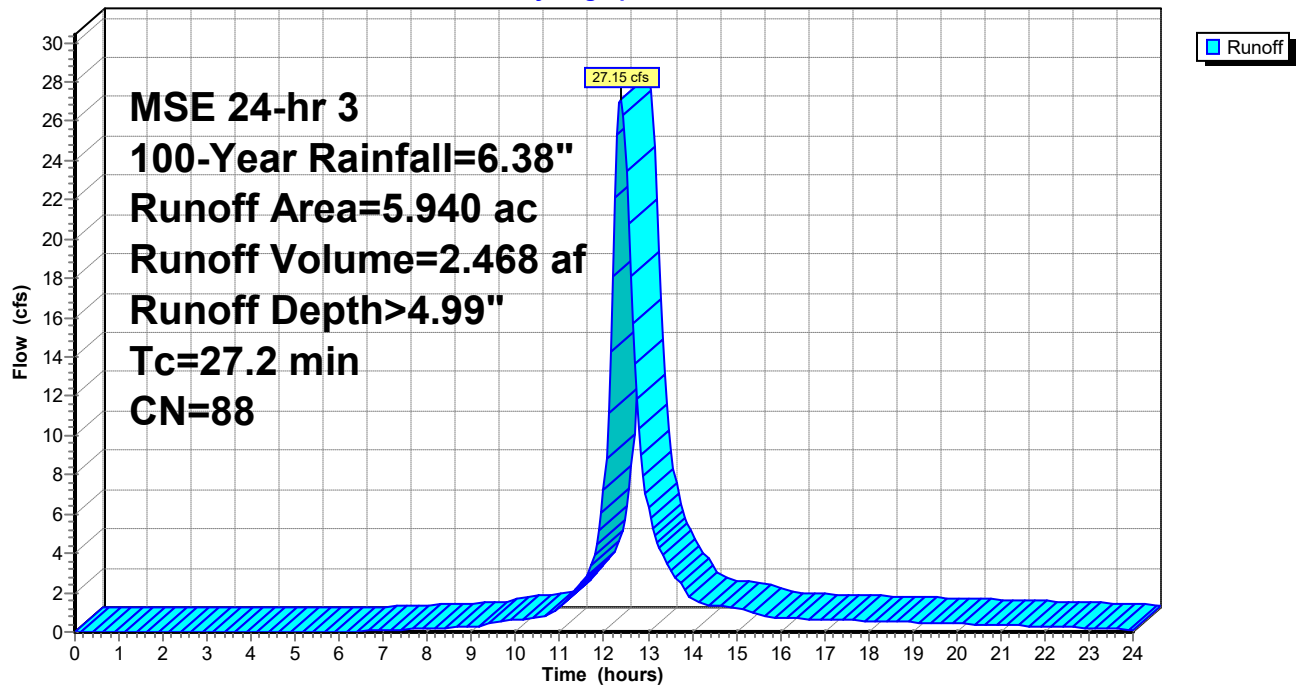
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.38"

Area (ac)	CN	Description
* 5.940	88	From 2016 Stormwater Inspection Report
5.940		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.2					Direct Entry, From 2016 Stormwater Inspection Report

Subcatchment East Site: East Site

Hydrograph



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MSE 24-hr 3 100-Year Rainfall=6.38"

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Summary for Subcatchment West Site: West Site

Runoff = 8.31 cfs @ 12.37 hrs, Volume= 0.731 af, Depth> 4.76"
Routed to Pond Pond : West Pond

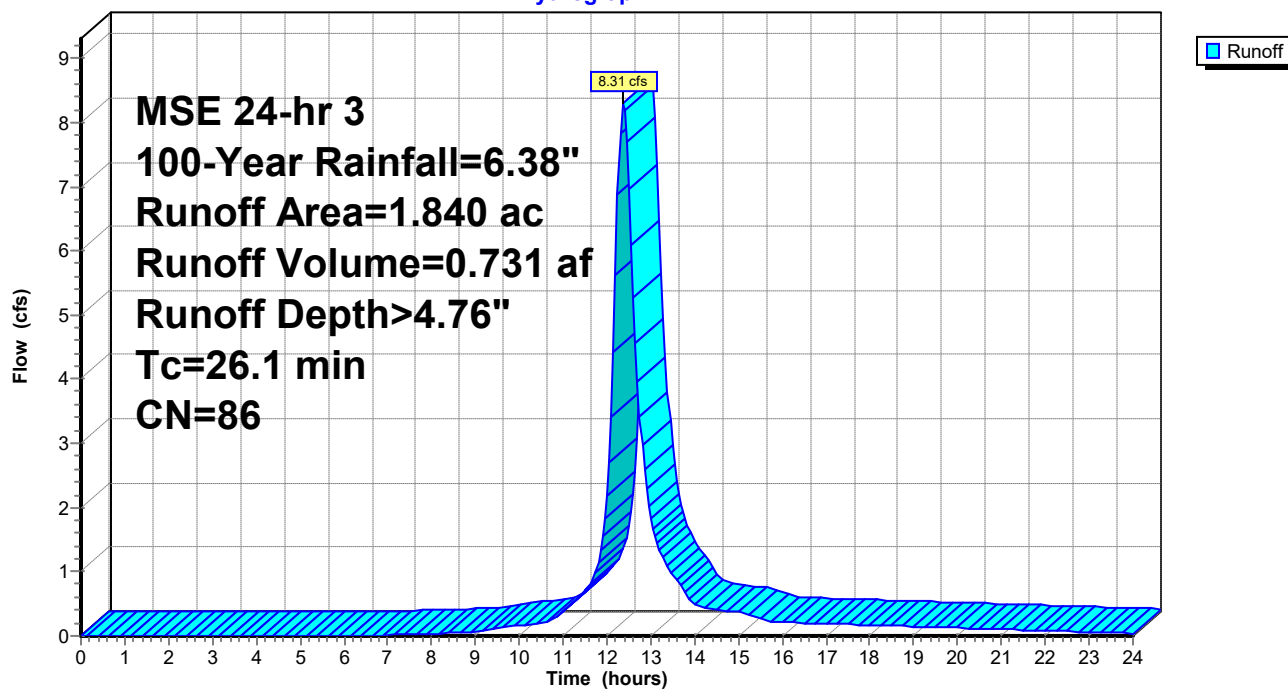
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=6.38"

Area (ac)	CN	Description
* 1.840	86	From 2016 Stormwater Inspection Report
1.840		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
26.1					Direct Entry, From 2016 Inspection Report

Subcatchment West Site: West Site

Hydrograph



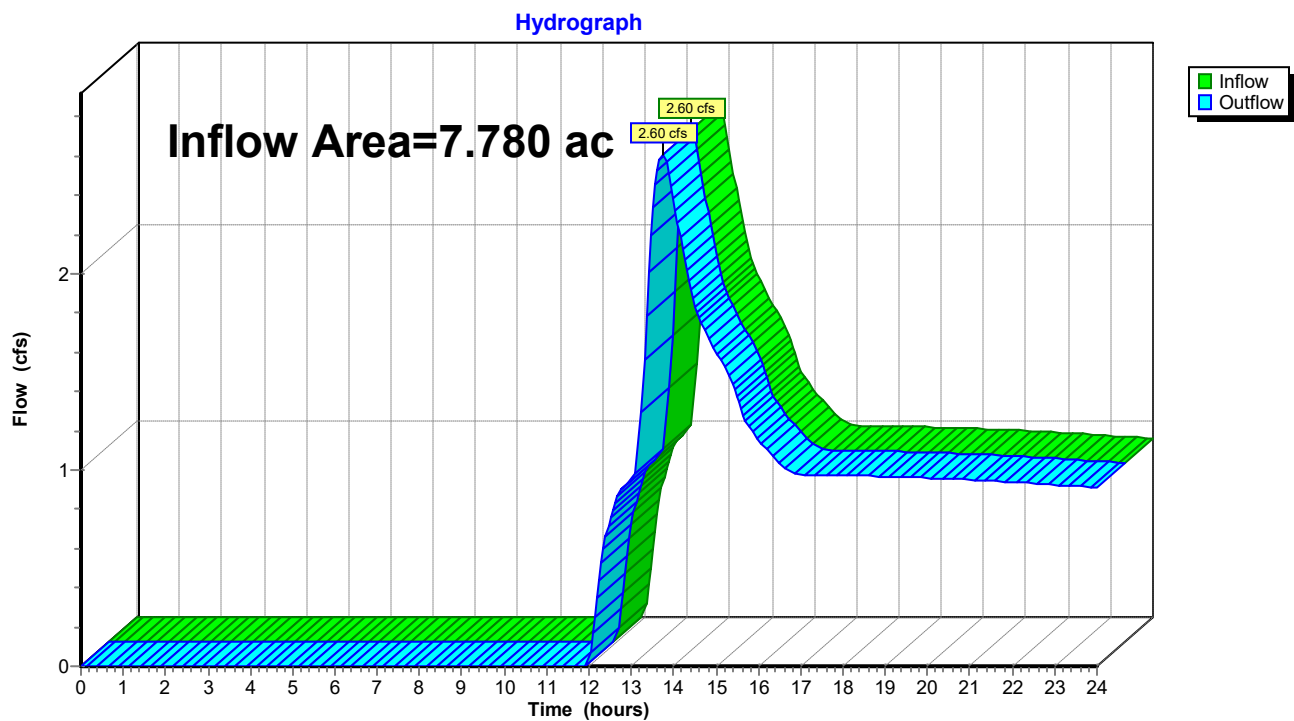
Summary for Reach Proposed: Proposed

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

Inflow Area = 7.780 ac, 0.00% Impervious, Inflow Depth > 1.73" for 100-Year event
 Inflow = 2.60 cfs @ 13.73 hrs, Volume= 1.124 af
 Outflow = 2.60 cfs @ 13.73 hrs, Volume= 1.124 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach Proposed: Proposed



Eaton Pond Inspection 10-2021

MSE 24-hr 3 100-Year Rainfall=6.38"

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Printed 10/1/2021

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Summary for Pond 2P: East Pond

Inflow Area = 5.940 ac, 0.00% Impervious, Inflow Depth > 4.99" for 100-Year event
 Inflow = 27.15 cfs @ 12.38 hrs, Volume= 2.468 af
 Outflow = 2.45 cfs @ 13.73 hrs, Volume= 0.971 af, Atten= 91%, Lag= 81.3 min
 Primary = 0.83 cfs @ 13.73 hrs, Volume= 0.775 af
 Routed to Reach Proposed : Proposed
 Secondary = 1.62 cfs @ 13.73 hrs, Volume= 0.196 af
 Routed to Reach Proposed : Proposed

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 796.76' @ 13.73 hrs Surf.Area= 0.450 ac Storage= 1.812 af

Plug-Flow detention time= 335.3 min calculated for 0.971 af (39% of inflow)
 Center-of-Mass det. time= 244.2 min (1,039.5 - 795.3)

Volume	Invert	Avail.Storage	Storage Description
#1	791.00'	1.922 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
791.00	0.175	0.000	0.000
792.00	0.228	0.201	0.201
793.00	0.276	0.252	0.453
794.00	0.316	0.296	0.749
795.00	0.368	0.342	1.092
796.00	0.416	0.392	1.484
797.00	0.461	0.439	1.922

Device	Routing	Invert	Outlet Devices
#1	Primary	791.14'	12.0" Round RCP_Round 12" L= 50.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 791.14' / 790.55' S= 0.0118 '/' Cc= 0.900 n= 0.014 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	787.71'	12.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 2	790.59'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Device 3	792.67'	4.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	796.59'	8.7' long x 50.0' 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=0.83 cfs @ 13.73 hrs HW=796.76' (Free Discharge)

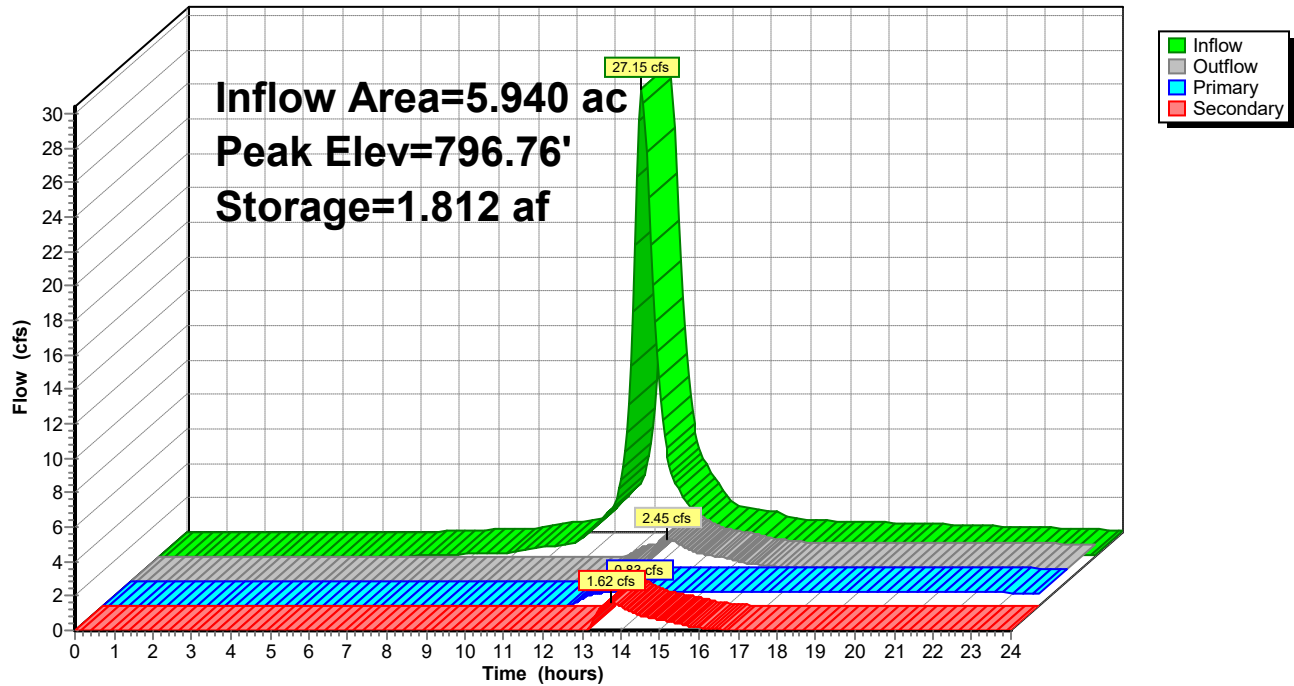
↑ **1=RCP_Round 12"** (Passes 0.83 cfs of 7.89 cfs potential flow)
 ↑ **2=Orifice/Grate** (Passes 0.83 cfs of 8.96 cfs potential flow)
 ↑ **3=Orifice/Grate** (Passes 0.83 cfs of 1.00 cfs potential flow)
 ↑ **4=Orifice/Grate** (Orifice Controls 0.83 cfs @ 9.54 fps)

Secondary OutFlow Max=1.61 cfs @ 13.73 hrs HW=796.76' (Free Discharge)

↑ **5=Broad-Crested Rectangular Weir** (Weir Controls 1.61 cfs @ 1.10 fps)

Pond 2P: East Pond

Hydrograph



Eaton Pond Inspection 10-2021

MSE 24-hr 3 100-Year Rainfall=6.38"

Prepared by Foth

Printed 10/1/2021

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Summary for Pond Pond: West Pond

Inflow Area = 1.840 ac, 0.00% Impervious, Inflow Depth > 4.76" for 100-Year event
 Inflow = 8.31 cfs @ 12.37 hrs, Volume= 0.731 af
 Outflow = 0.16 cfs @ 18.43 hrs, Volume= 0.153 af, Atten= 98%, Lag= 363.9 min
 Primary = 0.16 cfs @ 18.43 hrs, Volume= 0.153 af
 Routed to Reach Proposed : Proposed
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Reach Proposed : Proposed

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 797.54' @ 18.43 hrs Surf.Area= 0.235 ac Storage= 0.606 af

Plug-Flow detention time= 410.6 min calculated for 0.152 af (21% of inflow)
 Center-of-Mass det. time= 296.0 min (1,094.7 - 798.7)

Volume	Invert	Avail.Storage	Storage Description
#1	794.00'	0.993 af	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)
794.00	0.103	0.000	0.000
795.00	0.147	0.125	0.125
796.00	0.179	0.163	0.288
797.00	0.215	0.197	0.485
798.00	0.253	0.234	0.719
799.00	0.295	0.274	0.993

Device	Routing	Invert	Outlet Devices
#1	Primary	793.51'	12.0" Round CMP_Round 12" L= 140.0' RCP, sq.cut end projecting, Ke= 0.500 Inlet / Outlet Invert= 793.51' / 792.54' S= 0.0069 '/' Cc= 0.900 n= 0.014 Concrete pipe, finished, Flow Area= 0.79 sf
#2	Device 1	793.92'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#3	Device 2	795.09'	2.0" Vert. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	798.83'	11.0' long x 25.0' 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=0.16 cfs @ 18.43 hrs HW=797.54' (Free Discharge)

↑ **1=CMP_Round 12"** (Passes 0.16 cfs of 4.91 cfs potential flow)

↑ **2=Orifice/Grate** (Passes 0.16 cfs of 0.20 cfs potential flow)

↑ **3=Orifice/Grate** (Orifice Controls 0.16 cfs @ 7.40 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=794.00' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond Pond: West Pond

