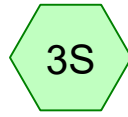
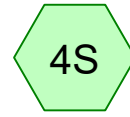




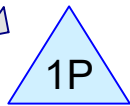
0.7 ac Impervious
(Postconstruction)



0.7 ac Pervious
(Preconstruction)



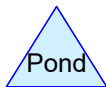
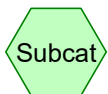
0.7 ac Impervious
(Postconstruction w/o
BMPs)



Managed Release Rain
Garden



Managed Release Rain
Garden



Routing Diagram for MRC Example 2

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MRC Example 2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.700	74	Meadow, non-grazed, HSG C (3S)
1.400	98	Paved roads w/curbs & sewers, HSG B (1S, 4S)
2.100	90	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
1.400	HSG B	1S, 4S
0.700	HSG C	3S
0.000	HSG D	
0.000	Other	
2.100		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	Subcatchment Numbers
0.000	0.000	0.700	0.000	0.000	0.700	Meadow, non-grazed	3S
0.000	1.400	0.000	0.000	0.000	1.400	Paved roads w/curbs & sewers	1S, 4S
0.000	1.400	0.700	0.000	0.000	2.100	TOTAL AREA	

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1P	-2.51	-2.52	1.0	0.0100	0.011	24.0	0.0	0.0

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Notes Listing (all nodes)

Line#	Node Number	Notes
1	1P	50% IWS routing modeled with a $0.30 \times 50\% = 0.15$ void space
2	2P	50% IWS routing modeled with a $0.30 \times 50\% = 0.15$ void space

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Time span=0.00-300.00 hrs, dt=0.01 hrs, 30001 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=1.00"
Tc=6.0 min CN=0/98 Runoff=1.98 cfs 0.058 af

Subcatchment3S: 0.7 ac Pervious Runoff Area=30,492 sf 0.00% Impervious Runoff Depth=0.06"
Tc=15.0 min CN=74/0 Runoff=0.07 cfs 0.004 af

Subcatchment4S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=1.00"
Tc=6.0 min CN=0/98 Runoff=1.98 cfs 0.058 af

Pond 1P: Managed Release Rain Garden Peak Elev=0.21' Storage=2,496 cf Inflow=1.98 cfs 0.058 af
Outflow=0.01 cfs 0.047 af

Pond 2P: Managed Release Rain Garden Peak Elev=-2.45' Storage=96 cf Inflow=0.01 cfs 0.047 af
Primary=0.01 cfs 0.047 af Secondary=0.00 cfs 0.000 af Outflow=0.01 cfs 0.047 af

Total Runoff Area = 2.100 ac Runoff Volume = 0.120 af Average Runoff Depth = 0.68"
33.33% Pervious = 0.700 ac 66.67% Impervious = 1.400 ac

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Summary for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Runoff = 1.98 cfs @ 1.11 hrs, Volume= 0.058 af, Depth= 1.00"

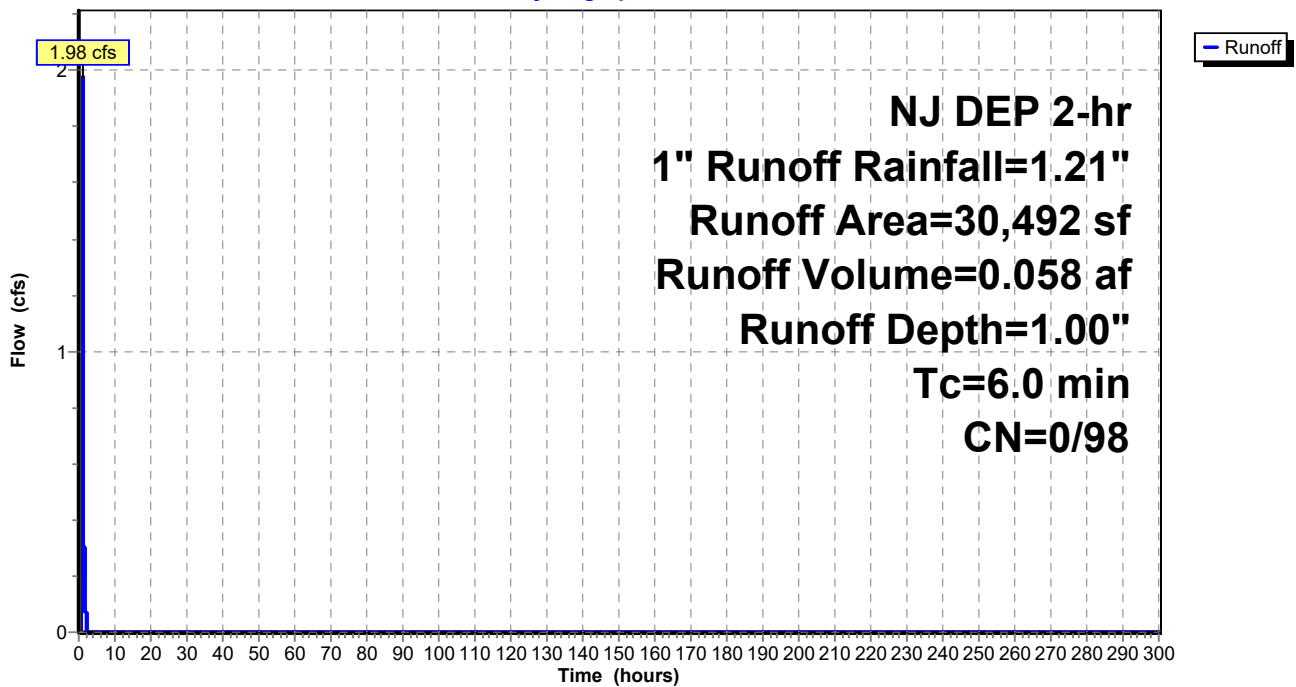
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 NJ DEP 2-hr 1" Runoff Rainfall=1.21"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Hydrograph



MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.60	0.00	0.41	1.25
2.00	1.21	0.00	1.00	0.07
3.00	1.21	0.00	1.00	0.00
4.00	1.21	0.00	1.00	0.00
5.00	1.21	0.00	1.00	0.00
6.00	1.21	0.00	1.00	0.00
7.00	1.21	0.00	1.00	0.00
8.00	1.21	0.00	1.00	0.00
9.00	1.21	0.00	1.00	0.00
10.00	1.21	0.00	1.00	0.00
11.00	1.21	0.00	1.00	0.00
12.00	1.21	0.00	1.00	0.00
13.00	1.21	0.00	1.00	0.00
14.00	1.21	0.00	1.00	0.00
15.00	1.21	0.00	1.00	0.00
16.00	1.21	0.00	1.00	0.00
17.00	1.21	0.00	1.00	0.00
18.00	1.21	0.00	1.00	0.00
19.00	1.21	0.00	1.00	0.00
20.00	1.21	0.00	1.00	0.00
21.00	1.21	0.00	1.00	0.00
22.00	1.21	0.00	1.00	0.00
23.00	1.21	0.00	1.00	0.00
24.00	1.21	0.00	1.00	0.00
25.00	1.21	0.00	1.00	0.00
26.00	1.21	0.00	1.00	0.00
27.00	1.21	0.00	1.00	0.00
28.00	1.21	0.00	1.00	0.00
29.00	1.21	0.00	1.00	0.00
30.00	1.21	0.00	1.00	0.00
31.00	1.21	0.00	1.00	0.00
32.00	1.21	0.00	1.00	0.00
33.00	1.21	0.00	1.00	0.00
34.00	1.21	0.00	1.00	0.00
35.00	1.21	0.00	1.00	0.00
36.00	1.21	0.00	1.00	0.00
37.00	1.21	0.00	1.00	0.00
38.00	1.21	0.00	1.00	0.00
39.00	1.21	0.00	1.00	0.00
40.00	1.21	0.00	1.00	0.00
41.00	1.21	0.00	1.00	0.00
42.00	1.21	0.00	1.00	0.00
43.00	1.21	0.00	1.00	0.00
44.00	1.21	0.00	1.00	0.00
45.00	1.21	0.00	1.00	0.00
46.00	1.21	0.00	1.00	0.00
47.00	1.21	0.00	1.00	0.00
48.00	1.21	0.00	1.00	0.00
49.00	1.21	0.00	1.00	0.00
50.00	1.21	0.00	1.00	0.00
51.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	1.21	0.00	1.00	0.00
53.00	1.21	0.00	1.00	0.00
54.00	1.21	0.00	1.00	0.00
55.00	1.21	0.00	1.00	0.00
56.00	1.21	0.00	1.00	0.00
57.00	1.21	0.00	1.00	0.00
58.00	1.21	0.00	1.00	0.00
59.00	1.21	0.00	1.00	0.00
60.00	1.21	0.00	1.00	0.00
61.00	1.21	0.00	1.00	0.00
62.00	1.21	0.00	1.00	0.00
63.00	1.21	0.00	1.00	0.00
64.00	1.21	0.00	1.00	0.00
65.00	1.21	0.00	1.00	0.00
66.00	1.21	0.00	1.00	0.00
67.00	1.21	0.00	1.00	0.00
68.00	1.21	0.00	1.00	0.00
69.00	1.21	0.00	1.00	0.00
70.00	1.21	0.00	1.00	0.00
71.00	1.21	0.00	1.00	0.00
72.00	1.21	0.00	1.00	0.00
73.00	1.21	0.00	1.00	0.00
74.00	1.21	0.00	1.00	0.00
75.00	1.21	0.00	1.00	0.00
76.00	1.21	0.00	1.00	0.00
77.00	1.21	0.00	1.00	0.00
78.00	1.21	0.00	1.00	0.00
79.00	1.21	0.00	1.00	0.00
80.00	1.21	0.00	1.00	0.00
81.00	1.21	0.00	1.00	0.00
82.00	1.21	0.00	1.00	0.00
83.00	1.21	0.00	1.00	0.00
84.00	1.21	0.00	1.00	0.00
85.00	1.21	0.00	1.00	0.00
86.00	1.21	0.00	1.00	0.00
87.00	1.21	0.00	1.00	0.00
88.00	1.21	0.00	1.00	0.00
89.00	1.21	0.00	1.00	0.00
90.00	1.21	0.00	1.00	0.00
91.00	1.21	0.00	1.00	0.00
92.00	1.21	0.00	1.00	0.00
93.00	1.21	0.00	1.00	0.00
94.00	1.21	0.00	1.00	0.00
95.00	1.21	0.00	1.00	0.00
96.00	1.21	0.00	1.00	0.00
97.00	1.21	0.00	1.00	0.00
98.00	1.21	0.00	1.00	0.00
99.00	1.21	0.00	1.00	0.00
100.00	1.21	0.00	1.00	0.00
101.00	1.21	0.00	1.00	0.00
102.00	1.21	0.00	1.00	0.00
103.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	1.21	0.00	1.00	0.00
105.00	1.21	0.00	1.00	0.00
106.00	1.21	0.00	1.00	0.00
107.00	1.21	0.00	1.00	0.00
108.00	1.21	0.00	1.00	0.00
109.00	1.21	0.00	1.00	0.00
110.00	1.21	0.00	1.00	0.00
111.00	1.21	0.00	1.00	0.00
112.00	1.21	0.00	1.00	0.00
113.00	1.21	0.00	1.00	0.00
114.00	1.21	0.00	1.00	0.00
115.00	1.21	0.00	1.00	0.00
116.00	1.21	0.00	1.00	0.00
117.00	1.21	0.00	1.00	0.00
118.00	1.21	0.00	1.00	0.00
119.00	1.21	0.00	1.00	0.00
120.00	1.21	0.00	1.00	0.00
121.00	1.21	0.00	1.00	0.00
122.00	1.21	0.00	1.00	0.00
123.00	1.21	0.00	1.00	0.00
124.00	1.21	0.00	1.00	0.00
125.00	1.21	0.00	1.00	0.00
126.00	1.21	0.00	1.00	0.00
127.00	1.21	0.00	1.00	0.00
128.00	1.21	0.00	1.00	0.00
129.00	1.21	0.00	1.00	0.00
130.00	1.21	0.00	1.00	0.00
131.00	1.21	0.00	1.00	0.00
132.00	1.21	0.00	1.00	0.00
133.00	1.21	0.00	1.00	0.00
134.00	1.21	0.00	1.00	0.00
135.00	1.21	0.00	1.00	0.00
136.00	1.21	0.00	1.00	0.00
137.00	1.21	0.00	1.00	0.00
138.00	1.21	0.00	1.00	0.00
139.00	1.21	0.00	1.00	0.00
140.00	1.21	0.00	1.00	0.00
141.00	1.21	0.00	1.00	0.00
142.00	1.21	0.00	1.00	0.00
143.00	1.21	0.00	1.00	0.00
144.00	1.21	0.00	1.00	0.00
145.00	1.21	0.00	1.00	0.00
146.00	1.21	0.00	1.00	0.00
147.00	1.21	0.00	1.00	0.00
148.00	1.21	0.00	1.00	0.00
149.00	1.21	0.00	1.00	0.00
150.00	1.21	0.00	1.00	0.00
151.00	1.21	0.00	1.00	0.00
152.00	1.21	0.00	1.00	0.00
153.00	1.21	0.00	1.00	0.00
154.00	1.21	0.00	1.00	0.00
155.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	1.21	0.00	1.00	0.00
157.00	1.21	0.00	1.00	0.00
158.00	1.21	0.00	1.00	0.00
159.00	1.21	0.00	1.00	0.00
160.00	1.21	0.00	1.00	0.00
161.00	1.21	0.00	1.00	0.00
162.00	1.21	0.00	1.00	0.00
163.00	1.21	0.00	1.00	0.00
164.00	1.21	0.00	1.00	0.00
165.00	1.21	0.00	1.00	0.00
166.00	1.21	0.00	1.00	0.00
167.00	1.21	0.00	1.00	0.00
168.00	1.21	0.00	1.00	0.00
169.00	1.21	0.00	1.00	0.00
170.00	1.21	0.00	1.00	0.00
171.00	1.21	0.00	1.00	0.00
172.00	1.21	0.00	1.00	0.00
173.00	1.21	0.00	1.00	0.00
174.00	1.21	0.00	1.00	0.00
175.00	1.21	0.00	1.00	0.00
176.00	1.21	0.00	1.00	0.00
177.00	1.21	0.00	1.00	0.00
178.00	1.21	0.00	1.00	0.00
179.00	1.21	0.00	1.00	0.00
180.00	1.21	0.00	1.00	0.00
181.00	1.21	0.00	1.00	0.00
182.00	1.21	0.00	1.00	0.00
183.00	1.21	0.00	1.00	0.00
184.00	1.21	0.00	1.00	0.00
185.00	1.21	0.00	1.00	0.00
186.00	1.21	0.00	1.00	0.00
187.00	1.21	0.00	1.00	0.00
188.00	1.21	0.00	1.00	0.00
189.00	1.21	0.00	1.00	0.00
190.00	1.21	0.00	1.00	0.00
191.00	1.21	0.00	1.00	0.00
192.00	1.21	0.00	1.00	0.00
193.00	1.21	0.00	1.00	0.00
194.00	1.21	0.00	1.00	0.00
195.00	1.21	0.00	1.00	0.00
196.00	1.21	0.00	1.00	0.00
197.00	1.21	0.00	1.00	0.00
198.00	1.21	0.00	1.00	0.00
199.00	1.21	0.00	1.00	0.00
200.00	1.21	0.00	1.00	0.00
201.00	1.21	0.00	1.00	0.00
202.00	1.21	0.00	1.00	0.00
203.00	1.21	0.00	1.00	0.00
204.00	1.21	0.00	1.00	0.00
205.00	1.21	0.00	1.00	0.00
206.00	1.21	0.00	1.00	0.00
207.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	1.21	0.00	1.00	0.00
209.00	1.21	0.00	1.00	0.00
210.00	1.21	0.00	1.00	0.00
211.00	1.21	0.00	1.00	0.00
212.00	1.21	0.00	1.00	0.00
213.00	1.21	0.00	1.00	0.00
214.00	1.21	0.00	1.00	0.00
215.00	1.21	0.00	1.00	0.00
216.00	1.21	0.00	1.00	0.00
217.00	1.21	0.00	1.00	0.00
218.00	1.21	0.00	1.00	0.00
219.00	1.21	0.00	1.00	0.00
220.00	1.21	0.00	1.00	0.00
221.00	1.21	0.00	1.00	0.00
222.00	1.21	0.00	1.00	0.00
223.00	1.21	0.00	1.00	0.00
224.00	1.21	0.00	1.00	0.00
225.00	1.21	0.00	1.00	0.00
226.00	1.21	0.00	1.00	0.00
227.00	1.21	0.00	1.00	0.00
228.00	1.21	0.00	1.00	0.00
229.00	1.21	0.00	1.00	0.00
230.00	1.21	0.00	1.00	0.00
231.00	1.21	0.00	1.00	0.00
232.00	1.21	0.00	1.00	0.00
233.00	1.21	0.00	1.00	0.00
234.00	1.21	0.00	1.00	0.00
235.00	1.21	0.00	1.00	0.00
236.00	1.21	0.00	1.00	0.00
237.00	1.21	0.00	1.00	0.00
238.00	1.21	0.00	1.00	0.00
239.00	1.21	0.00	1.00	0.00
240.00	1.21	0.00	1.00	0.00
241.00	1.21	0.00	1.00	0.00
242.00	1.21	0.00	1.00	0.00
243.00	1.21	0.00	1.00	0.00
244.00	1.21	0.00	1.00	0.00
245.00	1.21	0.00	1.00	0.00
246.00	1.21	0.00	1.00	0.00
247.00	1.21	0.00	1.00	0.00
248.00	1.21	0.00	1.00	0.00
249.00	1.21	0.00	1.00	0.00
250.00	1.21	0.00	1.00	0.00
251.00	1.21	0.00	1.00	0.00
252.00	1.21	0.00	1.00	0.00
253.00	1.21	0.00	1.00	0.00
254.00	1.21	0.00	1.00	0.00
255.00	1.21	0.00	1.00	0.00
256.00	1.21	0.00	1.00	0.00
257.00	1.21	0.00	1.00	0.00
258.00	1.21	0.00	1.00	0.00
259.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	1.21	0.00	1.00	0.00
261.00	1.21	0.00	1.00	0.00
262.00	1.21	0.00	1.00	0.00
263.00	1.21	0.00	1.00	0.00
264.00	1.21	0.00	1.00	0.00
265.00	1.21	0.00	1.00	0.00
266.00	1.21	0.00	1.00	0.00
267.00	1.21	0.00	1.00	0.00
268.00	1.21	0.00	1.00	0.00
269.00	1.21	0.00	1.00	0.00
270.00	1.21	0.00	1.00	0.00
271.00	1.21	0.00	1.00	0.00
272.00	1.21	0.00	1.00	0.00
273.00	1.21	0.00	1.00	0.00
274.00	1.21	0.00	1.00	0.00
275.00	1.21	0.00	1.00	0.00
276.00	1.21	0.00	1.00	0.00
277.00	1.21	0.00	1.00	0.00
278.00	1.21	0.00	1.00	0.00
279.00	1.21	0.00	1.00	0.00
280.00	1.21	0.00	1.00	0.00
281.00	1.21	0.00	1.00	0.00
282.00	1.21	0.00	1.00	0.00
283.00	1.21	0.00	1.00	0.00
284.00	1.21	0.00	1.00	0.00
285.00	1.21	0.00	1.00	0.00
286.00	1.21	0.00	1.00	0.00
287.00	1.21	0.00	1.00	0.00
288.00	1.21	0.00	1.00	0.00
289.00	1.21	0.00	1.00	0.00
290.00	1.21	0.00	1.00	0.00
291.00	1.21	0.00	1.00	0.00
292.00	1.21	0.00	1.00	0.00
293.00	1.21	0.00	1.00	0.00
294.00	1.21	0.00	1.00	0.00
295.00	1.21	0.00	1.00	0.00
296.00	1.21	0.00	1.00	0.00
297.00	1.21	0.00	1.00	0.00
298.00	1.21	0.00	1.00	0.00
299.00	1.21	0.00	1.00	0.00
300.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

Prepared by VU for PADEP

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Summary for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Runoff = 0.07 cfs @ 1.35 hrs, Volume= 0.004 af, Depth= 0.06"

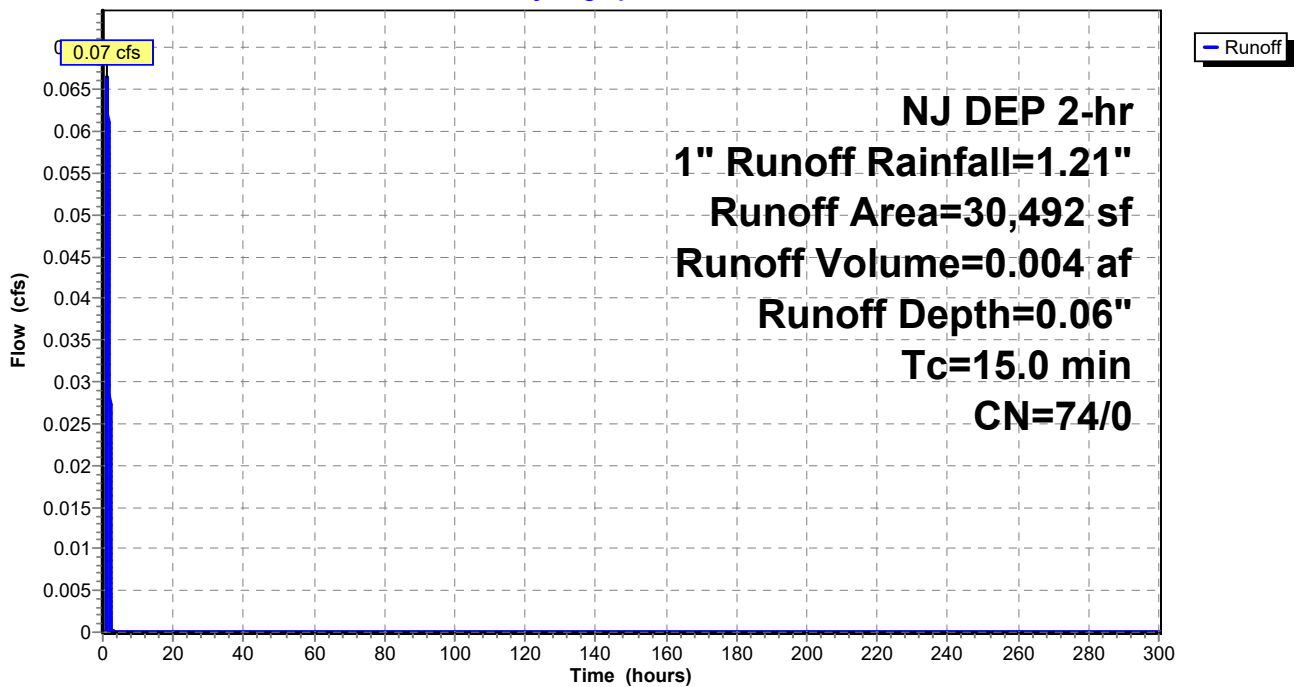
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 NJ DEP 2-hr 1" Runoff Rainfall=1.21"

Area (sf)	CN	Description
* 30,492	74	Meadow, non-grazed, HSG C
30,492	74	100.00% Pervious Area

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

Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Hydrograph



MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.60	0.00	0.00	0.00
2.00	1.21	0.06	0.00	0.03
3.00	1.21	0.06	0.00	0.00
4.00	1.21	0.06	0.00	0.00
5.00	1.21	0.06	0.00	0.00
6.00	1.21	0.06	0.00	0.00
7.00	1.21	0.06	0.00	0.00
8.00	1.21	0.06	0.00	0.00
9.00	1.21	0.06	0.00	0.00
10.00	1.21	0.06	0.00	0.00
11.00	1.21	0.06	0.00	0.00
12.00	1.21	0.06	0.00	0.00
13.00	1.21	0.06	0.00	0.00
14.00	1.21	0.06	0.00	0.00
15.00	1.21	0.06	0.00	0.00
16.00	1.21	0.06	0.00	0.00
17.00	1.21	0.06	0.00	0.00
18.00	1.21	0.06	0.00	0.00
19.00	1.21	0.06	0.00	0.00
20.00	1.21	0.06	0.00	0.00
21.00	1.21	0.06	0.00	0.00
22.00	1.21	0.06	0.00	0.00
23.00	1.21	0.06	0.00	0.00
24.00	1.21	0.06	0.00	0.00
25.00	1.21	0.06	0.00	0.00
26.00	1.21	0.06	0.00	0.00
27.00	1.21	0.06	0.00	0.00
28.00	1.21	0.06	0.00	0.00
29.00	1.21	0.06	0.00	0.00
30.00	1.21	0.06	0.00	0.00
31.00	1.21	0.06	0.00	0.00
32.00	1.21	0.06	0.00	0.00
33.00	1.21	0.06	0.00	0.00
34.00	1.21	0.06	0.00	0.00
35.00	1.21	0.06	0.00	0.00
36.00	1.21	0.06	0.00	0.00
37.00	1.21	0.06	0.00	0.00
38.00	1.21	0.06	0.00	0.00
39.00	1.21	0.06	0.00	0.00
40.00	1.21	0.06	0.00	0.00
41.00	1.21	0.06	0.00	0.00
42.00	1.21	0.06	0.00	0.00
43.00	1.21	0.06	0.00	0.00
44.00	1.21	0.06	0.00	0.00
45.00	1.21	0.06	0.00	0.00
46.00	1.21	0.06	0.00	0.00
47.00	1.21	0.06	0.00	0.00
48.00	1.21	0.06	0.00	0.00
49.00	1.21	0.06	0.00	0.00
50.00	1.21	0.06	0.00	0.00
51.00	1.21	0.06	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	1.21	0.06	0.00	0.00
53.00	1.21	0.06	0.00	0.00
54.00	1.21	0.06	0.00	0.00
55.00	1.21	0.06	0.00	0.00
56.00	1.21	0.06	0.00	0.00
57.00	1.21	0.06	0.00	0.00
58.00	1.21	0.06	0.00	0.00
59.00	1.21	0.06	0.00	0.00
60.00	1.21	0.06	0.00	0.00
61.00	1.21	0.06	0.00	0.00
62.00	1.21	0.06	0.00	0.00
63.00	1.21	0.06	0.00	0.00
64.00	1.21	0.06	0.00	0.00
65.00	1.21	0.06	0.00	0.00
66.00	1.21	0.06	0.00	0.00
67.00	1.21	0.06	0.00	0.00
68.00	1.21	0.06	0.00	0.00
69.00	1.21	0.06	0.00	0.00
70.00	1.21	0.06	0.00	0.00
71.00	1.21	0.06	0.00	0.00
72.00	1.21	0.06	0.00	0.00
73.00	1.21	0.06	0.00	0.00
74.00	1.21	0.06	0.00	0.00
75.00	1.21	0.06	0.00	0.00
76.00	1.21	0.06	0.00	0.00
77.00	1.21	0.06	0.00	0.00
78.00	1.21	0.06	0.00	0.00
79.00	1.21	0.06	0.00	0.00
80.00	1.21	0.06	0.00	0.00
81.00	1.21	0.06	0.00	0.00
82.00	1.21	0.06	0.00	0.00
83.00	1.21	0.06	0.00	0.00
84.00	1.21	0.06	0.00	0.00
85.00	1.21	0.06	0.00	0.00
86.00	1.21	0.06	0.00	0.00
87.00	1.21	0.06	0.00	0.00
88.00	1.21	0.06	0.00	0.00
89.00	1.21	0.06	0.00	0.00
90.00	1.21	0.06	0.00	0.00
91.00	1.21	0.06	0.00	0.00
92.00	1.21	0.06	0.00	0.00
93.00	1.21	0.06	0.00	0.00
94.00	1.21	0.06	0.00	0.00
95.00	1.21	0.06	0.00	0.00
96.00	1.21	0.06	0.00	0.00
97.00	1.21	0.06	0.00	0.00
98.00	1.21	0.06	0.00	0.00
99.00	1.21	0.06	0.00	0.00
100.00	1.21	0.06	0.00	0.00
101.00	1.21	0.06	0.00	0.00
102.00	1.21	0.06	0.00	0.00
103.00	1.21	0.06	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	1.21	0.06	0.00	0.00
105.00	1.21	0.06	0.00	0.00
106.00	1.21	0.06	0.00	0.00
107.00	1.21	0.06	0.00	0.00
108.00	1.21	0.06	0.00	0.00
109.00	1.21	0.06	0.00	0.00
110.00	1.21	0.06	0.00	0.00
111.00	1.21	0.06	0.00	0.00
112.00	1.21	0.06	0.00	0.00
113.00	1.21	0.06	0.00	0.00
114.00	1.21	0.06	0.00	0.00
115.00	1.21	0.06	0.00	0.00
116.00	1.21	0.06	0.00	0.00
117.00	1.21	0.06	0.00	0.00
118.00	1.21	0.06	0.00	0.00
119.00	1.21	0.06	0.00	0.00
120.00	1.21	0.06	0.00	0.00
121.00	1.21	0.06	0.00	0.00
122.00	1.21	0.06	0.00	0.00
123.00	1.21	0.06	0.00	0.00
124.00	1.21	0.06	0.00	0.00
125.00	1.21	0.06	0.00	0.00
126.00	1.21	0.06	0.00	0.00
127.00	1.21	0.06	0.00	0.00
128.00	1.21	0.06	0.00	0.00
129.00	1.21	0.06	0.00	0.00
130.00	1.21	0.06	0.00	0.00
131.00	1.21	0.06	0.00	0.00
132.00	1.21	0.06	0.00	0.00
133.00	1.21	0.06	0.00	0.00
134.00	1.21	0.06	0.00	0.00
135.00	1.21	0.06	0.00	0.00
136.00	1.21	0.06	0.00	0.00
137.00	1.21	0.06	0.00	0.00
138.00	1.21	0.06	0.00	0.00
139.00	1.21	0.06	0.00	0.00
140.00	1.21	0.06	0.00	0.00
141.00	1.21	0.06	0.00	0.00
142.00	1.21	0.06	0.00	0.00
143.00	1.21	0.06	0.00	0.00
144.00	1.21	0.06	0.00	0.00
145.00	1.21	0.06	0.00	0.00
146.00	1.21	0.06	0.00	0.00
147.00	1.21	0.06	0.00	0.00
148.00	1.21	0.06	0.00	0.00
149.00	1.21	0.06	0.00	0.00
150.00	1.21	0.06	0.00	0.00
151.00	1.21	0.06	0.00	0.00
152.00	1.21	0.06	0.00	0.00
153.00	1.21	0.06	0.00	0.00
154.00	1.21	0.06	0.00	0.00
155.00	1.21	0.06	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	1.21	0.06	0.00	0.00
157.00	1.21	0.06	0.00	0.00
158.00	1.21	0.06	0.00	0.00
159.00	1.21	0.06	0.00	0.00
160.00	1.21	0.06	0.00	0.00
161.00	1.21	0.06	0.00	0.00
162.00	1.21	0.06	0.00	0.00
163.00	1.21	0.06	0.00	0.00
164.00	1.21	0.06	0.00	0.00
165.00	1.21	0.06	0.00	0.00
166.00	1.21	0.06	0.00	0.00
167.00	1.21	0.06	0.00	0.00
168.00	1.21	0.06	0.00	0.00
169.00	1.21	0.06	0.00	0.00
170.00	1.21	0.06	0.00	0.00
171.00	1.21	0.06	0.00	0.00
172.00	1.21	0.06	0.00	0.00
173.00	1.21	0.06	0.00	0.00
174.00	1.21	0.06	0.00	0.00
175.00	1.21	0.06	0.00	0.00
176.00	1.21	0.06	0.00	0.00
177.00	1.21	0.06	0.00	0.00
178.00	1.21	0.06	0.00	0.00
179.00	1.21	0.06	0.00	0.00
180.00	1.21	0.06	0.00	0.00
181.00	1.21	0.06	0.00	0.00
182.00	1.21	0.06	0.00	0.00
183.00	1.21	0.06	0.00	0.00
184.00	1.21	0.06	0.00	0.00
185.00	1.21	0.06	0.00	0.00
186.00	1.21	0.06	0.00	0.00
187.00	1.21	0.06	0.00	0.00
188.00	1.21	0.06	0.00	0.00
189.00	1.21	0.06	0.00	0.00
190.00	1.21	0.06	0.00	0.00
191.00	1.21	0.06	0.00	0.00
192.00	1.21	0.06	0.00	0.00
193.00	1.21	0.06	0.00	0.00
194.00	1.21	0.06	0.00	0.00
195.00	1.21	0.06	0.00	0.00
196.00	1.21	0.06	0.00	0.00
197.00	1.21	0.06	0.00	0.00
198.00	1.21	0.06	0.00	0.00
199.00	1.21	0.06	0.00	0.00
200.00	1.21	0.06	0.00	0.00
201.00	1.21	0.06	0.00	0.00
202.00	1.21	0.06	0.00	0.00
203.00	1.21	0.06	0.00	0.00
204.00	1.21	0.06	0.00	0.00
205.00	1.21	0.06	0.00	0.00
206.00	1.21	0.06	0.00	0.00
207.00	1.21	0.06	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	1.21	0.06	0.00	0.00
209.00	1.21	0.06	0.00	0.00
210.00	1.21	0.06	0.00	0.00
211.00	1.21	0.06	0.00	0.00
212.00	1.21	0.06	0.00	0.00
213.00	1.21	0.06	0.00	0.00
214.00	1.21	0.06	0.00	0.00
215.00	1.21	0.06	0.00	0.00
216.00	1.21	0.06	0.00	0.00
217.00	1.21	0.06	0.00	0.00
218.00	1.21	0.06	0.00	0.00
219.00	1.21	0.06	0.00	0.00
220.00	1.21	0.06	0.00	0.00
221.00	1.21	0.06	0.00	0.00
222.00	1.21	0.06	0.00	0.00
223.00	1.21	0.06	0.00	0.00
224.00	1.21	0.06	0.00	0.00
225.00	1.21	0.06	0.00	0.00
226.00	1.21	0.06	0.00	0.00
227.00	1.21	0.06	0.00	0.00
228.00	1.21	0.06	0.00	0.00
229.00	1.21	0.06	0.00	0.00
230.00	1.21	0.06	0.00	0.00
231.00	1.21	0.06	0.00	0.00
232.00	1.21	0.06	0.00	0.00
233.00	1.21	0.06	0.00	0.00
234.00	1.21	0.06	0.00	0.00
235.00	1.21	0.06	0.00	0.00
236.00	1.21	0.06	0.00	0.00
237.00	1.21	0.06	0.00	0.00
238.00	1.21	0.06	0.00	0.00
239.00	1.21	0.06	0.00	0.00
240.00	1.21	0.06	0.00	0.00
241.00	1.21	0.06	0.00	0.00
242.00	1.21	0.06	0.00	0.00
243.00	1.21	0.06	0.00	0.00
244.00	1.21	0.06	0.00	0.00
245.00	1.21	0.06	0.00	0.00
246.00	1.21	0.06	0.00	0.00
247.00	1.21	0.06	0.00	0.00
248.00	1.21	0.06	0.00	0.00
249.00	1.21	0.06	0.00	0.00
250.00	1.21	0.06	0.00	0.00
251.00	1.21	0.06	0.00	0.00
252.00	1.21	0.06	0.00	0.00
253.00	1.21	0.06	0.00	0.00
254.00	1.21	0.06	0.00	0.00
255.00	1.21	0.06	0.00	0.00
256.00	1.21	0.06	0.00	0.00
257.00	1.21	0.06	0.00	0.00
258.00	1.21	0.06	0.00	0.00
259.00	1.21	0.06	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	1.21	0.06	0.00	0.00
261.00	1.21	0.06	0.00	0.00
262.00	1.21	0.06	0.00	0.00
263.00	1.21	0.06	0.00	0.00
264.00	1.21	0.06	0.00	0.00
265.00	1.21	0.06	0.00	0.00
266.00	1.21	0.06	0.00	0.00
267.00	1.21	0.06	0.00	0.00
268.00	1.21	0.06	0.00	0.00
269.00	1.21	0.06	0.00	0.00
270.00	1.21	0.06	0.00	0.00
271.00	1.21	0.06	0.00	0.00
272.00	1.21	0.06	0.00	0.00
273.00	1.21	0.06	0.00	0.00
274.00	1.21	0.06	0.00	0.00
275.00	1.21	0.06	0.00	0.00
276.00	1.21	0.06	0.00	0.00
277.00	1.21	0.06	0.00	0.00
278.00	1.21	0.06	0.00	0.00
279.00	1.21	0.06	0.00	0.00
280.00	1.21	0.06	0.00	0.00
281.00	1.21	0.06	0.00	0.00
282.00	1.21	0.06	0.00	0.00
283.00	1.21	0.06	0.00	0.00
284.00	1.21	0.06	0.00	0.00
285.00	1.21	0.06	0.00	0.00
286.00	1.21	0.06	0.00	0.00
287.00	1.21	0.06	0.00	0.00
288.00	1.21	0.06	0.00	0.00
289.00	1.21	0.06	0.00	0.00
290.00	1.21	0.06	0.00	0.00
291.00	1.21	0.06	0.00	0.00
292.00	1.21	0.06	0.00	0.00
293.00	1.21	0.06	0.00	0.00
294.00	1.21	0.06	0.00	0.00
295.00	1.21	0.06	0.00	0.00
296.00	1.21	0.06	0.00	0.00
297.00	1.21	0.06	0.00	0.00
298.00	1.21	0.06	0.00	0.00
299.00	1.21	0.06	0.00	0.00
300.00	1.21	0.06	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Summary for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Runoff = 1.98 cfs @ 1.11 hrs, Volume= 0.058 af, Depth= 1.00"

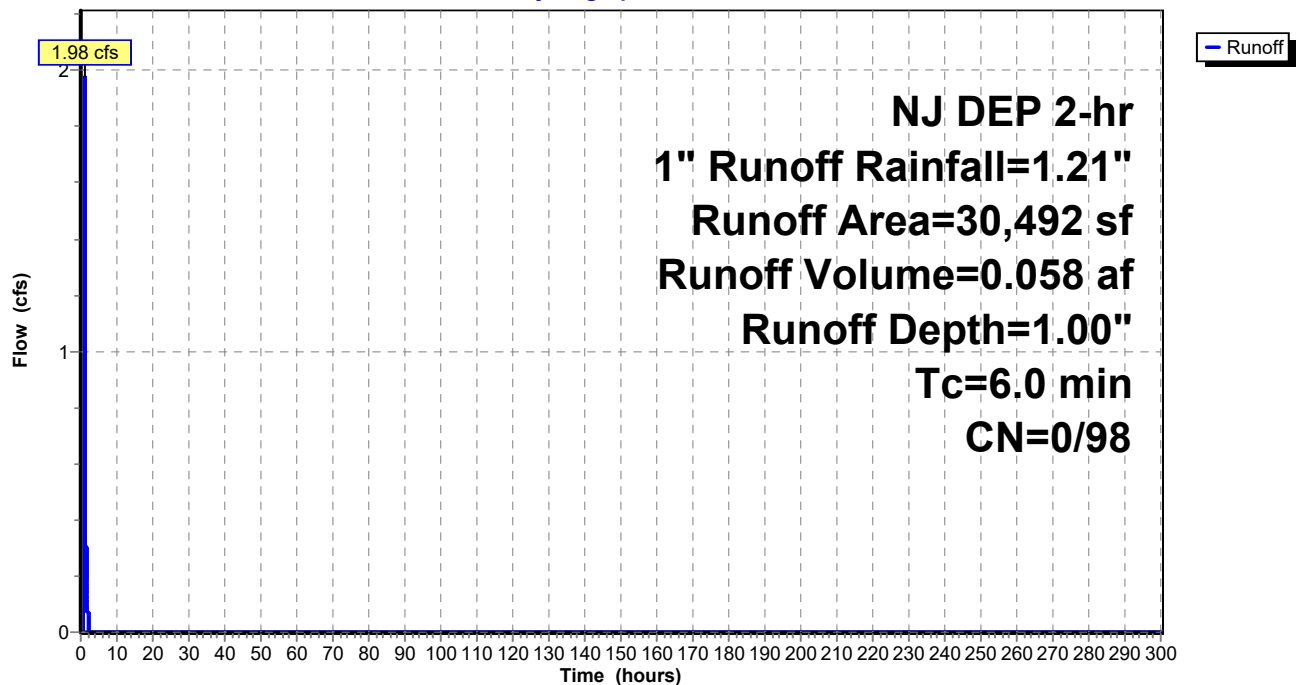
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NJ DEP 2-hr 1" Runoff Rainfall=1.21"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Hydrograph



MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.60	0.00	0.41	1.25
2.00	1.21	0.00	1.00	0.07
3.00	1.21	0.00	1.00	0.00
4.00	1.21	0.00	1.00	0.00
5.00	1.21	0.00	1.00	0.00
6.00	1.21	0.00	1.00	0.00
7.00	1.21	0.00	1.00	0.00
8.00	1.21	0.00	1.00	0.00
9.00	1.21	0.00	1.00	0.00
10.00	1.21	0.00	1.00	0.00
11.00	1.21	0.00	1.00	0.00
12.00	1.21	0.00	1.00	0.00
13.00	1.21	0.00	1.00	0.00
14.00	1.21	0.00	1.00	0.00
15.00	1.21	0.00	1.00	0.00
16.00	1.21	0.00	1.00	0.00
17.00	1.21	0.00	1.00	0.00
18.00	1.21	0.00	1.00	0.00
19.00	1.21	0.00	1.00	0.00
20.00	1.21	0.00	1.00	0.00
21.00	1.21	0.00	1.00	0.00
22.00	1.21	0.00	1.00	0.00
23.00	1.21	0.00	1.00	0.00
24.00	1.21	0.00	1.00	0.00
25.00	1.21	0.00	1.00	0.00
26.00	1.21	0.00	1.00	0.00
27.00	1.21	0.00	1.00	0.00
28.00	1.21	0.00	1.00	0.00
29.00	1.21	0.00	1.00	0.00
30.00	1.21	0.00	1.00	0.00
31.00	1.21	0.00	1.00	0.00
32.00	1.21	0.00	1.00	0.00
33.00	1.21	0.00	1.00	0.00
34.00	1.21	0.00	1.00	0.00
35.00	1.21	0.00	1.00	0.00
36.00	1.21	0.00	1.00	0.00
37.00	1.21	0.00	1.00	0.00
38.00	1.21	0.00	1.00	0.00
39.00	1.21	0.00	1.00	0.00
40.00	1.21	0.00	1.00	0.00
41.00	1.21	0.00	1.00	0.00
42.00	1.21	0.00	1.00	0.00
43.00	1.21	0.00	1.00	0.00
44.00	1.21	0.00	1.00	0.00
45.00	1.21	0.00	1.00	0.00
46.00	1.21	0.00	1.00	0.00
47.00	1.21	0.00	1.00	0.00
48.00	1.21	0.00	1.00	0.00
49.00	1.21	0.00	1.00	0.00
50.00	1.21	0.00	1.00	0.00
51.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	1.21	0.00	1.00	0.00
53.00	1.21	0.00	1.00	0.00
54.00	1.21	0.00	1.00	0.00
55.00	1.21	0.00	1.00	0.00
56.00	1.21	0.00	1.00	0.00
57.00	1.21	0.00	1.00	0.00
58.00	1.21	0.00	1.00	0.00
59.00	1.21	0.00	1.00	0.00
60.00	1.21	0.00	1.00	0.00
61.00	1.21	0.00	1.00	0.00
62.00	1.21	0.00	1.00	0.00
63.00	1.21	0.00	1.00	0.00
64.00	1.21	0.00	1.00	0.00
65.00	1.21	0.00	1.00	0.00
66.00	1.21	0.00	1.00	0.00
67.00	1.21	0.00	1.00	0.00
68.00	1.21	0.00	1.00	0.00
69.00	1.21	0.00	1.00	0.00
70.00	1.21	0.00	1.00	0.00
71.00	1.21	0.00	1.00	0.00
72.00	1.21	0.00	1.00	0.00
73.00	1.21	0.00	1.00	0.00
74.00	1.21	0.00	1.00	0.00
75.00	1.21	0.00	1.00	0.00
76.00	1.21	0.00	1.00	0.00
77.00	1.21	0.00	1.00	0.00
78.00	1.21	0.00	1.00	0.00
79.00	1.21	0.00	1.00	0.00
80.00	1.21	0.00	1.00	0.00
81.00	1.21	0.00	1.00	0.00
82.00	1.21	0.00	1.00	0.00
83.00	1.21	0.00	1.00	0.00
84.00	1.21	0.00	1.00	0.00
85.00	1.21	0.00	1.00	0.00
86.00	1.21	0.00	1.00	0.00
87.00	1.21	0.00	1.00	0.00
88.00	1.21	0.00	1.00	0.00
89.00	1.21	0.00	1.00	0.00
90.00	1.21	0.00	1.00	0.00
91.00	1.21	0.00	1.00	0.00
92.00	1.21	0.00	1.00	0.00
93.00	1.21	0.00	1.00	0.00
94.00	1.21	0.00	1.00	0.00
95.00	1.21	0.00	1.00	0.00
96.00	1.21	0.00	1.00	0.00
97.00	1.21	0.00	1.00	0.00
98.00	1.21	0.00	1.00	0.00
99.00	1.21	0.00	1.00	0.00
100.00	1.21	0.00	1.00	0.00
101.00	1.21	0.00	1.00	0.00
102.00	1.21	0.00	1.00	0.00
103.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	1.21	0.00	1.00	0.00
105.00	1.21	0.00	1.00	0.00
106.00	1.21	0.00	1.00	0.00
107.00	1.21	0.00	1.00	0.00
108.00	1.21	0.00	1.00	0.00
109.00	1.21	0.00	1.00	0.00
110.00	1.21	0.00	1.00	0.00
111.00	1.21	0.00	1.00	0.00
112.00	1.21	0.00	1.00	0.00
113.00	1.21	0.00	1.00	0.00
114.00	1.21	0.00	1.00	0.00
115.00	1.21	0.00	1.00	0.00
116.00	1.21	0.00	1.00	0.00
117.00	1.21	0.00	1.00	0.00
118.00	1.21	0.00	1.00	0.00
119.00	1.21	0.00	1.00	0.00
120.00	1.21	0.00	1.00	0.00
121.00	1.21	0.00	1.00	0.00
122.00	1.21	0.00	1.00	0.00
123.00	1.21	0.00	1.00	0.00
124.00	1.21	0.00	1.00	0.00
125.00	1.21	0.00	1.00	0.00
126.00	1.21	0.00	1.00	0.00
127.00	1.21	0.00	1.00	0.00
128.00	1.21	0.00	1.00	0.00
129.00	1.21	0.00	1.00	0.00
130.00	1.21	0.00	1.00	0.00
131.00	1.21	0.00	1.00	0.00
132.00	1.21	0.00	1.00	0.00
133.00	1.21	0.00	1.00	0.00
134.00	1.21	0.00	1.00	0.00
135.00	1.21	0.00	1.00	0.00
136.00	1.21	0.00	1.00	0.00
137.00	1.21	0.00	1.00	0.00
138.00	1.21	0.00	1.00	0.00
139.00	1.21	0.00	1.00	0.00
140.00	1.21	0.00	1.00	0.00
141.00	1.21	0.00	1.00	0.00
142.00	1.21	0.00	1.00	0.00
143.00	1.21	0.00	1.00	0.00
144.00	1.21	0.00	1.00	0.00
145.00	1.21	0.00	1.00	0.00
146.00	1.21	0.00	1.00	0.00
147.00	1.21	0.00	1.00	0.00
148.00	1.21	0.00	1.00	0.00
149.00	1.21	0.00	1.00	0.00
150.00	1.21	0.00	1.00	0.00
151.00	1.21	0.00	1.00	0.00
152.00	1.21	0.00	1.00	0.00
153.00	1.21	0.00	1.00	0.00
154.00	1.21	0.00	1.00	0.00
155.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	1.21	0.00	1.00	0.00
157.00	1.21	0.00	1.00	0.00
158.00	1.21	0.00	1.00	0.00
159.00	1.21	0.00	1.00	0.00
160.00	1.21	0.00	1.00	0.00
161.00	1.21	0.00	1.00	0.00
162.00	1.21	0.00	1.00	0.00
163.00	1.21	0.00	1.00	0.00
164.00	1.21	0.00	1.00	0.00
165.00	1.21	0.00	1.00	0.00
166.00	1.21	0.00	1.00	0.00
167.00	1.21	0.00	1.00	0.00
168.00	1.21	0.00	1.00	0.00
169.00	1.21	0.00	1.00	0.00
170.00	1.21	0.00	1.00	0.00
171.00	1.21	0.00	1.00	0.00
172.00	1.21	0.00	1.00	0.00
173.00	1.21	0.00	1.00	0.00
174.00	1.21	0.00	1.00	0.00
175.00	1.21	0.00	1.00	0.00
176.00	1.21	0.00	1.00	0.00
177.00	1.21	0.00	1.00	0.00
178.00	1.21	0.00	1.00	0.00
179.00	1.21	0.00	1.00	0.00
180.00	1.21	0.00	1.00	0.00
181.00	1.21	0.00	1.00	0.00
182.00	1.21	0.00	1.00	0.00
183.00	1.21	0.00	1.00	0.00
184.00	1.21	0.00	1.00	0.00
185.00	1.21	0.00	1.00	0.00
186.00	1.21	0.00	1.00	0.00
187.00	1.21	0.00	1.00	0.00
188.00	1.21	0.00	1.00	0.00
189.00	1.21	0.00	1.00	0.00
190.00	1.21	0.00	1.00	0.00
191.00	1.21	0.00	1.00	0.00
192.00	1.21	0.00	1.00	0.00
193.00	1.21	0.00	1.00	0.00
194.00	1.21	0.00	1.00	0.00
195.00	1.21	0.00	1.00	0.00
196.00	1.21	0.00	1.00	0.00
197.00	1.21	0.00	1.00	0.00
198.00	1.21	0.00	1.00	0.00
199.00	1.21	0.00	1.00	0.00
200.00	1.21	0.00	1.00	0.00
201.00	1.21	0.00	1.00	0.00
202.00	1.21	0.00	1.00	0.00
203.00	1.21	0.00	1.00	0.00
204.00	1.21	0.00	1.00	0.00
205.00	1.21	0.00	1.00	0.00
206.00	1.21	0.00	1.00	0.00
207.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	1.21	0.00	1.00	0.00
209.00	1.21	0.00	1.00	0.00
210.00	1.21	0.00	1.00	0.00
211.00	1.21	0.00	1.00	0.00
212.00	1.21	0.00	1.00	0.00
213.00	1.21	0.00	1.00	0.00
214.00	1.21	0.00	1.00	0.00
215.00	1.21	0.00	1.00	0.00
216.00	1.21	0.00	1.00	0.00
217.00	1.21	0.00	1.00	0.00
218.00	1.21	0.00	1.00	0.00
219.00	1.21	0.00	1.00	0.00
220.00	1.21	0.00	1.00	0.00
221.00	1.21	0.00	1.00	0.00
222.00	1.21	0.00	1.00	0.00
223.00	1.21	0.00	1.00	0.00
224.00	1.21	0.00	1.00	0.00
225.00	1.21	0.00	1.00	0.00
226.00	1.21	0.00	1.00	0.00
227.00	1.21	0.00	1.00	0.00
228.00	1.21	0.00	1.00	0.00
229.00	1.21	0.00	1.00	0.00
230.00	1.21	0.00	1.00	0.00
231.00	1.21	0.00	1.00	0.00
232.00	1.21	0.00	1.00	0.00
233.00	1.21	0.00	1.00	0.00
234.00	1.21	0.00	1.00	0.00
235.00	1.21	0.00	1.00	0.00
236.00	1.21	0.00	1.00	0.00
237.00	1.21	0.00	1.00	0.00
238.00	1.21	0.00	1.00	0.00
239.00	1.21	0.00	1.00	0.00
240.00	1.21	0.00	1.00	0.00
241.00	1.21	0.00	1.00	0.00
242.00	1.21	0.00	1.00	0.00
243.00	1.21	0.00	1.00	0.00
244.00	1.21	0.00	1.00	0.00
245.00	1.21	0.00	1.00	0.00
246.00	1.21	0.00	1.00	0.00
247.00	1.21	0.00	1.00	0.00
248.00	1.21	0.00	1.00	0.00
249.00	1.21	0.00	1.00	0.00
250.00	1.21	0.00	1.00	0.00
251.00	1.21	0.00	1.00	0.00
252.00	1.21	0.00	1.00	0.00
253.00	1.21	0.00	1.00	0.00
254.00	1.21	0.00	1.00	0.00
255.00	1.21	0.00	1.00	0.00
256.00	1.21	0.00	1.00	0.00
257.00	1.21	0.00	1.00	0.00
258.00	1.21	0.00	1.00	0.00
259.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	1.21	0.00	1.00	0.00
261.00	1.21	0.00	1.00	0.00
262.00	1.21	0.00	1.00	0.00
263.00	1.21	0.00	1.00	0.00
264.00	1.21	0.00	1.00	0.00
265.00	1.21	0.00	1.00	0.00
266.00	1.21	0.00	1.00	0.00
267.00	1.21	0.00	1.00	0.00
268.00	1.21	0.00	1.00	0.00
269.00	1.21	0.00	1.00	0.00
270.00	1.21	0.00	1.00	0.00
271.00	1.21	0.00	1.00	0.00
272.00	1.21	0.00	1.00	0.00
273.00	1.21	0.00	1.00	0.00
274.00	1.21	0.00	1.00	0.00
275.00	1.21	0.00	1.00	0.00
276.00	1.21	0.00	1.00	0.00
277.00	1.21	0.00	1.00	0.00
278.00	1.21	0.00	1.00	0.00
279.00	1.21	0.00	1.00	0.00
280.00	1.21	0.00	1.00	0.00
281.00	1.21	0.00	1.00	0.00
282.00	1.21	0.00	1.00	0.00
283.00	1.21	0.00	1.00	0.00
284.00	1.21	0.00	1.00	0.00
285.00	1.21	0.00	1.00	0.00
286.00	1.21	0.00	1.00	0.00
287.00	1.21	0.00	1.00	0.00
288.00	1.21	0.00	1.00	0.00
289.00	1.21	0.00	1.00	0.00
290.00	1.21	0.00	1.00	0.00
291.00	1.21	0.00	1.00	0.00
292.00	1.21	0.00	1.00	0.00
293.00	1.21	0.00	1.00	0.00
294.00	1.21	0.00	1.00	0.00
295.00	1.21	0.00	1.00	0.00
296.00	1.21	0.00	1.00	0.00
297.00	1.21	0.00	1.00	0.00
298.00	1.21	0.00	1.00	0.00
299.00	1.21	0.00	1.00	0.00
300.00	1.21	0.00	1.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Summary for Pond 1P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 1.00" for 1" Runoff event
 Inflow = 1.98 cfs @ 1.11 hrs, Volume= 0.058 af
 Outflow = 0.01 cfs @ 2.14 hrs, Volume= 0.047 af, Atten= 100%, Lag= 62.1 min
 Primary = 0.01 cfs @ 2.14 hrs, Volume= 0.047 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.21' @ 2.14 hrs Surf.Area= 3,049 sf Storage= 2,496 cf

Plug-Flow detention time= 2,451.7 min calculated for 0.047 af (82% of inflow)
 Center-of-Mass det. time= 2,445.7 min (2,516.1 - 70.4)

Volume	Invert	Avail.Storage	Storage Description
#1	-2.51'	11,007 cf	Rain Garden (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	3,049	0.0	0	0
-1.51	3,049	15.0	457	457
-1.50	3,049	30.0	9	466
-0.01	3,049	30.0	1,363	1,829
0.00	3,049	100.0	30	1,860
3.00	3,049	100.0	9,147	11,007

Device	Routing	Invert	Outlet Devices
#1	Device 4	1.10'	40.0' 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
#2	Device 4	-1.50'	0.5" Vert. Orifice/Grate C= 0.600
#3	Device 4	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Primary	-2.51'	24.0" Round Culvert L= 1.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= -2.51' / -2.52' S= 0.0100 '/ Cc= 0.900 n= 0.011 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=0.01 cfs @ 2.14 hrs HW=0.21' (Free Discharge)

- 4=Culvert (Passes 0.01 cfs of 15.58 cfs potential flow)
- 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Orifice/Grate (Orifice Controls 0.01 cfs @ 6.26 fps)
- 3=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

MRC Example 2

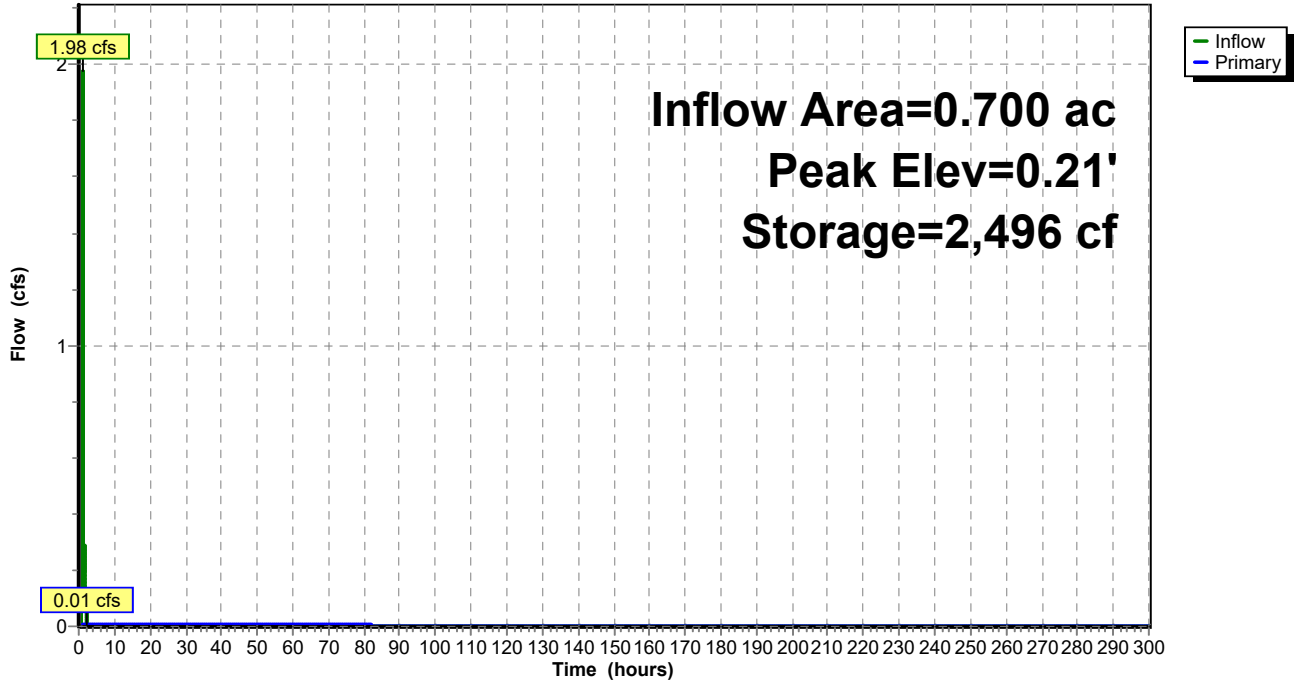
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NJ DEP 2-hr 1" Runoff Rainfall=1.21"

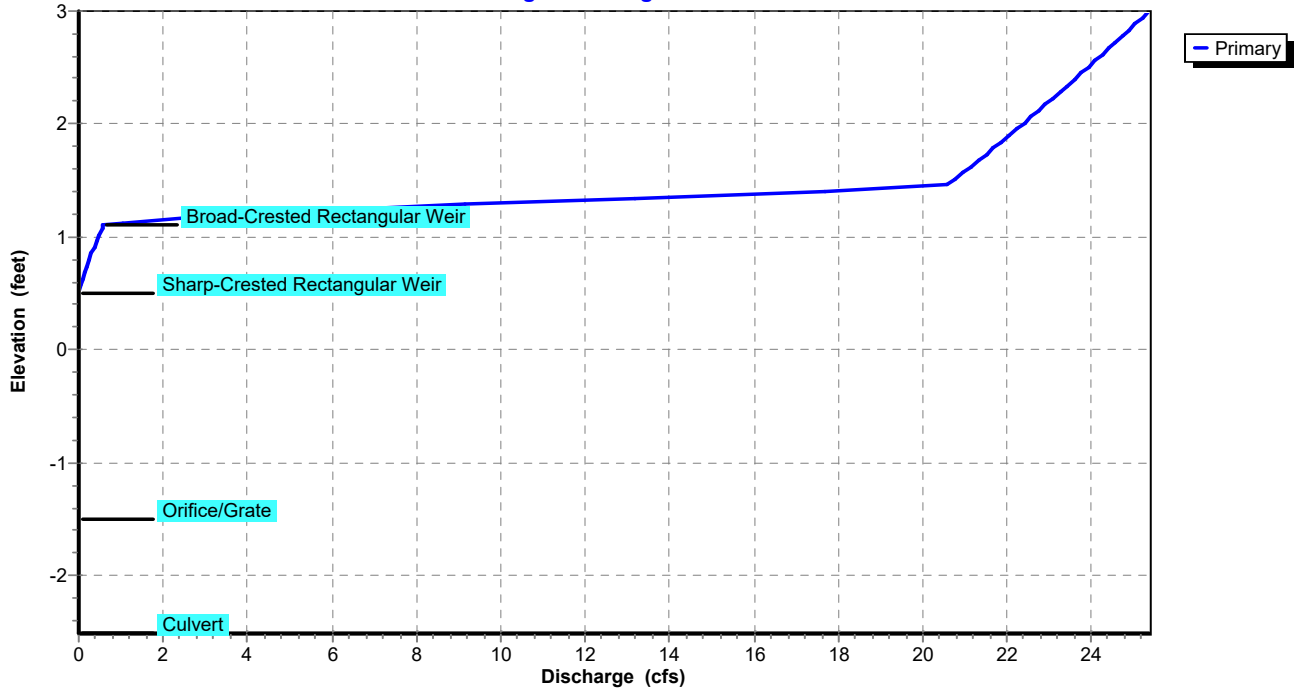
Pond 1P: Managed Release Rain Garden

Hydrograph



Pond 1P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

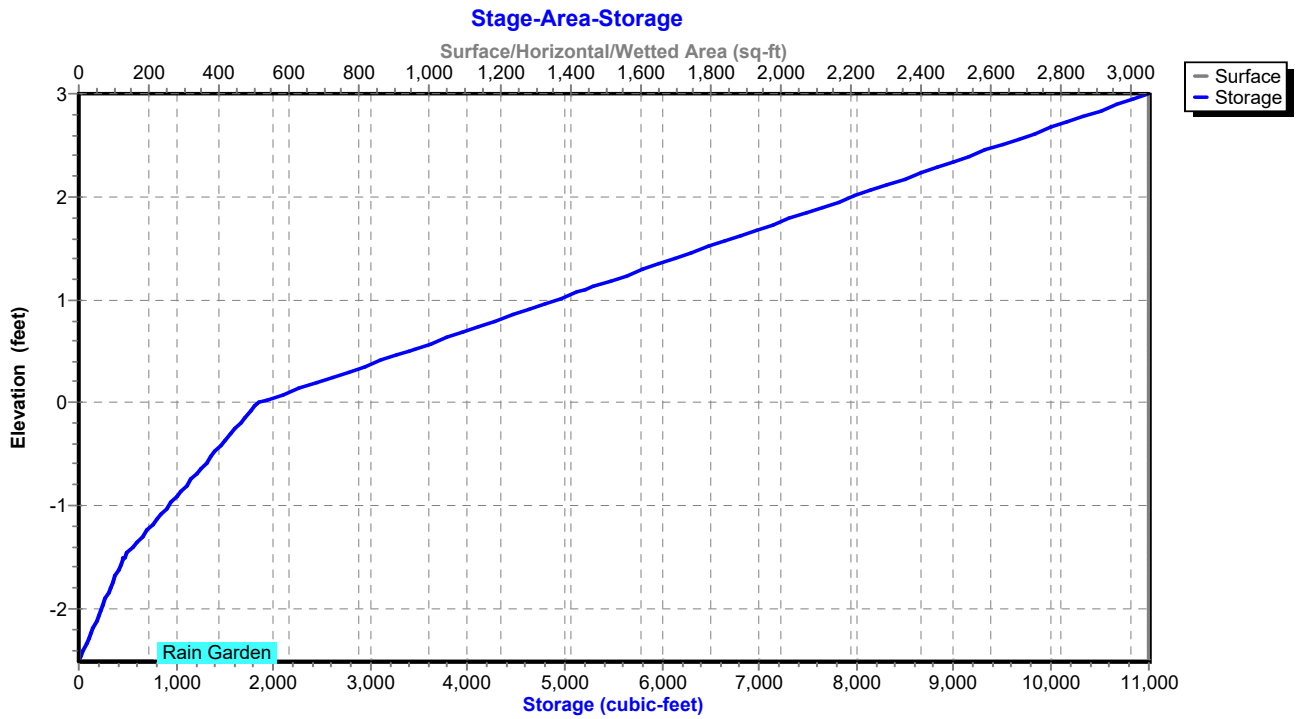
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NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Pond 1P: Managed Release Rain Garden



MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 1P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	-2.51	0.00
1.00	1.25	500	-1.46	0.00
2.00	0.07	2,479	0.20	0.01
3.00	0.00	2,471	0.20	0.01
4.00	0.00	2,441	0.19	0.01
5.00	0.00	2,410	0.18	0.01
6.00	0.00	2,380	0.17	0.01
7.00	0.00	2,349	0.16	0.01
8.00	0.00	2,319	0.15	0.01
9.00	0.00	2,289	0.14	0.01
10.00	0.00	2,259	0.13	0.01
11.00	0.00	2,229	0.12	0.01
12.00	0.00	2,199	0.11	0.01
13.00	0.00	2,169	0.10	0.01
14.00	0.00	2,140	0.09	0.01
15.00	0.00	2,110	0.08	0.01
16.00	0.00	2,081	0.07	0.01
17.00	0.00	2,051	0.06	0.01
18.00	0.00	2,022	0.05	0.01
19.00	0.00	1,993	0.04	0.01
20.00	0.00	1,964	0.03	0.01
21.00	0.00	1,935	0.02	0.01
22.00	0.00	1,906	0.02	0.01
23.00	0.00	1,877	0.01	0.01
24.00	0.00	1,848	0.00	0.01
25.00	0.00	1,819	-0.02	0.01
26.00	0.00	1,791	-0.05	0.01
27.00	0.00	1,763	-0.08	0.01
28.00	0.00	1,735	-0.11	0.01
29.00	0.00	1,708	-0.14	0.01
30.00	0.00	1,681	-0.17	0.01
31.00	0.00	1,654	-0.20	0.01
32.00	0.00	1,627	-0.23	0.01
33.00	0.00	1,601	-0.26	0.01
34.00	0.00	1,575	-0.29	0.01
35.00	0.00	1,549	-0.32	0.01
36.00	0.00	1,524	-0.34	0.01
37.00	0.00	1,499	-0.37	0.01
38.00	0.00	1,474	-0.40	0.01
39.00	0.00	1,450	-0.43	0.01
40.00	0.00	1,426	-0.45	0.01
41.00	0.00	1,402	-0.48	0.01
42.00	0.00	1,378	-0.50	0.01
43.00	0.00	1,355	-0.53	0.01
44.00	0.00	1,332	-0.55	0.01
45.00	0.00	1,310	-0.58	0.01
46.00	0.00	1,287	-0.60	0.01
47.00	0.00	1,265	-0.63	0.01
48.00	0.00	1,244	-0.65	0.01
49.00	0.00	1,222	-0.67	0.01
50.00	0.00	1,201	-0.70	0.01
51.00	0.00	1,181	-0.72	0.01

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	1,160	-0.74	0.01
53.00	0.00	1,140	-0.76	0.01
54.00	0.00	1,120	-0.79	0.01
55.00	0.00	1,101	-0.81	0.01
56.00	0.00	1,081	-0.83	0.01
57.00	0.00	1,062	-0.85	0.01
58.00	0.00	1,044	-0.87	0.01
59.00	0.00	1,026	-0.89	0.01
60.00	0.00	1,008	-0.91	0.00
61.00	0.00	990	-0.93	0.00
62.00	0.00	972	-0.95	0.00
63.00	0.00	955	-0.97	0.00
64.00	0.00	939	-0.98	0.00
65.00	0.00	922	-1.00	0.00
66.00	0.00	906	-1.02	0.00
67.00	0.00	890	-1.04	0.00
68.00	0.00	875	-1.05	0.00
69.00	0.00	859	-1.07	0.00
70.00	0.00	844	-1.09	0.00
71.00	0.00	830	-1.10	0.00
72.00	0.00	815	-1.12	0.00
73.00	0.00	801	-1.13	0.00
74.00	0.00	788	-1.15	0.00
75.00	0.00	774	-1.16	0.00
76.00	0.00	761	-1.18	0.00
77.00	0.00	748	-1.19	0.00
78.00	0.00	736	-1.21	0.00
79.00	0.00	724	-1.22	0.00
80.00	0.00	712	-1.23	0.00
81.00	0.00	700	-1.24	0.00
82.00	0.00	689	-1.26	0.00
83.00	0.00	678	-1.27	0.00
84.00	0.00	667	-1.28	0.00
85.00	0.00	657	-1.29	0.00
86.00	0.00	647	-1.30	0.00
87.00	0.00	637	-1.31	0.00
88.00	0.00	628	-1.32	0.00
89.00	0.00	618	-1.33	0.00
90.00	0.00	610	-1.34	0.00
91.00	0.00	601	-1.35	0.00
92.00	0.00	593	-1.36	0.00
93.00	0.00	585	-1.37	0.00
94.00	0.00	577	-1.38	0.00
95.00	0.00	570	-1.39	0.00
96.00	0.00	563	-1.39	0.00
97.00	0.00	556	-1.40	0.00
98.00	0.00	550	-1.41	0.00
99.00	0.00	544	-1.42	0.00
100.00	0.00	538	-1.42	0.00
101.00	0.00	533	-1.43	0.00
102.00	0.00	528	-1.43	0.00
103.00	0.00	523	-1.44	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	519	-1.44	0.00
105.00	0.00	515	-1.45	0.00
106.00	0.00	511	-1.45	0.00
107.00	0.00	507	-1.46	0.00
108.00	0.00	504	-1.46	0.00
109.00	0.00	501	-1.46	0.00
110.00	0.00	498	-1.47	0.00
111.00	0.00	495	-1.47	0.00
112.00	0.00	493	-1.47	0.00
113.00	0.00	491	-1.47	0.00
114.00	0.00	489	-1.48	0.00
115.00	0.00	487	-1.48	0.00
116.00	0.00	485	-1.48	0.00
117.00	0.00	483	-1.48	0.00
118.00	0.00	482	-1.48	0.00
119.00	0.00	481	-1.48	0.00
120.00	0.00	479	-1.49	0.00
121.00	0.00	478	-1.49	0.00
122.00	0.00	477	-1.49	0.00
123.00	0.00	476	-1.49	0.00
124.00	0.00	476	-1.49	0.00
125.00	0.00	475	-1.49	0.00
126.00	0.00	474	-1.49	0.00
127.00	0.00	473	-1.49	0.00
128.00	0.00	473	-1.49	0.00
129.00	0.00	472	-1.49	0.00
130.00	0.00	472	-1.49	0.00
131.00	0.00	471	-1.49	0.00
132.00	0.00	471	-1.50	0.00
133.00	0.00	471	-1.50	0.00
134.00	0.00	470	-1.50	0.00
135.00	0.00	470	-1.50	0.00
136.00	0.00	470	-1.50	0.00
137.00	0.00	469	-1.50	0.00
138.00	0.00	469	-1.50	0.00
139.00	0.00	469	-1.50	0.00
140.00	0.00	469	-1.50	0.00
141.00	0.00	468	-1.50	0.00
142.00	0.00	468	-1.50	0.00
143.00	0.00	468	-1.50	0.00
144.00	0.00	468	-1.50	0.00
145.00	0.00	468	-1.50	0.00
146.00	0.00	468	-1.50	0.00
147.00	0.00	468	-1.50	0.00
148.00	0.00	468	-1.50	0.00
149.00	0.00	467	-1.50	0.00
150.00	0.00	467	-1.50	0.00
151.00	0.00	467	-1.50	0.00
152.00	0.00	467	-1.50	0.00
153.00	0.00	467	-1.50	0.00
154.00	0.00	467	-1.50	0.00
155.00	0.00	467	-1.50	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	467	-1.50	0.00
157.00	0.00	467	-1.50	0.00
158.00	0.00	467	-1.50	0.00
159.00	0.00	467	-1.50	0.00
160.00	0.00	467	-1.50	0.00
161.00	0.00	467	-1.50	0.00
162.00	0.00	467	-1.50	0.00
163.00	0.00	467	-1.50	0.00
164.00	0.00	467	-1.50	0.00
165.00	0.00	467	-1.50	0.00
166.00	0.00	467	-1.50	0.00
167.00	0.00	467	-1.50	0.00
168.00	0.00	467	-1.50	0.00
169.00	0.00	467	-1.50	0.00
170.00	0.00	467	-1.50	0.00
171.00	0.00	467	-1.50	0.00
172.00	0.00	467	-1.50	0.00
173.00	0.00	467	-1.50	0.00
174.00	0.00	467	-1.50	0.00
175.00	0.00	467	-1.50	0.00
176.00	0.00	467	-1.50	0.00
177.00	0.00	467	-1.50	0.00
178.00	0.00	467	-1.50	0.00
179.00	0.00	467	-1.50	0.00
180.00	0.00	467	-1.50	0.00
181.00	0.00	467	-1.50	0.00
182.00	0.00	467	-1.50	0.00
183.00	0.00	467	-1.50	0.00
184.00	0.00	467	-1.50	0.00
185.00	0.00	467	-1.50	0.00
186.00	0.00	467	-1.50	0.00
187.00	0.00	467	-1.50	0.00
188.00	0.00	467	-1.50	0.00
189.00	0.00	467	-1.50	0.00
190.00	0.00	467	-1.50	0.00
191.00	0.00	467	-1.50	0.00
192.00	0.00	467	-1.50	0.00
193.00	0.00	467	-1.50	0.00
194.00	0.00	467	-1.50	0.00
195.00	0.00	467	-1.50	0.00
196.00	0.00	467	-1.50	0.00
197.00	0.00	467	-1.50	0.00
198.00	0.00	467	-1.50	0.00
199.00	0.00	467	-1.50	0.00
200.00	0.00	467	-1.50	0.00
201.00	0.00	467	-1.50	0.00
202.00	0.00	467	-1.50	0.00
203.00	0.00	467	-1.50	0.00
204.00	0.00	467	-1.50	0.00
205.00	0.00	467	-1.50	0.00
206.00	0.00	467	-1.50	0.00
207.00	0.00	467	-1.50	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
208.00	0.00	467	-1.50	0.00
209.00	0.00	467	-1.50	0.00
210.00	0.00	467	-1.50	0.00
211.00	0.00	467	-1.50	0.00
212.00	0.00	467	-1.50	0.00
213.00	0.00	467	-1.50	0.00
214.00	0.00	466	-1.50	0.00
215.00	0.00	466	-1.50	0.00
216.00	0.00	466	-1.50	0.00
217.00	0.00	466	-1.50	0.00
218.00	0.00	466	-1.50	0.00
219.00	0.00	466	-1.50	0.00
220.00	0.00	466	-1.50	0.00
221.00	0.00	466	-1.50	0.00
222.00	0.00	466	-1.50	0.00
223.00	0.00	466	-1.50	0.00
224.00	0.00	466	-1.50	0.00
225.00	0.00	466	-1.50	0.00
226.00	0.00	466	-1.50	0.00
227.00	0.00	466	-1.50	0.00
228.00	0.00	466	-1.50	0.00
229.00	0.00	466	-1.50	0.00
230.00	0.00	466	-1.50	0.00
231.00	0.00	466	-1.50	0.00
232.00	0.00	466	-1.50	0.00
233.00	0.00	466	-1.50	0.00
234.00	0.00	466	-1.50	0.00
235.00	0.00	466	-1.50	0.00
236.00	0.00	466	-1.50	0.00
237.00	0.00	466	-1.50	0.00
238.00	0.00	466	-1.50	0.00
239.00	0.00	466	-1.50	0.00
240.00	0.00	466	-1.50	0.00
241.00	0.00	466	-1.50	0.00
242.00	0.00	466	-1.50	0.00
243.00	0.00	466	-1.50	0.00
244.00	0.00	466	-1.50	0.00
245.00	0.00	466	-1.50	0.00
246.00	0.00	466	-1.50	0.00
247.00	0.00	466	-1.50	0.00
248.00	0.00	466	-1.50	0.00
249.00	0.00	466	-1.50	0.00
250.00	0.00	466	-1.50	0.00
251.00	0.00	466	-1.50	0.00
252.00	0.00	466	-1.50	0.00
253.00	0.00	466	-1.50	0.00
254.00	0.00	466	-1.50	0.00
255.00	0.00	466	-1.50	0.00
256.00	0.00	466	-1.50	0.00
257.00	0.00	466	-1.50	0.00
258.00	0.00	466	-1.50	0.00
259.00	0.00	466	-1.50	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
260.00	0.00	466	-1.50	0.00
261.00	0.00	466	-1.50	0.00
262.00	0.00	466	-1.50	0.00
263.00	0.00	466	-1.50	0.00
264.00	0.00	466	-1.50	0.00
265.00	0.00	466	-1.50	0.00
266.00	0.00	466	-1.50	0.00
267.00	0.00	466	-1.50	0.00
268.00	0.00	466	-1.50	0.00
269.00	0.00	466	-1.50	0.00
270.00	0.00	466	-1.50	0.00
271.00	0.00	466	-1.50	0.00
272.00	0.00	466	-1.50	0.00
273.00	0.00	466	-1.50	0.00
274.00	0.00	466	-1.50	0.00
275.00	0.00	466	-1.50	0.00
276.00	0.00	466	-1.50	0.00
277.00	0.00	466	-1.50	0.00
278.00	0.00	466	-1.50	0.00
279.00	0.00	466	-1.50	0.00
280.00	0.00	466	-1.50	0.00
281.00	0.00	466	-1.50	0.00
282.00	0.00	466	-1.50	0.00
283.00	0.00	466	-1.50	0.00
284.00	0.00	466	-1.50	0.00
285.00	0.00	466	-1.50	0.00
286.00	0.00	466	-1.50	0.00
287.00	0.00	466	-1.50	0.00
288.00	0.00	466	-1.50	0.00
289.00	0.00	466	-1.50	0.00
290.00	0.00	466	-1.50	0.00
291.00	0.00	466	-1.50	0.00
292.00	0.00	466	-1.50	0.00
293.00	0.00	466	-1.50	0.00
294.00	0.00	466	-1.50	0.00
295.00	0.00	466	-1.50	0.00
296.00	0.00	466	-1.50	0.00
297.00	0.00	466	-1.50	0.00
298.00	0.00	466	-1.50	0.00
299.00	0.00	466	-1.50	0.00
300.00	0.00	466	-1.50	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Summary for Pond 2P: Managed Release Rain Garden

50% IWS routing modeled with a $0.30 \times 50\% = 0.15$ void space

[79] Warning: Submerged Pond 1P Primary device # 4 INLET by 0.06'

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 0.81" for 1" Runoff event
Inflow = 0.01 cfs @ 2.14 hrs, Volume= 0.047 af
Outflow = 0.01 cfs @ 12.45 hrs, Volume= 0.047 af, Atten= 3%, Lag= 618.3 min
Primary = 0.01 cfs @ 12.45 hrs, Volume= 0.047 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
Peak Elev= -2.45' @ 12.45 hrs Surf.Area= 1,742 sf Storage= 96 cf

Plug-Flow detention time= 253.5 min calculated for 0.047 af (100% of inflow)
Center-of-Mass det. time= 253.6 min (2,769.7 - 2,516.1)

Volume	Invert	Avail.Storage	Storage Description	
#1	-2.51'	6,114 cf	Detention Basin (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	1,742	0.0	0	0
-2.50	1,742	100.0	17	17
1.00	1,742	100.0	6,097	6,114

Device	Routing	Invert	Outlet Devices
#1	Secondary	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	-2.51'	4.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.01 cfs @ 12.45 hrs HW=-2.45' (Free Discharge)
↑**2=Orifice/Grate** (Orifice Controls 0.01 cfs @ 0.80 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=-2.51' (Free Discharge)
↑**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

MRC Example 2

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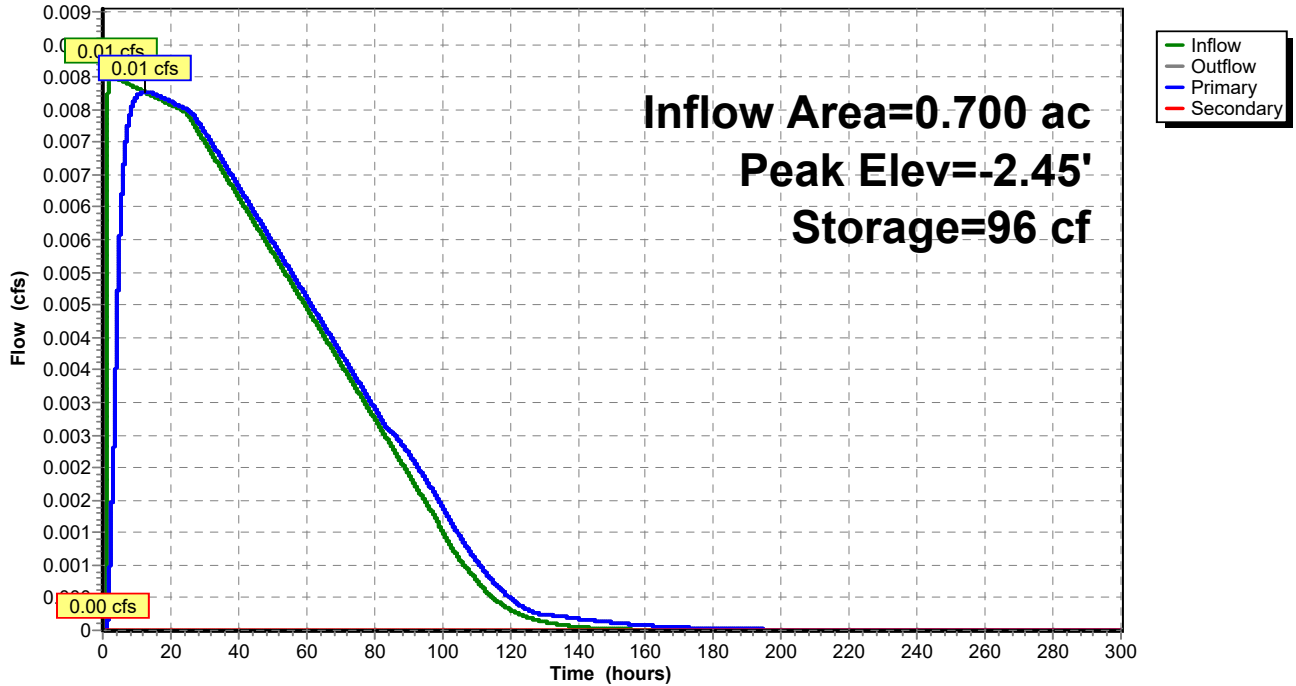
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NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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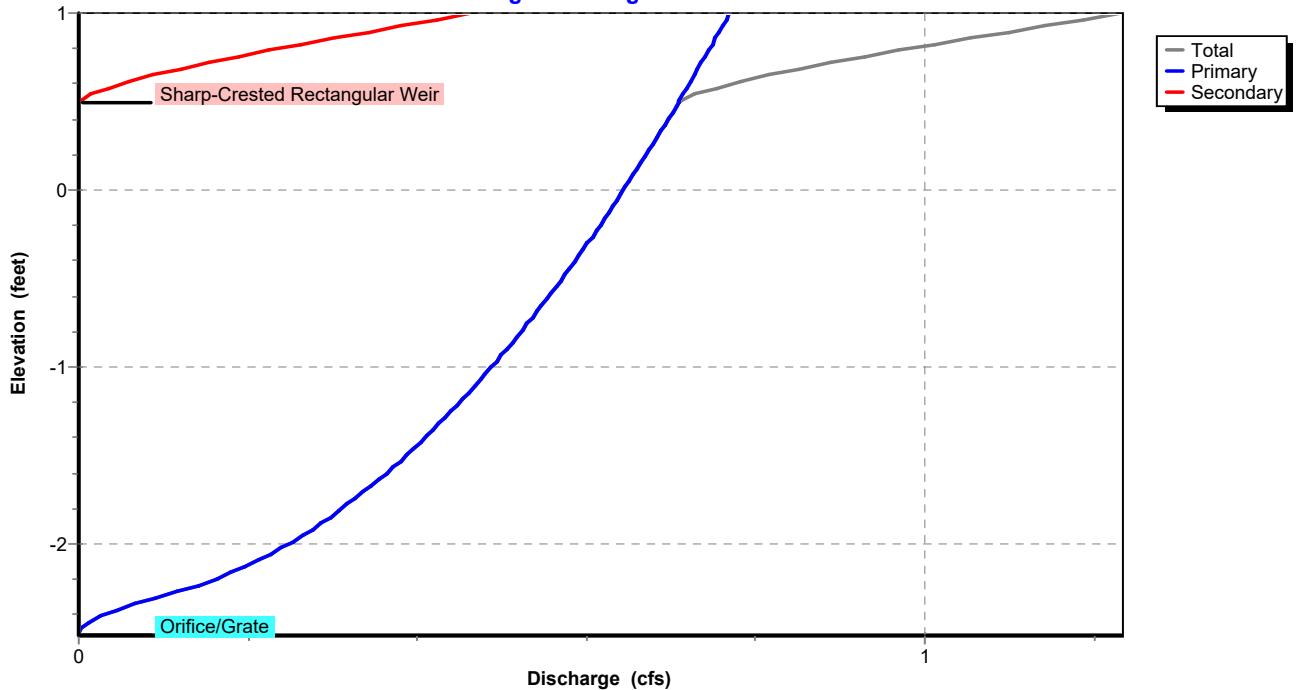
Pond 2P: Managed Release Rain Garden

Hydrograph



Pond 2P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

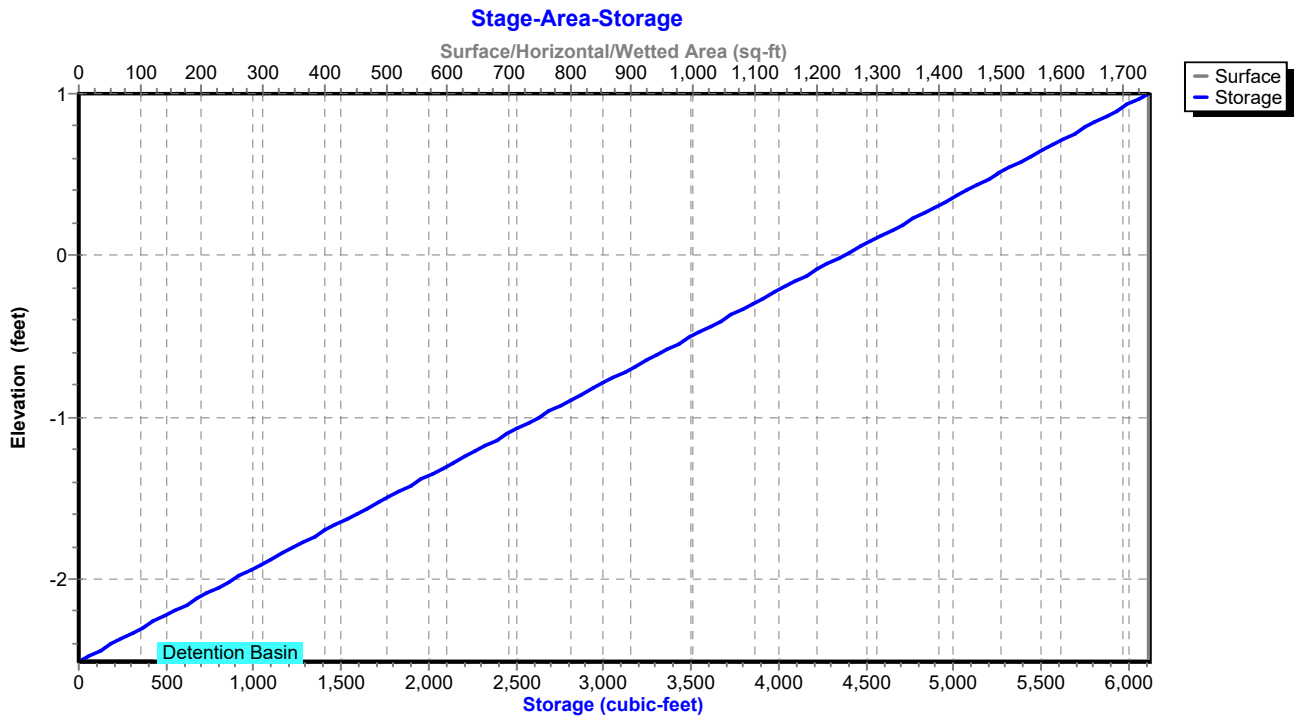
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NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Pond 2P: Managed Release Rain Garden



MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 2P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	-2.51	0.00	0.00	0.00
1.00	0.00	0	-2.51	0.00	0.00	0.00
2.00	0.01	27	-2.49	0.00	0.00	0.00
3.00	0.01	51	-2.48	0.00	0.00	0.00
4.00	0.01	70	-2.47	0.00	0.00	0.00
5.00	0.01	81	-2.46	0.01	0.01	0.00
6.00	0.01	88	-2.46	0.01	0.01	0.00
7.00	0.01	92	-2.46	0.01	0.01	0.00
8.00	0.01	94	-2.46	0.01	0.01	0.00
9.00	0.01	95	-2.46	0.01	0.01	0.00
10.00	0.01	96	-2.45	0.01	0.01	0.00
11.00	0.01	96	-2.45	0.01	0.01	0.00
12.00	0.01	96	-2.45	0.01	0.01	0.00
13.00	0.01	96	-2.45	0.01	0.01	0.00
14.00	0.01	96	-2.45	0.01	0.01	0.00
15.00	0.01	96	-2.45	0.01	0.01	0.00
16.00	0.01	96	-2.45	0.01	0.01	0.00
17.00	0.01	96	-2.45	0.01	0.01	0.00
18.00	0.01	96	-2.46	0.01	0.01	0.00
19.00	0.01	95	-2.46	0.01	0.01	0.00
20.00	0.01	95	-2.46	0.01	0.01	0.00
21.00	0.01	95	-2.46	0.01	0.01	0.00
22.00	0.01	95	-2.46	0.01	0.01	0.00
23.00	0.01	95	-2.46	0.01	0.01	0.00
24.00	0.01	95	-2.46	0.01	0.01	0.00
25.00	0.01	94	-2.46	0.01	0.01	0.00
26.00	0.01	94	-2.46	0.01	0.01	0.00
27.00	0.01	94	-2.46	0.01	0.01	0.00
28.00	0.01	93	-2.46	0.01	0.01	0.00
29.00	0.01	93	-2.46	0.01	0.01	0.00
30.00	0.01	92	-2.46	0.01	0.01	0.00
31.00	0.01	92	-2.46	0.01	0.01	0.00
32.00	0.01	91	-2.46	0.01	0.01	0.00
33.00	0.01	90	-2.46	0.01	0.01	0.00
34.00	0.01	90	-2.46	0.01	0.01	0.00
35.00	0.01	89	-2.46	0.01	0.01	0.00
36.00	0.01	89	-2.46	0.01	0.01	0.00
37.00	0.01	88	-2.46	0.01	0.01	0.00
38.00	0.01	88	-2.46	0.01	0.01	0.00
39.00	0.01	87	-2.46	0.01	0.01	0.00
40.00	0.01	86	-2.46	0.01	0.01	0.00
41.00	0.01	86	-2.46	0.01	0.01	0.00
42.00	0.01	85	-2.46	0.01	0.01	0.00
43.00	0.01	85	-2.46	0.01	0.01	0.00
44.00	0.01	84	-2.46	0.01	0.01	0.00
45.00	0.01	83	-2.46	0.01	0.01	0.00
46.00	0.01	83	-2.46	0.01	0.01	0.00
47.00	0.01	82	-2.46	0.01	0.01	0.00
48.00	0.01	82	-2.46	0.01	0.01	0.00
49.00	0.01	81	-2.46	0.01	0.01	0.00
50.00	0.01	81	-2.46	0.01	0.01	0.00
51.00	0.01	80	-2.46	0.01	0.01	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
52.00	0.01	79	-2.46	0.01	0.01	0.00
53.00	0.01	79	-2.46	0.01	0.01	0.00
54.00	0.01	78	-2.47	0.01	0.01	0.00
55.00	0.01	78	-2.47	0.01	0.01	0.00
56.00	0.01	77	-2.47	0.01	0.01	0.00
57.00	0.01	77	-2.47	0.01	0.01	0.00
58.00	0.01	76	-2.47	0.01	0.01	0.00
59.00	0.01	75	-2.47	0.01	0.01	0.00
60.00	0.00	75	-2.47	0.01	0.01	0.00
61.00	0.00	74	-2.47	0.01	0.01	0.00
62.00	0.00	74	-2.47	0.00	0.00	0.00
63.00	0.00	73	-2.47	0.00	0.00	0.00
64.00	0.00	72	-2.47	0.00	0.00	0.00
65.00	0.00	72	-2.47	0.00	0.00	0.00
66.00	0.00	71	-2.47	0.00	0.00	0.00
67.00	0.00	71	-2.47	0.00	0.00	0.00
68.00	0.00	70	-2.47	0.00	0.00	0.00
69.00	0.00	70	-2.47	0.00	0.00	0.00
70.00	0.00	69	-2.47	0.00	0.00	0.00
71.00	0.00	68	-2.47	0.00	0.00	0.00
72.00	0.00	68	-2.47	0.00	0.00	0.00
73.00	0.00	67	-2.47	0.00	0.00	0.00
74.00	0.00	67	-2.47	0.00	0.00	0.00
75.00	0.00	66	-2.47	0.00	0.00	0.00
76.00	0.00	65	-2.47	0.00	0.00	0.00
77.00	0.00	65	-2.47	0.00	0.00	0.00
78.00	0.00	64	-2.47	0.00	0.00	0.00
79.00	0.00	64	-2.47	0.00	0.00	0.00
80.00	0.00	63	-2.47	0.00	0.00	0.00
81.00	0.00	63	-2.47	0.00	0.00	0.00
82.00	0.00	62	-2.47	0.00	0.00	0.00
83.00	0.00	61	-2.47	0.00	0.00	0.00
84.00	0.00	61	-2.48	0.00	0.00	0.00
85.00	0.00	60	-2.48	0.00	0.00	0.00
86.00	0.00	59	-2.48	0.00	0.00	0.00
87.00	0.00	58	-2.48	0.00	0.00	0.00
88.00	0.00	57	-2.48	0.00	0.00	0.00
89.00	0.00	56	-2.48	0.00	0.00	0.00
90.00	0.00	55	-2.48	0.00	0.00	0.00
91.00	0.00	54	-2.48	0.00	0.00	0.00
92.00	0.00	53	-2.48	0.00	0.00	0.00
93.00	0.00	52	-2.48	0.00	0.00	0.00
94.00	0.00	50	-2.48	0.00	0.00	0.00
95.00	0.00	49	-2.48	0.00	0.00	0.00
96.00	0.00	48	-2.48	0.00	0.00	0.00
97.00	0.00	46	-2.48	0.00	0.00	0.00
98.00	0.00	45	-2.48	0.00	0.00	0.00
99.00	0.00	44	-2.48	0.00	0.00	0.00
100.00	0.00	43	-2.49	0.00	0.00	0.00
101.00	0.00	41	-2.49	0.00	0.00	0.00
102.00	0.00	40	-2.49	0.00	0.00	0.00
103.00	0.00	38	-2.49	0.00	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
104.00	0.00	37	-2.49	0.00	0.00	0.00
105.00	0.00	36	-2.49	0.00	0.00	0.00
106.00	0.00	34	-2.49	0.00	0.00	0.00
107.00	0.00	33	-2.49	0.00	0.00	0.00
108.00	0.00	32	-2.49	0.00	0.00	0.00
109.00	0.00	31	-2.49	0.00	0.00	0.00
110.00	0.00	30	-2.49	0.00	0.00	0.00
111.00	0.00	29	-2.49	0.00	0.00	0.00
112.00	0.00	28	-2.49	0.00	0.00	0.00
113.00	0.00	27	-2.49	0.00	0.00	0.00
114.00	0.00	26	-2.50	0.00	0.00	0.00
115.00	0.00	25	-2.50	0.00	0.00	0.00
116.00	0.00	24	-2.50	0.00	0.00	0.00
117.00	0.00	23	-2.50	0.00	0.00	0.00
118.00	0.00	22	-2.50	0.00	0.00	0.00
119.00	0.00	22	-2.50	0.00	0.00	0.00
120.00	0.00	21	-2.50	0.00	0.00	0.00
121.00	0.00	20	-2.50	0.00	0.00	0.00
122.00	0.00	20	-2.50	0.00	0.00	0.00
123.00	0.00	19	-2.50	0.00	0.00	0.00
124.00	0.00	19	-2.50	0.00	0.00	0.00
125.00	0.00	18	-2.50	0.00	0.00	0.00
126.00	0.00	18	-2.50	0.00	0.00	0.00
127.00	0.00	18	-2.50	0.00	0.00	0.00
128.00	0.00	17	-2.50	0.00	0.00	0.00
129.00	0.00	17	-2.50	0.00	0.00	0.00
130.00	0.00	16	-2.50	0.00	0.00	0.00
131.00	0.00	16	-2.50	0.00	0.00	0.00
132.00	0.00	16	-2.50	0.00	0.00	0.00
133.00	0.00	15	-2.50	0.00	0.00	0.00
134.00	0.00	15	-2.50	0.00	0.00	0.00
135.00	0.00	14	-2.50	0.00	0.00	0.00
136.00	0.00	14	-2.50	0.00	0.00	0.00
137.00	0.00	13	-2.50	0.00	0.00	0.00
138.00	0.00	13	-2.50	0.00	0.00	0.00
139.00	0.00	12	-2.50	0.00	0.00	0.00
140.00	0.00	12	-2.50	0.00	0.00	0.00
141.00	0.00	12	-2.50	0.00	0.00	0.00
142.00	0.00	11	-2.50	0.00	0.00	0.00
143.00	0.00	11	-2.50	0.00	0.00	0.00
144.00	0.00	10	-2.50	0.00	0.00	0.00
145.00	0.00	10	-2.50	0.00	0.00	0.00
146.00	0.00	9	-2.50	0.00	0.00	0.00
147.00	0.00	9	-2.50	0.00	0.00	0.00
148.00	0.00	9	-2.51	0.00	0.00	0.00
149.00	0.00	8	-2.51	0.00	0.00	0.00
150.00	0.00	8	-2.51	0.00	0.00	0.00
151.00	0.00	8	-2.51	0.00	0.00	0.00
152.00	0.00	7	-2.51	0.00	0.00	0.00
153.00	0.00	7	-2.51	0.00	0.00	0.00
154.00	0.00	7	-2.51	0.00	0.00	0.00
155.00	0.00	6	-2.51	0.00	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
156.00	0.00	6	-2.51	0.00	0.00	0.00
157.00	0.00	6	-2.51	0.00	0.00	0.00
158.00	0.00	6	-2.51	0.00	0.00	0.00
159.00	0.00	5	-2.51	0.00	0.00	0.00
160.00	0.00	5	-2.51	0.00	0.00	0.00
161.00	0.00	5	-2.51	0.00	0.00	0.00
162.00	0.00	5	-2.51	0.00	0.00	0.00
163.00	0.00	4	-2.51	0.00	0.00	0.00
164.00	0.00	4	-2.51	0.00	0.00	0.00
165.00	0.00	4	-2.51	0.00	0.00	0.00
166.00	0.00	4	-2.51	0.00	0.00	0.00
167.00	0.00	4	-2.51	0.00	0.00	0.00
168.00	0.00	3	-2.51	0.00	0.00	0.00
169.00	0.00	3	-2.51	0.00	0.00	0.00
170.00	0.00	3	-2.51	0.00	0.00	0.00
171.00	0.00	3	-2.51	0.00	0.00	0.00
172.00	0.00	3	-2.51	0.00	0.00	0.00
173.00	0.00	3	-2.51	0.00	0.00	0.00
174.00	0.00	3	-2.51	0.00	0.00	0.00
175.00	0.00	2	-2.51	0.00	0.00	0.00
176.00	0.00	2	-2.51	0.00	0.00	0.00
177.00	0.00	2	-2.51	0.00	0.00	0.00
178.00	0.00	2	-2.51	0.00	0.00	0.00
179.00	0.00	2	-2.51	0.00	0.00	0.00
180.00	0.00	2	-2.51	0.00	0.00	0.00
181.00	0.00	2	-2.51	0.00	0.00	0.00
182.00	0.00	2	-2.51	0.00	0.00	0.00
183.00	0.00	2	-2.51	0.00	0.00	0.00
184.00	0.00	2	-2.51	0.00	0.00	0.00
185.00	0.00	1	-2.51	0.00	0.00	0.00
186.00	0.00	1	-2.51	0.00	0.00	0.00
187.00	0.00	1	-2.51	0.00	0.00	0.00
188.00	0.00	1	-2.51	0.00	0.00	0.00
189.00	0.00	1	-2.51	0.00	0.00	0.00
190.00	0.00	1	-2.51	0.00	0.00	0.00
191.00	0.00	1	-2.51	0.00	0.00	0.00
192.00	0.00	1	-2.51	0.00	0.00	0.00
193.00	0.00	1	-2.51	0.00	0.00	0.00
194.00	0.00	1	-2.51	0.00	0.00	0.00
195.00	0.00	1	-2.51	0.00	0.00	0.00
196.00	0.00	1	-2.51	0.00	0.00	0.00
197.00	0.00	1	-2.51	0.00	0.00	0.00
198.00	0.00	1	-2.51	0.00	0.00	0.00
199.00	0.00	1	-2.51	0.00	0.00	0.00
200.00	0.00	1	-2.51	0.00	0.00	0.00
201.00	0.00	1	-2.51	0.00	0.00	0.00
202.00	0.00	1	-2.51	0.00	0.00	0.00
203.00	0.00	1	-2.51	0.00	0.00	0.00
204.00	0.00	1	-2.51	0.00	0.00	0.00
205.00	0.00	1	-2.51	0.00	0.00	0.00
206.00	0.00	0	-2.51	0.00	0.00	0.00
207.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
208.00	0.00	0	-2.51	0.00	0.00	0.00
209.00	0.00	0	-2.51	0.00	0.00	0.00
210.00	0.00	0	-2.51	0.00	0.00	0.00
211.00	0.00	0	-2.51	0.00	0.00	0.00
212.00	0.00	0	-2.51	0.00	0.00	0.00
213.00	0.00	0	-2.51	0.00	0.00	0.00
214.00	0.00	0	-2.51	0.00	0.00	0.00
215.00	0.00	0	-2.51	0.00	0.00	0.00
216.00	0.00	0	-2.51	0.00	0.00	0.00
217.00	0.00	0	-2.51	0.00	0.00	0.00
218.00	0.00	0	-2.51	0.00	0.00	0.00
219.00	0.00	0	-2.51	0.00	0.00	0.00
220.00	0.00	0	-2.51	0.00	0.00	0.00
221.00	0.00	0	-2.51	0.00	0.00	0.00
222.00	0.00	0	-2.51	0.00	0.00	0.00
223.00	0.00	0	-2.51	0.00	0.00	0.00
224.00	0.00	0	-2.51	0.00	0.00	0.00
225.00	0.00	0	-2.51	0.00	0.00	0.00
226.00	0.00	0	-2.51	0.00	0.00	0.00
227.00	0.00	0	-2.51	0.00	0.00	0.00
228.00	0.00	0	-2.51	0.00	0.00	0.00
229.00	0.00	0	-2.51	0.00	0.00	0.00
230.00	0.00	0	-2.51	0.00	0.00	0.00
231.00	0.00	0	-2.51	0.00	0.00	0.00
232.00	0.00	0	-2.51	0.00	0.00	0.00
233.00	0.00	0	-2.51	0.00	0.00	0.00
234.00	0.00	0	-2.51	0.00	0.00	0.00
235.00	0.00	0	-2.51	0.00	0.00	0.00
236.00	0.00	0	-2.51	0.00	0.00	0.00
237.00	0.00	0	-2.51	0.00	0.00	0.00
238.00	0.00	0	-2.51	0.00	0.00	0.00
239.00	0.00	0	-2.51	0.00	0.00	0.00
240.00	0.00	0	-2.51	0.00	0.00	0.00
241.00	0.00	0	-2.51	0.00	0.00	0.00
242.00	0.00	0	-2.51	0.00	0.00	0.00
243.00	0.00	0	-2.51	0.00	0.00	0.00
244.00	0.00	0	-2.51	0.00	0.00	0.00
245.00	0.00	0	-2.51	0.00	0.00	0.00
246.00	0.00	0	-2.51	0.00	0.00	0.00
247.00	0.00	0	-2.51	0.00	0.00	0.00
248.00	0.00	0	-2.51	0.00	0.00	0.00
249.00	0.00	0	-2.51	0.00	0.00	0.00
250.00	0.00	0	-2.51	0.00	0.00	0.00
251.00	0.00	0	-2.51	0.00	0.00	0.00
252.00	0.00	0	-2.51	0.00	0.00	0.00
253.00	0.00	0	-2.51	0.00	0.00	0.00
254.00	0.00	0	-2.51	0.00	0.00	0.00
255.00	0.00	0	-2.51	0.00	0.00	0.00
256.00	0.00	0	-2.51	0.00	0.00	0.00
257.00	0.00	0	-2.51	0.00	0.00	0.00
258.00	0.00	0	-2.51	0.00	0.00	0.00
259.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NJ DEP 2-hr 1" Runoff Rainfall=1.21"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
260.00	0.00	0	-2.51	0.00	0.00	0.00
261.00	0.00	0	-2.51	0.00	0.00	0.00
262.00	0.00	0	-2.51	0.00	0.00	0.00
263.00	0.00	0	-2.51	0.00	0.00	0.00
264.00	0.00	0	-2.51	0.00	0.00	0.00
265.00	0.00	0	-2.51	0.00	0.00	0.00
266.00	0.00	0	-2.51	0.00	0.00	0.00
267.00	0.00	0	-2.51	0.00	0.00	0.00
268.00	0.00	0	-2.51	0.00	0.00	0.00
269.00	0.00	0	-2.51	0.00	0.00	0.00
270.00	0.00	0	-2.51	0.00	0.00	0.00
271.00	0.00	0	-2.51	0.00	0.00	0.00
272.00	0.00	0	-2.51	0.00	0.00	0.00
273.00	0.00	0	-2.51	0.00	0.00	0.00
274.00	0.00	0	-2.51	0.00	0.00	0.00
275.00	0.00	0	-2.51	0.00	0.00	0.00
276.00	0.00	0	-2.51	0.00	0.00	0.00
277.00	0.00	0	-2.51	0.00	0.00	0.00
278.00	0.00	0	-2.51	0.00	0.00	0.00
279.00	0.00	0	-2.51	0.00	0.00	0.00
280.00	0.00	0	-2.51	0.00	0.00	0.00
281.00	0.00	0	-2.51	0.00	0.00	0.00
282.00	0.00	0	-2.51	0.00	0.00	0.00
283.00	0.00	0	-2.51	0.00	0.00	0.00
284.00	0.00	0	-2.51	0.00	0.00	0.00
285.00	0.00	0	-2.51	0.00	0.00	0.00
286.00	0.00	0	-2.51	0.00	0.00	0.00
287.00	0.00	0	-2.51	0.00	0.00	0.00
288.00	0.00	0	-2.51	0.00	0.00	0.00
289.00	0.00	0	-2.51	0.00	0.00	0.00
290.00	0.00	0	-2.51	0.00	0.00	0.00
291.00	0.00	0	-2.51	0.00	0.00	0.00
292.00	0.00	0	-2.51	0.00	0.00	0.00
293.00	0.00	0	-2.51	0.00	0.00	0.00
294.00	0.00	0	-2.51	0.00	0.00	0.00
295.00	0.00	0	-2.51	0.00	0.00	0.00
296.00	0.00	0	-2.51	0.00	0.00	0.00
297.00	0.00	0	-2.51	0.00	0.00	0.00
298.00	0.00	0	-2.51	0.00	0.00	0.00
299.00	0.00	0	-2.51	0.00	0.00	0.00
300.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Time span=0.00-300.00 hrs, dt=0.01 hrs, 30001 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

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

Subcatchment1S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=2.47"
Tc=6.0 min CN=0/98 Runoff=1.99 cfs 0.144 af

Subcatchment3S: 0.7 ac Pervious Runoff Area=30,492 sf 0.00% Impervious Runoff Depth=0.72"
Tc=15.0 min CN=74/0 Runoff=0.45 cfs 0.042 af

Subcatchment4S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=2.47"
Tc=6.0 min CN=0/98 Runoff=1.99 cfs 0.144 af

Pond 1P: Managed Release Rain Garden Peak Elev=0.74' Storage=4,120 cf Inflow=1.99 cfs 0.144 af
Outflow=0.18 cfs 0.133 af

Pond 2P: Managed Release Rain Garden Peak Elev=-2.23' Storage=487 cf Inflow=0.18 cfs 0.133 af
Primary=0.14 cfs 0.133 af Secondary=0.00 cfs 0.000 af Outflow=0.14 cfs 0.133 af

Total Runoff Area = 2.100 ac Runoff Volume = 0.330 af Average Runoff Depth = 1.89"
33.33% Pervious = 0.700 ac 66.67% Impervious = 1.400 ac

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Summary for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Runoff = 1.99 cfs @ 12.13 hrs, Volume= 0.144 af, Depth= 2.47"

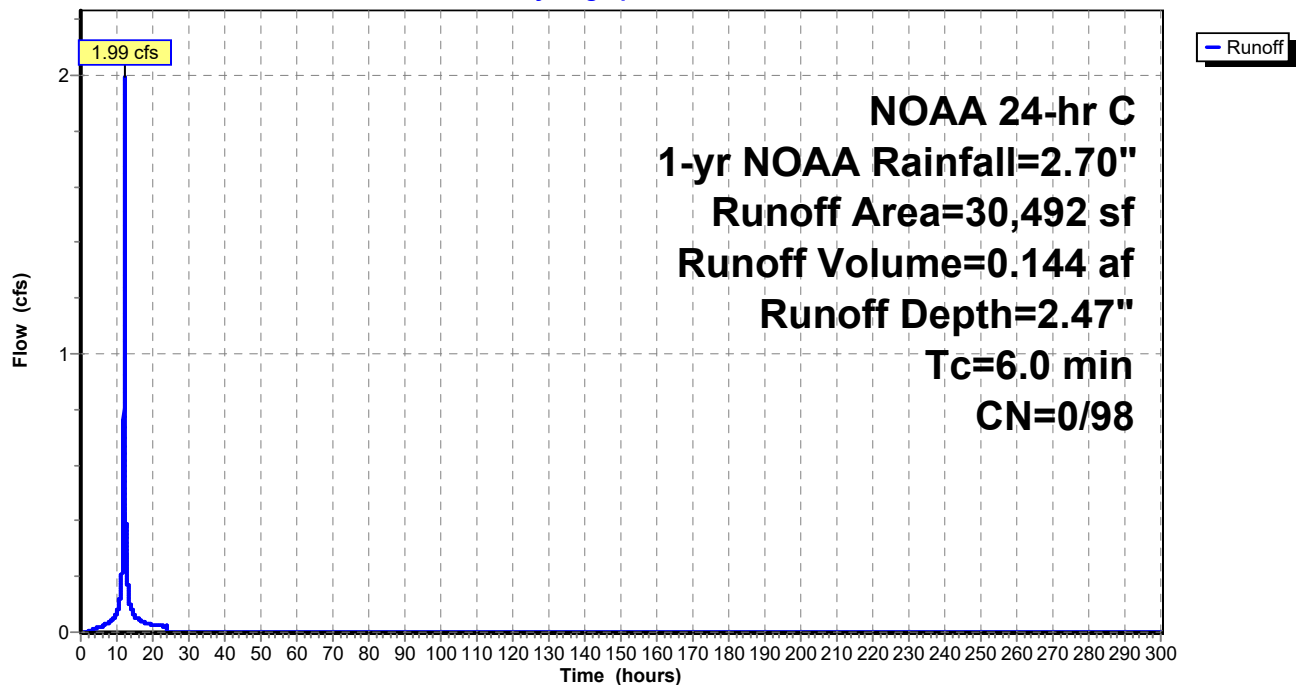
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00	0.00
2.00	0.06	0.00	0.00	0.00
3.00	0.10	0.00	0.01	0.01
4.00	0.13	0.00	0.03	0.01
5.00	0.17	0.00	0.05	0.02
6.00	0.21	0.00	0.08	0.02
7.00	0.26	0.00	0.12	0.03
8.00	0.32	0.00	0.16	0.04
9.00	0.39	0.00	0.22	0.05
10.00	0.49	0.00	0.31	0.07
11.00	0.65	0.00	0.45	0.14
12.00	1.29	0.00	1.07	1.10
13.00	2.05	0.00	1.83	0.18
14.00	2.21	0.00	1.98	0.09
15.00	2.31	0.00	2.08	0.06
16.00	2.38	0.00	2.15	0.05
17.00	2.44	0.00	2.21	0.04
18.00	2.49	0.00	2.26	0.03
19.00	2.53	0.00	2.30	0.03
20.00	2.57	0.00	2.34	0.03
21.00	2.60	0.00	2.37	0.03
22.00	2.64	0.00	2.41	0.02
23.00	2.67	0.00	2.44	0.02
24.00	2.70	0.00	2.47	0.02
25.00	2.70	0.00	2.47	0.00
26.00	2.70	0.00	2.47	0.00
27.00	2.70	0.00	2.47	0.00
28.00	2.70	0.00	2.47	0.00
29.00	2.70	0.00	2.47	0.00
30.00	2.70	0.00	2.47	0.00
31.00	2.70	0.00	2.47	0.00
32.00	2.70	0.00	2.47	0.00
33.00	2.70	0.00	2.47	0.00
34.00	2.70	0.00	2.47	0.00
35.00	2.70	0.00	2.47	0.00
36.00	2.70	0.00	2.47	0.00
37.00	2.70	0.00	2.47	0.00
38.00	2.70	0.00	2.47	0.00
39.00	2.70	0.00	2.47	0.00
40.00	2.70	0.00	2.47	0.00
41.00	2.70	0.00	2.47	0.00
42.00	2.70	0.00	2.47	0.00
43.00	2.70	0.00	2.47	0.00
44.00	2.70	0.00	2.47	0.00
45.00	2.70	0.00	2.47	0.00
46.00	2.70	0.00	2.47	0.00
47.00	2.70	0.00	2.47	0.00
48.00	2.70	0.00	2.47	0.00
49.00	2.70	0.00	2.47	0.00
50.00	2.70	0.00	2.47	0.00
51.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	2.70	0.00	2.47	0.00
53.00	2.70	0.00	2.47	0.00
54.00	2.70	0.00	2.47	0.00
55.00	2.70	0.00	2.47	0.00
56.00	2.70	0.00	2.47	0.00
57.00	2.70	0.00	2.47	0.00
58.00	2.70	0.00	2.47	0.00
59.00	2.70	0.00	2.47	0.00
60.00	2.70	0.00	2.47	0.00
61.00	2.70	0.00	2.47	0.00
62.00	2.70	0.00	2.47	0.00
63.00	2.70	0.00	2.47	0.00
64.00	2.70	0.00	2.47	0.00
65.00	2.70	0.00	2.47	0.00
66.00	2.70	0.00	2.47	0.00
67.00	2.70	0.00	2.47	0.00
68.00	2.70	0.00	2.47	0.00
69.00	2.70	0.00	2.47	0.00
70.00	2.70	0.00	2.47	0.00
71.00	2.70	0.00	2.47	0.00
72.00	2.70	0.00	2.47	0.00
73.00	2.70	0.00	2.47	0.00
74.00	2.70	0.00	2.47	0.00
75.00	2.70	0.00	2.47	0.00
76.00	2.70	0.00	2.47	0.00
77.00	2.70	0.00	2.47	0.00
78.00	2.70	0.00	2.47	0.00
79.00	2.70	0.00	2.47	0.00
80.00	2.70	0.00	2.47	0.00
81.00	2.70	0.00	2.47	0.00
82.00	2.70	0.00	2.47	0.00
83.00	2.70	0.00	2.47	0.00
84.00	2.70	0.00	2.47	0.00
85.00	2.70	0.00	2.47	0.00
86.00	2.70	0.00	2.47	0.00
87.00	2.70	0.00	2.47	0.00
88.00	2.70	0.00	2.47	0.00
89.00	2.70	0.00	2.47	0.00
90.00	2.70	0.00	2.47	0.00
91.00	2.70	0.00	2.47	0.00
92.00	2.70	0.00	2.47	0.00
93.00	2.70	0.00	2.47	0.00
94.00	2.70	0.00	2.47	0.00
95.00	2.70	0.00	2.47	0.00
96.00	2.70	0.00	2.47	0.00
97.00	2.70	0.00	2.47	0.00
98.00	2.70	0.00	2.47	0.00
99.00	2.70	0.00	2.47	0.00
100.00	2.70	0.00	2.47	0.00
101.00	2.70	0.00	2.47	0.00
102.00	2.70	0.00	2.47	0.00
103.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	2.70	0.00	2.47	0.00
105.00	2.70	0.00	2.47	0.00
106.00	2.70	0.00	2.47	0.00
107.00	2.70	0.00	2.47	0.00
108.00	2.70	0.00	2.47	0.00
109.00	2.70	0.00	2.47	0.00
110.00	2.70	0.00	2.47	0.00
111.00	2.70	0.00	2.47	0.00
112.00	2.70	0.00	2.47	0.00
113.00	2.70	0.00	2.47	0.00
114.00	2.70	0.00	2.47	0.00
115.00	2.70	0.00	2.47	0.00
116.00	2.70	0.00	2.47	0.00
117.00	2.70	0.00	2.47	0.00
118.00	2.70	0.00	2.47	0.00
119.00	2.70	0.00	2.47	0.00
120.00	2.70	0.00	2.47	0.00
121.00	2.70	0.00	2.47	0.00
122.00	2.70	0.00	2.47	0.00
123.00	2.70	0.00	2.47	0.00
124.00	2.70	0.00	2.47	0.00
125.00	2.70	0.00	2.47	0.00
126.00	2.70	0.00	2.47	0.00
127.00	2.70	0.00	2.47	0.00
128.00	2.70	0.00	2.47	0.00
129.00	2.70	0.00	2.47	0.00
130.00	2.70	0.00	2.47	0.00
131.00	2.70	0.00	2.47	0.00
132.00	2.70	0.00	2.47	0.00
133.00	2.70	0.00	2.47	0.00
134.00	2.70	0.00	2.47	0.00
135.00	2.70	0.00	2.47	0.00
136.00	2.70	0.00	2.47	0.00
137.00	2.70	0.00	2.47	0.00
138.00	2.70	0.00	2.47	0.00
139.00	2.70	0.00	2.47	0.00
140.00	2.70	0.00	2.47	0.00
141.00	2.70	0.00	2.47	0.00
142.00	2.70	0.00	2.47	0.00
143.00	2.70	0.00	2.47	0.00
144.00	2.70	0.00	2.47	0.00
145.00	2.70	0.00	2.47	0.00
146.00	2.70	0.00	2.47	0.00
147.00	2.70	0.00	2.47	0.00
148.00	2.70	0.00	2.47	0.00
149.00	2.70	0.00	2.47	0.00
150.00	2.70	0.00	2.47	0.00
151.00	2.70	0.00	2.47	0.00
152.00	2.70	0.00	2.47	0.00
153.00	2.70	0.00	2.47	0.00
154.00	2.70	0.00	2.47	0.00
155.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	2.70	0.00	2.47	0.00
157.00	2.70	0.00	2.47	0.00
158.00	2.70	0.00	2.47	0.00
159.00	2.70	0.00	2.47	0.00
160.00	2.70	0.00	2.47	0.00
161.00	2.70	0.00	2.47	0.00
162.00	2.70	0.00	2.47	0.00
163.00	2.70	0.00	2.47	0.00
164.00	2.70	0.00	2.47	0.00
165.00	2.70	0.00	2.47	0.00
166.00	2.70	0.00	2.47	0.00
167.00	2.70	0.00	2.47	0.00
168.00	2.70	0.00	2.47	0.00
169.00	2.70	0.00	2.47	0.00
170.00	2.70	0.00	2.47	0.00
171.00	2.70	0.00	2.47	0.00
172.00	2.70	0.00	2.47	0.00
173.00	2.70	0.00	2.47	0.00
174.00	2.70	0.00	2.47	0.00
175.00	2.70	0.00	2.47	0.00
176.00	2.70	0.00	2.47	0.00
177.00	2.70	0.00	2.47	0.00
178.00	2.70	0.00	2.47	0.00
179.00	2.70	0.00	2.47	0.00
180.00	2.70	0.00	2.47	0.00
181.00	2.70	0.00	2.47	0.00
182.00	2.70	0.00	2.47	0.00
183.00	2.70	0.00	2.47	0.00
184.00	2.70	0.00	2.47	0.00
185.00	2.70	0.00	2.47	0.00
186.00	2.70	0.00	2.47	0.00
187.00	2.70	0.00	2.47	0.00
188.00	2.70	0.00	2.47	0.00
189.00	2.70	0.00	2.47	0.00
190.00	2.70	0.00	2.47	0.00
191.00	2.70	0.00	2.47	0.00
192.00	2.70	0.00	2.47	0.00
193.00	2.70	0.00	2.47	0.00
194.00	2.70	0.00	2.47	0.00
195.00	2.70	0.00	2.47	0.00
196.00	2.70	0.00	2.47	0.00
197.00	2.70	0.00	2.47	0.00
198.00	2.70	0.00	2.47	0.00
199.00	2.70	0.00	2.47	0.00
200.00	2.70	0.00	2.47	0.00
201.00	2.70	0.00	2.47	0.00
202.00	2.70	0.00	2.47	0.00
203.00	2.70	0.00	2.47	0.00
204.00	2.70	0.00	2.47	0.00
205.00	2.70	0.00	2.47	0.00
206.00	2.70	0.00	2.47	0.00
207.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	2.70	0.00	2.47	0.00
209.00	2.70	0.00	2.47	0.00
210.00	2.70	0.00	2.47	0.00
211.00	2.70	0.00	2.47	0.00
212.00	2.70	0.00	2.47	0.00
213.00	2.70	0.00	2.47	0.00
214.00	2.70	0.00	2.47	0.00
215.00	2.70	0.00	2.47	0.00
216.00	2.70	0.00	2.47	0.00
217.00	2.70	0.00	2.47	0.00
218.00	2.70	0.00	2.47	0.00
219.00	2.70	0.00	2.47	0.00
220.00	2.70	0.00	2.47	0.00
221.00	2.70	0.00	2.47	0.00
222.00	2.70	0.00	2.47	0.00
223.00	2.70	0.00	2.47	0.00
224.00	2.70	0.00	2.47	0.00
225.00	2.70	0.00	2.47	0.00
226.00	2.70	0.00	2.47	0.00
227.00	2.70	0.00	2.47	0.00
228.00	2.70	0.00	2.47	0.00
229.00	2.70	0.00	2.47	0.00
230.00	2.70	0.00	2.47	0.00
231.00	2.70	0.00	2.47	0.00
232.00	2.70	0.00	2.47	0.00
233.00	2.70	0.00	2.47	0.00
234.00	2.70	0.00	2.47	0.00
235.00	2.70	0.00	2.47	0.00
236.00	2.70	0.00	2.47	0.00
237.00	2.70	0.00	2.47	0.00
238.00	2.70	0.00	2.47	0.00
239.00	2.70	0.00	2.47	0.00
240.00	2.70	0.00	2.47	0.00
241.00	2.70	0.00	2.47	0.00
242.00	2.70	0.00	2.47	0.00
243.00	2.70	0.00	2.47	0.00
244.00	2.70	0.00	2.47	0.00
245.00	2.70	0.00	2.47	0.00
246.00	2.70	0.00	2.47	0.00
247.00	2.70	0.00	2.47	0.00
248.00	2.70	0.00	2.47	0.00
249.00	2.70	0.00	2.47	0.00
250.00	2.70	0.00	2.47	0.00
251.00	2.70	0.00	2.47	0.00
252.00	2.70	0.00	2.47	0.00
253.00	2.70	0.00	2.47	0.00
254.00	2.70	0.00	2.47	0.00
255.00	2.70	0.00	2.47	0.00
256.00	2.70	0.00	2.47	0.00
257.00	2.70	0.00	2.47	0.00
258.00	2.70	0.00	2.47	0.00
259.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	2.70	0.00	2.47	0.00
261.00	2.70	0.00	2.47	0.00
262.00	2.70	0.00	2.47	0.00
263.00	2.70	0.00	2.47	0.00
264.00	2.70	0.00	2.47	0.00
265.00	2.70	0.00	2.47	0.00
266.00	2.70	0.00	2.47	0.00
267.00	2.70	0.00	2.47	0.00
268.00	2.70	0.00	2.47	0.00
269.00	2.70	0.00	2.47	0.00
270.00	2.70	0.00	2.47	0.00
271.00	2.70	0.00	2.47	0.00
272.00	2.70	0.00	2.47	0.00
273.00	2.70	0.00	2.47	0.00
274.00	2.70	0.00	2.47	0.00
275.00	2.70	0.00	2.47	0.00
276.00	2.70	0.00	2.47	0.00
277.00	2.70	0.00	2.47	0.00
278.00	2.70	0.00	2.47	0.00
279.00	2.70	0.00	2.47	0.00
280.00	2.70	0.00	2.47	0.00
281.00	2.70	0.00	2.47	0.00
282.00	2.70	0.00	2.47	0.00
283.00	2.70	0.00	2.47	0.00
284.00	2.70	0.00	2.47	0.00
285.00	2.70	0.00	2.47	0.00
286.00	2.70	0.00	2.47	0.00
287.00	2.70	0.00	2.47	0.00
288.00	2.70	0.00	2.47	0.00
289.00	2.70	0.00	2.47	0.00
290.00	2.70	0.00	2.47	0.00
291.00	2.70	0.00	2.47	0.00
292.00	2.70	0.00	2.47	0.00
293.00	2.70	0.00	2.47	0.00
294.00	2.70	0.00	2.47	0.00
295.00	2.70	0.00	2.47	0.00
296.00	2.70	0.00	2.47	0.00
297.00	2.70	0.00	2.47	0.00
298.00	2.70	0.00	2.47	0.00
299.00	2.70	0.00	2.47	0.00
300.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

Prepared by VU for PADEP

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Summary for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Runoff = 0.45 cfs @ 12.25 hrs, Volume= 0.042 af, Depth= 0.72"

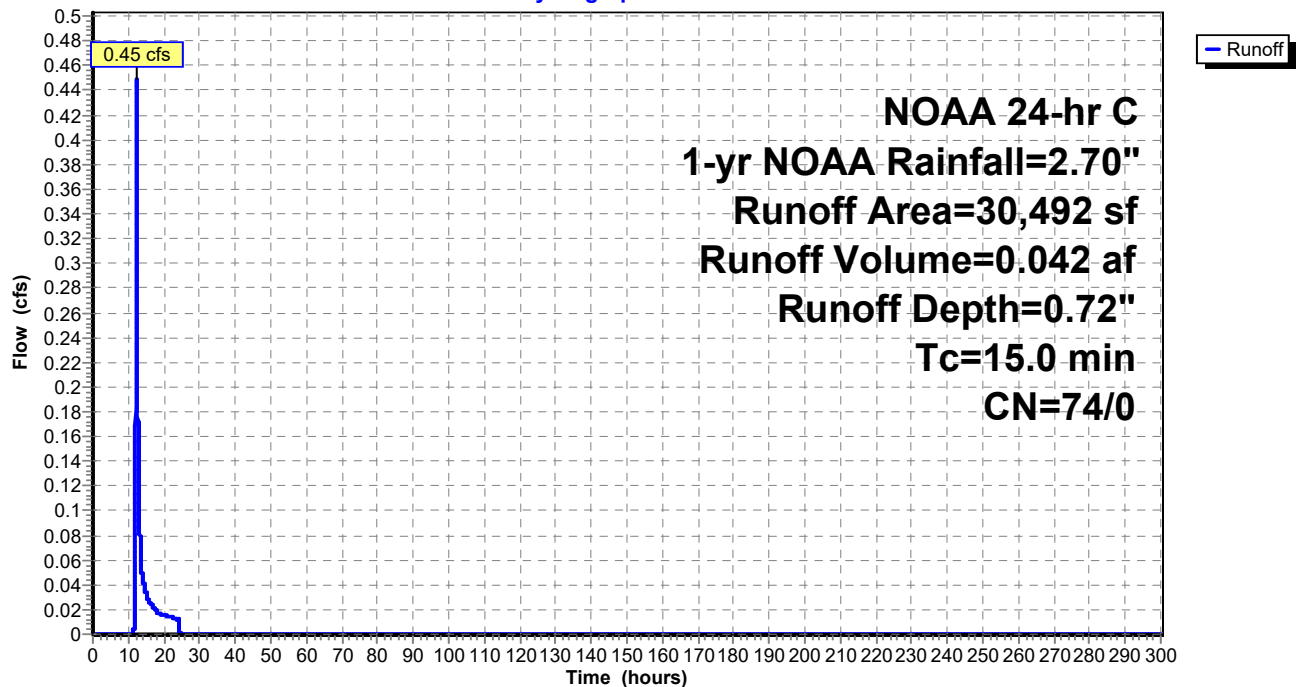
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

	Area (sf)	CN	Description
*	30,492	74	Meadow, non-grazed, HSG C
	30,492	74	100.00% Pervious Area

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

Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00	0.00
2.00	0.06	0.00	0.00	0.00
3.00	0.10	0.00	0.00	0.00
4.00	0.13	0.00	0.00	0.00
5.00	0.17	0.00	0.00	0.00
6.00	0.21	0.00	0.00	0.00
7.00	0.26	0.00	0.00	0.00
8.00	0.32	0.00	0.00	0.00
9.00	0.39	0.00	0.00	0.00
10.00	0.49	0.00	0.00	0.00
11.00	0.65	0.00	0.00	0.00
12.00	1.29	0.08	0.00	0.10
13.00	2.05	0.37	0.00	0.10
14.00	2.21	0.45	0.00	0.05
15.00	2.31	0.50	0.00	0.03
16.00	2.38	0.54	0.00	0.03
17.00	2.44	0.57	0.00	0.02
18.00	2.49	0.60	0.00	0.02
19.00	2.53	0.62	0.00	0.02
20.00	2.57	0.65	0.00	0.02
21.00	2.60	0.67	0.00	0.01
22.00	2.64	0.69	0.00	0.01
23.00	2.67	0.71	0.00	0.01
24.00	2.70	0.72	0.00	0.01
25.00	2.70	0.72	0.00	0.00
26.00	2.70	0.72	0.00	0.00
27.00	2.70	0.72	0.00	0.00
28.00	2.70	0.72	0.00	0.00
29.00	2.70	0.72	0.00	0.00
30.00	2.70	0.72	0.00	0.00
31.00	2.70	0.72	0.00	0.00
32.00	2.70	0.72	0.00	0.00
33.00	2.70	0.72	0.00	0.00
34.00	2.70	0.72	0.00	0.00
35.00	2.70	0.72	0.00	0.00
36.00	2.70	0.72	0.00	0.00
37.00	2.70	0.72	0.00	0.00
38.00	2.70	0.72	0.00	0.00
39.00	2.70	0.72	0.00	0.00
40.00	2.70	0.72	0.00	0.00
41.00	2.70	0.72	0.00	0.00
42.00	2.70	0.72	0.00	0.00
43.00	2.70	0.72	0.00	0.00
44.00	2.70	0.72	0.00	0.00
45.00	2.70	0.72	0.00	0.00
46.00	2.70	0.72	0.00	0.00
47.00	2.70	0.72	0.00	0.00
48.00	2.70	0.72	0.00	0.00
49.00	2.70	0.72	0.00	0.00
50.00	2.70	0.72	0.00	0.00
51.00	2.70	0.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	2.70	0.72	0.00	0.00
53.00	2.70	0.72	0.00	0.00
54.00	2.70	0.72	0.00	0.00
55.00	2.70	0.72	0.00	0.00
56.00	2.70	0.72	0.00	0.00
57.00	2.70	0.72	0.00	0.00
58.00	2.70	0.72	0.00	0.00
59.00	2.70	0.72	0.00	0.00
60.00	2.70	0.72	0.00	0.00
61.00	2.70	0.72	0.00	0.00
62.00	2.70	0.72	0.00	0.00
63.00	2.70	0.72	0.00	0.00
64.00	2.70	0.72	0.00	0.00
65.00	2.70	0.72	0.00	0.00
66.00	2.70	0.72	0.00	0.00
67.00	2.70	0.72	0.00	0.00
68.00	2.70	0.72	0.00	0.00
69.00	2.70	0.72	0.00	0.00
70.00	2.70	0.72	0.00	0.00
71.00	2.70	0.72	0.00	0.00
72.00	2.70	0.72	0.00	0.00
73.00	2.70	0.72	0.00	0.00
74.00	2.70	0.72	0.00	0.00
75.00	2.70	0.72	0.00	0.00
76.00	2.70	0.72	0.00	0.00
77.00	2.70	0.72	0.00	0.00
78.00	2.70	0.72	0.00	0.00
79.00	2.70	0.72	0.00	0.00
80.00	2.70	0.72	0.00	0.00
81.00	2.70	0.72	0.00	0.00
82.00	2.70	0.72	0.00	0.00
83.00	2.70	0.72	0.00	0.00
84.00	2.70	0.72	0.00	0.00
85.00	2.70	0.72	0.00	0.00
86.00	2.70	0.72	0.00	0.00
87.00	2.70	0.72	0.00	0.00
88.00	2.70	0.72	0.00	0.00
89.00	2.70	0.72	0.00	0.00
90.00	2.70	0.72	0.00	0.00
91.00	2.70	0.72	0.00	0.00
92.00	2.70	0.72	0.00	0.00
93.00	2.70	0.72	0.00	0.00
94.00	2.70	0.72	0.00	0.00
95.00	2.70	0.72	0.00	0.00
96.00	2.70	0.72	0.00	0.00
97.00	2.70	0.72	0.00	0.00
98.00	2.70	0.72	0.00	0.00
99.00	2.70	0.72	0.00	0.00
100.00	2.70	0.72	0.00	0.00
101.00	2.70	0.72	0.00	0.00
102.00	2.70	0.72	0.00	0.00
103.00	2.70	0.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	2.70	0.72	0.00	0.00
105.00	2.70	0.72	0.00	0.00
106.00	2.70	0.72	0.00	0.00
107.00	2.70	0.72	0.00	0.00
108.00	2.70	0.72	0.00	0.00
109.00	2.70	0.72	0.00	0.00
110.00	2.70	0.72	0.00	0.00
111.00	2.70	0.72	0.00	0.00
112.00	2.70	0.72	0.00	0.00
113.00	2.70	0.72	0.00	0.00
114.00	2.70	0.72	0.00	0.00
115.00	2.70	0.72	0.00	0.00
116.00	2.70	0.72	0.00	0.00
117.00	2.70	0.72	0.00	0.00
118.00	2.70	0.72	0.00	0.00
119.00	2.70	0.72	0.00	0.00
120.00	2.70	0.72	0.00	0.00
121.00	2.70	0.72	0.00	0.00
122.00	2.70	0.72	0.00	0.00
123.00	2.70	0.72	0.00	0.00
124.00	2.70	0.72	0.00	0.00
125.00	2.70	0.72	0.00	0.00
126.00	2.70	0.72	0.00	0.00
127.00	2.70	0.72	0.00	0.00
128.00	2.70	0.72	0.00	0.00
129.00	2.70	0.72	0.00	0.00
130.00	2.70	0.72	0.00	0.00
131.00	2.70	0.72	0.00	0.00
132.00	2.70	0.72	0.00	0.00
133.00	2.70	0.72	0.00	0.00
134.00	2.70	0.72	0.00	0.00
135.00	2.70	0.72	0.00	0.00
136.00	2.70	0.72	0.00	0.00
137.00	2.70	0.72	0.00	0.00
138.00	2.70	0.72	0.00	0.00
139.00	2.70	0.72	0.00	0.00
140.00	2.70	0.72	0.00	0.00
141.00	2.70	0.72	0.00	0.00
142.00	2.70	0.72	0.00	0.00
143.00	2.70	0.72	0.00	0.00
144.00	2.70	0.72	0.00	0.00
145.00	2.70	0.72	0.00	0.00
146.00	2.70	0.72	0.00	0.00
147.00	2.70	0.72	0.00	0.00
148.00	2.70	0.72	0.00	0.00
149.00	2.70	0.72	0.00	0.00
150.00	2.70	0.72	0.00	0.00
151.00	2.70	0.72	0.00	0.00
152.00	2.70	0.72	0.00	0.00
153.00	2.70	0.72	0.00	0.00
154.00	2.70	0.72	0.00	0.00
155.00	2.70	0.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	2.70	0.72	0.00	0.00
157.00	2.70	0.72	0.00	0.00
158.00	2.70	0.72	0.00	0.00
159.00	2.70	0.72	0.00	0.00
160.00	2.70	0.72	0.00	0.00
161.00	2.70	0.72	0.00	0.00
162.00	2.70	0.72	0.00	0.00
163.00	2.70	0.72	0.00	0.00
164.00	2.70	0.72	0.00	0.00
165.00	2.70	0.72	0.00	0.00
166.00	2.70	0.72	0.00	0.00
167.00	2.70	0.72	0.00	0.00
168.00	2.70	0.72	0.00	0.00
169.00	2.70	0.72	0.00	0.00
170.00	2.70	0.72	0.00	0.00
171.00	2.70	0.72	0.00	0.00
172.00	2.70	0.72	0.00	0.00
173.00	2.70	0.72	0.00	0.00
174.00	2.70	0.72	0.00	0.00
175.00	2.70	0.72	0.00	0.00
176.00	2.70	0.72	0.00	0.00
177.00	2.70	0.72	0.00	0.00
178.00	2.70	0.72	0.00	0.00
179.00	2.70	0.72	0.00	0.00
180.00	2.70	0.72	0.00	0.00
181.00	2.70	0.72	0.00	0.00
182.00	2.70	0.72	0.00	0.00
183.00	2.70	0.72	0.00	0.00
184.00	2.70	0.72	0.00	0.00
185.00	2.70	0.72	0.00	0.00
186.00	2.70	0.72	0.00	0.00
187.00	2.70	0.72	0.00	0.00
188.00	2.70	0.72	0.00	0.00
189.00	2.70	0.72	0.00	0.00
190.00	2.70	0.72	0.00	0.00
191.00	2.70	0.72	0.00	0.00
192.00	2.70	0.72	0.00	0.00
193.00	2.70	0.72	0.00	0.00
194.00	2.70	0.72	0.00	0.00
195.00	2.70	0.72	0.00	0.00
196.00	2.70	0.72	0.00	0.00
197.00	2.70	0.72	0.00	0.00
198.00	2.70	0.72	0.00	0.00
199.00	2.70	0.72	0.00	0.00
200.00	2.70	0.72	0.00	0.00
201.00	2.70	0.72	0.00	0.00
202.00	2.70	0.72	0.00	0.00
203.00	2.70	0.72	0.00	0.00
204.00	2.70	0.72	0.00	0.00
205.00	2.70	0.72	0.00	0.00
206.00	2.70	0.72	0.00	0.00
207.00	2.70	0.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	2.70	0.72	0.00	0.00
209.00	2.70	0.72	0.00	0.00
210.00	2.70	0.72	0.00	0.00
211.00	2.70	0.72	0.00	0.00
212.00	2.70	0.72	0.00	0.00
213.00	2.70	0.72	0.00	0.00
214.00	2.70	0.72	0.00	0.00
215.00	2.70	0.72	0.00	0.00
216.00	2.70	0.72	0.00	0.00
217.00	2.70	0.72	0.00	0.00
218.00	2.70	0.72	0.00	0.00
219.00	2.70	0.72	0.00	0.00
220.00	2.70	0.72	0.00	0.00
221.00	2.70	0.72	0.00	0.00
222.00	2.70	0.72	0.00	0.00
223.00	2.70	0.72	0.00	0.00
224.00	2.70	0.72	0.00	0.00
225.00	2.70	0.72	0.00	0.00
226.00	2.70	0.72	0.00	0.00
227.00	2.70	0.72	0.00	0.00
228.00	2.70	0.72	0.00	0.00
229.00	2.70	0.72	0.00	0.00
230.00	2.70	0.72	0.00	0.00
231.00	2.70	0.72	0.00	0.00
232.00	2.70	0.72	0.00	0.00
233.00	2.70	0.72	0.00	0.00
234.00	2.70	0.72	0.00	0.00
235.00	2.70	0.72	0.00	0.00
236.00	2.70	0.72	0.00	0.00
237.00	2.70	0.72	0.00	0.00
238.00	2.70	0.72	0.00	0.00
239.00	2.70	0.72	0.00	0.00
240.00	2.70	0.72	0.00	0.00
241.00	2.70	0.72	0.00	0.00
242.00	2.70	0.72	0.00	0.00
243.00	2.70	0.72	0.00	0.00
244.00	2.70	0.72	0.00	0.00
245.00	2.70	0.72	0.00	0.00
246.00	2.70	0.72	0.00	0.00
247.00	2.70	0.72	0.00	0.00
248.00	2.70	0.72	0.00	0.00
249.00	2.70	0.72	0.00	0.00
250.00	2.70	0.72	0.00	0.00
251.00	2.70	0.72	0.00	0.00
252.00	2.70	0.72	0.00	0.00
253.00	2.70	0.72	0.00	0.00
254.00	2.70	0.72	0.00	0.00
255.00	2.70	0.72	0.00	0.00
256.00	2.70	0.72	0.00	0.00
257.00	2.70	0.72	0.00	0.00
258.00	2.70	0.72	0.00	0.00
259.00	2.70	0.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	2.70	0.72	0.00	0.00
261.00	2.70	0.72	0.00	0.00
262.00	2.70	0.72	0.00	0.00
263.00	2.70	0.72	0.00	0.00
264.00	2.70	0.72	0.00	0.00
265.00	2.70	0.72	0.00	0.00
266.00	2.70	0.72	0.00	0.00
267.00	2.70	0.72	0.00	0.00
268.00	2.70	0.72	0.00	0.00
269.00	2.70	0.72	0.00	0.00
270.00	2.70	0.72	0.00	0.00
271.00	2.70	0.72	0.00	0.00
272.00	2.70	0.72	0.00	0.00
273.00	2.70	0.72	0.00	0.00
274.00	2.70	0.72	0.00	0.00
275.00	2.70	0.72	0.00	0.00
276.00	2.70	0.72	0.00	0.00
277.00	2.70	0.72	0.00	0.00
278.00	2.70	0.72	0.00	0.00
279.00	2.70	0.72	0.00	0.00
280.00	2.70	0.72	0.00	0.00
281.00	2.70	0.72	0.00	0.00
282.00	2.70	0.72	0.00	0.00
283.00	2.70	0.72	0.00	0.00
284.00	2.70	0.72	0.00	0.00
285.00	2.70	0.72	0.00	0.00
286.00	2.70	0.72	0.00	0.00
287.00	2.70	0.72	0.00	0.00
288.00	2.70	0.72	0.00	0.00
289.00	2.70	0.72	0.00	0.00
290.00	2.70	0.72	0.00	0.00
291.00	2.70	0.72	0.00	0.00
292.00	2.70	0.72	0.00	0.00
293.00	2.70	0.72	0.00	0.00
294.00	2.70	0.72	0.00	0.00
295.00	2.70	0.72	0.00	0.00
296.00	2.70	0.72	0.00	0.00
297.00	2.70	0.72	0.00	0.00
298.00	2.70	0.72	0.00	0.00
299.00	2.70	0.72	0.00	0.00
300.00	2.70	0.72	0.00	0.00

MRC Example 2

Prepared by VU for PADEP

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NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Summary for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Runoff = 1.99 cfs @ 12.13 hrs, Volume= 0.144 af, Depth= 2.47"

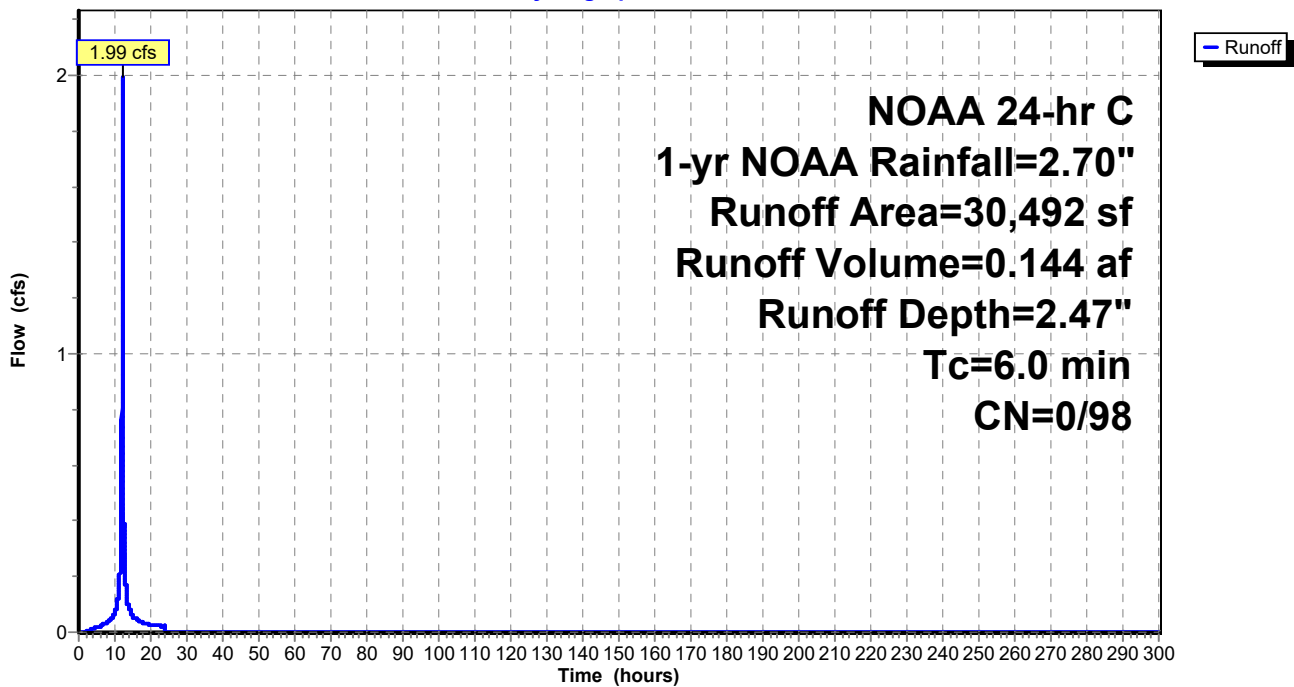
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Hydrograph



MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.03	0.00	0.00	0.00
2.00	0.06	0.00	0.00	0.00
3.00	0.10	0.00	0.01	0.01
4.00	0.13	0.00	0.03	0.01
5.00	0.17	0.00	0.05	0.02
6.00	0.21	0.00	0.08	0.02
7.00	0.26	0.00	0.12	0.03
8.00	0.32	0.00	0.16	0.04
9.00	0.39	0.00	0.22	0.05
10.00	0.49	0.00	0.31	0.07
11.00	0.65	0.00	0.45	0.14
12.00	1.29	0.00	1.07	1.10
13.00	2.05	0.00	1.83	0.18
14.00	2.21	0.00	1.98	0.09
15.00	2.31	0.00	2.08	0.06
16.00	2.38	0.00	2.15	0.05
17.00	2.44	0.00	2.21	0.04
18.00	2.49	0.00	2.26	0.03
19.00	2.53	0.00	2.30	0.03
20.00	2.57	0.00	2.34	0.03
21.00	2.60	0.00	2.37	0.03
22.00	2.64	0.00	2.41	0.02
23.00	2.67	0.00	2.44	0.02
24.00	2.70	0.00	2.47	0.02
25.00	2.70	0.00	2.47	0.00
26.00	2.70	0.00	2.47	0.00
27.00	2.70	0.00	2.47	0.00
28.00	2.70	0.00	2.47	0.00
29.00	2.70	0.00	2.47	0.00
30.00	2.70	0.00	2.47	0.00
31.00	2.70	0.00	2.47	0.00
32.00	2.70	0.00	2.47	0.00
33.00	2.70	0.00	2.47	0.00
34.00	2.70	0.00	2.47	0.00
35.00	2.70	0.00	2.47	0.00
36.00	2.70	0.00	2.47	0.00
37.00	2.70	0.00	2.47	0.00
38.00	2.70	0.00	2.47	0.00
39.00	2.70	0.00	2.47	0.00
40.00	2.70	0.00	2.47	0.00
41.00	2.70	0.00	2.47	0.00
42.00	2.70	0.00	2.47	0.00
43.00	2.70	0.00	2.47	0.00
44.00	2.70	0.00	2.47	0.00
45.00	2.70	0.00	2.47	0.00
46.00	2.70	0.00	2.47	0.00
47.00	2.70	0.00	2.47	0.00
48.00	2.70	0.00	2.47	0.00
49.00	2.70	0.00	2.47	0.00
50.00	2.70	0.00	2.47	0.00
51.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	2.70	0.00	2.47	0.00
53.00	2.70	0.00	2.47	0.00
54.00	2.70	0.00	2.47	0.00
55.00	2.70	0.00	2.47	0.00
56.00	2.70	0.00	2.47	0.00
57.00	2.70	0.00	2.47	0.00
58.00	2.70	0.00	2.47	0.00
59.00	2.70	0.00	2.47	0.00
60.00	2.70	0.00	2.47	0.00
61.00	2.70	0.00	2.47	0.00
62.00	2.70	0.00	2.47	0.00
63.00	2.70	0.00	2.47	0.00
64.00	2.70	0.00	2.47	0.00
65.00	2.70	0.00	2.47	0.00
66.00	2.70	0.00	2.47	0.00
67.00	2.70	0.00	2.47	0.00
68.00	2.70	0.00	2.47	0.00
69.00	2.70	0.00	2.47	0.00
70.00	2.70	0.00	2.47	0.00
71.00	2.70	0.00	2.47	0.00
72.00	2.70	0.00	2.47	0.00
73.00	2.70	0.00	2.47	0.00
74.00	2.70	0.00	2.47	0.00
75.00	2.70	0.00	2.47	0.00
76.00	2.70	0.00	2.47	0.00
77.00	2.70	0.00	2.47	0.00
78.00	2.70	0.00	2.47	0.00
79.00	2.70	0.00	2.47	0.00
80.00	2.70	0.00	2.47	0.00
81.00	2.70	0.00	2.47	0.00
82.00	2.70	0.00	2.47	0.00
83.00	2.70	0.00	2.47	0.00
84.00	2.70	0.00	2.47	0.00
85.00	2.70	0.00	2.47	0.00
86.00	2.70	0.00	2.47	0.00
87.00	2.70	0.00	2.47	0.00
88.00	2.70	0.00	2.47	0.00
89.00	2.70	0.00	2.47	0.00
90.00	2.70	0.00	2.47	0.00
91.00	2.70	0.00	2.47	0.00
92.00	2.70	0.00	2.47	0.00
93.00	2.70	0.00	2.47	0.00
94.00	2.70	0.00	2.47	0.00
95.00	2.70	0.00	2.47	0.00
96.00	2.70	0.00	2.47	0.00
97.00	2.70	0.00	2.47	0.00
98.00	2.70	0.00	2.47	0.00
99.00	2.70	0.00	2.47	0.00
100.00	2.70	0.00	2.47	0.00
101.00	2.70	0.00	2.47	0.00
102.00	2.70	0.00	2.47	0.00
103.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	2.70	0.00	2.47	0.00
105.00	2.70	0.00	2.47	0.00
106.00	2.70	0.00	2.47	0.00
107.00	2.70	0.00	2.47	0.00
108.00	2.70	0.00	2.47	0.00
109.00	2.70	0.00	2.47	0.00
110.00	2.70	0.00	2.47	0.00
111.00	2.70	0.00	2.47	0.00
112.00	2.70	0.00	2.47	0.00
113.00	2.70	0.00	2.47	0.00
114.00	2.70	0.00	2.47	0.00
115.00	2.70	0.00	2.47	0.00
116.00	2.70	0.00	2.47	0.00
117.00	2.70	0.00	2.47	0.00
118.00	2.70	0.00	2.47	0.00
119.00	2.70	0.00	2.47	0.00
120.00	2.70	0.00	2.47	0.00
121.00	2.70	0.00	2.47	0.00
122.00	2.70	0.00	2.47	0.00
123.00	2.70	0.00	2.47	0.00
124.00	2.70	0.00	2.47	0.00
125.00	2.70	0.00	2.47	0.00
126.00	2.70	0.00	2.47	0.00
127.00	2.70	0.00	2.47	0.00
128.00	2.70	0.00	2.47	0.00
129.00	2.70	0.00	2.47	0.00
130.00	2.70	0.00	2.47	0.00
131.00	2.70	0.00	2.47	0.00
132.00	2.70	0.00	2.47	0.00
133.00	2.70	0.00	2.47	0.00
134.00	2.70	0.00	2.47	0.00
135.00	2.70	0.00	2.47	0.00
136.00	2.70	0.00	2.47	0.00
137.00	2.70	0.00	2.47	0.00
138.00	2.70	0.00	2.47	0.00
139.00	2.70	0.00	2.47	0.00
140.00	2.70	0.00	2.47	0.00
141.00	2.70	0.00	2.47	0.00
142.00	2.70	0.00	2.47	0.00
143.00	2.70	0.00	2.47	0.00
144.00	2.70	0.00	2.47	0.00
145.00	2.70	0.00	2.47	0.00
146.00	2.70	0.00	2.47	0.00
147.00	2.70	0.00	2.47	0.00
148.00	2.70	0.00	2.47	0.00
149.00	2.70	0.00	2.47	0.00
150.00	2.70	0.00	2.47	0.00
151.00	2.70	0.00	2.47	0.00
152.00	2.70	0.00	2.47	0.00
153.00	2.70	0.00	2.47	0.00
154.00	2.70	0.00	2.47	0.00
155.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	2.70	0.00	2.47	0.00
157.00	2.70	0.00	2.47	0.00
158.00	2.70	0.00	2.47	0.00
159.00	2.70	0.00	2.47	0.00
160.00	2.70	0.00	2.47	0.00
161.00	2.70	0.00	2.47	0.00
162.00	2.70	0.00	2.47	0.00
163.00	2.70	0.00	2.47	0.00
164.00	2.70	0.00	2.47	0.00
165.00	2.70	0.00	2.47	0.00
166.00	2.70	0.00	2.47	0.00
167.00	2.70	0.00	2.47	0.00
168.00	2.70	0.00	2.47	0.00
169.00	2.70	0.00	2.47	0.00
170.00	2.70	0.00	2.47	0.00
171.00	2.70	0.00	2.47	0.00
172.00	2.70	0.00	2.47	0.00
173.00	2.70	0.00	2.47	0.00
174.00	2.70	0.00	2.47	0.00
175.00	2.70	0.00	2.47	0.00
176.00	2.70	0.00	2.47	0.00
177.00	2.70	0.00	2.47	0.00
178.00	2.70	0.00	2.47	0.00
179.00	2.70	0.00	2.47	0.00
180.00	2.70	0.00	2.47	0.00
181.00	2.70	0.00	2.47	0.00
182.00	2.70	0.00	2.47	0.00
183.00	2.70	0.00	2.47	0.00
184.00	2.70	0.00	2.47	0.00
185.00	2.70	0.00	2.47	0.00
186.00	2.70	0.00	2.47	0.00
187.00	2.70	0.00	2.47	0.00
188.00	2.70	0.00	2.47	0.00
189.00	2.70	0.00	2.47	0.00
190.00	2.70	0.00	2.47	0.00
191.00	2.70	0.00	2.47	0.00
192.00	2.70	0.00	2.47	0.00
193.00	2.70	0.00	2.47	0.00
194.00	2.70	0.00	2.47	0.00
195.00	2.70	0.00	2.47	0.00
196.00	2.70	0.00	2.47	0.00
197.00	2.70	0.00	2.47	0.00
198.00	2.70	0.00	2.47	0.00
199.00	2.70	0.00	2.47	0.00
200.00	2.70	0.00	2.47	0.00
201.00	2.70	0.00	2.47	0.00
202.00	2.70	0.00	2.47	0.00
203.00	2.70	0.00	2.47	0.00
204.00	2.70	0.00	2.47	0.00
205.00	2.70	0.00	2.47	0.00
206.00	2.70	0.00	2.47	0.00
207.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	2.70	0.00	2.47	0.00
209.00	2.70	0.00	2.47	0.00
210.00	2.70	0.00	2.47	0.00
211.00	2.70	0.00	2.47	0.00
212.00	2.70	0.00	2.47	0.00
213.00	2.70	0.00	2.47	0.00
214.00	2.70	0.00	2.47	0.00
215.00	2.70	0.00	2.47	0.00
216.00	2.70	0.00	2.47	0.00
217.00	2.70	0.00	2.47	0.00
218.00	2.70	0.00	2.47	0.00
219.00	2.70	0.00	2.47	0.00
220.00	2.70	0.00	2.47	0.00
221.00	2.70	0.00	2.47	0.00
222.00	2.70	0.00	2.47	0.00
223.00	2.70	0.00	2.47	0.00
224.00	2.70	0.00	2.47	0.00
225.00	2.70	0.00	2.47	0.00
226.00	2.70	0.00	2.47	0.00
227.00	2.70	0.00	2.47	0.00
228.00	2.70	0.00	2.47	0.00
229.00	2.70	0.00	2.47	0.00
230.00	2.70	0.00	2.47	0.00
231.00	2.70	0.00	2.47	0.00
232.00	2.70	0.00	2.47	0.00
233.00	2.70	0.00	2.47	0.00
234.00	2.70	0.00	2.47	0.00
235.00	2.70	0.00	2.47	0.00
236.00	2.70	0.00	2.47	0.00
237.00	2.70	0.00	2.47	0.00
238.00	2.70	0.00	2.47	0.00
239.00	2.70	0.00	2.47	0.00
240.00	2.70	0.00	2.47	0.00
241.00	2.70	0.00	2.47	0.00
242.00	2.70	0.00	2.47	0.00
243.00	2.70	0.00	2.47	0.00
244.00	2.70	0.00	2.47	0.00
245.00	2.70	0.00	2.47	0.00
246.00	2.70	0.00	2.47	0.00
247.00	2.70	0.00	2.47	0.00
248.00	2.70	0.00	2.47	0.00
249.00	2.70	0.00	2.47	0.00
250.00	2.70	0.00	2.47	0.00
251.00	2.70	0.00	2.47	0.00
252.00	2.70	0.00	2.47	0.00
253.00	2.70	0.00	2.47	0.00
254.00	2.70	0.00	2.47	0.00
255.00	2.70	0.00	2.47	0.00
256.00	2.70	0.00	2.47	0.00
257.00	2.70	0.00	2.47	0.00
258.00	2.70	0.00	2.47	0.00
259.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	2.70	0.00	2.47	0.00
261.00	2.70	0.00	2.47	0.00
262.00	2.70	0.00	2.47	0.00
263.00	2.70	0.00	2.47	0.00
264.00	2.70	0.00	2.47	0.00
265.00	2.70	0.00	2.47	0.00
266.00	2.70	0.00	2.47	0.00
267.00	2.70	0.00	2.47	0.00
268.00	2.70	0.00	2.47	0.00
269.00	2.70	0.00	2.47	0.00
270.00	2.70	0.00	2.47	0.00
271.00	2.70	0.00	2.47	0.00
272.00	2.70	0.00	2.47	0.00
273.00	2.70	0.00	2.47	0.00
274.00	2.70	0.00	2.47	0.00
275.00	2.70	0.00	2.47	0.00
276.00	2.70	0.00	2.47	0.00
277.00	2.70	0.00	2.47	0.00
278.00	2.70	0.00	2.47	0.00
279.00	2.70	0.00	2.47	0.00
280.00	2.70	0.00	2.47	0.00
281.00	2.70	0.00	2.47	0.00
282.00	2.70	0.00	2.47	0.00
283.00	2.70	0.00	2.47	0.00
284.00	2.70	0.00	2.47	0.00
285.00	2.70	0.00	2.47	0.00
286.00	2.70	0.00	2.47	0.00
287.00	2.70	0.00	2.47	0.00
288.00	2.70	0.00	2.47	0.00
289.00	2.70	0.00	2.47	0.00
290.00	2.70	0.00	2.47	0.00
291.00	2.70	0.00	2.47	0.00
292.00	2.70	0.00	2.47	0.00
293.00	2.70	0.00	2.47	0.00
294.00	2.70	0.00	2.47	0.00
295.00	2.70	0.00	2.47	0.00
296.00	2.70	0.00	2.47	0.00
297.00	2.70	0.00	2.47	0.00
298.00	2.70	0.00	2.47	0.00
299.00	2.70	0.00	2.47	0.00
300.00	2.70	0.00	2.47	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Summary for Pond 1P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 2.47" for 1-yr NOAA event
 Inflow = 1.99 cfs @ 12.13 hrs, Volume= 0.144 af
 Outflow = 0.18 cfs @ 12.97 hrs, Volume= 0.133 af, Atten= 91%, Lag= 50.5 min
 Primary = 0.18 cfs @ 12.97 hrs, Volume= 0.133 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.74' @ 12.97 hrs Surf.Area= 3,049 sf Storage= 4,120 cf

Plug-Flow detention time= 2,115.7 min calculated for 0.133 af (93% of inflow)
 Center-of-Mass det. time= 2,074.7 min (2,836.1 - 761.4)

Volume	Invert	Avail.Storage	Storage Description
#1	-2.51'	11,007 cf	Rain Garden (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	3,049	0.0	0	0
-1.51	3,049	15.0	457	457
-1.50	3,049	30.0	9	466
-0.01	3,049	30.0	1,363	1,829
0.00	3,049	100.0	30	1,860
3.00	3,049	100.0	9,147	11,007

Device	Routing	Invert	Outlet Devices
#1	Device 4	1.10'	40.0' 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
#2	Device 4	-1.50'	0.5" Vert. Orifice/Grate C= 0.600
#3	Device 4	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Primary	-2.51'	24.0" Round Culvert L= 1.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= -2.51' / -2.52' S= 0.0100 '/ Cc= 0.900 n= 0.011 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=0.18 cfs @ 12.97 hrs HW=0.74' (Free Discharge)

- 4=Culvert (Passes 0.18 cfs of 17.92 cfs potential flow)
- 1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)
- 2=Orifice/Grate (Orifice Controls 0.01 cfs @ 7.17 fps)
- 3=Sharp-Crested Rectangular Weir(Weir Controls 0.18 cfs @ 1.61 fps)

MRC Example 2

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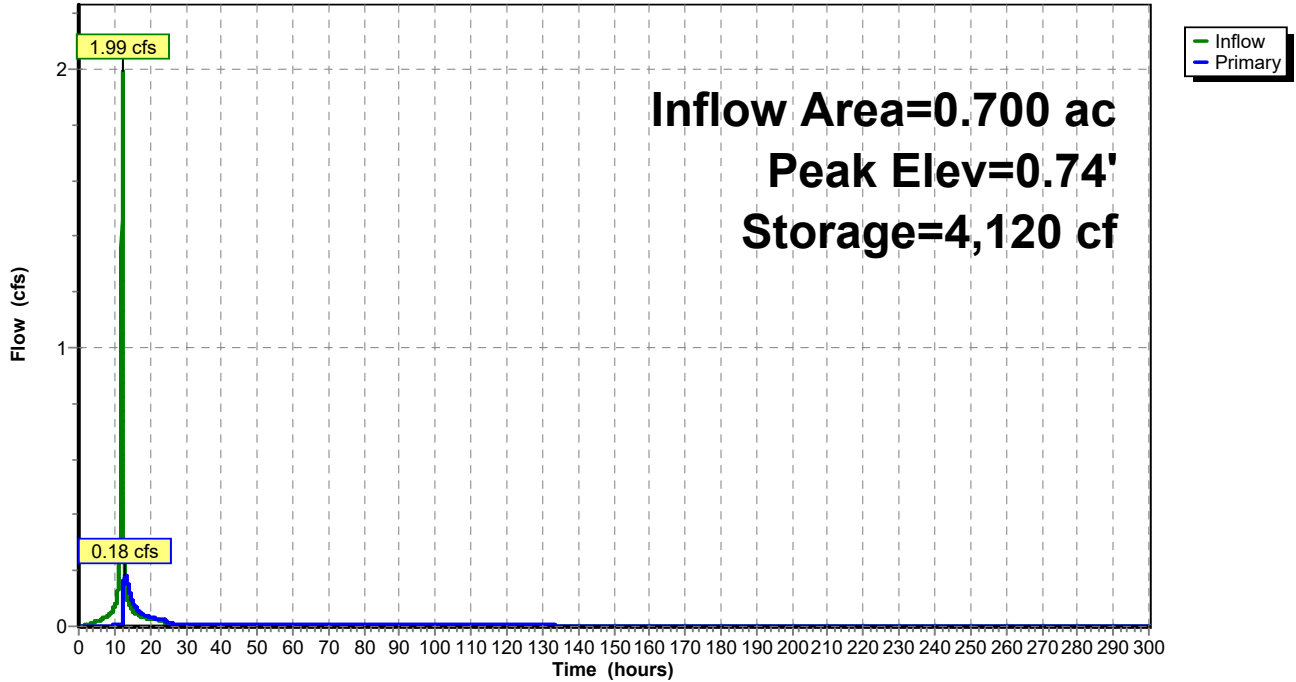
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NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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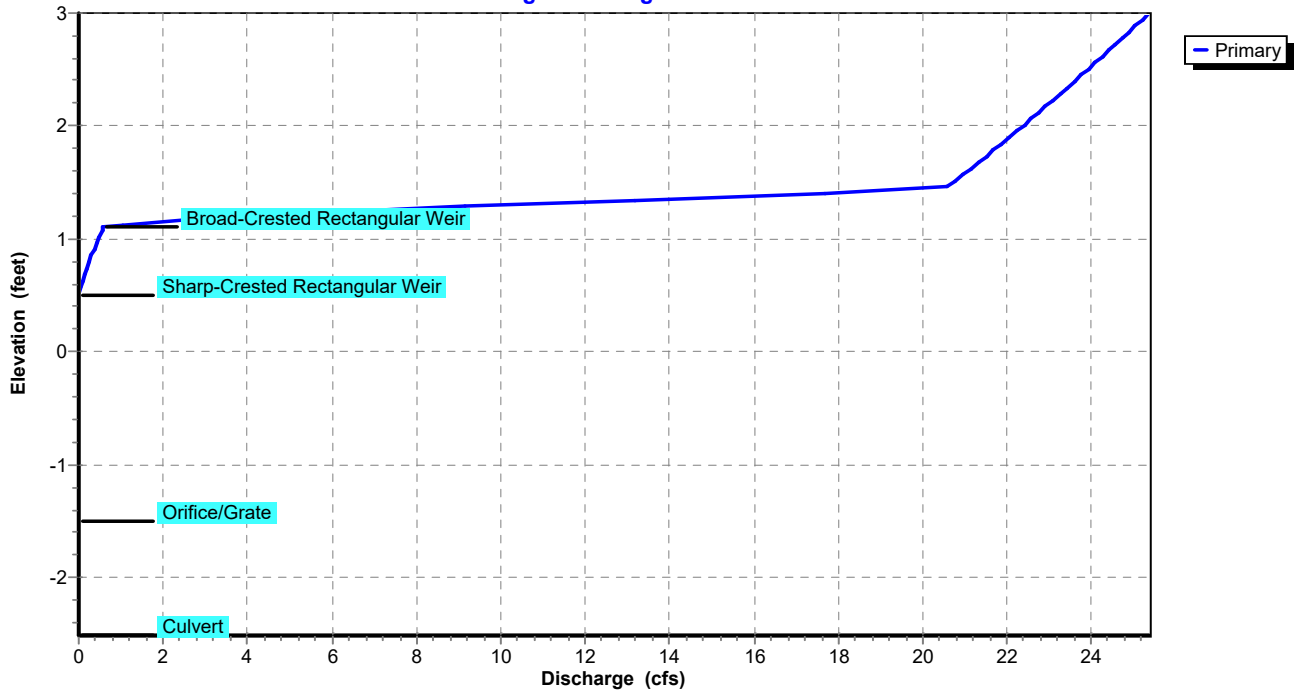
Pond 1P: Managed Release Rain Garden

Hydrograph



Pond 1P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

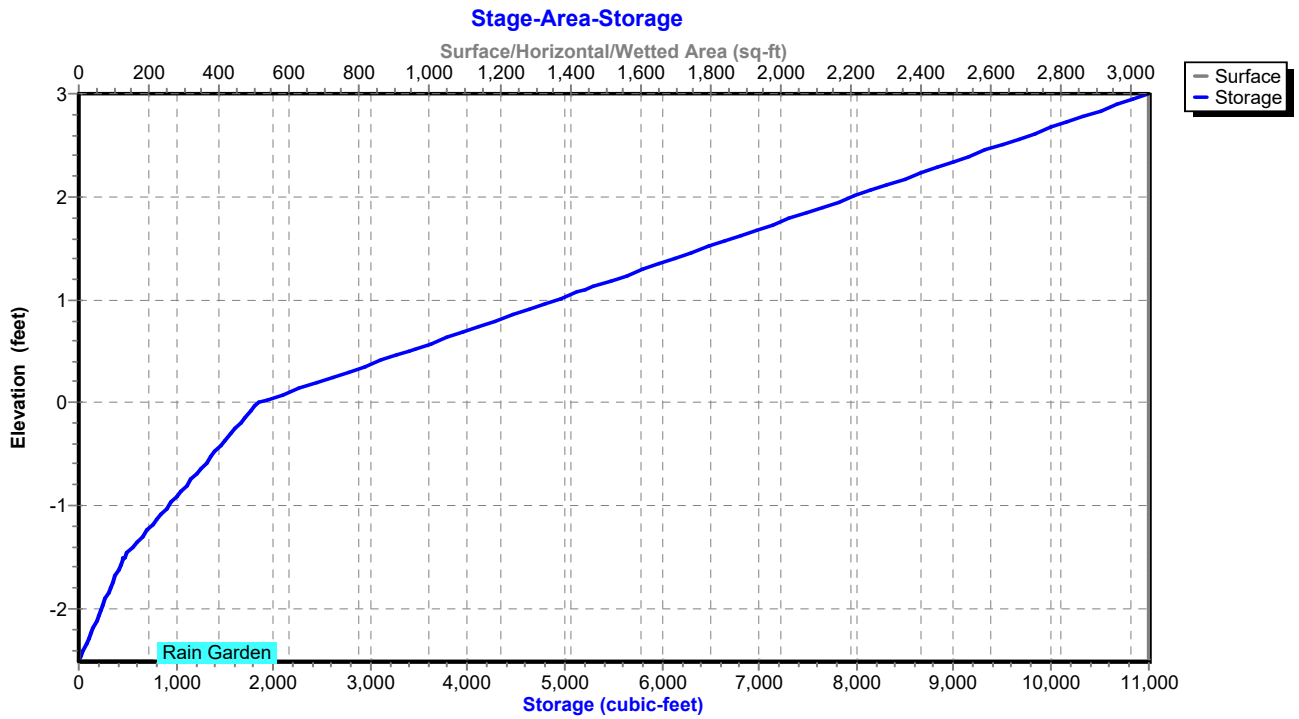
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NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Pond 1P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 1P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	-2.51	0.00
1.00	0.00	0	-2.51	0.00
2.00	0.00	3	-2.50	0.00
3.00	0.01	26	-2.45	0.00
4.00	0.01	67	-2.36	0.00
5.00	0.02	124	-2.24	0.00
6.00	0.02	195	-2.08	0.00
7.00	0.03	285	-1.89	0.00
8.00	0.04	405	-1.63	0.00
9.00	0.05	552	-1.41	0.00
10.00	0.07	754	-1.19	0.00
11.00	0.14	1,081	-0.83	0.01
12.00	1.10	2,263	0.13	0.01
13.00	0.18	4,120	0.74	0.18
14.00	0.09	3,958	0.69	0.13
15.00	0.06	3,814	0.64	0.09
16.00	0.05	3,717	0.61	0.07
17.00	0.04	3,658	0.59	0.05
18.00	0.03	3,615	0.58	0.04
19.00	0.03	3,581	0.56	0.04
20.00	0.03	3,557	0.56	0.03
21.00	0.03	3,539	0.55	0.03
22.00	0.02	3,524	0.55	0.03
23.00	0.02	3,511	0.54	0.02
24.00	0.02	3,499	0.54	0.02
25.00	0.00	3,442	0.52	0.01
26.00	0.00	3,399	0.50	0.01
27.00	0.00	3,365	0.49	0.01
28.00	0.00	3,332	0.48	0.01
29.00	0.00	3,299	0.47	0.01
30.00	0.00	3,266	0.46	0.01
31.00	0.00	3,233	0.45	0.01
32.00	0.00	3,200	0.44	0.01
33.00	0.00	3,167	0.43	0.01
34.00	0.00	3,135	0.42	0.01
35.00	0.00	3,102	0.41	0.01
36.00	0.00	3,070	0.40	0.01
37.00	0.00	3,037	0.39	0.01
38.00	0.00	3,005	0.38	0.01
39.00	0.00	2,973	0.37	0.01
40.00	0.00	2,941	0.35	0.01
41.00	0.00	2,909	0.34	0.01
42.00	0.00	2,877	0.33	0.01
43.00	0.00	2,845	0.32	0.01
44.00	0.00	2,814	0.31	0.01
45.00	0.00	2,782	0.30	0.01
46.00	0.00	2,751	0.29	0.01
47.00	0.00	2,719	0.28	0.01
48.00	0.00	2,688	0.27	0.01
49.00	0.00	2,657	0.26	0.01
50.00	0.00	2,626	0.25	0.01
51.00	0.00	2,595	0.24	0.01

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	2,564	0.23	0.01
53.00	0.00	2,533	0.22	0.01
54.00	0.00	2,502	0.21	0.01
55.00	0.00	2,471	0.20	0.01
56.00	0.00	2,441	0.19	0.01
57.00	0.00	2,410	0.18	0.01
58.00	0.00	2,380	0.17	0.01
59.00	0.00	2,349	0.16	0.01
60.00	0.00	2,319	0.15	0.01
61.00	0.00	2,289	0.14	0.01
62.00	0.00	2,259	0.13	0.01
63.00	0.00	2,229	0.12	0.01
64.00	0.00	2,199	0.11	0.01
65.00	0.00	2,170	0.10	0.01
66.00	0.00	2,140	0.09	0.01
67.00	0.00	2,110	0.08	0.01
68.00	0.00	2,081	0.07	0.01
69.00	0.00	2,051	0.06	0.01
70.00	0.00	2,022	0.05	0.01
71.00	0.00	1,993	0.04	0.01
72.00	0.00	1,964	0.03	0.01
73.00	0.00	1,935	0.02	0.01
74.00	0.00	1,906	0.02	0.01
75.00	0.00	1,877	0.01	0.01
76.00	0.00	1,848	0.00	0.01
77.00	0.00	1,820	-0.02	0.01
78.00	0.00	1,791	-0.05	0.01
79.00	0.00	1,763	-0.08	0.01
80.00	0.00	1,735	-0.11	0.01
81.00	0.00	1,708	-0.14	0.01
82.00	0.00	1,681	-0.17	0.01
83.00	0.00	1,654	-0.20	0.01
84.00	0.00	1,627	-0.23	0.01
85.00	0.00	1,601	-0.26	0.01
86.00	0.00	1,575	-0.29	0.01
87.00	0.00	1,549	-0.32	0.01
88.00	0.00	1,524	-0.34	0.01
89.00	0.00	1,499	-0.37	0.01
90.00	0.00	1,474	-0.40	0.01
91.00	0.00	1,450	-0.42	0.01
92.00	0.00	1,426	-0.45	0.01
93.00	0.00	1,402	-0.48	0.01
94.00	0.00	1,378	-0.50	0.01
95.00	0.00	1,355	-0.53	0.01
96.00	0.00	1,332	-0.55	0.01
97.00	0.00	1,310	-0.58	0.01
98.00	0.00	1,288	-0.60	0.01
99.00	0.00	1,266	-0.63	0.01
100.00	0.00	1,244	-0.65	0.01
101.00	0.00	1,222	-0.67	0.01
102.00	0.00	1,201	-0.70	0.01
103.00	0.00	1,181	-0.72	0.01

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1,160	-0.74	0.01
105.00	0.00	1,140	-0.76	0.01
106.00	0.00	1,120	-0.79	0.01
107.00	0.00	1,101	-0.81	0.01
108.00	0.00	1,081	-0.83	0.01
109.00	0.00	1,063	-0.85	0.01
110.00	0.00	1,044	-0.87	0.01
111.00	0.00	1,026	-0.89	0.01
112.00	0.00	1,008	-0.91	0.00
113.00	0.00	990	-0.93	0.00
114.00	0.00	973	-0.95	0.00
115.00	0.00	955	-0.97	0.00
116.00	0.00	939	-0.98	0.00
117.00	0.00	922	-1.00	0.00
118.00	0.00	906	-1.02	0.00
119.00	0.00	890	-1.04	0.00
120.00	0.00	875	-1.05	0.00
121.00	0.00	859	-1.07	0.00
122.00	0.00	844	-1.09	0.00
123.00	0.00	830	-1.10	0.00
124.00	0.00	815	-1.12	0.00
125.00	0.00	801	-1.13	0.00
126.00	0.00	788	-1.15	0.00
127.00	0.00	774	-1.16	0.00
128.00	0.00	761	-1.18	0.00
129.00	0.00	748	-1.19	0.00
130.00	0.00	736	-1.21	0.00
131.00	0.00	724	-1.22	0.00
132.00	0.00	712	-1.23	0.00
133.00	0.00	700	-1.24	0.00
134.00	0.00	689	-1.26	0.00
135.00	0.00	678	-1.27	0.00
136.00	0.00	667	-1.28	0.00
137.00	0.00	657	-1.29	0.00
138.00	0.00	647	-1.30	0.00
139.00	0.00	637	-1.31	0.00
140.00	0.00	628	-1.32	0.00
141.00	0.00	618	-1.33	0.00
142.00	0.00	610	-1.34	0.00
143.00	0.00	601	-1.35	0.00
144.00	0.00	593	-1.36	0.00
145.00	0.00	585	-1.37	0.00
146.00	0.00	577	-1.38	0.00
147.00	0.00	570	-1.39	0.00
148.00	0.00	563	-1.39	0.00
149.00	0.00	556	-1.40	0.00
150.00	0.00	550	-1.41	0.00
151.00	0.00	544	-1.42	0.00
152.00	0.00	538	-1.42	0.00
153.00	0.00	533	-1.43	0.00
154.00	0.00	528	-1.43	0.00
155.00	0.00	523	-1.44	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	519	-1.44	0.00
157.00	0.00	515	-1.45	0.00
158.00	0.00	511	-1.45	0.00
159.00	0.00	507	-1.46	0.00
160.00	0.00	504	-1.46	0.00
161.00	0.00	501	-1.46	0.00
162.00	0.00	498	-1.47	0.00
163.00	0.00	495	-1.47	0.00
164.00	0.00	493	-1.47	0.00
165.00	0.00	491	-1.47	0.00
166.00	0.00	489	-1.48	0.00
167.00	0.00	487	-1.48	0.00
168.00	0.00	485	-1.48	0.00
169.00	0.00	483	-1.48	0.00
170.00	0.00	482	-1.48	0.00
171.00	0.00	481	-1.48	0.00
172.00	0.00	479	-1.49	0.00
173.00	0.00	478	-1.49	0.00
174.00	0.00	477	-1.49	0.00
175.00	0.00	476	-1.49	0.00
176.00	0.00	476	-1.49	0.00
177.00	0.00	475	-1.49	0.00
178.00	0.00	474	-1.49	0.00
179.00	0.00	473	-1.49	0.00
180.00	0.00	473	-1.49	0.00
181.00	0.00	472	-1.49	0.00
182.00	0.00	472	-1.49	0.00
183.00	0.00	471	-1.49	0.00
184.00	0.00	471	-1.50	0.00
185.00	0.00	471	-1.50	0.00
186.00	0.00	470	-1.50	0.00
187.00	0.00	470	-1.50	0.00
188.00	0.00	470	-1.50	0.00
189.00	0.00	469	-1.50	0.00
190.00	0.00	469	-1.50	0.00
191.00	0.00	469	-1.50	0.00
192.00	0.00	469	-1.50	0.00
193.00	0.00	468	-1.50	0.00
194.00	0.00	468	-1.50	0.00
195.00	0.00	468	-1.50	0.00
196.00	0.00	468	-1.50	0.00
197.00	0.00	468	-1.50	0.00
198.00	0.00	468	-1.50	0.00
199.00	0.00	468	-1.50	0.00
200.00	0.00	468	-1.50	0.00
201.00	0.00	467	-1.50	0.00
202.00	0.00	467	-1.50	0.00
203.00	0.00	467	-1.50	0.00
204.00	0.00	467	-1.50	0.00
205.00	0.00	467	-1.50	0.00
206.00	0.00	467	-1.50	0.00
207.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
208.00	0.00	467	-1.50	0.00
209.00	0.00	467	-1.50	0.00
210.00	0.00	467	-1.50	0.00
211.00	0.00	467	-1.50	0.00
212.00	0.00	467	-1.50	0.00
213.00	0.00	467	-1.50	0.00
214.00	0.00	467	-1.50	0.00
215.00	0.00	467	-1.50	0.00
216.00	0.00	467	-1.50	0.00
217.00	0.00	467	-1.50	0.00
218.00	0.00	467	-1.50	0.00
219.00	0.00	467	-1.50	0.00
220.00	0.00	467	-1.50	0.00
221.00	0.00	467	-1.50	0.00
222.00	0.00	467	-1.50	0.00
223.00	0.00	467	-1.50	0.00
224.00	0.00	467	-1.50	0.00
225.00	0.00	467	-1.50	0.00
226.00	0.00	467	-1.50	0.00
227.00	0.00	467	-1.50	0.00
228.00	0.00	467	-1.50	0.00
229.00	0.00	467	-1.50	0.00
230.00	0.00	467	-1.50	0.00
231.00	0.00	467	-1.50	0.00
232.00	0.00	467	-1.50	0.00
233.00	0.00	467	-1.50	0.00
234.00	0.00	467	-1.50	0.00
235.00	0.00	467	-1.50	0.00
236.00	0.00	467	-1.50	0.00
237.00	0.00	467	-1.50	0.00
238.00	0.00	467	-1.50	0.00
239.00	0.00	467	-1.50	0.00
240.00	0.00	467	-1.50	0.00
241.00	0.00	467	-1.50	0.00
242.00	0.00	467	-1.50	0.00
243.00	0.00	467	-1.50	0.00
244.00	0.00	467	-1.50	0.00
245.00	0.00	467	-1.50	0.00
246.00	0.00	467	-1.50	0.00
247.00	0.00	467	-1.50	0.00
248.00	0.00	467	-1.50	0.00
249.00	0.00	467	-1.50	0.00
250.00	0.00	467	-1.50	0.00
251.00	0.00	467	-1.50	0.00
252.00	0.00	467	-1.50	0.00
253.00	0.00	467	-1.50	0.00
254.00	0.00	467	-1.50	0.00
255.00	0.00	467	-1.50	0.00
256.00	0.00	467	-1.50	0.00
257.00	0.00	467	-1.50	0.00
258.00	0.00	467	-1.50	0.00
259.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
260.00	0.00	467	-1.50	0.00
261.00	0.00	467	-1.50	0.00
262.00	0.00	467	-1.50	0.00
263.00	0.00	467	-1.50	0.00
264.00	0.00	467	-1.50	0.00
265.00	0.00	467	-1.50	0.00
266.00	0.00	466	-1.50	0.00
267.00	0.00	466	-1.50	0.00
268.00	0.00	466	-1.50	0.00
269.00	0.00	466	-1.50	0.00
270.00	0.00	466	-1.50	0.00
271.00	0.00	466	-1.50	0.00
272.00	0.00	466	-1.50	0.00
273.00	0.00	466	-1.50	0.00
274.00	0.00	466	-1.50	0.00
275.00	0.00	466	-1.50	0.00
276.00	0.00	466	-1.50	0.00
277.00	0.00	466	-1.50	0.00
278.00	0.00	466	-1.50	0.00
279.00	0.00	466	-1.50	0.00
280.00	0.00	466	-1.50	0.00
281.00	0.00	466	-1.50	0.00
282.00	0.00	466	-1.50	0.00
283.00	0.00	466	-1.50	0.00
284.00	0.00	466	-1.50	0.00
285.00	0.00	466	-1.50	0.00
286.00	0.00	466	-1.50	0.00
287.00	0.00	466	-1.50	0.00
288.00	0.00	466	-1.50	0.00
289.00	0.00	466	-1.50	0.00
290.00	0.00	466	-1.50	0.00
291.00	0.00	466	-1.50	0.00
292.00	0.00	466	-1.50	0.00
293.00	0.00	466	-1.50	0.00
294.00	0.00	466	-1.50	0.00
295.00	0.00	466	-1.50	0.00
296.00	0.00	466	-1.50	0.00
297.00	0.00	466	-1.50	0.00
298.00	0.00	466	-1.50	0.00
299.00	0.00	466	-1.50	0.00
300.00	0.00	466	-1.50	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Summary for Pond 2P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

[79] Warning: Submerged Pond 1P Primary device # 4 INLET by 0.28'

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 2.29" for 1-yr NOAA event
 Inflow = 0.18 cfs @ 12.97 hrs, Volume= 0.133 af
 Outflow = 0.14 cfs @ 13.86 hrs, Volume= 0.133 af, Atten= 24%, Lag= 53.5 min
 Primary = 0.14 cfs @ 13.86 hrs, Volume= 0.133 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= -2.23' @ 13.86 hrs Surf.Area= 1,742 sf Storage= 487 cf

Plug-Flow detention time= 159.4 min calculated for 0.133 af (100% of inflow)
 Center-of-Mass det. time= 159.4 min (2,995.5 - 2,836.1)

Volume	Invert	Avail.Storage	Storage Description	
#1	-2.51'	6,114 cf	Detention Basin (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	1,742	0.0	0	0
-2.50	1,742	100.0	17	17
1.00	1,742	100.0	6,097	6,114

Device	Routing	Invert	Outlet Devices
#1	Secondary	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	-2.51'	4.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.14 cfs @ 13.86 hrs HW=-2.23' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 0.14 cfs @ 1.80 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=-2.51' (Free Discharge)
 ↑1=Sharp-Crested Rectangular Weir(Controls 0.00 cfs)

MRC Example 2

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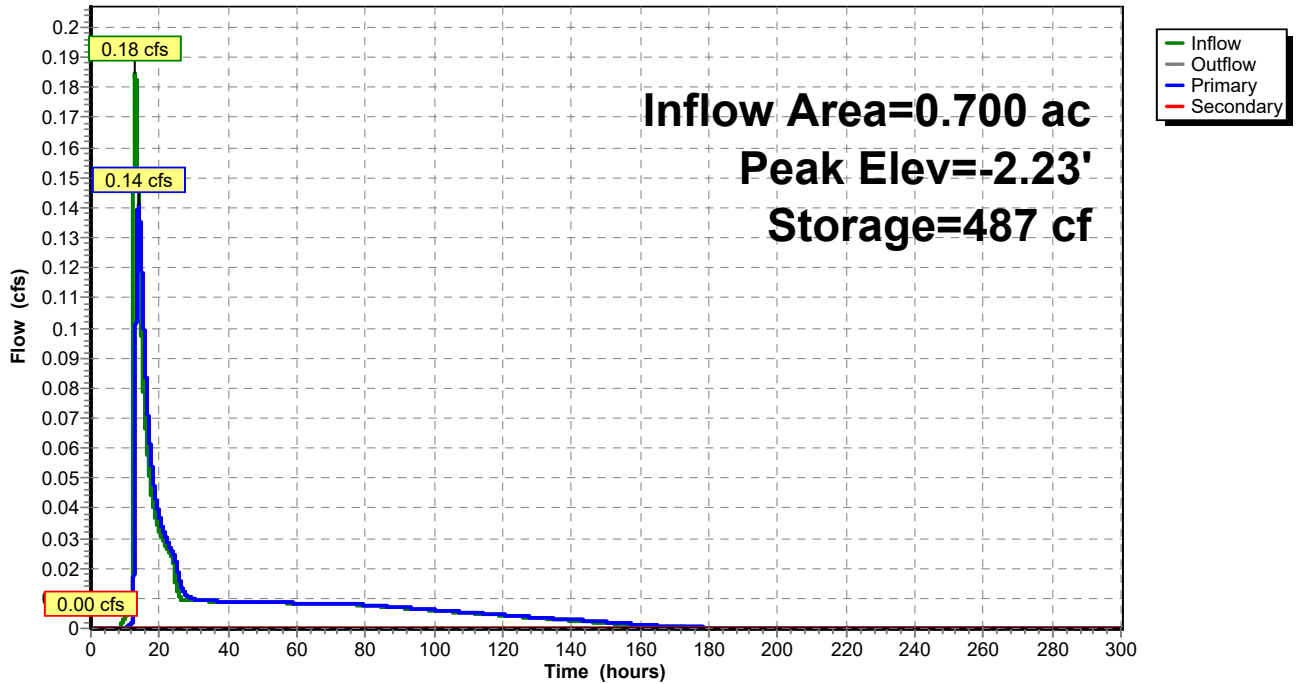
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NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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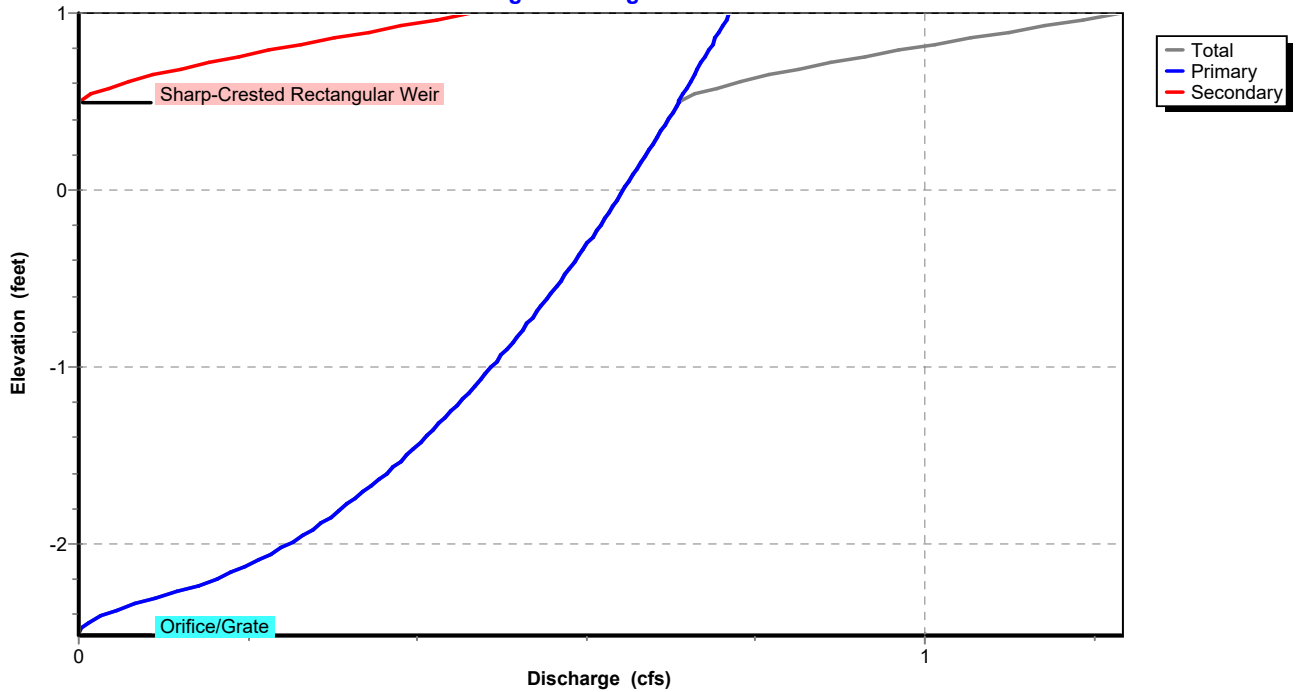
Pond 2P: Managed Release Rain Garden

Hydrograph



Pond 2P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

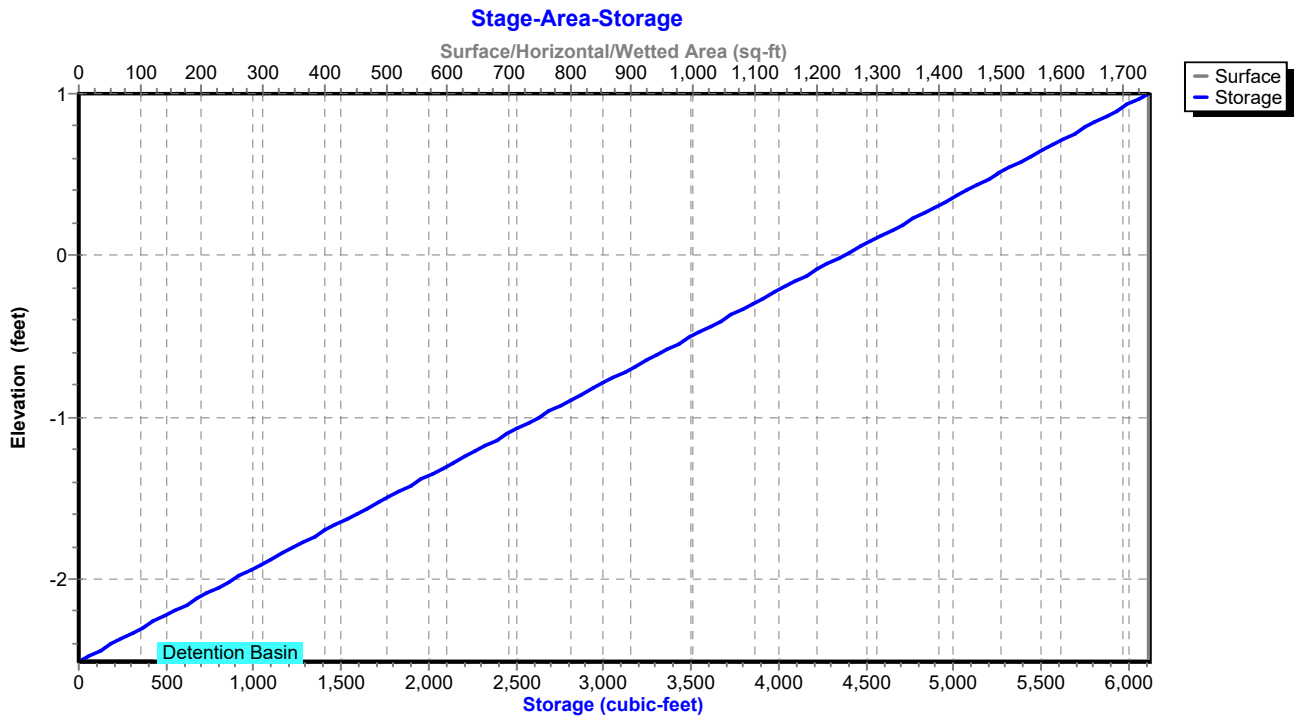
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NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Pond 2P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 2P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	-2.51	0.00	0.00	0.00
1.00	0.00	0	-2.51	0.00	0.00	0.00
2.00	0.00	0	-2.51	0.00	0.00	0.00
3.00	0.00	0	-2.51	0.00	0.00	0.00
4.00	0.00	0	-2.51	0.00	0.00	0.00
5.00	0.00	0	-2.51	0.00	0.00	0.00
6.00	0.00	0	-2.51	0.00	0.00	0.00
7.00	0.00	0	-2.51	0.00	0.00	0.00
8.00	0.00	0	-2.51	0.00	0.00	0.00
9.00	0.00	2	-2.51	0.00	0.00	0.00
10.00	0.00	11	-2.50	0.00	0.00	0.00
11.00	0.01	26	-2.50	0.00	0.00	0.00
12.00	0.01	45	-2.48	0.00	0.00	0.00
13.00	0.18	359	-2.30	0.09	0.09	0.00
14.00	0.13	486	-2.23	0.14	0.14	0.00
15.00	0.09	422	-2.27	0.11	0.11	0.00
16.00	0.07	349	-2.31	0.08	0.08	0.00
17.00	0.05	299	-2.34	0.06	0.06	0.00
18.00	0.04	263	-2.36	0.05	0.05	0.00
19.00	0.04	238	-2.37	0.04	0.04	0.00
20.00	0.03	219	-2.38	0.04	0.04	0.00
21.00	0.03	206	-2.39	0.03	0.03	0.00
22.00	0.03	195	-2.40	0.03	0.03	0.00
23.00	0.02	187	-2.40	0.03	0.03	0.00
24.00	0.02	179	-2.41	0.03	0.03	0.00
25.00	0.01	160	-2.42	0.02	0.02	0.00
26.00	0.01	138	-2.43	0.02	0.02	0.00
27.00	0.01	123	-2.44	0.01	0.01	0.00
28.00	0.01	114	-2.44	0.01	0.01	0.00
29.00	0.01	110	-2.45	0.01	0.01	0.00
30.00	0.01	107	-2.45	0.01	0.01	0.00
31.00	0.01	105	-2.45	0.01	0.01	0.00
32.00	0.01	104	-2.45	0.01	0.01	0.00
33.00	0.01	103	-2.45	0.01	0.01	0.00
34.00	0.01	102	-2.45	0.01	0.01	0.00
35.00	0.01	102	-2.45	0.01	0.01	0.00
36.00	0.01	102	-2.45	0.01	0.01	0.00
37.00	0.01	102	-2.45	0.01	0.01	0.00
38.00	0.01	101	-2.45	0.01	0.01	0.00
39.00	0.01	101	-2.45	0.01	0.01	0.00
40.00	0.01	101	-2.45	0.01	0.01	0.00
41.00	0.01	101	-2.45	0.01	0.01	0.00
42.00	0.01	101	-2.45	0.01	0.01	0.00
43.00	0.01	100	-2.45	0.01	0.01	0.00
44.00	0.01	100	-2.45	0.01	0.01	0.00
45.00	0.01	100	-2.45	0.01	0.01	0.00
46.00	0.01	100	-2.45	0.01	0.01	0.00
47.00	0.01	100	-2.45	0.01	0.01	0.00
48.00	0.01	100	-2.45	0.01	0.01	0.00
49.00	0.01	99	-2.45	0.01	0.01	0.00
50.00	0.01	99	-2.45	0.01	0.01	0.00
51.00	0.01	99	-2.45	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
52.00	0.01	99	-2.45	0.01	0.01	0.00
53.00	0.01	99	-2.45	0.01	0.01	0.00
54.00	0.01	98	-2.45	0.01	0.01	0.00
55.00	0.01	98	-2.45	0.01	0.01	0.00
56.00	0.01	98	-2.45	0.01	0.01	0.00
57.00	0.01	98	-2.45	0.01	0.01	0.00
58.00	0.01	98	-2.45	0.01	0.01	0.00
59.00	0.01	98	-2.45	0.01	0.01	0.00
60.00	0.01	97	-2.45	0.01	0.01	0.00
61.00	0.01	97	-2.45	0.01	0.01	0.00
62.00	0.01	97	-2.45	0.01	0.01	0.00
63.00	0.01	97	-2.45	0.01	0.01	0.00
64.00	0.01	97	-2.45	0.01	0.01	0.00
65.00	0.01	97	-2.45	0.01	0.01	0.00
66.00	0.01	96	-2.45	0.01	0.01	0.00
67.00	0.01	96	-2.45	0.01	0.01	0.00
68.00	0.01	96	-2.45	0.01	0.01	0.00
69.00	0.01	96	-2.45	0.01	0.01	0.00
70.00	0.01	96	-2.46	0.01	0.01	0.00
71.00	0.01	96	-2.46	0.01	0.01	0.00
72.00	0.01	95	-2.46	0.01	0.01	0.00
73.00	0.01	95	-2.46	0.01	0.01	0.00
74.00	0.01	95	-2.46	0.01	0.01	0.00
75.00	0.01	95	-2.46	0.01	0.01	0.00
76.00	0.01	95	-2.46	0.01	0.01	0.00
77.00	0.01	94	-2.46	0.01	0.01	0.00
78.00	0.01	94	-2.46	0.01	0.01	0.00
79.00	0.01	94	-2.46	0.01	0.01	0.00
80.00	0.01	93	-2.46	0.01	0.01	0.00
81.00	0.01	93	-2.46	0.01	0.01	0.00
82.00	0.01	92	-2.46	0.01	0.01	0.00
83.00	0.01	92	-2.46	0.01	0.01	0.00
84.00	0.01	91	-2.46	0.01	0.01	0.00
85.00	0.01	90	-2.46	0.01	0.01	0.00
86.00	0.01	90	-2.46	0.01	0.01	0.00
87.00	0.01	89	-2.46	0.01	0.01	0.00
88.00	0.01	89	-2.46	0.01	0.01	0.00
89.00	0.01	88	-2.46	0.01	0.01	0.00
90.00	0.01	88	-2.46	0.01	0.01	0.00
91.00	0.01	87	-2.46	0.01	0.01	0.00
92.00	0.01	86	-2.46	0.01	0.01	0.00
93.00	0.01	86	-2.46	0.01	0.01	0.00
94.00	0.01	85	-2.46	0.01	0.01	0.00
95.00	0.01	85	-2.46	0.01	0.01	0.00
96.00	0.01	84	-2.46	0.01	0.01	0.00
97.00	0.01	83	-2.46	0.01	0.01	0.00
98.00	0.01	83	-2.46	0.01	0.01	0.00
99.00	0.01	82	-2.46	0.01	0.01	0.00
100.00	0.01	82	-2.46	0.01	0.01	0.00
101.00	0.01	81	-2.46	0.01	0.01	0.00
102.00	0.01	81	-2.46	0.01	0.01	0.00
103.00	0.01	80	-2.46	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
104.00	0.01	79	-2.46	0.01	0.01	0.00
105.00	0.01	79	-2.46	0.01	0.01	0.00
106.00	0.01	78	-2.47	0.01	0.01	0.00
107.00	0.01	78	-2.47	0.01	0.01	0.00
108.00	0.01	77	-2.47	0.01	0.01	0.00
109.00	0.01	77	-2.47	0.01	0.01	0.00
110.00	0.01	76	-2.47	0.01	0.01	0.00
111.00	0.01	75	-2.47	0.01	0.01	0.00
112.00	0.00	75	-2.47	0.01	0.01	0.00
113.00	0.00	74	-2.47	0.01	0.01	0.00
114.00	0.00	74	-2.47	0.00	0.00	0.00
115.00	0.00	73	-2.47	0.00	0.00	0.00
116.00	0.00	72	-2.47	0.00	0.00	0.00
117.00	0.00	72	-2.47	0.00	0.00	0.00
118.00	0.00	71	-2.47	0.00	0.00	0.00
119.00	0.00	71	-2.47	0.00	0.00	0.00
120.00	0.00	70	-2.47	0.00	0.00	0.00
121.00	0.00	70	-2.47	0.00	0.00	0.00
122.00	0.00	69	-2.47	0.00	0.00	0.00
123.00	0.00	68	-2.47	0.00	0.00	0.00
124.00	0.00	68	-2.47	0.00	0.00	0.00
125.00	0.00	67	-2.47	0.00	0.00	0.00
126.00	0.00	67	-2.47	0.00	0.00	0.00
127.00	0.00	66	-2.47	0.00	0.00	0.00
128.00	0.00	65	-2.47	0.00	0.00	0.00
129.00	0.00	65	-2.47	0.00	0.00	0.00
130.00	0.00	64	-2.47	0.00	0.00	0.00
131.00	0.00	64	-2.47	0.00	0.00	0.00
132.00	0.00	63	-2.47	0.00	0.00	0.00
133.00	0.00	63	-2.47	0.00	0.00	0.00
134.00	0.00	62	-2.47	0.00	0.00	0.00
135.00	0.00	61	-2.47	0.00	0.00	0.00
136.00	0.00	61	-2.48	0.00	0.00	0.00
137.00	0.00	60	-2.48	0.00	0.00	0.00
138.00	0.00	59	-2.48	0.00	0.00	0.00
139.00	0.00	58	-2.48	0.00	0.00	0.00
140.00	0.00	57	-2.48	0.00	0.00	0.00
141.00	0.00	56	-2.48	0.00	0.00	0.00
142.00	0.00	55	-2.48	0.00	0.00	0.00
143.00	0.00	54	-2.48	0.00	0.00	0.00
144.00	0.00	53	-2.48	0.00	0.00	0.00
145.00	0.00	52	-2.48	0.00	0.00	0.00
146.00	0.00	50	-2.48	0.00	0.00	0.00
147.00	0.00	49	-2.48	0.00	0.00	0.00
148.00	0.00	48	-2.48	0.00	0.00	0.00
149.00	0.00	46	-2.48	0.00	0.00	0.00
150.00	0.00	45	-2.48	0.00	0.00	0.00
151.00	0.00	44	-2.48	0.00	0.00	0.00
152.00	0.00	43	-2.49	0.00	0.00	0.00
153.00	0.00	41	-2.49	0.00	0.00	0.00
154.00	0.00	40	-2.49	0.00	0.00	0.00
155.00	0.00	38	-2.49	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
156.00	0.00	37	-2.49	0.00	0.00	0.00
157.00	0.00	36	-2.49	0.00	0.00	0.00
158.00	0.00	34	-2.49	0.00	0.00	0.00
159.00	0.00	33	-2.49	0.00	0.00	0.00
160.00	0.00	32	-2.49	0.00	0.00	0.00
161.00	0.00	31	-2.49	0.00	0.00	0.00
162.00	0.00	30	-2.49	0.00	0.00	0.00
163.00	0.00	29	-2.49	0.00	0.00	0.00
164.00	0.00	28	-2.49	0.00	0.00	0.00
165.00	0.00	27	-2.49	0.00	0.00	0.00
166.00	0.00	26	-2.50	0.00	0.00	0.00
167.00	0.00	25	-2.50	0.00	0.00	0.00
168.00	0.00	24	-2.50	0.00	0.00	0.00
169.00	0.00	23	-2.50	0.00	0.00	0.00
170.00	0.00	22	-2.50	0.00	0.00	0.00
171.00	0.00	22	-2.50	0.00	0.00	0.00
172.00	0.00	21	-2.50	0.00	0.00	0.00
173.00	0.00	20	-2.50	0.00	0.00	0.00
174.00	0.00	20	-2.50	0.00	0.00	0.00
175.00	0.00	19	-2.50	0.00	0.00	0.00
176.00	0.00	19	-2.50	0.00	0.00	0.00
177.00	0.00	18	-2.50	0.00	0.00	0.00
178.00	0.00	18	-2.50	0.00	0.00	0.00
179.00	0.00	18	-2.50	0.00	0.00	0.00
180.00	0.00	17	-2.50	0.00	0.00	0.00
181.00	0.00	17	-2.50	0.00	0.00	0.00
182.00	0.00	16	-2.50	0.00	0.00	0.00
183.00	0.00	16	-2.50	0.00	0.00	0.00
184.00	0.00	16	-2.50	0.00	0.00	0.00
185.00	0.00	15	-2.50	0.00	0.00	0.00
186.00	0.00	15	-2.50	0.00	0.00	0.00
187.00	0.00	14	-2.50	0.00	0.00	0.00
188.00	0.00	14	-2.50	0.00	0.00	0.00
189.00	0.00	13	-2.50	0.00	0.00	0.00
190.00	0.00	13	-2.50	0.00	0.00	0.00
191.00	0.00	12	-2.50	0.00	0.00	0.00
192.00	0.00	12	-2.50	0.00	0.00	0.00
193.00	0.00	12	-2.50	0.00	0.00	0.00
194.00	0.00	11	-2.50	0.00	0.00	0.00
195.00	0.00	11	-2.50	0.00	0.00	0.00
196.00	0.00	10	-2.50	0.00	0.00	0.00
197.00	0.00	10	-2.50	0.00	0.00	0.00
198.00	0.00	9	-2.50	0.00	0.00	0.00
199.00	0.00	9	-2.50	0.00	0.00	0.00
200.00	0.00	9	-2.51	0.00	0.00	0.00
201.00	0.00	8	-2.51	0.00	0.00	0.00
202.00	0.00	8	-2.51	0.00	0.00	0.00
203.00	0.00	8	-2.51	0.00	0.00	0.00
204.00	0.00	7	-2.51	0.00	0.00	0.00
205.00	0.00	7	-2.51	0.00	0.00	0.00
206.00	0.00	7	-2.51	0.00	0.00	0.00
207.00	0.00	6	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
208.00	0.00	6	-2.51	0.00	0.00	0.00
209.00	0.00	6	-2.51	0.00	0.00	0.00
210.00	0.00	6	-2.51	0.00	0.00	0.00
211.00	0.00	5	-2.51	0.00	0.00	0.00
212.00	0.00	5	-2.51	0.00	0.00	0.00
213.00	0.00	5	-2.51	0.00	0.00	0.00
214.00	0.00	5	-2.51	0.00	0.00	0.00
215.00	0.00	4	-2.51	0.00	0.00	0.00
216.00	0.00	4	-2.51	0.00	0.00	0.00
217.00	0.00	4	-2.51	0.00	0.00	0.00
218.00	0.00	4	-2.51	0.00	0.00	0.00
219.00	0.00	4	-2.51	0.00	0.00	0.00
220.00	0.00	3	-2.51	0.00	0.00	0.00
221.00	0.00	3	-2.51	0.00	0.00	0.00
222.00	0.00	3	-2.51	0.00	0.00	0.00
223.00	0.00	3	-2.51	0.00	0.00	0.00
224.00	0.00	3	-2.51	0.00	0.00	0.00
225.00	0.00	3	-2.51	0.00	0.00	0.00
226.00	0.00	3	-2.51	0.00	0.00	0.00
227.00	0.00	2	-2.51	0.00	0.00	0.00
228.00	0.00	2	-2.51	0.00	0.00	0.00
229.00	0.00	2	-2.51	0.00	0.00	0.00
230.00	0.00	2	-2.51	0.00	0.00	0.00
231.00	0.00	2	-2.51	0.00	0.00	0.00
232.00	0.00	2	-2.51	0.00	0.00	0.00
233.00	0.00	2	-2.51	0.00	0.00	0.00
234.00	0.00	2	-2.51	0.00	0.00	0.00
235.00	0.00	2	-2.51	0.00	0.00	0.00
236.00	0.00	2	-2.51	0.00	0.00	0.00
237.00	0.00	1	-2.51	0.00	0.00	0.00
238.00	0.00	1	-2.51	0.00	0.00	0.00
239.00	0.00	1	-2.51	0.00	0.00	0.00
240.00	0.00	1	-2.51	0.00	0.00	0.00
241.00	0.00	1	-2.51	0.00	0.00	0.00
242.00	0.00	1	-2.51	0.00	0.00	0.00
243.00	0.00	1	-2.51	0.00	0.00	0.00
244.00	0.00	1	-2.51	0.00	0.00	0.00
245.00	0.00	1	-2.51	0.00	0.00	0.00
246.00	0.00	1	-2.51	0.00	0.00	0.00
247.00	0.00	1	-2.51	0.00	0.00	0.00
248.00	0.00	1	-2.51	0.00	0.00	0.00
249.00	0.00	1	-2.51	0.00	0.00	0.00
250.00	0.00	1	-2.51	0.00	0.00	0.00
251.00	0.00	1	-2.51	0.00	0.00	0.00
252.00	0.00	1	-2.51	0.00	0.00	0.00
253.00	0.00	1	-2.51	0.00	0.00	0.00
254.00	0.00	1	-2.51	0.00	0.00	0.00
255.00	0.00	1	-2.51	0.00	0.00	0.00
256.00	0.00	1	-2.51	0.00	0.00	0.00
257.00	0.00	1	-2.51	0.00	0.00	0.00
258.00	0.00	0	-2.51	0.00	0.00	0.00
259.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 1-yr NOAA Rainfall=2.70"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
260.00	0.00	0	-2.51	0.00	0.00	0.00
261.00	0.00	0	-2.51	0.00	0.00	0.00
262.00	0.00	0	-2.51	0.00	0.00	0.00
263.00	0.00	0	-2.51	0.00	0.00	0.00
264.00	0.00	0	-2.51	0.00	0.00	0.00
265.00	0.00	0	-2.51	0.00	0.00	0.00
266.00	0.00	0	-2.51	0.00	0.00	0.00
267.00	0.00	0	-2.51	0.00	0.00	0.00
268.00	0.00	0	-2.51	0.00	0.00	0.00
269.00	0.00	0	-2.51	0.00	0.00	0.00
270.00	0.00	0	-2.51	0.00	0.00	0.00
271.00	0.00	0	-2.51	0.00	0.00	0.00
272.00	0.00	0	-2.51	0.00	0.00	0.00
273.00	0.00	0	-2.51	0.00	0.00	0.00
274.00	0.00	0	-2.51	0.00	0.00	0.00
275.00	0.00	0	-2.51	0.00	0.00	0.00
276.00	0.00	0	-2.51	0.00	0.00	0.00
277.00	0.00	0	-2.51	0.00	0.00	0.00
278.00	0.00	0	-2.51	0.00	0.00	0.00
279.00	0.00	0	-2.51	0.00	0.00	0.00
280.00	0.00	0	-2.51	0.00	0.00	0.00
281.00	0.00	0	-2.51	0.00	0.00	0.00
282.00	0.00	0	-2.51	0.00	0.00	0.00
283.00	0.00	0	-2.51	0.00	0.00	0.00
284.00	0.00	0	-2.51	0.00	0.00	0.00
285.00	0.00	0	-2.51	0.00	0.00	0.00
286.00	0.00	0	-2.51	0.00	0.00	0.00
287.00	0.00	0	-2.51	0.00	0.00	0.00
288.00	0.00	0	-2.51	0.00	0.00	0.00
289.00	0.00	0	-2.51	0.00	0.00	0.00
290.00	0.00	0	-2.51	0.00	0.00	0.00
291.00	0.00	0	-2.51	0.00	0.00	0.00
292.00	0.00	0	-2.51	0.00	0.00	0.00
293.00	0.00	0	-2.51	0.00	0.00	0.00
294.00	0.00	0	-2.51	0.00	0.00	0.00
295.00	0.00	0	-2.51	0.00	0.00	0.00
296.00	0.00	0	-2.51	0.00	0.00	0.00
297.00	0.00	0	-2.51	0.00	0.00	0.00
298.00	0.00	0	-2.51	0.00	0.00	0.00
299.00	0.00	0	-2.51	0.00	0.00	0.00
300.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Time span=0.00-300.00 hrs, dt=0.01 hrs, 30001 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

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

Subcatchment1S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=3.03"
Tc=6.0 min CN=0/98 Runoff=2.42 cfs 0.177 af

Subcatchment3S: 0.7 ac Pervious Runoff Area=30,492 sf 0.00% Impervious Runoff Depth=1.08"
Tc=15.0 min CN=74/0 Runoff=0.70 cfs 0.063 af

Subcatchment4S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=3.03"
Tc=6.0 min CN=0/98 Runoff=2.42 cfs 0.177 af

Pond 1P: Managed Release Rain Garden Peak Elev=0.92' Storage=4,662 cf Inflow=2.42 cfs 0.177 af
Outflow=0.38 cfs 0.166 af

Pond 2P: Managed Release Rain Garden Peak Elev=-2.02' Storage=851 cf Inflow=0.38 cfs 0.166 af
Primary=0.24 cfs 0.166 af Secondary=0.00 cfs 0.000 af Outflow=0.24 cfs 0.166 af

Total Runoff Area = 2.100 ac Runoff Volume = 0.416 af Average Runoff Depth = 2.38"
33.33% Pervious = 0.700 ac 66.67% Impervious = 1.400 ac

MRC Example 2

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NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Summary for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Runoff = 2.42 cfs @ 12.13 hrs, Volume= 0.177 af, Depth= 3.03"

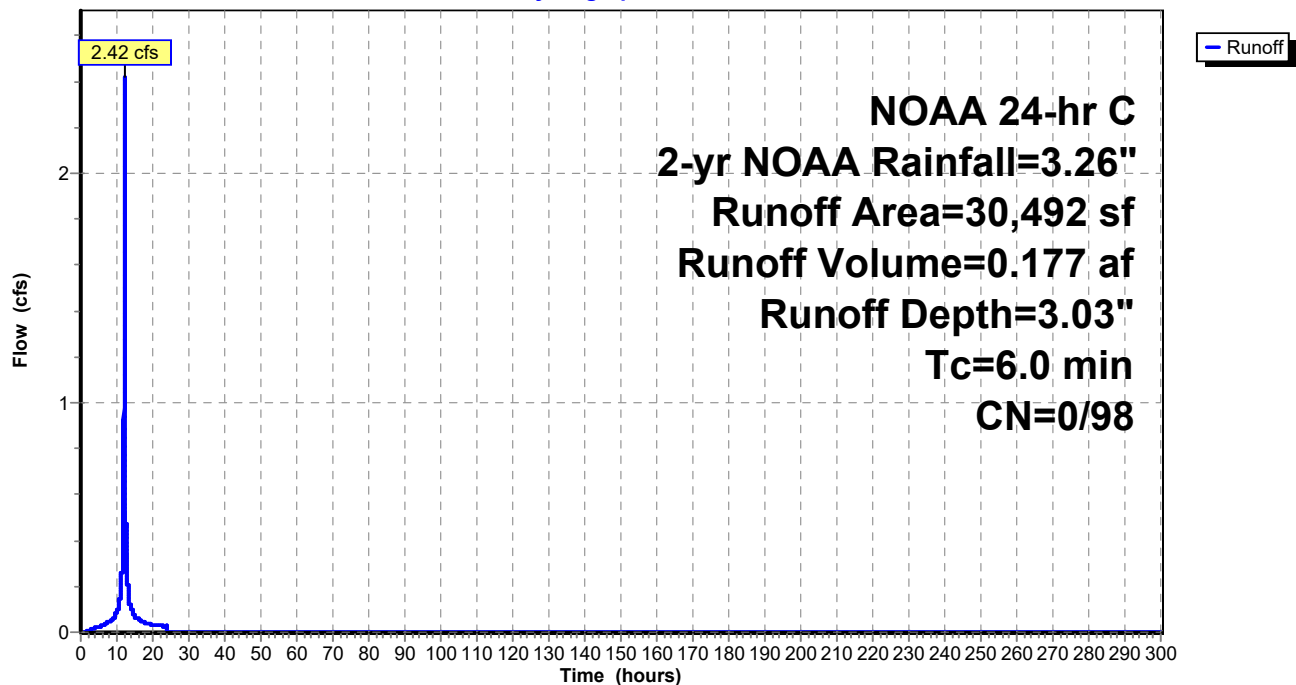
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00	0.00
2.00	0.07	0.00	0.00	0.01
3.00	0.12	0.00	0.02	0.01
4.00	0.16	0.00	0.04	0.02
5.00	0.21	0.00	0.07	0.02
6.00	0.26	0.00	0.11	0.03
7.00	0.32	0.00	0.16	0.04
8.00	0.39	0.00	0.22	0.05
9.00	0.48	0.00	0.30	0.06
10.00	0.59	0.00	0.40	0.09
11.00	0.78	0.00	0.58	0.17
12.00	1.55	0.00	1.33	1.34
13.00	2.48	0.00	2.25	0.22
14.00	2.67	0.00	2.44	0.10
15.00	2.78	0.00	2.55	0.07
16.00	2.87	0.00	2.64	0.06
17.00	2.94	0.00	2.71	0.05
18.00	3.00	0.00	2.77	0.04
19.00	3.05	0.00	2.82	0.03
20.00	3.10	0.00	2.87	0.03
21.00	3.14	0.00	2.91	0.03
22.00	3.19	0.00	2.95	0.03
23.00	3.22	0.00	2.99	0.03
24.00	3.26	0.00	3.03	0.03
25.00	3.26	0.00	3.03	0.00
26.00	3.26	0.00	3.03	0.00
27.00	3.26	0.00	3.03	0.00
28.00	3.26	0.00	3.03	0.00
29.00	3.26	0.00	3.03	0.00
30.00	3.26	0.00	3.03	0.00
31.00	3.26	0.00	3.03	0.00
32.00	3.26	0.00	3.03	0.00
33.00	3.26	0.00	3.03	0.00
34.00	3.26	0.00	3.03	0.00
35.00	3.26	0.00	3.03	0.00
36.00	3.26	0.00	3.03	0.00
37.00	3.26	0.00	3.03	0.00
38.00	3.26	0.00	3.03	0.00
39.00	3.26	0.00	3.03	0.00
40.00	3.26	0.00	3.03	0.00
41.00	3.26	0.00	3.03	0.00
42.00	3.26	0.00	3.03	0.00
43.00	3.26	0.00	3.03	0.00
44.00	3.26	0.00	3.03	0.00
45.00	3.26	0.00	3.03	0.00
46.00	3.26	0.00	3.03	0.00
47.00	3.26	0.00	3.03	0.00
48.00	3.26	0.00	3.03	0.00
49.00	3.26	0.00	3.03	0.00
50.00	3.26	0.00	3.03	0.00
51.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	3.26	0.00	3.03	0.00
53.00	3.26	0.00	3.03	0.00
54.00	3.26	0.00	3.03	0.00
55.00	3.26	0.00	3.03	0.00
56.00	3.26	0.00	3.03	0.00
57.00	3.26	0.00	3.03	0.00
58.00	3.26	0.00	3.03	0.00
59.00	3.26	0.00	3.03	0.00
60.00	3.26	0.00	3.03	0.00
61.00	3.26	0.00	3.03	0.00
62.00	3.26	0.00	3.03	0.00
63.00	3.26	0.00	3.03	0.00
64.00	3.26	0.00	3.03	0.00
65.00	3.26	0.00	3.03	0.00
66.00	3.26	0.00	3.03	0.00
67.00	3.26	0.00	3.03	0.00
68.00	3.26	0.00	3.03	0.00
69.00	3.26	0.00	3.03	0.00
70.00	3.26	0.00	3.03	0.00
71.00	3.26	0.00	3.03	0.00
72.00	3.26	0.00	3.03	0.00
73.00	3.26	0.00	3.03	0.00
74.00	3.26	0.00	3.03	0.00
75.00	3.26	0.00	3.03	0.00
76.00	3.26	0.00	3.03	0.00
77.00	3.26	0.00	3.03	0.00
78.00	3.26	0.00	3.03	0.00
79.00	3.26	0.00	3.03	0.00
80.00	3.26	0.00	3.03	0.00
81.00	3.26	0.00	3.03	0.00
82.00	3.26	0.00	3.03	0.00
83.00	3.26	0.00	3.03	0.00
84.00	3.26	0.00	3.03	0.00
85.00	3.26	0.00	3.03	0.00
86.00	3.26	0.00	3.03	0.00
87.00	3.26	0.00	3.03	0.00
88.00	3.26	0.00	3.03	0.00
89.00	3.26	0.00	3.03	0.00
90.00	3.26	0.00	3.03	0.00
91.00	3.26	0.00	3.03	0.00
92.00	3.26	0.00	3.03	0.00
93.00	3.26	0.00	3.03	0.00
94.00	3.26	0.00	3.03	0.00
95.00	3.26	0.00	3.03	0.00
96.00	3.26	0.00	3.03	0.00
97.00	3.26	0.00	3.03	0.00
98.00	3.26	0.00	3.03	0.00
99.00	3.26	0.00	3.03	0.00
100.00	3.26	0.00	3.03	0.00
101.00	3.26	0.00	3.03	0.00
102.00	3.26	0.00	3.03	0.00
103.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	3.26	0.00	3.03	0.00
105.00	3.26	0.00	3.03	0.00
106.00	3.26	0.00	3.03	0.00
107.00	3.26	0.00	3.03	0.00
108.00	3.26	0.00	3.03	0.00
109.00	3.26	0.00	3.03	0.00
110.00	3.26	0.00	3.03	0.00
111.00	3.26	0.00	3.03	0.00
112.00	3.26	0.00	3.03	0.00
113.00	3.26	0.00	3.03	0.00
114.00	3.26	0.00	3.03	0.00
115.00	3.26	0.00	3.03	0.00
116.00	3.26	0.00	3.03	0.00
117.00	3.26	0.00	3.03	0.00
118.00	3.26	0.00	3.03	0.00
119.00	3.26	0.00	3.03	0.00
120.00	3.26	0.00	3.03	0.00
121.00	3.26	0.00	3.03	0.00
122.00	3.26	0.00	3.03	0.00
123.00	3.26	0.00	3.03	0.00
124.00	3.26	0.00	3.03	0.00
125.00	3.26	0.00	3.03	0.00
126.00	3.26	0.00	3.03	0.00
127.00	3.26	0.00	3.03	0.00
128.00	3.26	0.00	3.03	0.00
129.00	3.26	0.00	3.03	0.00
130.00	3.26	0.00	3.03	0.00
131.00	3.26	0.00	3.03	0.00
132.00	3.26	0.00	3.03	0.00
133.00	3.26	0.00	3.03	0.00
134.00	3.26	0.00	3.03	0.00
135.00	3.26	0.00	3.03	0.00
136.00	3.26	0.00	3.03	0.00
137.00	3.26	0.00	3.03	0.00
138.00	3.26	0.00	3.03	0.00
139.00	3.26	0.00	3.03	0.00
140.00	3.26	0.00	3.03	0.00
141.00	3.26	0.00	3.03	0.00
142.00	3.26	0.00	3.03	0.00
143.00	3.26	0.00	3.03	0.00
144.00	3.26	0.00	3.03	0.00
145.00	3.26	0.00	3.03	0.00
146.00	3.26	0.00	3.03	0.00
147.00	3.26	0.00	3.03	0.00
148.00	3.26	0.00	3.03	0.00
149.00	3.26	0.00	3.03	0.00
150.00	3.26	0.00	3.03	0.00
151.00	3.26	0.00	3.03	0.00
152.00	3.26	0.00	3.03	0.00
153.00	3.26	0.00	3.03	0.00
154.00	3.26	0.00	3.03	0.00
155.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	3.26	0.00	3.03	0.00
157.00	3.26	0.00	3.03	0.00
158.00	3.26	0.00	3.03	0.00
159.00	3.26	0.00	3.03	0.00
160.00	3.26	0.00	3.03	0.00
161.00	3.26	0.00	3.03	0.00
162.00	3.26	0.00	3.03	0.00
163.00	3.26	0.00	3.03	0.00
164.00	3.26	0.00	3.03	0.00
165.00	3.26	0.00	3.03	0.00
166.00	3.26	0.00	3.03	0.00
167.00	3.26	0.00	3.03	0.00
168.00	3.26	0.00	3.03	0.00
169.00	3.26	0.00	3.03	0.00
170.00	3.26	0.00	3.03	0.00
171.00	3.26	0.00	3.03	0.00
172.00	3.26	0.00	3.03	0.00
173.00	3.26	0.00	3.03	0.00
174.00	3.26	0.00	3.03	0.00
175.00	3.26	0.00	3.03	0.00
176.00	3.26	0.00	3.03	0.00
177.00	3.26	0.00	3.03	0.00
178.00	3.26	0.00	3.03	0.00
179.00	3.26	0.00	3.03	0.00
180.00	3.26	0.00	3.03	0.00
181.00	3.26	0.00	3.03	0.00
182.00	3.26	0.00	3.03	0.00
183.00	3.26	0.00	3.03	0.00
184.00	3.26	0.00	3.03	0.00
185.00	3.26	0.00	3.03	0.00
186.00	3.26	0.00	3.03	0.00
187.00	3.26	0.00	3.03	0.00
188.00	3.26	0.00	3.03	0.00
189.00	3.26	0.00	3.03	0.00
190.00	3.26	0.00	3.03	0.00
191.00	3.26	0.00	3.03	0.00
192.00	3.26	0.00	3.03	0.00
193.00	3.26	0.00	3.03	0.00
194.00	3.26	0.00	3.03	0.00
195.00	3.26	0.00	3.03	0.00
196.00	3.26	0.00	3.03	0.00
197.00	3.26	0.00	3.03	0.00
198.00	3.26	0.00	3.03	0.00
199.00	3.26	0.00	3.03	0.00
200.00	3.26	0.00	3.03	0.00
201.00	3.26	0.00	3.03	0.00
202.00	3.26	0.00	3.03	0.00
203.00	3.26	0.00	3.03	0.00
204.00	3.26	0.00	3.03	0.00
205.00	3.26	0.00	3.03	0.00
206.00	3.26	0.00	3.03	0.00
207.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	3.26	0.00	3.03	0.00
209.00	3.26	0.00	3.03	0.00
210.00	3.26	0.00	3.03	0.00
211.00	3.26	0.00	3.03	0.00
212.00	3.26	0.00	3.03	0.00
213.00	3.26	0.00	3.03	0.00
214.00	3.26	0.00	3.03	0.00
215.00	3.26	0.00	3.03	0.00
216.00	3.26	0.00	3.03	0.00
217.00	3.26	0.00	3.03	0.00
218.00	3.26	0.00	3.03	0.00
219.00	3.26	0.00	3.03	0.00
220.00	3.26	0.00	3.03	0.00
221.00	3.26	0.00	3.03	0.00
222.00	3.26	0.00	3.03	0.00
223.00	3.26	0.00	3.03	0.00
224.00	3.26	0.00	3.03	0.00
225.00	3.26	0.00	3.03	0.00
226.00	3.26	0.00	3.03	0.00
227.00	3.26	0.00	3.03	0.00
228.00	3.26	0.00	3.03	0.00
229.00	3.26	0.00	3.03	0.00
230.00	3.26	0.00	3.03	0.00
231.00	3.26	0.00	3.03	0.00
232.00	3.26	0.00	3.03	0.00
233.00	3.26	0.00	3.03	0.00
234.00	3.26	0.00	3.03	0.00
235.00	3.26	0.00	3.03	0.00
236.00	3.26	0.00	3.03	0.00
237.00	3.26	0.00	3.03	0.00
238.00	3.26	0.00	3.03	0.00
239.00	3.26	0.00	3.03	0.00
240.00	3.26	0.00	3.03	0.00
241.00	3.26	0.00	3.03	0.00
242.00	3.26	0.00	3.03	0.00
243.00	3.26	0.00	3.03	0.00
244.00	3.26	0.00	3.03	0.00
245.00	3.26	0.00	3.03	0.00
246.00	3.26	0.00	3.03	0.00
247.00	3.26	0.00	3.03	0.00
248.00	3.26	0.00	3.03	0.00
249.00	3.26	0.00	3.03	0.00
250.00	3.26	0.00	3.03	0.00
251.00	3.26	0.00	3.03	0.00
252.00	3.26	0.00	3.03	0.00
253.00	3.26	0.00	3.03	0.00
254.00	3.26	0.00	3.03	0.00
255.00	3.26	0.00	3.03	0.00
256.00	3.26	0.00	3.03	0.00
257.00	3.26	0.00	3.03	0.00
258.00	3.26	0.00	3.03	0.00
259.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	3.26	0.00	3.03	0.00
261.00	3.26	0.00	3.03	0.00
262.00	3.26	0.00	3.03	0.00
263.00	3.26	0.00	3.03	0.00
264.00	3.26	0.00	3.03	0.00
265.00	3.26	0.00	3.03	0.00
266.00	3.26	0.00	3.03	0.00
267.00	3.26	0.00	3.03	0.00
268.00	3.26	0.00	3.03	0.00
269.00	3.26	0.00	3.03	0.00
270.00	3.26	0.00	3.03	0.00
271.00	3.26	0.00	3.03	0.00
272.00	3.26	0.00	3.03	0.00
273.00	3.26	0.00	3.03	0.00
274.00	3.26	0.00	3.03	0.00
275.00	3.26	0.00	3.03	0.00
276.00	3.26	0.00	3.03	0.00
277.00	3.26	0.00	3.03	0.00
278.00	3.26	0.00	3.03	0.00
279.00	3.26	0.00	3.03	0.00
280.00	3.26	0.00	3.03	0.00
281.00	3.26	0.00	3.03	0.00
282.00	3.26	0.00	3.03	0.00
283.00	3.26	0.00	3.03	0.00
284.00	3.26	0.00	3.03	0.00
285.00	3.26	0.00	3.03	0.00
286.00	3.26	0.00	3.03	0.00
287.00	3.26	0.00	3.03	0.00
288.00	3.26	0.00	3.03	0.00
289.00	3.26	0.00	3.03	0.00
290.00	3.26	0.00	3.03	0.00
291.00	3.26	0.00	3.03	0.00
292.00	3.26	0.00	3.03	0.00
293.00	3.26	0.00	3.03	0.00
294.00	3.26	0.00	3.03	0.00
295.00	3.26	0.00	3.03	0.00
296.00	3.26	0.00	3.03	0.00
297.00	3.26	0.00	3.03	0.00
298.00	3.26	0.00	3.03	0.00
299.00	3.26	0.00	3.03	0.00
300.00	3.26	0.00	3.03	0.00

MRC Example 2

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NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Summary for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Runoff = 0.70 cfs @ 12.25 hrs, Volume= 0.063 af, Depth= 1.08"

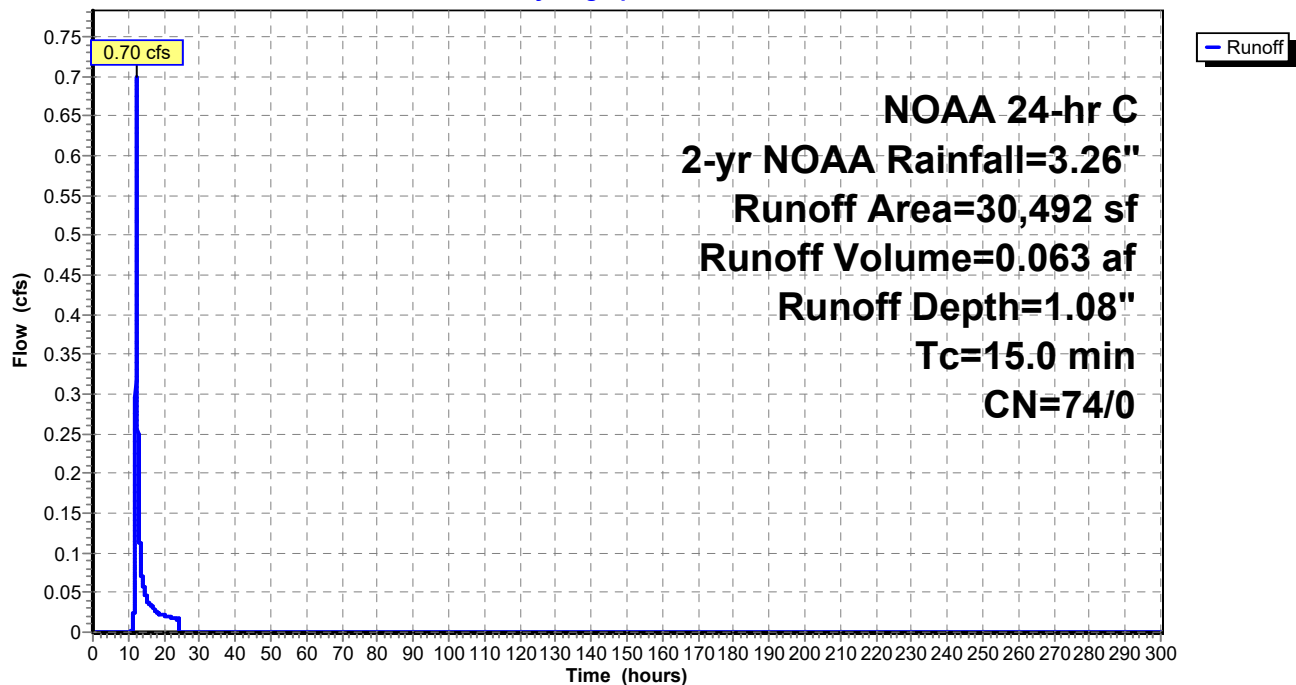
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

	Area (sf)	CN	Description
*	30,492	74	Meadow, non-grazed, HSG C
	30,492	74	100.00% Pervious Area

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

Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00	0.00
2.00	0.07	0.00	0.00	0.00
3.00	0.12	0.00	0.00	0.00
4.00	0.16	0.00	0.00	0.00
5.00	0.21	0.00	0.00	0.00
6.00	0.26	0.00	0.00	0.00
7.00	0.32	0.00	0.00	0.00
8.00	0.39	0.00	0.00	0.00
9.00	0.48	0.00	0.00	0.00
10.00	0.59	0.00	0.00	0.00
11.00	0.78	0.00	0.00	0.00
12.00	1.55	0.17	0.00	0.19
13.00	2.48	0.60	0.00	0.14
14.00	2.67	0.70	0.00	0.06
15.00	2.78	0.77	0.00	0.04
16.00	2.87	0.83	0.00	0.04
17.00	2.94	0.87	0.00	0.03
18.00	3.00	0.91	0.00	0.03
19.00	3.05	0.94	0.00	0.02
20.00	3.10	0.97	0.00	0.02
21.00	3.14	1.00	0.00	0.02
22.00	3.19	1.03	0.00	0.02
23.00	3.22	1.05	0.00	0.02
24.00	3.26	1.08	0.00	0.02
25.00	3.26	1.08	0.00	0.00
26.00	3.26	1.08	0.00	0.00
27.00	3.26	1.08	0.00	0.00
28.00	3.26	1.08	0.00	0.00
29.00	3.26	1.08	0.00	0.00
30.00	3.26	1.08	0.00	0.00
31.00	3.26	1.08	0.00	0.00
32.00	3.26	1.08	0.00	0.00
33.00	3.26	1.08	0.00	0.00
34.00	3.26	1.08	0.00	0.00
35.00	3.26	1.08	0.00	0.00
36.00	3.26	1.08	0.00	0.00
37.00	3.26	1.08	0.00	0.00
38.00	3.26	1.08	0.00	0.00
39.00	3.26	1.08	0.00	0.00
40.00	3.26	1.08	0.00	0.00
41.00	3.26	1.08	0.00	0.00
42.00	3.26	1.08	0.00	0.00
43.00	3.26	1.08	0.00	0.00
44.00	3.26	1.08	0.00	0.00
45.00	3.26	1.08	0.00	0.00
46.00	3.26	1.08	0.00	0.00
47.00	3.26	1.08	0.00	0.00
48.00	3.26	1.08	0.00	0.00
49.00	3.26	1.08	0.00	0.00
50.00	3.26	1.08	0.00	0.00
51.00	3.26	1.08	0.00	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	3.26	1.08	0.00	0.00
53.00	3.26	1.08	0.00	0.00
54.00	3.26	1.08	0.00	0.00
55.00	3.26	1.08	0.00	0.00
56.00	3.26	1.08	0.00	0.00
57.00	3.26	1.08	0.00	0.00
58.00	3.26	1.08	0.00	0.00
59.00	3.26	1.08	0.00	0.00
60.00	3.26	1.08	0.00	0.00
61.00	3.26	1.08	0.00	0.00
62.00	3.26	1.08	0.00	0.00
63.00	3.26	1.08	0.00	0.00
64.00	3.26	1.08	0.00	0.00
65.00	3.26	1.08	0.00	0.00
66.00	3.26	1.08	0.00	0.00
67.00	3.26	1.08	0.00	0.00
68.00	3.26	1.08	0.00	0.00
69.00	3.26	1.08	0.00	0.00
70.00	3.26	1.08	0.00	0.00
71.00	3.26	1.08	0.00	0.00
72.00	3.26	1.08	0.00	0.00
73.00	3.26	1.08	0.00	0.00
74.00	3.26	1.08	0.00	0.00
75.00	3.26	1.08	0.00	0.00
76.00	3.26	1.08	0.00	0.00
77.00	3.26	1.08	0.00	0.00
78.00	3.26	1.08	0.00	0.00
79.00	3.26	1.08	0.00	0.00
80.00	3.26	1.08	0.00	0.00
81.00	3.26	1.08	0.00	0.00
82.00	3.26	1.08	0.00	0.00
83.00	3.26	1.08	0.00	0.00
84.00	3.26	1.08	0.00	0.00
85.00	3.26	1.08	0.00	0.00
86.00	3.26	1.08	0.00	0.00
87.00	3.26	1.08	0.00	0.00
88.00	3.26	1.08	0.00	0.00
89.00	3.26	1.08	0.00	0.00
90.00	3.26	1.08	0.00	0.00
91.00	3.26	1.08	0.00	0.00
92.00	3.26	1.08	0.00	0.00
93.00	3.26	1.08	0.00	0.00
94.00	3.26	1.08	0.00	0.00
95.00	3.26	1.08	0.00	0.00
96.00	3.26	1.08	0.00	0.00
97.00	3.26	1.08	0.00	0.00
98.00	3.26	1.08	0.00	0.00
99.00	3.26	1.08	0.00	0.00
100.00	3.26	1.08	0.00	0.00
101.00	3.26	1.08	0.00	0.00
102.00	3.26	1.08	0.00	0.00
103.00	3.26	1.08	0.00	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	3.26	1.08	0.00	0.00
105.00	3.26	1.08	0.00	0.00
106.00	3.26	1.08	0.00	0.00
107.00	3.26	1.08	0.00	0.00
108.00	3.26	1.08	0.00	0.00
109.00	3.26	1.08	0.00	0.00
110.00	3.26	1.08	0.00	0.00
111.00	3.26	1.08	0.00	0.00
112.00	3.26	1.08	0.00	0.00
113.00	3.26	1.08	0.00	0.00
114.00	3.26	1.08	0.00	0.00
115.00	3.26	1.08	0.00	0.00
116.00	3.26	1.08	0.00	0.00
117.00	3.26	1.08	0.00	0.00
118.00	3.26	1.08	0.00	0.00
119.00	3.26	1.08	0.00	0.00
120.00	3.26	1.08	0.00	0.00
121.00	3.26	1.08	0.00	0.00
122.00	3.26	1.08	0.00	0.00
123.00	3.26	1.08	0.00	0.00
124.00	3.26	1.08	0.00	0.00
125.00	3.26	1.08	0.00	0.00
126.00	3.26	1.08	0.00	0.00
127.00	3.26	1.08	0.00	0.00
128.00	3.26	1.08	0.00	0.00
129.00	3.26	1.08	0.00	0.00
130.00	3.26	1.08	0.00	0.00
131.00	3.26	1.08	0.00	0.00
132.00	3.26	1.08	0.00	0.00
133.00	3.26	1.08	0.00	0.00
134.00	3.26	1.08	0.00	0.00
135.00	3.26	1.08	0.00	0.00
136.00	3.26	1.08	0.00	0.00
137.00	3.26	1.08	0.00	0.00
138.00	3.26	1.08	0.00	0.00
139.00	3.26	1.08	0.00	0.00
140.00	3.26	1.08	0.00	0.00
141.00	3.26	1.08	0.00	0.00
142.00	3.26	1.08	0.00	0.00
143.00	3.26	1.08	0.00	0.00
144.00	3.26	1.08	0.00	0.00
145.00	3.26	1.08	0.00	0.00
146.00	3.26	1.08	0.00	0.00
147.00	3.26	1.08	0.00	0.00
148.00	3.26	1.08	0.00	0.00
149.00	3.26	1.08	0.00	0.00
150.00	3.26	1.08	0.00	0.00
151.00	3.26	1.08	0.00	0.00
152.00	3.26	1.08	0.00	0.00
153.00	3.26	1.08	0.00	0.00
154.00	3.26	1.08	0.00	0.00
155.00	3.26	1.08	0.00	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	3.26	1.08	0.00	0.00
157.00	3.26	1.08	0.00	0.00
158.00	3.26	1.08	0.00	0.00
159.00	3.26	1.08	0.00	0.00
160.00	3.26	1.08	0.00	0.00
161.00	3.26	1.08	0.00	0.00
162.00	3.26	1.08	0.00	0.00
163.00	3.26	1.08	0.00	0.00
164.00	3.26	1.08	0.00	0.00
165.00	3.26	1.08	0.00	0.00
166.00	3.26	1.08	0.00	0.00
167.00	3.26	1.08	0.00	0.00
168.00	3.26	1.08	0.00	0.00
169.00	3.26	1.08	0.00	0.00
170.00	3.26	1.08	0.00	0.00
171.00	3.26	1.08	0.00	0.00
172.00	3.26	1.08	0.00	0.00
173.00	3.26	1.08	0.00	0.00
174.00	3.26	1.08	0.00	0.00
175.00	3.26	1.08	0.00	0.00
176.00	3.26	1.08	0.00	0.00
177.00	3.26	1.08	0.00	0.00
178.00	3.26	1.08	0.00	0.00
179.00	3.26	1.08	0.00	0.00
180.00	3.26	1.08	0.00	0.00
181.00	3.26	1.08	0.00	0.00
182.00	3.26	1.08	0.00	0.00
183.00	3.26	1.08	0.00	0.00
184.00	3.26	1.08	0.00	0.00
185.00	3.26	1.08	0.00	0.00
186.00	3.26	1.08	0.00	0.00
187.00	3.26	1.08	0.00	0.00
188.00	3.26	1.08	0.00	0.00
189.00	3.26	1.08	0.00	0.00
190.00	3.26	1.08	0.00	0.00
191.00	3.26	1.08	0.00	0.00
192.00	3.26	1.08	0.00	0.00
193.00	3.26	1.08	0.00	0.00
194.00	3.26	1.08	0.00	0.00
195.00	3.26	1.08	0.00	0.00
196.00	3.26	1.08	0.00	0.00
197.00	3.26	1.08	0.00	0.00
198.00	3.26	1.08	0.00	0.00
199.00	3.26	1.08	0.00	0.00
200.00	3.26	1.08	0.00	0.00
201.00	3.26	1.08	0.00	0.00
202.00	3.26	1.08	0.00	0.00
203.00	3.26	1.08	0.00	0.00
204.00	3.26	1.08	0.00	0.00
205.00	3.26	1.08	0.00	0.00
206.00	3.26	1.08	0.00	0.00
207.00	3.26	1.08	0.00	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	3.26	1.08	0.00	0.00
209.00	3.26	1.08	0.00	0.00
210.00	3.26	1.08	0.00	0.00
211.00	3.26	1.08	0.00	0.00
212.00	3.26	1.08	0.00	0.00
213.00	3.26	1.08	0.00	0.00
214.00	3.26	1.08	0.00	0.00
215.00	3.26	1.08	0.00	0.00
216.00	3.26	1.08	0.00	0.00
217.00	3.26	1.08	0.00	0.00
218.00	3.26	1.08	0.00	0.00
219.00	3.26	1.08	0.00	0.00
220.00	3.26	1.08	0.00	0.00
221.00	3.26	1.08	0.00	0.00
222.00	3.26	1.08	0.00	0.00
223.00	3.26	1.08	0.00	0.00
224.00	3.26	1.08	0.00	0.00
225.00	3.26	1.08	0.00	0.00
226.00	3.26	1.08	0.00	0.00
227.00	3.26	1.08	0.00	0.00
228.00	3.26	1.08	0.00	0.00
229.00	3.26	1.08	0.00	0.00
230.00	3.26	1.08	0.00	0.00
231.00	3.26	1.08	0.00	0.00
232.00	3.26	1.08	0.00	0.00
233.00	3.26	1.08	0.00	0.00
234.00	3.26	1.08	0.00	0.00
235.00	3.26	1.08	0.00	0.00
236.00	3.26	1.08	0.00	0.00
237.00	3.26	1.08	0.00	0.00
238.00	3.26	1.08	0.00	0.00
239.00	3.26	1.08	0.00	0.00
240.00	3.26	1.08	0.00	0.00
241.00	3.26	1.08	0.00	0.00
242.00	3.26	1.08	0.00	0.00
243.00	3.26	1.08	0.00	0.00
244.00	3.26	1.08	0.00	0.00
245.00	3.26	1.08	0.00	0.00
246.00	3.26	1.08	0.00	0.00
247.00	3.26	1.08	0.00	0.00
248.00	3.26	1.08	0.00	0.00
249.00	3.26	1.08	0.00	0.00
250.00	3.26	1.08	0.00	0.00
251.00	3.26	1.08	0.00	0.00
252.00	3.26	1.08	0.00	0.00
253.00	3.26	1.08	0.00	0.00
254.00	3.26	1.08	0.00	0.00
255.00	3.26	1.08	0.00	0.00
256.00	3.26	1.08	0.00	0.00
257.00	3.26	1.08	0.00	0.00
258.00	3.26	1.08	0.00	0.00
259.00	3.26	1.08	0.00	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	3.26	1.08	0.00	0.00
261.00	3.26	1.08	0.00	0.00
262.00	3.26	1.08	0.00	0.00
263.00	3.26	1.08	0.00	0.00
264.00	3.26	1.08	0.00	0.00
265.00	3.26	1.08	0.00	0.00
266.00	3.26	1.08	0.00	0.00
267.00	3.26	1.08	0.00	0.00
268.00	3.26	1.08	0.00	0.00
269.00	3.26	1.08	0.00	0.00
270.00	3.26	1.08	0.00	0.00
271.00	3.26	1.08	0.00	0.00
272.00	3.26	1.08	0.00	0.00
273.00	3.26	1.08	0.00	0.00
274.00	3.26	1.08	0.00	0.00
275.00	3.26	1.08	0.00	0.00
276.00	3.26	1.08	0.00	0.00
277.00	3.26	1.08	0.00	0.00
278.00	3.26	1.08	0.00	0.00
279.00	3.26	1.08	0.00	0.00
280.00	3.26	1.08	0.00	0.00
281.00	3.26	1.08	0.00	0.00
282.00	3.26	1.08	0.00	0.00
283.00	3.26	1.08	0.00	0.00
284.00	3.26	1.08	0.00	0.00
285.00	3.26	1.08	0.00	0.00
286.00	3.26	1.08	0.00	0.00
287.00	3.26	1.08	0.00	0.00
288.00	3.26	1.08	0.00	0.00
289.00	3.26	1.08	0.00	0.00
290.00	3.26	1.08	0.00	0.00
291.00	3.26	1.08	0.00	0.00
292.00	3.26	1.08	0.00	0.00
293.00	3.26	1.08	0.00	0.00
294.00	3.26	1.08	0.00	0.00
295.00	3.26	1.08	0.00	0.00
296.00	3.26	1.08	0.00	0.00
297.00	3.26	1.08	0.00	0.00
298.00	3.26	1.08	0.00	0.00
299.00	3.26	1.08	0.00	0.00
300.00	3.26	1.08	0.00	0.00

MRC Example 2

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NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Summary for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Runoff = 2.42 cfs @ 12.13 hrs, Volume= 0.177 af, Depth= 3.03"

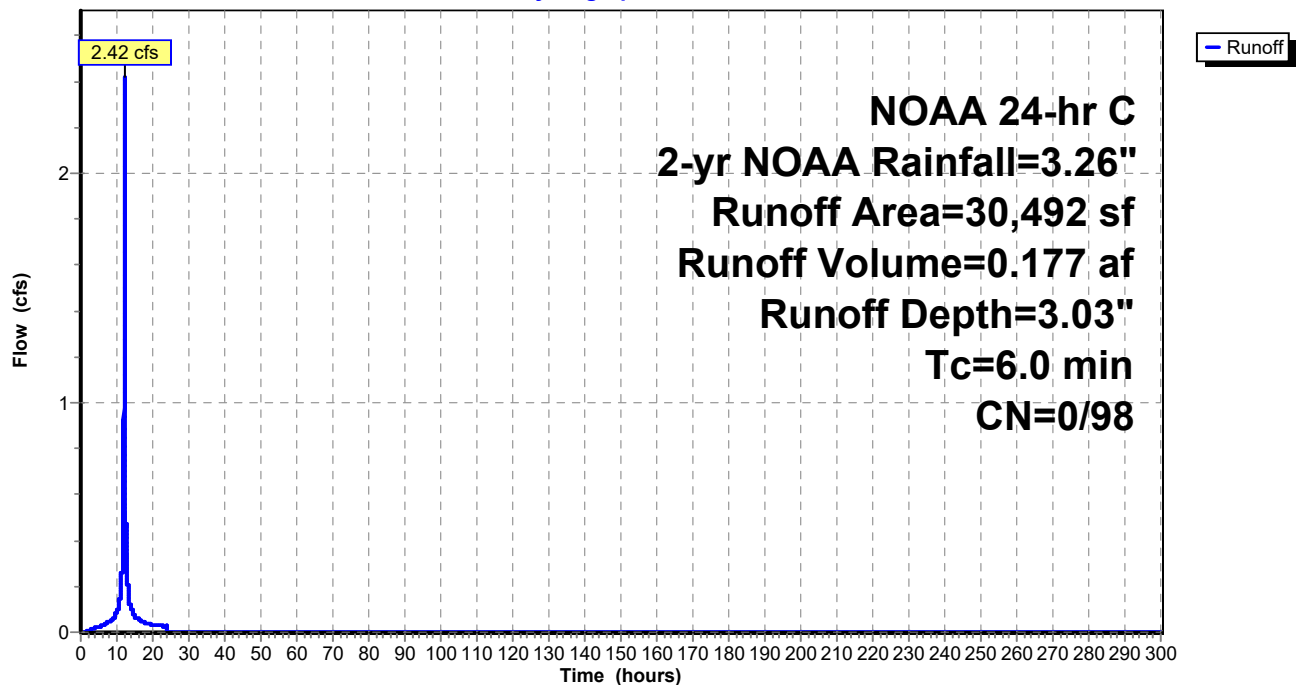
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Hydrograph



MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.04	0.00	0.00	0.00
2.00	0.07	0.00	0.00	0.01
3.00	0.12	0.00	0.02	0.01
4.00	0.16	0.00	0.04	0.02
5.00	0.21	0.00	0.07	0.02
6.00	0.26	0.00	0.11	0.03
7.00	0.32	0.00	0.16	0.04
8.00	0.39	0.00	0.22	0.05
9.00	0.48	0.00	0.30	0.06
10.00	0.59	0.00	0.40	0.09
11.00	0.78	0.00	0.58	0.17
12.00	1.55	0.00	1.33	1.34
13.00	2.48	0.00	2.25	0.22
14.00	2.67	0.00	2.44	0.10
15.00	2.78	0.00	2.55	0.07
16.00	2.87	0.00	2.64	0.06
17.00	2.94	0.00	2.71	0.05
18.00	3.00	0.00	2.77	0.04
19.00	3.05	0.00	2.82	0.03
20.00	3.10	0.00	2.87	0.03
21.00	3.14	0.00	2.91	0.03
22.00	3.19	0.00	2.95	0.03
23.00	3.22	0.00	2.99	0.03
24.00	3.26	0.00	3.03	0.03
25.00	3.26	0.00	3.03	0.00
26.00	3.26	0.00	3.03	0.00
27.00	3.26	0.00	3.03	0.00
28.00	3.26	0.00	3.03	0.00
29.00	3.26	0.00	3.03	0.00
30.00	3.26	0.00	3.03	0.00
31.00	3.26	0.00	3.03	0.00
32.00	3.26	0.00	3.03	0.00
33.00	3.26	0.00	3.03	0.00
34.00	3.26	0.00	3.03	0.00
35.00	3.26	0.00	3.03	0.00
36.00	3.26	0.00	3.03	0.00
37.00	3.26	0.00	3.03	0.00
38.00	3.26	0.00	3.03	0.00
39.00	3.26	0.00	3.03	0.00
40.00	3.26	0.00	3.03	0.00
41.00	3.26	0.00	3.03	0.00
42.00	3.26	0.00	3.03	0.00
43.00	3.26	0.00	3.03	0.00
44.00	3.26	0.00	3.03	0.00
45.00	3.26	0.00	3.03	0.00
46.00	3.26	0.00	3.03	0.00
47.00	3.26	0.00	3.03	0.00
48.00	3.26	0.00	3.03	0.00
49.00	3.26	0.00	3.03	0.00
50.00	3.26	0.00	3.03	0.00
51.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	3.26	0.00	3.03	0.00
53.00	3.26	0.00	3.03	0.00
54.00	3.26	0.00	3.03	0.00
55.00	3.26	0.00	3.03	0.00
56.00	3.26	0.00	3.03	0.00
57.00	3.26	0.00	3.03	0.00
58.00	3.26	0.00	3.03	0.00
59.00	3.26	0.00	3.03	0.00
60.00	3.26	0.00	3.03	0.00
61.00	3.26	0.00	3.03	0.00
62.00	3.26	0.00	3.03	0.00
63.00	3.26	0.00	3.03	0.00
64.00	3.26	0.00	3.03	0.00
65.00	3.26	0.00	3.03	0.00
66.00	3.26	0.00	3.03	0.00
67.00	3.26	0.00	3.03	0.00
68.00	3.26	0.00	3.03	0.00
69.00	3.26	0.00	3.03	0.00
70.00	3.26	0.00	3.03	0.00
71.00	3.26	0.00	3.03	0.00
72.00	3.26	0.00	3.03	0.00
73.00	3.26	0.00	3.03	0.00
74.00	3.26	0.00	3.03	0.00
75.00	3.26	0.00	3.03	0.00
76.00	3.26	0.00	3.03	0.00
77.00	3.26	0.00	3.03	0.00
78.00	3.26	0.00	3.03	0.00
79.00	3.26	0.00	3.03	0.00
80.00	3.26	0.00	3.03	0.00
81.00	3.26	0.00	3.03	0.00
82.00	3.26	0.00	3.03	0.00
83.00	3.26	0.00	3.03	0.00
84.00	3.26	0.00	3.03	0.00
85.00	3.26	0.00	3.03	0.00
86.00	3.26	0.00	3.03	0.00
87.00	3.26	0.00	3.03	0.00
88.00	3.26	0.00	3.03	0.00
89.00	3.26	0.00	3.03	0.00
90.00	3.26	0.00	3.03	0.00
91.00	3.26	0.00	3.03	0.00
92.00	3.26	0.00	3.03	0.00
93.00	3.26	0.00	3.03	0.00
94.00	3.26	0.00	3.03	0.00
95.00	3.26	0.00	3.03	0.00
96.00	3.26	0.00	3.03	0.00
97.00	3.26	0.00	3.03	0.00
98.00	3.26	0.00	3.03	0.00
99.00	3.26	0.00	3.03	0.00
100.00	3.26	0.00	3.03	0.00
101.00	3.26	0.00	3.03	0.00
102.00	3.26	0.00	3.03	0.00
103.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	3.26	0.00	3.03	0.00
105.00	3.26	0.00	3.03	0.00
106.00	3.26	0.00	3.03	0.00
107.00	3.26	0.00	3.03	0.00
108.00	3.26	0.00	3.03	0.00
109.00	3.26	0.00	3.03	0.00
110.00	3.26	0.00	3.03	0.00
111.00	3.26	0.00	3.03	0.00
112.00	3.26	0.00	3.03	0.00
113.00	3.26	0.00	3.03	0.00
114.00	3.26	0.00	3.03	0.00
115.00	3.26	0.00	3.03	0.00
116.00	3.26	0.00	3.03	0.00
117.00	3.26	0.00	3.03	0.00
118.00	3.26	0.00	3.03	0.00
119.00	3.26	0.00	3.03	0.00
120.00	3.26	0.00	3.03	0.00
121.00	3.26	0.00	3.03	0.00
122.00	3.26	0.00	3.03	0.00
123.00	3.26	0.00	3.03	0.00
124.00	3.26	0.00	3.03	0.00
125.00	3.26	0.00	3.03	0.00
126.00	3.26	0.00	3.03	0.00
127.00	3.26	0.00	3.03	0.00
128.00	3.26	0.00	3.03	0.00
129.00	3.26	0.00	3.03	0.00
130.00	3.26	0.00	3.03	0.00
131.00	3.26	0.00	3.03	0.00
132.00	3.26	0.00	3.03	0.00
133.00	3.26	0.00	3.03	0.00
134.00	3.26	0.00	3.03	0.00
135.00	3.26	0.00	3.03	0.00
136.00	3.26	0.00	3.03	0.00
137.00	3.26	0.00	3.03	0.00
138.00	3.26	0.00	3.03	0.00
139.00	3.26	0.00	3.03	0.00
140.00	3.26	0.00	3.03	0.00
141.00	3.26	0.00	3.03	0.00
142.00	3.26	0.00	3.03	0.00
143.00	3.26	0.00	3.03	0.00
144.00	3.26	0.00	3.03	0.00
145.00	3.26	0.00	3.03	0.00
146.00	3.26	0.00	3.03	0.00
147.00	3.26	0.00	3.03	0.00
148.00	3.26	0.00	3.03	0.00
149.00	3.26	0.00	3.03	0.00
150.00	3.26	0.00	3.03	0.00
151.00	3.26	0.00	3.03	0.00
152.00	3.26	0.00	3.03	0.00
153.00	3.26	0.00	3.03	0.00
154.00	3.26	0.00	3.03	0.00
155.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	3.26	0.00	3.03	0.00
157.00	3.26	0.00	3.03	0.00
158.00	3.26	0.00	3.03	0.00
159.00	3.26	0.00	3.03	0.00
160.00	3.26	0.00	3.03	0.00
161.00	3.26	0.00	3.03	0.00
162.00	3.26	0.00	3.03	0.00
163.00	3.26	0.00	3.03	0.00
164.00	3.26	0.00	3.03	0.00
165.00	3.26	0.00	3.03	0.00
166.00	3.26	0.00	3.03	0.00
167.00	3.26	0.00	3.03	0.00
168.00	3.26	0.00	3.03	0.00
169.00	3.26	0.00	3.03	0.00
170.00	3.26	0.00	3.03	0.00
171.00	3.26	0.00	3.03	0.00
172.00	3.26	0.00	3.03	0.00
173.00	3.26	0.00	3.03	0.00
174.00	3.26	0.00	3.03	0.00
175.00	3.26	0.00	3.03	0.00
176.00	3.26	0.00	3.03	0.00
177.00	3.26	0.00	3.03	0.00
178.00	3.26	0.00	3.03	0.00
179.00	3.26	0.00	3.03	0.00
180.00	3.26	0.00	3.03	0.00
181.00	3.26	0.00	3.03	0.00
182.00	3.26	0.00	3.03	0.00
183.00	3.26	0.00	3.03	0.00
184.00	3.26	0.00	3.03	0.00
185.00	3.26	0.00	3.03	0.00
186.00	3.26	0.00	3.03	0.00
187.00	3.26	0.00	3.03	0.00
188.00	3.26	0.00	3.03	0.00
189.00	3.26	0.00	3.03	0.00
190.00	3.26	0.00	3.03	0.00
191.00	3.26	0.00	3.03	0.00
192.00	3.26	0.00	3.03	0.00
193.00	3.26	0.00	3.03	0.00
194.00	3.26	0.00	3.03	0.00
195.00	3.26	0.00	3.03	0.00
196.00	3.26	0.00	3.03	0.00
197.00	3.26	0.00	3.03	0.00
198.00	3.26	0.00	3.03	0.00
199.00	3.26	0.00	3.03	0.00
200.00	3.26	0.00	3.03	0.00
201.00	3.26	0.00	3.03	0.00
202.00	3.26	0.00	3.03	0.00
203.00	3.26	0.00	3.03	0.00
204.00	3.26	0.00	3.03	0.00
205.00	3.26	0.00	3.03	0.00
206.00	3.26	0.00	3.03	0.00
207.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	3.26	0.00	3.03	0.00
209.00	3.26	0.00	3.03	0.00
210.00	3.26	0.00	3.03	0.00
211.00	3.26	0.00	3.03	0.00
212.00	3.26	0.00	3.03	0.00
213.00	3.26	0.00	3.03	0.00
214.00	3.26	0.00	3.03	0.00
215.00	3.26	0.00	3.03	0.00
216.00	3.26	0.00	3.03	0.00
217.00	3.26	0.00	3.03	0.00
218.00	3.26	0.00	3.03	0.00
219.00	3.26	0.00	3.03	0.00
220.00	3.26	0.00	3.03	0.00
221.00	3.26	0.00	3.03	0.00
222.00	3.26	0.00	3.03	0.00
223.00	3.26	0.00	3.03	0.00
224.00	3.26	0.00	3.03	0.00
225.00	3.26	0.00	3.03	0.00
226.00	3.26	0.00	3.03	0.00
227.00	3.26	0.00	3.03	0.00
228.00	3.26	0.00	3.03	0.00
229.00	3.26	0.00	3.03	0.00
230.00	3.26	0.00	3.03	0.00
231.00	3.26	0.00	3.03	0.00
232.00	3.26	0.00	3.03	0.00
233.00	3.26	0.00	3.03	0.00
234.00	3.26	0.00	3.03	0.00
235.00	3.26	0.00	3.03	0.00
236.00	3.26	0.00	3.03	0.00
237.00	3.26	0.00	3.03	0.00
238.00	3.26	0.00	3.03	0.00
239.00	3.26	0.00	3.03	0.00
240.00	3.26	0.00	3.03	0.00
241.00	3.26	0.00	3.03	0.00
242.00	3.26	0.00	3.03	0.00
243.00	3.26	0.00	3.03	0.00
244.00	3.26	0.00	3.03	0.00
245.00	3.26	0.00	3.03	0.00
246.00	3.26	0.00	3.03	0.00
247.00	3.26	0.00	3.03	0.00
248.00	3.26	0.00	3.03	0.00
249.00	3.26	0.00	3.03	0.00
250.00	3.26	0.00	3.03	0.00
251.00	3.26	0.00	3.03	0.00
252.00	3.26	0.00	3.03	0.00
253.00	3.26	0.00	3.03	0.00
254.00	3.26	0.00	3.03	0.00
255.00	3.26	0.00	3.03	0.00
256.00	3.26	0.00	3.03	0.00
257.00	3.26	0.00	3.03	0.00
258.00	3.26	0.00	3.03	0.00
259.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	3.26	0.00	3.03	0.00
261.00	3.26	0.00	3.03	0.00
262.00	3.26	0.00	3.03	0.00
263.00	3.26	0.00	3.03	0.00
264.00	3.26	0.00	3.03	0.00
265.00	3.26	0.00	3.03	0.00
266.00	3.26	0.00	3.03	0.00
267.00	3.26	0.00	3.03	0.00
268.00	3.26	0.00	3.03	0.00
269.00	3.26	0.00	3.03	0.00
270.00	3.26	0.00	3.03	0.00
271.00	3.26	0.00	3.03	0.00
272.00	3.26	0.00	3.03	0.00
273.00	3.26	0.00	3.03	0.00
274.00	3.26	0.00	3.03	0.00
275.00	3.26	0.00	3.03	0.00
276.00	3.26	0.00	3.03	0.00
277.00	3.26	0.00	3.03	0.00
278.00	3.26	0.00	3.03	0.00
279.00	3.26	0.00	3.03	0.00
280.00	3.26	0.00	3.03	0.00
281.00	3.26	0.00	3.03	0.00
282.00	3.26	0.00	3.03	0.00
283.00	3.26	0.00	3.03	0.00
284.00	3.26	0.00	3.03	0.00
285.00	3.26	0.00	3.03	0.00
286.00	3.26	0.00	3.03	0.00
287.00	3.26	0.00	3.03	0.00
288.00	3.26	0.00	3.03	0.00
289.00	3.26	0.00	3.03	0.00
290.00	3.26	0.00	3.03	0.00
291.00	3.26	0.00	3.03	0.00
292.00	3.26	0.00	3.03	0.00
293.00	3.26	0.00	3.03	0.00
294.00	3.26	0.00	3.03	0.00
295.00	3.26	0.00	3.03	0.00
296.00	3.26	0.00	3.03	0.00
297.00	3.26	0.00	3.03	0.00
298.00	3.26	0.00	3.03	0.00
299.00	3.26	0.00	3.03	0.00
300.00	3.26	0.00	3.03	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Summary for Pond 1P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 3.03" for 2-yr NOAA event
 Inflow = 2.42 cfs @ 12.13 hrs, Volume= 0.177 af
 Outflow = 0.38 cfs @ 12.59 hrs, Volume= 0.166 af, Atten= 84%, Lag= 27.5 min
 Primary = 0.38 cfs @ 12.59 hrs, Volume= 0.166 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.92' @ 12.59 hrs Surf.Area= 3,049 sf Storage= 4,662 cf

Plug-Flow detention time= 1,733.3 min calculated for 0.166 af (94% of inflow)
 Center-of-Mass det. time= 1,698.1 min (2,455.2 - 757.2)

Volume	Invert	Avail.Storage	Storage Description
#1	-2.51'	11,007 cf	Rain Garden (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	3,049	0.0	0	0
-1.51	3,049	15.0	457	457
-1.50	3,049	30.0	9	466
-0.01	3,049	30.0	1,363	1,829
0.00	3,049	100.0	30	1,860
3.00	3,049	100.0	9,147	11,007

Device	Routing	Invert	Outlet Devices
#1	Device 4	1.10'	40.0' 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
#2	Device 4	-1.50'	0.5" Vert. Orifice/Grate C= 0.600
#3	Device 4	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Primary	-2.51'	24.0" Round Culvert L= 1.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= -2.51' / -2.52' S= 0.0100 '/ Cc= 0.900 n= 0.011 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=0.38 cfs @ 12.59 hrs HW=0.92' (Free Discharge)

- ↑ **4=Culvert** (Passes 0.38 cfs of 18.61 cfs potential flow)
- ↑ **1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
- ↑ **2=Orifice/Grate** (Orifice Controls 0.01 cfs @ 7.46 fps)
- ↑ **3=Sharp-Crested Rectangular Weir**(Weir Controls 0.37 cfs @ 2.12 fps)

MRC Example 2

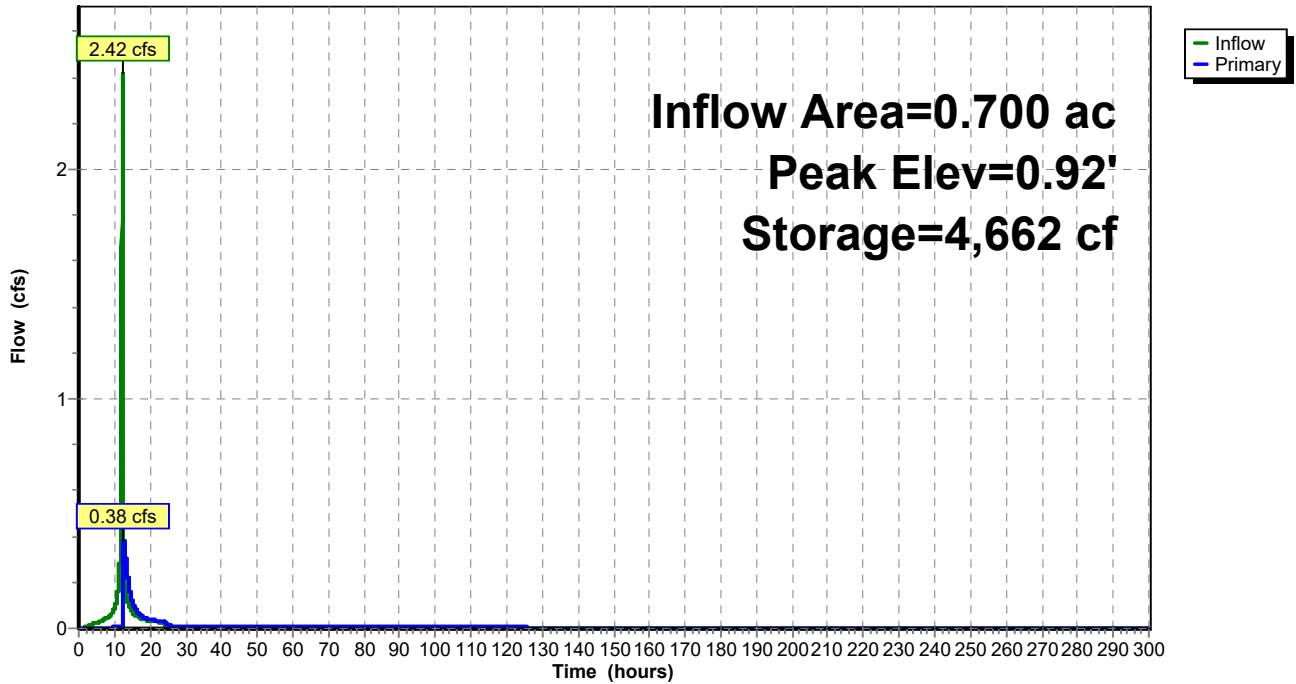
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NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

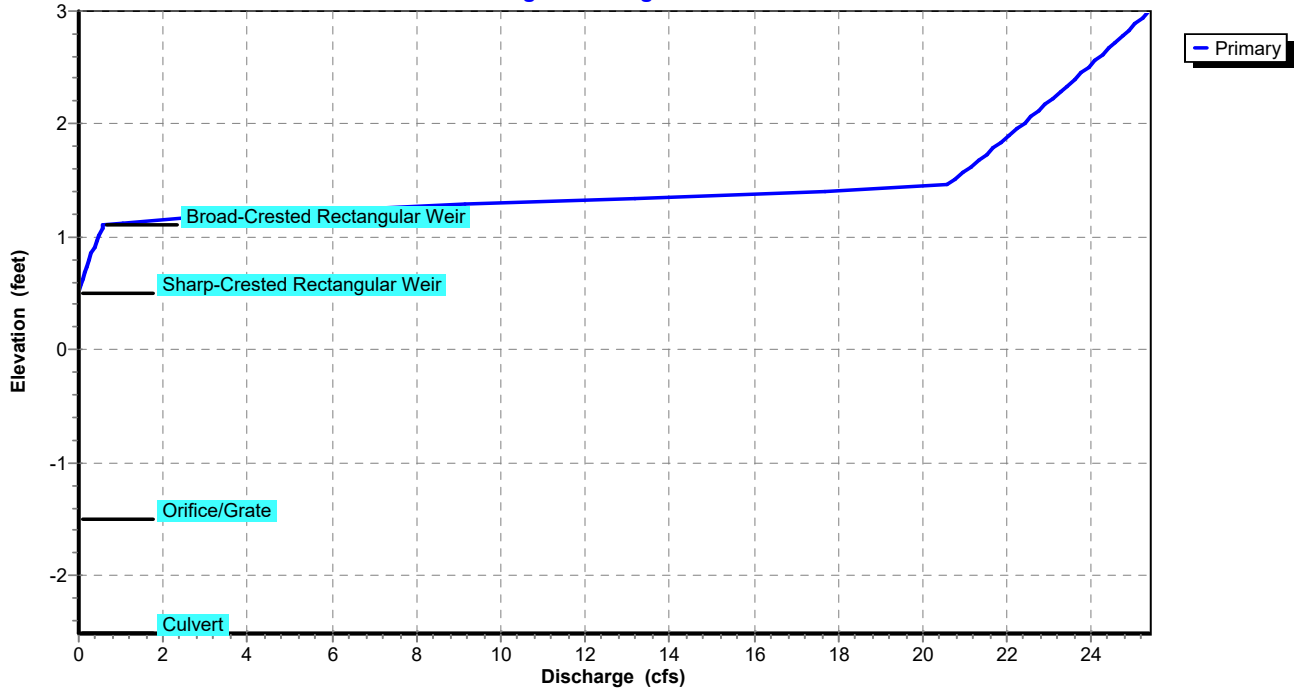
Pond 1P: Managed Release Rain Garden

Hydrograph



Pond 1P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

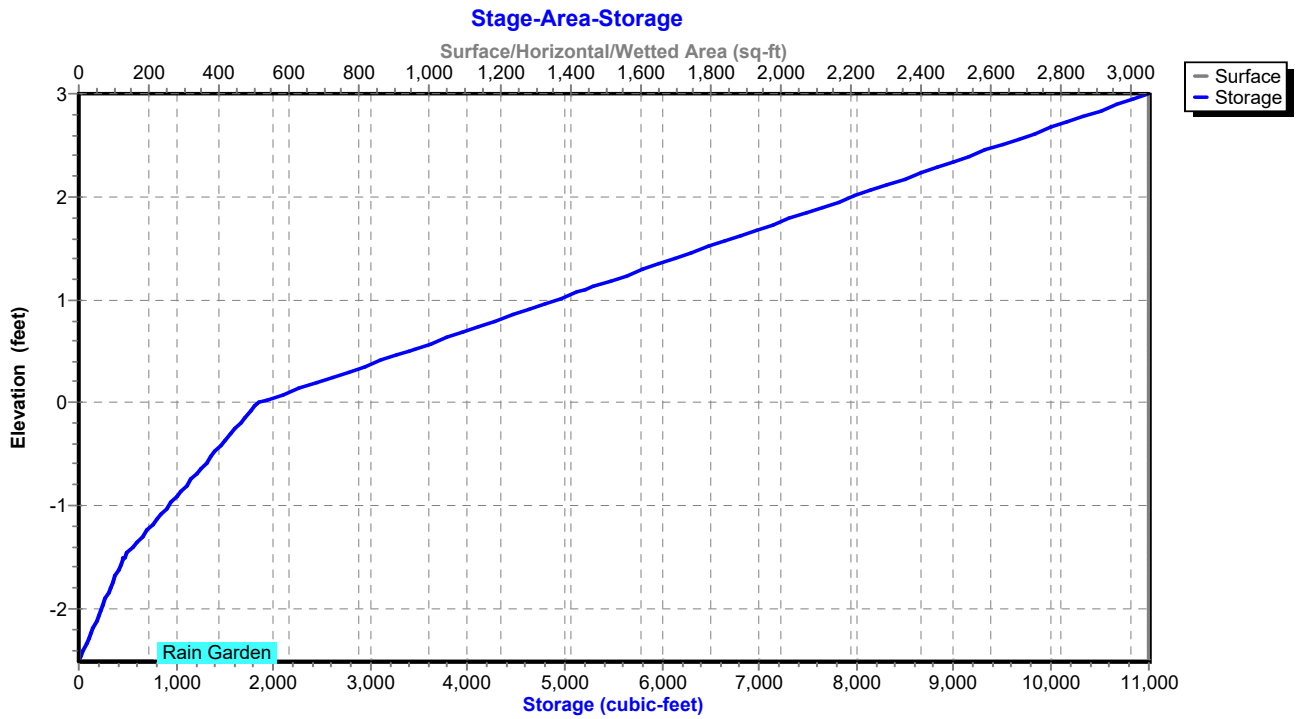
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NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Pond 1P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 1P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	-2.51	0.00
1.00	0.00	0	-2.51	0.00
2.00	0.01	9	-2.49	0.00
3.00	0.01	46	-2.41	0.00
4.00	0.02	105	-2.28	0.00
5.00	0.02	182	-2.11	0.00
6.00	0.03	276	-1.91	0.00
7.00	0.04	393	-1.65	0.00
8.00	0.05	544	-1.42	0.00
9.00	0.06	723	-1.22	0.00
10.00	0.09	972	-0.95	0.00
11.00	0.17	1,375	-0.51	0.01
12.00	1.34	2,821	0.32	0.01
13.00	0.22	4,533	0.88	0.33
14.00	0.10	4,128	0.74	0.19
15.00	0.07	3,904	0.67	0.12
16.00	0.06	3,776	0.63	0.08
17.00	0.05	3,704	0.60	0.06
18.00	0.04	3,652	0.59	0.05
19.00	0.03	3,615	0.58	0.04
20.00	0.03	3,592	0.57	0.04
21.00	0.03	3,573	0.56	0.04
22.00	0.03	3,556	0.56	0.03
23.00	0.03	3,541	0.55	0.03
24.00	0.03	3,527	0.55	0.03
25.00	0.00	3,458	0.52	0.02
26.00	0.00	3,411	0.51	0.01
27.00	0.00	3,375	0.50	0.01
28.00	0.00	3,342	0.49	0.01
29.00	0.00	3,309	0.48	0.01
30.00	0.00	3,276	0.46	0.01
31.00	0.00	3,243	0.45	0.01
32.00	0.00	3,210	0.44	0.01
33.00	0.00	3,177	0.43	0.01
34.00	0.00	3,145	0.42	0.01
35.00	0.00	3,112	0.41	0.01
36.00	0.00	3,080	0.40	0.01
37.00	0.00	3,047	0.39	0.01
38.00	0.00	3,015	0.38	0.01
39.00	0.00	2,983	0.37	0.01
40.00	0.00	2,951	0.36	0.01
41.00	0.00	2,919	0.35	0.01
42.00	0.00	2,887	0.34	0.01
43.00	0.00	2,855	0.33	0.01
44.00	0.00	2,824	0.32	0.01
45.00	0.00	2,792	0.31	0.01
46.00	0.00	2,760	0.30	0.01
47.00	0.00	2,729	0.29	0.01
48.00	0.00	2,698	0.27	0.01
49.00	0.00	2,666	0.26	0.01
50.00	0.00	2,635	0.25	0.01
51.00	0.00	2,604	0.24	0.01

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	2,573	0.23	0.01
53.00	0.00	2,542	0.22	0.01
54.00	0.00	2,511	0.21	0.01
55.00	0.00	2,481	0.20	0.01
56.00	0.00	2,450	0.19	0.01
57.00	0.00	2,420	0.18	0.01
58.00	0.00	2,389	0.17	0.01
59.00	0.00	2,359	0.16	0.01
60.00	0.00	2,329	0.15	0.01
61.00	0.00	2,298	0.14	0.01
62.00	0.00	2,268	0.13	0.01
63.00	0.00	2,238	0.12	0.01
64.00	0.00	2,208	0.11	0.01
65.00	0.00	2,179	0.10	0.01
66.00	0.00	2,149	0.09	0.01
67.00	0.00	2,119	0.09	0.01
68.00	0.00	2,090	0.08	0.01
69.00	0.00	2,060	0.07	0.01
70.00	0.00	2,031	0.06	0.01
71.00	0.00	2,002	0.05	0.01
72.00	0.00	1,973	0.04	0.01
73.00	0.00	1,944	0.03	0.01
74.00	0.00	1,915	0.02	0.01
75.00	0.00	1,886	0.01	0.01
76.00	0.00	1,857	0.00	0.01
77.00	0.00	1,828	-0.01	0.01
78.00	0.00	1,800	-0.04	0.01
79.00	0.00	1,772	-0.07	0.01
80.00	0.00	1,744	-0.10	0.01
81.00	0.00	1,716	-0.13	0.01
82.00	0.00	1,689	-0.16	0.01
83.00	0.00	1,662	-0.19	0.01
84.00	0.00	1,635	-0.22	0.01
85.00	0.00	1,609	-0.25	0.01
86.00	0.00	1,583	-0.28	0.01
87.00	0.00	1,557	-0.31	0.01
88.00	0.00	1,532	-0.34	0.01
89.00	0.00	1,507	-0.36	0.01
90.00	0.00	1,482	-0.39	0.01
91.00	0.00	1,457	-0.42	0.01
92.00	0.00	1,433	-0.44	0.01
93.00	0.00	1,409	-0.47	0.01
94.00	0.00	1,386	-0.50	0.01
95.00	0.00	1,362	-0.52	0.01
96.00	0.00	1,339	-0.55	0.01
97.00	0.00	1,317	-0.57	0.01
98.00	0.00	1,294	-0.59	0.01
99.00	0.00	1,272	-0.62	0.01
100.00	0.00	1,251	-0.64	0.01
101.00	0.00	1,229	-0.67	0.01
102.00	0.00	1,208	-0.69	0.01
103.00	0.00	1,187	-0.71	0.01

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1,166	-0.73	0.01
105.00	0.00	1,146	-0.76	0.01
106.00	0.00	1,126	-0.78	0.01
107.00	0.00	1,107	-0.80	0.01
108.00	0.00	1,087	-0.82	0.01
109.00	0.00	1,068	-0.84	0.01
110.00	0.00	1,050	-0.86	0.01
111.00	0.00	1,031	-0.88	0.01
112.00	0.00	1,013	-0.90	0.00
113.00	0.00	995	-0.92	0.00
114.00	0.00	978	-0.94	0.00
115.00	0.00	961	-0.96	0.00
116.00	0.00	944	-0.98	0.00
117.00	0.00	927	-1.00	0.00
118.00	0.00	911	-1.01	0.00
119.00	0.00	895	-1.03	0.00
120.00	0.00	879	-1.05	0.00
121.00	0.00	864	-1.07	0.00
122.00	0.00	849	-1.08	0.00
123.00	0.00	834	-1.10	0.00
124.00	0.00	820	-1.11	0.00
125.00	0.00	806	-1.13	0.00
126.00	0.00	792	-1.14	0.00
127.00	0.00	778	-1.16	0.00
128.00	0.00	765	-1.17	0.00
129.00	0.00	752	-1.19	0.00
130.00	0.00	740	-1.20	0.00
131.00	0.00	727	-1.21	0.00
132.00	0.00	715	-1.23	0.00
133.00	0.00	704	-1.24	0.00
134.00	0.00	692	-1.25	0.00
135.00	0.00	681	-1.27	0.00
136.00	0.00	670	-1.28	0.00
137.00	0.00	660	-1.29	0.00
138.00	0.00	650	-1.30	0.00
139.00	0.00	640	-1.31	0.00
140.00	0.00	630	-1.32	0.00
141.00	0.00	621	-1.33	0.00
142.00	0.00	612	-1.34	0.00
143.00	0.00	604	-1.35	0.00
144.00	0.00	595	-1.36	0.00
145.00	0.00	587	-1.37	0.00
146.00	0.00	580	-1.38	0.00
147.00	0.00	572	-1.38	0.00
148.00	0.00	565	-1.39	0.00
149.00	0.00	559	-1.40	0.00
150.00	0.00	552	-1.41	0.00
151.00	0.00	546	-1.41	0.00
152.00	0.00	540	-1.42	0.00
153.00	0.00	535	-1.43	0.00
154.00	0.00	530	-1.43	0.00
155.00	0.00	525	-1.44	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	520	-1.44	0.00
157.00	0.00	516	-1.45	0.00
158.00	0.00	512	-1.45	0.00
159.00	0.00	509	-1.45	0.00
160.00	0.00	505	-1.46	0.00
161.00	0.00	502	-1.46	0.00
162.00	0.00	499	-1.46	0.00
163.00	0.00	496	-1.47	0.00
164.00	0.00	494	-1.47	0.00
165.00	0.00	491	-1.47	0.00
166.00	0.00	489	-1.48	0.00
167.00	0.00	487	-1.48	0.00
168.00	0.00	485	-1.48	0.00
169.00	0.00	484	-1.48	0.00
170.00	0.00	482	-1.48	0.00
171.00	0.00	481	-1.48	0.00
172.00	0.00	480	-1.49	0.00
173.00	0.00	479	-1.49	0.00
174.00	0.00	478	-1.49	0.00
175.00	0.00	477	-1.49	0.00
176.00	0.00	476	-1.49	0.00
177.00	0.00	475	-1.49	0.00
178.00	0.00	474	-1.49	0.00
179.00	0.00	474	-1.49	0.00
180.00	0.00	473	-1.49	0.00
181.00	0.00	472	-1.49	0.00
182.00	0.00	472	-1.49	0.00
183.00	0.00	471	-1.49	0.00
184.00	0.00	471	-1.50	0.00
185.00	0.00	471	-1.50	0.00
186.00	0.00	470	-1.50	0.00
187.00	0.00	470	-1.50	0.00
188.00	0.00	470	-1.50	0.00
189.00	0.00	469	-1.50	0.00
190.00	0.00	469	-1.50	0.00
191.00	0.00	469	-1.50	0.00
192.00	0.00	469	-1.50	0.00
193.00	0.00	469	-1.50	0.00
194.00	0.00	468	-1.50	0.00
195.00	0.00	468	-1.50	0.00
196.00	0.00	468	-1.50	0.00
197.00	0.00	468	-1.50	0.00
198.00	0.00	468	-1.50	0.00
199.00	0.00	468	-1.50	0.00
200.00	0.00	468	-1.50	0.00
201.00	0.00	467	-1.50	0.00
202.00	0.00	467	-1.50	0.00
203.00	0.00	467	-1.50	0.00
204.00	0.00	467	-1.50	0.00
205.00	0.00	467	-1.50	0.00
206.00	0.00	467	-1.50	0.00
207.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
208.00	0.00	467	-1.50	0.00
209.00	0.00	467	-1.50	0.00
210.00	0.00	467	-1.50	0.00
211.00	0.00	467	-1.50	0.00
212.00	0.00	467	-1.50	0.00
213.00	0.00	467	-1.50	0.00
214.00	0.00	467	-1.50	0.00
215.00	0.00	467	-1.50	0.00
216.00	0.00	467	-1.50	0.00
217.00	0.00	467	-1.50	0.00
218.00	0.00	467	-1.50	0.00
219.00	0.00	467	-1.50	0.00
220.00	0.00	467	-1.50	0.00
221.00	0.00	467	-1.50	0.00
222.00	0.00	467	-1.50	0.00
223.00	0.00	467	-1.50	0.00
224.00	0.00	467	-1.50	0.00
225.00	0.00	467	-1.50	0.00
226.00	0.00	467	-1.50	0.00
227.00	0.00	467	-1.50	0.00
228.00	0.00	467	-1.50	0.00
229.00	0.00	467	-1.50	0.00
230.00	0.00	467	-1.50	0.00
231.00	0.00	467	-1.50	0.00
232.00	0.00	467	-1.50	0.00
233.00	0.00	467	-1.50	0.00
234.00	0.00	467	-1.50	0.00
235.00	0.00	467	-1.50	0.00
236.00	0.00	467	-1.50	0.00
237.00	0.00	467	-1.50	0.00
238.00	0.00	467	-1.50	0.00
239.00	0.00	467	-1.50	0.00
240.00	0.00	467	-1.50	0.00
241.00	0.00	467	-1.50	0.00
242.00	0.00	467	-1.50	0.00
243.00	0.00	467	-1.50	0.00
244.00	0.00	467	-1.50	0.00
245.00	0.00	467	-1.50	0.00
246.00	0.00	467	-1.50	0.00
247.00	0.00	467	-1.50	0.00
248.00	0.00	467	-1.50	0.00
249.00	0.00	467	-1.50	0.00
250.00	0.00	467	-1.50	0.00
251.00	0.00	467	-1.50	0.00
252.00	0.00	467	-1.50	0.00
253.00	0.00	467	-1.50	0.00
254.00	0.00	467	-1.50	0.00
255.00	0.00	467	-1.50	0.00
256.00	0.00	467	-1.50	0.00
257.00	0.00	467	-1.50	0.00
258.00	0.00	467	-1.50	0.00
259.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
260.00	0.00	467	-1.50	0.00
261.00	0.00	467	-1.50	0.00
262.00	0.00	467	-1.50	0.00
263.00	0.00	467	-1.50	0.00
264.00	0.00	467	-1.50	0.00
265.00	0.00	467	-1.50	0.00
266.00	0.00	467	-1.50	0.00
267.00	0.00	466	-1.50	0.00
268.00	0.00	466	-1.50	0.00
269.00	0.00	466	-1.50	0.00
270.00	0.00	466	-1.50	0.00
271.00	0.00	466	-1.50	0.00
272.00	0.00	466	-1.50	0.00
273.00	0.00	466	-1.50	0.00
274.00	0.00	466	-1.50	0.00
275.00	0.00	466	-1.50	0.00
276.00	0.00	466	-1.50	0.00
277.00	0.00	466	-1.50	0.00
278.00	0.00	466	-1.50	0.00
279.00	0.00	466	-1.50	0.00
280.00	0.00	466	-1.50	0.00
281.00	0.00	466	-1.50	0.00
282.00	0.00	466	-1.50	0.00
283.00	0.00	466	-1.50	0.00
284.00	0.00	466	-1.50	0.00
285.00	0.00	466	-1.50	0.00
286.00	0.00	466	-1.50	0.00
287.00	0.00	466	-1.50	0.00
288.00	0.00	466	-1.50	0.00
289.00	0.00	466	-1.50	0.00
290.00	0.00	466	-1.50	0.00
291.00	0.00	466	-1.50	0.00
292.00	0.00	466	-1.50	0.00
293.00	0.00	466	-1.50	0.00
294.00	0.00	466	-1.50	0.00
295.00	0.00	466	-1.50	0.00
296.00	0.00	466	-1.50	0.00
297.00	0.00	466	-1.50	0.00
298.00	0.00	466	-1.50	0.00
299.00	0.00	466	-1.50	0.00
300.00	0.00	466	-1.50	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Summary for Pond 2P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

[79] Warning: Submerged Pond 1P Primary device # 4 INLET by 0.49'

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 2.84" for 2-yr NOAA event
 Inflow = 0.38 cfs @ 12.59 hrs, Volume= 0.166 af
 Outflow = 0.24 cfs @ 13.59 hrs, Volume= 0.166 af, Atten= 37%, Lag= 60.3 min
 Primary = 0.24 cfs @ 13.59 hrs, Volume= 0.166 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= -2.02' @ 13.59 hrs Surf.Area= 1,742 sf Storage= 851 cf

Plug-Flow detention time= 138.9 min calculated for 0.166 af (100% of inflow)
 Center-of-Mass det. time= 139.0 min (2,594.2 - 2,455.2)

Volume	Invert	Avail.Storage	Storage Description	
#1	-2.51'	6,114 cf	Detention Basin (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	1,742	0.0	0	0
-2.50	1,742	100.0	17	17
1.00	1,742	100.0	6,097	6,114

Device	Routing	Invert	Outlet Devices
#1	Secondary	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	-2.51'	4.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.24 cfs @ 13.59 hrs HW=-2.02' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 0.24 cfs @ 2.73 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=-2.51' (Free Discharge)
 ↑1=Sharp-Crested Rectangular Weir(Controls 0.00 cfs)

MRC Example 2

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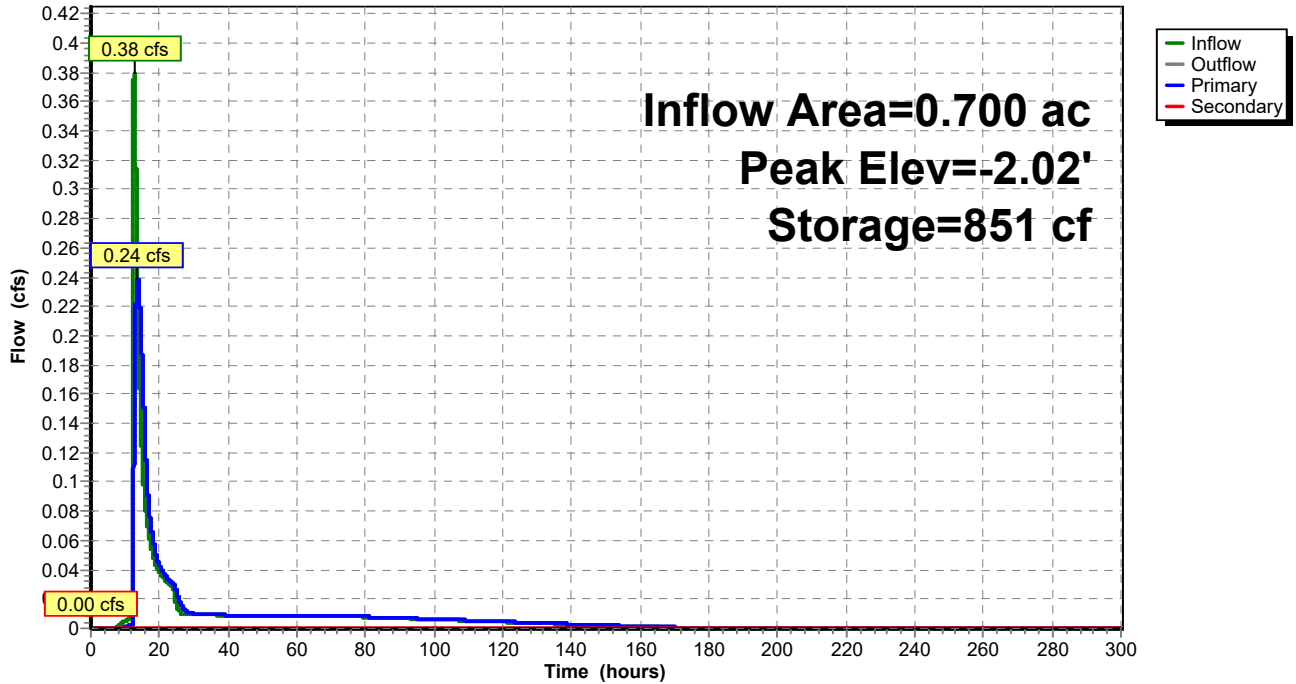
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NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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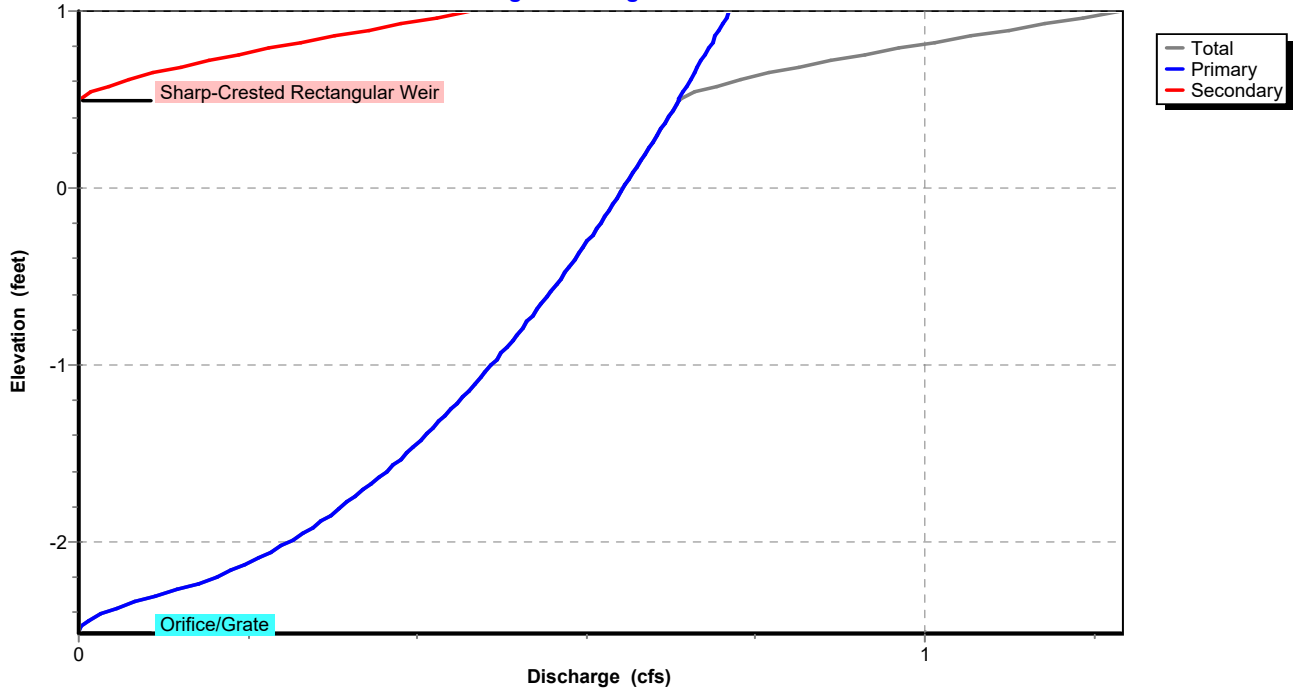
Pond 2P: Managed Release Rain Garden

Hydrograph



Pond 2P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

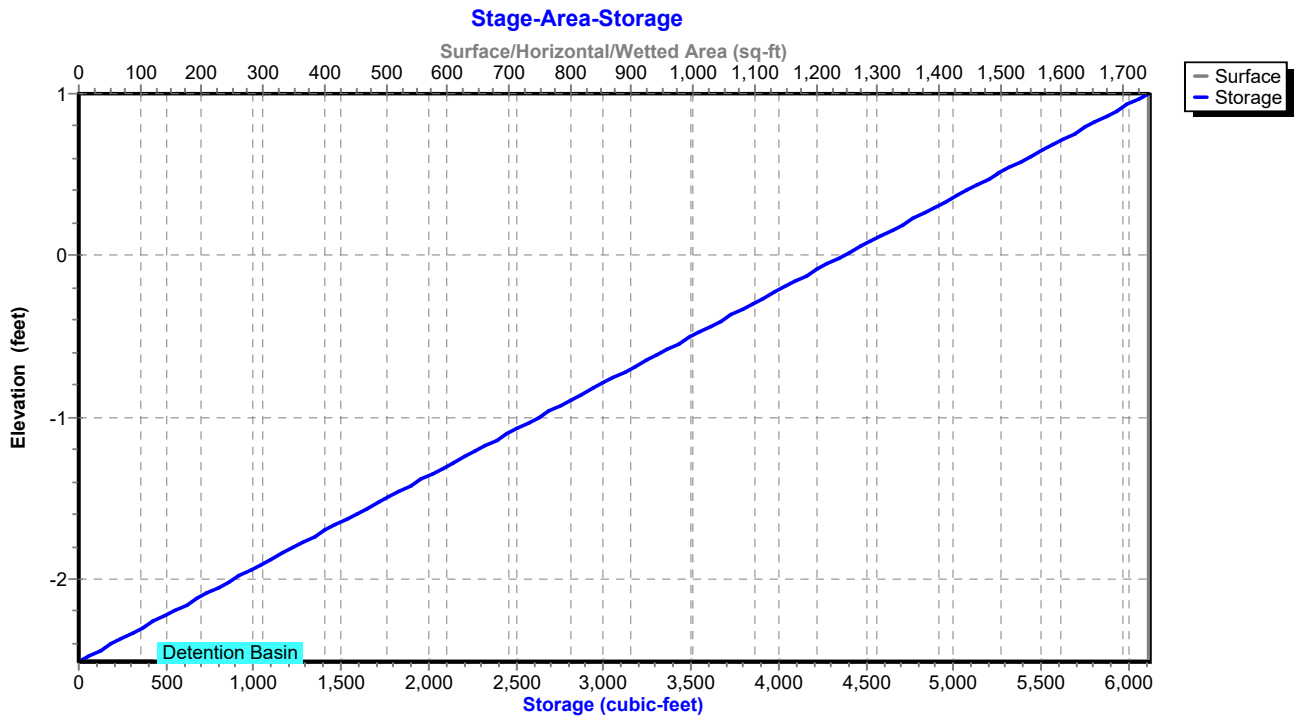
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NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Pond 2P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 2P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	-2.51	0.00	0.00	0.00
1.00	0.00	0	-2.51	0.00	0.00	0.00
2.00	0.00	0	-2.51	0.00	0.00	0.00
3.00	0.00	0	-2.51	0.00	0.00	0.00
4.00	0.00	0	-2.51	0.00	0.00	0.00
5.00	0.00	0	-2.51	0.00	0.00	0.00
6.00	0.00	0	-2.51	0.00	0.00	0.00
7.00	0.00	0	-2.51	0.00	0.00	0.00
8.00	0.00	2	-2.51	0.00	0.00	0.00
9.00	0.00	10	-2.50	0.00	0.00	0.00
10.00	0.00	24	-2.50	0.00	0.00	0.00
11.00	0.01	40	-2.49	0.00	0.00	0.00
12.00	0.01	59	-2.48	0.00	0.00	0.00
13.00	0.33	736	-2.09	0.21	0.21	0.00
14.00	0.19	815	-2.04	0.23	0.23	0.00
15.00	0.12	605	-2.16	0.18	0.18	0.00
16.00	0.08	426	-2.27	0.12	0.12	0.00
17.00	0.06	341	-2.31	0.08	0.08	0.00
18.00	0.05	293	-2.34	0.06	0.06	0.00
19.00	0.04	260	-2.36	0.05	0.05	0.00
20.00	0.04	239	-2.37	0.04	0.04	0.00
21.00	0.04	225	-2.38	0.04	0.04	0.00
22.00	0.03	214	-2.39	0.04	0.04	0.00
23.00	0.03	204	-2.39	0.03	0.03	0.00
24.00	0.03	196	-2.40	0.03	0.03	0.00
25.00	0.02	175	-2.41	0.02	0.02	0.00
26.00	0.01	147	-2.43	0.02	0.02	0.00
27.00	0.01	128	-2.44	0.01	0.01	0.00
28.00	0.01	117	-2.44	0.01	0.01	0.00
29.00	0.01	111	-2.45	0.01	0.01	0.00
30.00	0.01	108	-2.45	0.01	0.01	0.00
31.00	0.01	105	-2.45	0.01	0.01	0.00
32.00	0.01	104	-2.45	0.01	0.01	0.00
33.00	0.01	103	-2.45	0.01	0.01	0.00
34.00	0.01	103	-2.45	0.01	0.01	0.00
35.00	0.01	102	-2.45	0.01	0.01	0.00
36.00	0.01	102	-2.45	0.01	0.01	0.00
37.00	0.01	102	-2.45	0.01	0.01	0.00
38.00	0.01	101	-2.45	0.01	0.01	0.00
39.00	0.01	101	-2.45	0.01	0.01	0.00
40.00	0.01	101	-2.45	0.01	0.01	0.00
41.00	0.01	101	-2.45	0.01	0.01	0.00
42.00	0.01	101	-2.45	0.01	0.01	0.00
43.00	0.01	100	-2.45	0.01	0.01	0.00
44.00	0.01	100	-2.45	0.01	0.01	0.00
45.00	0.01	100	-2.45	0.01	0.01	0.00
46.00	0.01	100	-2.45	0.01	0.01	0.00
47.00	0.01	100	-2.45	0.01	0.01	0.00
48.00	0.01	100	-2.45	0.01	0.01	0.00
49.00	0.01	99	-2.45	0.01	0.01	0.00
50.00	0.01	99	-2.45	0.01	0.01	0.00
51.00	0.01	99	-2.45	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
52.00	0.01	99	-2.45	0.01	0.01	0.00
53.00	0.01	99	-2.45	0.01	0.01	0.00
54.00	0.01	99	-2.45	0.01	0.01	0.00
55.00	0.01	98	-2.45	0.01	0.01	0.00
56.00	0.01	98	-2.45	0.01	0.01	0.00
57.00	0.01	98	-2.45	0.01	0.01	0.00
58.00	0.01	98	-2.45	0.01	0.01	0.00
59.00	0.01	98	-2.45	0.01	0.01	0.00
60.00	0.01	97	-2.45	0.01	0.01	0.00
61.00	0.01	97	-2.45	0.01	0.01	0.00
62.00	0.01	97	-2.45	0.01	0.01	0.00
63.00	0.01	97	-2.45	0.01	0.01	0.00
64.00	0.01	97	-2.45	0.01	0.01	0.00
65.00	0.01	97	-2.45	0.01	0.01	0.00
66.00	0.01	96	-2.45	0.01	0.01	0.00
67.00	0.01	96	-2.45	0.01	0.01	0.00
68.00	0.01	96	-2.45	0.01	0.01	0.00
69.00	0.01	96	-2.45	0.01	0.01	0.00
70.00	0.01	96	-2.46	0.01	0.01	0.00
71.00	0.01	96	-2.46	0.01	0.01	0.00
72.00	0.01	95	-2.46	0.01	0.01	0.00
73.00	0.01	95	-2.46	0.01	0.01	0.00
74.00	0.01	95	-2.46	0.01	0.01	0.00
75.00	0.01	95	-2.46	0.01	0.01	0.00
76.00	0.01	95	-2.46	0.01	0.01	0.00
77.00	0.01	95	-2.46	0.01	0.01	0.00
78.00	0.01	94	-2.46	0.01	0.01	0.00
79.00	0.01	94	-2.46	0.01	0.01	0.00
80.00	0.01	93	-2.46	0.01	0.01	0.00
81.00	0.01	93	-2.46	0.01	0.01	0.00
82.00	0.01	92	-2.46	0.01	0.01	0.00
83.00	0.01	92	-2.46	0.01	0.01	0.00
84.00	0.01	91	-2.46	0.01	0.01	0.00
85.00	0.01	91	-2.46	0.01	0.01	0.00
86.00	0.01	90	-2.46	0.01	0.01	0.00
87.00	0.01	89	-2.46	0.01	0.01	0.00
88.00	0.01	89	-2.46	0.01	0.01	0.00
89.00	0.01	88	-2.46	0.01	0.01	0.00
90.00	0.01	88	-2.46	0.01	0.01	0.00
91.00	0.01	87	-2.46	0.01	0.01	0.00
92.00	0.01	87	-2.46	0.01	0.01	0.00
93.00	0.01	86	-2.46	0.01	0.01	0.00
94.00	0.01	85	-2.46	0.01	0.01	0.00
95.00	0.01	85	-2.46	0.01	0.01	0.00
96.00	0.01	84	-2.46	0.01	0.01	0.00
97.00	0.01	84	-2.46	0.01	0.01	0.00
98.00	0.01	83	-2.46	0.01	0.01	0.00
99.00	0.01	83	-2.46	0.01	0.01	0.00
100.00	0.01	82	-2.46	0.01	0.01	0.00
101.00	0.01	81	-2.46	0.01	0.01	0.00
102.00	0.01	81	-2.46	0.01	0.01	0.00
103.00	0.01	80	-2.46	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
104.00	0.01	80	-2.46	0.01	0.01	0.00
105.00	0.01	79	-2.46	0.01	0.01	0.00
106.00	0.01	78	-2.46	0.01	0.01	0.00
107.00	0.01	78	-2.47	0.01	0.01	0.00
108.00	0.01	77	-2.47	0.01	0.01	0.00
109.00	0.01	77	-2.47	0.01	0.01	0.00
110.00	0.01	76	-2.47	0.01	0.01	0.00
111.00	0.01	76	-2.47	0.01	0.01	0.00
112.00	0.00	75	-2.47	0.01	0.01	0.00
113.00	0.00	74	-2.47	0.01	0.01	0.00
114.00	0.00	74	-2.47	0.00	0.00	0.00
115.00	0.00	73	-2.47	0.00	0.00	0.00
116.00	0.00	73	-2.47	0.00	0.00	0.00
117.00	0.00	72	-2.47	0.00	0.00	0.00
118.00	0.00	71	-2.47	0.00	0.00	0.00
119.00	0.00	71	-2.47	0.00	0.00	0.00
120.00	0.00	70	-2.47	0.00	0.00	0.00
121.00	0.00	70	-2.47	0.00	0.00	0.00
122.00	0.00	69	-2.47	0.00	0.00	0.00
123.00	0.00	69	-2.47	0.00	0.00	0.00
124.00	0.00	68	-2.47	0.00	0.00	0.00
125.00	0.00	67	-2.47	0.00	0.00	0.00
126.00	0.00	67	-2.47	0.00	0.00	0.00
127.00	0.00	66	-2.47	0.00	0.00	0.00
128.00	0.00	66	-2.47	0.00	0.00	0.00
129.00	0.00	65	-2.47	0.00	0.00	0.00
130.00	0.00	65	-2.47	0.00	0.00	0.00
131.00	0.00	64	-2.47	0.00	0.00	0.00
132.00	0.00	63	-2.47	0.00	0.00	0.00
133.00	0.00	63	-2.47	0.00	0.00	0.00
134.00	0.00	62	-2.47	0.00	0.00	0.00
135.00	0.00	62	-2.47	0.00	0.00	0.00
136.00	0.00	61	-2.47	0.00	0.00	0.00
137.00	0.00	60	-2.48	0.00	0.00	0.00
138.00	0.00	60	-2.48	0.00	0.00	0.00
139.00	0.00	59	-2.48	0.00	0.00	0.00
140.00	0.00	58	-2.48	0.00	0.00	0.00
141.00	0.00	57	-2.48	0.00	0.00	0.00
142.00	0.00	55	-2.48	0.00	0.00	0.00
143.00	0.00	54	-2.48	0.00	0.00	0.00
144.00	0.00	53	-2.48	0.00	0.00	0.00
145.00	0.00	52	-2.48	0.00	0.00	0.00
146.00	0.00	51	-2.48	0.00	0.00	0.00
147.00	0.00	49	-2.48	0.00	0.00	0.00
148.00	0.00	48	-2.48	0.00	0.00	0.00
149.00	0.00	47	-2.48	0.00	0.00	0.00
150.00	0.00	46	-2.48	0.00	0.00	0.00
151.00	0.00	44	-2.48	0.00	0.00	0.00
152.00	0.00	43	-2.49	0.00	0.00	0.00
153.00	0.00	42	-2.49	0.00	0.00	0.00
154.00	0.00	40	-2.49	0.00	0.00	0.00
155.00	0.00	39	-2.49	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
156.00	0.00	37	-2.49	0.00	0.00	0.00
157.00	0.00	36	-2.49	0.00	0.00	0.00
158.00	0.00	35	-2.49	0.00	0.00	0.00
159.00	0.00	34	-2.49	0.00	0.00	0.00
160.00	0.00	32	-2.49	0.00	0.00	0.00
161.00	0.00	31	-2.49	0.00	0.00	0.00
162.00	0.00	30	-2.49	0.00	0.00	0.00
163.00	0.00	29	-2.49	0.00	0.00	0.00
164.00	0.00	28	-2.49	0.00	0.00	0.00
165.00	0.00	27	-2.49	0.00	0.00	0.00
166.00	0.00	26	-2.50	0.00	0.00	0.00
167.00	0.00	25	-2.50	0.00	0.00	0.00
168.00	0.00	24	-2.50	0.00	0.00	0.00
169.00	0.00	23	-2.50	0.00	0.00	0.00
170.00	0.00	23	-2.50	0.00	0.00	0.00
171.00	0.00	22	-2.50	0.00	0.00	0.00
172.00	0.00	21	-2.50	0.00	0.00	0.00
173.00	0.00	21	-2.50	0.00	0.00	0.00
174.00	0.00	20	-2.50	0.00	0.00	0.00
175.00	0.00	19	-2.50	0.00	0.00	0.00
176.00	0.00	19	-2.50	0.00	0.00	0.00
177.00	0.00	19	-2.50	0.00	0.00	0.00
178.00	0.00	18	-2.50	0.00	0.00	0.00
179.00	0.00	18	-2.50	0.00	0.00	0.00
180.00	0.00	17	-2.50	0.00	0.00	0.00
181.00	0.00	17	-2.50	0.00	0.00	0.00
182.00	0.00	17	-2.50	0.00	0.00	0.00
183.00	0.00	16	-2.50	0.00	0.00	0.00
184.00	0.00	16	-2.50	0.00	0.00	0.00
185.00	0.00	15	-2.50	0.00	0.00	0.00
186.00	0.00	15	-2.50	0.00	0.00	0.00
187.00	0.00	14	-2.50	0.00	0.00	0.00
188.00	0.00	14	-2.50	0.00	0.00	0.00
189.00	0.00	13	-2.50	0.00	0.00	0.00
190.00	0.00	13	-2.50	0.00	0.00	0.00
191.00	0.00	13	-2.50	0.00	0.00	0.00
192.00	0.00	12	-2.50	0.00	0.00	0.00
193.00	0.00	12	-2.50	0.00	0.00	0.00
194.00	0.00	11	-2.50	0.00	0.00	0.00
195.00	0.00	11	-2.50	0.00	0.00	0.00
196.00	0.00	10	-2.50	0.00	0.00	0.00
197.00	0.00	10	-2.50	0.00	0.00	0.00
198.00	0.00	10	-2.50	0.00	0.00	0.00
199.00	0.00	9	-2.50	0.00	0.00	0.00
200.00	0.00	9	-2.50	0.00	0.00	0.00
201.00	0.00	8	-2.51	0.00	0.00	0.00
202.00	0.00	8	-2.51	0.00	0.00	0.00
203.00	0.00	8	-2.51	0.00	0.00	0.00
204.00	0.00	7	-2.51	0.00	0.00	0.00
205.00	0.00	7	-2.51	0.00	0.00	0.00
206.00	0.00	7	-2.51	0.00	0.00	0.00
207.00	0.00	6	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
208.00	0.00	6	-2.51	0.00	0.00	0.00
209.00	0.00	6	-2.51	0.00	0.00	0.00
210.00	0.00	6	-2.51	0.00	0.00	0.00
211.00	0.00	5	-2.51	0.00	0.00	0.00
212.00	0.00	5	-2.51	0.00	0.00	0.00
213.00	0.00	5	-2.51	0.00	0.00	0.00
214.00	0.00	5	-2.51	0.00	0.00	0.00
215.00	0.00	4	-2.51	0.00	0.00	0.00
216.00	0.00	4	-2.51	0.00	0.00	0.00
217.00	0.00	4	-2.51	0.00	0.00	0.00
218.00	0.00	4	-2.51	0.00	0.00	0.00
219.00	0.00	4	-2.51	0.00	0.00	0.00
220.00	0.00	3	-2.51	0.00	0.00	0.00
221.00	0.00	3	-2.51	0.00	0.00	0.00
222.00	0.00	3	-2.51	0.00	0.00	0.00
223.00	0.00	3	-2.51	0.00	0.00	0.00
224.00	0.00	3	-2.51	0.00	0.00	0.00
225.00	0.00	3	-2.51	0.00	0.00	0.00
226.00	0.00	3	-2.51	0.00	0.00	0.00
227.00	0.00	2	-2.51	0.00	0.00	0.00
228.00	0.00	2	-2.51	0.00	0.00	0.00
229.00	0.00	2	-2.51	0.00	0.00	0.00
230.00	0.00	2	-2.51	0.00	0.00	0.00
231.00	0.00	2	-2.51	0.00	0.00	0.00
232.00	0.00	2	-2.51	0.00	0.00	0.00
233.00	0.00	2	-2.51	0.00	0.00	0.00
234.00	0.00	2	-2.51	0.00	0.00	0.00
235.00	0.00	2	-2.51	0.00	0.00	0.00
236.00	0.00	2	-2.51	0.00	0.00	0.00
237.00	0.00	1	-2.51	0.00	0.00	0.00
238.00	0.00	1	-2.51	0.00	0.00	0.00
239.00	0.00	1	-2.51	0.00	0.00	0.00
240.00	0.00	1	-2.51	0.00	0.00	0.00
241.00	0.00	1	-2.51	0.00	0.00	0.00
242.00	0.00	1	-2.51	0.00	0.00	0.00
243.00	0.00	1	-2.51	0.00	0.00	0.00
244.00	0.00	1	-2.51	0.00	0.00	0.00
245.00	0.00	1	-2.51	0.00	0.00	0.00
246.00	0.00	1	-2.51	0.00	0.00	0.00
247.00	0.00	1	-2.51	0.00	0.00	0.00
248.00	0.00	1	-2.51	0.00	0.00	0.00
249.00	0.00	1	-2.51	0.00	0.00	0.00
250.00	0.00	1	-2.51	0.00	0.00	0.00
251.00	0.00	1	-2.51	0.00	0.00	0.00
252.00	0.00	1	-2.51	0.00	0.00	0.00
253.00	0.00	1	-2.51	0.00	0.00	0.00
254.00	0.00	1	-2.51	0.00	0.00	0.00
255.00	0.00	1	-2.51	0.00	0.00	0.00
256.00	0.00	1	-2.51	0.00	0.00	0.00
257.00	0.00	1	-2.51	0.00	0.00	0.00
258.00	0.00	0	-2.51	0.00	0.00	0.00
259.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 2-yr NOAA Rainfall=3.26"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
260.00	0.00	0	-2.51	0.00	0.00	0.00
261.00	0.00	0	-2.51	0.00	0.00	0.00
262.00	0.00	0	-2.51	0.00	0.00	0.00
263.00	0.00	0	-2.51	0.00	0.00	0.00
264.00	0.00	0	-2.51	0.00	0.00	0.00
265.00	0.00	0	-2.51	0.00	0.00	0.00
266.00	0.00	0	-2.51	0.00	0.00	0.00
267.00	0.00	0	-2.51	0.00	0.00	0.00
268.00	0.00	0	-2.51	0.00	0.00	0.00
269.00	0.00	0	-2.51	0.00	0.00	0.00
270.00	0.00	0	-2.51	0.00	0.00	0.00
271.00	0.00	0	-2.51	0.00	0.00	0.00
272.00	0.00	0	-2.51	0.00	0.00	0.00
273.00	0.00	0	-2.51	0.00	0.00	0.00
274.00	0.00	0	-2.51	0.00	0.00	0.00
275.00	0.00	0	-2.51	0.00	0.00	0.00
276.00	0.00	0	-2.51	0.00	0.00	0.00
277.00	0.00	0	-2.51	0.00	0.00	0.00
278.00	0.00	0	-2.51	0.00	0.00	0.00
279.00	0.00	0	-2.51	0.00	0.00	0.00
280.00	0.00	0	-2.51	0.00	0.00	0.00
281.00	0.00	0	-2.51	0.00	0.00	0.00
282.00	0.00	0	-2.51	0.00	0.00	0.00
283.00	0.00	0	-2.51	0.00	0.00	0.00
284.00	0.00	0	-2.51	0.00	0.00	0.00
285.00	0.00	0	-2.51	0.00	0.00	0.00
286.00	0.00	0	-2.51	0.00	0.00	0.00
287.00	0.00	0	-2.51	0.00	0.00	0.00
288.00	0.00	0	-2.51	0.00	0.00	0.00
289.00	0.00	0	-2.51	0.00	0.00	0.00
290.00	0.00	0	-2.51	0.00	0.00	0.00
291.00	0.00	0	-2.51	0.00	0.00	0.00
292.00	0.00	0	-2.51	0.00	0.00	0.00
293.00	0.00	0	-2.51	0.00	0.00	0.00
294.00	0.00	0	-2.51	0.00	0.00	0.00
295.00	0.00	0	-2.51	0.00	0.00	0.00
296.00	0.00	0	-2.51	0.00	0.00	0.00
297.00	0.00	0	-2.51	0.00	0.00	0.00
298.00	0.00	0	-2.51	0.00	0.00	0.00
299.00	0.00	0	-2.51	0.00	0.00	0.00
300.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Time span=0.00-300.00 hrs, dt=0.01 hrs, 30001 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

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

Subcatchment1S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=4.60"
Tc=6.0 min CN=0/98 Runoff=3.61 cfs 0.269 af

Subcatchment3S: 0.7 ac Pervious Runoff Area=30,492 sf 0.00% Impervious Runoff Depth=2.24"
Tc=15.0 min CN=74/0 Runoff=1.51 cfs 0.131 af

Subcatchment4S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=4.60"
Tc=6.0 min CN=0/98 Runoff=3.61 cfs 0.269 af

Pond 1P: Managed Release Rain Garden Peak Elev=1.18' Storage=5,469 cf Inflow=3.61 cfs 0.269 af
Outflow=3.11 cfs 0.258 af

Pond 2P: Managed Release Rain Garden Peak Elev=-1.17' Storage=2,339 cf Inflow=3.11 cfs 0.258 af
Primary=0.46 cfs 0.258 af Secondary=0.00 cfs 0.000 af Outflow=0.46 cfs 0.258 af

Total Runoff Area = 2.100 ac Runoff Volume = 0.668 af Average Runoff Depth = 3.81"
33.33% Pervious = 0.700 ac 66.67% Impervious = 1.400 ac

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Summary for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Runoff = 3.61 cfs @ 12.13 hrs, Volume= 0.269 af, Depth= 4.60"

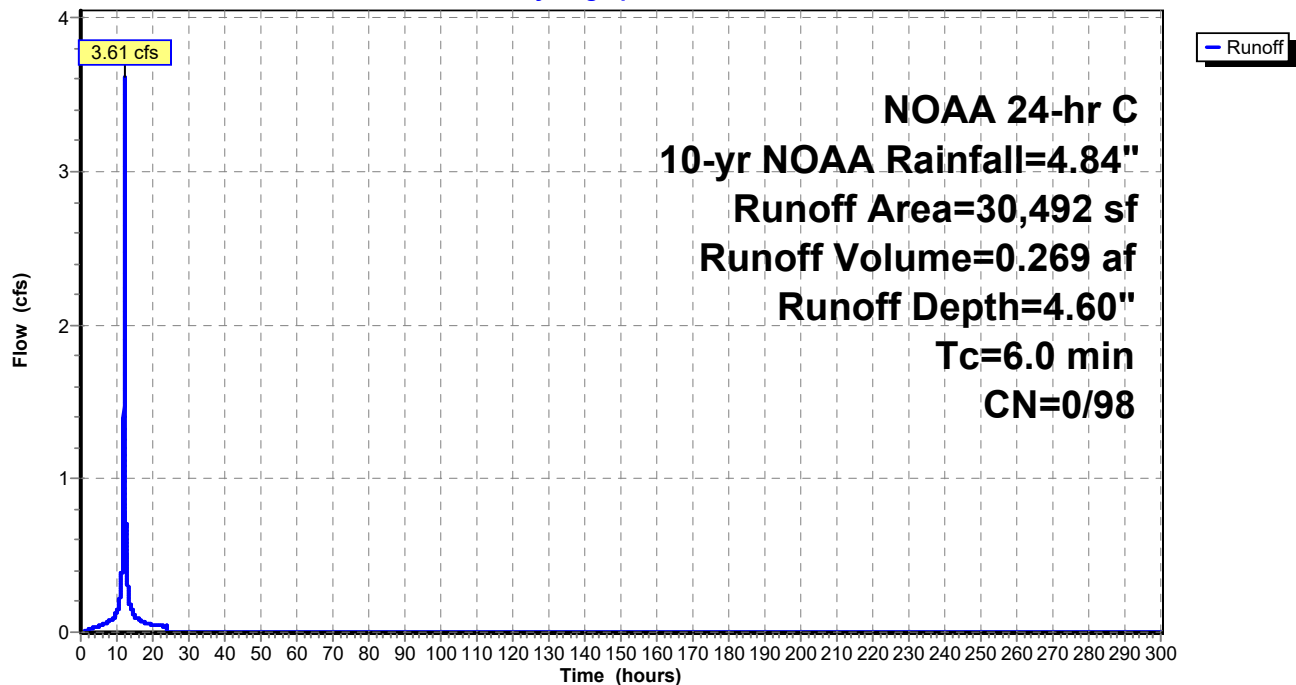
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00	0.00
2.00	0.11	0.00	0.02	0.02
3.00	0.17	0.00	0.05	0.03
4.00	0.24	0.00	0.10	0.04
5.00	0.31	0.00	0.15	0.04
6.00	0.38	0.00	0.21	0.05
7.00	0.47	0.00	0.29	0.06
8.00	0.58	0.00	0.39	0.08
9.00	0.71	0.00	0.51	0.09
10.00	0.88	0.00	0.68	0.14
11.00	1.16	0.00	0.95	0.26
12.00	2.31	0.00	2.08	2.00
13.00	3.68	0.00	3.44	0.32
14.00	3.96	0.00	3.72	0.15
15.00	4.13	0.00	3.90	0.10
16.00	4.26	0.00	4.02	0.08
17.00	4.37	0.00	4.13	0.07
18.00	4.46	0.00	4.22	0.06
19.00	4.53	0.00	4.30	0.05
20.00	4.60	0.00	4.37	0.05
21.00	4.67	0.00	4.43	0.05
22.00	4.73	0.00	4.49	0.04
23.00	4.79	0.00	4.55	0.04
24.00	4.84	0.00	4.60	0.04
25.00	4.84	0.00	4.60	0.00
26.00	4.84	0.00	4.60	0.00
27.00	4.84	0.00	4.60	0.00
28.00	4.84	0.00	4.60	0.00
29.00	4.84	0.00	4.60	0.00
30.00	4.84	0.00	4.60	0.00
31.00	4.84	0.00	4.60	0.00
32.00	4.84	0.00	4.60	0.00
33.00	4.84	0.00	4.60	0.00
34.00	4.84	0.00	4.60	0.00
35.00	4.84	0.00	4.60	0.00
36.00	4.84	0.00	4.60	0.00
37.00	4.84	0.00	4.60	0.00
38.00	4.84	0.00	4.60	0.00
39.00	4.84	0.00	4.60	0.00
40.00	4.84	0.00	4.60	0.00
41.00	4.84	0.00	4.60	0.00
42.00	4.84	0.00	4.60	0.00
43.00	4.84	0.00	4.60	0.00
44.00	4.84	0.00	4.60	0.00
45.00	4.84	0.00	4.60	0.00
46.00	4.84	0.00	4.60	0.00
47.00	4.84	0.00	4.60	0.00
48.00	4.84	0.00	4.60	0.00
49.00	4.84	0.00	4.60	0.00
50.00	4.84	0.00	4.60	0.00
51.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	4.84	0.00	4.60	0.00
53.00	4.84	0.00	4.60	0.00
54.00	4.84	0.00	4.60	0.00
55.00	4.84	0.00	4.60	0.00
56.00	4.84	0.00	4.60	0.00
57.00	4.84	0.00	4.60	0.00
58.00	4.84	0.00	4.60	0.00
59.00	4.84	0.00	4.60	0.00
60.00	4.84	0.00	4.60	0.00
61.00	4.84	0.00	4.60	0.00
62.00	4.84	0.00	4.60	0.00
63.00	4.84	0.00	4.60	0.00
64.00	4.84	0.00	4.60	0.00
65.00	4.84	0.00	4.60	0.00
66.00	4.84	0.00	4.60	0.00
67.00	4.84	0.00	4.60	0.00
68.00	4.84	0.00	4.60	0.00
69.00	4.84	0.00	4.60	0.00
70.00	4.84	0.00	4.60	0.00
71.00	4.84	0.00	4.60	0.00
72.00	4.84	0.00	4.60	0.00
73.00	4.84	0.00	4.60	0.00
74.00	4.84	0.00	4.60	0.00
75.00	4.84	0.00	4.60	0.00
76.00	4.84	0.00	4.60	0.00
77.00	4.84	0.00	4.60	0.00
78.00	4.84	0.00	4.60	0.00
79.00	4.84	0.00	4.60	0.00
80.00	4.84	0.00	4.60	0.00
81.00	4.84	0.00	4.60	0.00
82.00	4.84	0.00	4.60	0.00
83.00	4.84	0.00	4.60	0.00
84.00	4.84	0.00	4.60	0.00
85.00	4.84	0.00	4.60	0.00
86.00	4.84	0.00	4.60	0.00
87.00	4.84	0.00	4.60	0.00
88.00	4.84	0.00	4.60	0.00
89.00	4.84	0.00	4.60	0.00
90.00	4.84	0.00	4.60	0.00
91.00	4.84	0.00	4.60	0.00
92.00	4.84	0.00	4.60	0.00
93.00	4.84	0.00	4.60	0.00
94.00	4.84	0.00	4.60	0.00
95.00	4.84	0.00	4.60	0.00
96.00	4.84	0.00	4.60	0.00
97.00	4.84	0.00	4.60	0.00
98.00	4.84	0.00	4.60	0.00
99.00	4.84	0.00	4.60	0.00
100.00	4.84	0.00	4.60	0.00
101.00	4.84	0.00	4.60	0.00
102.00	4.84	0.00	4.60	0.00
103.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	4.84	0.00	4.60	0.00
105.00	4.84	0.00	4.60	0.00
106.00	4.84	0.00	4.60	0.00
107.00	4.84	0.00	4.60	0.00
108.00	4.84	0.00	4.60	0.00
109.00	4.84	0.00	4.60	0.00
110.00	4.84	0.00	4.60	0.00
111.00	4.84	0.00	4.60	0.00
112.00	4.84	0.00	4.60	0.00
113.00	4.84	0.00	4.60	0.00
114.00	4.84	0.00	4.60	0.00
115.00	4.84	0.00	4.60	0.00
116.00	4.84	0.00	4.60	0.00
117.00	4.84	0.00	4.60	0.00
118.00	4.84	0.00	4.60	0.00
119.00	4.84	0.00	4.60	0.00
120.00	4.84	0.00	4.60	0.00
121.00	4.84	0.00	4.60	0.00
122.00	4.84	0.00	4.60	0.00
123.00	4.84	0.00	4.60	0.00
124.00	4.84	0.00	4.60	0.00
125.00	4.84	0.00	4.60	0.00
126.00	4.84	0.00	4.60	0.00
127.00	4.84	0.00	4.60	0.00
128.00	4.84	0.00	4.60	0.00
129.00	4.84	0.00	4.60	0.00
130.00	4.84	0.00	4.60	0.00
131.00	4.84	0.00	4.60	0.00
132.00	4.84	0.00	4.60	0.00
133.00	4.84	0.00	4.60	0.00
134.00	4.84	0.00	4.60	0.00
135.00	4.84	0.00	4.60	0.00
136.00	4.84	0.00	4.60	0.00
137.00	4.84	0.00	4.60	0.00
138.00	4.84	0.00	4.60	0.00
139.00	4.84	0.00	4.60	0.00
140.00	4.84	0.00	4.60	0.00
141.00	4.84	0.00	4.60	0.00
142.00	4.84	0.00	4.60	0.00
143.00	4.84	0.00	4.60	0.00
144.00	4.84	0.00	4.60	0.00
145.00	4.84	0.00	4.60	0.00
146.00	4.84	0.00	4.60	0.00
147.00	4.84	0.00	4.60	0.00
148.00	4.84	0.00	4.60	0.00
149.00	4.84	0.00	4.60	0.00
150.00	4.84	0.00	4.60	0.00
151.00	4.84	0.00	4.60	0.00
152.00	4.84	0.00	4.60	0.00
153.00	4.84	0.00	4.60	0.00
154.00	4.84	0.00	4.60	0.00
155.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	4.84	0.00	4.60	0.00
157.00	4.84	0.00	4.60	0.00
158.00	4.84	0.00	4.60	0.00
159.00	4.84	0.00	4.60	0.00
160.00	4.84	0.00	4.60	0.00
161.00	4.84	0.00	4.60	0.00
162.00	4.84	0.00	4.60	0.00
163.00	4.84	0.00	4.60	0.00
164.00	4.84	0.00	4.60	0.00
165.00	4.84	0.00	4.60	0.00
166.00	4.84	0.00	4.60	0.00
167.00	4.84	0.00	4.60	0.00
168.00	4.84	0.00	4.60	0.00
169.00	4.84	0.00	4.60	0.00
170.00	4.84	0.00	4.60	0.00
171.00	4.84	0.00	4.60	0.00
172.00	4.84	0.00	4.60	0.00
173.00	4.84	0.00	4.60	0.00
174.00	4.84	0.00	4.60	0.00
175.00	4.84	0.00	4.60	0.00
176.00	4.84	0.00	4.60	0.00
177.00	4.84	0.00	4.60	0.00
178.00	4.84	0.00	4.60	0.00
179.00	4.84	0.00	4.60	0.00
180.00	4.84	0.00	4.60	0.00
181.00	4.84	0.00	4.60	0.00
182.00	4.84	0.00	4.60	0.00
183.00	4.84	0.00	4.60	0.00
184.00	4.84	0.00	4.60	0.00
185.00	4.84	0.00	4.60	0.00
186.00	4.84	0.00	4.60	0.00
187.00	4.84	0.00	4.60	0.00
188.00	4.84	0.00	4.60	0.00
189.00	4.84	0.00	4.60	0.00
190.00	4.84	0.00	4.60	0.00
191.00	4.84	0.00	4.60	0.00
192.00	4.84	0.00	4.60	0.00
193.00	4.84	0.00	4.60	0.00
194.00	4.84	0.00	4.60	0.00
195.00	4.84	0.00	4.60	0.00
196.00	4.84	0.00	4.60	0.00
197.00	4.84	0.00	4.60	0.00
198.00	4.84	0.00	4.60	0.00
199.00	4.84	0.00	4.60	0.00
200.00	4.84	0.00	4.60	0.00
201.00	4.84	0.00	4.60	0.00
202.00	4.84	0.00	4.60	0.00
203.00	4.84	0.00	4.60	0.00
204.00	4.84	0.00	4.60	0.00
205.00	4.84	0.00	4.60	0.00
206.00	4.84	0.00	4.60	0.00
207.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	4.84	0.00	4.60	0.00
209.00	4.84	0.00	4.60	0.00
210.00	4.84	0.00	4.60	0.00
211.00	4.84	0.00	4.60	0.00
212.00	4.84	0.00	4.60	0.00
213.00	4.84	0.00	4.60	0.00
214.00	4.84	0.00	4.60	0.00
215.00	4.84	0.00	4.60	0.00
216.00	4.84	0.00	4.60	0.00
217.00	4.84	0.00	4.60	0.00
218.00	4.84	0.00	4.60	0.00
219.00	4.84	0.00	4.60	0.00
220.00	4.84	0.00	4.60	0.00
221.00	4.84	0.00	4.60	0.00
222.00	4.84	0.00	4.60	0.00
223.00	4.84	0.00	4.60	0.00
224.00	4.84	0.00	4.60	0.00
225.00	4.84	0.00	4.60	0.00
226.00	4.84	0.00	4.60	0.00
227.00	4.84	0.00	4.60	0.00
228.00	4.84	0.00	4.60	0.00
229.00	4.84	0.00	4.60	0.00
230.00	4.84	0.00	4.60	0.00
231.00	4.84	0.00	4.60	0.00
232.00	4.84	0.00	4.60	0.00
233.00	4.84	0.00	4.60	0.00
234.00	4.84	0.00	4.60	0.00
235.00	4.84	0.00	4.60	0.00
236.00	4.84	0.00	4.60	0.00
237.00	4.84	0.00	4.60	0.00
238.00	4.84	0.00	4.60	0.00
239.00	4.84	0.00	4.60	0.00
240.00	4.84	0.00	4.60	0.00
241.00	4.84	0.00	4.60	0.00
242.00	4.84	0.00	4.60	0.00
243.00	4.84	0.00	4.60	0.00
244.00	4.84	0.00	4.60	0.00
245.00	4.84	0.00	4.60	0.00
246.00	4.84	0.00	4.60	0.00
247.00	4.84	0.00	4.60	0.00
248.00	4.84	0.00	4.60	0.00
249.00	4.84	0.00	4.60	0.00
250.00	4.84	0.00	4.60	0.00
251.00	4.84	0.00	4.60	0.00
252.00	4.84	0.00	4.60	0.00
253.00	4.84	0.00	4.60	0.00
254.00	4.84	0.00	4.60	0.00
255.00	4.84	0.00	4.60	0.00
256.00	4.84	0.00	4.60	0.00
257.00	4.84	0.00	4.60	0.00
258.00	4.84	0.00	4.60	0.00
259.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	4.84	0.00	4.60	0.00
261.00	4.84	0.00	4.60	0.00
262.00	4.84	0.00	4.60	0.00
263.00	4.84	0.00	4.60	0.00
264.00	4.84	0.00	4.60	0.00
265.00	4.84	0.00	4.60	0.00
266.00	4.84	0.00	4.60	0.00
267.00	4.84	0.00	4.60	0.00
268.00	4.84	0.00	4.60	0.00
269.00	4.84	0.00	4.60	0.00
270.00	4.84	0.00	4.60	0.00
271.00	4.84	0.00	4.60	0.00
272.00	4.84	0.00	4.60	0.00
273.00	4.84	0.00	4.60	0.00
274.00	4.84	0.00	4.60	0.00
275.00	4.84	0.00	4.60	0.00
276.00	4.84	0.00	4.60	0.00
277.00	4.84	0.00	4.60	0.00
278.00	4.84	0.00	4.60	0.00
279.00	4.84	0.00	4.60	0.00
280.00	4.84	0.00	4.60	0.00
281.00	4.84	0.00	4.60	0.00
282.00	4.84	0.00	4.60	0.00
283.00	4.84	0.00	4.60	0.00
284.00	4.84	0.00	4.60	0.00
285.00	4.84	0.00	4.60	0.00
286.00	4.84	0.00	4.60	0.00
287.00	4.84	0.00	4.60	0.00
288.00	4.84	0.00	4.60	0.00
289.00	4.84	0.00	4.60	0.00
290.00	4.84	0.00	4.60	0.00
291.00	4.84	0.00	4.60	0.00
292.00	4.84	0.00	4.60	0.00
293.00	4.84	0.00	4.60	0.00
294.00	4.84	0.00	4.60	0.00
295.00	4.84	0.00	4.60	0.00
296.00	4.84	0.00	4.60	0.00
297.00	4.84	0.00	4.60	0.00
298.00	4.84	0.00	4.60	0.00
299.00	4.84	0.00	4.60	0.00
300.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Summary for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Runoff = 1.51 cfs @ 12.24 hrs, Volume= 0.131 af, Depth= 2.24"

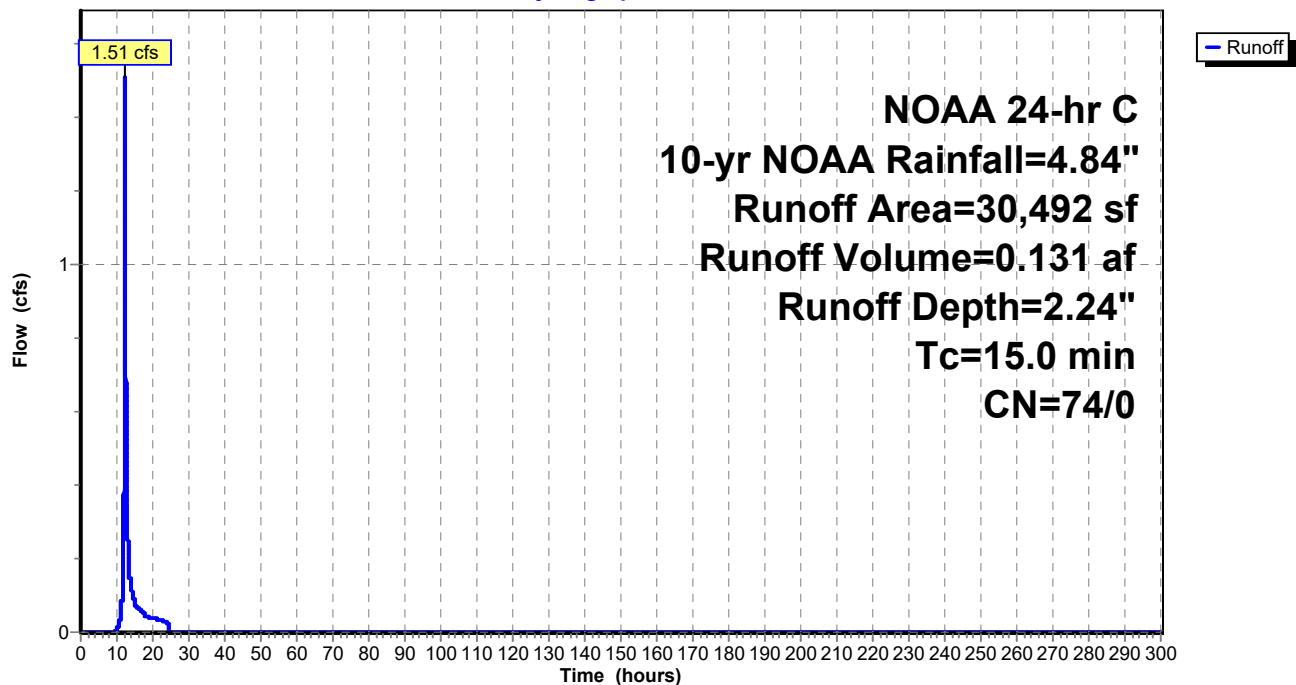
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

	Area (sf)	CN	Description
*	30,492	74	Meadow, non-grazed, HSG C
	30,492	74	100.00% Pervious Area

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

Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00	0.00
2.00	0.11	0.00	0.00	0.00
3.00	0.17	0.00	0.00	0.00
4.00	0.24	0.00	0.00	0.00
5.00	0.31	0.00	0.00	0.00
6.00	0.38	0.00	0.00	0.00
7.00	0.47	0.00	0.00	0.00
8.00	0.58	0.00	0.00	0.00
9.00	0.71	0.00	0.00	0.00
10.00	0.88	0.01	0.00	0.01
11.00	1.16	0.05	0.00	0.04
12.00	2.31	0.50	0.00	0.49
13.00	3.68	1.36	0.00	0.26
14.00	3.96	1.57	0.00	0.12
15.00	4.13	1.69	0.00	0.08
16.00	4.26	1.79	0.00	0.06
17.00	4.37	1.87	0.00	0.05
18.00	4.46	1.94	0.00	0.04
19.00	4.53	2.00	0.00	0.04
20.00	4.60	2.05	0.00	0.04
21.00	4.67	2.10	0.00	0.04
22.00	4.73	2.15	0.00	0.03
23.00	4.79	2.20	0.00	0.03
24.00	4.84	2.24	0.00	0.03
25.00	4.84	2.24	0.00	0.00
26.00	4.84	2.24	0.00	0.00
27.00	4.84	2.24	0.00	0.00
28.00	4.84	2.24	0.00	0.00
29.00	4.84	2.24	0.00	0.00
30.00	4.84	2.24	0.00	0.00
31.00	4.84	2.24	0.00	0.00
32.00	4.84	2.24	0.00	0.00
33.00	4.84	2.24	0.00	0.00
34.00	4.84	2.24	0.00	0.00
35.00	4.84	2.24	0.00	0.00
36.00	4.84	2.24	0.00	0.00
37.00	4.84	2.24	0.00	0.00
38.00	4.84	2.24	0.00	0.00
39.00	4.84	2.24	0.00	0.00
40.00	4.84	2.24	0.00	0.00
41.00	4.84	2.24	0.00	0.00
42.00	4.84	2.24	0.00	0.00
43.00	4.84	2.24	0.00	0.00
44.00	4.84	2.24	0.00	0.00
45.00	4.84	2.24	0.00	0.00
46.00	4.84	2.24	0.00	0.00
47.00	4.84	2.24	0.00	0.00
48.00	4.84	2.24	0.00	0.00
49.00	4.84	2.24	0.00	0.00
50.00	4.84	2.24	0.00	0.00
51.00	4.84	2.24	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	4.84	2.24	0.00	0.00
53.00	4.84	2.24	0.00	0.00
54.00	4.84	2.24	0.00	0.00
55.00	4.84	2.24	0.00	0.00
56.00	4.84	2.24	0.00	0.00
57.00	4.84	2.24	0.00	0.00
58.00	4.84	2.24	0.00	0.00
59.00	4.84	2.24	0.00	0.00
60.00	4.84	2.24	0.00	0.00
61.00	4.84	2.24	0.00	0.00
62.00	4.84	2.24	0.00	0.00
63.00	4.84	2.24	0.00	0.00
64.00	4.84	2.24	0.00	0.00
65.00	4.84	2.24	0.00	0.00
66.00	4.84	2.24	0.00	0.00
67.00	4.84	2.24	0.00	0.00
68.00	4.84	2.24	0.00	0.00
69.00	4.84	2.24	0.00	0.00
70.00	4.84	2.24	0.00	0.00
71.00	4.84	2.24	0.00	0.00
72.00	4.84	2.24	0.00	0.00
73.00	4.84	2.24	0.00	0.00
74.00	4.84	2.24	0.00	0.00
75.00	4.84	2.24	0.00	0.00
76.00	4.84	2.24	0.00	0.00
77.00	4.84	2.24	0.00	0.00
78.00	4.84	2.24	0.00	0.00
79.00	4.84	2.24	0.00	0.00
80.00	4.84	2.24	0.00	0.00
81.00	4.84	2.24	0.00	0.00
82.00	4.84	2.24	0.00	0.00
83.00	4.84	2.24	0.00	0.00
84.00	4.84	2.24	0.00	0.00
85.00	4.84	2.24	0.00	0.00
86.00	4.84	2.24	0.00	0.00
87.00	4.84	2.24	0.00	0.00
88.00	4.84	2.24	0.00	0.00
89.00	4.84	2.24	0.00	0.00
90.00	4.84	2.24	0.00	0.00
91.00	4.84	2.24	0.00	0.00
92.00	4.84	2.24	0.00	0.00
93.00	4.84	2.24	0.00	0.00
94.00	4.84	2.24	0.00	0.00
95.00	4.84	2.24	0.00	0.00
96.00	4.84	2.24	0.00	0.00
97.00	4.84	2.24	0.00	0.00
98.00	4.84	2.24	0.00	0.00
99.00	4.84	2.24	0.00	0.00
100.00	4.84	2.24	0.00	0.00
101.00	4.84	2.24	0.00	0.00
102.00	4.84	2.24	0.00	0.00
103.00	4.84	2.24	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	4.84	2.24	0.00	0.00
105.00	4.84	2.24	0.00	0.00
106.00	4.84	2.24	0.00	0.00
107.00	4.84	2.24	0.00	0.00
108.00	4.84	2.24	0.00	0.00
109.00	4.84	2.24	0.00	0.00
110.00	4.84	2.24	0.00	0.00
111.00	4.84	2.24	0.00	0.00
112.00	4.84	2.24	0.00	0.00
113.00	4.84	2.24	0.00	0.00
114.00	4.84	2.24	0.00	0.00
115.00	4.84	2.24	0.00	0.00
116.00	4.84	2.24	0.00	0.00
117.00	4.84	2.24	0.00	0.00
118.00	4.84	2.24	0.00	0.00
119.00	4.84	2.24	0.00	0.00
120.00	4.84	2.24	0.00	0.00
121.00	4.84	2.24	0.00	0.00
122.00	4.84	2.24	0.00	0.00
123.00	4.84	2.24	0.00	0.00
124.00	4.84	2.24	0.00	0.00
125.00	4.84	2.24	0.00	0.00
126.00	4.84	2.24	0.00	0.00
127.00	4.84	2.24	0.00	0.00
128.00	4.84	2.24	0.00	0.00
129.00	4.84	2.24	0.00	0.00
130.00	4.84	2.24	0.00	0.00
131.00	4.84	2.24	0.00	0.00
132.00	4.84	2.24	0.00	0.00
133.00	4.84	2.24	0.00	0.00
134.00	4.84	2.24	0.00	0.00
135.00	4.84	2.24	0.00	0.00
136.00	4.84	2.24	0.00	0.00
137.00	4.84	2.24	0.00	0.00
138.00	4.84	2.24	0.00	0.00
139.00	4.84	2.24	0.00	0.00
140.00	4.84	2.24	0.00	0.00
141.00	4.84	2.24	0.00	0.00
142.00	4.84	2.24	0.00	0.00
143.00	4.84	2.24	0.00	0.00
144.00	4.84	2.24	0.00	0.00
145.00	4.84	2.24	0.00	0.00
146.00	4.84	2.24	0.00	0.00
147.00	4.84	2.24	0.00	0.00
148.00	4.84	2.24	0.00	0.00
149.00	4.84	2.24	0.00	0.00
150.00	4.84	2.24	0.00	0.00
151.00	4.84	2.24	0.00	0.00
152.00	4.84	2.24	0.00	0.00
153.00	4.84	2.24	0.00	0.00
154.00	4.84	2.24	0.00	0.00
155.00	4.84	2.24	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	4.84	2.24	0.00	0.00
157.00	4.84	2.24	0.00	0.00
158.00	4.84	2.24	0.00	0.00
159.00	4.84	2.24	0.00	0.00
160.00	4.84	2.24	0.00	0.00
161.00	4.84	2.24	0.00	0.00
162.00	4.84	2.24	0.00	0.00
163.00	4.84	2.24	0.00	0.00
164.00	4.84	2.24	0.00	0.00
165.00	4.84	2.24	0.00	0.00
166.00	4.84	2.24	0.00	0.00
167.00	4.84	2.24	0.00	0.00
168.00	4.84	2.24	0.00	0.00
169.00	4.84	2.24	0.00	0.00
170.00	4.84	2.24	0.00	0.00
171.00	4.84	2.24	0.00	0.00
172.00	4.84	2.24	0.00	0.00
173.00	4.84	2.24	0.00	0.00
174.00	4.84	2.24	0.00	0.00
175.00	4.84	2.24	0.00	0.00
176.00	4.84	2.24	0.00	0.00
177.00	4.84	2.24	0.00	0.00
178.00	4.84	2.24	0.00	0.00
179.00	4.84	2.24	0.00	0.00
180.00	4.84	2.24	0.00	0.00
181.00	4.84	2.24	0.00	0.00
182.00	4.84	2.24	0.00	0.00
183.00	4.84	2.24	0.00	0.00
184.00	4.84	2.24	0.00	0.00
185.00	4.84	2.24	0.00	0.00
186.00	4.84	2.24	0.00	0.00
187.00	4.84	2.24	0.00	0.00
188.00	4.84	2.24	0.00	0.00
189.00	4.84	2.24	0.00	0.00
190.00	4.84	2.24	0.00	0.00
191.00	4.84	2.24	0.00	0.00
192.00	4.84	2.24	0.00	0.00
193.00	4.84	2.24	0.00	0.00
194.00	4.84	2.24	0.00	0.00
195.00	4.84	2.24	0.00	0.00
196.00	4.84	2.24	0.00	0.00
197.00	4.84	2.24	0.00	0.00
198.00	4.84	2.24	0.00	0.00
199.00	4.84	2.24	0.00	0.00
200.00	4.84	2.24	0.00	0.00
201.00	4.84	2.24	0.00	0.00
202.00	4.84	2.24	0.00	0.00
203.00	4.84	2.24	0.00	0.00
204.00	4.84	2.24	0.00	0.00
205.00	4.84	2.24	0.00	0.00
206.00	4.84	2.24	0.00	0.00
207.00	4.84	2.24	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	4.84	2.24	0.00	0.00
209.00	4.84	2.24	0.00	0.00
210.00	4.84	2.24	0.00	0.00
211.00	4.84	2.24	0.00	0.00
212.00	4.84	2.24	0.00	0.00
213.00	4.84	2.24	0.00	0.00
214.00	4.84	2.24	0.00	0.00
215.00	4.84	2.24	0.00	0.00
216.00	4.84	2.24	0.00	0.00
217.00	4.84	2.24	0.00	0.00
218.00	4.84	2.24	0.00	0.00
219.00	4.84	2.24	0.00	0.00
220.00	4.84	2.24	0.00	0.00
221.00	4.84	2.24	0.00	0.00
222.00	4.84	2.24	0.00	0.00
223.00	4.84	2.24	0.00	0.00
224.00	4.84	2.24	0.00	0.00
225.00	4.84	2.24	0.00	0.00
226.00	4.84	2.24	0.00	0.00
227.00	4.84	2.24	0.00	0.00
228.00	4.84	2.24	0.00	0.00
229.00	4.84	2.24	0.00	0.00
230.00	4.84	2.24	0.00	0.00
231.00	4.84	2.24	0.00	0.00
232.00	4.84	2.24	0.00	0.00
233.00	4.84	2.24	0.00	0.00
234.00	4.84	2.24	0.00	0.00
235.00	4.84	2.24	0.00	0.00
236.00	4.84	2.24	0.00	0.00
237.00	4.84	2.24	0.00	0.00
238.00	4.84	2.24	0.00	0.00
239.00	4.84	2.24	0.00	0.00
240.00	4.84	2.24	0.00	0.00
241.00	4.84	2.24	0.00	0.00
242.00	4.84	2.24	0.00	0.00
243.00	4.84	2.24	0.00	0.00
244.00	4.84	2.24	0.00	0.00
245.00	4.84	2.24	0.00	0.00
246.00	4.84	2.24	0.00	0.00
247.00	4.84	2.24	0.00	0.00
248.00	4.84	2.24	0.00	0.00
249.00	4.84	2.24	0.00	0.00
250.00	4.84	2.24	0.00	0.00
251.00	4.84	2.24	0.00	0.00
252.00	4.84	2.24	0.00	0.00
253.00	4.84	2.24	0.00	0.00
254.00	4.84	2.24	0.00	0.00
255.00	4.84	2.24	0.00	0.00
256.00	4.84	2.24	0.00	0.00
257.00	4.84	2.24	0.00	0.00
258.00	4.84	2.24	0.00	0.00
259.00	4.84	2.24	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	4.84	2.24	0.00	0.00
261.00	4.84	2.24	0.00	0.00
262.00	4.84	2.24	0.00	0.00
263.00	4.84	2.24	0.00	0.00
264.00	4.84	2.24	0.00	0.00
265.00	4.84	2.24	0.00	0.00
266.00	4.84	2.24	0.00	0.00
267.00	4.84	2.24	0.00	0.00
268.00	4.84	2.24	0.00	0.00
269.00	4.84	2.24	0.00	0.00
270.00	4.84	2.24	0.00	0.00
271.00	4.84	2.24	0.00	0.00
272.00	4.84	2.24	0.00	0.00
273.00	4.84	2.24	0.00	0.00
274.00	4.84	2.24	0.00	0.00
275.00	4.84	2.24	0.00	0.00
276.00	4.84	2.24	0.00	0.00
277.00	4.84	2.24	0.00	0.00
278.00	4.84	2.24	0.00	0.00
279.00	4.84	2.24	0.00	0.00
280.00	4.84	2.24	0.00	0.00
281.00	4.84	2.24	0.00	0.00
282.00	4.84	2.24	0.00	0.00
283.00	4.84	2.24	0.00	0.00
284.00	4.84	2.24	0.00	0.00
285.00	4.84	2.24	0.00	0.00
286.00	4.84	2.24	0.00	0.00
287.00	4.84	2.24	0.00	0.00
288.00	4.84	2.24	0.00	0.00
289.00	4.84	2.24	0.00	0.00
290.00	4.84	2.24	0.00	0.00
291.00	4.84	2.24	0.00	0.00
292.00	4.84	2.24	0.00	0.00
293.00	4.84	2.24	0.00	0.00
294.00	4.84	2.24	0.00	0.00
295.00	4.84	2.24	0.00	0.00
296.00	4.84	2.24	0.00	0.00
297.00	4.84	2.24	0.00	0.00
298.00	4.84	2.24	0.00	0.00
299.00	4.84	2.24	0.00	0.00
300.00	4.84	2.24	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Summary for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Runoff = 3.61 cfs @ 12.13 hrs, Volume= 0.269 af, Depth= 4.60"

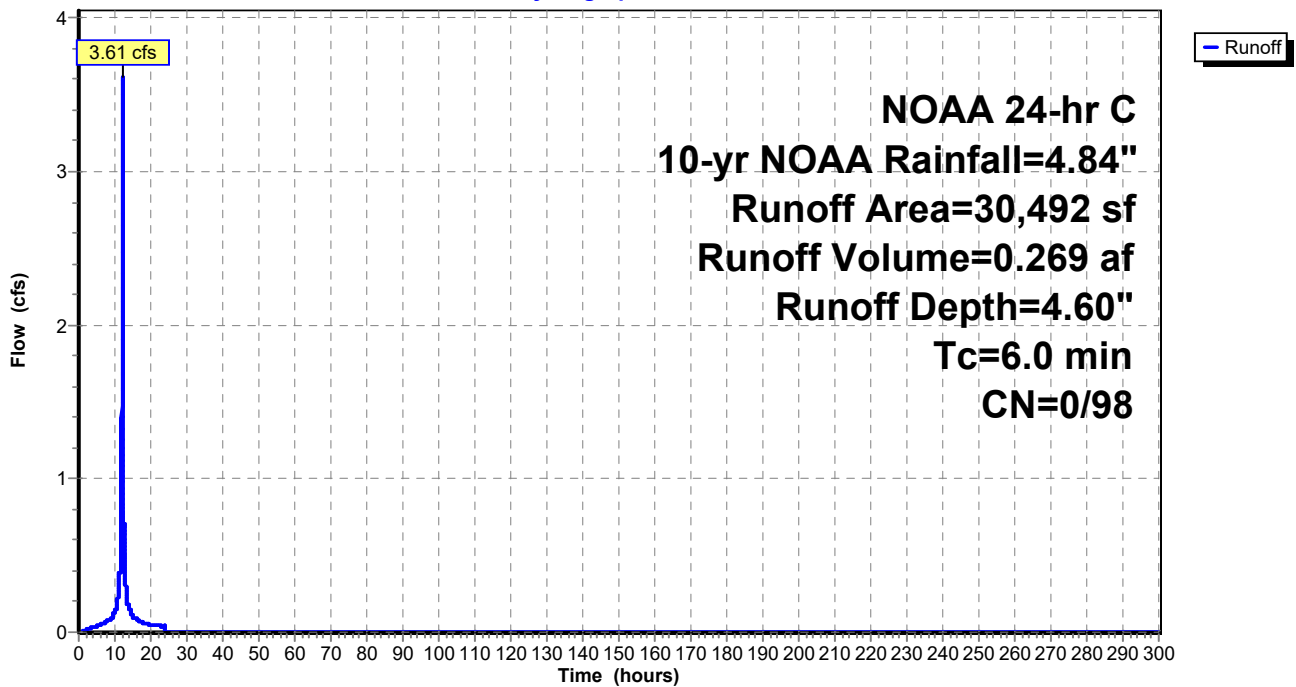
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Hydrograph



MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.05	0.00	0.00	0.00
2.00	0.11	0.00	0.02	0.02
3.00	0.17	0.00	0.05	0.03
4.00	0.24	0.00	0.10	0.04
5.00	0.31	0.00	0.15	0.04
6.00	0.38	0.00	0.21	0.05
7.00	0.47	0.00	0.29	0.06
8.00	0.58	0.00	0.39	0.08
9.00	0.71	0.00	0.51	0.09
10.00	0.88	0.00	0.68	0.14
11.00	1.16	0.00	0.95	0.26
12.00	2.31	0.00	2.08	2.00
13.00	3.68	0.00	3.44	0.32
14.00	3.96	0.00	3.72	0.15
15.00	4.13	0.00	3.90	0.10
16.00	4.26	0.00	4.02	0.08
17.00	4.37	0.00	4.13	0.07
18.00	4.46	0.00	4.22	0.06
19.00	4.53	0.00	4.30	0.05
20.00	4.60	0.00	4.37	0.05
21.00	4.67	0.00	4.43	0.05
22.00	4.73	0.00	4.49	0.04
23.00	4.79	0.00	4.55	0.04
24.00	4.84	0.00	4.60	0.04
25.00	4.84	0.00	4.60	0.00
26.00	4.84	0.00	4.60	0.00
27.00	4.84	0.00	4.60	0.00
28.00	4.84	0.00	4.60	0.00
29.00	4.84	0.00	4.60	0.00
30.00	4.84	0.00	4.60	0.00
31.00	4.84	0.00	4.60	0.00
32.00	4.84	0.00	4.60	0.00
33.00	4.84	0.00	4.60	0.00
34.00	4.84	0.00	4.60	0.00
35.00	4.84	0.00	4.60	0.00
36.00	4.84	0.00	4.60	0.00
37.00	4.84	0.00	4.60	0.00
38.00	4.84	0.00	4.60	0.00
39.00	4.84	0.00	4.60	0.00
40.00	4.84	0.00	4.60	0.00
41.00	4.84	0.00	4.60	0.00
42.00	4.84	0.00	4.60	0.00
43.00	4.84	0.00	4.60	0.00
44.00	4.84	0.00	4.60	0.00
45.00	4.84	0.00	4.60	0.00
46.00	4.84	0.00	4.60	0.00
47.00	4.84	0.00	4.60	0.00
48.00	4.84	0.00	4.60	0.00
49.00	4.84	0.00	4.60	0.00
50.00	4.84	0.00	4.60	0.00
51.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	4.84	0.00	4.60	0.00
53.00	4.84	0.00	4.60	0.00
54.00	4.84	0.00	4.60	0.00
55.00	4.84	0.00	4.60	0.00
56.00	4.84	0.00	4.60	0.00
57.00	4.84	0.00	4.60	0.00
58.00	4.84	0.00	4.60	0.00
59.00	4.84	0.00	4.60	0.00
60.00	4.84	0.00	4.60	0.00
61.00	4.84	0.00	4.60	0.00
62.00	4.84	0.00	4.60	0.00
63.00	4.84	0.00	4.60	0.00
64.00	4.84	0.00	4.60	0.00
65.00	4.84	0.00	4.60	0.00
66.00	4.84	0.00	4.60	0.00
67.00	4.84	0.00	4.60	0.00
68.00	4.84	0.00	4.60	0.00
69.00	4.84	0.00	4.60	0.00
70.00	4.84	0.00	4.60	0.00
71.00	4.84	0.00	4.60	0.00
72.00	4.84	0.00	4.60	0.00
73.00	4.84	0.00	4.60	0.00
74.00	4.84	0.00	4.60	0.00
75.00	4.84	0.00	4.60	0.00
76.00	4.84	0.00	4.60	0.00
77.00	4.84	0.00	4.60	0.00
78.00	4.84	0.00	4.60	0.00
79.00	4.84	0.00	4.60	0.00
80.00	4.84	0.00	4.60	0.00
81.00	4.84	0.00	4.60	0.00
82.00	4.84	0.00	4.60	0.00
83.00	4.84	0.00	4.60	0.00
84.00	4.84	0.00	4.60	0.00
85.00	4.84	0.00	4.60	0.00
86.00	4.84	0.00	4.60	0.00
87.00	4.84	0.00	4.60	0.00
88.00	4.84	0.00	4.60	0.00
89.00	4.84	0.00	4.60	0.00
90.00	4.84	0.00	4.60	0.00
91.00	4.84	0.00	4.60	0.00
92.00	4.84	0.00	4.60	0.00
93.00	4.84	0.00	4.60	0.00
94.00	4.84	0.00	4.60	0.00
95.00	4.84	0.00	4.60	0.00
96.00	4.84	0.00	4.60	0.00
97.00	4.84	0.00	4.60	0.00
98.00	4.84	0.00	4.60	0.00
99.00	4.84	0.00	4.60	0.00
100.00	4.84	0.00	4.60	0.00
101.00	4.84	0.00	4.60	0.00
102.00	4.84	0.00	4.60	0.00
103.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	4.84	0.00	4.60	0.00
105.00	4.84	0.00	4.60	0.00
106.00	4.84	0.00	4.60	0.00
107.00	4.84	0.00	4.60	0.00
108.00	4.84	0.00	4.60	0.00
109.00	4.84	0.00	4.60	0.00
110.00	4.84	0.00	4.60	0.00
111.00	4.84	0.00	4.60	0.00
112.00	4.84	0.00	4.60	0.00
113.00	4.84	0.00	4.60	0.00
114.00	4.84	0.00	4.60	0.00
115.00	4.84	0.00	4.60	0.00
116.00	4.84	0.00	4.60	0.00
117.00	4.84	0.00	4.60	0.00
118.00	4.84	0.00	4.60	0.00
119.00	4.84	0.00	4.60	0.00
120.00	4.84	0.00	4.60	0.00
121.00	4.84	0.00	4.60	0.00
122.00	4.84	0.00	4.60	0.00
123.00	4.84	0.00	4.60	0.00
124.00	4.84	0.00	4.60	0.00
125.00	4.84	0.00	4.60	0.00
126.00	4.84	0.00	4.60	0.00
127.00	4.84	0.00	4.60	0.00
128.00	4.84	0.00	4.60	0.00
129.00	4.84	0.00	4.60	0.00
130.00	4.84	0.00	4.60	0.00
131.00	4.84	0.00	4.60	0.00
132.00	4.84	0.00	4.60	0.00
133.00	4.84	0.00	4.60	0.00
134.00	4.84	0.00	4.60	0.00
135.00	4.84	0.00	4.60	0.00
136.00	4.84	0.00	4.60	0.00
137.00	4.84	0.00	4.60	0.00
138.00	4.84	0.00	4.60	0.00
139.00	4.84	0.00	4.60	0.00
140.00	4.84	0.00	4.60	0.00
141.00	4.84	0.00	4.60	0.00
142.00	4.84	0.00	4.60	0.00
143.00	4.84	0.00	4.60	0.00
144.00	4.84	0.00	4.60	0.00
145.00	4.84	0.00	4.60	0.00
146.00	4.84	0.00	4.60	0.00
147.00	4.84	0.00	4.60	0.00
148.00	4.84	0.00	4.60	0.00
149.00	4.84	0.00	4.60	0.00
150.00	4.84	0.00	4.60	0.00
151.00	4.84	0.00	4.60	0.00
152.00	4.84	0.00	4.60	0.00
153.00	4.84	0.00	4.60	0.00
154.00	4.84	0.00	4.60	0.00
155.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	4.84	0.00	4.60	0.00
157.00	4.84	0.00	4.60	0.00
158.00	4.84	0.00	4.60	0.00
159.00	4.84	0.00	4.60	0.00
160.00	4.84	0.00	4.60	0.00
161.00	4.84	0.00	4.60	0.00
162.00	4.84	0.00	4.60	0.00
163.00	4.84	0.00	4.60	0.00
164.00	4.84	0.00	4.60	0.00
165.00	4.84	0.00	4.60	0.00
166.00	4.84	0.00	4.60	0.00
167.00	4.84	0.00	4.60	0.00
168.00	4.84	0.00	4.60	0.00
169.00	4.84	0.00	4.60	0.00
170.00	4.84	0.00	4.60	0.00
171.00	4.84	0.00	4.60	0.00
172.00	4.84	0.00	4.60	0.00
173.00	4.84	0.00	4.60	0.00
174.00	4.84	0.00	4.60	0.00
175.00	4.84	0.00	4.60	0.00
176.00	4.84	0.00	4.60	0.00
177.00	4.84	0.00	4.60	0.00
178.00	4.84	0.00	4.60	0.00
179.00	4.84	0.00	4.60	0.00
180.00	4.84	0.00	4.60	0.00
181.00	4.84	0.00	4.60	0.00
182.00	4.84	0.00	4.60	0.00
183.00	4.84	0.00	4.60	0.00
184.00	4.84	0.00	4.60	0.00
185.00	4.84	0.00	4.60	0.00
186.00	4.84	0.00	4.60	0.00
187.00	4.84	0.00	4.60	0.00
188.00	4.84	0.00	4.60	0.00
189.00	4.84	0.00	4.60	0.00
190.00	4.84	0.00	4.60	0.00
191.00	4.84	0.00	4.60	0.00
192.00	4.84	0.00	4.60	0.00
193.00	4.84	0.00	4.60	0.00
194.00	4.84	0.00	4.60	0.00
195.00	4.84	0.00	4.60	0.00
196.00	4.84	0.00	4.60	0.00
197.00	4.84	0.00	4.60	0.00
198.00	4.84	0.00	4.60	0.00
199.00	4.84	0.00	4.60	0.00
200.00	4.84	0.00	4.60	0.00
201.00	4.84	0.00	4.60	0.00
202.00	4.84	0.00	4.60	0.00
203.00	4.84	0.00	4.60	0.00
204.00	4.84	0.00	4.60	0.00
205.00	4.84	0.00	4.60	0.00
206.00	4.84	0.00	4.60	0.00
207.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	4.84	0.00	4.60	0.00
209.00	4.84	0.00	4.60	0.00
210.00	4.84	0.00	4.60	0.00
211.00	4.84	0.00	4.60	0.00
212.00	4.84	0.00	4.60	0.00
213.00	4.84	0.00	4.60	0.00
214.00	4.84	0.00	4.60	0.00
215.00	4.84	0.00	4.60	0.00
216.00	4.84	0.00	4.60	0.00
217.00	4.84	0.00	4.60	0.00
218.00	4.84	0.00	4.60	0.00
219.00	4.84	0.00	4.60	0.00
220.00	4.84	0.00	4.60	0.00
221.00	4.84	0.00	4.60	0.00
222.00	4.84	0.00	4.60	0.00
223.00	4.84	0.00	4.60	0.00
224.00	4.84	0.00	4.60	0.00
225.00	4.84	0.00	4.60	0.00
226.00	4.84	0.00	4.60	0.00
227.00	4.84	0.00	4.60	0.00
228.00	4.84	0.00	4.60	0.00
229.00	4.84	0.00	4.60	0.00
230.00	4.84	0.00	4.60	0.00
231.00	4.84	0.00	4.60	0.00
232.00	4.84	0.00	4.60	0.00
233.00	4.84	0.00	4.60	0.00
234.00	4.84	0.00	4.60	0.00
235.00	4.84	0.00	4.60	0.00
236.00	4.84	0.00	4.60	0.00
237.00	4.84	0.00	4.60	0.00
238.00	4.84	0.00	4.60	0.00
239.00	4.84	0.00	4.60	0.00
240.00	4.84	0.00	4.60	0.00
241.00	4.84	0.00	4.60	0.00
242.00	4.84	0.00	4.60	0.00
243.00	4.84	0.00	4.60	0.00
244.00	4.84	0.00	4.60	0.00
245.00	4.84	0.00	4.60	0.00
246.00	4.84	0.00	4.60	0.00
247.00	4.84	0.00	4.60	0.00
248.00	4.84	0.00	4.60	0.00
249.00	4.84	0.00	4.60	0.00
250.00	4.84	0.00	4.60	0.00
251.00	4.84	0.00	4.60	0.00
252.00	4.84	0.00	4.60	0.00
253.00	4.84	0.00	4.60	0.00
254.00	4.84	0.00	4.60	0.00
255.00	4.84	0.00	4.60	0.00
256.00	4.84	0.00	4.60	0.00
257.00	4.84	0.00	4.60	0.00
258.00	4.84	0.00	4.60	0.00
259.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	4.84	0.00	4.60	0.00
261.00	4.84	0.00	4.60	0.00
262.00	4.84	0.00	4.60	0.00
263.00	4.84	0.00	4.60	0.00
264.00	4.84	0.00	4.60	0.00
265.00	4.84	0.00	4.60	0.00
266.00	4.84	0.00	4.60	0.00
267.00	4.84	0.00	4.60	0.00
268.00	4.84	0.00	4.60	0.00
269.00	4.84	0.00	4.60	0.00
270.00	4.84	0.00	4.60	0.00
271.00	4.84	0.00	4.60	0.00
272.00	4.84	0.00	4.60	0.00
273.00	4.84	0.00	4.60	0.00
274.00	4.84	0.00	4.60	0.00
275.00	4.84	0.00	4.60	0.00
276.00	4.84	0.00	4.60	0.00
277.00	4.84	0.00	4.60	0.00
278.00	4.84	0.00	4.60	0.00
279.00	4.84	0.00	4.60	0.00
280.00	4.84	0.00	4.60	0.00
281.00	4.84	0.00	4.60	0.00
282.00	4.84	0.00	4.60	0.00
283.00	4.84	0.00	4.60	0.00
284.00	4.84	0.00	4.60	0.00
285.00	4.84	0.00	4.60	0.00
286.00	4.84	0.00	4.60	0.00
287.00	4.84	0.00	4.60	0.00
288.00	4.84	0.00	4.60	0.00
289.00	4.84	0.00	4.60	0.00
290.00	4.84	0.00	4.60	0.00
291.00	4.84	0.00	4.60	0.00
292.00	4.84	0.00	4.60	0.00
293.00	4.84	0.00	4.60	0.00
294.00	4.84	0.00	4.60	0.00
295.00	4.84	0.00	4.60	0.00
296.00	4.84	0.00	4.60	0.00
297.00	4.84	0.00	4.60	0.00
298.00	4.84	0.00	4.60	0.00
299.00	4.84	0.00	4.60	0.00
300.00	4.84	0.00	4.60	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Summary for Pond 1P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 4.60" for 10-yr NOAA event
Inflow = 3.61 cfs @ 12.13 hrs, Volume= 0.269 af
Outflow = 3.11 cfs @ 12.17 hrs, Volume= 0.258 af, Atten= 14%, Lag= 2.2 min
Primary = 3.11 cfs @ 12.17 hrs, Volume= 0.258 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
Peak Elev= 1.18' @ 12.17 hrs Surf.Area= 3,049 sf Storage= 5,469 cf

Plug-Flow detention time= 1,160.0 min calculated for 0.258 af (96% of inflow)
Center-of-Mass det. time= 1,135.6 min (1,885.0 - 749.4)

Volume	Invert	Avail.Storage	Storage Description
#1	-2.51'	11,007 cf	Rain Garden (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	3,049	0.0	0	0
-1.51	3,049	15.0	457	457
-1.50	3,049	30.0	9	466
-0.01	3,049	30.0	1,363	1,829
0.00	3,049	100.0	30	1,860
3.00	3,049	100.0	9,147	11,007

Device	Routing	Invert	Outlet Devices
#1	Device 4	1.10'	40.0' 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
#2	Device 4	-1.50'	0.5" Vert. Orifice/Grate C= 0.600
#3	Device 4	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Primary	-2.51'	24.0" Round Culvert L= 1.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= -2.51' / -2.52' S= 0.0100 '/ Cc= 0.900 n= 0.011 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=3.09 cfs @ 12.17 hrs HW=1.18' (Free Discharge)

4=Culvert (Passes 3.09 cfs of 19.60 cfs potential flow)

1=Broad-Crested Rectangular Weir (Weir Controls 2.40 cfs @ 0.72 fps)

2=Orifice/Grate (Orifice Controls 0.01 cfs @ 7.86 fps)

3=Sharp-Crested Rectangular Weir (Weir Controls 0.67 cfs @ 2.70 fps)

MRC Example 2

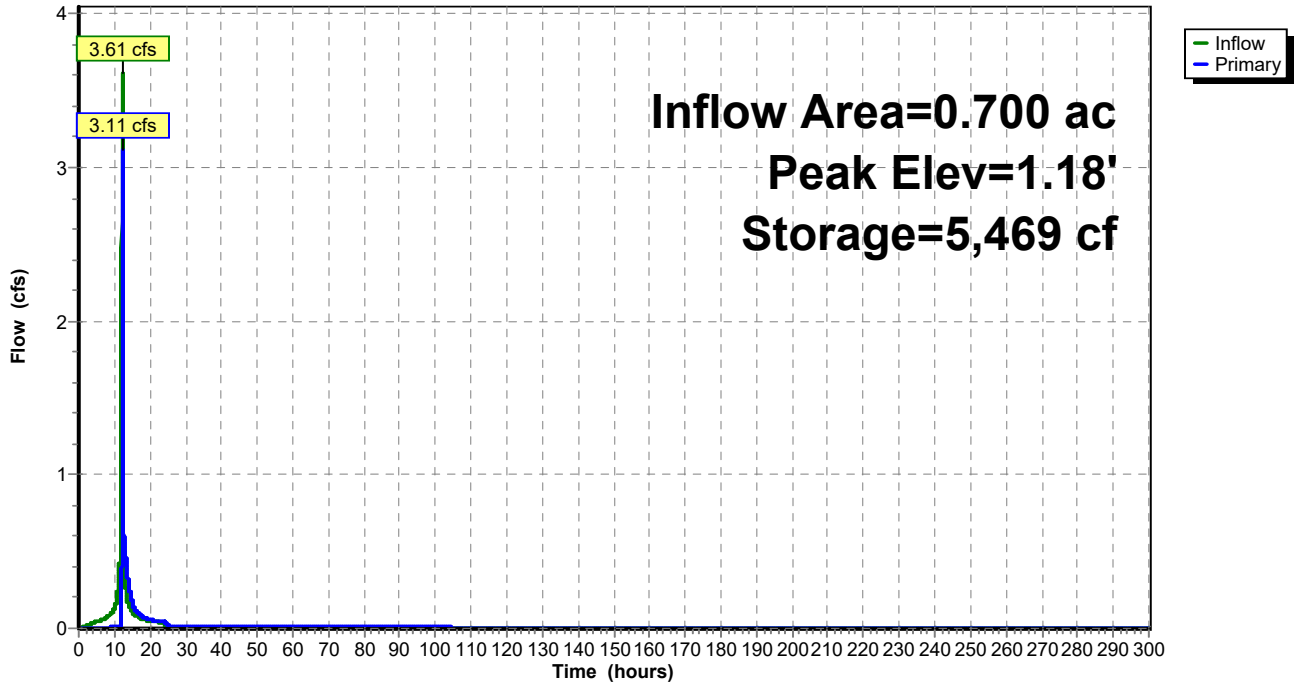
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NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

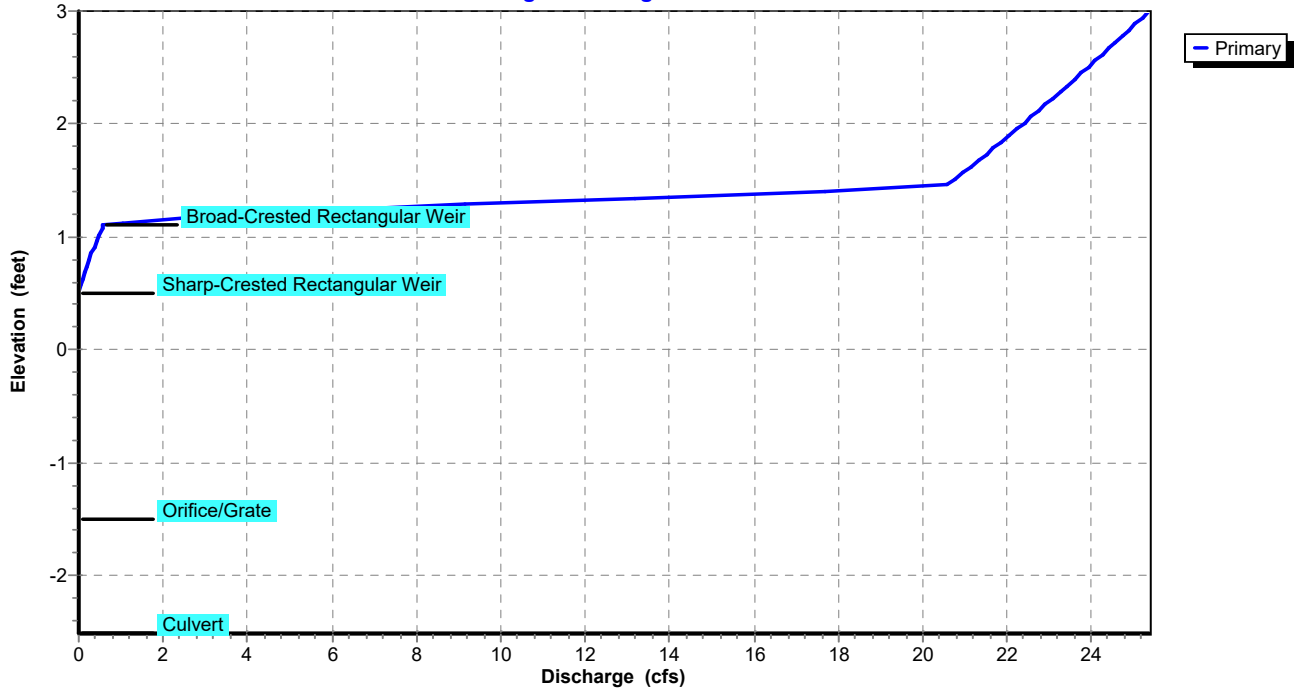
Pond 1P: Managed Release Rain Garden

Hydrograph



Pond 1P: Managed Release Rain Garden

Stage-Discharge



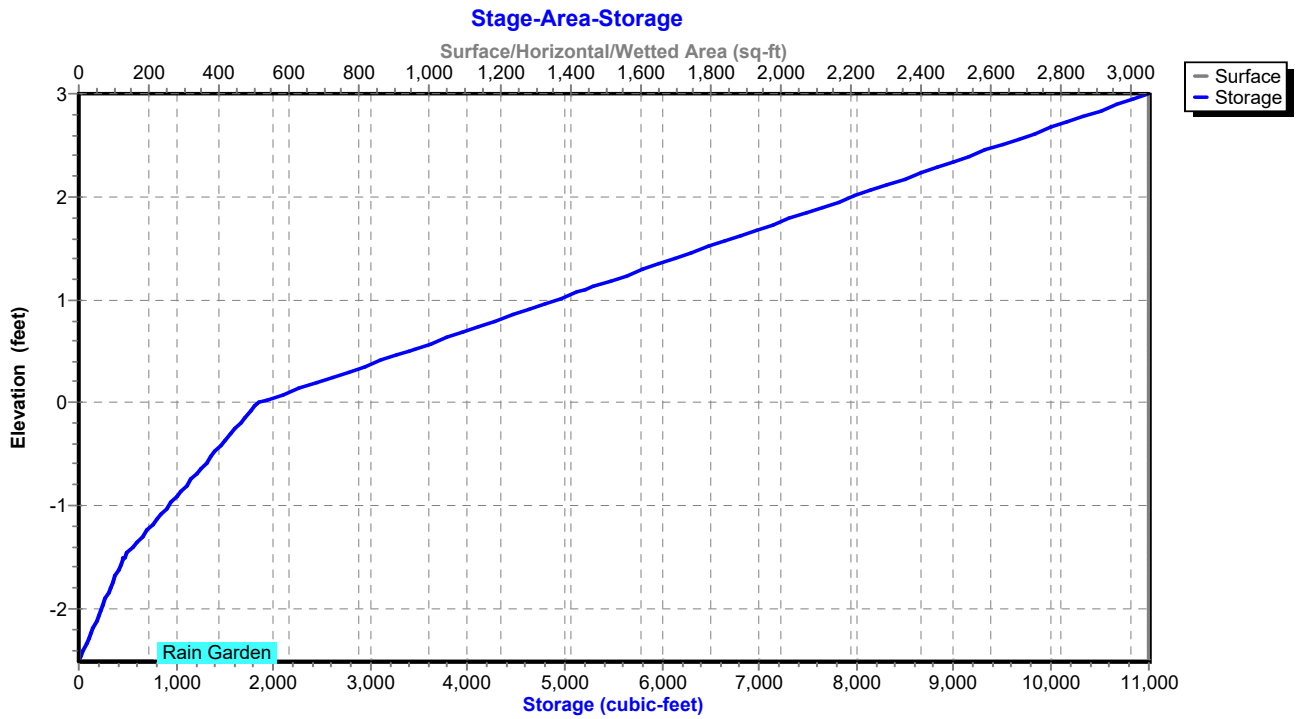
MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Pond 1P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 1P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	-2.51	0.00
1.00	0.00	1	-2.51	0.00
2.00	0.02	38	-2.43	0.00
3.00	0.03	119	-2.25	0.00
4.00	0.04	232	-2.00	0.00
5.00	0.04	371	-1.70	0.00
6.00	0.05	529	-1.43	0.00
7.00	0.06	714	-1.23	0.00
8.00	0.08	944	-0.98	0.00
9.00	0.09	1,222	-0.67	0.01
10.00	0.14	1,608	-0.25	0.01
11.00	0.26	2,227	0.12	0.01
12.00	2.00	4,340	0.81	0.26
13.00	0.32	5,001	1.03	0.51
14.00	0.15	4,383	0.83	0.28
15.00	0.10	4,069	0.72	0.17
16.00	0.08	3,899	0.67	0.12
17.00	0.07	3,809	0.64	0.09
18.00	0.06	3,745	0.62	0.07
19.00	0.05	3,697	0.60	0.06
20.00	0.05	3,668	0.59	0.06
21.00	0.05	3,648	0.59	0.05
22.00	0.04	3,631	0.58	0.05
23.00	0.04	3,616	0.58	0.04
24.00	0.04	3,600	0.57	0.04
25.00	0.00	3,501	0.54	0.02
26.00	0.00	3,438	0.52	0.01
27.00	0.00	3,396	0.50	0.01
28.00	0.00	3,362	0.49	0.01
29.00	0.00	3,329	0.48	0.01
30.00	0.00	3,296	0.47	0.01
31.00	0.00	3,263	0.46	0.01
32.00	0.00	3,230	0.45	0.01
33.00	0.00	3,197	0.44	0.01
34.00	0.00	3,165	0.43	0.01
35.00	0.00	3,132	0.42	0.01
36.00	0.00	3,100	0.41	0.01
37.00	0.00	3,067	0.40	0.01
38.00	0.00	3,035	0.39	0.01
39.00	0.00	3,003	0.37	0.01
40.00	0.00	2,971	0.36	0.01
41.00	0.00	2,939	0.35	0.01
42.00	0.00	2,907	0.34	0.01
43.00	0.00	2,875	0.33	0.01
44.00	0.00	2,843	0.32	0.01
45.00	0.00	2,811	0.31	0.01
46.00	0.00	2,780	0.30	0.01
47.00	0.00	2,748	0.29	0.01
48.00	0.00	2,717	0.28	0.01
49.00	0.00	2,685	0.27	0.01
50.00	0.00	2,654	0.26	0.01
51.00	0.00	2,623	0.25	0.01

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	2,592	0.24	0.01
53.00	0.00	2,561	0.23	0.01
54.00	0.00	2,530	0.22	0.01
55.00	0.00	2,500	0.21	0.01
56.00	0.00	2,469	0.20	0.01
57.00	0.00	2,438	0.19	0.01
58.00	0.00	2,408	0.18	0.01
59.00	0.00	2,377	0.17	0.01
60.00	0.00	2,347	0.16	0.01
61.00	0.00	2,317	0.15	0.01
62.00	0.00	2,287	0.14	0.01
63.00	0.00	2,257	0.13	0.01
64.00	0.00	2,227	0.12	0.01
65.00	0.00	2,197	0.11	0.01
66.00	0.00	2,167	0.10	0.01
67.00	0.00	2,138	0.09	0.01
68.00	0.00	2,108	0.08	0.01
69.00	0.00	2,078	0.07	0.01
70.00	0.00	2,049	0.06	0.01
71.00	0.00	2,020	0.05	0.01
72.00	0.00	1,991	0.04	0.01
73.00	0.00	1,961	0.03	0.01
74.00	0.00	1,932	0.02	0.01
75.00	0.00	1,904	0.01	0.01
76.00	0.00	1,875	0.00	0.01
77.00	0.00	1,846	0.00	0.01
78.00	0.00	1,817	-0.02	0.01
79.00	0.00	1,789	-0.05	0.01
80.00	0.00	1,761	-0.08	0.01
81.00	0.00	1,733	-0.12	0.01
82.00	0.00	1,706	-0.15	0.01
83.00	0.00	1,679	-0.17	0.01
84.00	0.00	1,652	-0.20	0.01
85.00	0.00	1,625	-0.23	0.01
86.00	0.00	1,599	-0.26	0.01
87.00	0.00	1,573	-0.29	0.01
88.00	0.00	1,547	-0.32	0.01
89.00	0.00	1,522	-0.35	0.01
90.00	0.00	1,497	-0.37	0.01
91.00	0.00	1,472	-0.40	0.01
92.00	0.00	1,448	-0.43	0.01
93.00	0.00	1,424	-0.45	0.01
94.00	0.00	1,400	-0.48	0.01
95.00	0.00	1,377	-0.51	0.01
96.00	0.00	1,353	-0.53	0.01
97.00	0.00	1,331	-0.56	0.01
98.00	0.00	1,308	-0.58	0.01
99.00	0.00	1,286	-0.60	0.01
100.00	0.00	1,264	-0.63	0.01
101.00	0.00	1,242	-0.65	0.01
102.00	0.00	1,221	-0.68	0.01
103.00	0.00	1,200	-0.70	0.01

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1,179	-0.72	0.01
105.00	0.00	1,159	-0.74	0.01
106.00	0.00	1,138	-0.77	0.01
107.00	0.00	1,119	-0.79	0.01
108.00	0.00	1,099	-0.81	0.01
109.00	0.00	1,080	-0.83	0.01
110.00	0.00	1,061	-0.85	0.01
111.00	0.00	1,042	-0.87	0.01
112.00	0.00	1,024	-0.89	0.01
113.00	0.00	1,006	-0.91	0.00
114.00	0.00	989	-0.93	0.00
115.00	0.00	971	-0.95	0.00
116.00	0.00	954	-0.97	0.00
117.00	0.00	937	-0.99	0.00
118.00	0.00	921	-1.00	0.00
119.00	0.00	905	-1.02	0.00
120.00	0.00	889	-1.04	0.00
121.00	0.00	873	-1.06	0.00
122.00	0.00	858	-1.07	0.00
123.00	0.00	843	-1.09	0.00
124.00	0.00	829	-1.10	0.00
125.00	0.00	814	-1.12	0.00
126.00	0.00	800	-1.14	0.00
127.00	0.00	787	-1.15	0.00
128.00	0.00	773	-1.16	0.00
129.00	0.00	760	-1.18	0.00
130.00	0.00	747	-1.19	0.00
131.00	0.00	735	-1.21	0.00
132.00	0.00	723	-1.22	0.00
133.00	0.00	711	-1.23	0.00
134.00	0.00	699	-1.25	0.00
135.00	0.00	688	-1.26	0.00
136.00	0.00	677	-1.27	0.00
137.00	0.00	666	-1.28	0.00
138.00	0.00	656	-1.29	0.00
139.00	0.00	646	-1.30	0.00
140.00	0.00	636	-1.31	0.00
141.00	0.00	627	-1.32	0.00
142.00	0.00	618	-1.33	0.00
143.00	0.00	609	-1.34	0.00
144.00	0.00	600	-1.35	0.00
145.00	0.00	592	-1.36	0.00
146.00	0.00	584	-1.37	0.00
147.00	0.00	577	-1.38	0.00
148.00	0.00	570	-1.39	0.00
149.00	0.00	563	-1.39	0.00
150.00	0.00	556	-1.40	0.00
151.00	0.00	550	-1.41	0.00
152.00	0.00	544	-1.42	0.00
153.00	0.00	538	-1.42	0.00
154.00	0.00	533	-1.43	0.00
155.00	0.00	528	-1.43	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	523	-1.44	0.00
157.00	0.00	519	-1.44	0.00
158.00	0.00	515	-1.45	0.00
159.00	0.00	511	-1.45	0.00
160.00	0.00	507	-1.46	0.00
161.00	0.00	504	-1.46	0.00
162.00	0.00	501	-1.46	0.00
163.00	0.00	498	-1.47	0.00
164.00	0.00	495	-1.47	0.00
165.00	0.00	493	-1.47	0.00
166.00	0.00	490	-1.47	0.00
167.00	0.00	488	-1.48	0.00
168.00	0.00	487	-1.48	0.00
169.00	0.00	485	-1.48	0.00
170.00	0.00	483	-1.48	0.00
171.00	0.00	482	-1.48	0.00
172.00	0.00	481	-1.48	0.00
173.00	0.00	479	-1.49	0.00
174.00	0.00	478	-1.49	0.00
175.00	0.00	477	-1.49	0.00
176.00	0.00	476	-1.49	0.00
177.00	0.00	475	-1.49	0.00
178.00	0.00	475	-1.49	0.00
179.00	0.00	474	-1.49	0.00
180.00	0.00	473	-1.49	0.00
181.00	0.00	473	-1.49	0.00
182.00	0.00	472	-1.49	0.00
183.00	0.00	472	-1.49	0.00
184.00	0.00	471	-1.49	0.00
185.00	0.00	471	-1.50	0.00
186.00	0.00	471	-1.50	0.00
187.00	0.00	470	-1.50	0.00
188.00	0.00	470	-1.50	0.00
189.00	0.00	470	-1.50	0.00
190.00	0.00	469	-1.50	0.00
191.00	0.00	469	-1.50	0.00
192.00	0.00	469	-1.50	0.00
193.00	0.00	469	-1.50	0.00
194.00	0.00	468	-1.50	0.00
195.00	0.00	468	-1.50	0.00
196.00	0.00	468	-1.50	0.00
197.00	0.00	468	-1.50	0.00
198.00	0.00	468	-1.50	0.00
199.00	0.00	468	-1.50	0.00
200.00	0.00	468	-1.50	0.00
201.00	0.00	468	-1.50	0.00
202.00	0.00	467	-1.50	0.00
203.00	0.00	467	-1.50	0.00
204.00	0.00	467	-1.50	0.00
205.00	0.00	467	-1.50	0.00
206.00	0.00	467	-1.50	0.00
207.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
208.00	0.00	467	-1.50	0.00
209.00	0.00	467	-1.50	0.00
210.00	0.00	467	-1.50	0.00
211.00	0.00	467	-1.50	0.00
212.00	0.00	467	-1.50	0.00
213.00	0.00	467	-1.50	0.00
214.00	0.00	467	-1.50	0.00
215.00	0.00	467	-1.50	0.00
216.00	0.00	467	-1.50	0.00
217.00	0.00	467	-1.50	0.00
218.00	0.00	467	-1.50	0.00
219.00	0.00	467	-1.50	0.00
220.00	0.00	467	-1.50	0.00
221.00	0.00	467	-1.50	0.00
222.00	0.00	467	-1.50	0.00
223.00	0.00	467	-1.50	0.00
224.00	0.00	467	-1.50	0.00
225.00	0.00	467	-1.50	0.00
226.00	0.00	467	-1.50	0.00
227.00	0.00	467	-1.50	0.00
228.00	0.00	467	-1.50	0.00
229.00	0.00	467	-1.50	0.00
230.00	0.00	467	-1.50	0.00
231.00	0.00	467	-1.50	0.00
232.00	0.00	467	-1.50	0.00
233.00	0.00	467	-1.50	0.00
234.00	0.00	467	-1.50	0.00
235.00	0.00	467	-1.50	0.00
236.00	0.00	467	-1.50	0.00
237.00	0.00	467	-1.50	0.00
238.00	0.00	467	-1.50	0.00
239.00	0.00	467	-1.50	0.00
240.00	0.00	467	-1.50	0.00
241.00	0.00	467	-1.50	0.00
242.00	0.00	467	-1.50	0.00
243.00	0.00	467	-1.50	0.00
244.00	0.00	467	-1.50	0.00
245.00	0.00	467	-1.50	0.00
246.00	0.00	467	-1.50	0.00
247.00	0.00	467	-1.50	0.00
248.00	0.00	467	-1.50	0.00
249.00	0.00	467	-1.50	0.00
250.00	0.00	467	-1.50	0.00
251.00	0.00	467	-1.50	0.00
252.00	0.00	467	-1.50	0.00
253.00	0.00	467	-1.50	0.00
254.00	0.00	467	-1.50	0.00
255.00	0.00	467	-1.50	0.00
256.00	0.00	467	-1.50	0.00
257.00	0.00	467	-1.50	0.00
258.00	0.00	467	-1.50	0.00
259.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
260.00	0.00	467	-1.50	0.00
261.00	0.00	467	-1.50	0.00
262.00	0.00	467	-1.50	0.00
263.00	0.00	467	-1.50	0.00
264.00	0.00	467	-1.50	0.00
265.00	0.00	467	-1.50	0.00
266.00	0.00	467	-1.50	0.00
267.00	0.00	466	-1.50	0.00
268.00	0.00	466	-1.50	0.00
269.00	0.00	466	-1.50	0.00
270.00	0.00	466	-1.50	0.00
271.00	0.00	466	-1.50	0.00
272.00	0.00	466	-1.50	0.00
273.00	0.00	466	-1.50	0.00
274.00	0.00	466	-1.50	0.00
275.00	0.00	466	-1.50	0.00
276.00	0.00	466	-1.50	0.00
277.00	0.00	466	-1.50	0.00
278.00	0.00	466	-1.50	0.00
279.00	0.00	466	-1.50	0.00
280.00	0.00	466	-1.50	0.00
281.00	0.00	466	-1.50	0.00
282.00	0.00	466	-1.50	0.00
283.00	0.00	466	-1.50	0.00
284.00	0.00	466	-1.50	0.00
285.00	0.00	466	-1.50	0.00
286.00	0.00	466	-1.50	0.00
287.00	0.00	466	-1.50	0.00
288.00	0.00	466	-1.50	0.00
289.00	0.00	466	-1.50	0.00
290.00	0.00	466	-1.50	0.00
291.00	0.00	466	-1.50	0.00
292.00	0.00	466	-1.50	0.00
293.00	0.00	466	-1.50	0.00
294.00	0.00	466	-1.50	0.00
295.00	0.00	466	-1.50	0.00
296.00	0.00	466	-1.50	0.00
297.00	0.00	466	-1.50	0.00
298.00	0.00	466	-1.50	0.00
299.00	0.00	466	-1.50	0.00
300.00	0.00	466	-1.50	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Summary for Pond 2P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

[79] Warning: Submerged Pond 1P Primary device # 4 INLET by 1.34'

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 4.42" for 10-yr NOAA event
 Inflow = 3.11 cfs @ 12.17 hrs, Volume= 0.258 af
 Outflow = 0.46 cfs @ 13.20 hrs, Volume= 0.258 af, Atten= 85%, Lag= 61.8 min
 Primary = 0.46 cfs @ 13.20 hrs, Volume= 0.258 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= -1.17' @ 13.20 hrs Surf.Area= 1,742 sf Storage= 2,339 cf

Plug-Flow detention time= 119.3 min calculated for 0.258 af (100% of inflow)
 Center-of-Mass det. time= 119.2 min (2,004.3 - 1,885.0)

Volume	Invert	Avail.Storage	Storage Description	
#1	-2.51'	6,114 cf	Detention Basin (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	1,742	0.0	0	0
-2.50	1,742	100.0	17	17
1.00	1,742	100.0	6,097	6,114

Device	Routing	Invert	Outlet Devices
#1	Secondary	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	-2.51'	4.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.46 cfs @ 13.20 hrs HW=-1.17' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 0.46 cfs @ 5.22 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=-2.51' (Free Discharge)
 ↑1=Sharp-Crested Rectangular Weir(Controls 0.00 cfs)

MRC Example 2

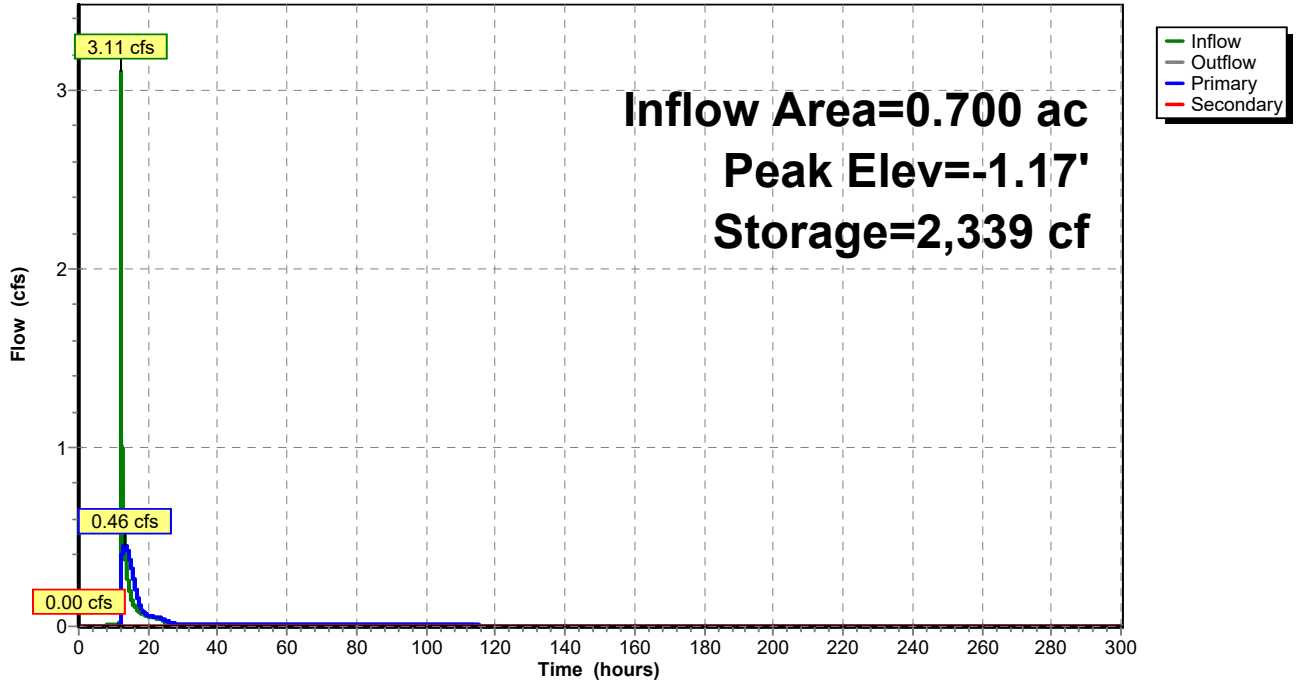
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NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

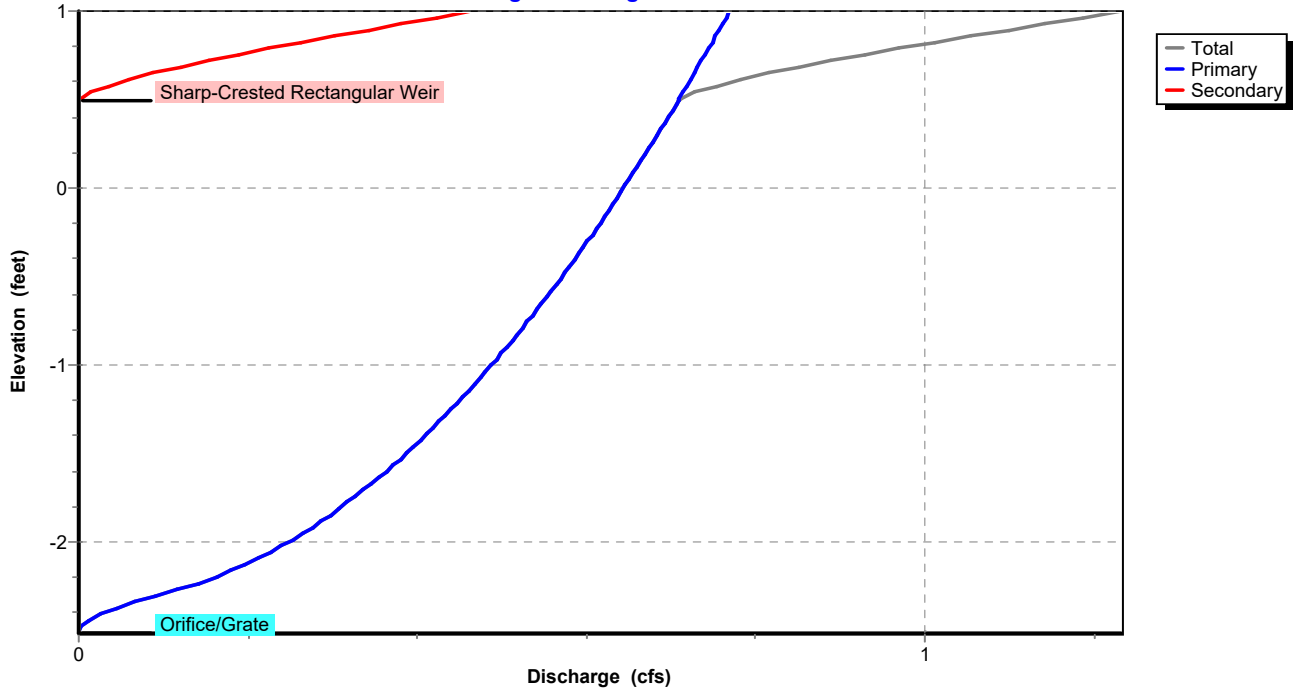
Pond 2P: Managed Release Rain Garden

Hydrograph



Pond 2P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

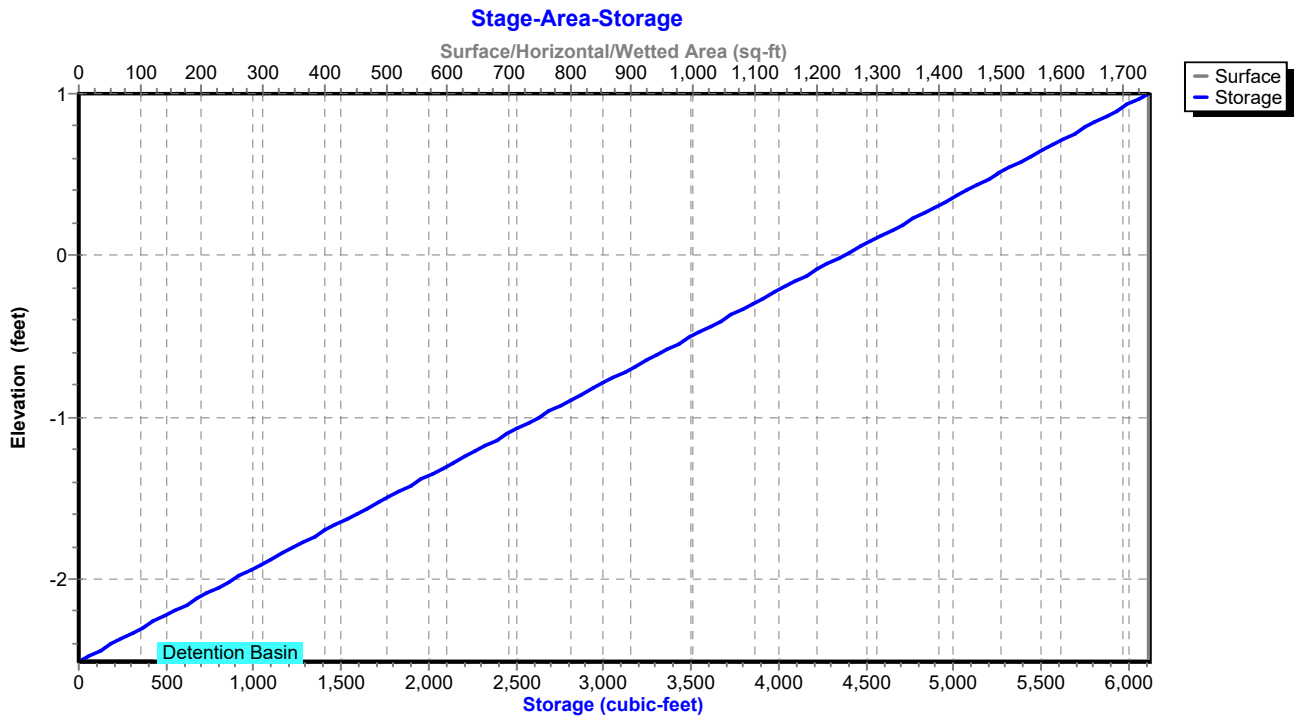
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NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Pond 2P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 2P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	-2.51	0.00	0.00	0.00
1.00	0.00	0	-2.51	0.00	0.00	0.00
2.00	0.00	0	-2.51	0.00	0.00	0.00
3.00	0.00	0	-2.51	0.00	0.00	0.00
4.00	0.00	0	-2.51	0.00	0.00	0.00
5.00	0.00	0	-2.51	0.00	0.00	0.00
6.00	0.00	1	-2.51	0.00	0.00	0.00
7.00	0.00	9	-2.50	0.00	0.00	0.00
8.00	0.00	23	-2.50	0.00	0.00	0.00
9.00	0.01	38	-2.49	0.00	0.00	0.00
10.00	0.01	54	-2.48	0.00	0.00	0.00
11.00	0.01	70	-2.47	0.00	0.00	0.00
12.00	0.26	156	-2.42	0.02	0.02	0.00
13.00	0.51	2,320	-1.18	0.45	0.45	0.00
14.00	0.28	2,088	-1.31	0.43	0.43	0.00
15.00	0.17	1,466	-1.67	0.35	0.35	0.00
16.00	0.12	896	-2.00	0.25	0.25	0.00
17.00	0.09	537	-2.20	0.16	0.16	0.00
18.00	0.07	384	-2.29	0.10	0.10	0.00
19.00	0.06	323	-2.32	0.07	0.07	0.00
20.00	0.06	292	-2.34	0.06	0.06	0.00
21.00	0.05	273	-2.35	0.05	0.05	0.00
22.00	0.05	259	-2.36	0.05	0.05	0.00
23.00	0.04	247	-2.37	0.05	0.05	0.00
24.00	0.04	238	-2.37	0.04	0.04	0.00
25.00	0.02	210	-2.39	0.03	0.03	0.00
26.00	0.01	171	-2.41	0.02	0.02	0.00
27.00	0.01	142	-2.43	0.02	0.02	0.00
28.00	0.01	124	-2.44	0.01	0.01	0.00
29.00	0.01	115	-2.44	0.01	0.01	0.00
30.00	0.01	110	-2.45	0.01	0.01	0.00
31.00	0.01	107	-2.45	0.01	0.01	0.00
32.00	0.01	105	-2.45	0.01	0.01	0.00
33.00	0.01	104	-2.45	0.01	0.01	0.00
34.00	0.01	103	-2.45	0.01	0.01	0.00
35.00	0.01	102	-2.45	0.01	0.01	0.00
36.00	0.01	102	-2.45	0.01	0.01	0.00
37.00	0.01	102	-2.45	0.01	0.01	0.00
38.00	0.01	102	-2.45	0.01	0.01	0.00
39.00	0.01	101	-2.45	0.01	0.01	0.00
40.00	0.01	101	-2.45	0.01	0.01	0.00
41.00	0.01	101	-2.45	0.01	0.01	0.00
42.00	0.01	101	-2.45	0.01	0.01	0.00
43.00	0.01	101	-2.45	0.01	0.01	0.00
44.00	0.01	100	-2.45	0.01	0.01	0.00
45.00	0.01	100	-2.45	0.01	0.01	0.00
46.00	0.01	100	-2.45	0.01	0.01	0.00
47.00	0.01	100	-2.45	0.01	0.01	0.00
48.00	0.01	100	-2.45	0.01	0.01	0.00
49.00	0.01	99	-2.45	0.01	0.01	0.00
50.00	0.01	99	-2.45	0.01	0.01	0.00
51.00	0.01	99	-2.45	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
52.00	0.01	99	-2.45	0.01	0.01	0.00
53.00	0.01	99	-2.45	0.01	0.01	0.00
54.00	0.01	99	-2.45	0.01	0.01	0.00
55.00	0.01	98	-2.45	0.01	0.01	0.00
56.00	0.01	98	-2.45	0.01	0.01	0.00
57.00	0.01	98	-2.45	0.01	0.01	0.00
58.00	0.01	98	-2.45	0.01	0.01	0.00
59.00	0.01	98	-2.45	0.01	0.01	0.00
60.00	0.01	98	-2.45	0.01	0.01	0.00
61.00	0.01	97	-2.45	0.01	0.01	0.00
62.00	0.01	97	-2.45	0.01	0.01	0.00
63.00	0.01	97	-2.45	0.01	0.01	0.00
64.00	0.01	97	-2.45	0.01	0.01	0.00
65.00	0.01	97	-2.45	0.01	0.01	0.00
66.00	0.01	97	-2.45	0.01	0.01	0.00
67.00	0.01	96	-2.45	0.01	0.01	0.00
68.00	0.01	96	-2.45	0.01	0.01	0.00
69.00	0.01	96	-2.45	0.01	0.01	0.00
70.00	0.01	96	-2.45	0.01	0.01	0.00
71.00	0.01	96	-2.46	0.01	0.01	0.00
72.00	0.01	95	-2.46	0.01	0.01	0.00
73.00	0.01	95	-2.46	0.01	0.01	0.00
74.00	0.01	95	-2.46	0.01	0.01	0.00
75.00	0.01	95	-2.46	0.01	0.01	0.00
76.00	0.01	95	-2.46	0.01	0.01	0.00
77.00	0.01	95	-2.46	0.01	0.01	0.00
78.00	0.01	94	-2.46	0.01	0.01	0.00
79.00	0.01	94	-2.46	0.01	0.01	0.00
80.00	0.01	94	-2.46	0.01	0.01	0.00
81.00	0.01	93	-2.46	0.01	0.01	0.00
82.00	0.01	93	-2.46	0.01	0.01	0.00
83.00	0.01	92	-2.46	0.01	0.01	0.00
84.00	0.01	92	-2.46	0.01	0.01	0.00
85.00	0.01	91	-2.46	0.01	0.01	0.00
86.00	0.01	90	-2.46	0.01	0.01	0.00
87.00	0.01	90	-2.46	0.01	0.01	0.00
88.00	0.01	89	-2.46	0.01	0.01	0.00
89.00	0.01	89	-2.46	0.01	0.01	0.00
90.00	0.01	88	-2.46	0.01	0.01	0.00
91.00	0.01	88	-2.46	0.01	0.01	0.00
92.00	0.01	87	-2.46	0.01	0.01	0.00
93.00	0.01	86	-2.46	0.01	0.01	0.00
94.00	0.01	86	-2.46	0.01	0.01	0.00
95.00	0.01	85	-2.46	0.01	0.01	0.00
96.00	0.01	85	-2.46	0.01	0.01	0.00
97.00	0.01	84	-2.46	0.01	0.01	0.00
98.00	0.01	83	-2.46	0.01	0.01	0.00
99.00	0.01	83	-2.46	0.01	0.01	0.00
100.00	0.01	82	-2.46	0.01	0.01	0.00
101.00	0.01	82	-2.46	0.01	0.01	0.00
102.00	0.01	81	-2.46	0.01	0.01	0.00
103.00	0.01	81	-2.46	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
104.00	0.01	80	-2.46	0.01	0.01	0.00
105.00	0.01	79	-2.46	0.01	0.01	0.00
106.00	0.01	79	-2.46	0.01	0.01	0.00
107.00	0.01	78	-2.47	0.01	0.01	0.00
108.00	0.01	78	-2.47	0.01	0.01	0.00
109.00	0.01	77	-2.47	0.01	0.01	0.00
110.00	0.01	76	-2.47	0.01	0.01	0.00
111.00	0.01	76	-2.47	0.01	0.01	0.00
112.00	0.01	75	-2.47	0.01	0.01	0.00
113.00	0.00	75	-2.47	0.01	0.01	0.00
114.00	0.00	74	-2.47	0.01	0.01	0.00
115.00	0.00	74	-2.47	0.00	0.00	0.00
116.00	0.00	73	-2.47	0.00	0.00	0.00
117.00	0.00	72	-2.47	0.00	0.00	0.00
118.00	0.00	72	-2.47	0.00	0.00	0.00
119.00	0.00	71	-2.47	0.00	0.00	0.00
120.00	0.00	71	-2.47	0.00	0.00	0.00
121.00	0.00	70	-2.47	0.00	0.00	0.00
122.00	0.00	70	-2.47	0.00	0.00	0.00
123.00	0.00	69	-2.47	0.00	0.00	0.00
124.00	0.00	68	-2.47	0.00	0.00	0.00
125.00	0.00	68	-2.47	0.00	0.00	0.00
126.00	0.00	67	-2.47	0.00	0.00	0.00
127.00	0.00	67	-2.47	0.00	0.00	0.00
128.00	0.00	66	-2.47	0.00	0.00	0.00
129.00	0.00	65	-2.47	0.00	0.00	0.00
130.00	0.00	65	-2.47	0.00	0.00	0.00
131.00	0.00	64	-2.47	0.00	0.00	0.00
132.00	0.00	64	-2.47	0.00	0.00	0.00
133.00	0.00	63	-2.47	0.00	0.00	0.00
134.00	0.00	63	-2.47	0.00	0.00	0.00
135.00	0.00	62	-2.47	0.00	0.00	0.00
136.00	0.00	61	-2.47	0.00	0.00	0.00
137.00	0.00	61	-2.48	0.00	0.00	0.00
138.00	0.00	60	-2.48	0.00	0.00	0.00
139.00	0.00	59	-2.48	0.00	0.00	0.00
140.00	0.00	58	-2.48	0.00	0.00	0.00
141.00	0.00	57	-2.48	0.00	0.00	0.00
142.00	0.00	56	-2.48	0.00	0.00	0.00
143.00	0.00	55	-2.48	0.00	0.00	0.00
144.00	0.00	54	-2.48	0.00	0.00	0.00
145.00	0.00	53	-2.48	0.00	0.00	0.00
146.00	0.00	51	-2.48	0.00	0.00	0.00
147.00	0.00	50	-2.48	0.00	0.00	0.00
148.00	0.00	49	-2.48	0.00	0.00	0.00
149.00	0.00	48	-2.48	0.00	0.00	0.00
150.00	0.00	46	-2.48	0.00	0.00	0.00
151.00	0.00	45	-2.48	0.00	0.00	0.00
152.00	0.00	44	-2.48	0.00	0.00	0.00
153.00	0.00	42	-2.49	0.00	0.00	0.00
154.00	0.00	41	-2.49	0.00	0.00	0.00
155.00	0.00	40	-2.49	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
156.00	0.00	38	-2.49	0.00	0.00	0.00
157.00	0.00	37	-2.49	0.00	0.00	0.00
158.00	0.00	36	-2.49	0.00	0.00	0.00
159.00	0.00	34	-2.49	0.00	0.00	0.00
160.00	0.00	33	-2.49	0.00	0.00	0.00
161.00	0.00	32	-2.49	0.00	0.00	0.00
162.00	0.00	31	-2.49	0.00	0.00	0.00
163.00	0.00	30	-2.49	0.00	0.00	0.00
164.00	0.00	29	-2.49	0.00	0.00	0.00
165.00	0.00	28	-2.49	0.00	0.00	0.00
166.00	0.00	27	-2.49	0.00	0.00	0.00
167.00	0.00	26	-2.50	0.00	0.00	0.00
168.00	0.00	25	-2.50	0.00	0.00	0.00
169.00	0.00	24	-2.50	0.00	0.00	0.00
170.00	0.00	23	-2.50	0.00	0.00	0.00
171.00	0.00	22	-2.50	0.00	0.00	0.00
172.00	0.00	22	-2.50	0.00	0.00	0.00
173.00	0.00	21	-2.50	0.00	0.00	0.00
174.00	0.00	20	-2.50	0.00	0.00	0.00
175.00	0.00	20	-2.50	0.00	0.00	0.00
176.00	0.00	19	-2.50	0.00	0.00	0.00
177.00	0.00	19	-2.50	0.00	0.00	0.00
178.00	0.00	18	-2.50	0.00	0.00	0.00
179.00	0.00	18	-2.50	0.00	0.00	0.00
180.00	0.00	18	-2.50	0.00	0.00	0.00
181.00	0.00	17	-2.50	0.00	0.00	0.00
182.00	0.00	17	-2.50	0.00	0.00	0.00
183.00	0.00	16	-2.50	0.00	0.00	0.00
184.00	0.00	16	-2.50	0.00	0.00	0.00
185.00	0.00	16	-2.50	0.00	0.00	0.00
186.00	0.00	15	-2.50	0.00	0.00	0.00
187.00	0.00	15	-2.50	0.00	0.00	0.00
188.00	0.00	14	-2.50	0.00	0.00	0.00
189.00	0.00	14	-2.50	0.00	0.00	0.00
190.00	0.00	13	-2.50	0.00	0.00	0.00
191.00	0.00	13	-2.50	0.00	0.00	0.00
192.00	0.00	12	-2.50	0.00	0.00	0.00
193.00	0.00	12	-2.50	0.00	0.00	0.00
194.00	0.00	11	-2.50	0.00	0.00	0.00
195.00	0.00	11	-2.50	0.00	0.00	0.00
196.00	0.00	11	-2.50	0.00	0.00	0.00
197.00	0.00	10	-2.50	0.00	0.00	0.00
198.00	0.00	10	-2.50	0.00	0.00	0.00
199.00	0.00	9	-2.50	0.00	0.00	0.00
200.00	0.00	9	-2.50	0.00	0.00	0.00
201.00	0.00	9	-2.51	0.00	0.00	0.00
202.00	0.00	8	-2.51	0.00	0.00	0.00
203.00	0.00	8	-2.51	0.00	0.00	0.00
204.00	0.00	8	-2.51	0.00	0.00	0.00
205.00	0.00	7	-2.51	0.00	0.00	0.00
206.00	0.00	7	-2.51	0.00	0.00	0.00
207.00	0.00	7	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
208.00	0.00	6	-2.51	0.00	0.00	0.00
209.00	0.00	6	-2.51	0.00	0.00	0.00
210.00	0.00	6	-2.51	0.00	0.00	0.00
211.00	0.00	6	-2.51	0.00	0.00	0.00
212.00	0.00	5	-2.51	0.00	0.00	0.00
213.00	0.00	5	-2.51	0.00	0.00	0.00
214.00	0.00	5	-2.51	0.00	0.00	0.00
215.00	0.00	5	-2.51	0.00	0.00	0.00
216.00	0.00	4	-2.51	0.00	0.00	0.00
217.00	0.00	4	-2.51	0.00	0.00	0.00
218.00	0.00	4	-2.51	0.00	0.00	0.00
219.00	0.00	4	-2.51	0.00	0.00	0.00
220.00	0.00	4	-2.51	0.00	0.00	0.00
221.00	0.00	3	-2.51	0.00	0.00	0.00
222.00	0.00	3	-2.51	0.00	0.00	0.00
223.00	0.00	3	-2.51	0.00	0.00	0.00
224.00	0.00	3	-2.51	0.00	0.00	0.00
225.00	0.00	3	-2.51	0.00	0.00	0.00
226.00	0.00	3	-2.51	0.00	0.00	0.00
227.00	0.00	3	-2.51	0.00	0.00	0.00
228.00	0.00	2	-2.51	0.00	0.00	0.00
229.00	0.00	2	-2.51	0.00	0.00	0.00
230.00	0.00	2	-2.51	0.00	0.00	0.00
231.00	0.00	2	-2.51	0.00	0.00	0.00
232.00	0.00	2	-2.51	0.00	0.00	0.00
233.00	0.00	2	-2.51	0.00	0.00	0.00
234.00	0.00	2	-2.51	0.00	0.00	0.00
235.00	0.00	2	-2.51	0.00	0.00	0.00
236.00	0.00	2	-2.51	0.00	0.00	0.00
237.00	0.00	2	-2.51	0.00	0.00	0.00
238.00	0.00	1	-2.51	0.00	0.00	0.00
239.00	0.00	1	-2.51	0.00	0.00	0.00
240.00	0.00	1	-2.51	0.00	0.00	0.00
241.00	0.00	1	-2.51	0.00	0.00	0.00
242.00	0.00	1	-2.51	0.00	0.00	0.00
243.00	0.00	1	-2.51	0.00	0.00	0.00
244.00	0.00	1	-2.51	0.00	0.00	0.00
245.00	0.00	1	-2.51	0.00	0.00	0.00
246.00	0.00	1	-2.51	0.00	0.00	0.00
247.00	0.00	1	-2.51	0.00	0.00	0.00
248.00	0.00	1	-2.51	0.00	0.00	0.00
249.00	0.00	1	-2.51	0.00	0.00	0.00
250.00	0.00	1	-2.51	0.00	0.00	0.00
251.00	0.00	1	-2.51	0.00	0.00	0.00
252.00	0.00	1	-2.51	0.00	0.00	0.00
253.00	0.00	1	-2.51	0.00	0.00	0.00
254.00	0.00	1	-2.51	0.00	0.00	0.00
255.00	0.00	1	-2.51	0.00	0.00	0.00
256.00	0.00	1	-2.51	0.00	0.00	0.00
257.00	0.00	1	-2.51	0.00	0.00	0.00
258.00	0.00	1	-2.51	0.00	0.00	0.00
259.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 10-yr NOAA Rainfall=4.84"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
260.00	0.00	0	-2.51	0.00	0.00	0.00
261.00	0.00	0	-2.51	0.00	0.00	0.00
262.00	0.00	0	-2.51	0.00	0.00	0.00
263.00	0.00	0	-2.51	0.00	0.00	0.00
264.00	0.00	0	-2.51	0.00	0.00	0.00
265.00	0.00	0	-2.51	0.00	0.00	0.00
266.00	0.00	0	-2.51	0.00	0.00	0.00
267.00	0.00	0	-2.51	0.00	0.00	0.00
268.00	0.00	0	-2.51	0.00	0.00	0.00
269.00	0.00	0	-2.51	0.00	0.00	0.00
270.00	0.00	0	-2.51	0.00	0.00	0.00
271.00	0.00	0	-2.51	0.00	0.00	0.00
272.00	0.00	0	-2.51	0.00	0.00	0.00
273.00	0.00	0	-2.51	0.00	0.00	0.00
274.00	0.00	0	-2.51	0.00	0.00	0.00
275.00	0.00	0	-2.51	0.00	0.00	0.00
276.00	0.00	0	-2.51	0.00	0.00	0.00
277.00	0.00	0	-2.51	0.00	0.00	0.00
278.00	0.00	0	-2.51	0.00	0.00	0.00
279.00	0.00	0	-2.51	0.00	0.00	0.00
280.00	0.00	0	-2.51	0.00	0.00	0.00
281.00	0.00	0	-2.51	0.00	0.00	0.00
282.00	0.00	0	-2.51	0.00	0.00	0.00
283.00	0.00	0	-2.51	0.00	0.00	0.00
284.00	0.00	0	-2.51	0.00	0.00	0.00
285.00	0.00	0	-2.51	0.00	0.00	0.00
286.00	0.00	0	-2.51	0.00	0.00	0.00
287.00	0.00	0	-2.51	0.00	0.00	0.00
288.00	0.00	0	-2.51	0.00	0.00	0.00
289.00	0.00	0	-2.51	0.00	0.00	0.00
290.00	0.00	0	-2.51	0.00	0.00	0.00
291.00	0.00	0	-2.51	0.00	0.00	0.00
292.00	0.00	0	-2.51	0.00	0.00	0.00
293.00	0.00	0	-2.51	0.00	0.00	0.00
294.00	0.00	0	-2.51	0.00	0.00	0.00
295.00	0.00	0	-2.51	0.00	0.00	0.00
296.00	0.00	0	-2.51	0.00	0.00	0.00
297.00	0.00	0	-2.51	0.00	0.00	0.00
298.00	0.00	0	-2.51	0.00	0.00	0.00
299.00	0.00	0	-2.51	0.00	0.00	0.00
300.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Summary for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Runoff = 4.41 cfs @ 12.13 hrs, Volume= 0.330 af, Depth= 5.66"

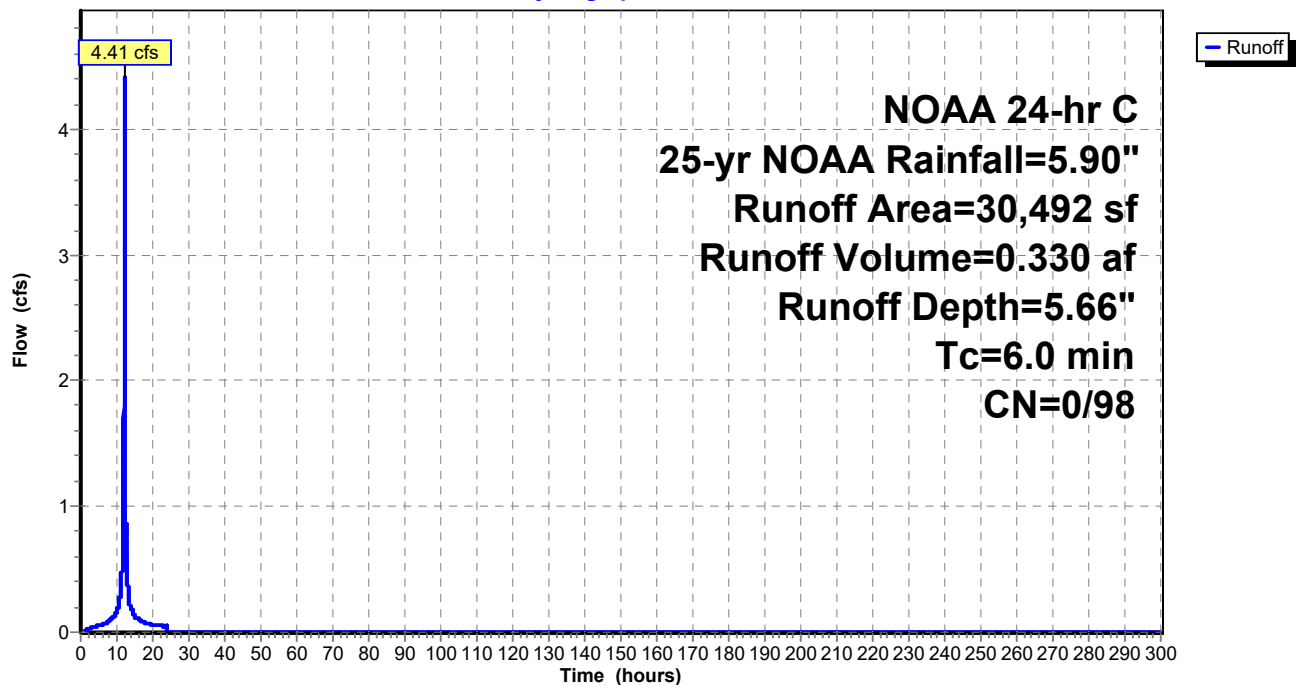
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00	0.01
2.00	0.13	0.00	0.03	0.03
3.00	0.21	0.00	0.08	0.04
4.00	0.29	0.00	0.14	0.05
5.00	0.38	0.00	0.21	0.05
6.00	0.47	0.00	0.29	0.06
7.00	0.58	0.00	0.39	0.08
8.00	0.71	0.00	0.51	0.09
9.00	0.86	0.00	0.66	0.11
10.00	1.08	0.00	0.86	0.17
11.00	1.42	0.00	1.20	0.32
12.00	2.81	0.00	2.58	2.45
13.00	4.48	0.00	4.25	0.39
14.00	4.82	0.00	4.59	0.19
15.00	5.04	0.00	4.80	0.13
16.00	5.19	0.00	4.96	0.10
17.00	5.32	0.00	5.09	0.09
18.00	5.43	0.00	5.19	0.07
19.00	5.52	0.00	5.29	0.06
20.00	5.61	0.00	5.37	0.06
21.00	5.69	0.00	5.45	0.06
22.00	5.77	0.00	5.53	0.05
23.00	5.84	0.00	5.60	0.05
24.00	5.90	0.00	5.66	0.05
25.00	5.90	0.00	5.66	0.00
26.00	5.90	0.00	5.66	0.00
27.00	5.90	0.00	5.66	0.00
28.00	5.90	0.00	5.66	0.00
29.00	5.90	0.00	5.66	0.00
30.00	5.90	0.00	5.66	0.00
31.00	5.90	0.00	5.66	0.00
32.00	5.90	0.00	5.66	0.00
33.00	5.90	0.00	5.66	0.00
34.00	5.90	0.00	5.66	0.00
35.00	5.90	0.00	5.66	0.00
36.00	5.90	0.00	5.66	0.00
37.00	5.90	0.00	5.66	0.00
38.00	5.90	0.00	5.66	0.00
39.00	5.90	0.00	5.66	0.00
40.00	5.90	0.00	5.66	0.00
41.00	5.90	0.00	5.66	0.00
42.00	5.90	0.00	5.66	0.00
43.00	5.90	0.00	5.66	0.00
44.00	5.90	0.00	5.66	0.00
45.00	5.90	0.00	5.66	0.00
46.00	5.90	0.00	5.66	0.00
47.00	5.90	0.00	5.66	0.00
48.00	5.90	0.00	5.66	0.00
49.00	5.90	0.00	5.66	0.00
50.00	5.90	0.00	5.66	0.00
51.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	5.90	0.00	5.66	0.00
53.00	5.90	0.00	5.66	0.00
54.00	5.90	0.00	5.66	0.00
55.00	5.90	0.00	5.66	0.00
56.00	5.90	0.00	5.66	0.00
57.00	5.90	0.00	5.66	0.00
58.00	5.90	0.00	5.66	0.00
59.00	5.90	0.00	5.66	0.00
60.00	5.90	0.00	5.66	0.00
61.00	5.90	0.00	5.66	0.00
62.00	5.90	0.00	5.66	0.00
63.00	5.90	0.00	5.66	0.00
64.00	5.90	0.00	5.66	0.00
65.00	5.90	0.00	5.66	0.00
66.00	5.90	0.00	5.66	0.00
67.00	5.90	0.00	5.66	0.00
68.00	5.90	0.00	5.66	0.00
69.00	5.90	0.00	5.66	0.00
70.00	5.90	0.00	5.66	0.00
71.00	5.90	0.00	5.66	0.00
72.00	5.90	0.00	5.66	0.00
73.00	5.90	0.00	5.66	0.00
74.00	5.90	0.00	5.66	0.00
75.00	5.90	0.00	5.66	0.00
76.00	5.90	0.00	5.66	0.00
77.00	5.90	0.00	5.66	0.00
78.00	5.90	0.00	5.66	0.00
79.00	5.90	0.00	5.66	0.00
80.00	5.90	0.00	5.66	0.00
81.00	5.90	0.00	5.66	0.00
82.00	5.90	0.00	5.66	0.00
83.00	5.90	0.00	5.66	0.00
84.00	5.90	0.00	5.66	0.00
85.00	5.90	0.00	5.66	0.00
86.00	5.90	0.00	5.66	0.00
87.00	5.90	0.00	5.66	0.00
88.00	5.90	0.00	5.66	0.00
89.00	5.90	0.00	5.66	0.00
90.00	5.90	0.00	5.66	0.00
91.00	5.90	0.00	5.66	0.00
92.00	5.90	0.00	5.66	0.00
93.00	5.90	0.00	5.66	0.00
94.00	5.90	0.00	5.66	0.00
95.00	5.90	0.00	5.66	0.00
96.00	5.90	0.00	5.66	0.00
97.00	5.90	0.00	5.66	0.00
98.00	5.90	0.00	5.66	0.00
99.00	5.90	0.00	5.66	0.00
100.00	5.90	0.00	5.66	0.00
101.00	5.90	0.00	5.66	0.00
102.00	5.90	0.00	5.66	0.00
103.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	5.90	0.00	5.66	0.00
105.00	5.90	0.00	5.66	0.00
106.00	5.90	0.00	5.66	0.00
107.00	5.90	0.00	5.66	0.00
108.00	5.90	0.00	5.66	0.00
109.00	5.90	0.00	5.66	0.00
110.00	5.90	0.00	5.66	0.00
111.00	5.90	0.00	5.66	0.00
112.00	5.90	0.00	5.66	0.00
113.00	5.90	0.00	5.66	0.00
114.00	5.90	0.00	5.66	0.00
115.00	5.90	0.00	5.66	0.00
116.00	5.90	0.00	5.66	0.00
117.00	5.90	0.00	5.66	0.00
118.00	5.90	0.00	5.66	0.00
119.00	5.90	0.00	5.66	0.00
120.00	5.90	0.00	5.66	0.00
121.00	5.90	0.00	5.66	0.00
122.00	5.90	0.00	5.66	0.00
123.00	5.90	0.00	5.66	0.00
124.00	5.90	0.00	5.66	0.00
125.00	5.90	0.00	5.66	0.00
126.00	5.90	0.00	5.66	0.00
127.00	5.90	0.00	5.66	0.00
128.00	5.90	0.00	5.66	0.00
129.00	5.90	0.00	5.66	0.00
130.00	5.90	0.00	5.66	0.00
131.00	5.90	0.00	5.66	0.00
132.00	5.90	0.00	5.66	0.00
133.00	5.90	0.00	5.66	0.00
134.00	5.90	0.00	5.66	0.00
135.00	5.90	0.00	5.66	0.00
136.00	5.90	0.00	5.66	0.00
137.00	5.90	0.00	5.66	0.00
138.00	5.90	0.00	5.66	0.00
139.00	5.90	0.00	5.66	0.00
140.00	5.90	0.00	5.66	0.00
141.00	5.90	0.00	5.66	0.00
142.00	5.90	0.00	5.66	0.00
143.00	5.90	0.00	5.66	0.00
144.00	5.90	0.00	5.66	0.00
145.00	5.90	0.00	5.66	0.00
146.00	5.90	0.00	5.66	0.00
147.00	5.90	0.00	5.66	0.00
148.00	5.90	0.00	5.66	0.00
149.00	5.90	0.00	5.66	0.00
150.00	5.90	0.00	5.66	0.00
151.00	5.90	0.00	5.66	0.00
152.00	5.90	0.00	5.66	0.00
153.00	5.90	0.00	5.66	0.00
154.00	5.90	0.00	5.66	0.00
155.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	5.90	0.00	5.66	0.00
157.00	5.90	0.00	5.66	0.00
158.00	5.90	0.00	5.66	0.00
159.00	5.90	0.00	5.66	0.00
160.00	5.90	0.00	5.66	0.00
161.00	5.90	0.00	5.66	0.00
162.00	5.90	0.00	5.66	0.00
163.00	5.90	0.00	5.66	0.00
164.00	5.90	0.00	5.66	0.00
165.00	5.90	0.00	5.66	0.00
166.00	5.90	0.00	5.66	0.00
167.00	5.90	0.00	5.66	0.00
168.00	5.90	0.00	5.66	0.00
169.00	5.90	0.00	5.66	0.00
170.00	5.90	0.00	5.66	0.00
171.00	5.90	0.00	5.66	0.00
172.00	5.90	0.00	5.66	0.00
173.00	5.90	0.00	5.66	0.00
174.00	5.90	0.00	5.66	0.00
175.00	5.90	0.00	5.66	0.00
176.00	5.90	0.00	5.66	0.00
177.00	5.90	0.00	5.66	0.00
178.00	5.90	0.00	5.66	0.00
179.00	5.90	0.00	5.66	0.00
180.00	5.90	0.00	5.66	0.00
181.00	5.90	0.00	5.66	0.00
182.00	5.90	0.00	5.66	0.00
183.00	5.90	0.00	5.66	0.00
184.00	5.90	0.00	5.66	0.00
185.00	5.90	0.00	5.66	0.00
186.00	5.90	0.00	5.66	0.00
187.00	5.90	0.00	5.66	0.00
188.00	5.90	0.00	5.66	0.00
189.00	5.90	0.00	5.66	0.00
190.00	5.90	0.00	5.66	0.00
191.00	5.90	0.00	5.66	0.00
192.00	5.90	0.00	5.66	0.00
193.00	5.90	0.00	5.66	0.00
194.00	5.90	0.00	5.66	0.00
195.00	5.90	0.00	5.66	0.00
196.00	5.90	0.00	5.66	0.00
197.00	5.90	0.00	5.66	0.00
198.00	5.90	0.00	5.66	0.00
199.00	5.90	0.00	5.66	0.00
200.00	5.90	0.00	5.66	0.00
201.00	5.90	0.00	5.66	0.00
202.00	5.90	0.00	5.66	0.00
203.00	5.90	0.00	5.66	0.00
204.00	5.90	0.00	5.66	0.00
205.00	5.90	0.00	5.66	0.00
206.00	5.90	0.00	5.66	0.00
207.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	5.90	0.00	5.66	0.00
209.00	5.90	0.00	5.66	0.00
210.00	5.90	0.00	5.66	0.00
211.00	5.90	0.00	5.66	0.00
212.00	5.90	0.00	5.66	0.00
213.00	5.90	0.00	5.66	0.00
214.00	5.90	0.00	5.66	0.00
215.00	5.90	0.00	5.66	0.00
216.00	5.90	0.00	5.66	0.00
217.00	5.90	0.00	5.66	0.00
218.00	5.90	0.00	5.66	0.00
219.00	5.90	0.00	5.66	0.00
220.00	5.90	0.00	5.66	0.00
221.00	5.90	0.00	5.66	0.00
222.00	5.90	0.00	5.66	0.00
223.00	5.90	0.00	5.66	0.00
224.00	5.90	0.00	5.66	0.00
225.00	5.90	0.00	5.66	0.00
226.00	5.90	0.00	5.66	0.00
227.00	5.90	0.00	5.66	0.00
228.00	5.90	0.00	5.66	0.00
229.00	5.90	0.00	5.66	0.00
230.00	5.90	0.00	5.66	0.00
231.00	5.90	0.00	5.66	0.00
232.00	5.90	0.00	5.66	0.00
233.00	5.90	0.00	5.66	0.00
234.00	5.90	0.00	5.66	0.00
235.00	5.90	0.00	5.66	0.00
236.00	5.90	0.00	5.66	0.00
237.00	5.90	0.00	5.66	0.00
238.00	5.90	0.00	5.66	0.00
239.00	5.90	0.00	5.66	0.00
240.00	5.90	0.00	5.66	0.00
241.00	5.90	0.00	5.66	0.00
242.00	5.90	0.00	5.66	0.00
243.00	5.90	0.00	5.66	0.00
244.00	5.90	0.00	5.66	0.00
245.00	5.90	0.00	5.66	0.00
246.00	5.90	0.00	5.66	0.00
247.00	5.90	0.00	5.66	0.00
248.00	5.90	0.00	5.66	0.00
249.00	5.90	0.00	5.66	0.00
250.00	5.90	0.00	5.66	0.00
251.00	5.90	0.00	5.66	0.00
252.00	5.90	0.00	5.66	0.00
253.00	5.90	0.00	5.66	0.00
254.00	5.90	0.00	5.66	0.00
255.00	5.90	0.00	5.66	0.00
256.00	5.90	0.00	5.66	0.00
257.00	5.90	0.00	5.66	0.00
258.00	5.90	0.00	5.66	0.00
259.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	5.90	0.00	5.66	0.00
261.00	5.90	0.00	5.66	0.00
262.00	5.90	0.00	5.66	0.00
263.00	5.90	0.00	5.66	0.00
264.00	5.90	0.00	5.66	0.00
265.00	5.90	0.00	5.66	0.00
266.00	5.90	0.00	5.66	0.00
267.00	5.90	0.00	5.66	0.00
268.00	5.90	0.00	5.66	0.00
269.00	5.90	0.00	5.66	0.00
270.00	5.90	0.00	5.66	0.00
271.00	5.90	0.00	5.66	0.00
272.00	5.90	0.00	5.66	0.00
273.00	5.90	0.00	5.66	0.00
274.00	5.90	0.00	5.66	0.00
275.00	5.90	0.00	5.66	0.00
276.00	5.90	0.00	5.66	0.00
277.00	5.90	0.00	5.66	0.00
278.00	5.90	0.00	5.66	0.00
279.00	5.90	0.00	5.66	0.00
280.00	5.90	0.00	5.66	0.00
281.00	5.90	0.00	5.66	0.00
282.00	5.90	0.00	5.66	0.00
283.00	5.90	0.00	5.66	0.00
284.00	5.90	0.00	5.66	0.00
285.00	5.90	0.00	5.66	0.00
286.00	5.90	0.00	5.66	0.00
287.00	5.90	0.00	5.66	0.00
288.00	5.90	0.00	5.66	0.00
289.00	5.90	0.00	5.66	0.00
290.00	5.90	0.00	5.66	0.00
291.00	5.90	0.00	5.66	0.00
292.00	5.90	0.00	5.66	0.00
293.00	5.90	0.00	5.66	0.00
294.00	5.90	0.00	5.66	0.00
295.00	5.90	0.00	5.66	0.00
296.00	5.90	0.00	5.66	0.00
297.00	5.90	0.00	5.66	0.00
298.00	5.90	0.00	5.66	0.00
299.00	5.90	0.00	5.66	0.00
300.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Summary for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Runoff = 2.10 cfs @ 12.23 hrs, Volume= 0.181 af, Depth= 3.10"

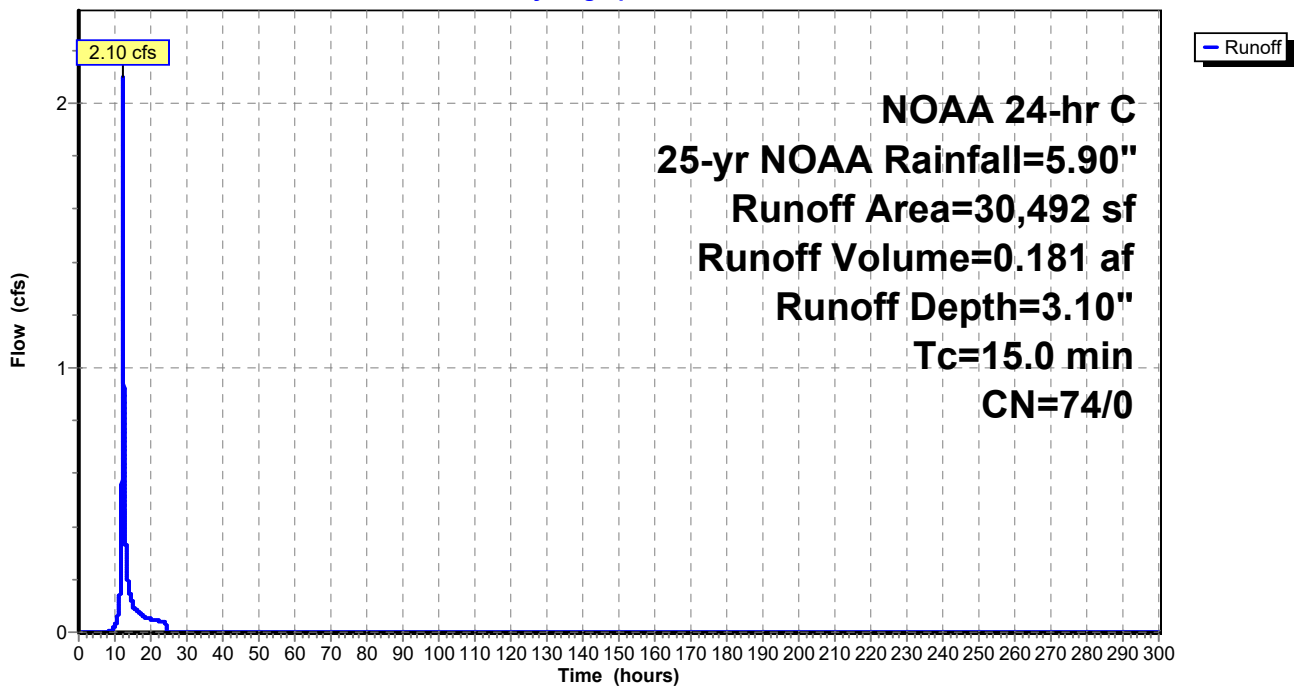
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Area (sf)	CN	Description
* 30,492	74	Meadow, non-grazed, HSG C
30,492	74	100.00% Pervious Area

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

Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00	0.00
2.00	0.13	0.00	0.00	0.00
3.00	0.21	0.00	0.00	0.00
4.00	0.29	0.00	0.00	0.00
5.00	0.38	0.00	0.00	0.00
6.00	0.47	0.00	0.00	0.00
7.00	0.58	0.00	0.00	0.00
8.00	0.71	0.00	0.00	0.00
9.00	0.86	0.01	0.00	0.01
10.00	1.08	0.04	0.00	0.03
11.00	1.42	0.12	0.00	0.08
12.00	2.81	0.79	0.00	0.72
13.00	4.48	1.96	0.00	0.35
14.00	4.82	2.22	0.00	0.15
15.00	5.04	2.39	0.00	0.11
16.00	5.19	2.52	0.00	0.08
17.00	5.32	2.63	0.00	0.07
18.00	5.43	2.71	0.00	0.06
19.00	5.52	2.79	0.00	0.05
20.00	5.61	2.86	0.00	0.05
21.00	5.69	2.93	0.00	0.05
22.00	5.77	2.99	0.00	0.04
23.00	5.84	3.05	0.00	0.04
24.00	5.90	3.10	0.00	0.04
25.00	5.90	3.10	0.00	0.00
26.00	5.90	3.10	0.00	0.00
27.00	5.90	3.10	0.00	0.00
28.00	5.90	3.10	0.00	0.00
29.00	5.90	3.10	0.00	0.00
30.00	5.90	3.10	0.00	0.00
31.00	5.90	3.10	0.00	0.00
32.00	5.90	3.10	0.00	0.00
33.00	5.90	3.10	0.00	0.00
34.00	5.90	3.10	0.00	0.00
35.00	5.90	3.10	0.00	0.00
36.00	5.90	3.10	0.00	0.00
37.00	5.90	3.10	0.00	0.00
38.00	5.90	3.10	0.00	0.00
39.00	5.90	3.10	0.00	0.00
40.00	5.90	3.10	0.00	0.00
41.00	5.90	3.10	0.00	0.00
42.00	5.90	3.10	0.00	0.00
43.00	5.90	3.10	0.00	0.00
44.00	5.90	3.10	0.00	0.00
45.00	5.90	3.10	0.00	0.00
46.00	5.90	3.10	0.00	0.00
47.00	5.90	3.10	0.00	0.00
48.00	5.90	3.10	0.00	0.00
49.00	5.90	3.10	0.00	0.00
50.00	5.90	3.10	0.00	0.00
51.00	5.90	3.10	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	5.90	3.10	0.00	0.00
53.00	5.90	3.10	0.00	0.00
54.00	5.90	3.10	0.00	0.00
55.00	5.90	3.10	0.00	0.00
56.00	5.90	3.10	0.00	0.00
57.00	5.90	3.10	0.00	0.00
58.00	5.90	3.10	0.00	0.00
59.00	5.90	3.10	0.00	0.00
60.00	5.90	3.10	0.00	0.00
61.00	5.90	3.10	0.00	0.00
62.00	5.90	3.10	0.00	0.00
63.00	5.90	3.10	0.00	0.00
64.00	5.90	3.10	0.00	0.00
65.00	5.90	3.10	0.00	0.00
66.00	5.90	3.10	0.00	0.00
67.00	5.90	3.10	0.00	0.00
68.00	5.90	3.10	0.00	0.00
69.00	5.90	3.10	0.00	0.00
70.00	5.90	3.10	0.00	0.00
71.00	5.90	3.10	0.00	0.00
72.00	5.90	3.10	0.00	0.00
73.00	5.90	3.10	0.00	0.00
74.00	5.90	3.10	0.00	0.00
75.00	5.90	3.10	0.00	0.00
76.00	5.90	3.10	0.00	0.00
77.00	5.90	3.10	0.00	0.00
78.00	5.90	3.10	0.00	0.00
79.00	5.90	3.10	0.00	0.00
80.00	5.90	3.10	0.00	0.00
81.00	5.90	3.10	0.00	0.00
82.00	5.90	3.10	0.00	0.00
83.00	5.90	3.10	0.00	0.00
84.00	5.90	3.10	0.00	0.00
85.00	5.90	3.10	0.00	0.00
86.00	5.90	3.10	0.00	0.00
87.00	5.90	3.10	0.00	0.00
88.00	5.90	3.10	0.00	0.00
89.00	5.90	3.10	0.00	0.00
90.00	5.90	3.10	0.00	0.00
91.00	5.90	3.10	0.00	0.00
92.00	5.90	3.10	0.00	0.00
93.00	5.90	3.10	0.00	0.00
94.00	5.90	3.10	0.00	0.00
95.00	5.90	3.10	0.00	0.00
96.00	5.90	3.10	0.00	0.00
97.00	5.90	3.10	0.00	0.00
98.00	5.90	3.10	0.00	0.00
99.00	5.90	3.10	0.00	0.00
100.00	5.90	3.10	0.00	0.00
101.00	5.90	3.10	0.00	0.00
102.00	5.90	3.10	0.00	0.00
103.00	5.90	3.10	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	5.90	3.10	0.00	0.00
105.00	5.90	3.10	0.00	0.00
106.00	5.90	3.10	0.00	0.00
107.00	5.90	3.10	0.00	0.00
108.00	5.90	3.10	0.00	0.00
109.00	5.90	3.10	0.00	0.00
110.00	5.90	3.10	0.00	0.00
111.00	5.90	3.10	0.00	0.00
112.00	5.90	3.10	0.00	0.00
113.00	5.90	3.10	0.00	0.00
114.00	5.90	3.10	0.00	0.00
115.00	5.90	3.10	0.00	0.00
116.00	5.90	3.10	0.00	0.00
117.00	5.90	3.10	0.00	0.00
118.00	5.90	3.10	0.00	0.00
119.00	5.90	3.10	0.00	0.00
120.00	5.90	3.10	0.00	0.00
121.00	5.90	3.10	0.00	0.00
122.00	5.90	3.10	0.00	0.00
123.00	5.90	3.10	0.00	0.00
124.00	5.90	3.10	0.00	0.00
125.00	5.90	3.10	0.00	0.00
126.00	5.90	3.10	0.00	0.00
127.00	5.90	3.10	0.00	0.00
128.00	5.90	3.10	0.00	0.00
129.00	5.90	3.10	0.00	0.00
130.00	5.90	3.10	0.00	0.00
131.00	5.90	3.10	0.00	0.00
132.00	5.90	3.10	0.00	0.00
133.00	5.90	3.10	0.00	0.00
134.00	5.90	3.10	0.00	0.00
135.00	5.90	3.10	0.00	0.00
136.00	5.90	3.10	0.00	0.00
137.00	5.90	3.10	0.00	0.00
138.00	5.90	3.10	0.00	0.00
139.00	5.90	3.10	0.00	0.00
140.00	5.90	3.10	0.00	0.00
141.00	5.90	3.10	0.00	0.00
142.00	5.90	3.10	0.00	0.00
143.00	5.90	3.10	0.00	0.00
144.00	5.90	3.10	0.00	0.00
145.00	5.90	3.10	0.00	0.00
146.00	5.90	3.10	0.00	0.00
147.00	5.90	3.10	0.00	0.00
148.00	5.90	3.10	0.00	0.00
149.00	5.90	3.10	0.00	0.00
150.00	5.90	3.10	0.00	0.00
151.00	5.90	3.10	0.00	0.00
152.00	5.90	3.10	0.00	0.00
153.00	5.90	3.10	0.00	0.00
154.00	5.90	3.10	0.00	0.00
155.00	5.90	3.10	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	5.90	3.10	0.00	0.00
157.00	5.90	3.10	0.00	0.00
158.00	5.90	3.10	0.00	0.00
159.00	5.90	3.10	0.00	0.00
160.00	5.90	3.10	0.00	0.00
161.00	5.90	3.10	0.00	0.00
162.00	5.90	3.10	0.00	0.00
163.00	5.90	3.10	0.00	0.00
164.00	5.90	3.10	0.00	0.00
165.00	5.90	3.10	0.00	0.00
166.00	5.90	3.10	0.00	0.00
167.00	5.90	3.10	0.00	0.00
168.00	5.90	3.10	0.00	0.00
169.00	5.90	3.10	0.00	0.00
170.00	5.90	3.10	0.00	0.00
171.00	5.90	3.10	0.00	0.00
172.00	5.90	3.10	0.00	0.00
173.00	5.90	3.10	0.00	0.00
174.00	5.90	3.10	0.00	0.00
175.00	5.90	3.10	0.00	0.00
176.00	5.90	3.10	0.00	0.00
177.00	5.90	3.10	0.00	0.00
178.00	5.90	3.10	0.00	0.00
179.00	5.90	3.10	0.00	0.00
180.00	5.90	3.10	0.00	0.00
181.00	5.90	3.10	0.00	0.00
182.00	5.90	3.10	0.00	0.00
183.00	5.90	3.10	0.00	0.00
184.00	5.90	3.10	0.00	0.00
185.00	5.90	3.10	0.00	0.00
186.00	5.90	3.10	0.00	0.00
187.00	5.90	3.10	0.00	0.00
188.00	5.90	3.10	0.00	0.00
189.00	5.90	3.10	0.00	0.00
190.00	5.90	3.10	0.00	0.00
191.00	5.90	3.10	0.00	0.00
192.00	5.90	3.10	0.00	0.00
193.00	5.90	3.10	0.00	0.00
194.00	5.90	3.10	0.00	0.00
195.00	5.90	3.10	0.00	0.00
196.00	5.90	3.10	0.00	0.00
197.00	5.90	3.10	0.00	0.00
198.00	5.90	3.10	0.00	0.00
199.00	5.90	3.10	0.00	0.00
200.00	5.90	3.10	0.00	0.00
201.00	5.90	3.10	0.00	0.00
202.00	5.90	3.10	0.00	0.00
203.00	5.90	3.10	0.00	0.00
204.00	5.90	3.10	0.00	0.00
205.00	5.90	3.10	0.00	0.00
206.00	5.90	3.10	0.00	0.00
207.00	5.90	3.10	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	5.90	3.10	0.00	0.00
209.00	5.90	3.10	0.00	0.00
210.00	5.90	3.10	0.00	0.00
211.00	5.90	3.10	0.00	0.00
212.00	5.90	3.10	0.00	0.00
213.00	5.90	3.10	0.00	0.00
214.00	5.90	3.10	0.00	0.00
215.00	5.90	3.10	0.00	0.00
216.00	5.90	3.10	0.00	0.00
217.00	5.90	3.10	0.00	0.00
218.00	5.90	3.10	0.00	0.00
219.00	5.90	3.10	0.00	0.00
220.00	5.90	3.10	0.00	0.00
221.00	5.90	3.10	0.00	0.00
222.00	5.90	3.10	0.00	0.00
223.00	5.90	3.10	0.00	0.00
224.00	5.90	3.10	0.00	0.00
225.00	5.90	3.10	0.00	0.00
226.00	5.90	3.10	0.00	0.00
227.00	5.90	3.10	0.00	0.00
228.00	5.90	3.10	0.00	0.00
229.00	5.90	3.10	0.00	0.00
230.00	5.90	3.10	0.00	0.00
231.00	5.90	3.10	0.00	0.00
232.00	5.90	3.10	0.00	0.00
233.00	5.90	3.10	0.00	0.00
234.00	5.90	3.10	0.00	0.00
235.00	5.90	3.10	0.00	0.00
236.00	5.90	3.10	0.00	0.00
237.00	5.90	3.10	0.00	0.00
238.00	5.90	3.10	0.00	0.00
239.00	5.90	3.10	0.00	0.00
240.00	5.90	3.10	0.00	0.00
241.00	5.90	3.10	0.00	0.00
242.00	5.90	3.10	0.00	0.00
243.00	5.90	3.10	0.00	0.00
244.00	5.90	3.10	0.00	0.00
245.00	5.90	3.10	0.00	0.00
246.00	5.90	3.10	0.00	0.00
247.00	5.90	3.10	0.00	0.00
248.00	5.90	3.10	0.00	0.00
249.00	5.90	3.10	0.00	0.00
250.00	5.90	3.10	0.00	0.00
251.00	5.90	3.10	0.00	0.00
252.00	5.90	3.10	0.00	0.00
253.00	5.90	3.10	0.00	0.00
254.00	5.90	3.10	0.00	0.00
255.00	5.90	3.10	0.00	0.00
256.00	5.90	3.10	0.00	0.00
257.00	5.90	3.10	0.00	0.00
258.00	5.90	3.10	0.00	0.00
259.00	5.90	3.10	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	5.90	3.10	0.00	0.00
261.00	5.90	3.10	0.00	0.00
262.00	5.90	3.10	0.00	0.00
263.00	5.90	3.10	0.00	0.00
264.00	5.90	3.10	0.00	0.00
265.00	5.90	3.10	0.00	0.00
266.00	5.90	3.10	0.00	0.00
267.00	5.90	3.10	0.00	0.00
268.00	5.90	3.10	0.00	0.00
269.00	5.90	3.10	0.00	0.00
270.00	5.90	3.10	0.00	0.00
271.00	5.90	3.10	0.00	0.00
272.00	5.90	3.10	0.00	0.00
273.00	5.90	3.10	0.00	0.00
274.00	5.90	3.10	0.00	0.00
275.00	5.90	3.10	0.00	0.00
276.00	5.90	3.10	0.00	0.00
277.00	5.90	3.10	0.00	0.00
278.00	5.90	3.10	0.00	0.00
279.00	5.90	3.10	0.00	0.00
280.00	5.90	3.10	0.00	0.00
281.00	5.90	3.10	0.00	0.00
282.00	5.90	3.10	0.00	0.00
283.00	5.90	3.10	0.00	0.00
284.00	5.90	3.10	0.00	0.00
285.00	5.90	3.10	0.00	0.00
286.00	5.90	3.10	0.00	0.00
287.00	5.90	3.10	0.00	0.00
288.00	5.90	3.10	0.00	0.00
289.00	5.90	3.10	0.00	0.00
290.00	5.90	3.10	0.00	0.00
291.00	5.90	3.10	0.00	0.00
292.00	5.90	3.10	0.00	0.00
293.00	5.90	3.10	0.00	0.00
294.00	5.90	3.10	0.00	0.00
295.00	5.90	3.10	0.00	0.00
296.00	5.90	3.10	0.00	0.00
297.00	5.90	3.10	0.00	0.00
298.00	5.90	3.10	0.00	0.00
299.00	5.90	3.10	0.00	0.00
300.00	5.90	3.10	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Prepared by VU for PADEP

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Summary for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Runoff = 4.41 cfs @ 12.13 hrs, Volume= 0.330 af, Depth= 5.66"

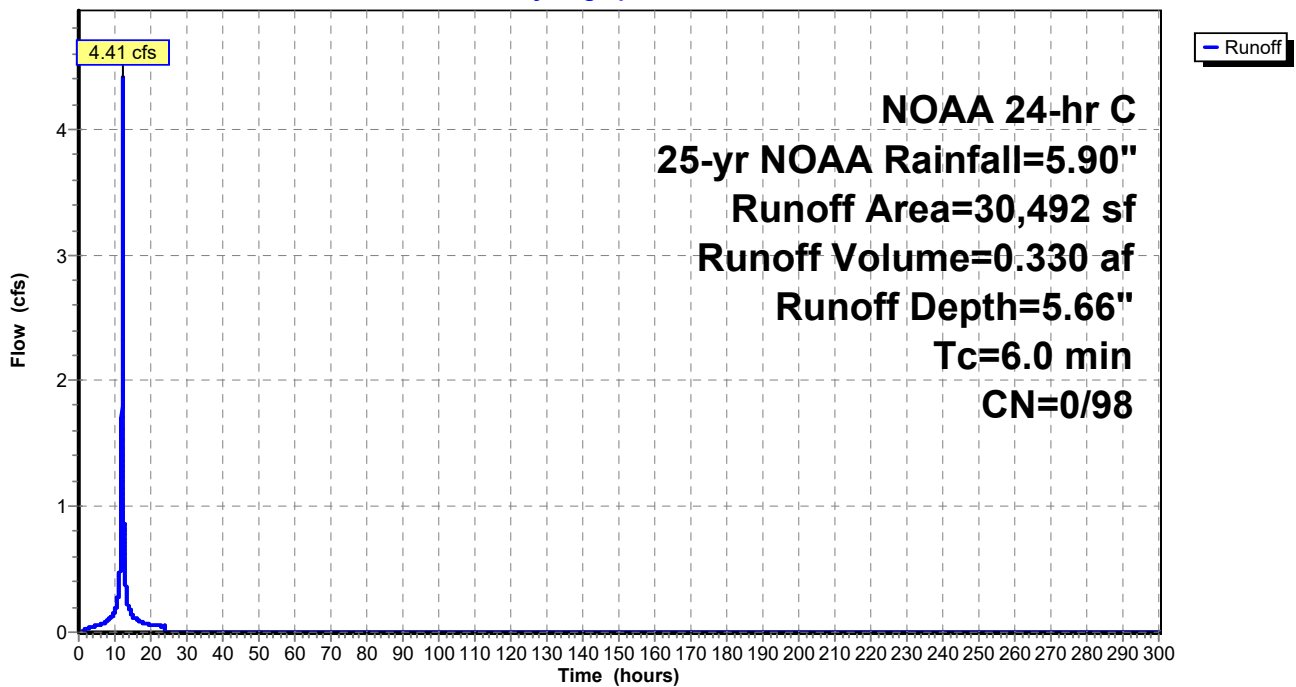
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Hydrograph



MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.06	0.00	0.00	0.01
2.00	0.13	0.00	0.03	0.03
3.00	0.21	0.00	0.08	0.04
4.00	0.29	0.00	0.14	0.05
5.00	0.38	0.00	0.21	0.05
6.00	0.47	0.00	0.29	0.06
7.00	0.58	0.00	0.39	0.08
8.00	0.71	0.00	0.51	0.09
9.00	0.86	0.00	0.66	0.11
10.00	1.08	0.00	0.86	0.17
11.00	1.42	0.00	1.20	0.32
12.00	2.81	0.00	2.58	2.45
13.00	4.48	0.00	4.25	0.39
14.00	4.82	0.00	4.59	0.19
15.00	5.04	0.00	4.80	0.13
16.00	5.19	0.00	4.96	0.10
17.00	5.32	0.00	5.09	0.09
18.00	5.43	0.00	5.19	0.07
19.00	5.52	0.00	5.29	0.06
20.00	5.61	0.00	5.37	0.06
21.00	5.69	0.00	5.45	0.06
22.00	5.77	0.00	5.53	0.05
23.00	5.84	0.00	5.60	0.05
24.00	5.90	0.00	5.66	0.05
25.00	5.90	0.00	5.66	0.00
26.00	5.90	0.00	5.66	0.00
27.00	5.90	0.00	5.66	0.00
28.00	5.90	0.00	5.66	0.00
29.00	5.90	0.00	5.66	0.00
30.00	5.90	0.00	5.66	0.00
31.00	5.90	0.00	5.66	0.00
32.00	5.90	0.00	5.66	0.00
33.00	5.90	0.00	5.66	0.00
34.00	5.90	0.00	5.66	0.00
35.00	5.90	0.00	5.66	0.00
36.00	5.90	0.00	5.66	0.00
37.00	5.90	0.00	5.66	0.00
38.00	5.90	0.00	5.66	0.00
39.00	5.90	0.00	5.66	0.00
40.00	5.90	0.00	5.66	0.00
41.00	5.90	0.00	5.66	0.00
42.00	5.90	0.00	5.66	0.00
43.00	5.90	0.00	5.66	0.00
44.00	5.90	0.00	5.66	0.00
45.00	5.90	0.00	5.66	0.00
46.00	5.90	0.00	5.66	0.00
47.00	5.90	0.00	5.66	0.00
48.00	5.90	0.00	5.66	0.00
49.00	5.90	0.00	5.66	0.00
50.00	5.90	0.00	5.66	0.00
51.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	5.90	0.00	5.66	0.00
53.00	5.90	0.00	5.66	0.00
54.00	5.90	0.00	5.66	0.00
55.00	5.90	0.00	5.66	0.00
56.00	5.90	0.00	5.66	0.00
57.00	5.90	0.00	5.66	0.00
58.00	5.90	0.00	5.66	0.00
59.00	5.90	0.00	5.66	0.00
60.00	5.90	0.00	5.66	0.00
61.00	5.90	0.00	5.66	0.00
62.00	5.90	0.00	5.66	0.00
63.00	5.90	0.00	5.66	0.00
64.00	5.90	0.00	5.66	0.00
65.00	5.90	0.00	5.66	0.00
66.00	5.90	0.00	5.66	0.00
67.00	5.90	0.00	5.66	0.00
68.00	5.90	0.00	5.66	0.00
69.00	5.90	0.00	5.66	0.00
70.00	5.90	0.00	5.66	0.00
71.00	5.90	0.00	5.66	0.00
72.00	5.90	0.00	5.66	0.00
73.00	5.90	0.00	5.66	0.00
74.00	5.90	0.00	5.66	0.00
75.00	5.90	0.00	5.66	0.00
76.00	5.90	0.00	5.66	0.00
77.00	5.90	0.00	5.66	0.00
78.00	5.90	0.00	5.66	0.00
79.00	5.90	0.00	5.66	0.00
80.00	5.90	0.00	5.66	0.00
81.00	5.90	0.00	5.66	0.00
82.00	5.90	0.00	5.66	0.00
83.00	5.90	0.00	5.66	0.00
84.00	5.90	0.00	5.66	0.00
85.00	5.90	0.00	5.66	0.00
86.00	5.90	0.00	5.66	0.00
87.00	5.90	0.00	5.66	0.00
88.00	5.90	0.00	5.66	0.00
89.00	5.90	0.00	5.66	0.00
90.00	5.90	0.00	5.66	0.00
91.00	5.90	0.00	5.66	0.00
92.00	5.90	0.00	5.66	0.00
93.00	5.90	0.00	5.66	0.00
94.00	5.90	0.00	5.66	0.00
95.00	5.90	0.00	5.66	0.00
96.00	5.90	0.00	5.66	0.00
97.00	5.90	0.00	5.66	0.00
98.00	5.90	0.00	5.66	0.00
99.00	5.90	0.00	5.66	0.00
100.00	5.90	0.00	5.66	0.00
101.00	5.90	0.00	5.66	0.00
102.00	5.90	0.00	5.66	0.00
103.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	5.90	0.00	5.66	0.00
105.00	5.90	0.00	5.66	0.00
106.00	5.90	0.00	5.66	0.00
107.00	5.90	0.00	5.66	0.00
108.00	5.90	0.00	5.66	0.00
109.00	5.90	0.00	5.66	0.00
110.00	5.90	0.00	5.66	0.00
111.00	5.90	0.00	5.66	0.00
112.00	5.90	0.00	5.66	0.00
113.00	5.90	0.00	5.66	0.00
114.00	5.90	0.00	5.66	0.00
115.00	5.90	0.00	5.66	0.00
116.00	5.90	0.00	5.66	0.00
117.00	5.90	0.00	5.66	0.00
118.00	5.90	0.00	5.66	0.00
119.00	5.90	0.00	5.66	0.00
120.00	5.90	0.00	5.66	0.00
121.00	5.90	0.00	5.66	0.00
122.00	5.90	0.00	5.66	0.00
123.00	5.90	0.00	5.66	0.00
124.00	5.90	0.00	5.66	0.00
125.00	5.90	0.00	5.66	0.00
126.00	5.90	0.00	5.66	0.00
127.00	5.90	0.00	5.66	0.00
128.00	5.90	0.00	5.66	0.00
129.00	5.90	0.00	5.66	0.00
130.00	5.90	0.00	5.66	0.00
131.00	5.90	0.00	5.66	0.00
132.00	5.90	0.00	5.66	0.00
133.00	5.90	0.00	5.66	0.00
134.00	5.90	0.00	5.66	0.00
135.00	5.90	0.00	5.66	0.00
136.00	5.90	0.00	5.66	0.00
137.00	5.90	0.00	5.66	0.00
138.00	5.90	0.00	5.66	0.00
139.00	5.90	0.00	5.66	0.00
140.00	5.90	0.00	5.66	0.00
141.00	5.90	0.00	5.66	0.00
142.00	5.90	0.00	5.66	0.00
143.00	5.90	0.00	5.66	0.00
144.00	5.90	0.00	5.66	0.00
145.00	5.90	0.00	5.66	0.00
146.00	5.90	0.00	5.66	0.00
147.00	5.90	0.00	5.66	0.00
148.00	5.90	0.00	5.66	0.00
149.00	5.90	0.00	5.66	0.00
150.00	5.90	0.00	5.66	0.00
151.00	5.90	0.00	5.66	0.00
152.00	5.90	0.00	5.66	0.00
153.00	5.90	0.00	5.66	0.00
154.00	5.90	0.00	5.66	0.00
155.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	5.90	0.00	5.66	0.00
157.00	5.90	0.00	5.66	0.00
158.00	5.90	0.00	5.66	0.00
159.00	5.90	0.00	5.66	0.00
160.00	5.90	0.00	5.66	0.00
161.00	5.90	0.00	5.66	0.00
162.00	5.90	0.00	5.66	0.00
163.00	5.90	0.00	5.66	0.00
164.00	5.90	0.00	5.66	0.00
165.00	5.90	0.00	5.66	0.00
166.00	5.90	0.00	5.66	0.00
167.00	5.90	0.00	5.66	0.00
168.00	5.90	0.00	5.66	0.00
169.00	5.90	0.00	5.66	0.00
170.00	5.90	0.00	5.66	0.00
171.00	5.90	0.00	5.66	0.00
172.00	5.90	0.00	5.66	0.00
173.00	5.90	0.00	5.66	0.00
174.00	5.90	0.00	5.66	0.00
175.00	5.90	0.00	5.66	0.00
176.00	5.90	0.00	5.66	0.00
177.00	5.90	0.00	5.66	0.00
178.00	5.90	0.00	5.66	0.00
179.00	5.90	0.00	5.66	0.00
180.00	5.90	0.00	5.66	0.00
181.00	5.90	0.00	5.66	0.00
182.00	5.90	0.00	5.66	0.00
183.00	5.90	0.00	5.66	0.00
184.00	5.90	0.00	5.66	0.00
185.00	5.90	0.00	5.66	0.00
186.00	5.90	0.00	5.66	0.00
187.00	5.90	0.00	5.66	0.00
188.00	5.90	0.00	5.66	0.00
189.00	5.90	0.00	5.66	0.00
190.00	5.90	0.00	5.66	0.00
191.00	5.90	0.00	5.66	0.00
192.00	5.90	0.00	5.66	0.00
193.00	5.90	0.00	5.66	0.00
194.00	5.90	0.00	5.66	0.00
195.00	5.90	0.00	5.66	0.00
196.00	5.90	0.00	5.66	0.00
197.00	5.90	0.00	5.66	0.00
198.00	5.90	0.00	5.66	0.00
199.00	5.90	0.00	5.66	0.00
200.00	5.90	0.00	5.66	0.00
201.00	5.90	0.00	5.66	0.00
202.00	5.90	0.00	5.66	0.00
203.00	5.90	0.00	5.66	0.00
204.00	5.90	0.00	5.66	0.00
205.00	5.90	0.00	5.66	0.00
206.00	5.90	0.00	5.66	0.00
207.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	5.90	0.00	5.66	0.00
209.00	5.90	0.00	5.66	0.00
210.00	5.90	0.00	5.66	0.00
211.00	5.90	0.00	5.66	0.00
212.00	5.90	0.00	5.66	0.00
213.00	5.90	0.00	5.66	0.00
214.00	5.90	0.00	5.66	0.00
215.00	5.90	0.00	5.66	0.00
216.00	5.90	0.00	5.66	0.00
217.00	5.90	0.00	5.66	0.00
218.00	5.90	0.00	5.66	0.00
219.00	5.90	0.00	5.66	0.00
220.00	5.90	0.00	5.66	0.00
221.00	5.90	0.00	5.66	0.00
222.00	5.90	0.00	5.66	0.00
223.00	5.90	0.00	5.66	0.00
224.00	5.90	0.00	5.66	0.00
225.00	5.90	0.00	5.66	0.00
226.00	5.90	0.00	5.66	0.00
227.00	5.90	0.00	5.66	0.00
228.00	5.90	0.00	5.66	0.00
229.00	5.90	0.00	5.66	0.00
230.00	5.90	0.00	5.66	0.00
231.00	5.90	0.00	5.66	0.00
232.00	5.90	0.00	5.66	0.00
233.00	5.90	0.00	5.66	0.00
234.00	5.90	0.00	5.66	0.00
235.00	5.90	0.00	5.66	0.00
236.00	5.90	0.00	5.66	0.00
237.00	5.90	0.00	5.66	0.00
238.00	5.90	0.00	5.66	0.00
239.00	5.90	0.00	5.66	0.00
240.00	5.90	0.00	5.66	0.00
241.00	5.90	0.00	5.66	0.00
242.00	5.90	0.00	5.66	0.00
243.00	5.90	0.00	5.66	0.00
244.00	5.90	0.00	5.66	0.00
245.00	5.90	0.00	5.66	0.00
246.00	5.90	0.00	5.66	0.00
247.00	5.90	0.00	5.66	0.00
248.00	5.90	0.00	5.66	0.00
249.00	5.90	0.00	5.66	0.00
250.00	5.90	0.00	5.66	0.00
251.00	5.90	0.00	5.66	0.00
252.00	5.90	0.00	5.66	0.00
253.00	5.90	0.00	5.66	0.00
254.00	5.90	0.00	5.66	0.00
255.00	5.90	0.00	5.66	0.00
256.00	5.90	0.00	5.66	0.00
257.00	5.90	0.00	5.66	0.00
258.00	5.90	0.00	5.66	0.00
259.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	5.90	0.00	5.66	0.00
261.00	5.90	0.00	5.66	0.00
262.00	5.90	0.00	5.66	0.00
263.00	5.90	0.00	5.66	0.00
264.00	5.90	0.00	5.66	0.00
265.00	5.90	0.00	5.66	0.00
266.00	5.90	0.00	5.66	0.00
267.00	5.90	0.00	5.66	0.00
268.00	5.90	0.00	5.66	0.00
269.00	5.90	0.00	5.66	0.00
270.00	5.90	0.00	5.66	0.00
271.00	5.90	0.00	5.66	0.00
272.00	5.90	0.00	5.66	0.00
273.00	5.90	0.00	5.66	0.00
274.00	5.90	0.00	5.66	0.00
275.00	5.90	0.00	5.66	0.00
276.00	5.90	0.00	5.66	0.00
277.00	5.90	0.00	5.66	0.00
278.00	5.90	0.00	5.66	0.00
279.00	5.90	0.00	5.66	0.00
280.00	5.90	0.00	5.66	0.00
281.00	5.90	0.00	5.66	0.00
282.00	5.90	0.00	5.66	0.00
283.00	5.90	0.00	5.66	0.00
284.00	5.90	0.00	5.66	0.00
285.00	5.90	0.00	5.66	0.00
286.00	5.90	0.00	5.66	0.00
287.00	5.90	0.00	5.66	0.00
288.00	5.90	0.00	5.66	0.00
289.00	5.90	0.00	5.66	0.00
290.00	5.90	0.00	5.66	0.00
291.00	5.90	0.00	5.66	0.00
292.00	5.90	0.00	5.66	0.00
293.00	5.90	0.00	5.66	0.00
294.00	5.90	0.00	5.66	0.00
295.00	5.90	0.00	5.66	0.00
296.00	5.90	0.00	5.66	0.00
297.00	5.90	0.00	5.66	0.00
298.00	5.90	0.00	5.66	0.00
299.00	5.90	0.00	5.66	0.00
300.00	5.90	0.00	5.66	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Summary for Pond 1P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 5.66" for 25-yr NOAA event
 Inflow = 4.41 cfs @ 12.13 hrs, Volume= 0.330 af
 Outflow = 4.31 cfs @ 12.14 hrs, Volume= 0.320 af, Atten= 2%, Lag= 0.9 min
 Primary = 4.31 cfs @ 12.14 hrs, Volume= 0.320 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= 1.21' @ 12.14 hrs Surf.Area= 3,049 sf Storage= 5,542 cf

Plug-Flow detention time= 955.4 min calculated for 0.320 af (97% of inflow)
 Center-of-Mass det. time= 934.7 min (1,680.8 - 746.1)

Volume	Invert	Avail.Storage	Storage Description
#1	-2.51'	11,007 cf	Rain Garden (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	3,049	0.0	0	0
-1.51	3,049	15.0	457	457
-1.50	3,049	30.0	9	466
-0.01	3,049	30.0	1,363	1,829
0.00	3,049	100.0	30	1,860
3.00	3,049	100.0	9,147	11,007

Device	Routing	Invert	Outlet Devices
#1	Device 4	1.10'	40.0' 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
#2	Device 4	-1.50'	0.5" Vert. Orifice/Grate C= 0.600
#3	Device 4	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Primary	-2.51'	24.0" Round Culvert L= 1.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= -2.51' / -2.52' S= 0.0100 '/ Cc= 0.900 n= 0.011 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=4.22 cfs @ 12.14 hrs HW=1.21' (Free Discharge)

- 4=Culvert (Passes 4.22 cfs of 19.69 cfs potential flow)
- 1=Broad-Crested Rectangular Weir (Weir Controls 3.51 cfs @ 0.82 fps)
- 2=Orifice/Grate (Orifice Controls 0.01 cfs @ 7.89 fps)
- 3=Sharp-Crested Rectangular Weir (Weir Controls 0.70 cfs @ 2.75 fps)

MRC Example 2

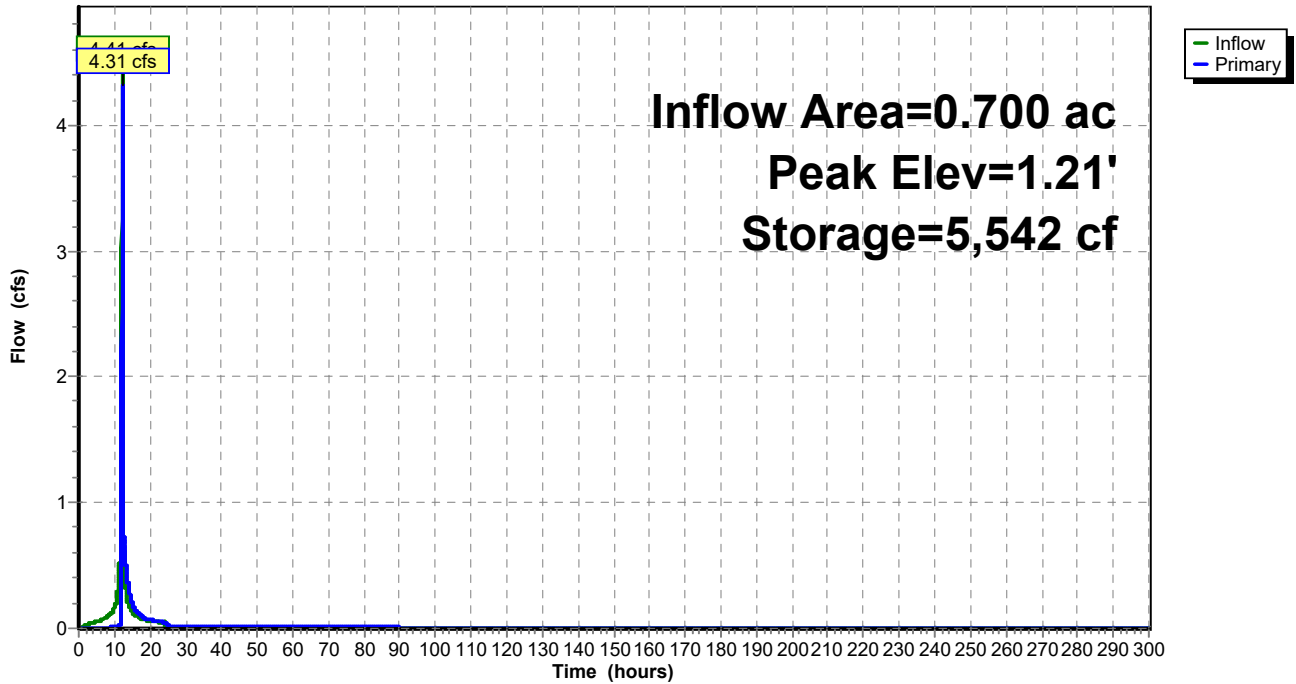
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NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

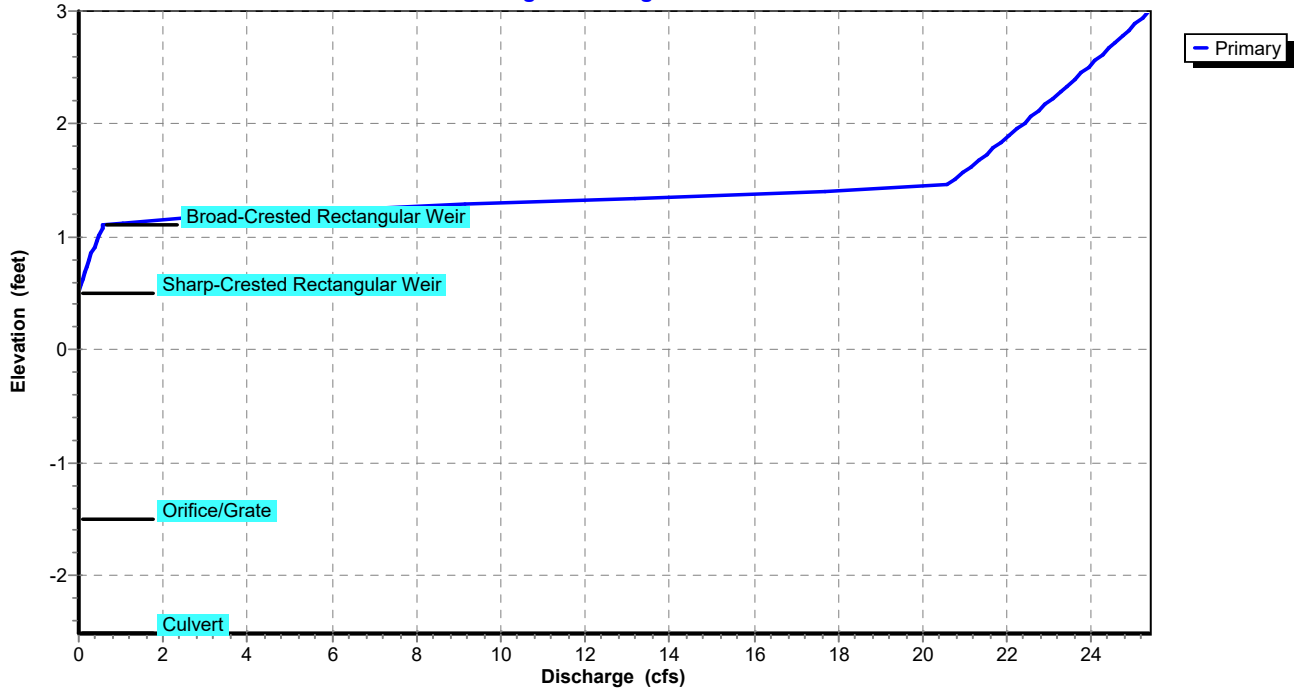
Pond 1P: Managed Release Rain Garden

Hydrograph



Pond 1P: Managed Release Rain Garden

Stage-Discharge



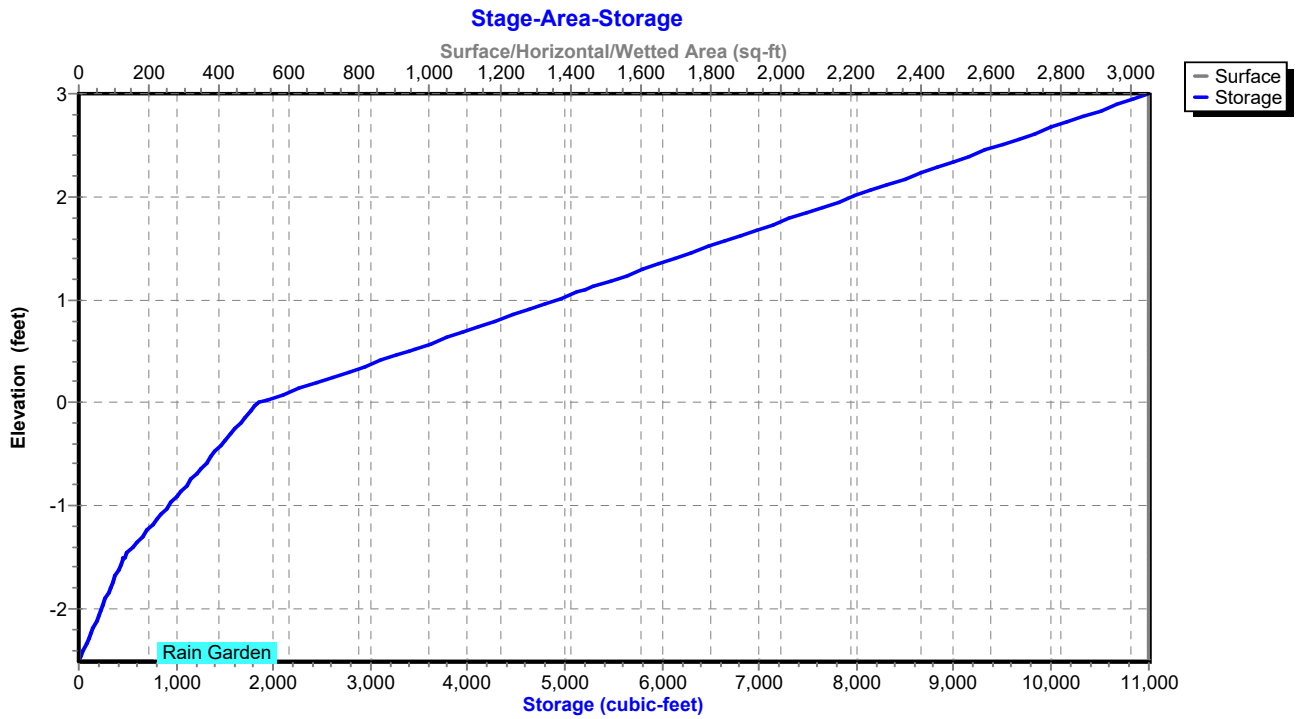
MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Pond 1P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 1P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	-2.51	0.00
1.00	0.01	4	-2.50	0.00
2.00	0.03	65	-2.37	0.00
3.00	0.04	179	-2.12	0.00
4.00	0.05	330	-1.79	0.00
5.00	0.05	509	-1.45	0.00
6.00	0.06	705	-1.24	0.00
7.00	0.08	935	-0.99	0.00
8.00	0.09	1,222	-0.67	0.01
9.00	0.11	1,568	-0.30	0.01
10.00	0.17	2,046	0.06	0.01
11.00	0.32	2,812	0.31	0.01
12.00	2.45	5,123	1.07	0.55
13.00	0.39	5,096	1.06	0.54
14.00	0.19	4,492	0.86	0.32
15.00	0.13	4,156	0.75	0.20
16.00	0.10	3,970	0.69	0.14
17.00	0.09	3,872	0.66	0.11
18.00	0.07	3,800	0.64	0.09
19.00	0.06	3,748	0.62	0.07
20.00	0.06	3,716	0.61	0.07
21.00	0.06	3,692	0.60	0.06
22.00	0.05	3,673	0.59	0.06
23.00	0.05	3,654	0.59	0.05
24.00	0.05	3,637	0.58	0.05
25.00	0.00	3,522	0.55	0.03
26.00	0.00	3,450	0.52	0.01
27.00	0.00	3,405	0.51	0.01
28.00	0.00	3,370	0.50	0.01
29.00	0.00	3,337	0.48	0.01
30.00	0.00	3,304	0.47	0.01
31.00	0.00	3,271	0.46	0.01
32.00	0.00	3,238	0.45	0.01
33.00	0.00	3,205	0.44	0.01
34.00	0.00	3,173	0.43	0.01
35.00	0.00	3,140	0.42	0.01
36.00	0.00	3,107	0.41	0.01
37.00	0.00	3,075	0.40	0.01
38.00	0.00	3,043	0.39	0.01
39.00	0.00	3,010	0.38	0.01
40.00	0.00	2,978	0.37	0.01
41.00	0.00	2,946	0.36	0.01
42.00	0.00	2,914	0.35	0.01
43.00	0.00	2,882	0.34	0.01
44.00	0.00	2,851	0.32	0.01
45.00	0.00	2,819	0.31	0.01
46.00	0.00	2,787	0.30	0.01
47.00	0.00	2,756	0.29	0.01
48.00	0.00	2,724	0.28	0.01
49.00	0.00	2,693	0.27	0.01
50.00	0.00	2,662	0.26	0.01
51.00	0.00	2,631	0.25	0.01

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	2,599	0.24	0.01
53.00	0.00	2,569	0.23	0.01
54.00	0.00	2,538	0.22	0.01
55.00	0.00	2,507	0.21	0.01
56.00	0.00	2,476	0.20	0.01
57.00	0.00	2,446	0.19	0.01
58.00	0.00	2,415	0.18	0.01
59.00	0.00	2,385	0.17	0.01
60.00	0.00	2,354	0.16	0.01
61.00	0.00	2,324	0.15	0.01
62.00	0.00	2,294	0.14	0.01
63.00	0.00	2,264	0.13	0.01
64.00	0.00	2,234	0.12	0.01
65.00	0.00	2,204	0.11	0.01
66.00	0.00	2,174	0.10	0.01
67.00	0.00	2,145	0.09	0.01
68.00	0.00	2,115	0.08	0.01
69.00	0.00	2,086	0.07	0.01
70.00	0.00	2,056	0.06	0.01
71.00	0.00	2,027	0.05	0.01
72.00	0.00	1,998	0.05	0.01
73.00	0.00	1,968	0.04	0.01
74.00	0.00	1,939	0.03	0.01
75.00	0.00	1,910	0.02	0.01
76.00	0.00	1,882	0.01	0.01
77.00	0.00	1,853	0.00	0.01
78.00	0.00	1,824	-0.02	0.01
79.00	0.00	1,796	-0.05	0.01
80.00	0.00	1,768	-0.08	0.01
81.00	0.00	1,740	-0.11	0.01
82.00	0.00	1,712	-0.14	0.01
83.00	0.00	1,685	-0.17	0.01
84.00	0.00	1,658	-0.20	0.01
85.00	0.00	1,631	-0.23	0.01
86.00	0.00	1,605	-0.26	0.01
87.00	0.00	1,579	-0.28	0.01
88.00	0.00	1,553	-0.31	0.01
89.00	0.00	1,528	-0.34	0.01
90.00	0.00	1,503	-0.37	0.01
91.00	0.00	1,478	-0.39	0.01
92.00	0.00	1,454	-0.42	0.01
93.00	0.00	1,430	-0.45	0.01
94.00	0.00	1,406	-0.47	0.01
95.00	0.00	1,382	-0.50	0.01
96.00	0.00	1,359	-0.52	0.01
97.00	0.00	1,336	-0.55	0.01
98.00	0.00	1,313	-0.57	0.01
99.00	0.00	1,291	-0.60	0.01
100.00	0.00	1,269	-0.62	0.01
101.00	0.00	1,247	-0.65	0.01
102.00	0.00	1,226	-0.67	0.01
103.00	0.00	1,205	-0.69	0.01

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1,184	-0.72	0.01
105.00	0.00	1,163	-0.74	0.01
106.00	0.00	1,143	-0.76	0.01
107.00	0.00	1,123	-0.78	0.01
108.00	0.00	1,104	-0.80	0.01
109.00	0.00	1,085	-0.82	0.01
110.00	0.00	1,066	-0.85	0.01
111.00	0.00	1,047	-0.87	0.01
112.00	0.00	1,029	-0.89	0.01
113.00	0.00	1,010	-0.91	0.00
114.00	0.00	993	-0.92	0.00
115.00	0.00	975	-0.94	0.00
116.00	0.00	958	-0.96	0.00
117.00	0.00	941	-0.98	0.00
118.00	0.00	925	-1.00	0.00
119.00	0.00	909	-1.02	0.00
120.00	0.00	893	-1.03	0.00
121.00	0.00	877	-1.05	0.00
122.00	0.00	862	-1.07	0.00
123.00	0.00	847	-1.08	0.00
124.00	0.00	832	-1.10	0.00
125.00	0.00	818	-1.12	0.00
126.00	0.00	804	-1.13	0.00
127.00	0.00	790	-1.15	0.00
128.00	0.00	776	-1.16	0.00
129.00	0.00	763	-1.18	0.00
130.00	0.00	750	-1.19	0.00
131.00	0.00	738	-1.20	0.00
132.00	0.00	726	-1.22	0.00
133.00	0.00	714	-1.23	0.00
134.00	0.00	702	-1.24	0.00
135.00	0.00	691	-1.25	0.00
136.00	0.00	680	-1.27	0.00
137.00	0.00	669	-1.28	0.00
138.00	0.00	658	-1.29	0.00
139.00	0.00	648	-1.30	0.00
140.00	0.00	639	-1.31	0.00
141.00	0.00	629	-1.32	0.00
142.00	0.00	620	-1.33	0.00
143.00	0.00	611	-1.34	0.00
144.00	0.00	602	-1.35	0.00
145.00	0.00	594	-1.36	0.00
146.00	0.00	586	-1.37	0.00
147.00	0.00	579	-1.38	0.00
148.00	0.00	571	-1.39	0.00
149.00	0.00	564	-1.39	0.00
150.00	0.00	558	-1.40	0.00
151.00	0.00	551	-1.41	0.00
152.00	0.00	545	-1.41	0.00
153.00	0.00	539	-1.42	0.00
154.00	0.00	534	-1.43	0.00
155.00	0.00	529	-1.43	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	524	-1.44	0.00
157.00	0.00	520	-1.44	0.00
158.00	0.00	516	-1.45	0.00
159.00	0.00	512	-1.45	0.00
160.00	0.00	508	-1.45	0.00
161.00	0.00	505	-1.46	0.00
162.00	0.00	501	-1.46	0.00
163.00	0.00	498	-1.47	0.00
164.00	0.00	496	-1.47	0.00
165.00	0.00	493	-1.47	0.00
166.00	0.00	491	-1.47	0.00
167.00	0.00	489	-1.48	0.00
168.00	0.00	487	-1.48	0.00
169.00	0.00	485	-1.48	0.00
170.00	0.00	484	-1.48	0.00
171.00	0.00	482	-1.48	0.00
172.00	0.00	481	-1.48	0.00
173.00	0.00	480	-1.49	0.00
174.00	0.00	478	-1.49	0.00
175.00	0.00	477	-1.49	0.00
176.00	0.00	477	-1.49	0.00
177.00	0.00	476	-1.49	0.00
178.00	0.00	475	-1.49	0.00
179.00	0.00	474	-1.49	0.00
180.00	0.00	474	-1.49	0.00
181.00	0.00	473	-1.49	0.00
182.00	0.00	472	-1.49	0.00
183.00	0.00	472	-1.49	0.00
184.00	0.00	471	-1.49	0.00
185.00	0.00	471	-1.50	0.00
186.00	0.00	471	-1.50	0.00
187.00	0.00	470	-1.50	0.00
188.00	0.00	470	-1.50	0.00
189.00	0.00	470	-1.50	0.00
190.00	0.00	469	-1.50	0.00
191.00	0.00	469	-1.50	0.00
192.00	0.00	469	-1.50	0.00
193.00	0.00	469	-1.50	0.00
194.00	0.00	469	-1.50	0.00
195.00	0.00	468	-1.50	0.00
196.00	0.00	468	-1.50	0.00
197.00	0.00	468	-1.50	0.00
198.00	0.00	468	-1.50	0.00
199.00	0.00	468	-1.50	0.00
200.00	0.00	468	-1.50	0.00
201.00	0.00	468	-1.50	0.00
202.00	0.00	467	-1.50	0.00
203.00	0.00	467	-1.50	0.00
204.00	0.00	467	-1.50	0.00
205.00	0.00	467	-1.50	0.00
206.00	0.00	467	-1.50	0.00
207.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
208.00	0.00	467	-1.50	0.00
209.00	0.00	467	-1.50	0.00
210.00	0.00	467	-1.50	0.00
211.00	0.00	467	-1.50	0.00
212.00	0.00	467	-1.50	0.00
213.00	0.00	467	-1.50	0.00
214.00	0.00	467	-1.50	0.00
215.00	0.00	467	-1.50	0.00
216.00	0.00	467	-1.50	0.00
217.00	0.00	467	-1.50	0.00
218.00	0.00	467	-1.50	0.00
219.00	0.00	467	-1.50	0.00
220.00	0.00	467	-1.50	0.00
221.00	0.00	467	-1.50	0.00
222.00	0.00	467	-1.50	0.00
223.00	0.00	467	-1.50	0.00
224.00	0.00	467	-1.50	0.00
225.00	0.00	467	-1.50	0.00
226.00	0.00	467	-1.50	0.00
227.00	0.00	467	-1.50	0.00
228.00	0.00	467	-1.50	0.00
229.00	0.00	467	-1.50	0.00
230.00	0.00	467	-1.50	0.00
231.00	0.00	467	-1.50	0.00
232.00	0.00	467	-1.50	0.00
233.00	0.00	467	-1.50	0.00
234.00	0.00	467	-1.50	0.00
235.00	0.00	467	-1.50	0.00
236.00	0.00	467	-1.50	0.00
237.00	0.00	467	-1.50	0.00
238.00	0.00	467	-1.50	0.00
239.00	0.00	467	-1.50	0.00
240.00	0.00	467	-1.50	0.00
241.00	0.00	467	-1.50	0.00
242.00	0.00	467	-1.50	0.00
243.00	0.00	467	-1.50	0.00
244.00	0.00	467	-1.50	0.00
245.00	0.00	467	-1.50	0.00
246.00	0.00	467	-1.50	0.00
247.00	0.00	467	-1.50	0.00
248.00	0.00	467	-1.50	0.00
249.00	0.00	467	-1.50	0.00
250.00	0.00	467	-1.50	0.00
251.00	0.00	467	-1.50	0.00
252.00	0.00	467	-1.50	0.00
253.00	0.00	467	-1.50	0.00
254.00	0.00	467	-1.50	0.00
255.00	0.00	467	-1.50	0.00
256.00	0.00	467	-1.50	0.00
257.00	0.00	467	-1.50	0.00
258.00	0.00	467	-1.50	0.00
259.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
260.00	0.00	467	-1.50	0.00
261.00	0.00	467	-1.50	0.00
262.00	0.00	467	-1.50	0.00
263.00	0.00	467	-1.50	0.00
264.00	0.00	467	-1.50	0.00
265.00	0.00	467	-1.50	0.00
266.00	0.00	467	-1.50	0.00
267.00	0.00	467	-1.50	0.00
268.00	0.00	466	-1.50	0.00
269.00	0.00	466	-1.50	0.00
270.00	0.00	466	-1.50	0.00
271.00	0.00	466	-1.50	0.00
272.00	0.00	466	-1.50	0.00
273.00	0.00	466	-1.50	0.00
274.00	0.00	466	-1.50	0.00
275.00	0.00	466	-1.50	0.00
276.00	0.00	466	-1.50	0.00
277.00	0.00	466	-1.50	0.00
278.00	0.00	466	-1.50	0.00
279.00	0.00	466	-1.50	0.00
280.00	0.00	466	-1.50	0.00
281.00	0.00	466	-1.50	0.00
282.00	0.00	466	-1.50	0.00
283.00	0.00	466	-1.50	0.00
284.00	0.00	466	-1.50	0.00
285.00	0.00	466	-1.50	0.00
286.00	0.00	466	-1.50	0.00
287.00	0.00	466	-1.50	0.00
288.00	0.00	466	-1.50	0.00
289.00	0.00	466	-1.50	0.00
290.00	0.00	466	-1.50	0.00
291.00	0.00	466	-1.50	0.00
292.00	0.00	466	-1.50	0.00
293.00	0.00	466	-1.50	0.00
294.00	0.00	466	-1.50	0.00
295.00	0.00	466	-1.50	0.00
296.00	0.00	466	-1.50	0.00
297.00	0.00	466	-1.50	0.00
298.00	0.00	466	-1.50	0.00
299.00	0.00	466	-1.50	0.00
300.00	0.00	466	-1.50	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Summary for Pond 2P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

[79] Warning: Submerged Pond 1P Primary device # 4 INLET by 2.09'

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 5.48" for 25-yr NOAA event
 Inflow = 4.31 cfs @ 12.14 hrs, Volume= 0.320 af
 Outflow = 0.58 cfs @ 12.75 hrs, Volume= 0.320 af, Atten= 86%, Lag= 36.7 min
 Primary = 0.58 cfs @ 12.75 hrs, Volume= 0.320 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= -0.42' @ 12.75 hrs Surf.Area= 1,742 sf Storage= 3,641 cf

Plug-Flow detention time= 118.1 min calculated for 0.320 af (100% of inflow)
 Center-of-Mass det. time= 118.0 min (1,798.9 - 1,680.8)

Volume	Invert	Avail.Storage	Storage Description	
#1	-2.51'	6,114 cf	Detention Basin (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	1,742	0.0	0	0
-2.50	1,742	100.0	17	17
1.00	1,742	100.0	6,097	6,114

Device	Routing	Invert	Outlet Devices
#1	Secondary	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	-2.51'	4.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.58 cfs @ 12.75 hrs HW=-0.42' (Free Discharge)
 ↑**2=Orifice/Grate** (Orifice Controls 0.58 cfs @ 6.68 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=-2.51' (Free Discharge)
 ↑**1=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

MRC Example 2

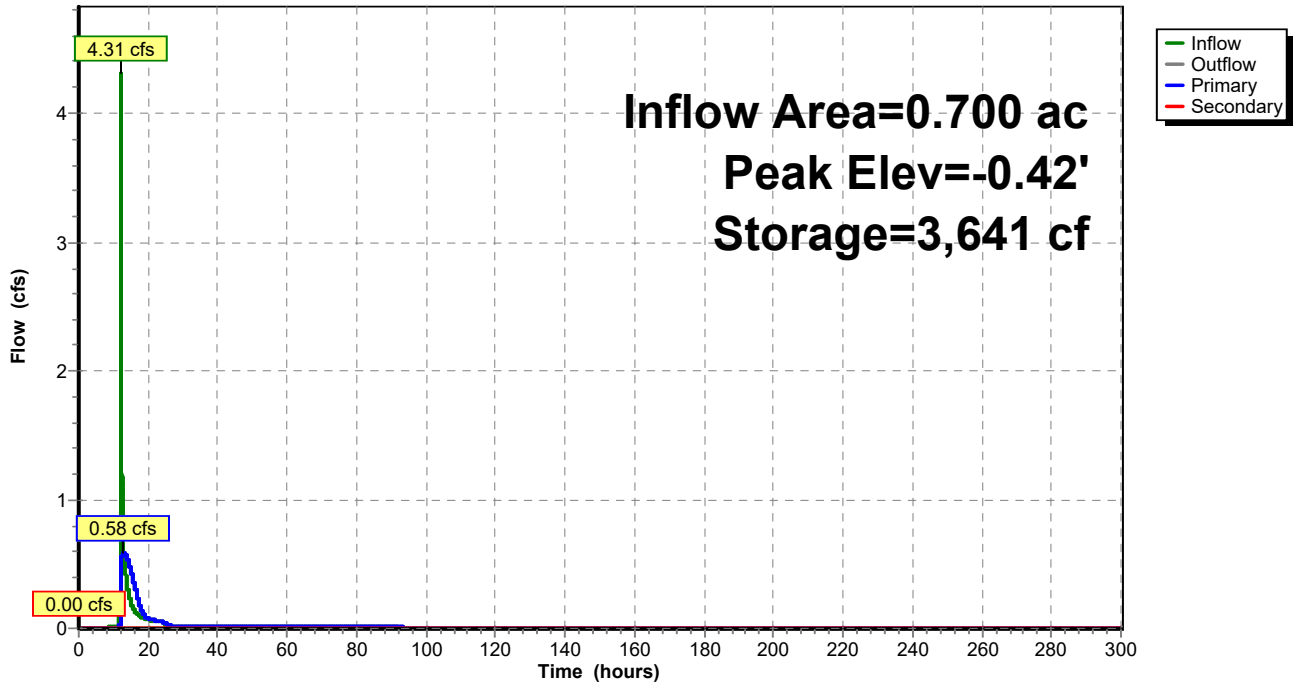
NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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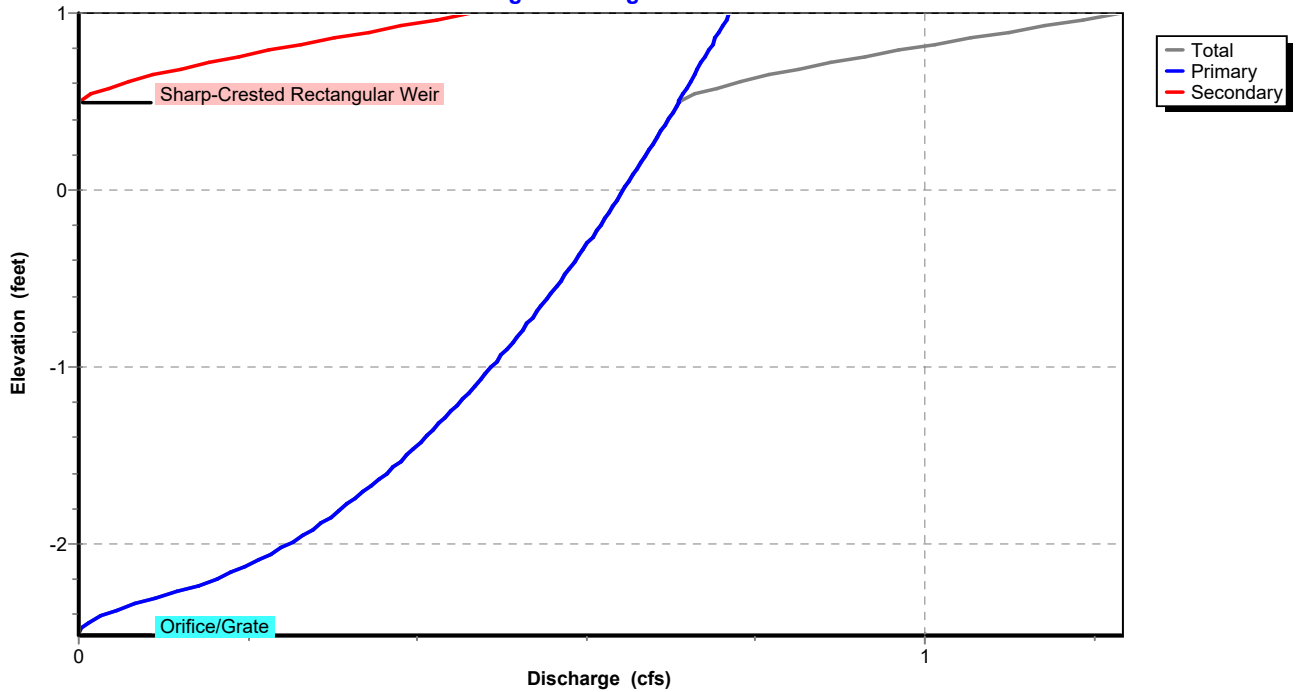
Pond 2P: Managed Release Rain Garden

Hydrograph



Pond 2P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

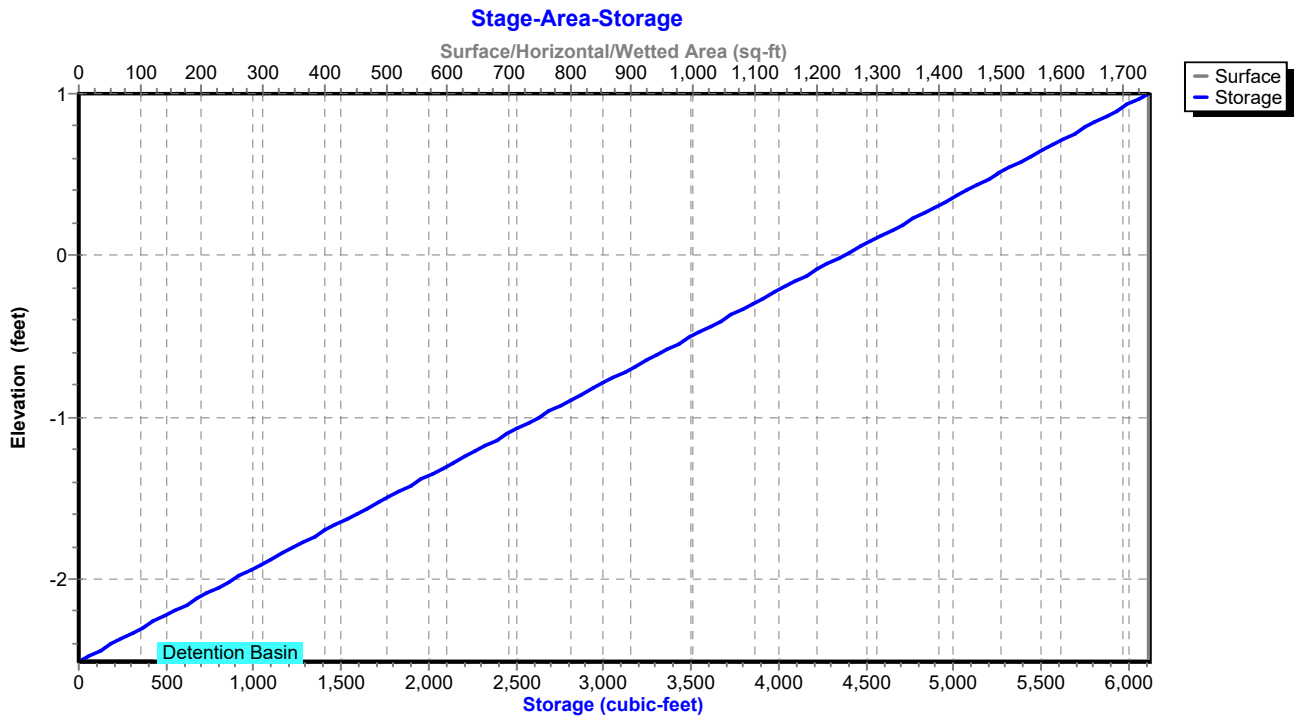
NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Pond 2P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 2P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	-2.51	0.00	0.00	0.00
1.00	0.00	0	-2.51	0.00	0.00	0.00
2.00	0.00	0	-2.51	0.00	0.00	0.00
3.00	0.00	0	-2.51	0.00	0.00	0.00
4.00	0.00	0	-2.51	0.00	0.00	0.00
5.00	0.00	0	-2.51	0.00	0.00	0.00
6.00	0.00	8	-2.51	0.00	0.00	0.00
7.00	0.00	22	-2.50	0.00	0.00	0.00
8.00	0.01	37	-2.49	0.00	0.00	0.00
9.00	0.01	53	-2.48	0.00	0.00	0.00
10.00	0.01	69	-2.47	0.00	0.00	0.00
11.00	0.01	81	-2.46	0.01	0.01	0.00
12.00	0.55	417	-2.27	0.11	0.11	0.00
13.00	0.54	3,626	-0.43	0.58	0.58	0.00
14.00	0.32	3,127	-0.72	0.54	0.54	0.00
15.00	0.20	2,251	-1.22	0.45	0.45	0.00
16.00	0.14	1,423	-1.69	0.34	0.34	0.00
17.00	0.11	832	-2.03	0.23	0.23	0.00
18.00	0.09	504	-2.22	0.15	0.15	0.00
19.00	0.07	375	-2.29	0.09	0.09	0.00
20.00	0.07	328	-2.32	0.08	0.08	0.00
21.00	0.06	305	-2.34	0.07	0.07	0.00
22.00	0.06	289	-2.34	0.06	0.06	0.00
23.00	0.05	275	-2.35	0.06	0.06	0.00
24.00	0.05	263	-2.36	0.05	0.05	0.00
25.00	0.03	229	-2.38	0.04	0.04	0.00
26.00	0.01	183	-2.40	0.03	0.03	0.00
27.00	0.01	149	-2.42	0.02	0.02	0.00
28.00	0.01	128	-2.44	0.01	0.01	0.00
29.00	0.01	117	-2.44	0.01	0.01	0.00
30.00	0.01	111	-2.45	0.01	0.01	0.00
31.00	0.01	108	-2.45	0.01	0.01	0.00
32.00	0.01	105	-2.45	0.01	0.01	0.00
33.00	0.01	104	-2.45	0.01	0.01	0.00
34.00	0.01	103	-2.45	0.01	0.01	0.00
35.00	0.01	103	-2.45	0.01	0.01	0.00
36.00	0.01	102	-2.45	0.01	0.01	0.00
37.00	0.01	102	-2.45	0.01	0.01	0.00
38.00	0.01	102	-2.45	0.01	0.01	0.00
39.00	0.01	101	-2.45	0.01	0.01	0.00
40.00	0.01	101	-2.45	0.01	0.01	0.00
41.00	0.01	101	-2.45	0.01	0.01	0.00
42.00	0.01	101	-2.45	0.01	0.01	0.00
43.00	0.01	101	-2.45	0.01	0.01	0.00
44.00	0.01	100	-2.45	0.01	0.01	0.00
45.00	0.01	100	-2.45	0.01	0.01	0.00
46.00	0.01	100	-2.45	0.01	0.01	0.00
47.00	0.01	100	-2.45	0.01	0.01	0.00
48.00	0.01	100	-2.45	0.01	0.01	0.00
49.00	0.01	100	-2.45	0.01	0.01	0.00
50.00	0.01	99	-2.45	0.01	0.01	0.00
51.00	0.01	99	-2.45	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
52.00	0.01	99	-2.45	0.01	0.01	0.00
53.00	0.01	99	-2.45	0.01	0.01	0.00
54.00	0.01	99	-2.45	0.01	0.01	0.00
55.00	0.01	98	-2.45	0.01	0.01	0.00
56.00	0.01	98	-2.45	0.01	0.01	0.00
57.00	0.01	98	-2.45	0.01	0.01	0.00
58.00	0.01	98	-2.45	0.01	0.01	0.00
59.00	0.01	98	-2.45	0.01	0.01	0.00
60.00	0.01	98	-2.45	0.01	0.01	0.00
61.00	0.01	97	-2.45	0.01	0.01	0.00
62.00	0.01	97	-2.45	0.01	0.01	0.00
63.00	0.01	97	-2.45	0.01	0.01	0.00
64.00	0.01	97	-2.45	0.01	0.01	0.00
65.00	0.01	97	-2.45	0.01	0.01	0.00
66.00	0.01	97	-2.45	0.01	0.01	0.00
67.00	0.01	96	-2.45	0.01	0.01	0.00
68.00	0.01	96	-2.45	0.01	0.01	0.00
69.00	0.01	96	-2.45	0.01	0.01	0.00
70.00	0.01	96	-2.45	0.01	0.01	0.00
71.00	0.01	96	-2.46	0.01	0.01	0.00
72.00	0.01	96	-2.46	0.01	0.01	0.00
73.00	0.01	95	-2.46	0.01	0.01	0.00
74.00	0.01	95	-2.46	0.01	0.01	0.00
75.00	0.01	95	-2.46	0.01	0.01	0.00
76.00	0.01	95	-2.46	0.01	0.01	0.00
77.00	0.01	95	-2.46	0.01	0.01	0.00
78.00	0.01	94	-2.46	0.01	0.01	0.00
79.00	0.01	94	-2.46	0.01	0.01	0.00
80.00	0.01	94	-2.46	0.01	0.01	0.00
81.00	0.01	93	-2.46	0.01	0.01	0.00
82.00	0.01	93	-2.46	0.01	0.01	0.00
83.00	0.01	92	-2.46	0.01	0.01	0.00
84.00	0.01	92	-2.46	0.01	0.01	0.00
85.00	0.01	91	-2.46	0.01	0.01	0.00
86.00	0.01	91	-2.46	0.01	0.01	0.00
87.00	0.01	90	-2.46	0.01	0.01	0.00
88.00	0.01	89	-2.46	0.01	0.01	0.00
89.00	0.01	89	-2.46	0.01	0.01	0.00
90.00	0.01	88	-2.46	0.01	0.01	0.00
91.00	0.01	88	-2.46	0.01	0.01	0.00
92.00	0.01	87	-2.46	0.01	0.01	0.00
93.00	0.01	86	-2.46	0.01	0.01	0.00
94.00	0.01	86	-2.46	0.01	0.01	0.00
95.00	0.01	85	-2.46	0.01	0.01	0.00
96.00	0.01	85	-2.46	0.01	0.01	0.00
97.00	0.01	84	-2.46	0.01	0.01	0.00
98.00	0.01	84	-2.46	0.01	0.01	0.00
99.00	0.01	83	-2.46	0.01	0.01	0.00
100.00	0.01	82	-2.46	0.01	0.01	0.00
101.00	0.01	82	-2.46	0.01	0.01	0.00
102.00	0.01	81	-2.46	0.01	0.01	0.00
103.00	0.01	81	-2.46	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
104.00	0.01	80	-2.46	0.01	0.01	0.00
105.00	0.01	80	-2.46	0.01	0.01	0.00
106.00	0.01	79	-2.46	0.01	0.01	0.00
107.00	0.01	78	-2.47	0.01	0.01	0.00
108.00	0.01	78	-2.47	0.01	0.01	0.00
109.00	0.01	77	-2.47	0.01	0.01	0.00
110.00	0.01	77	-2.47	0.01	0.01	0.00
111.00	0.01	76	-2.47	0.01	0.01	0.00
112.00	0.01	75	-2.47	0.01	0.01	0.00
113.00	0.00	75	-2.47	0.01	0.01	0.00
114.00	0.00	74	-2.47	0.01	0.01	0.00
115.00	0.00	74	-2.47	0.00	0.00	0.00
116.00	0.00	73	-2.47	0.00	0.00	0.00
117.00	0.00	73	-2.47	0.00	0.00	0.00
118.00	0.00	72	-2.47	0.00	0.00	0.00
119.00	0.00	71	-2.47	0.00	0.00	0.00
120.00	0.00	71	-2.47	0.00	0.00	0.00
121.00	0.00	70	-2.47	0.00	0.00	0.00
122.00	0.00	70	-2.47	0.00	0.00	0.00
123.00	0.00	69	-2.47	0.00	0.00	0.00
124.00	0.00	68	-2.47	0.00	0.00	0.00
125.00	0.00	68	-2.47	0.00	0.00	0.00
126.00	0.00	67	-2.47	0.00	0.00	0.00
127.00	0.00	67	-2.47	0.00	0.00	0.00
128.00	0.00	66	-2.47	0.00	0.00	0.00
129.00	0.00	66	-2.47	0.00	0.00	0.00
130.00	0.00	65	-2.47	0.00	0.00	0.00
131.00	0.00	64	-2.47	0.00	0.00	0.00
132.00	0.00	64	-2.47	0.00	0.00	0.00
133.00	0.00	63	-2.47	0.00	0.00	0.00
134.00	0.00	63	-2.47	0.00	0.00	0.00
135.00	0.00	62	-2.47	0.00	0.00	0.00
136.00	0.00	62	-2.47	0.00	0.00	0.00
137.00	0.00	61	-2.48	0.00	0.00	0.00
138.00	0.00	60	-2.48	0.00	0.00	0.00
139.00	0.00	59	-2.48	0.00	0.00	0.00
140.00	0.00	58	-2.48	0.00	0.00	0.00
141.00	0.00	57	-2.48	0.00	0.00	0.00
142.00	0.00	56	-2.48	0.00	0.00	0.00
143.00	0.00	55	-2.48	0.00	0.00	0.00
144.00	0.00	54	-2.48	0.00	0.00	0.00
145.00	0.00	53	-2.48	0.00	0.00	0.00
146.00	0.00	52	-2.48	0.00	0.00	0.00
147.00	0.00	50	-2.48	0.00	0.00	0.00
148.00	0.00	49	-2.48	0.00	0.00	0.00
149.00	0.00	48	-2.48	0.00	0.00	0.00
150.00	0.00	47	-2.48	0.00	0.00	0.00
151.00	0.00	45	-2.48	0.00	0.00	0.00
152.00	0.00	44	-2.48	0.00	0.00	0.00
153.00	0.00	43	-2.49	0.00	0.00	0.00
154.00	0.00	41	-2.49	0.00	0.00	0.00
155.00	0.00	40	-2.49	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
156.00	0.00	39	-2.49	0.00	0.00	0.00
157.00	0.00	37	-2.49	0.00	0.00	0.00
158.00	0.00	36	-2.49	0.00	0.00	0.00
159.00	0.00	35	-2.49	0.00	0.00	0.00
160.00	0.00	33	-2.49	0.00	0.00	0.00
161.00	0.00	32	-2.49	0.00	0.00	0.00
162.00	0.00	31	-2.49	0.00	0.00	0.00
163.00	0.00	30	-2.49	0.00	0.00	0.00
164.00	0.00	29	-2.49	0.00	0.00	0.00
165.00	0.00	28	-2.49	0.00	0.00	0.00
166.00	0.00	27	-2.49	0.00	0.00	0.00
167.00	0.00	26	-2.50	0.00	0.00	0.00
168.00	0.00	25	-2.50	0.00	0.00	0.00
169.00	0.00	24	-2.50	0.00	0.00	0.00
170.00	0.00	23	-2.50	0.00	0.00	0.00
171.00	0.00	23	-2.50	0.00	0.00	0.00
172.00	0.00	22	-2.50	0.00	0.00	0.00
173.00	0.00	21	-2.50	0.00	0.00	0.00
174.00	0.00	21	-2.50	0.00	0.00	0.00
175.00	0.00	20	-2.50	0.00	0.00	0.00
176.00	0.00	19	-2.50	0.00	0.00	0.00
177.00	0.00	19	-2.50	0.00	0.00	0.00
178.00	0.00	18	-2.50	0.00	0.00	0.00
179.00	0.00	18	-2.50	0.00	0.00	0.00
180.00	0.00	18	-2.50	0.00	0.00	0.00
181.00	0.00	17	-2.50	0.00	0.00	0.00
182.00	0.00	17	-2.50	0.00	0.00	0.00
183.00	0.00	17	-2.50	0.00	0.00	0.00
184.00	0.00	16	-2.50	0.00	0.00	0.00
185.00	0.00	16	-2.50	0.00	0.00	0.00
186.00	0.00	15	-2.50	0.00	0.00	0.00
187.00	0.00	15	-2.50	0.00	0.00	0.00
188.00	0.00	14	-2.50	0.00	0.00	0.00
189.00	0.00	14	-2.50	0.00	0.00	0.00
190.00	0.00	13	-2.50	0.00	0.00	0.00
191.00	0.00	13	-2.50	0.00	0.00	0.00
192.00	0.00	12	-2.50	0.00	0.00	0.00
193.00	0.00	12	-2.50	0.00	0.00	0.00
194.00	0.00	12	-2.50	0.00	0.00	0.00
195.00	0.00	11	-2.50	0.00	0.00	0.00
196.00	0.00	11	-2.50	0.00	0.00	0.00
197.00	0.00	10	-2.50	0.00	0.00	0.00
198.00	0.00	10	-2.50	0.00	0.00	0.00
199.00	0.00	9	-2.50	0.00	0.00	0.00
200.00	0.00	9	-2.50	0.00	0.00	0.00
201.00	0.00	9	-2.50	0.00	0.00	0.00
202.00	0.00	8	-2.51	0.00	0.00	0.00
203.00	0.00	8	-2.51	0.00	0.00	0.00
204.00	0.00	8	-2.51	0.00	0.00	0.00
205.00	0.00	7	-2.51	0.00	0.00	0.00
206.00	0.00	7	-2.51	0.00	0.00	0.00
207.00	0.00	7	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
208.00	0.00	6	-2.51	0.00	0.00	0.00
209.00	0.00	6	-2.51	0.00	0.00	0.00
210.00	0.00	6	-2.51	0.00	0.00	0.00
211.00	0.00	6	-2.51	0.00	0.00	0.00
212.00	0.00	5	-2.51	0.00	0.00	0.00
213.00	0.00	5	-2.51	0.00	0.00	0.00
214.00	0.00	5	-2.51	0.00	0.00	0.00
215.00	0.00	5	-2.51	0.00	0.00	0.00
216.00	0.00	4	-2.51	0.00	0.00	0.00
217.00	0.00	4	-2.51	0.00	0.00	0.00
218.00	0.00	4	-2.51	0.00	0.00	0.00
219.00	0.00	4	-2.51	0.00	0.00	0.00
220.00	0.00	4	-2.51	0.00	0.00	0.00
221.00	0.00	3	-2.51	0.00	0.00	0.00
222.00	0.00	3	-2.51	0.00	0.00	0.00
223.00	0.00	3	-2.51	0.00	0.00	0.00
224.00	0.00	3	-2.51	0.00	0.00	0.00
225.00	0.00	3	-2.51	0.00	0.00	0.00
226.00	0.00	3	-2.51	0.00	0.00	0.00
227.00	0.00	3	-2.51	0.00	0.00	0.00
228.00	0.00	2	-2.51	0.00	0.00	0.00
229.00	0.00	2	-2.51	0.00	0.00	0.00
230.00	0.00	2	-2.51	0.00	0.00	0.00
231.00	0.00	2	-2.51	0.00	0.00	0.00
232.00	0.00	2	-2.51	0.00	0.00	0.00
233.00	0.00	2	-2.51	0.00	0.00	0.00
234.00	0.00	2	-2.51	0.00	0.00	0.00
235.00	0.00	2	-2.51	0.00	0.00	0.00
236.00	0.00	2	-2.51	0.00	0.00	0.00
237.00	0.00	2	-2.51	0.00	0.00	0.00
238.00	0.00	1	-2.51	0.00	0.00	0.00
239.00	0.00	1	-2.51	0.00	0.00	0.00
240.00	0.00	1	-2.51	0.00	0.00	0.00
241.00	0.00	1	-2.51	0.00	0.00	0.00
242.00	0.00	1	-2.51	0.00	0.00	0.00
243.00	0.00	1	-2.51	0.00	0.00	0.00
244.00	0.00	1	-2.51	0.00	0.00	0.00
245.00	0.00	1	-2.51	0.00	0.00	0.00
246.00	0.00	1	-2.51	0.00	0.00	0.00
247.00	0.00	1	-2.51	0.00	0.00	0.00
248.00	0.00	1	-2.51	0.00	0.00	0.00
249.00	0.00	1	-2.51	0.00	0.00	0.00
250.00	0.00	1	-2.51	0.00	0.00	0.00
251.00	0.00	1	-2.51	0.00	0.00	0.00
252.00	0.00	1	-2.51	0.00	0.00	0.00
253.00	0.00	1	-2.51	0.00	0.00	0.00
254.00	0.00	1	-2.51	0.00	0.00	0.00
255.00	0.00	1	-2.51	0.00	0.00	0.00
256.00	0.00	1	-2.51	0.00	0.00	0.00
257.00	0.00	1	-2.51	0.00	0.00	0.00
258.00	0.00	1	-2.51	0.00	0.00	0.00
259.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 25-yr NOAA Rainfall=5.90"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
260.00	0.00	0	-2.51	0.00	0.00	0.00
261.00	0.00	0	-2.51	0.00	0.00	0.00
262.00	0.00	0	-2.51	0.00	0.00	0.00
263.00	0.00	0	-2.51	0.00	0.00	0.00
264.00	0.00	0	-2.51	0.00	0.00	0.00
265.00	0.00	0	-2.51	0.00	0.00	0.00
266.00	0.00	0	-2.51	0.00	0.00	0.00
267.00	0.00	0	-2.51	0.00	0.00	0.00
268.00	0.00	0	-2.51	0.00	0.00	0.00
269.00	0.00	0	-2.51	0.00	0.00	0.00
270.00	0.00	0	-2.51	0.00	0.00	0.00
271.00	0.00	0	-2.51	0.00	0.00	0.00
272.00	0.00	0	-2.51	0.00	0.00	0.00
273.00	0.00	0	-2.51	0.00	0.00	0.00
274.00	0.00	0	-2.51	0.00	0.00	0.00
275.00	0.00	0	-2.51	0.00	0.00	0.00
276.00	0.00	0	-2.51	0.00	0.00	0.00
277.00	0.00	0	-2.51	0.00	0.00	0.00
278.00	0.00	0	-2.51	0.00	0.00	0.00
279.00	0.00	0	-2.51	0.00	0.00	0.00
280.00	0.00	0	-2.51	0.00	0.00	0.00
281.00	0.00	0	-2.51	0.00	0.00	0.00
282.00	0.00	0	-2.51	0.00	0.00	0.00
283.00	0.00	0	-2.51	0.00	0.00	0.00
284.00	0.00	0	-2.51	0.00	0.00	0.00
285.00	0.00	0	-2.51	0.00	0.00	0.00
286.00	0.00	0	-2.51	0.00	0.00	0.00
287.00	0.00	0	-2.51	0.00	0.00	0.00
288.00	0.00	0	-2.51	0.00	0.00	0.00
289.00	0.00	0	-2.51	0.00	0.00	0.00
290.00	0.00	0	-2.51	0.00	0.00	0.00
291.00	0.00	0	-2.51	0.00	0.00	0.00
292.00	0.00	0	-2.51	0.00	0.00	0.00
293.00	0.00	0	-2.51	0.00	0.00	0.00
294.00	0.00	0	-2.51	0.00	0.00	0.00
295.00	0.00	0	-2.51	0.00	0.00	0.00
296.00	0.00	0	-2.51	0.00	0.00	0.00
297.00	0.00	0	-2.51	0.00	0.00	0.00
298.00	0.00	0	-2.51	0.00	0.00	0.00
299.00	0.00	0	-2.51	0.00	0.00	0.00
300.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Time span=0.00-300.00 hrs, dt=0.01 hrs, 30001 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

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

Subcatchment1S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=6.56"
Tc=6.0 min CN=0/98 Runoff=5.09 cfs 0.383 af

Subcatchment3S: 0.7 ac Pervious Runoff Area=30,492 sf 0.00% Impervious Runoff Depth=3.87"
Tc=15.0 min CN=74/0 Runoff=2.62 cfs 0.226 af

Subcatchment4S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=6.56"
Tc=6.0 min CN=0/98 Runoff=5.09 cfs 0.383 af

Pond 1P: Managed Release Rain Garden Peak Elev=1.22' Storage=5,583 cf Inflow=5.09 cfs 0.383 af
Outflow=4.98 cfs 0.372 af

Pond 2P: Managed Release Rain Garden Peak Elev=0.27' Storage=4,845 cf Inflow=4.98 cfs 0.372 af
Primary=0.68 cfs 0.372 af Secondary=0.00 cfs 0.000 af Outflow=0.68 cfs 0.372 af

Total Runoff Area = 2.100 ac Runoff Volume = 0.991 af Average Runoff Depth = 5.66"
33.33% Pervious = 0.700 ac 66.67% Impervious = 1.400 ac

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Summary for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Runoff = 5.09 cfs @ 12.13 hrs, Volume= 0.383 af, Depth= 6.56"

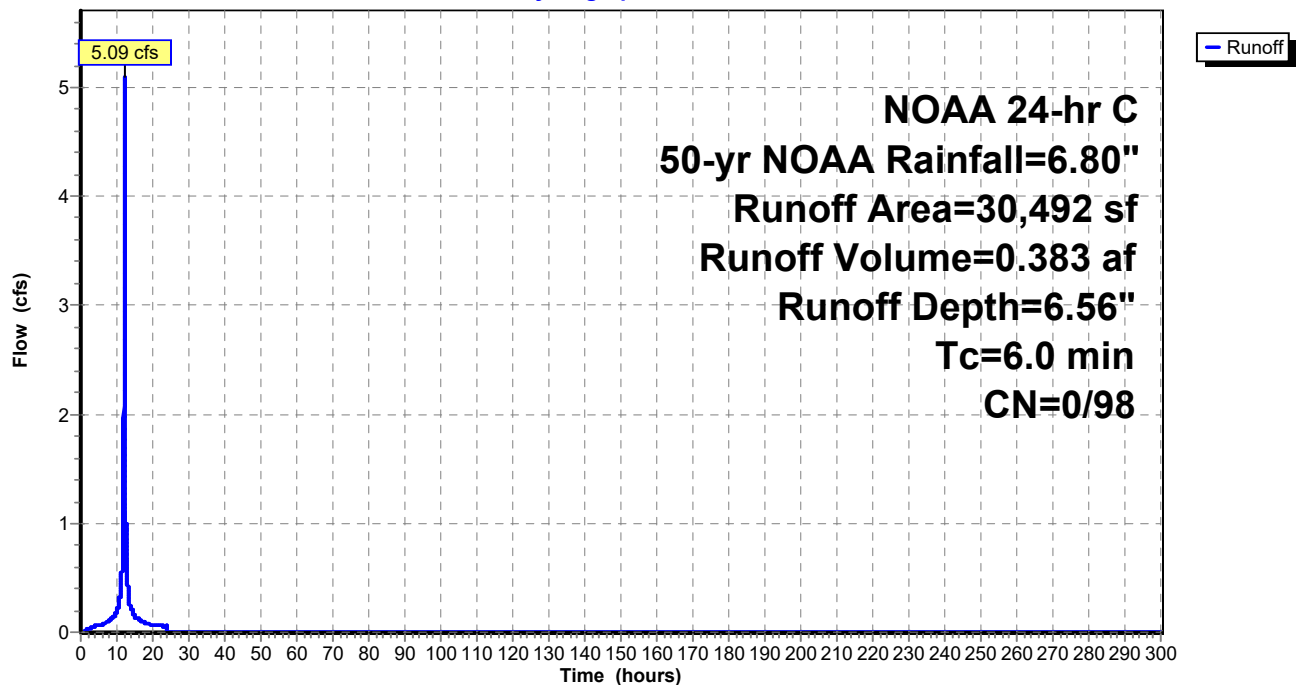
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00	0.01
2.00	0.15	0.00	0.04	0.03
3.00	0.24	0.00	0.10	0.05
4.00	0.33	0.00	0.17	0.06
5.00	0.43	0.00	0.26	0.06
6.00	0.54	0.00	0.35	0.07
7.00	0.66	0.00	0.47	0.09
8.00	0.81	0.00	0.61	0.11
9.00	0.99	0.00	0.78	0.13
10.00	1.24	0.00	1.02	0.20
11.00	1.63	0.00	1.41	0.36
12.00	3.24	0.00	3.01	2.83
13.00	5.17	0.00	4.93	0.45
14.00	5.56	0.00	5.32	0.22
15.00	5.81	0.00	5.57	0.14
16.00	5.99	0.00	5.75	0.12
17.00	6.14	0.00	5.90	0.10
18.00	6.26	0.00	6.02	0.08
19.00	6.37	0.00	6.13	0.07
20.00	6.47	0.00	6.23	0.07
21.00	6.56	0.00	6.32	0.06
22.00	6.65	0.00	6.41	0.06
23.00	6.73	0.00	6.49	0.05
24.00	6.80	0.00	6.56	0.06
25.00	6.80	0.00	6.56	0.00
26.00	6.80	0.00	6.56	0.00
27.00	6.80	0.00	6.56	0.00
28.00	6.80	0.00	6.56	0.00
29.00	6.80	0.00	6.56	0.00
30.00	6.80	0.00	6.56	0.00
31.00	6.80	0.00	6.56	0.00
32.00	6.80	0.00	6.56	0.00
33.00	6.80	0.00	6.56	0.00
34.00	6.80	0.00	6.56	0.00
35.00	6.80	0.00	6.56	0.00
36.00	6.80	0.00	6.56	0.00
37.00	6.80	0.00	6.56	0.00
38.00	6.80	0.00	6.56	0.00
39.00	6.80	0.00	6.56	0.00
40.00	6.80	0.00	6.56	0.00
41.00	6.80	0.00	6.56	0.00
42.00	6.80	0.00	6.56	0.00
43.00	6.80	0.00	6.56	0.00
44.00	6.80	0.00	6.56	0.00
45.00	6.80	0.00	6.56	0.00
46.00	6.80	0.00	6.56	0.00
47.00	6.80	0.00	6.56	0.00
48.00	6.80	0.00	6.56	0.00
49.00	6.80	0.00	6.56	0.00
50.00	6.80	0.00	6.56	0.00
51.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	6.80	0.00	6.56	0.00
53.00	6.80	0.00	6.56	0.00
54.00	6.80	0.00	6.56	0.00
55.00	6.80	0.00	6.56	0.00
56.00	6.80	0.00	6.56	0.00
57.00	6.80	0.00	6.56	0.00
58.00	6.80	0.00	6.56	0.00
59.00	6.80	0.00	6.56	0.00
60.00	6.80	0.00	6.56	0.00
61.00	6.80	0.00	6.56	0.00
62.00	6.80	0.00	6.56	0.00
63.00	6.80	0.00	6.56	0.00
64.00	6.80	0.00	6.56	0.00
65.00	6.80	0.00	6.56	0.00
66.00	6.80	0.00	6.56	0.00
67.00	6.80	0.00	6.56	0.00
68.00	6.80	0.00	6.56	0.00
69.00	6.80	0.00	6.56	0.00
70.00	6.80	0.00	6.56	0.00
71.00	6.80	0.00	6.56	0.00
72.00	6.80	0.00	6.56	0.00
73.00	6.80	0.00	6.56	0.00
74.00	6.80	0.00	6.56	0.00
75.00	6.80	0.00	6.56	0.00
76.00	6.80	0.00	6.56	0.00
77.00	6.80	0.00	6.56	0.00
78.00	6.80	0.00	6.56	0.00
79.00	6.80	0.00	6.56	0.00
80.00	6.80	0.00	6.56	0.00
81.00	6.80	0.00	6.56	0.00
82.00	6.80	0.00	6.56	0.00
83.00	6.80	0.00	6.56	0.00
84.00	6.80	0.00	6.56	0.00
85.00	6.80	0.00	6.56	0.00
86.00	6.80	0.00	6.56	0.00
87.00	6.80	0.00	6.56	0.00
88.00	6.80	0.00	6.56	0.00
89.00	6.80	0.00	6.56	0.00
90.00	6.80	0.00	6.56	0.00
91.00	6.80	0.00	6.56	0.00
92.00	6.80	0.00	6.56	0.00
93.00	6.80	0.00	6.56	0.00
94.00	6.80	0.00	6.56	0.00
95.00	6.80	0.00	6.56	0.00
96.00	6.80	0.00	6.56	0.00
97.00	6.80	0.00	6.56	0.00
98.00	6.80	0.00	6.56	0.00
99.00	6.80	0.00	6.56	0.00
100.00	6.80	0.00	6.56	0.00
101.00	6.80	0.00	6.56	0.00
102.00	6.80	0.00	6.56	0.00
103.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	6.80	0.00	6.56	0.00
105.00	6.80	0.00	6.56	0.00
106.00	6.80	0.00	6.56	0.00
107.00	6.80	0.00	6.56	0.00
108.00	6.80	0.00	6.56	0.00
109.00	6.80	0.00	6.56	0.00
110.00	6.80	0.00	6.56	0.00
111.00	6.80	0.00	6.56	0.00
112.00	6.80	0.00	6.56	0.00
113.00	6.80	0.00	6.56	0.00
114.00	6.80	0.00	6.56	0.00
115.00	6.80	0.00	6.56	0.00
116.00	6.80	0.00	6.56	0.00
117.00	6.80	0.00	6.56	0.00
118.00	6.80	0.00	6.56	0.00
119.00	6.80	0.00	6.56	0.00
120.00	6.80	0.00	6.56	0.00
121.00	6.80	0.00	6.56	0.00
122.00	6.80	0.00	6.56	0.00
123.00	6.80	0.00	6.56	0.00
124.00	6.80	0.00	6.56	0.00
125.00	6.80	0.00	6.56	0.00
126.00	6.80	0.00	6.56	0.00
127.00	6.80	0.00	6.56	0.00
128.00	6.80	0.00	6.56	0.00
129.00	6.80	0.00	6.56	0.00
130.00	6.80	0.00	6.56	0.00
131.00	6.80	0.00	6.56	0.00
132.00	6.80	0.00	6.56	0.00
133.00	6.80	0.00	6.56	0.00
134.00	6.80	0.00	6.56	0.00
135.00	6.80	0.00	6.56	0.00
136.00	6.80	0.00	6.56	0.00
137.00	6.80	0.00	6.56	0.00
138.00	6.80	0.00	6.56	0.00
139.00	6.80	0.00	6.56	0.00
140.00	6.80	0.00	6.56	0.00
141.00	6.80	0.00	6.56	0.00
142.00	6.80	0.00	6.56	0.00
143.00	6.80	0.00	6.56	0.00
144.00	6.80	0.00	6.56	0.00
145.00	6.80	0.00	6.56	0.00
146.00	6.80	0.00	6.56	0.00
147.00	6.80	0.00	6.56	0.00
148.00	6.80	0.00	6.56	0.00
149.00	6.80	0.00	6.56	0.00
150.00	6.80	0.00	6.56	0.00
151.00	6.80	0.00	6.56	0.00
152.00	6.80	0.00	6.56	0.00
153.00	6.80	0.00	6.56	0.00
154.00	6.80	0.00	6.56	0.00
155.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	6.80	0.00	6.56	0.00
157.00	6.80	0.00	6.56	0.00
158.00	6.80	0.00	6.56	0.00
159.00	6.80	0.00	6.56	0.00
160.00	6.80	0.00	6.56	0.00
161.00	6.80	0.00	6.56	0.00
162.00	6.80	0.00	6.56	0.00
163.00	6.80	0.00	6.56	0.00
164.00	6.80	0.00	6.56	0.00
165.00	6.80	0.00	6.56	0.00
166.00	6.80	0.00	6.56	0.00
167.00	6.80	0.00	6.56	0.00
168.00	6.80	0.00	6.56	0.00
169.00	6.80	0.00	6.56	0.00
170.00	6.80	0.00	6.56	0.00
171.00	6.80	0.00	6.56	0.00
172.00	6.80	0.00	6.56	0.00
173.00	6.80	0.00	6.56	0.00
174.00	6.80	0.00	6.56	0.00
175.00	6.80	0.00	6.56	0.00
176.00	6.80	0.00	6.56	0.00
177.00	6.80	0.00	6.56	0.00
178.00	6.80	0.00	6.56	0.00
179.00	6.80	0.00	6.56	0.00
180.00	6.80	0.00	6.56	0.00
181.00	6.80	0.00	6.56	0.00
182.00	6.80	0.00	6.56	0.00
183.00	6.80	0.00	6.56	0.00
184.00	6.80	0.00	6.56	0.00
185.00	6.80	0.00	6.56	0.00
186.00	6.80	0.00	6.56	0.00
187.00	6.80	0.00	6.56	0.00
188.00	6.80	0.00	6.56	0.00
189.00	6.80	0.00	6.56	0.00
190.00	6.80	0.00	6.56	0.00
191.00	6.80	0.00	6.56	0.00
192.00	6.80	0.00	6.56	0.00
193.00	6.80	0.00	6.56	0.00
194.00	6.80	0.00	6.56	0.00
195.00	6.80	0.00	6.56	0.00
196.00	6.80	0.00	6.56	0.00
197.00	6.80	0.00	6.56	0.00
198.00	6.80	0.00	6.56	0.00
199.00	6.80	0.00	6.56	0.00
200.00	6.80	0.00	6.56	0.00
201.00	6.80	0.00	6.56	0.00
202.00	6.80	0.00	6.56	0.00
203.00	6.80	0.00	6.56	0.00
204.00	6.80	0.00	6.56	0.00
205.00	6.80	0.00	6.56	0.00
206.00	6.80	0.00	6.56	0.00
207.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	6.80	0.00	6.56	0.00
209.00	6.80	0.00	6.56	0.00
210.00	6.80	0.00	6.56	0.00
211.00	6.80	0.00	6.56	0.00
212.00	6.80	0.00	6.56	0.00
213.00	6.80	0.00	6.56	0.00
214.00	6.80	0.00	6.56	0.00
215.00	6.80	0.00	6.56	0.00
216.00	6.80	0.00	6.56	0.00
217.00	6.80	0.00	6.56	0.00
218.00	6.80	0.00	6.56	0.00
219.00	6.80	0.00	6.56	0.00
220.00	6.80	0.00	6.56	0.00
221.00	6.80	0.00	6.56	0.00
222.00	6.80	0.00	6.56	0.00
223.00	6.80	0.00	6.56	0.00
224.00	6.80	0.00	6.56	0.00
225.00	6.80	0.00	6.56	0.00
226.00	6.80	0.00	6.56	0.00
227.00	6.80	0.00	6.56	0.00
228.00	6.80	0.00	6.56	0.00
229.00	6.80	0.00	6.56	0.00
230.00	6.80	0.00	6.56	0.00
231.00	6.80	0.00	6.56	0.00
232.00	6.80	0.00	6.56	0.00
233.00	6.80	0.00	6.56	0.00
234.00	6.80	0.00	6.56	0.00
235.00	6.80	0.00	6.56	0.00
236.00	6.80	0.00	6.56	0.00
237.00	6.80	0.00	6.56	0.00
238.00	6.80	0.00	6.56	0.00
239.00	6.80	0.00	6.56	0.00
240.00	6.80	0.00	6.56	0.00
241.00	6.80	0.00	6.56	0.00
242.00	6.80	0.00	6.56	0.00
243.00	6.80	0.00	6.56	0.00
244.00	6.80	0.00	6.56	0.00
245.00	6.80	0.00	6.56	0.00
246.00	6.80	0.00	6.56	0.00
247.00	6.80	0.00	6.56	0.00
248.00	6.80	0.00	6.56	0.00
249.00	6.80	0.00	6.56	0.00
250.00	6.80	0.00	6.56	0.00
251.00	6.80	0.00	6.56	0.00
252.00	6.80	0.00	6.56	0.00
253.00	6.80	0.00	6.56	0.00
254.00	6.80	0.00	6.56	0.00
255.00	6.80	0.00	6.56	0.00
256.00	6.80	0.00	6.56	0.00
257.00	6.80	0.00	6.56	0.00
258.00	6.80	0.00	6.56	0.00
259.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	6.80	0.00	6.56	0.00
261.00	6.80	0.00	6.56	0.00
262.00	6.80	0.00	6.56	0.00
263.00	6.80	0.00	6.56	0.00
264.00	6.80	0.00	6.56	0.00
265.00	6.80	0.00	6.56	0.00
266.00	6.80	0.00	6.56	0.00
267.00	6.80	0.00	6.56	0.00
268.00	6.80	0.00	6.56	0.00
269.00	6.80	0.00	6.56	0.00
270.00	6.80	0.00	6.56	0.00
271.00	6.80	0.00	6.56	0.00
272.00	6.80	0.00	6.56	0.00
273.00	6.80	0.00	6.56	0.00
274.00	6.80	0.00	6.56	0.00
275.00	6.80	0.00	6.56	0.00
276.00	6.80	0.00	6.56	0.00
277.00	6.80	0.00	6.56	0.00
278.00	6.80	0.00	6.56	0.00
279.00	6.80	0.00	6.56	0.00
280.00	6.80	0.00	6.56	0.00
281.00	6.80	0.00	6.56	0.00
282.00	6.80	0.00	6.56	0.00
283.00	6.80	0.00	6.56	0.00
284.00	6.80	0.00	6.56	0.00
285.00	6.80	0.00	6.56	0.00
286.00	6.80	0.00	6.56	0.00
287.00	6.80	0.00	6.56	0.00
288.00	6.80	0.00	6.56	0.00
289.00	6.80	0.00	6.56	0.00
290.00	6.80	0.00	6.56	0.00
291.00	6.80	0.00	6.56	0.00
292.00	6.80	0.00	6.56	0.00
293.00	6.80	0.00	6.56	0.00
294.00	6.80	0.00	6.56	0.00
295.00	6.80	0.00	6.56	0.00
296.00	6.80	0.00	6.56	0.00
297.00	6.80	0.00	6.56	0.00
298.00	6.80	0.00	6.56	0.00
299.00	6.80	0.00	6.56	0.00
300.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Summary for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Runoff = 2.62 cfs @ 12.23 hrs, Volume= 0.226 af, Depth= 3.87"

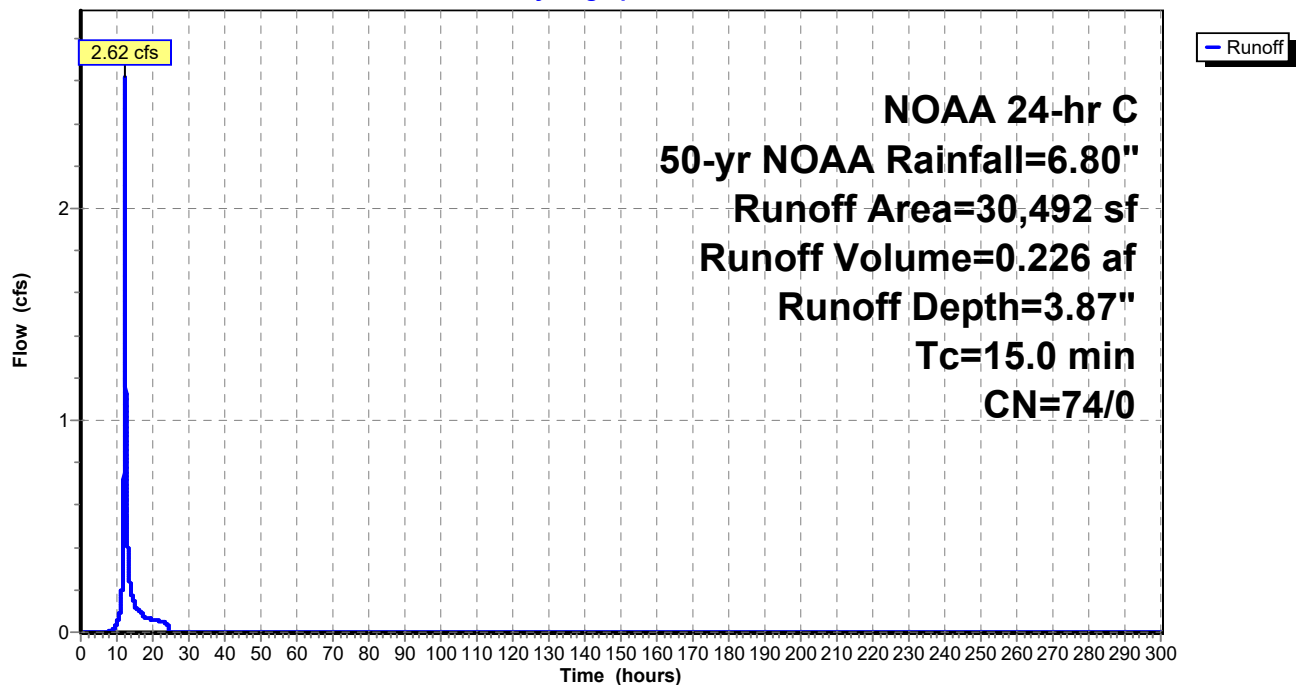
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

	Area (sf)	CN	Description
*	30,492	74	Meadow, non-grazed, HSG C
	30,492	74	100.00% Pervious Area

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

Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00	0.00
2.00	0.15	0.00	0.00	0.00
3.00	0.24	0.00	0.00	0.00
4.00	0.33	0.00	0.00	0.00
5.00	0.43	0.00	0.00	0.00
6.00	0.54	0.00	0.00	0.00
7.00	0.66	0.00	0.00	0.00
8.00	0.81	0.00	0.00	0.00
9.00	0.99	0.02	0.00	0.02
10.00	1.24	0.07	0.00	0.04
11.00	1.63	0.19	0.00	0.11
12.00	3.24	1.06	0.00	0.93
13.00	5.17	2.50	0.00	0.43
14.00	5.56	2.82	0.00	0.19
15.00	5.81	3.02	0.00	0.13
16.00	5.99	3.17	0.00	0.10
17.00	6.14	3.30	0.00	0.09
18.00	6.26	3.41	0.00	0.07
19.00	6.37	3.50	0.00	0.06
20.00	6.47	3.58	0.00	0.06
21.00	6.56	3.66	0.00	0.06
22.00	6.65	3.74	0.00	0.05
23.00	6.73	3.80	0.00	0.05
24.00	6.80	3.87	0.00	0.04
25.00	6.80	3.87	0.00	0.00
26.00	6.80	3.87	0.00	0.00
27.00	6.80	3.87	0.00	0.00
28.00	6.80	3.87	0.00	0.00
29.00	6.80	3.87	0.00	0.00
30.00	6.80	3.87	0.00	0.00
31.00	6.80	3.87	0.00	0.00
32.00	6.80	3.87	0.00	0.00
33.00	6.80	3.87	0.00	0.00
34.00	6.80	3.87	0.00	0.00
35.00	6.80	3.87	0.00	0.00
36.00	6.80	3.87	0.00	0.00
37.00	6.80	3.87	0.00	0.00
38.00	6.80	3.87	0.00	0.00
39.00	6.80	3.87	0.00	0.00
40.00	6.80	3.87	0.00	0.00
41.00	6.80	3.87	0.00	0.00
42.00	6.80	3.87	0.00	0.00
43.00	6.80	3.87	0.00	0.00
44.00	6.80	3.87	0.00	0.00
45.00	6.80	3.87	0.00	0.00
46.00	6.80	3.87	0.00	0.00
47.00	6.80	3.87	0.00	0.00
48.00	6.80	3.87	0.00	0.00
49.00	6.80	3.87	0.00	0.00
50.00	6.80	3.87	0.00	0.00
51.00	6.80	3.87	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	6.80	3.87	0.00	0.00
53.00	6.80	3.87	0.00	0.00
54.00	6.80	3.87	0.00	0.00
55.00	6.80	3.87	0.00	0.00
56.00	6.80	3.87	0.00	0.00
57.00	6.80	3.87	0.00	0.00
58.00	6.80	3.87	0.00	0.00
59.00	6.80	3.87	0.00	0.00
60.00	6.80	3.87	0.00	0.00
61.00	6.80	3.87	0.00	0.00
62.00	6.80	3.87	0.00	0.00
63.00	6.80	3.87	0.00	0.00
64.00	6.80	3.87	0.00	0.00
65.00	6.80	3.87	0.00	0.00
66.00	6.80	3.87	0.00	0.00
67.00	6.80	3.87	0.00	0.00
68.00	6.80	3.87	0.00	0.00
69.00	6.80	3.87	0.00	0.00
70.00	6.80	3.87	0.00	0.00
71.00	6.80	3.87	0.00	0.00
72.00	6.80	3.87	0.00	0.00
73.00	6.80	3.87	0.00	0.00
74.00	6.80	3.87	0.00	0.00
75.00	6.80	3.87	0.00	0.00
76.00	6.80	3.87	0.00	0.00
77.00	6.80	3.87	0.00	0.00
78.00	6.80	3.87	0.00	0.00
79.00	6.80	3.87	0.00	0.00
80.00	6.80	3.87	0.00	0.00
81.00	6.80	3.87	0.00	0.00
82.00	6.80	3.87	0.00	0.00
83.00	6.80	3.87	0.00	0.00
84.00	6.80	3.87	0.00	0.00
85.00	6.80	3.87	0.00	0.00
86.00	6.80	3.87	0.00	0.00
87.00	6.80	3.87	0.00	0.00
88.00	6.80	3.87	0.00	0.00
89.00	6.80	3.87	0.00	0.00
90.00	6.80	3.87	0.00	0.00
91.00	6.80	3.87	0.00	0.00
92.00	6.80	3.87	0.00	0.00
93.00	6.80	3.87	0.00	0.00
94.00	6.80	3.87	0.00	0.00
95.00	6.80	3.87	0.00	0.00
96.00	6.80	3.87	0.00	0.00
97.00	6.80	3.87	0.00	0.00
98.00	6.80	3.87	0.00	0.00
99.00	6.80	3.87	0.00	0.00
100.00	6.80	3.87	0.00	0.00
101.00	6.80	3.87	0.00	0.00
102.00	6.80	3.87	0.00	0.00
103.00	6.80	3.87	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	6.80	3.87	0.00	0.00
105.00	6.80	3.87	0.00	0.00
106.00	6.80	3.87	0.00	0.00
107.00	6.80	3.87	0.00	0.00
108.00	6.80	3.87	0.00	0.00
109.00	6.80	3.87	0.00	0.00
110.00	6.80	3.87	0.00	0.00
111.00	6.80	3.87	0.00	0.00
112.00	6.80	3.87	0.00	0.00
113.00	6.80	3.87	0.00	0.00
114.00	6.80	3.87	0.00	0.00
115.00	6.80	3.87	0.00	0.00
116.00	6.80	3.87	0.00	0.00
117.00	6.80	3.87	0.00	0.00
118.00	6.80	3.87	0.00	0.00
119.00	6.80	3.87	0.00	0.00
120.00	6.80	3.87	0.00	0.00
121.00	6.80	3.87	0.00	0.00
122.00	6.80	3.87	0.00	0.00
123.00	6.80	3.87	0.00	0.00
124.00	6.80	3.87	0.00	0.00
125.00	6.80	3.87	0.00	0.00
126.00	6.80	3.87	0.00	0.00
127.00	6.80	3.87	0.00	0.00
128.00	6.80	3.87	0.00	0.00
129.00	6.80	3.87	0.00	0.00
130.00	6.80	3.87	0.00	0.00
131.00	6.80	3.87	0.00	0.00
132.00	6.80	3.87	0.00	0.00
133.00	6.80	3.87	0.00	0.00
134.00	6.80	3.87	0.00	0.00
135.00	6.80	3.87	0.00	0.00
136.00	6.80	3.87	0.00	0.00
137.00	6.80	3.87	0.00	0.00
138.00	6.80	3.87	0.00	0.00
139.00	6.80	3.87	0.00	0.00
140.00	6.80	3.87	0.00	0.00
141.00	6.80	3.87	0.00	0.00
142.00	6.80	3.87	0.00	0.00
143.00	6.80	3.87	0.00	0.00
144.00	6.80	3.87	0.00	0.00
145.00	6.80	3.87	0.00	0.00
146.00	6.80	3.87	0.00	0.00
147.00	6.80	3.87	0.00	0.00
148.00	6.80	3.87	0.00	0.00
149.00	6.80	3.87	0.00	0.00
150.00	6.80	3.87	0.00	0.00
151.00	6.80	3.87	0.00	0.00
152.00	6.80	3.87	0.00	0.00
153.00	6.80	3.87	0.00	0.00
154.00	6.80	3.87	0.00	0.00
155.00	6.80	3.87	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	6.80	3.87	0.00	0.00
157.00	6.80	3.87	0.00	0.00
158.00	6.80	3.87	0.00	0.00
159.00	6.80	3.87	0.00	0.00
160.00	6.80	3.87	0.00	0.00
161.00	6.80	3.87	0.00	0.00
162.00	6.80	3.87	0.00	0.00
163.00	6.80	3.87	0.00	0.00
164.00	6.80	3.87	0.00	0.00
165.00	6.80	3.87	0.00	0.00
166.00	6.80	3.87	0.00	0.00
167.00	6.80	3.87	0.00	0.00
168.00	6.80	3.87	0.00	0.00
169.00	6.80	3.87	0.00	0.00
170.00	6.80	3.87	0.00	0.00
171.00	6.80	3.87	0.00	0.00
172.00	6.80	3.87	0.00	0.00
173.00	6.80	3.87	0.00	0.00
174.00	6.80	3.87	0.00	0.00
175.00	6.80	3.87	0.00	0.00
176.00	6.80	3.87	0.00	0.00
177.00	6.80	3.87	0.00	0.00
178.00	6.80	3.87	0.00	0.00
179.00	6.80	3.87	0.00	0.00
180.00	6.80	3.87	0.00	0.00
181.00	6.80	3.87	0.00	0.00
182.00	6.80	3.87	0.00	0.00
183.00	6.80	3.87	0.00	0.00
184.00	6.80	3.87	0.00	0.00
185.00	6.80	3.87	0.00	0.00
186.00	6.80	3.87	0.00	0.00
187.00	6.80	3.87	0.00	0.00
188.00	6.80	3.87	0.00	0.00
189.00	6.80	3.87	0.00	0.00
190.00	6.80	3.87	0.00	0.00
191.00	6.80	3.87	0.00	0.00
192.00	6.80	3.87	0.00	0.00
193.00	6.80	3.87	0.00	0.00
194.00	6.80	3.87	0.00	0.00
195.00	6.80	3.87	0.00	0.00
196.00	6.80	3.87	0.00	0.00
197.00	6.80	3.87	0.00	0.00
198.00	6.80	3.87	0.00	0.00
199.00	6.80	3.87	0.00	0.00
200.00	6.80	3.87	0.00	0.00
201.00	6.80	3.87	0.00	0.00
202.00	6.80	3.87	0.00	0.00
203.00	6.80	3.87	0.00	0.00
204.00	6.80	3.87	0.00	0.00
205.00	6.80	3.87	0.00	0.00
206.00	6.80	3.87	0.00	0.00
207.00	6.80	3.87	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	6.80	3.87	0.00	0.00
209.00	6.80	3.87	0.00	0.00
210.00	6.80	3.87	0.00	0.00
211.00	6.80	3.87	0.00	0.00
212.00	6.80	3.87	0.00	0.00
213.00	6.80	3.87	0.00	0.00
214.00	6.80	3.87	0.00	0.00
215.00	6.80	3.87	0.00	0.00
216.00	6.80	3.87	0.00	0.00
217.00	6.80	3.87	0.00	0.00
218.00	6.80	3.87	0.00	0.00
219.00	6.80	3.87	0.00	0.00
220.00	6.80	3.87	0.00	0.00
221.00	6.80	3.87	0.00	0.00
222.00	6.80	3.87	0.00	0.00
223.00	6.80	3.87	0.00	0.00
224.00	6.80	3.87	0.00	0.00
225.00	6.80	3.87	0.00	0.00
226.00	6.80	3.87	0.00	0.00
227.00	6.80	3.87	0.00	0.00
228.00	6.80	3.87	0.00	0.00
229.00	6.80	3.87	0.00	0.00
230.00	6.80	3.87	0.00	0.00
231.00	6.80	3.87	0.00	0.00
232.00	6.80	3.87	0.00	0.00
233.00	6.80	3.87	0.00	0.00
234.00	6.80	3.87	0.00	0.00
235.00	6.80	3.87	0.00	0.00
236.00	6.80	3.87	0.00	0.00
237.00	6.80	3.87	0.00	0.00
238.00	6.80	3.87	0.00	0.00
239.00	6.80	3.87	0.00	0.00
240.00	6.80	3.87	0.00	0.00
241.00	6.80	3.87	0.00	0.00
242.00	6.80	3.87	0.00	0.00
243.00	6.80	3.87	0.00	0.00
244.00	6.80	3.87	0.00	0.00
245.00	6.80	3.87	0.00	0.00
246.00	6.80	3.87	0.00	0.00
247.00	6.80	3.87	0.00	0.00
248.00	6.80	3.87	0.00	0.00
249.00	6.80	3.87	0.00	0.00
250.00	6.80	3.87	0.00	0.00
251.00	6.80	3.87	0.00	0.00
252.00	6.80	3.87	0.00	0.00
253.00	6.80	3.87	0.00	0.00
254.00	6.80	3.87	0.00	0.00
255.00	6.80	3.87	0.00	0.00
256.00	6.80	3.87	0.00	0.00
257.00	6.80	3.87	0.00	0.00
258.00	6.80	3.87	0.00	0.00
259.00	6.80	3.87	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	6.80	3.87	0.00	0.00
261.00	6.80	3.87	0.00	0.00
262.00	6.80	3.87	0.00	0.00
263.00	6.80	3.87	0.00	0.00
264.00	6.80	3.87	0.00	0.00
265.00	6.80	3.87	0.00	0.00
266.00	6.80	3.87	0.00	0.00
267.00	6.80	3.87	0.00	0.00
268.00	6.80	3.87	0.00	0.00
269.00	6.80	3.87	0.00	0.00
270.00	6.80	3.87	0.00	0.00
271.00	6.80	3.87	0.00	0.00
272.00	6.80	3.87	0.00	0.00
273.00	6.80	3.87	0.00	0.00
274.00	6.80	3.87	0.00	0.00
275.00	6.80	3.87	0.00	0.00
276.00	6.80	3.87	0.00	0.00
277.00	6.80	3.87	0.00	0.00
278.00	6.80	3.87	0.00	0.00
279.00	6.80	3.87	0.00	0.00
280.00	6.80	3.87	0.00	0.00
281.00	6.80	3.87	0.00	0.00
282.00	6.80	3.87	0.00	0.00
283.00	6.80	3.87	0.00	0.00
284.00	6.80	3.87	0.00	0.00
285.00	6.80	3.87	0.00	0.00
286.00	6.80	3.87	0.00	0.00
287.00	6.80	3.87	0.00	0.00
288.00	6.80	3.87	0.00	0.00
289.00	6.80	3.87	0.00	0.00
290.00	6.80	3.87	0.00	0.00
291.00	6.80	3.87	0.00	0.00
292.00	6.80	3.87	0.00	0.00
293.00	6.80	3.87	0.00	0.00
294.00	6.80	3.87	0.00	0.00
295.00	6.80	3.87	0.00	0.00
296.00	6.80	3.87	0.00	0.00
297.00	6.80	3.87	0.00	0.00
298.00	6.80	3.87	0.00	0.00
299.00	6.80	3.87	0.00	0.00
300.00	6.80	3.87	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Summary for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Runoff = 5.09 cfs @ 12.13 hrs, Volume= 0.383 af, Depth= 6.56"

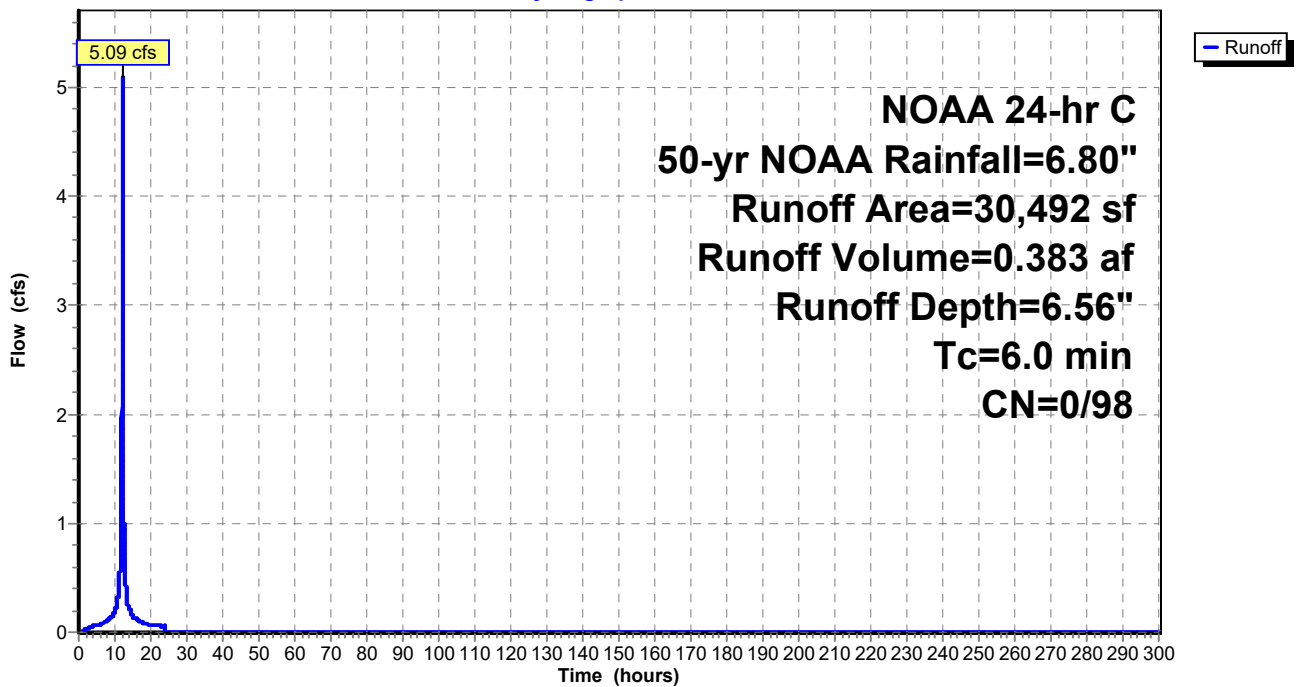
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Hydrograph



MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.07	0.00	0.00	0.01
2.00	0.15	0.00	0.04	0.03
3.00	0.24	0.00	0.10	0.05
4.00	0.33	0.00	0.17	0.06
5.00	0.43	0.00	0.26	0.06
6.00	0.54	0.00	0.35	0.07
7.00	0.66	0.00	0.47	0.09
8.00	0.81	0.00	0.61	0.11
9.00	0.99	0.00	0.78	0.13
10.00	1.24	0.00	1.02	0.20
11.00	1.63	0.00	1.41	0.36
12.00	3.24	0.00	3.01	2.83
13.00	5.17	0.00	4.93	0.45
14.00	5.56	0.00	5.32	0.22
15.00	5.81	0.00	5.57	0.14
16.00	5.99	0.00	5.75	0.12
17.00	6.14	0.00	5.90	0.10
18.00	6.26	0.00	6.02	0.08
19.00	6.37	0.00	6.13	0.07
20.00	6.47	0.00	6.23	0.07
21.00	6.56	0.00	6.32	0.06
22.00	6.65	0.00	6.41	0.06
23.00	6.73	0.00	6.49	0.05
24.00	6.80	0.00	6.56	0.06
25.00	6.80	0.00	6.56	0.00
26.00	6.80	0.00	6.56	0.00
27.00	6.80	0.00	6.56	0.00
28.00	6.80	0.00	6.56	0.00
29.00	6.80	0.00	6.56	0.00
30.00	6.80	0.00	6.56	0.00
31.00	6.80	0.00	6.56	0.00
32.00	6.80	0.00	6.56	0.00
33.00	6.80	0.00	6.56	0.00
34.00	6.80	0.00	6.56	0.00
35.00	6.80	0.00	6.56	0.00
36.00	6.80	0.00	6.56	0.00
37.00	6.80	0.00	6.56	0.00
38.00	6.80	0.00	6.56	0.00
39.00	6.80	0.00	6.56	0.00
40.00	6.80	0.00	6.56	0.00
41.00	6.80	0.00	6.56	0.00
42.00	6.80	0.00	6.56	0.00
43.00	6.80	0.00	6.56	0.00
44.00	6.80	0.00	6.56	0.00
45.00	6.80	0.00	6.56	0.00
46.00	6.80	0.00	6.56	0.00
47.00	6.80	0.00	6.56	0.00
48.00	6.80	0.00	6.56	0.00
49.00	6.80	0.00	6.56	0.00
50.00	6.80	0.00	6.56	0.00
51.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	6.80	0.00	6.56	0.00
53.00	6.80	0.00	6.56	0.00
54.00	6.80	0.00	6.56	0.00
55.00	6.80	0.00	6.56	0.00
56.00	6.80	0.00	6.56	0.00
57.00	6.80	0.00	6.56	0.00
58.00	6.80	0.00	6.56	0.00
59.00	6.80	0.00	6.56	0.00
60.00	6.80	0.00	6.56	0.00
61.00	6.80	0.00	6.56	0.00
62.00	6.80	0.00	6.56	0.00
63.00	6.80	0.00	6.56	0.00
64.00	6.80	0.00	6.56	0.00
65.00	6.80	0.00	6.56	0.00
66.00	6.80	0.00	6.56	0.00
67.00	6.80	0.00	6.56	0.00
68.00	6.80	0.00	6.56	0.00
69.00	6.80	0.00	6.56	0.00
70.00	6.80	0.00	6.56	0.00
71.00	6.80	0.00	6.56	0.00
72.00	6.80	0.00	6.56	0.00
73.00	6.80	0.00	6.56	0.00
74.00	6.80	0.00	6.56	0.00
75.00	6.80	0.00	6.56	0.00
76.00	6.80	0.00	6.56	0.00
77.00	6.80	0.00	6.56	0.00
78.00	6.80	0.00	6.56	0.00
79.00	6.80	0.00	6.56	0.00
80.00	6.80	0.00	6.56	0.00
81.00	6.80	0.00	6.56	0.00
82.00	6.80	0.00	6.56	0.00
83.00	6.80	0.00	6.56	0.00
84.00	6.80	0.00	6.56	0.00
85.00	6.80	0.00	6.56	0.00
86.00	6.80	0.00	6.56	0.00
87.00	6.80	0.00	6.56	0.00
88.00	6.80	0.00	6.56	0.00
89.00	6.80	0.00	6.56	0.00
90.00	6.80	0.00	6.56	0.00
91.00	6.80	0.00	6.56	0.00
92.00	6.80	0.00	6.56	0.00
93.00	6.80	0.00	6.56	0.00
94.00	6.80	0.00	6.56	0.00
95.00	6.80	0.00	6.56	0.00
96.00	6.80	0.00	6.56	0.00
97.00	6.80	0.00	6.56	0.00
98.00	6.80	0.00	6.56	0.00
99.00	6.80	0.00	6.56	0.00
100.00	6.80	0.00	6.56	0.00
101.00	6.80	0.00	6.56	0.00
102.00	6.80	0.00	6.56	0.00
103.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	6.80	0.00	6.56	0.00
105.00	6.80	0.00	6.56	0.00
106.00	6.80	0.00	6.56	0.00
107.00	6.80	0.00	6.56	0.00
108.00	6.80	0.00	6.56	0.00
109.00	6.80	0.00	6.56	0.00
110.00	6.80	0.00	6.56	0.00
111.00	6.80	0.00	6.56	0.00
112.00	6.80	0.00	6.56	0.00
113.00	6.80	0.00	6.56	0.00
114.00	6.80	0.00	6.56	0.00
115.00	6.80	0.00	6.56	0.00
116.00	6.80	0.00	6.56	0.00
117.00	6.80	0.00	6.56	0.00
118.00	6.80	0.00	6.56	0.00
119.00	6.80	0.00	6.56	0.00
120.00	6.80	0.00	6.56	0.00
121.00	6.80	0.00	6.56	0.00
122.00	6.80	0.00	6.56	0.00
123.00	6.80	0.00	6.56	0.00
124.00	6.80	0.00	6.56	0.00
125.00	6.80	0.00	6.56	0.00
126.00	6.80	0.00	6.56	0.00
127.00	6.80	0.00	6.56	0.00
128.00	6.80	0.00	6.56	0.00
129.00	6.80	0.00	6.56	0.00
130.00	6.80	0.00	6.56	0.00
131.00	6.80	0.00	6.56	0.00
132.00	6.80	0.00	6.56	0.00
133.00	6.80	0.00	6.56	0.00
134.00	6.80	0.00	6.56	0.00
135.00	6.80	0.00	6.56	0.00
136.00	6.80	0.00	6.56	0.00
137.00	6.80	0.00	6.56	0.00
138.00	6.80	0.00	6.56	0.00
139.00	6.80	0.00	6.56	0.00
140.00	6.80	0.00	6.56	0.00
141.00	6.80	0.00	6.56	0.00
142.00	6.80	0.00	6.56	0.00
143.00	6.80	0.00	6.56	0.00
144.00	6.80	0.00	6.56	0.00
145.00	6.80	0.00	6.56	0.00
146.00	6.80	0.00	6.56	0.00
147.00	6.80	0.00	6.56	0.00
148.00	6.80	0.00	6.56	0.00
149.00	6.80	0.00	6.56	0.00
150.00	6.80	0.00	6.56	0.00
151.00	6.80	0.00	6.56	0.00
152.00	6.80	0.00	6.56	0.00
153.00	6.80	0.00	6.56	0.00
154.00	6.80	0.00	6.56	0.00
155.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	6.80	0.00	6.56	0.00
157.00	6.80	0.00	6.56	0.00
158.00	6.80	0.00	6.56	0.00
159.00	6.80	0.00	6.56	0.00
160.00	6.80	0.00	6.56	0.00
161.00	6.80	0.00	6.56	0.00
162.00	6.80	0.00	6.56	0.00
163.00	6.80	0.00	6.56	0.00
164.00	6.80	0.00	6.56	0.00
165.00	6.80	0.00	6.56	0.00
166.00	6.80	0.00	6.56	0.00
167.00	6.80	0.00	6.56	0.00
168.00	6.80	0.00	6.56	0.00
169.00	6.80	0.00	6.56	0.00
170.00	6.80	0.00	6.56	0.00
171.00	6.80	0.00	6.56	0.00
172.00	6.80	0.00	6.56	0.00
173.00	6.80	0.00	6.56	0.00
174.00	6.80	0.00	6.56	0.00
175.00	6.80	0.00	6.56	0.00
176.00	6.80	0.00	6.56	0.00
177.00	6.80	0.00	6.56	0.00
178.00	6.80	0.00	6.56	0.00
179.00	6.80	0.00	6.56	0.00
180.00	6.80	0.00	6.56	0.00
181.00	6.80	0.00	6.56	0.00
182.00	6.80	0.00	6.56	0.00
183.00	6.80	0.00	6.56	0.00
184.00	6.80	0.00	6.56	0.00
185.00	6.80	0.00	6.56	0.00
186.00	6.80	0.00	6.56	0.00
187.00	6.80	0.00	6.56	0.00
188.00	6.80	0.00	6.56	0.00
189.00	6.80	0.00	6.56	0.00
190.00	6.80	0.00	6.56	0.00
191.00	6.80	0.00	6.56	0.00
192.00	6.80	0.00	6.56	0.00
193.00	6.80	0.00	6.56	0.00
194.00	6.80	0.00	6.56	0.00
195.00	6.80	0.00	6.56	0.00
196.00	6.80	0.00	6.56	0.00
197.00	6.80	0.00	6.56	0.00
198.00	6.80	0.00	6.56	0.00
199.00	6.80	0.00	6.56	0.00
200.00	6.80	0.00	6.56	0.00
201.00	6.80	0.00	6.56	0.00
202.00	6.80	0.00	6.56	0.00
203.00	6.80	0.00	6.56	0.00
204.00	6.80	0.00	6.56	0.00
205.00	6.80	0.00	6.56	0.00
206.00	6.80	0.00	6.56	0.00
207.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	6.80	0.00	6.56	0.00
209.00	6.80	0.00	6.56	0.00
210.00	6.80	0.00	6.56	0.00
211.00	6.80	0.00	6.56	0.00
212.00	6.80	0.00	6.56	0.00
213.00	6.80	0.00	6.56	0.00
214.00	6.80	0.00	6.56	0.00
215.00	6.80	0.00	6.56	0.00
216.00	6.80	0.00	6.56	0.00
217.00	6.80	0.00	6.56	0.00
218.00	6.80	0.00	6.56	0.00
219.00	6.80	0.00	6.56	0.00
220.00	6.80	0.00	6.56	0.00
221.00	6.80	0.00	6.56	0.00
222.00	6.80	0.00	6.56	0.00
223.00	6.80	0.00	6.56	0.00
224.00	6.80	0.00	6.56	0.00
225.00	6.80	0.00	6.56	0.00
226.00	6.80	0.00	6.56	0.00
227.00	6.80	0.00	6.56	0.00
228.00	6.80	0.00	6.56	0.00
229.00	6.80	0.00	6.56	0.00
230.00	6.80	0.00	6.56	0.00
231.00	6.80	0.00	6.56	0.00
232.00	6.80	0.00	6.56	0.00
233.00	6.80	0.00	6.56	0.00
234.00	6.80	0.00	6.56	0.00
235.00	6.80	0.00	6.56	0.00
236.00	6.80	0.00	6.56	0.00
237.00	6.80	0.00	6.56	0.00
238.00	6.80	0.00	6.56	0.00
239.00	6.80	0.00	6.56	0.00
240.00	6.80	0.00	6.56	0.00
241.00	6.80	0.00	6.56	0.00
242.00	6.80	0.00	6.56	0.00
243.00	6.80	0.00	6.56	0.00
244.00	6.80	0.00	6.56	0.00
245.00	6.80	0.00	6.56	0.00
246.00	6.80	0.00	6.56	0.00
247.00	6.80	0.00	6.56	0.00
248.00	6.80	0.00	6.56	0.00
249.00	6.80	0.00	6.56	0.00
250.00	6.80	0.00	6.56	0.00
251.00	6.80	0.00	6.56	0.00
252.00	6.80	0.00	6.56	0.00
253.00	6.80	0.00	6.56	0.00
254.00	6.80	0.00	6.56	0.00
255.00	6.80	0.00	6.56	0.00
256.00	6.80	0.00	6.56	0.00
257.00	6.80	0.00	6.56	0.00
258.00	6.80	0.00	6.56	0.00
259.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	6.80	0.00	6.56	0.00
261.00	6.80	0.00	6.56	0.00
262.00	6.80	0.00	6.56	0.00
263.00	6.80	0.00	6.56	0.00
264.00	6.80	0.00	6.56	0.00
265.00	6.80	0.00	6.56	0.00
266.00	6.80	0.00	6.56	0.00
267.00	6.80	0.00	6.56	0.00
268.00	6.80	0.00	6.56	0.00
269.00	6.80	0.00	6.56	0.00
270.00	6.80	0.00	6.56	0.00
271.00	6.80	0.00	6.56	0.00
272.00	6.80	0.00	6.56	0.00
273.00	6.80	0.00	6.56	0.00
274.00	6.80	0.00	6.56	0.00
275.00	6.80	0.00	6.56	0.00
276.00	6.80	0.00	6.56	0.00
277.00	6.80	0.00	6.56	0.00
278.00	6.80	0.00	6.56	0.00
279.00	6.80	0.00	6.56	0.00
280.00	6.80	0.00	6.56	0.00
281.00	6.80	0.00	6.56	0.00
282.00	6.80	0.00	6.56	0.00
283.00	6.80	0.00	6.56	0.00
284.00	6.80	0.00	6.56	0.00
285.00	6.80	0.00	6.56	0.00
286.00	6.80	0.00	6.56	0.00
287.00	6.80	0.00	6.56	0.00
288.00	6.80	0.00	6.56	0.00
289.00	6.80	0.00	6.56	0.00
290.00	6.80	0.00	6.56	0.00
291.00	6.80	0.00	6.56	0.00
292.00	6.80	0.00	6.56	0.00
293.00	6.80	0.00	6.56	0.00
294.00	6.80	0.00	6.56	0.00
295.00	6.80	0.00	6.56	0.00
296.00	6.80	0.00	6.56	0.00
297.00	6.80	0.00	6.56	0.00
298.00	6.80	0.00	6.56	0.00
299.00	6.80	0.00	6.56	0.00
300.00	6.80	0.00	6.56	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Summary for Pond 1P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 6.56" for 50-yr NOAA event
Inflow = 5.09 cfs @ 12.13 hrs, Volume= 0.383 af
Outflow = 4.98 cfs @ 12.14 hrs, Volume= 0.372 af, Atten= 2%, Lag= 0.9 min
Primary = 4.98 cfs @ 12.14 hrs, Volume= 0.372 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
Peak Elev= 1.22' @ 12.14 hrs Surf.Area= 3,049 sf Storage= 5,583 cf

Plug-Flow detention time= 833.3 min calculated for 0.372 af (97% of inflow)
Center-of-Mass det. time= 815.5 min (1,559.5 - 744.0)

Volume	Invert	Avail.Storage	Storage Description
#1	-2.51'	11,007 cf	Rain Garden (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	3,049	0.0	0	0
-1.51	3,049	15.0	457	457
-1.50	3,049	30.0	9	466
-0.01	3,049	30.0	1,363	1,829
0.00	3,049	100.0	30	1,860
3.00	3,049	100.0	9,147	11,007

Device	Routing	Invert	Outlet Devices
#1	Device 4	1.10'	40.0' 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
#2	Device 4	-1.50'	0.5" Vert. Orifice/Grate C= 0.600
#3	Device 4	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Primary	-2.51'	24.0" Round Culvert L= 1.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= -2.51' / -2.52' S= 0.0100 '/ Cc= 0.900 n= 0.011 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=4.90 cfs @ 12.14 hrs HW=1.22' (Free Discharge)

- 4=Culvert (Passes 4.90 cfs of 19.73 cfs potential flow)
- 1=Broad-Crested Rectangular Weir (Weir Controls 4.18 cfs @ 0.87 fps)
- 2=Orifice/Grate (Orifice Controls 0.01 cfs @ 7.91 fps)
- 3=Sharp-Crested Rectangular Weir (Weir Controls 0.71 cfs @ 2.78 fps)

MRC Example 2

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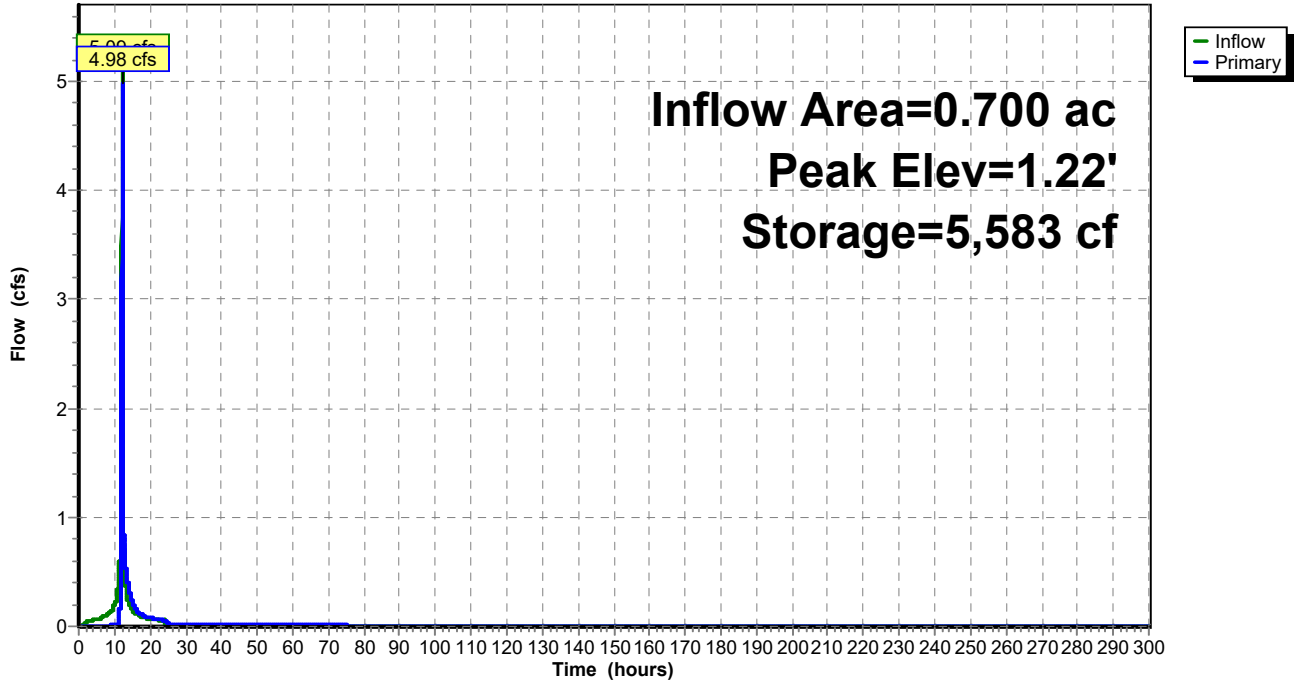
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NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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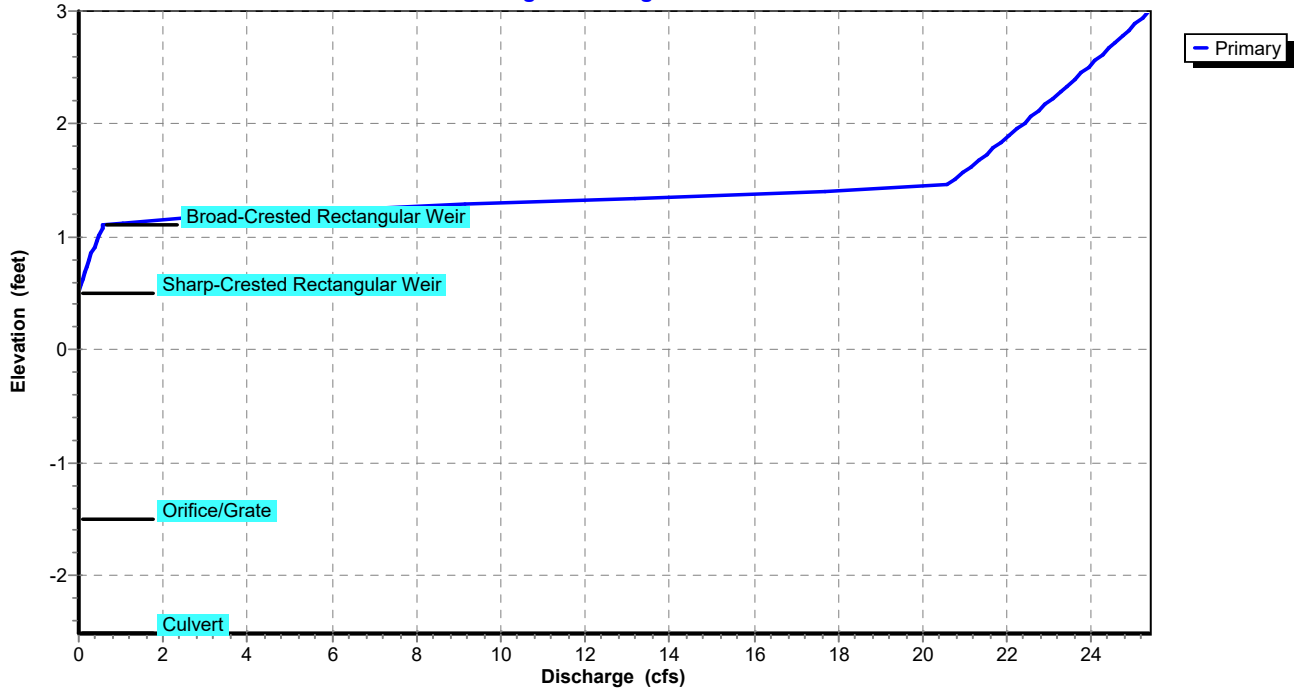
Pond 1P: Managed Release Rain Garden

Hydrograph



Pond 1P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

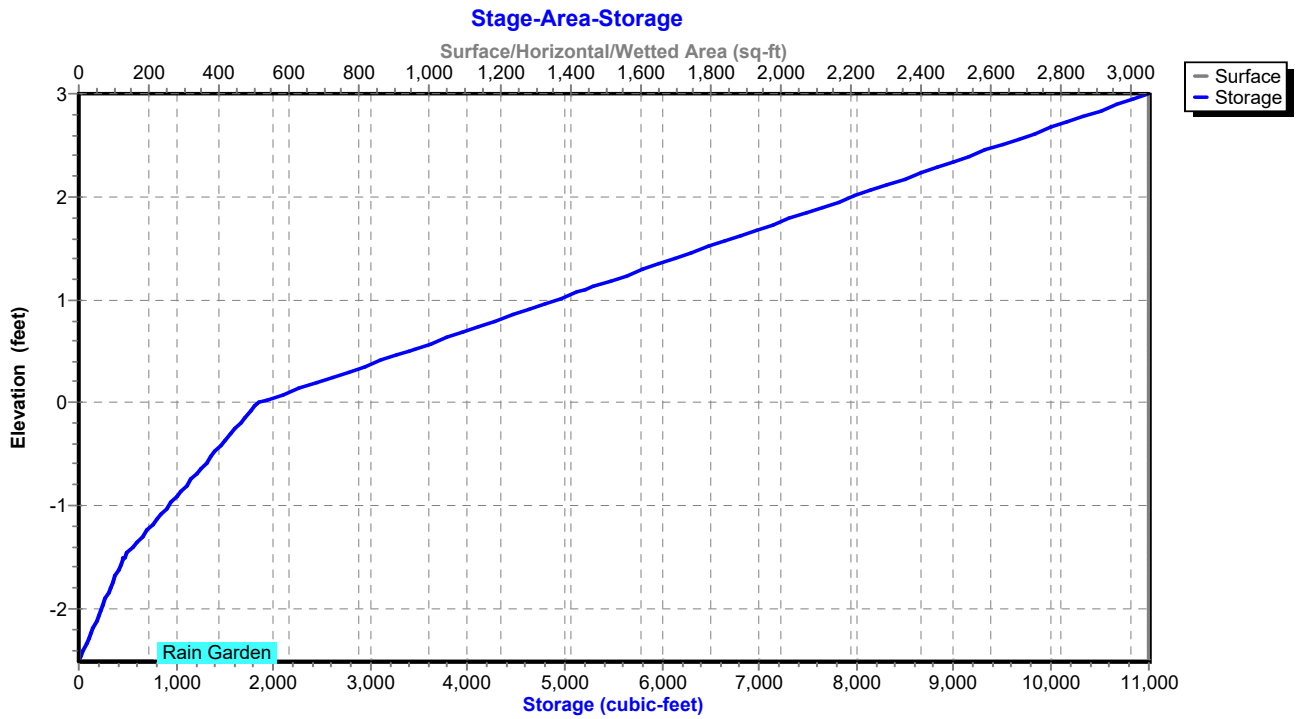
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NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Pond 1P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 1P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	-2.51	0.00
1.00	0.01	8	-2.49	0.00
2.00	0.03	91	-2.31	0.00
3.00	0.05	234	-2.00	0.00
4.00	0.06	418	-1.60	0.00
5.00	0.06	629	-1.32	0.00
6.00	0.07	858	-1.07	0.00
7.00	0.09	1,127	-0.78	0.01
8.00	0.11	1,463	-0.41	0.01
9.00	0.13	1,866	0.00	0.01
10.00	0.20	2,424	0.19	0.01
11.00	0.36	3,315	0.48	0.01
12.00	2.83	5,411	1.16	2.41
13.00	0.45	5,160	1.08	0.57
14.00	0.22	4,580	0.89	0.35
15.00	0.14	4,228	0.78	0.22
16.00	0.12	4,028	0.71	0.16
17.00	0.10	3,923	0.68	0.12
18.00	0.08	3,844	0.65	0.10
19.00	0.07	3,788	0.63	0.08
20.00	0.07	3,755	0.62	0.08
21.00	0.06	3,730	0.61	0.07
22.00	0.06	3,708	0.61	0.06
23.00	0.05	3,687	0.60	0.06
24.00	0.06	3,668	0.59	0.06
25.00	0.00	3,539	0.55	0.03
26.00	0.00	3,459	0.52	0.02
27.00	0.00	3,412	0.51	0.01
28.00	0.00	3,376	0.50	0.01
29.00	0.00	3,342	0.49	0.01
30.00	0.00	3,309	0.48	0.01
31.00	0.00	3,276	0.46	0.01
32.00	0.00	3,243	0.45	0.01
33.00	0.00	3,211	0.44	0.01
34.00	0.00	3,178	0.43	0.01
35.00	0.00	3,145	0.42	0.01
36.00	0.00	3,113	0.41	0.01
37.00	0.00	3,080	0.40	0.01
38.00	0.00	3,048	0.39	0.01
39.00	0.00	3,016	0.38	0.01
40.00	0.00	2,984	0.37	0.01
41.00	0.00	2,951	0.36	0.01
42.00	0.00	2,919	0.35	0.01
43.00	0.00	2,888	0.34	0.01
44.00	0.00	2,856	0.33	0.01
45.00	0.00	2,824	0.32	0.01
46.00	0.00	2,792	0.31	0.01
47.00	0.00	2,761	0.30	0.01
48.00	0.00	2,729	0.29	0.01
49.00	0.00	2,698	0.27	0.01
50.00	0.00	2,667	0.26	0.01
51.00	0.00	2,636	0.25	0.01

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	2,605	0.24	0.01
53.00	0.00	2,574	0.23	0.01
54.00	0.00	2,543	0.22	0.01
55.00	0.00	2,512	0.21	0.01
56.00	0.00	2,481	0.20	0.01
57.00	0.00	2,451	0.19	0.01
58.00	0.00	2,420	0.18	0.01
59.00	0.00	2,390	0.17	0.01
60.00	0.00	2,359	0.16	0.01
61.00	0.00	2,329	0.15	0.01
62.00	0.00	2,299	0.14	0.01
63.00	0.00	2,269	0.13	0.01
64.00	0.00	2,239	0.12	0.01
65.00	0.00	2,209	0.11	0.01
66.00	0.00	2,179	0.10	0.01
67.00	0.00	2,149	0.09	0.01
68.00	0.00	2,120	0.09	0.01
69.00	0.00	2,090	0.08	0.01
70.00	0.00	2,061	0.07	0.01
71.00	0.00	2,032	0.06	0.01
72.00	0.00	2,002	0.05	0.01
73.00	0.00	1,973	0.04	0.01
74.00	0.00	1,944	0.03	0.01
75.00	0.00	1,915	0.02	0.01
76.00	0.00	1,886	0.01	0.01
77.00	0.00	1,858	0.00	0.01
78.00	0.00	1,829	-0.01	0.01
79.00	0.00	1,800	-0.04	0.01
80.00	0.00	1,772	-0.07	0.01
81.00	0.00	1,744	-0.10	0.01
82.00	0.00	1,717	-0.13	0.01
83.00	0.00	1,689	-0.16	0.01
84.00	0.00	1,662	-0.19	0.01
85.00	0.00	1,636	-0.22	0.01
86.00	0.00	1,609	-0.25	0.01
87.00	0.00	1,583	-0.28	0.01
88.00	0.00	1,558	-0.31	0.01
89.00	0.00	1,532	-0.33	0.01
90.00	0.00	1,507	-0.36	0.01
91.00	0.00	1,482	-0.39	0.01
92.00	0.00	1,458	-0.42	0.01
93.00	0.00	1,434	-0.44	0.01
94.00	0.00	1,410	-0.47	0.01
95.00	0.00	1,386	-0.49	0.01
96.00	0.00	1,363	-0.52	0.01
97.00	0.00	1,340	-0.55	0.01
98.00	0.00	1,317	-0.57	0.01
99.00	0.00	1,295	-0.59	0.01
100.00	0.00	1,273	-0.62	0.01
101.00	0.00	1,251	-0.64	0.01
102.00	0.00	1,229	-0.67	0.01
103.00	0.00	1,208	-0.69	0.01

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1,187	-0.71	0.01
105.00	0.00	1,167	-0.73	0.01
106.00	0.00	1,147	-0.76	0.01
107.00	0.00	1,127	-0.78	0.01
108.00	0.00	1,107	-0.80	0.01
109.00	0.00	1,088	-0.82	0.01
110.00	0.00	1,069	-0.84	0.01
111.00	0.00	1,050	-0.86	0.01
112.00	0.00	1,032	-0.88	0.01
113.00	0.00	1,013	-0.90	0.00
114.00	0.00	996	-0.92	0.00
115.00	0.00	978	-0.94	0.00
116.00	0.00	961	-0.96	0.00
117.00	0.00	944	-0.98	0.00
118.00	0.00	927	-1.00	0.00
119.00	0.00	911	-1.01	0.00
120.00	0.00	895	-1.03	0.00
121.00	0.00	880	-1.05	0.00
122.00	0.00	864	-1.07	0.00
123.00	0.00	849	-1.08	0.00
124.00	0.00	834	-1.10	0.00
125.00	0.00	820	-1.11	0.00
126.00	0.00	806	-1.13	0.00
127.00	0.00	792	-1.14	0.00
128.00	0.00	779	-1.16	0.00
129.00	0.00	765	-1.17	0.00
130.00	0.00	752	-1.19	0.00
131.00	0.00	740	-1.20	0.00
132.00	0.00	728	-1.21	0.00
133.00	0.00	716	-1.23	0.00
134.00	0.00	704	-1.24	0.00
135.00	0.00	692	-1.25	0.00
136.00	0.00	681	-1.27	0.00
137.00	0.00	671	-1.28	0.00
138.00	0.00	660	-1.29	0.00
139.00	0.00	650	-1.30	0.00
140.00	0.00	640	-1.31	0.00
141.00	0.00	631	-1.32	0.00
142.00	0.00	621	-1.33	0.00
143.00	0.00	612	-1.34	0.00
144.00	0.00	604	-1.35	0.00
145.00	0.00	595	-1.36	0.00
146.00	0.00	587	-1.37	0.00
147.00	0.00	580	-1.38	0.00
148.00	0.00	572	-1.38	0.00
149.00	0.00	565	-1.39	0.00
150.00	0.00	559	-1.40	0.00
151.00	0.00	552	-1.41	0.00
152.00	0.00	546	-1.41	0.00
153.00	0.00	540	-1.42	0.00
154.00	0.00	535	-1.43	0.00
155.00	0.00	530	-1.43	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	525	-1.44	0.00
157.00	0.00	520	-1.44	0.00
158.00	0.00	516	-1.45	0.00
159.00	0.00	512	-1.45	0.00
160.00	0.00	509	-1.45	0.00
161.00	0.00	505	-1.46	0.00
162.00	0.00	502	-1.46	0.00
163.00	0.00	499	-1.46	0.00
164.00	0.00	496	-1.47	0.00
165.00	0.00	494	-1.47	0.00
166.00	0.00	491	-1.47	0.00
167.00	0.00	489	-1.48	0.00
168.00	0.00	487	-1.48	0.00
169.00	0.00	485	-1.48	0.00
170.00	0.00	484	-1.48	0.00
171.00	0.00	482	-1.48	0.00
172.00	0.00	481	-1.48	0.00
173.00	0.00	480	-1.49	0.00
174.00	0.00	479	-1.49	0.00
175.00	0.00	478	-1.49	0.00
176.00	0.00	477	-1.49	0.00
177.00	0.00	476	-1.49	0.00
178.00	0.00	475	-1.49	0.00
179.00	0.00	474	-1.49	0.00
180.00	0.00	474	-1.49	0.00
181.00	0.00	473	-1.49	0.00
182.00	0.00	472	-1.49	0.00
183.00	0.00	472	-1.49	0.00
184.00	0.00	471	-1.49	0.00
185.00	0.00	471	-1.50	0.00
186.00	0.00	471	-1.50	0.00
187.00	0.00	470	-1.50	0.00
188.00	0.00	470	-1.50	0.00
189.00	0.00	470	-1.50	0.00
190.00	0.00	469	-1.50	0.00
191.00	0.00	469	-1.50	0.00
192.00	0.00	469	-1.50	0.00
193.00	0.00	469	-1.50	0.00
194.00	0.00	469	-1.50	0.00
195.00	0.00	468	-1.50	0.00
196.00	0.00	468	-1.50	0.00
197.00	0.00	468	-1.50	0.00
198.00	0.00	468	-1.50	0.00
199.00	0.00	468	-1.50	0.00
200.00	0.00	468	-1.50	0.00
201.00	0.00	468	-1.50	0.00
202.00	0.00	468	-1.50	0.00
203.00	0.00	467	-1.50	0.00
204.00	0.00	467	-1.50	0.00
205.00	0.00	467	-1.50	0.00
206.00	0.00	467	-1.50	0.00
207.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
208.00	0.00	467	-1.50	0.00
209.00	0.00	467	-1.50	0.00
210.00	0.00	467	-1.50	0.00
211.00	0.00	467	-1.50	0.00
212.00	0.00	467	-1.50	0.00
213.00	0.00	467	-1.50	0.00
214.00	0.00	467	-1.50	0.00
215.00	0.00	467	-1.50	0.00
216.00	0.00	467	-1.50	0.00
217.00	0.00	467	-1.50	0.00
218.00	0.00	467	-1.50	0.00
219.00	0.00	467	-1.50	0.00
220.00	0.00	467	-1.50	0.00
221.00	0.00	467	-1.50	0.00
222.00	0.00	467	-1.50	0.00
223.00	0.00	467	-1.50	0.00
224.00	0.00	467	-1.50	0.00
225.00	0.00	467	-1.50	0.00
226.00	0.00	467	-1.50	0.00
227.00	0.00	467	-1.50	0.00
228.00	0.00	467	-1.50	0.00
229.00	0.00	467	-1.50	0.00
230.00	0.00	467	-1.50	0.00
231.00	0.00	467	-1.50	0.00
232.00	0.00	467	-1.50	0.00
233.00	0.00	467	-1.50	0.00
234.00	0.00	467	-1.50	0.00
235.00	0.00	467	-1.50	0.00
236.00	0.00	467	-1.50	0.00
237.00	0.00	467	-1.50	0.00
238.00	0.00	467	-1.50	0.00
239.00	0.00	467	-1.50	0.00
240.00	0.00	467	-1.50	0.00
241.00	0.00	467	-1.50	0.00
242.00	0.00	467	-1.50	0.00
243.00	0.00	467	-1.50	0.00
244.00	0.00	467	-1.50	0.00
245.00	0.00	467	-1.50	0.00
246.00	0.00	467	-1.50	0.00
247.00	0.00	467	-1.50	0.00
248.00	0.00	467	-1.50	0.00
249.00	0.00	467	-1.50	0.00
250.00	0.00	467	-1.50	0.00
251.00	0.00	467	-1.50	0.00
252.00	0.00	467	-1.50	0.00
253.00	0.00	467	-1.50	0.00
254.00	0.00	467	-1.50	0.00
255.00	0.00	467	-1.50	0.00
256.00	0.00	467	-1.50	0.00
257.00	0.00	467	-1.50	0.00
258.00	0.00	467	-1.50	0.00
259.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
260.00	0.00	467	-1.50	0.00
261.00	0.00	467	-1.50	0.00
262.00	0.00	467	-1.50	0.00
263.00	0.00	467	-1.50	0.00
264.00	0.00	467	-1.50	0.00
265.00	0.00	467	-1.50	0.00
266.00	0.00	467	-1.50	0.00
267.00	0.00	467	-1.50	0.00
268.00	0.00	466	-1.50	0.00
269.00	0.00	466	-1.50	0.00
270.00	0.00	466	-1.50	0.00
271.00	0.00	466	-1.50	0.00
272.00	0.00	466	-1.50	0.00
273.00	0.00	466	-1.50	0.00
274.00	0.00	466	-1.50	0.00
275.00	0.00	466	-1.50	0.00
276.00	0.00	466	-1.50	0.00
277.00	0.00	466	-1.50	0.00
278.00	0.00	466	-1.50	0.00
279.00	0.00	466	-1.50	0.00
280.00	0.00	466	-1.50	0.00
281.00	0.00	466	-1.50	0.00
282.00	0.00	466	-1.50	0.00
283.00	0.00	466	-1.50	0.00
284.00	0.00	466	-1.50	0.00
285.00	0.00	466	-1.50	0.00
286.00	0.00	466	-1.50	0.00
287.00	0.00	466	-1.50	0.00
288.00	0.00	466	-1.50	0.00
289.00	0.00	466	-1.50	0.00
290.00	0.00	466	-1.50	0.00
291.00	0.00	466	-1.50	0.00
292.00	0.00	466	-1.50	0.00
293.00	0.00	466	-1.50	0.00
294.00	0.00	466	-1.50	0.00
295.00	0.00	466	-1.50	0.00
296.00	0.00	466	-1.50	0.00
297.00	0.00	466	-1.50	0.00
298.00	0.00	466	-1.50	0.00
299.00	0.00	466	-1.50	0.00
300.00	0.00	466	-1.50	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Summary for Pond 2P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

[79] Warning: Submerged Pond 1P Primary device # 4 INLET by 2.78'

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 6.38" for 50-yr NOAA event
 Inflow = 4.98 cfs @ 12.14 hrs, Volume= 0.372 af
 Outflow = 0.68 cfs @ 12.70 hrs, Volume= 0.372 af, Atten= 86%, Lag= 33.2 min
 Primary = 0.68 cfs @ 12.70 hrs, Volume= 0.372 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.27' @ 12.70 hrs Surf.Area= 1,742 sf Storage= 4,845 cf

Plug-Flow detention time= 119.3 min calculated for 0.372 af (100% of inflow)
 Center-of-Mass det. time= 119.4 min (1,678.9 - 1,559.5)

Volume	Invert	Avail.Storage	Storage Description	
#1	-2.51'	6,114 cf	Detention Basin (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	1,742	0.0	0	0
-2.50	1,742	100.0	17	17
1.00	1,742	100.0	6,097	6,114

Device	Routing	Invert	Outlet Devices
#1	Secondary	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	-2.51'	4.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.68 cfs @ 12.70 hrs HW=0.27' (Free Discharge)
 ↑2=Orifice/Grate (Orifice Controls 0.68 cfs @ 7.79 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=-2.51' (Free Discharge)
 ↑1=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

MRC Example 2

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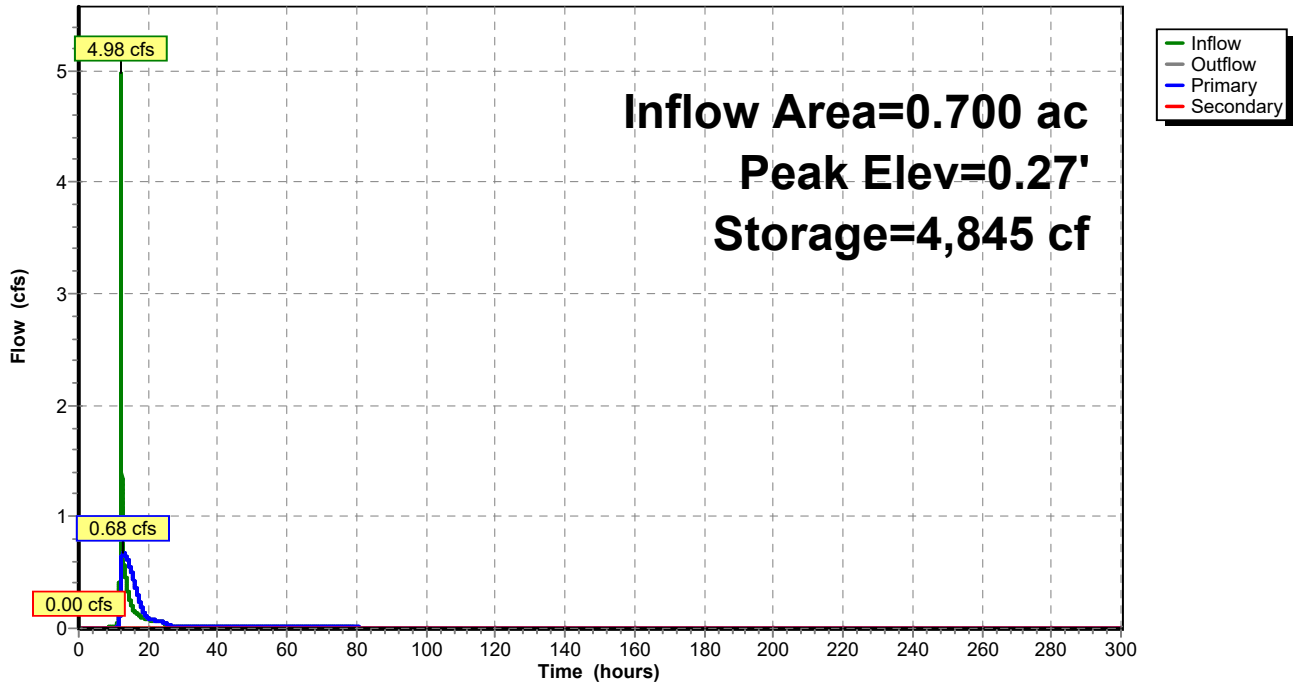
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NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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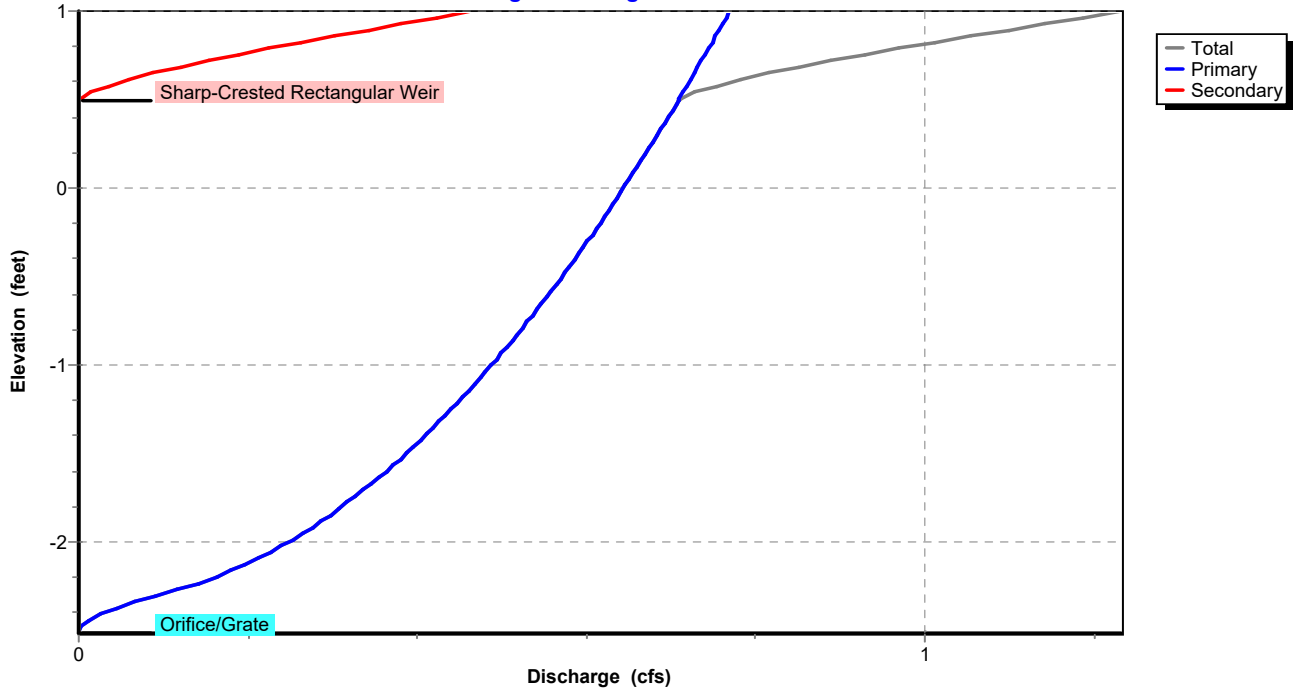
Pond 2P: Managed Release Rain Garden

Hydrograph



Pond 2P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

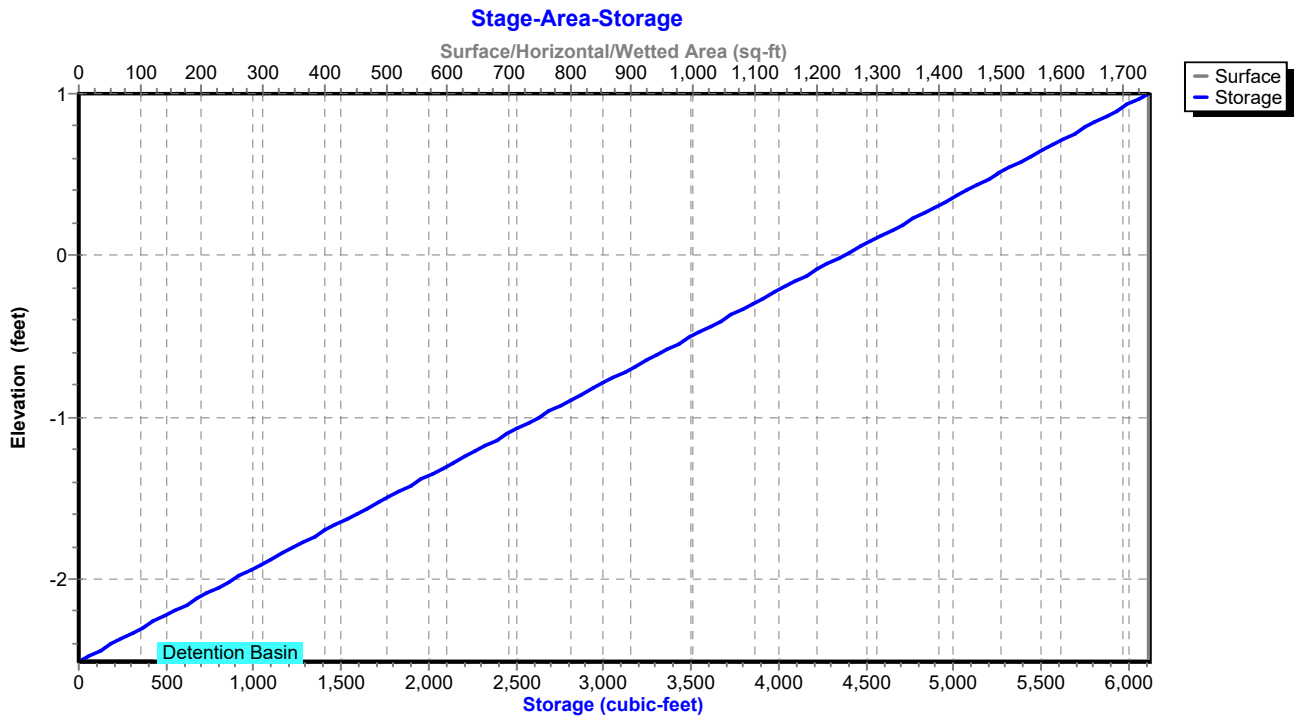
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NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Pond 2P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 2P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	-2.51	0.00	0.00	0.00
1.00	0.00	0	-2.51	0.00	0.00	0.00
2.00	0.00	0	-2.51	0.00	0.00	0.00
3.00	0.00	0	-2.51	0.00	0.00	0.00
4.00	0.00	0	-2.51	0.00	0.00	0.00
5.00	0.00	4	-2.51	0.00	0.00	0.00
6.00	0.00	16	-2.50	0.00	0.00	0.00
7.00	0.01	31	-2.49	0.00	0.00	0.00
8.00	0.01	47	-2.48	0.00	0.00	0.00
9.00	0.01	64	-2.47	0.00	0.00	0.00
10.00	0.01	77	-2.47	0.01	0.01	0.00
11.00	0.01	87	-2.46	0.01	0.01	0.00
12.00	2.41	928	-1.98	0.25	0.25	0.00
13.00	0.57	4,757	0.22	0.67	0.67	0.00
14.00	0.35	4,066	-0.18	0.62	0.62	0.00
15.00	0.22	3,004	-0.79	0.52	0.52	0.00
16.00	0.16	1,975	-1.38	0.41	0.41	0.00
17.00	0.12	1,186	-1.83	0.30	0.30	0.00
18.00	0.10	688	-2.11	0.20	0.20	0.00
19.00	0.08	443	-2.26	0.12	0.12	0.00
20.00	0.08	362	-2.30	0.09	0.09	0.00
21.00	0.07	330	-2.32	0.08	0.08	0.00
22.00	0.06	312	-2.33	0.07	0.07	0.00
23.00	0.06	298	-2.34	0.06	0.06	0.00
24.00	0.06	284	-2.35	0.06	0.06	0.00
25.00	0.03	243	-2.37	0.04	0.04	0.00
26.00	0.02	192	-2.40	0.03	0.03	0.00
27.00	0.01	155	-2.42	0.02	0.02	0.00
28.00	0.01	131	-2.43	0.01	0.01	0.00
29.00	0.01	119	-2.44	0.01	0.01	0.00
30.00	0.01	112	-2.45	0.01	0.01	0.00
31.00	0.01	108	-2.45	0.01	0.01	0.00
32.00	0.01	106	-2.45	0.01	0.01	0.00
33.00	0.01	104	-2.45	0.01	0.01	0.00
34.00	0.01	103	-2.45	0.01	0.01	0.00
35.00	0.01	103	-2.45	0.01	0.01	0.00
36.00	0.01	102	-2.45	0.01	0.01	0.00
37.00	0.01	102	-2.45	0.01	0.01	0.00
38.00	0.01	102	-2.45	0.01	0.01	0.00
39.00	0.01	101	-2.45	0.01	0.01	0.00
40.00	0.01	101	-2.45	0.01	0.01	0.00
41.00	0.01	101	-2.45	0.01	0.01	0.00
42.00	0.01	101	-2.45	0.01	0.01	0.00
43.00	0.01	101	-2.45	0.01	0.01	0.00
44.00	0.01	100	-2.45	0.01	0.01	0.00
45.00	0.01	100	-2.45	0.01	0.01	0.00
46.00	0.01	100	-2.45	0.01	0.01	0.00
47.00	0.01	100	-2.45	0.01	0.01	0.00
48.00	0.01	100	-2.45	0.01	0.01	0.00
49.00	0.01	100	-2.45	0.01	0.01	0.00
50.00	0.01	99	-2.45	0.01	0.01	0.00
51.00	0.01	99	-2.45	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
52.00	0.01	99	-2.45	0.01	0.01	0.00
53.00	0.01	99	-2.45	0.01	0.01	0.00
54.00	0.01	99	-2.45	0.01	0.01	0.00
55.00	0.01	99	-2.45	0.01	0.01	0.00
56.00	0.01	98	-2.45	0.01	0.01	0.00
57.00	0.01	98	-2.45	0.01	0.01	0.00
58.00	0.01	98	-2.45	0.01	0.01	0.00
59.00	0.01	98	-2.45	0.01	0.01	0.00
60.00	0.01	98	-2.45	0.01	0.01	0.00
61.00	0.01	97	-2.45	0.01	0.01	0.00
62.00	0.01	97	-2.45	0.01	0.01	0.00
63.00	0.01	97	-2.45	0.01	0.01	0.00
64.00	0.01	97	-2.45	0.01	0.01	0.00
65.00	0.01	97	-2.45	0.01	0.01	0.00
66.00	0.01	97	-2.45	0.01	0.01	0.00
67.00	0.01	96	-2.45	0.01	0.01	0.00
68.00	0.01	96	-2.45	0.01	0.01	0.00
69.00	0.01	96	-2.45	0.01	0.01	0.00
70.00	0.01	96	-2.45	0.01	0.01	0.00
71.00	0.01	96	-2.46	0.01	0.01	0.00
72.00	0.01	96	-2.46	0.01	0.01	0.00
73.00	0.01	95	-2.46	0.01	0.01	0.00
74.00	0.01	95	-2.46	0.01	0.01	0.00
75.00	0.01	95	-2.46	0.01	0.01	0.00
76.00	0.01	95	-2.46	0.01	0.01	0.00
77.00	0.01	95	-2.46	0.01	0.01	0.00
78.00	0.01	95	-2.46	0.01	0.01	0.00
79.00	0.01	94	-2.46	0.01	0.01	0.00
80.00	0.01	94	-2.46	0.01	0.01	0.00
81.00	0.01	93	-2.46	0.01	0.01	0.00
82.00	0.01	93	-2.46	0.01	0.01	0.00
83.00	0.01	92	-2.46	0.01	0.01	0.00
84.00	0.01	92	-2.46	0.01	0.01	0.00
85.00	0.01	91	-2.46	0.01	0.01	0.00
86.00	0.01	91	-2.46	0.01	0.01	0.00
87.00	0.01	90	-2.46	0.01	0.01	0.00
88.00	0.01	89	-2.46	0.01	0.01	0.00
89.00	0.01	89	-2.46	0.01	0.01	0.00
90.00	0.01	88	-2.46	0.01	0.01	0.00
91.00	0.01	88	-2.46	0.01	0.01	0.00
92.00	0.01	87	-2.46	0.01	0.01	0.00
93.00	0.01	87	-2.46	0.01	0.01	0.00
94.00	0.01	86	-2.46	0.01	0.01	0.00
95.00	0.01	85	-2.46	0.01	0.01	0.00
96.00	0.01	85	-2.46	0.01	0.01	0.00
97.00	0.01	84	-2.46	0.01	0.01	0.00
98.00	0.01	84	-2.46	0.01	0.01	0.00
99.00	0.01	83	-2.46	0.01	0.01	0.00
100.00	0.01	83	-2.46	0.01	0.01	0.00
101.00	0.01	82	-2.46	0.01	0.01	0.00
102.00	0.01	81	-2.46	0.01	0.01	0.00
103.00	0.01	81	-2.46	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
104.00	0.01	80	-2.46	0.01	0.01	0.00
105.00	0.01	80	-2.46	0.01	0.01	0.00
106.00	0.01	79	-2.46	0.01	0.01	0.00
107.00	0.01	78	-2.46	0.01	0.01	0.00
108.00	0.01	78	-2.47	0.01	0.01	0.00
109.00	0.01	77	-2.47	0.01	0.01	0.00
110.00	0.01	77	-2.47	0.01	0.01	0.00
111.00	0.01	76	-2.47	0.01	0.01	0.00
112.00	0.01	76	-2.47	0.01	0.01	0.00
113.00	0.00	75	-2.47	0.01	0.01	0.00
114.00	0.00	74	-2.47	0.01	0.01	0.00
115.00	0.00	74	-2.47	0.00	0.00	0.00
116.00	0.00	73	-2.47	0.00	0.00	0.00
117.00	0.00	73	-2.47	0.00	0.00	0.00
118.00	0.00	72	-2.47	0.00	0.00	0.00
119.00	0.00	71	-2.47	0.00	0.00	0.00
120.00	0.00	71	-2.47	0.00	0.00	0.00
121.00	0.00	70	-2.47	0.00	0.00	0.00
122.00	0.00	70	-2.47	0.00	0.00	0.00
123.00	0.00	69	-2.47	0.00	0.00	0.00
124.00	0.00	69	-2.47	0.00	0.00	0.00
125.00	0.00	68	-2.47	0.00	0.00	0.00
126.00	0.00	67	-2.47	0.00	0.00	0.00
127.00	0.00	67	-2.47	0.00	0.00	0.00
128.00	0.00	66	-2.47	0.00	0.00	0.00
129.00	0.00	66	-2.47	0.00	0.00	0.00
130.00	0.00	65	-2.47	0.00	0.00	0.00
131.00	0.00	65	-2.47	0.00	0.00	0.00
132.00	0.00	64	-2.47	0.00	0.00	0.00
133.00	0.00	63	-2.47	0.00	0.00	0.00
134.00	0.00	63	-2.47	0.00	0.00	0.00
135.00	0.00	62	-2.47	0.00	0.00	0.00
136.00	0.00	62	-2.47	0.00	0.00	0.00
137.00	0.00	61	-2.47	0.00	0.00	0.00
138.00	0.00	60	-2.48	0.00	0.00	0.00
139.00	0.00	60	-2.48	0.00	0.00	0.00
140.00	0.00	59	-2.48	0.00	0.00	0.00
141.00	0.00	58	-2.48	0.00	0.00	0.00
142.00	0.00	57	-2.48	0.00	0.00	0.00
143.00	0.00	55	-2.48	0.00	0.00	0.00
144.00	0.00	54	-2.48	0.00	0.00	0.00
145.00	0.00	53	-2.48	0.00	0.00	0.00
146.00	0.00	52	-2.48	0.00	0.00	0.00
147.00	0.00	51	-2.48	0.00	0.00	0.00
148.00	0.00	49	-2.48	0.00	0.00	0.00
149.00	0.00	48	-2.48	0.00	0.00	0.00
150.00	0.00	47	-2.48	0.00	0.00	0.00
151.00	0.00	46	-2.48	0.00	0.00	0.00
152.00	0.00	44	-2.48	0.00	0.00	0.00
153.00	0.00	43	-2.49	0.00	0.00	0.00
154.00	0.00	42	-2.49	0.00	0.00	0.00
155.00	0.00	40	-2.49	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
156.00	0.00	39	-2.49	0.00	0.00	0.00
157.00	0.00	38	-2.49	0.00	0.00	0.00
158.00	0.00	36	-2.49	0.00	0.00	0.00
159.00	0.00	35	-2.49	0.00	0.00	0.00
160.00	0.00	34	-2.49	0.00	0.00	0.00
161.00	0.00	32	-2.49	0.00	0.00	0.00
162.00	0.00	31	-2.49	0.00	0.00	0.00
163.00	0.00	30	-2.49	0.00	0.00	0.00
164.00	0.00	29	-2.49	0.00	0.00	0.00
165.00	0.00	28	-2.49	0.00	0.00	0.00
166.00	0.00	27	-2.49	0.00	0.00	0.00
167.00	0.00	26	-2.50	0.00	0.00	0.00
168.00	0.00	25	-2.50	0.00	0.00	0.00
169.00	0.00	24	-2.50	0.00	0.00	0.00
170.00	0.00	23	-2.50	0.00	0.00	0.00
171.00	0.00	23	-2.50	0.00	0.00	0.00
172.00	0.00	22	-2.50	0.00	0.00	0.00
173.00	0.00	21	-2.50	0.00	0.00	0.00
174.00	0.00	21	-2.50	0.00	0.00	0.00
175.00	0.00	20	-2.50	0.00	0.00	0.00
176.00	0.00	19	-2.50	0.00	0.00	0.00
177.00	0.00	19	-2.50	0.00	0.00	0.00
178.00	0.00	19	-2.50	0.00	0.00	0.00
179.00	0.00	18	-2.50	0.00	0.00	0.00
180.00	0.00	18	-2.50	0.00	0.00	0.00
181.00	0.00	17	-2.50	0.00	0.00	0.00
182.00	0.00	17	-2.50	0.00	0.00	0.00
183.00	0.00	17	-2.50	0.00	0.00	0.00
184.00	0.00	16	-2.50	0.00	0.00	0.00
185.00	0.00	16	-2.50	0.00	0.00	0.00
186.00	0.00	15	-2.50	0.00	0.00	0.00
187.00	0.00	15	-2.50	0.00	0.00	0.00
188.00	0.00	14	-2.50	0.00	0.00	0.00
189.00	0.00	14	-2.50	0.00	0.00	0.00
190.00	0.00	13	-2.50	0.00	0.00	0.00
191.00	0.00	13	-2.50	0.00	0.00	0.00
192.00	0.00	13	-2.50	0.00	0.00	0.00
193.00	0.00	12	-2.50	0.00	0.00	0.00
194.00	0.00	12	-2.50	0.00	0.00	0.00
195.00	0.00	11	-2.50	0.00	0.00	0.00
196.00	0.00	11	-2.50	0.00	0.00	0.00
197.00	0.00	10	-2.50	0.00	0.00	0.00
198.00	0.00	10	-2.50	0.00	0.00	0.00
199.00	0.00	10	-2.50	0.00	0.00	0.00
200.00	0.00	9	-2.50	0.00	0.00	0.00
201.00	0.00	9	-2.50	0.00	0.00	0.00
202.00	0.00	8	-2.51	0.00	0.00	0.00
203.00	0.00	8	-2.51	0.00	0.00	0.00
204.00	0.00	8	-2.51	0.00	0.00	0.00
205.00	0.00	7	-2.51	0.00	0.00	0.00
206.00	0.00	7	-2.51	0.00	0.00	0.00
207.00	0.00	7	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
208.00	0.00	6	-2.51	0.00	0.00	0.00
209.00	0.00	6	-2.51	0.00	0.00	0.00
210.00	0.00	6	-2.51	0.00	0.00	0.00
211.00	0.00	6	-2.51	0.00	0.00	0.00
212.00	0.00	5	-2.51	0.00	0.00	0.00
213.00	0.00	5	-2.51	0.00	0.00	0.00
214.00	0.00	5	-2.51	0.00	0.00	0.00
215.00	0.00	5	-2.51	0.00	0.00	0.00
216.00	0.00	4	-2.51	0.00	0.00	0.00
217.00	0.00	4	-2.51	0.00	0.00	0.00
218.00	0.00	4	-2.51	0.00	0.00	0.00
219.00	0.00	4	-2.51	0.00	0.00	0.00
220.00	0.00	4	-2.51	0.00	0.00	0.00
221.00	0.00	3	-2.51	0.00	0.00	0.00
222.00	0.00	3	-2.51	0.00	0.00	0.00
223.00	0.00	3	-2.51	0.00	0.00	0.00
224.00	0.00	3	-2.51	0.00	0.00	0.00
225.00	0.00	3	-2.51	0.00	0.00	0.00
226.00	0.00	3	-2.51	0.00	0.00	0.00
227.00	0.00	3	-2.51	0.00	0.00	0.00
228.00	0.00	2	-2.51	0.00	0.00	0.00
229.00	0.00	2	-2.51	0.00	0.00	0.00
230.00	0.00	2	-2.51	0.00	0.00	0.00
231.00	0.00	2	-2.51	0.00	0.00	0.00
232.00	0.00	2	-2.51	0.00	0.00	0.00
233.00	0.00	2	-2.51	0.00	0.00	0.00
234.00	0.00	2	-2.51	0.00	0.00	0.00
235.00	0.00	2	-2.51	0.00	0.00	0.00
236.00	0.00	2	-2.51	0.00	0.00	0.00
237.00	0.00	2	-2.51	0.00	0.00	0.00
238.00	0.00	1	-2.51	0.00	0.00	0.00
239.00	0.00	1	-2.51	0.00	0.00	0.00
240.00	0.00	1	-2.51	0.00	0.00	0.00
241.00	0.00	1	-2.51	0.00	0.00	0.00
242.00	0.00	1	-2.51	0.00	0.00	0.00
243.00	0.00	1	-2.51	0.00	0.00	0.00
244.00	0.00	1	-2.51	0.00	0.00	0.00
245.00	0.00	1	-2.51	0.00	0.00	0.00
246.00	0.00	1	-2.51	0.00	0.00	0.00
247.00	0.00	1	-2.51	0.00	0.00	0.00
248.00	0.00	1	-2.51	0.00	0.00	0.00
249.00	0.00	1	-2.51	0.00	0.00	0.00
250.00	0.00	1	-2.51	0.00	0.00	0.00
251.00	0.00	1	-2.51	0.00	0.00	0.00
252.00	0.00	1	-2.51	0.00	0.00	0.00
253.00	0.00	1	-2.51	0.00	0.00	0.00
254.00	0.00	1	-2.51	0.00	0.00	0.00
255.00	0.00	1	-2.51	0.00	0.00	0.00
256.00	0.00	1	-2.51	0.00	0.00	0.00
257.00	0.00	1	-2.51	0.00	0.00	0.00
258.00	0.00	1	-2.51	0.00	0.00	0.00
259.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 50-yr NOAA Rainfall=6.80"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
260.00	0.00	0	-2.51	0.00	0.00	0.00
261.00	0.00	0	-2.51	0.00	0.00	0.00
262.00	0.00	0	-2.51	0.00	0.00	0.00
263.00	0.00	0	-2.51	0.00	0.00	0.00
264.00	0.00	0	-2.51	0.00	0.00	0.00
265.00	0.00	0	-2.51	0.00	0.00	0.00
266.00	0.00	0	-2.51	0.00	0.00	0.00
267.00	0.00	0	-2.51	0.00	0.00	0.00
268.00	0.00	0	-2.51	0.00	0.00	0.00
269.00	0.00	0	-2.51	0.00	0.00	0.00
270.00	0.00	0	-2.51	0.00	0.00	0.00
271.00	0.00	0	-2.51	0.00	0.00	0.00
272.00	0.00	0	-2.51	0.00	0.00	0.00
273.00	0.00	0	-2.51	0.00	0.00	0.00
274.00	0.00	0	-2.51	0.00	0.00	0.00
275.00	0.00	0	-2.51	0.00	0.00	0.00
276.00	0.00	0	-2.51	0.00	0.00	0.00
277.00	0.00	0	-2.51	0.00	0.00	0.00
278.00	0.00	0	-2.51	0.00	0.00	0.00
279.00	0.00	0	-2.51	0.00	0.00	0.00
280.00	0.00	0	-2.51	0.00	0.00	0.00
281.00	0.00	0	-2.51	0.00	0.00	0.00
282.00	0.00	0	-2.51	0.00	0.00	0.00
283.00	0.00	0	-2.51	0.00	0.00	0.00
284.00	0.00	0	-2.51	0.00	0.00	0.00
285.00	0.00	0	-2.51	0.00	0.00	0.00
286.00	0.00	0	-2.51	0.00	0.00	0.00
287.00	0.00	0	-2.51	0.00	0.00	0.00
288.00	0.00	0	-2.51	0.00	0.00	0.00
289.00	0.00	0	-2.51	0.00	0.00	0.00
290.00	0.00	0	-2.51	0.00	0.00	0.00
291.00	0.00	0	-2.51	0.00	0.00	0.00
292.00	0.00	0	-2.51	0.00	0.00	0.00
293.00	0.00	0	-2.51	0.00	0.00	0.00
294.00	0.00	0	-2.51	0.00	0.00	0.00
295.00	0.00	0	-2.51	0.00	0.00	0.00
296.00	0.00	0	-2.51	0.00	0.00	0.00
297.00	0.00	0	-2.51	0.00	0.00	0.00
298.00	0.00	0	-2.51	0.00	0.00	0.00
299.00	0.00	0	-2.51	0.00	0.00	0.00
300.00	0.00	0	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Time span=0.00-300.00 hrs, dt=0.01 hrs, 30001 points

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.

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

Subcatchment1S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=7.53"
Tc=6.0 min CN=0/98 Runoff=5.82 cfs 0.439 af

Subcatchment3S: 0.7 ac Pervious Runoff Area=30,492 sf 0.00% Impervious Runoff Depth=4.72"
Tc=15.0 min CN=74/0 Runoff=3.18 cfs 0.275 af

Subcatchment4S: 0.7 ac Impervious Runoff Area=30,492 sf 100.00% Impervious Runoff Depth=7.53"
Tc=6.0 min CN=0/98 Runoff=5.82 cfs 0.439 af

Pond 1P: Managed Release Rain Garden Peak Elev=1.24' Storage=5,626 cf Inflow=5.82 cfs 0.439 af
Outflow=5.70 cfs 0.429 af

Pond 2P: Managed Release Rain Garden Peak Elev=0.85' Storage=5,847 cf Inflow=5.70 cfs 0.429 af
Primary=0.75 cfs 0.416 af Secondary=0.29 cfs 0.013 af Outflow=1.04 cfs 0.429 af

Total Runoff Area = 2.100 ac Runoff Volume = 1.154 af Average Runoff Depth = 6.59"
33.33% Pervious = 0.700 ac 66.67% Impervious = 1.400 ac

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Summary for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Runoff = 5.82 cfs @ 12.13 hrs, Volume= 0.439 af, Depth= 7.53"

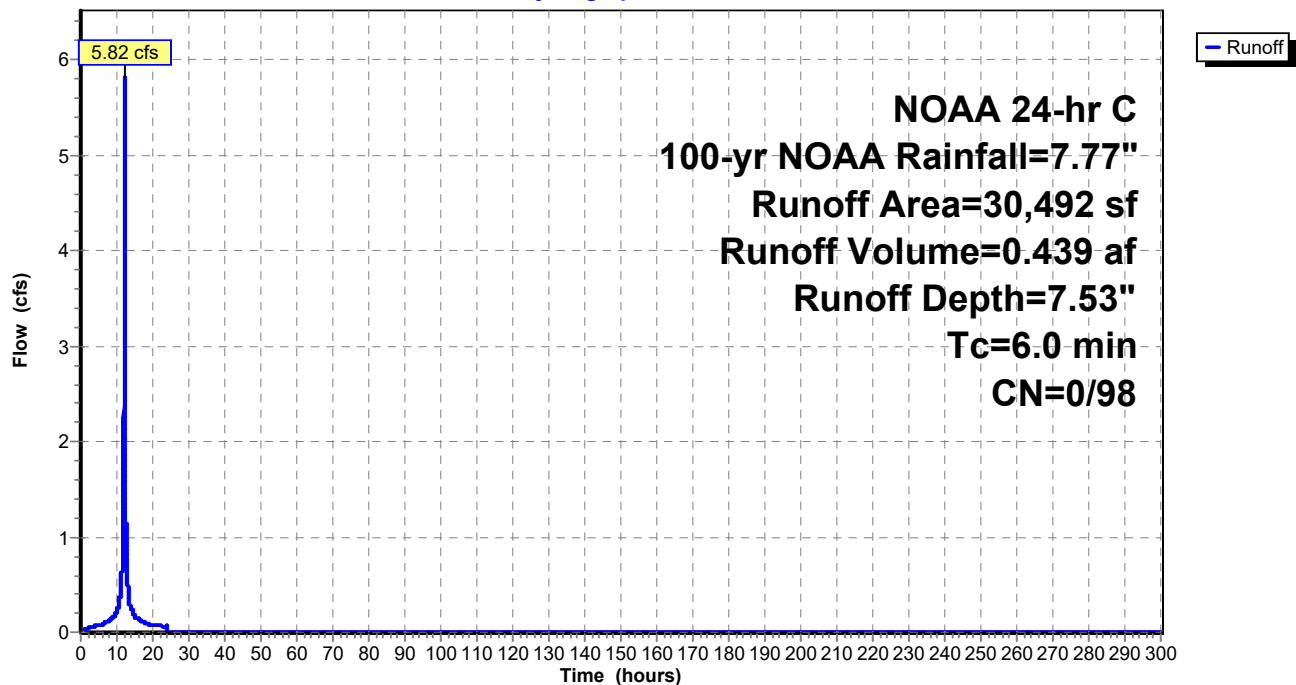
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.01	0.02
2.00	0.18	0.00	0.05	0.04
3.00	0.27	0.00	0.12	0.06
4.00	0.38	0.00	0.21	0.07
5.00	0.49	0.00	0.31	0.07
6.00	0.62	0.00	0.42	0.08
7.00	0.76	0.00	0.56	0.10
8.00	0.93	0.00	0.72	0.13
9.00	1.13	0.00	0.92	0.15
10.00	1.42	0.00	1.20	0.23
11.00	1.86	0.00	1.64	0.42
12.00	3.70	0.00	3.47	3.23
13.00	5.91	0.00	5.67	0.52
14.00	6.35	0.00	6.11	0.25
15.00	6.64	0.00	6.40	0.16
16.00	6.84	0.00	6.60	0.13
17.00	7.01	0.00	6.77	0.11
18.00	7.15	0.00	6.92	0.09
19.00	7.28	0.00	7.04	0.08
20.00	7.39	0.00	7.15	0.08
21.00	7.50	0.00	7.26	0.07
22.00	7.59	0.00	7.35	0.07
23.00	7.69	0.00	7.45	0.06
24.00	7.77	0.00	7.53	0.07
25.00	7.77	0.00	7.53	0.00
26.00	7.77	0.00	7.53	0.00
27.00	7.77	0.00	7.53	0.00
28.00	7.77	0.00	7.53	0.00
29.00	7.77	0.00	7.53	0.00
30.00	7.77	0.00	7.53	0.00
31.00	7.77	0.00	7.53	0.00
32.00	7.77	0.00	7.53	0.00
33.00	7.77	0.00	7.53	0.00
34.00	7.77	0.00	7.53	0.00
35.00	7.77	0.00	7.53	0.00
36.00	7.77	0.00	7.53	0.00
37.00	7.77	0.00	7.53	0.00
38.00	7.77	0.00	7.53	0.00
39.00	7.77	0.00	7.53	0.00
40.00	7.77	0.00	7.53	0.00
41.00	7.77	0.00	7.53	0.00
42.00	7.77	0.00	7.53	0.00
43.00	7.77	0.00	7.53	0.00
44.00	7.77	0.00	7.53	0.00
45.00	7.77	0.00	7.53	0.00
46.00	7.77	0.00	7.53	0.00
47.00	7.77	0.00	7.53	0.00
48.00	7.77	0.00	7.53	0.00
49.00	7.77	0.00	7.53	0.00
50.00	7.77	0.00	7.53	0.00
51.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	7.77	0.00	7.53	0.00
53.00	7.77	0.00	7.53	0.00
54.00	7.77	0.00	7.53	0.00
55.00	7.77	0.00	7.53	0.00
56.00	7.77	0.00	7.53	0.00
57.00	7.77	0.00	7.53	0.00
58.00	7.77	0.00	7.53	0.00
59.00	7.77	0.00	7.53	0.00
60.00	7.77	0.00	7.53	0.00
61.00	7.77	0.00	7.53	0.00
62.00	7.77	0.00	7.53	0.00
63.00	7.77	0.00	7.53	0.00
64.00	7.77	0.00	7.53	0.00
65.00	7.77	0.00	7.53	0.00
66.00	7.77	0.00	7.53	0.00
67.00	7.77	0.00	7.53	0.00
68.00	7.77	0.00	7.53	0.00
69.00	7.77	0.00	7.53	0.00
70.00	7.77	0.00	7.53	0.00
71.00	7.77	0.00	7.53	0.00
72.00	7.77	0.00	7.53	0.00
73.00	7.77	0.00	7.53	0.00
74.00	7.77	0.00	7.53	0.00
75.00	7.77	0.00	7.53	0.00
76.00	7.77	0.00	7.53	0.00
77.00	7.77	0.00	7.53	0.00
78.00	7.77	0.00	7.53	0.00
79.00	7.77	0.00	7.53	0.00
80.00	7.77	0.00	7.53	0.00
81.00	7.77	0.00	7.53	0.00
82.00	7.77	0.00	7.53	0.00
83.00	7.77	0.00	7.53	0.00
84.00	7.77	0.00	7.53	0.00
85.00	7.77	0.00	7.53	0.00
86.00	7.77	0.00	7.53	0.00
87.00	7.77	0.00	7.53	0.00
88.00	7.77	0.00	7.53	0.00
89.00	7.77	0.00	7.53	0.00
90.00	7.77	0.00	7.53	0.00
91.00	7.77	0.00	7.53	0.00
92.00	7.77	0.00	7.53	0.00
93.00	7.77	0.00	7.53	0.00
94.00	7.77	0.00	7.53	0.00
95.00	7.77	0.00	7.53	0.00
96.00	7.77	0.00	7.53	0.00
97.00	7.77	0.00	7.53	0.00
98.00	7.77	0.00	7.53	0.00
99.00	7.77	0.00	7.53	0.00
100.00	7.77	0.00	7.53	0.00
101.00	7.77	0.00	7.53	0.00
102.00	7.77	0.00	7.53	0.00
103.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	7.77	0.00	7.53	0.00
105.00	7.77	0.00	7.53	0.00
106.00	7.77	0.00	7.53	0.00
107.00	7.77	0.00	7.53	0.00
108.00	7.77	0.00	7.53	0.00
109.00	7.77	0.00	7.53	0.00
110.00	7.77	0.00	7.53	0.00
111.00	7.77	0.00	7.53	0.00
112.00	7.77	0.00	7.53	0.00
113.00	7.77	0.00	7.53	0.00
114.00	7.77	0.00	7.53	0.00
115.00	7.77	0.00	7.53	0.00
116.00	7.77	0.00	7.53	0.00
117.00	7.77	0.00	7.53	0.00
118.00	7.77	0.00	7.53	0.00
119.00	7.77	0.00	7.53	0.00
120.00	7.77	0.00	7.53	0.00
121.00	7.77	0.00	7.53	0.00
122.00	7.77	0.00	7.53	0.00
123.00	7.77	0.00	7.53	0.00
124.00	7.77	0.00	7.53	0.00
125.00	7.77	0.00	7.53	0.00
126.00	7.77	0.00	7.53	0.00
127.00	7.77	0.00	7.53	0.00
128.00	7.77	0.00	7.53	0.00
129.00	7.77	0.00	7.53	0.00
130.00	7.77	0.00	7.53	0.00
131.00	7.77	0.00	7.53	0.00
132.00	7.77	0.00	7.53	0.00
133.00	7.77	0.00	7.53	0.00
134.00	7.77	0.00	7.53	0.00
135.00	7.77	0.00	7.53	0.00
136.00	7.77	0.00	7.53	0.00
137.00	7.77	0.00	7.53	0.00
138.00	7.77	0.00	7.53	0.00
139.00	7.77	0.00	7.53	0.00
140.00	7.77	0.00	7.53	0.00
141.00	7.77	0.00	7.53	0.00
142.00	7.77	0.00	7.53	0.00
143.00	7.77	0.00	7.53	0.00
144.00	7.77	0.00	7.53	0.00
145.00	7.77	0.00	7.53	0.00
146.00	7.77	0.00	7.53	0.00
147.00	7.77	0.00	7.53	0.00
148.00	7.77	0.00	7.53	0.00
149.00	7.77	0.00	7.53	0.00
150.00	7.77	0.00	7.53	0.00
151.00	7.77	0.00	7.53	0.00
152.00	7.77	0.00	7.53	0.00
153.00	7.77	0.00	7.53	0.00
154.00	7.77	0.00	7.53	0.00
155.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	7.77	0.00	7.53	0.00
157.00	7.77	0.00	7.53	0.00
158.00	7.77	0.00	7.53	0.00
159.00	7.77	0.00	7.53	0.00
160.00	7.77	0.00	7.53	0.00
161.00	7.77	0.00	7.53	0.00
162.00	7.77	0.00	7.53	0.00
163.00	7.77	0.00	7.53	0.00
164.00	7.77	0.00	7.53	0.00
165.00	7.77	0.00	7.53	0.00
166.00	7.77	0.00	7.53	0.00
167.00	7.77	0.00	7.53	0.00
168.00	7.77	0.00	7.53	0.00
169.00	7.77	0.00	7.53	0.00
170.00	7.77	0.00	7.53	0.00
171.00	7.77	0.00	7.53	0.00
172.00	7.77	0.00	7.53	0.00
173.00	7.77	0.00	7.53	0.00
174.00	7.77	0.00	7.53	0.00
175.00	7.77	0.00	7.53	0.00
176.00	7.77	0.00	7.53	0.00
177.00	7.77	0.00	7.53	0.00
178.00	7.77	0.00	7.53	0.00
179.00	7.77	0.00	7.53	0.00
180.00	7.77	0.00	7.53	0.00
181.00	7.77	0.00	7.53	0.00
182.00	7.77	0.00	7.53	0.00
183.00	7.77	0.00	7.53	0.00
184.00	7.77	0.00	7.53	0.00
185.00	7.77	0.00	7.53	0.00
186.00	7.77	0.00	7.53	0.00
187.00	7.77	0.00	7.53	0.00
188.00	7.77	0.00	7.53	0.00
189.00	7.77	0.00	7.53	0.00
190.00	7.77	0.00	7.53	0.00
191.00	7.77	0.00	7.53	0.00
192.00	7.77	0.00	7.53	0.00
193.00	7.77	0.00	7.53	0.00
194.00	7.77	0.00	7.53	0.00
195.00	7.77	0.00	7.53	0.00
196.00	7.77	0.00	7.53	0.00
197.00	7.77	0.00	7.53	0.00
198.00	7.77	0.00	7.53	0.00
199.00	7.77	0.00	7.53	0.00
200.00	7.77	0.00	7.53	0.00
201.00	7.77	0.00	7.53	0.00
202.00	7.77	0.00	7.53	0.00
203.00	7.77	0.00	7.53	0.00
204.00	7.77	0.00	7.53	0.00
205.00	7.77	0.00	7.53	0.00
206.00	7.77	0.00	7.53	0.00
207.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	7.77	0.00	7.53	0.00
209.00	7.77	0.00	7.53	0.00
210.00	7.77	0.00	7.53	0.00
211.00	7.77	0.00	7.53	0.00
212.00	7.77	0.00	7.53	0.00
213.00	7.77	0.00	7.53	0.00
214.00	7.77	0.00	7.53	0.00
215.00	7.77	0.00	7.53	0.00
216.00	7.77	0.00	7.53	0.00
217.00	7.77	0.00	7.53	0.00
218.00	7.77	0.00	7.53	0.00
219.00	7.77	0.00	7.53	0.00
220.00	7.77	0.00	7.53	0.00
221.00	7.77	0.00	7.53	0.00
222.00	7.77	0.00	7.53	0.00
223.00	7.77	0.00	7.53	0.00
224.00	7.77	0.00	7.53	0.00
225.00	7.77	0.00	7.53	0.00
226.00	7.77	0.00	7.53	0.00
227.00	7.77	0.00	7.53	0.00
228.00	7.77	0.00	7.53	0.00
229.00	7.77	0.00	7.53	0.00
230.00	7.77	0.00	7.53	0.00
231.00	7.77	0.00	7.53	0.00
232.00	7.77	0.00	7.53	0.00
233.00	7.77	0.00	7.53	0.00
234.00	7.77	0.00	7.53	0.00
235.00	7.77	0.00	7.53	0.00
236.00	7.77	0.00	7.53	0.00
237.00	7.77	0.00	7.53	0.00
238.00	7.77	0.00	7.53	0.00
239.00	7.77	0.00	7.53	0.00
240.00	7.77	0.00	7.53	0.00
241.00	7.77	0.00	7.53	0.00
242.00	7.77	0.00	7.53	0.00
243.00	7.77	0.00	7.53	0.00
244.00	7.77	0.00	7.53	0.00
245.00	7.77	0.00	7.53	0.00
246.00	7.77	0.00	7.53	0.00
247.00	7.77	0.00	7.53	0.00
248.00	7.77	0.00	7.53	0.00
249.00	7.77	0.00	7.53	0.00
250.00	7.77	0.00	7.53	0.00
251.00	7.77	0.00	7.53	0.00
252.00	7.77	0.00	7.53	0.00
253.00	7.77	0.00	7.53	0.00
254.00	7.77	0.00	7.53	0.00
255.00	7.77	0.00	7.53	0.00
256.00	7.77	0.00	7.53	0.00
257.00	7.77	0.00	7.53	0.00
258.00	7.77	0.00	7.53	0.00
259.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 1S: 0.7 ac Impervious (Postconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	7.77	0.00	7.53	0.00
261.00	7.77	0.00	7.53	0.00
262.00	7.77	0.00	7.53	0.00
263.00	7.77	0.00	7.53	0.00
264.00	7.77	0.00	7.53	0.00
265.00	7.77	0.00	7.53	0.00
266.00	7.77	0.00	7.53	0.00
267.00	7.77	0.00	7.53	0.00
268.00	7.77	0.00	7.53	0.00
269.00	7.77	0.00	7.53	0.00
270.00	7.77	0.00	7.53	0.00
271.00	7.77	0.00	7.53	0.00
272.00	7.77	0.00	7.53	0.00
273.00	7.77	0.00	7.53	0.00
274.00	7.77	0.00	7.53	0.00
275.00	7.77	0.00	7.53	0.00
276.00	7.77	0.00	7.53	0.00
277.00	7.77	0.00	7.53	0.00
278.00	7.77	0.00	7.53	0.00
279.00	7.77	0.00	7.53	0.00
280.00	7.77	0.00	7.53	0.00
281.00	7.77	0.00	7.53	0.00
282.00	7.77	0.00	7.53	0.00
283.00	7.77	0.00	7.53	0.00
284.00	7.77	0.00	7.53	0.00
285.00	7.77	0.00	7.53	0.00
286.00	7.77	0.00	7.53	0.00
287.00	7.77	0.00	7.53	0.00
288.00	7.77	0.00	7.53	0.00
289.00	7.77	0.00	7.53	0.00
290.00	7.77	0.00	7.53	0.00
291.00	7.77	0.00	7.53	0.00
292.00	7.77	0.00	7.53	0.00
293.00	7.77	0.00	7.53	0.00
294.00	7.77	0.00	7.53	0.00
295.00	7.77	0.00	7.53	0.00
296.00	7.77	0.00	7.53	0.00
297.00	7.77	0.00	7.53	0.00
298.00	7.77	0.00	7.53	0.00
299.00	7.77	0.00	7.53	0.00
300.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Summary for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Runoff = 3.18 cfs @ 12.23 hrs, Volume= 0.275 af, Depth= 4.72"

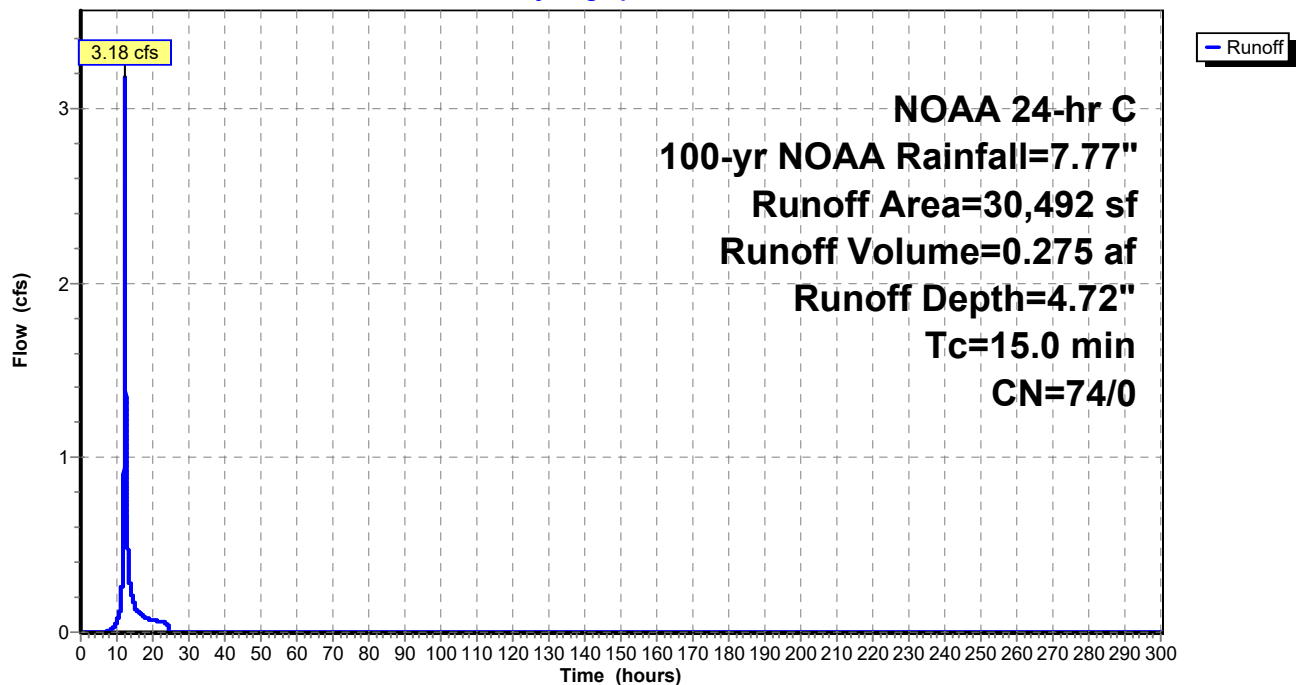
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

	Area (sf)	CN	Description
*	30,492	74	Meadow, non-grazed, HSG C
	30,492	74	100.00% Pervious Area

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

Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Hydrograph



MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.00	0.00
2.00	0.18	0.00	0.00	0.00
3.00	0.27	0.00	0.00	0.00
4.00	0.38	0.00	0.00	0.00
5.00	0.49	0.00	0.00	0.00
6.00	0.62	0.00	0.00	0.00
7.00	0.76	0.00	0.00	0.00
8.00	0.93	0.01	0.00	0.01
9.00	1.13	0.05	0.00	0.03
10.00	1.42	0.12	0.00	0.06
11.00	1.86	0.29	0.00	0.15
12.00	3.70	1.38	0.00	1.16
13.00	5.91	3.11	0.00	0.51
14.00	6.35	3.48	0.00	0.22
15.00	6.64	3.73	0.00	0.15
16.00	6.84	3.90	0.00	0.12
17.00	7.01	4.05	0.00	0.10
18.00	7.15	4.18	0.00	0.08
19.00	7.28	4.28	0.00	0.07
20.00	7.39	4.38	0.00	0.07
21.00	7.50	4.48	0.00	0.06
22.00	7.59	4.56	0.00	0.06
23.00	7.69	4.65	0.00	0.06
24.00	7.77	4.72	0.00	0.05
25.00	7.77	4.72	0.00	0.00
26.00	7.77	4.72	0.00	0.00
27.00	7.77	4.72	0.00	0.00
28.00	7.77	4.72	0.00	0.00
29.00	7.77	4.72	0.00	0.00
30.00	7.77	4.72	0.00	0.00
31.00	7.77	4.72	0.00	0.00
32.00	7.77	4.72	0.00	0.00
33.00	7.77	4.72	0.00	0.00
34.00	7.77	4.72	0.00	0.00
35.00	7.77	4.72	0.00	0.00
36.00	7.77	4.72	0.00	0.00
37.00	7.77	4.72	0.00	0.00
38.00	7.77	4.72	0.00	0.00
39.00	7.77	4.72	0.00	0.00
40.00	7.77	4.72	0.00	0.00
41.00	7.77	4.72	0.00	0.00
42.00	7.77	4.72	0.00	0.00
43.00	7.77	4.72	0.00	0.00
44.00	7.77	4.72	0.00	0.00
45.00	7.77	4.72	0.00	0.00
46.00	7.77	4.72	0.00	0.00
47.00	7.77	4.72	0.00	0.00
48.00	7.77	4.72	0.00	0.00
49.00	7.77	4.72	0.00	0.00
50.00	7.77	4.72	0.00	0.00
51.00	7.77	4.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	7.77	4.72	0.00	0.00
53.00	7.77	4.72	0.00	0.00
54.00	7.77	4.72	0.00	0.00
55.00	7.77	4.72	0.00	0.00
56.00	7.77	4.72	0.00	0.00
57.00	7.77	4.72	0.00	0.00
58.00	7.77	4.72	0.00	0.00
59.00	7.77	4.72	0.00	0.00
60.00	7.77	4.72	0.00	0.00
61.00	7.77	4.72	0.00	0.00
62.00	7.77	4.72	0.00	0.00
63.00	7.77	4.72	0.00	0.00
64.00	7.77	4.72	0.00	0.00
65.00	7.77	4.72	0.00	0.00
66.00	7.77	4.72	0.00	0.00
67.00	7.77	4.72	0.00	0.00
68.00	7.77	4.72	0.00	0.00
69.00	7.77	4.72	0.00	0.00
70.00	7.77	4.72	0.00	0.00
71.00	7.77	4.72	0.00	0.00
72.00	7.77	4.72	0.00	0.00
73.00	7.77	4.72	0.00	0.00
74.00	7.77	4.72	0.00	0.00
75.00	7.77	4.72	0.00	0.00
76.00	7.77	4.72	0.00	0.00
77.00	7.77	4.72	0.00	0.00
78.00	7.77	4.72	0.00	0.00
79.00	7.77	4.72	0.00	0.00
80.00	7.77	4.72	0.00	0.00
81.00	7.77	4.72	0.00	0.00
82.00	7.77	4.72	0.00	0.00
83.00	7.77	4.72	0.00	0.00
84.00	7.77	4.72	0.00	0.00
85.00	7.77	4.72	0.00	0.00
86.00	7.77	4.72	0.00	0.00
87.00	7.77	4.72	0.00	0.00
88.00	7.77	4.72	0.00	0.00
89.00	7.77	4.72	0.00	0.00
90.00	7.77	4.72	0.00	0.00
91.00	7.77	4.72	0.00	0.00
92.00	7.77	4.72	0.00	0.00
93.00	7.77	4.72	0.00	0.00
94.00	7.77	4.72	0.00	0.00
95.00	7.77	4.72	0.00	0.00
96.00	7.77	4.72	0.00	0.00
97.00	7.77	4.72	0.00	0.00
98.00	7.77	4.72	0.00	0.00
99.00	7.77	4.72	0.00	0.00
100.00	7.77	4.72	0.00	0.00
101.00	7.77	4.72	0.00	0.00
102.00	7.77	4.72	0.00	0.00
103.00	7.77	4.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	7.77	4.72	0.00	0.00
105.00	7.77	4.72	0.00	0.00
106.00	7.77	4.72	0.00	0.00
107.00	7.77	4.72	0.00	0.00
108.00	7.77	4.72	0.00	0.00
109.00	7.77	4.72	0.00	0.00
110.00	7.77	4.72	0.00	0.00
111.00	7.77	4.72	0.00	0.00
112.00	7.77	4.72	0.00	0.00
113.00	7.77	4.72	0.00	0.00
114.00	7.77	4.72	0.00	0.00
115.00	7.77	4.72	0.00	0.00
116.00	7.77	4.72	0.00	0.00
117.00	7.77	4.72	0.00	0.00
118.00	7.77	4.72	0.00	0.00
119.00	7.77	4.72	0.00	0.00
120.00	7.77	4.72	0.00	0.00
121.00	7.77	4.72	0.00	0.00
122.00	7.77	4.72	0.00	0.00
123.00	7.77	4.72	0.00	0.00
124.00	7.77	4.72	0.00	0.00
125.00	7.77	4.72	0.00	0.00
126.00	7.77	4.72	0.00	0.00
127.00	7.77	4.72	0.00	0.00
128.00	7.77	4.72	0.00	0.00
129.00	7.77	4.72	0.00	0.00
130.00	7.77	4.72	0.00	0.00
131.00	7.77	4.72	0.00	0.00
132.00	7.77	4.72	0.00	0.00
133.00	7.77	4.72	0.00	0.00
134.00	7.77	4.72	0.00	0.00
135.00	7.77	4.72	0.00	0.00
136.00	7.77	4.72	0.00	0.00
137.00	7.77	4.72	0.00	0.00
138.00	7.77	4.72	0.00	0.00
139.00	7.77	4.72	0.00	0.00
140.00	7.77	4.72	0.00	0.00
141.00	7.77	4.72	0.00	0.00
142.00	7.77	4.72	0.00	0.00
143.00	7.77	4.72	0.00	0.00
144.00	7.77	4.72	0.00	0.00
145.00	7.77	4.72	0.00	0.00
146.00	7.77	4.72	0.00	0.00
147.00	7.77	4.72	0.00	0.00
148.00	7.77	4.72	0.00	0.00
149.00	7.77	4.72	0.00	0.00
150.00	7.77	4.72	0.00	0.00
151.00	7.77	4.72	0.00	0.00
152.00	7.77	4.72	0.00	0.00
153.00	7.77	4.72	0.00	0.00
154.00	7.77	4.72	0.00	0.00
155.00	7.77	4.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	7.77	4.72	0.00	0.00
157.00	7.77	4.72	0.00	0.00
158.00	7.77	4.72	0.00	0.00
159.00	7.77	4.72	0.00	0.00
160.00	7.77	4.72	0.00	0.00
161.00	7.77	4.72	0.00	0.00
162.00	7.77	4.72	0.00	0.00
163.00	7.77	4.72	0.00	0.00
164.00	7.77	4.72	0.00	0.00
165.00	7.77	4.72	0.00	0.00
166.00	7.77	4.72	0.00	0.00
167.00	7.77	4.72	0.00	0.00
168.00	7.77	4.72	0.00	0.00
169.00	7.77	4.72	0.00	0.00
170.00	7.77	4.72	0.00	0.00
171.00	7.77	4.72	0.00	0.00
172.00	7.77	4.72	0.00	0.00
173.00	7.77	4.72	0.00	0.00
174.00	7.77	4.72	0.00	0.00
175.00	7.77	4.72	0.00	0.00
176.00	7.77	4.72	0.00	0.00
177.00	7.77	4.72	0.00	0.00
178.00	7.77	4.72	0.00	0.00
179.00	7.77	4.72	0.00	0.00
180.00	7.77	4.72	0.00	0.00
181.00	7.77	4.72	0.00	0.00
182.00	7.77	4.72	0.00	0.00
183.00	7.77	4.72	0.00	0.00
184.00	7.77	4.72	0.00	0.00
185.00	7.77	4.72	0.00	0.00
186.00	7.77	4.72	0.00	0.00
187.00	7.77	4.72	0.00	0.00
188.00	7.77	4.72	0.00	0.00
189.00	7.77	4.72	0.00	0.00
190.00	7.77	4.72	0.00	0.00
191.00	7.77	4.72	0.00	0.00
192.00	7.77	4.72	0.00	0.00
193.00	7.77	4.72	0.00	0.00
194.00	7.77	4.72	0.00	0.00
195.00	7.77	4.72	0.00	0.00
196.00	7.77	4.72	0.00	0.00
197.00	7.77	4.72	0.00	0.00
198.00	7.77	4.72	0.00	0.00
199.00	7.77	4.72	0.00	0.00
200.00	7.77	4.72	0.00	0.00
201.00	7.77	4.72	0.00	0.00
202.00	7.77	4.72	0.00	0.00
203.00	7.77	4.72	0.00	0.00
204.00	7.77	4.72	0.00	0.00
205.00	7.77	4.72	0.00	0.00
206.00	7.77	4.72	0.00	0.00
207.00	7.77	4.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

Prepared by VU for PADEP

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	7.77	4.72	0.00	0.00
209.00	7.77	4.72	0.00	0.00
210.00	7.77	4.72	0.00	0.00
211.00	7.77	4.72	0.00	0.00
212.00	7.77	4.72	0.00	0.00
213.00	7.77	4.72	0.00	0.00
214.00	7.77	4.72	0.00	0.00
215.00	7.77	4.72	0.00	0.00
216.00	7.77	4.72	0.00	0.00
217.00	7.77	4.72	0.00	0.00
218.00	7.77	4.72	0.00	0.00
219.00	7.77	4.72	0.00	0.00
220.00	7.77	4.72	0.00	0.00
221.00	7.77	4.72	0.00	0.00
222.00	7.77	4.72	0.00	0.00
223.00	7.77	4.72	0.00	0.00
224.00	7.77	4.72	0.00	0.00
225.00	7.77	4.72	0.00	0.00
226.00	7.77	4.72	0.00	0.00
227.00	7.77	4.72	0.00	0.00
228.00	7.77	4.72	0.00	0.00
229.00	7.77	4.72	0.00	0.00
230.00	7.77	4.72	0.00	0.00
231.00	7.77	4.72	0.00	0.00
232.00	7.77	4.72	0.00	0.00
233.00	7.77	4.72	0.00	0.00
234.00	7.77	4.72	0.00	0.00
235.00	7.77	4.72	0.00	0.00
236.00	7.77	4.72	0.00	0.00
237.00	7.77	4.72	0.00	0.00
238.00	7.77	4.72	0.00	0.00
239.00	7.77	4.72	0.00	0.00
240.00	7.77	4.72	0.00	0.00
241.00	7.77	4.72	0.00	0.00
242.00	7.77	4.72	0.00	0.00
243.00	7.77	4.72	0.00	0.00
244.00	7.77	4.72	0.00	0.00
245.00	7.77	4.72	0.00	0.00
246.00	7.77	4.72	0.00	0.00
247.00	7.77	4.72	0.00	0.00
248.00	7.77	4.72	0.00	0.00
249.00	7.77	4.72	0.00	0.00
250.00	7.77	4.72	0.00	0.00
251.00	7.77	4.72	0.00	0.00
252.00	7.77	4.72	0.00	0.00
253.00	7.77	4.72	0.00	0.00
254.00	7.77	4.72	0.00	0.00
255.00	7.77	4.72	0.00	0.00
256.00	7.77	4.72	0.00	0.00
257.00	7.77	4.72	0.00	0.00
258.00	7.77	4.72	0.00	0.00
259.00	7.77	4.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 3S: 0.7 ac Pervious (Preconstruction) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	7.77	4.72	0.00	0.00
261.00	7.77	4.72	0.00	0.00
262.00	7.77	4.72	0.00	0.00
263.00	7.77	4.72	0.00	0.00
264.00	7.77	4.72	0.00	0.00
265.00	7.77	4.72	0.00	0.00
266.00	7.77	4.72	0.00	0.00
267.00	7.77	4.72	0.00	0.00
268.00	7.77	4.72	0.00	0.00
269.00	7.77	4.72	0.00	0.00
270.00	7.77	4.72	0.00	0.00
271.00	7.77	4.72	0.00	0.00
272.00	7.77	4.72	0.00	0.00
273.00	7.77	4.72	0.00	0.00
274.00	7.77	4.72	0.00	0.00
275.00	7.77	4.72	0.00	0.00
276.00	7.77	4.72	0.00	0.00
277.00	7.77	4.72	0.00	0.00
278.00	7.77	4.72	0.00	0.00
279.00	7.77	4.72	0.00	0.00
280.00	7.77	4.72	0.00	0.00
281.00	7.77	4.72	0.00	0.00
282.00	7.77	4.72	0.00	0.00
283.00	7.77	4.72	0.00	0.00
284.00	7.77	4.72	0.00	0.00
285.00	7.77	4.72	0.00	0.00
286.00	7.77	4.72	0.00	0.00
287.00	7.77	4.72	0.00	0.00
288.00	7.77	4.72	0.00	0.00
289.00	7.77	4.72	0.00	0.00
290.00	7.77	4.72	0.00	0.00
291.00	7.77	4.72	0.00	0.00
292.00	7.77	4.72	0.00	0.00
293.00	7.77	4.72	0.00	0.00
294.00	7.77	4.72	0.00	0.00
295.00	7.77	4.72	0.00	0.00
296.00	7.77	4.72	0.00	0.00
297.00	7.77	4.72	0.00	0.00
298.00	7.77	4.72	0.00	0.00
299.00	7.77	4.72	0.00	0.00
300.00	7.77	4.72	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Summary for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Runoff = 5.82 cfs @ 12.13 hrs, Volume= 0.439 af, Depth= 7.53"

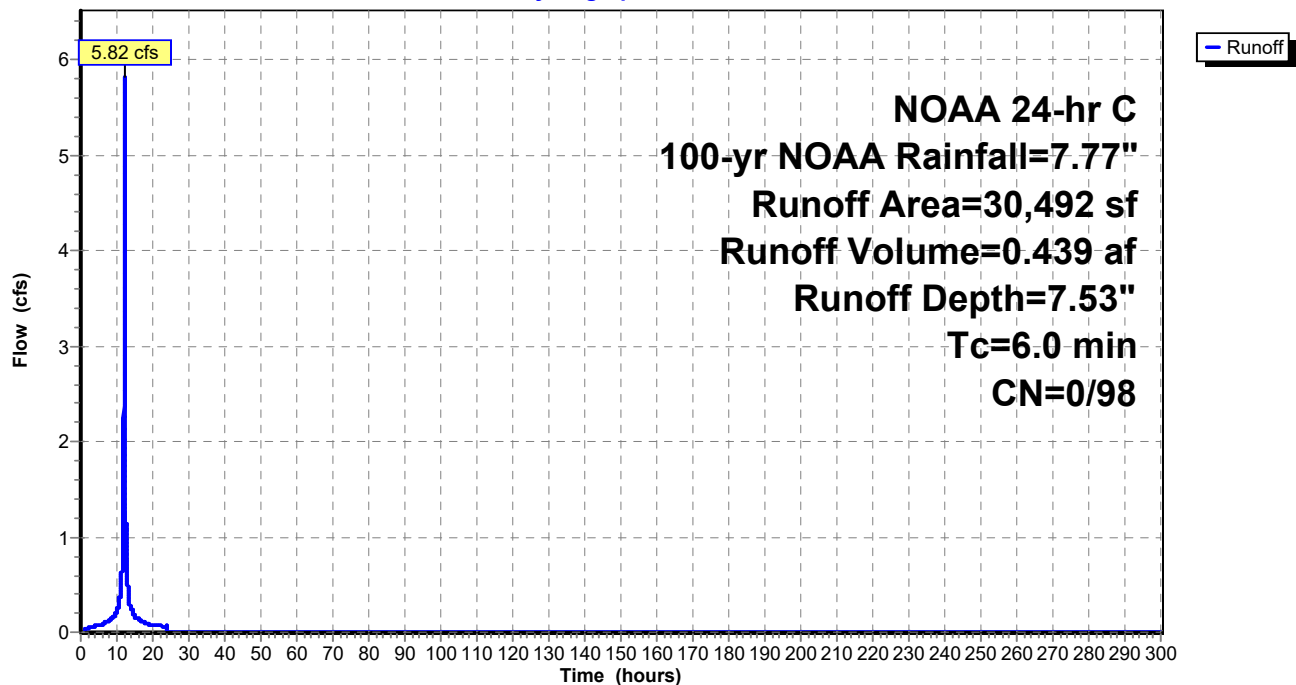
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

Area (sf)	CN	Description
30,492	98	Paved roads w/curbs & sewers, HSG B
30,492	98	100.00% Impervious Area

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

Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Hydrograph



MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	0.00
1.00	0.08	0.00	0.01	0.02
2.00	0.18	0.00	0.05	0.04
3.00	0.27	0.00	0.12	0.06
4.00	0.38	0.00	0.21	0.07
5.00	0.49	0.00	0.31	0.07
6.00	0.62	0.00	0.42	0.08
7.00	0.76	0.00	0.56	0.10
8.00	0.93	0.00	0.72	0.13
9.00	1.13	0.00	0.92	0.15
10.00	1.42	0.00	1.20	0.23
11.00	1.86	0.00	1.64	0.42
12.00	3.70	0.00	3.47	3.23
13.00	5.91	0.00	5.67	0.52
14.00	6.35	0.00	6.11	0.25
15.00	6.64	0.00	6.40	0.16
16.00	6.84	0.00	6.60	0.13
17.00	7.01	0.00	6.77	0.11
18.00	7.15	0.00	6.92	0.09
19.00	7.28	0.00	7.04	0.08
20.00	7.39	0.00	7.15	0.08
21.00	7.50	0.00	7.26	0.07
22.00	7.59	0.00	7.35	0.07
23.00	7.69	0.00	7.45	0.06
24.00	7.77	0.00	7.53	0.07
25.00	7.77	0.00	7.53	0.00
26.00	7.77	0.00	7.53	0.00
27.00	7.77	0.00	7.53	0.00
28.00	7.77	0.00	7.53	0.00
29.00	7.77	0.00	7.53	0.00
30.00	7.77	0.00	7.53	0.00
31.00	7.77	0.00	7.53	0.00
32.00	7.77	0.00	7.53	0.00
33.00	7.77	0.00	7.53	0.00
34.00	7.77	0.00	7.53	0.00
35.00	7.77	0.00	7.53	0.00
36.00	7.77	0.00	7.53	0.00
37.00	7.77	0.00	7.53	0.00
38.00	7.77	0.00	7.53	0.00
39.00	7.77	0.00	7.53	0.00
40.00	7.77	0.00	7.53	0.00
41.00	7.77	0.00	7.53	0.00
42.00	7.77	0.00	7.53	0.00
43.00	7.77	0.00	7.53	0.00
44.00	7.77	0.00	7.53	0.00
45.00	7.77	0.00	7.53	0.00
46.00	7.77	0.00	7.53	0.00
47.00	7.77	0.00	7.53	0.00
48.00	7.77	0.00	7.53	0.00
49.00	7.77	0.00	7.53	0.00
50.00	7.77	0.00	7.53	0.00
51.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
52.00	7.77	0.00	7.53	0.00
53.00	7.77	0.00	7.53	0.00
54.00	7.77	0.00	7.53	0.00
55.00	7.77	0.00	7.53	0.00
56.00	7.77	0.00	7.53	0.00
57.00	7.77	0.00	7.53	0.00
58.00	7.77	0.00	7.53	0.00
59.00	7.77	0.00	7.53	0.00
60.00	7.77	0.00	7.53	0.00
61.00	7.77	0.00	7.53	0.00
62.00	7.77	0.00	7.53	0.00
63.00	7.77	0.00	7.53	0.00
64.00	7.77	0.00	7.53	0.00
65.00	7.77	0.00	7.53	0.00
66.00	7.77	0.00	7.53	0.00
67.00	7.77	0.00	7.53	0.00
68.00	7.77	0.00	7.53	0.00
69.00	7.77	0.00	7.53	0.00
70.00	7.77	0.00	7.53	0.00
71.00	7.77	0.00	7.53	0.00
72.00	7.77	0.00	7.53	0.00
73.00	7.77	0.00	7.53	0.00
74.00	7.77	0.00	7.53	0.00
75.00	7.77	0.00	7.53	0.00
76.00	7.77	0.00	7.53	0.00
77.00	7.77	0.00	7.53	0.00
78.00	7.77	0.00	7.53	0.00
79.00	7.77	0.00	7.53	0.00
80.00	7.77	0.00	7.53	0.00
81.00	7.77	0.00	7.53	0.00
82.00	7.77	0.00	7.53	0.00
83.00	7.77	0.00	7.53	0.00
84.00	7.77	0.00	7.53	0.00
85.00	7.77	0.00	7.53	0.00
86.00	7.77	0.00	7.53	0.00
87.00	7.77	0.00	7.53	0.00
88.00	7.77	0.00	7.53	0.00
89.00	7.77	0.00	7.53	0.00
90.00	7.77	0.00	7.53	0.00
91.00	7.77	0.00	7.53	0.00
92.00	7.77	0.00	7.53	0.00
93.00	7.77	0.00	7.53	0.00
94.00	7.77	0.00	7.53	0.00
95.00	7.77	0.00	7.53	0.00
96.00	7.77	0.00	7.53	0.00
97.00	7.77	0.00	7.53	0.00
98.00	7.77	0.00	7.53	0.00
99.00	7.77	0.00	7.53	0.00
100.00	7.77	0.00	7.53	0.00
101.00	7.77	0.00	7.53	0.00
102.00	7.77	0.00	7.53	0.00
103.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
104.00	7.77	0.00	7.53	0.00
105.00	7.77	0.00	7.53	0.00
106.00	7.77	0.00	7.53	0.00
107.00	7.77	0.00	7.53	0.00
108.00	7.77	0.00	7.53	0.00
109.00	7.77	0.00	7.53	0.00
110.00	7.77	0.00	7.53	0.00
111.00	7.77	0.00	7.53	0.00
112.00	7.77	0.00	7.53	0.00
113.00	7.77	0.00	7.53	0.00
114.00	7.77	0.00	7.53	0.00
115.00	7.77	0.00	7.53	0.00
116.00	7.77	0.00	7.53	0.00
117.00	7.77	0.00	7.53	0.00
118.00	7.77	0.00	7.53	0.00
119.00	7.77	0.00	7.53	0.00
120.00	7.77	0.00	7.53	0.00
121.00	7.77	0.00	7.53	0.00
122.00	7.77	0.00	7.53	0.00
123.00	7.77	0.00	7.53	0.00
124.00	7.77	0.00	7.53	0.00
125.00	7.77	0.00	7.53	0.00
126.00	7.77	0.00	7.53	0.00
127.00	7.77	0.00	7.53	0.00
128.00	7.77	0.00	7.53	0.00
129.00	7.77	0.00	7.53	0.00
130.00	7.77	0.00	7.53	0.00
131.00	7.77	0.00	7.53	0.00
132.00	7.77	0.00	7.53	0.00
133.00	7.77	0.00	7.53	0.00
134.00	7.77	0.00	7.53	0.00
135.00	7.77	0.00	7.53	0.00
136.00	7.77	0.00	7.53	0.00
137.00	7.77	0.00	7.53	0.00
138.00	7.77	0.00	7.53	0.00
139.00	7.77	0.00	7.53	0.00
140.00	7.77	0.00	7.53	0.00
141.00	7.77	0.00	7.53	0.00
142.00	7.77	0.00	7.53	0.00
143.00	7.77	0.00	7.53	0.00
144.00	7.77	0.00	7.53	0.00
145.00	7.77	0.00	7.53	0.00
146.00	7.77	0.00	7.53	0.00
147.00	7.77	0.00	7.53	0.00
148.00	7.77	0.00	7.53	0.00
149.00	7.77	0.00	7.53	0.00
150.00	7.77	0.00	7.53	0.00
151.00	7.77	0.00	7.53	0.00
152.00	7.77	0.00	7.53	0.00
153.00	7.77	0.00	7.53	0.00
154.00	7.77	0.00	7.53	0.00
155.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
156.00	7.77	0.00	7.53	0.00
157.00	7.77	0.00	7.53	0.00
158.00	7.77	0.00	7.53	0.00
159.00	7.77	0.00	7.53	0.00
160.00	7.77	0.00	7.53	0.00
161.00	7.77	0.00	7.53	0.00
162.00	7.77	0.00	7.53	0.00
163.00	7.77	0.00	7.53	0.00
164.00	7.77	0.00	7.53	0.00
165.00	7.77	0.00	7.53	0.00
166.00	7.77	0.00	7.53	0.00
167.00	7.77	0.00	7.53	0.00
168.00	7.77	0.00	7.53	0.00
169.00	7.77	0.00	7.53	0.00
170.00	7.77	0.00	7.53	0.00
171.00	7.77	0.00	7.53	0.00
172.00	7.77	0.00	7.53	0.00
173.00	7.77	0.00	7.53	0.00
174.00	7.77	0.00	7.53	0.00
175.00	7.77	0.00	7.53	0.00
176.00	7.77	0.00	7.53	0.00
177.00	7.77	0.00	7.53	0.00
178.00	7.77	0.00	7.53	0.00
179.00	7.77	0.00	7.53	0.00
180.00	7.77	0.00	7.53	0.00
181.00	7.77	0.00	7.53	0.00
182.00	7.77	0.00	7.53	0.00
183.00	7.77	0.00	7.53	0.00
184.00	7.77	0.00	7.53	0.00
185.00	7.77	0.00	7.53	0.00
186.00	7.77	0.00	7.53	0.00
187.00	7.77	0.00	7.53	0.00
188.00	7.77	0.00	7.53	0.00
189.00	7.77	0.00	7.53	0.00
190.00	7.77	0.00	7.53	0.00
191.00	7.77	0.00	7.53	0.00
192.00	7.77	0.00	7.53	0.00
193.00	7.77	0.00	7.53	0.00
194.00	7.77	0.00	7.53	0.00
195.00	7.77	0.00	7.53	0.00
196.00	7.77	0.00	7.53	0.00
197.00	7.77	0.00	7.53	0.00
198.00	7.77	0.00	7.53	0.00
199.00	7.77	0.00	7.53	0.00
200.00	7.77	0.00	7.53	0.00
201.00	7.77	0.00	7.53	0.00
202.00	7.77	0.00	7.53	0.00
203.00	7.77	0.00	7.53	0.00
204.00	7.77	0.00	7.53	0.00
205.00	7.77	0.00	7.53	0.00
206.00	7.77	0.00	7.53	0.00
207.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
208.00	7.77	0.00	7.53	0.00
209.00	7.77	0.00	7.53	0.00
210.00	7.77	0.00	7.53	0.00
211.00	7.77	0.00	7.53	0.00
212.00	7.77	0.00	7.53	0.00
213.00	7.77	0.00	7.53	0.00
214.00	7.77	0.00	7.53	0.00
215.00	7.77	0.00	7.53	0.00
216.00	7.77	0.00	7.53	0.00
217.00	7.77	0.00	7.53	0.00
218.00	7.77	0.00	7.53	0.00
219.00	7.77	0.00	7.53	0.00
220.00	7.77	0.00	7.53	0.00
221.00	7.77	0.00	7.53	0.00
222.00	7.77	0.00	7.53	0.00
223.00	7.77	0.00	7.53	0.00
224.00	7.77	0.00	7.53	0.00
225.00	7.77	0.00	7.53	0.00
226.00	7.77	0.00	7.53	0.00
227.00	7.77	0.00	7.53	0.00
228.00	7.77	0.00	7.53	0.00
229.00	7.77	0.00	7.53	0.00
230.00	7.77	0.00	7.53	0.00
231.00	7.77	0.00	7.53	0.00
232.00	7.77	0.00	7.53	0.00
233.00	7.77	0.00	7.53	0.00
234.00	7.77	0.00	7.53	0.00
235.00	7.77	0.00	7.53	0.00
236.00	7.77	0.00	7.53	0.00
237.00	7.77	0.00	7.53	0.00
238.00	7.77	0.00	7.53	0.00
239.00	7.77	0.00	7.53	0.00
240.00	7.77	0.00	7.53	0.00
241.00	7.77	0.00	7.53	0.00
242.00	7.77	0.00	7.53	0.00
243.00	7.77	0.00	7.53	0.00
244.00	7.77	0.00	7.53	0.00
245.00	7.77	0.00	7.53	0.00
246.00	7.77	0.00	7.53	0.00
247.00	7.77	0.00	7.53	0.00
248.00	7.77	0.00	7.53	0.00
249.00	7.77	0.00	7.53	0.00
250.00	7.77	0.00	7.53	0.00
251.00	7.77	0.00	7.53	0.00
252.00	7.77	0.00	7.53	0.00
253.00	7.77	0.00	7.53	0.00
254.00	7.77	0.00	7.53	0.00
255.00	7.77	0.00	7.53	0.00
256.00	7.77	0.00	7.53	0.00
257.00	7.77	0.00	7.53	0.00
258.00	7.77	0.00	7.53	0.00
259.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Subcatchment 4S: 0.7 ac Impervious (Postconstruction w/o BMPs) (continued)

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
260.00	7.77	0.00	7.53	0.00
261.00	7.77	0.00	7.53	0.00
262.00	7.77	0.00	7.53	0.00
263.00	7.77	0.00	7.53	0.00
264.00	7.77	0.00	7.53	0.00
265.00	7.77	0.00	7.53	0.00
266.00	7.77	0.00	7.53	0.00
267.00	7.77	0.00	7.53	0.00
268.00	7.77	0.00	7.53	0.00
269.00	7.77	0.00	7.53	0.00
270.00	7.77	0.00	7.53	0.00
271.00	7.77	0.00	7.53	0.00
272.00	7.77	0.00	7.53	0.00
273.00	7.77	0.00	7.53	0.00
274.00	7.77	0.00	7.53	0.00
275.00	7.77	0.00	7.53	0.00
276.00	7.77	0.00	7.53	0.00
277.00	7.77	0.00	7.53	0.00
278.00	7.77	0.00	7.53	0.00
279.00	7.77	0.00	7.53	0.00
280.00	7.77	0.00	7.53	0.00
281.00	7.77	0.00	7.53	0.00
282.00	7.77	0.00	7.53	0.00
283.00	7.77	0.00	7.53	0.00
284.00	7.77	0.00	7.53	0.00
285.00	7.77	0.00	7.53	0.00
286.00	7.77	0.00	7.53	0.00
287.00	7.77	0.00	7.53	0.00
288.00	7.77	0.00	7.53	0.00
289.00	7.77	0.00	7.53	0.00
290.00	7.77	0.00	7.53	0.00
291.00	7.77	0.00	7.53	0.00
292.00	7.77	0.00	7.53	0.00
293.00	7.77	0.00	7.53	0.00
294.00	7.77	0.00	7.53	0.00
295.00	7.77	0.00	7.53	0.00
296.00	7.77	0.00	7.53	0.00
297.00	7.77	0.00	7.53	0.00
298.00	7.77	0.00	7.53	0.00
299.00	7.77	0.00	7.53	0.00
300.00	7.77	0.00	7.53	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Summary for Pond 1P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 7.53" for 100-yr NOAA event
 Inflow = 5.82 cfs @ 12.13 hrs, Volume= 0.439 af
 Outflow = 5.70 cfs @ 12.14 hrs, Volume= 0.429 af, Atten= 2%, Lag= 0.9 min
 Primary = 5.70 cfs @ 12.14 hrs, Volume= 0.429 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= 1.24' @ 12.14 hrs Surf.Area= 3,049 sf Storage= 5,626 cf

Plug-Flow detention time= 734.5 min calculated for 0.429 af (98% of inflow)
 Center-of-Mass det. time= 718.9 min (1,461.1 - 742.2)

Volume	Invert	Avail.Storage	Storage Description
#1	-2.51'	11,007 cf	Rain Garden (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	3,049	0.0	0	0
-1.51	3,049	15.0	457	457
-1.50	3,049	30.0	9	466
-0.01	3,049	30.0	1,363	1,829
0.00	3,049	100.0	30	1,860
3.00	3,049	100.0	9,147	11,007

Device	Routing	Invert	Outlet Devices
#1	Device 4	1.10'	40.0' 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
#2	Device 4	-1.50'	0.5" Vert. Orifice/Grate C= 0.600
#3	Device 4	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#4	Primary	-2.51'	24.0" Round Culvert L= 1.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= -2.51' / -2.52' S= 0.0100 '/ Cc= 0.900 n= 0.011 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=5.67 cfs @ 12.14 hrs HW=1.23' (Free Discharge)

↑ **4=Culvert** (Passes 5.67 cfs of 19.79 cfs potential flow)

↑ **1=Broad-Crested Rectangular Weir** (Weir Controls 4.94 cfs @ 0.91 fps)

↑ **2=Orifice/Grate** (Orifice Controls 0.01 cfs @ 7.93 fps)

↑ **3=Sharp-Crested Rectangular Weir** (Weir Controls 0.73 cfs @ 2.80 fps)

MRC Example 2

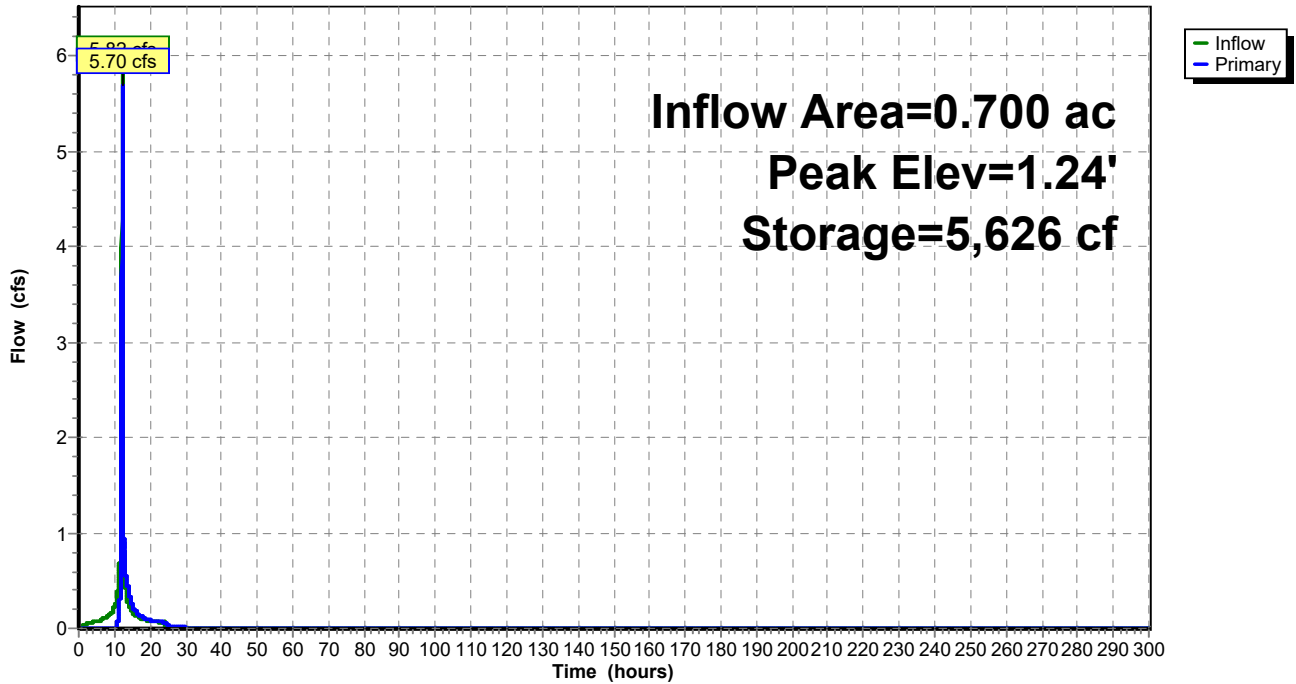
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NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

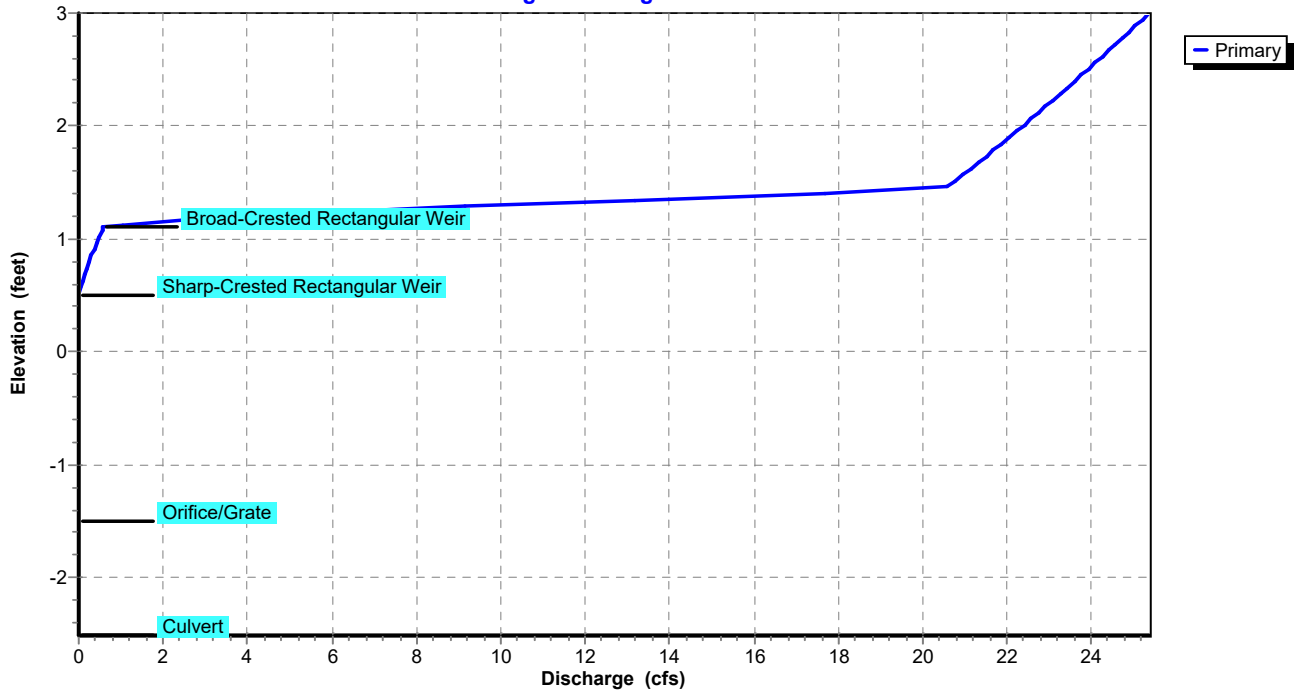
Pond 1P: Managed Release Rain Garden

Hydrograph



Pond 1P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

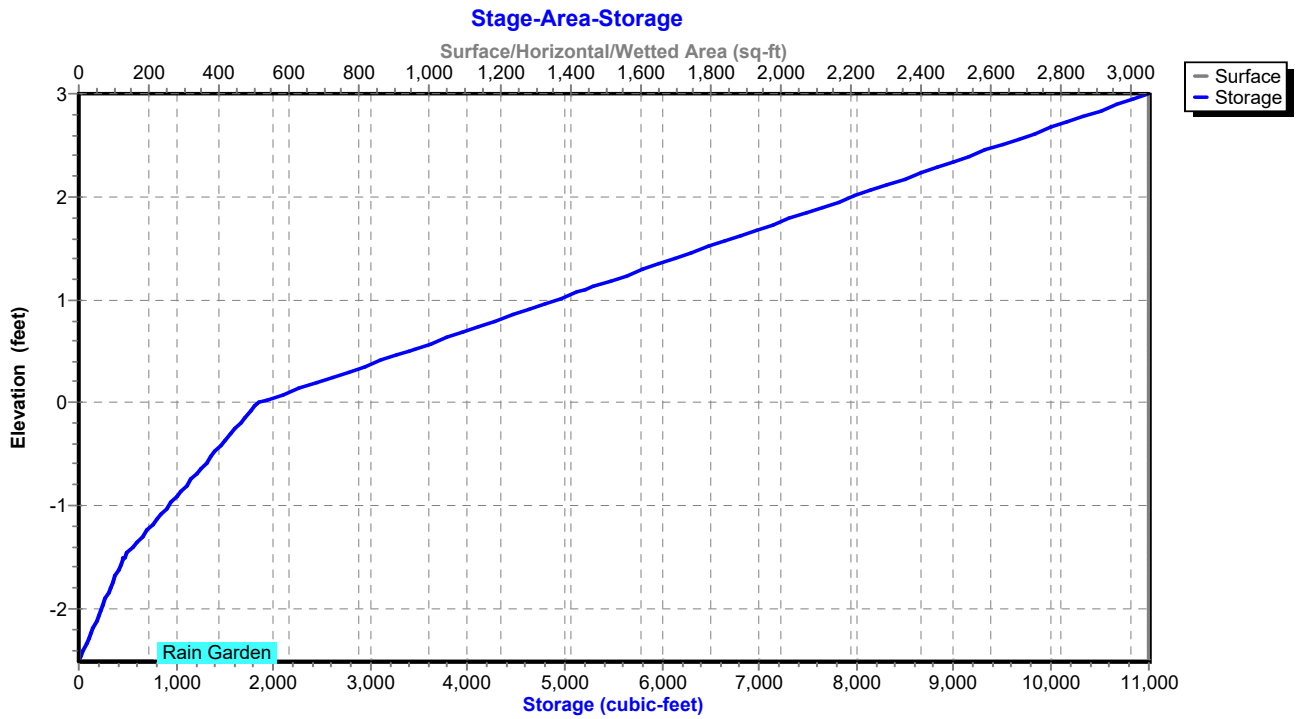
NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Pond 1P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 1P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
0.00	0.00	0	-2.51	0.00
1.00	0.02	14	-2.48	0.00
2.00	0.04	122	-2.24	0.00
3.00	0.06	298	-1.86	0.00
4.00	0.07	516	-1.45	0.00
5.00	0.07	760	-1.18	0.00
6.00	0.08	1,025	-0.89	0.01
7.00	0.10	1,338	-0.55	0.01
8.00	0.13	1,726	-0.12	0.01
9.00	0.15	2,193	0.11	0.01
10.00	0.23	2,837	0.32	0.01
11.00	0.42	3,816	0.64	0.09
12.00	3.23	5,450	1.18	2.85
13.00	0.52	5,202	1.10	0.58
14.00	0.25	4,668	0.92	0.38
15.00	0.16	4,301	0.80	0.25
16.00	0.13	4,088	0.73	0.17
17.00	0.11	3,975	0.69	0.14
18.00	0.09	3,891	0.67	0.11
19.00	0.08	3,829	0.65	0.10
20.00	0.08	3,794	0.63	0.09
21.00	0.07	3,769	0.63	0.08
22.00	0.07	3,745	0.62	0.07
23.00	0.06	3,722	0.61	0.07
24.00	0.07	3,700	0.60	0.06
25.00	0.00	3,556	0.56	0.03
26.00	0.00	3,468	0.53	0.02
27.00	0.00	3,418	0.51	0.01
28.00	0.00	3,381	0.50	0.01
29.00	0.00	3,348	0.49	0.01
30.00	0.00	3,314	0.48	0.01
31.00	0.00	3,281	0.47	0.01
32.00	0.00	3,249	0.46	0.01
33.00	0.00	3,216	0.44	0.01
34.00	0.00	3,183	0.43	0.01
35.00	0.00	3,150	0.42	0.01
36.00	0.00	3,118	0.41	0.01
37.00	0.00	3,085	0.40	0.01
38.00	0.00	3,053	0.39	0.01
39.00	0.00	3,021	0.38	0.01
40.00	0.00	2,988	0.37	0.01
41.00	0.00	2,956	0.36	0.01
42.00	0.00	2,924	0.35	0.01
43.00	0.00	2,892	0.34	0.01
44.00	0.00	2,861	0.33	0.01
45.00	0.00	2,829	0.32	0.01
46.00	0.00	2,797	0.31	0.01
47.00	0.00	2,766	0.30	0.01
48.00	0.00	2,734	0.29	0.01
49.00	0.00	2,703	0.28	0.01
50.00	0.00	2,672	0.27	0.01
51.00	0.00	2,640	0.26	0.01

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
52.00	0.00	2,609	0.25	0.01
53.00	0.00	2,578	0.24	0.01
54.00	0.00	2,547	0.23	0.01
55.00	0.00	2,517	0.22	0.01
56.00	0.00	2,486	0.21	0.01
57.00	0.00	2,455	0.20	0.01
58.00	0.00	2,425	0.19	0.01
59.00	0.00	2,394	0.18	0.01
60.00	0.00	2,364	0.17	0.01
61.00	0.00	2,334	0.16	0.01
62.00	0.00	2,304	0.15	0.01
63.00	0.00	2,273	0.14	0.01
64.00	0.00	2,243	0.13	0.01
65.00	0.00	2,214	0.12	0.01
66.00	0.00	2,184	0.11	0.01
67.00	0.00	2,154	0.10	0.01
68.00	0.00	2,124	0.09	0.01
69.00	0.00	2,095	0.08	0.01
70.00	0.00	2,065	0.07	0.01
71.00	0.00	2,036	0.06	0.01
72.00	0.00	2,007	0.05	0.01
73.00	0.00	1,978	0.04	0.01
74.00	0.00	1,949	0.03	0.01
75.00	0.00	1,920	0.02	0.01
76.00	0.00	1,891	0.01	0.01
77.00	0.00	1,862	0.00	0.01
78.00	0.00	1,833	-0.01	0.01
79.00	0.00	1,805	-0.04	0.01
80.00	0.00	1,776	-0.07	0.01
81.00	0.00	1,749	-0.10	0.01
82.00	0.00	1,721	-0.13	0.01
83.00	0.00	1,694	-0.16	0.01
84.00	0.00	1,667	-0.19	0.01
85.00	0.00	1,640	-0.22	0.01
86.00	0.00	1,613	-0.25	0.01
87.00	0.00	1,587	-0.27	0.01
88.00	0.00	1,562	-0.30	0.01
89.00	0.00	1,536	-0.33	0.01
90.00	0.00	1,511	-0.36	0.01
91.00	0.00	1,486	-0.39	0.01
92.00	0.00	1,462	-0.41	0.01
93.00	0.00	1,437	-0.44	0.01
94.00	0.00	1,413	-0.46	0.01
95.00	0.00	1,390	-0.49	0.01
96.00	0.00	1,366	-0.52	0.01
97.00	0.00	1,343	-0.54	0.01
98.00	0.00	1,321	-0.57	0.01
99.00	0.00	1,298	-0.59	0.01
100.00	0.00	1,276	-0.62	0.01
101.00	0.00	1,254	-0.64	0.01
102.00	0.00	1,233	-0.66	0.01
103.00	0.00	1,211	-0.69	0.01

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
104.00	0.00	1,191	-0.71	0.01
105.00	0.00	1,170	-0.73	0.01
106.00	0.00	1,150	-0.75	0.01
107.00	0.00	1,130	-0.77	0.01
108.00	0.00	1,110	-0.80	0.01
109.00	0.00	1,091	-0.82	0.01
110.00	0.00	1,072	-0.84	0.01
111.00	0.00	1,053	-0.86	0.01
112.00	0.00	1,034	-0.88	0.01
113.00	0.00	1,016	-0.90	0.00
114.00	0.00	998	-0.92	0.00
115.00	0.00	981	-0.94	0.00
116.00	0.00	964	-0.96	0.00
117.00	0.00	947	-0.98	0.00
118.00	0.00	930	-0.99	0.00
119.00	0.00	914	-1.01	0.00
120.00	0.00	898	-1.03	0.00
121.00	0.00	882	-1.05	0.00
122.00	0.00	867	-1.06	0.00
123.00	0.00	851	-1.08	0.00
124.00	0.00	837	-1.10	0.00
125.00	0.00	822	-1.11	0.00
126.00	0.00	808	-1.13	0.00
127.00	0.00	794	-1.14	0.00
128.00	0.00	781	-1.16	0.00
129.00	0.00	767	-1.17	0.00
130.00	0.00	754	-1.19	0.00
131.00	0.00	742	-1.20	0.00
132.00	0.00	729	-1.21	0.00
133.00	0.00	717	-1.23	0.00
134.00	0.00	706	-1.24	0.00
135.00	0.00	694	-1.25	0.00
136.00	0.00	683	-1.26	0.00
137.00	0.00	672	-1.28	0.00
138.00	0.00	662	-1.29	0.00
139.00	0.00	652	-1.30	0.00
140.00	0.00	642	-1.31	0.00
141.00	0.00	632	-1.32	0.00
142.00	0.00	623	-1.33	0.00
143.00	0.00	614	-1.34	0.00
144.00	0.00	605	-1.35	0.00
145.00	0.00	597	-1.36	0.00
146.00	0.00	589	-1.37	0.00
147.00	0.00	581	-1.37	0.00
148.00	0.00	574	-1.38	0.00
149.00	0.00	566	-1.39	0.00
150.00	0.00	560	-1.40	0.00
151.00	0.00	553	-1.41	0.00
152.00	0.00	547	-1.41	0.00
153.00	0.00	541	-1.42	0.00
154.00	0.00	535	-1.42	0.00
155.00	0.00	530	-1.43	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
156.00	0.00	526	-1.44	0.00
157.00	0.00	521	-1.44	0.00
158.00	0.00	517	-1.45	0.00
159.00	0.00	513	-1.45	0.00
160.00	0.00	509	-1.45	0.00
161.00	0.00	506	-1.46	0.00
162.00	0.00	502	-1.46	0.00
163.00	0.00	499	-1.46	0.00
164.00	0.00	497	-1.47	0.00
165.00	0.00	494	-1.47	0.00
166.00	0.00	492	-1.47	0.00
167.00	0.00	490	-1.47	0.00
168.00	0.00	488	-1.48	0.00
169.00	0.00	486	-1.48	0.00
170.00	0.00	484	-1.48	0.00
171.00	0.00	483	-1.48	0.00
172.00	0.00	481	-1.48	0.00
173.00	0.00	480	-1.49	0.00
174.00	0.00	479	-1.49	0.00
175.00	0.00	478	-1.49	0.00
176.00	0.00	477	-1.49	0.00
177.00	0.00	476	-1.49	0.00
178.00	0.00	475	-1.49	0.00
179.00	0.00	474	-1.49	0.00
180.00	0.00	474	-1.49	0.00
181.00	0.00	473	-1.49	0.00
182.00	0.00	473	-1.49	0.00
183.00	0.00	472	-1.49	0.00
184.00	0.00	472	-1.49	0.00
185.00	0.00	471	-1.49	0.00
186.00	0.00	471	-1.50	0.00
187.00	0.00	470	-1.50	0.00
188.00	0.00	470	-1.50	0.00
189.00	0.00	470	-1.50	0.00
190.00	0.00	469	-1.50	0.00
191.00	0.00	469	-1.50	0.00
192.00	0.00	469	-1.50	0.00
193.00	0.00	469	-1.50	0.00
194.00	0.00	469	-1.50	0.00
195.00	0.00	468	-1.50	0.00
196.00	0.00	468	-1.50	0.00
197.00	0.00	468	-1.50	0.00
198.00	0.00	468	-1.50	0.00
199.00	0.00	468	-1.50	0.00
200.00	0.00	468	-1.50	0.00
201.00	0.00	468	-1.50	0.00
202.00	0.00	468	-1.50	0.00
203.00	0.00	467	-1.50	0.00
204.00	0.00	467	-1.50	0.00
205.00	0.00	467	-1.50	0.00
206.00	0.00	467	-1.50	0.00
207.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
208.00	0.00	467	-1.50	0.00
209.00	0.00	467	-1.50	0.00
210.00	0.00	467	-1.50	0.00
211.00	0.00	467	-1.50	0.00
212.00	0.00	467	-1.50	0.00
213.00	0.00	467	-1.50	0.00
214.00	0.00	467	-1.50	0.00
215.00	0.00	467	-1.50	0.00
216.00	0.00	467	-1.50	0.00
217.00	0.00	467	-1.50	0.00
218.00	0.00	467	-1.50	0.00
219.00	0.00	467	-1.50	0.00
220.00	0.00	467	-1.50	0.00
221.00	0.00	467	-1.50	0.00
222.00	0.00	467	-1.50	0.00
223.00	0.00	467	-1.50	0.00
224.00	0.00	467	-1.50	0.00
225.00	0.00	467	-1.50	0.00
226.00	0.00	467	-1.50	0.00
227.00	0.00	467	-1.50	0.00
228.00	0.00	467	-1.50	0.00
229.00	0.00	467	-1.50	0.00
230.00	0.00	467	-1.50	0.00
231.00	0.00	467	-1.50	0.00
232.00	0.00	467	-1.50	0.00
233.00	0.00	467	-1.50	0.00
234.00	0.00	467	-1.50	0.00
235.00	0.00	467	-1.50	0.00
236.00	0.00	467	-1.50	0.00
237.00	0.00	467	-1.50	0.00
238.00	0.00	467	-1.50	0.00
239.00	0.00	467	-1.50	0.00
240.00	0.00	467	-1.50	0.00
241.00	0.00	467	-1.50	0.00
242.00	0.00	467	-1.50	0.00
243.00	0.00	467	-1.50	0.00
244.00	0.00	467	-1.50	0.00
245.00	0.00	467	-1.50	0.00
246.00	0.00	467	-1.50	0.00
247.00	0.00	467	-1.50	0.00
248.00	0.00	467	-1.50	0.00
249.00	0.00	467	-1.50	0.00
250.00	0.00	467	-1.50	0.00
251.00	0.00	467	-1.50	0.00
252.00	0.00	467	-1.50	0.00
253.00	0.00	467	-1.50	0.00
254.00	0.00	467	-1.50	0.00
255.00	0.00	467	-1.50	0.00
256.00	0.00	467	-1.50	0.00
257.00	0.00	467	-1.50	0.00
258.00	0.00	467	-1.50	0.00
259.00	0.00	467	-1.50	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 1P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
260.00	0.00	467	-1.50	0.00
261.00	0.00	467	-1.50	0.00
262.00	0.00	467	-1.50	0.00
263.00	0.00	467	-1.50	0.00
264.00	0.00	467	-1.50	0.00
265.00	0.00	467	-1.50	0.00
266.00	0.00	467	-1.50	0.00
267.00	0.00	467	-1.50	0.00
268.00	0.00	466	-1.50	0.00
269.00	0.00	466	-1.50	0.00
270.00	0.00	466	-1.50	0.00
271.00	0.00	466	-1.50	0.00
272.00	0.00	466	-1.50	0.00
273.00	0.00	466	-1.50	0.00
274.00	0.00	466	-1.50	0.00
275.00	0.00	466	-1.50	0.00
276.00	0.00	466	-1.50	0.00
277.00	0.00	466	-1.50	0.00
278.00	0.00	466	-1.50	0.00
279.00	0.00	466	-1.50	0.00
280.00	0.00	466	-1.50	0.00
281.00	0.00	466	-1.50	0.00
282.00	0.00	466	-1.50	0.00
283.00	0.00	466	-1.50	0.00
284.00	0.00	466	-1.50	0.00
285.00	0.00	466	-1.50	0.00
286.00	0.00	466	-1.50	0.00
287.00	0.00	466	-1.50	0.00
288.00	0.00	466	-1.50	0.00
289.00	0.00	466	-1.50	0.00
290.00	0.00	466	-1.50	0.00
291.00	0.00	466	-1.50	0.00
292.00	0.00	466	-1.50	0.00
293.00	0.00	466	-1.50	0.00
294.00	0.00	466	-1.50	0.00
295.00	0.00	466	-1.50	0.00
296.00	0.00	466	-1.50	0.00
297.00	0.00	466	-1.50	0.00
298.00	0.00	466	-1.50	0.00
299.00	0.00	466	-1.50	0.00
300.00	0.00	466	-1.50	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Summary for Pond 2P: Managed Release Rain Garden

50% IWS routing modeled with a 0.30*50% = 0.15 void space

[79] Warning: Submerged Pond 1P Primary device # 4 INLET by 3.36'

Inflow Area = 0.700 ac, 100.00% Impervious, Inflow Depth = 7.35" for 100-yr NOAA event
 Inflow = 5.70 cfs @ 12.14 hrs, Volume= 0.429 af
 Outflow = 1.04 cfs @ 12.58 hrs, Volume= 0.429 af, Atten= 82%, Lag= 26.2 min
 Primary = 0.75 cfs @ 12.58 hrs, Volume= 0.416 af
 Secondary = 0.29 cfs @ 12.58 hrs, Volume= 0.013 af

Routing by Stor-Ind method, Time Span= 0.00-300.00 hrs, dt= 0.01 hrs
 Peak Elev= 0.85' @ 12.58 hrs Surf.Area= 1,742 sf Storage= 5,847 cf

Plug-Flow detention time= 116.7 min calculated for 0.429 af (100% of inflow)
 Center-of-Mass det. time= 116.7 min (1,577.8 - 1,461.1)

Volume	Invert	Avail.Storage	Storage Description
#1	-2.51'	6,114 cf	Detention Basin (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
-2.51	1,742	0.0	0	0
-2.50	1,742	100.0	17	17
1.00	1,742	100.0	6,097	6,114

Device	Routing	Invert	Outlet Devices
#1	Secondary	0.50'	0.5' long Sharp-Crested Rectangular Weir 2 End Contraction(s)
#2	Primary	-2.51'	4.0" Vert. Orifice/Grate C= 0.600

Primary OutFlow Max=0.75 cfs @ 12.58 hrs HW=0.85' (Free Discharge)
 ↑**2=Orifice/Grate** (Orifice Controls 0.75 cfs @ 8.60 fps)

Secondary OutFlow Max=0.29 cfs @ 12.58 hrs HW=0.85' (Free Discharge)
 ↑**1=Sharp-Crested Rectangular Weir**(Weir Controls 0.29 cfs @ 1.92 fps)

MRC Example 2

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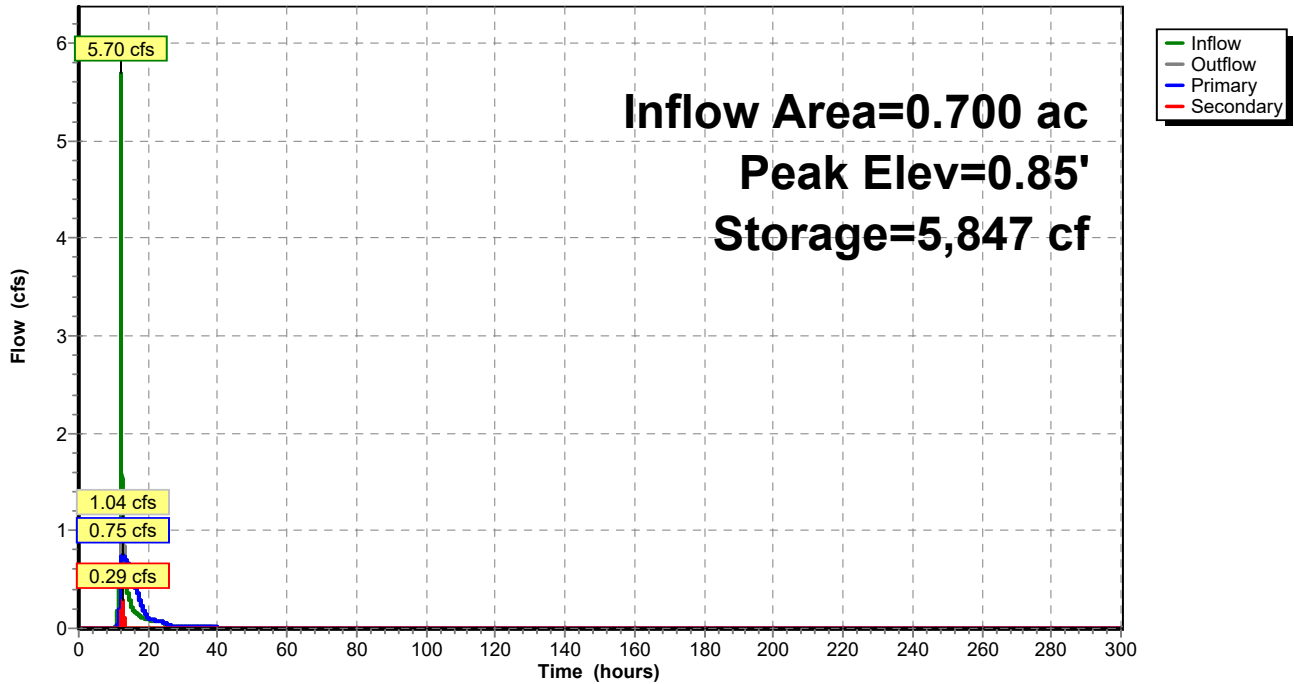
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NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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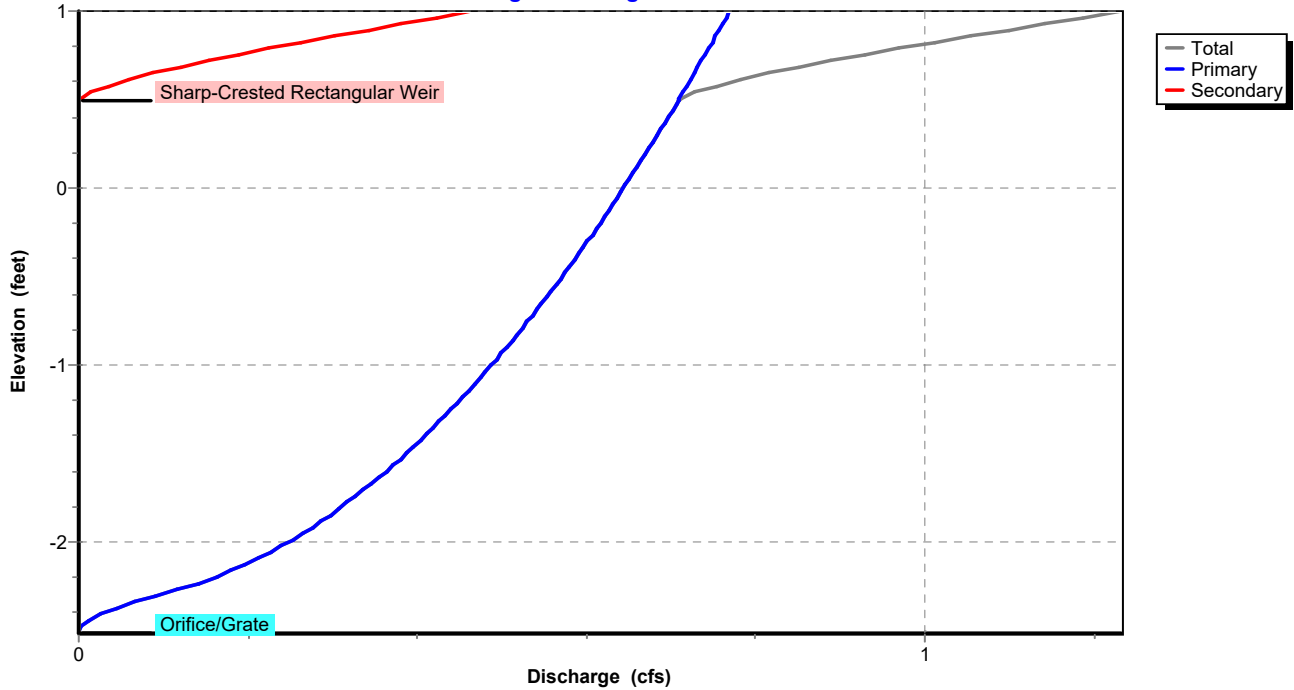
Pond 2P: Managed Release Rain Garden

Hydrograph



Pond 2P: Managed Release Rain Garden

Stage-Discharge



MRC Example 2

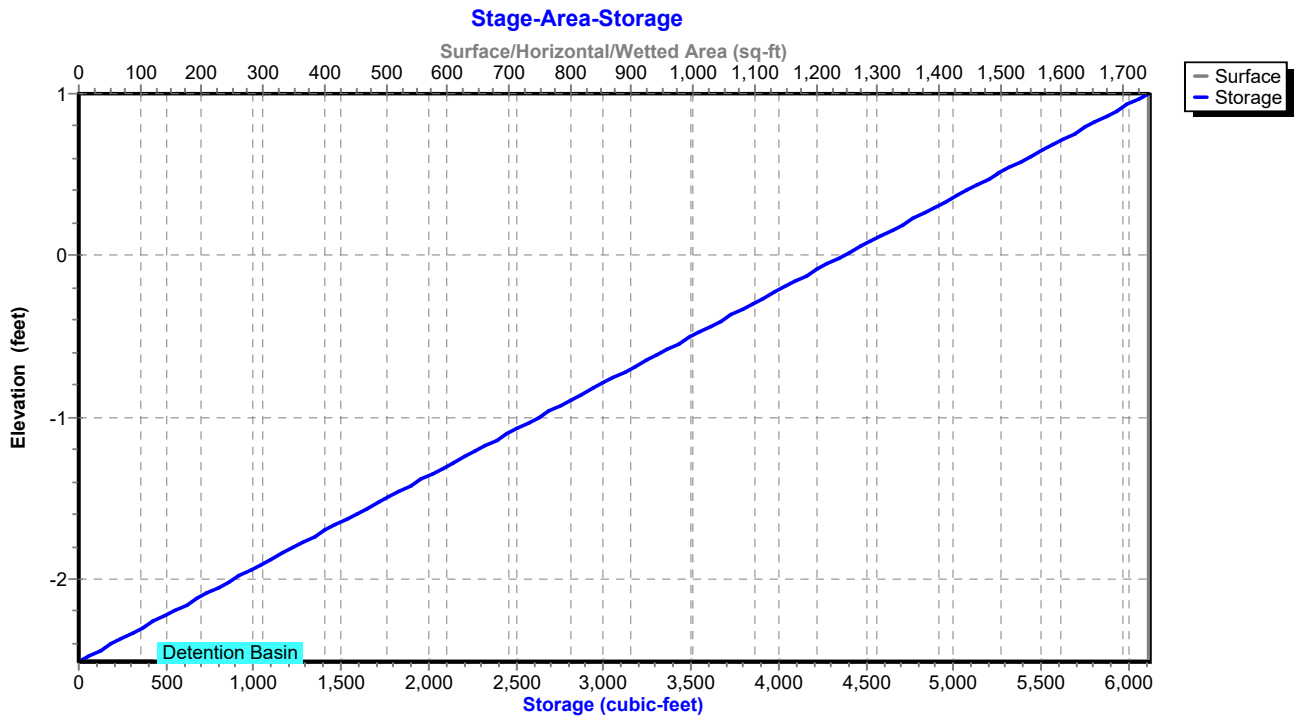
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NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Pond 2P: Managed Release Rain Garden



MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 2P: Managed Release Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
0.00	0.00	0	-2.51	0.00	0.00	0.00
1.00	0.00	0	-2.51	0.00	0.00	0.00
2.00	0.00	0	-2.51	0.00	0.00	0.00
3.00	0.00	0	-2.51	0.00	0.00	0.00
4.00	0.00	0	-2.51	0.00	0.00	0.00
5.00	0.00	9	-2.50	0.00	0.00	0.00
6.00	0.01	24	-2.50	0.00	0.00	0.00
7.00	0.01	40	-2.49	0.00	0.00	0.00
8.00	0.01	57	-2.48	0.00	0.00	0.00
9.00	0.01	72	-2.47	0.00	0.00	0.00
10.00	0.01	83	-2.46	0.01	0.01	0.00
11.00	0.09	135	-2.43	0.01	0.01	0.00
12.00	2.85	1,656	-1.56	0.37	0.37	0.00
13.00	0.58	5,510	0.65	0.82	0.73	0.09
14.00	0.38	4,698	0.19	0.67	0.67	0.00
15.00	0.25	3,560	-0.47	0.58	0.58	0.00
16.00	0.17	2,425	-1.12	0.47	0.47	0.00
17.00	0.14	1,514	-1.64	0.35	0.35	0.00
18.00	0.11	892	-2.00	0.25	0.25	0.00
19.00	0.10	541	-2.20	0.16	0.16	0.00
20.00	0.09	403	-2.28	0.11	0.11	0.00
21.00	0.08	358	-2.30	0.09	0.09	0.00
22.00	0.07	336	-2.32	0.08	0.08	0.00
23.00	0.07	320	-2.33	0.07	0.07	0.00
24.00	0.06	306	-2.33	0.07	0.07	0.00
25.00	0.03	258	-2.36	0.05	0.05	0.00
26.00	0.02	202	-2.39	0.03	0.03	0.00
27.00	0.01	160	-2.42	0.02	0.02	0.00
28.00	0.01	134	-2.43	0.01	0.01	0.00
29.00	0.01	120	-2.44	0.01	0.01	0.00
30.00	0.01	113	-2.45	0.01	0.01	0.00
31.00	0.01	109	-2.45	0.01	0.01	0.00
32.00	0.01	106	-2.45	0.01	0.01	0.00
33.00	0.01	104	-2.45	0.01	0.01	0.00
34.00	0.01	103	-2.45	0.01	0.01	0.00
35.00	0.01	103	-2.45	0.01	0.01	0.00
36.00	0.01	102	-2.45	0.01	0.01	0.00
37.00	0.01	102	-2.45	0.01	0.01	0.00
38.00	0.01	102	-2.45	0.01	0.01	0.00
39.00	0.01	101	-2.45	0.01	0.01	0.00
40.00	0.01	101	-2.45	0.01	0.01	0.00
41.00	0.01	101	-2.45	0.01	0.01	0.00
42.00	0.01	101	-2.45	0.01	0.01	0.00
43.00	0.01	101	-2.45	0.01	0.01	0.00
44.00	0.01	100	-2.45	0.01	0.01	0.00
45.00	0.01	100	-2.45	0.01	0.01	0.00
46.00	0.01	100	-2.45	0.01	0.01	0.00
47.00	0.01	100	-2.45	0.01	0.01	0.00
48.00	0.01	100	-2.45	0.01	0.01	0.00
49.00	0.01	100	-2.45	0.01	0.01	0.00
50.00	0.01	99	-2.45	0.01	0.01	0.00
51.00	0.01	99	-2.45	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
52.00	0.01	99	-2.45	0.01	0.01	0.00
53.00	0.01	99	-2.45	0.01	0.01	0.00
54.00	0.01	99	-2.45	0.01	0.01	0.00
55.00	0.01	99	-2.45	0.01	0.01	0.00
56.00	0.01	98	-2.45	0.01	0.01	0.00
57.00	0.01	98	-2.45	0.01	0.01	0.00
58.00	0.01	98	-2.45	0.01	0.01	0.00
59.00	0.01	98	-2.45	0.01	0.01	0.00
60.00	0.01	98	-2.45	0.01	0.01	0.00
61.00	0.01	98	-2.45	0.01	0.01	0.00
62.00	0.01	97	-2.45	0.01	0.01	0.00
63.00	0.01	97	-2.45	0.01	0.01	0.00
64.00	0.01	97	-2.45	0.01	0.01	0.00
65.00	0.01	97	-2.45	0.01	0.01	0.00
66.00	0.01	97	-2.45	0.01	0.01	0.00
67.00	0.01	96	-2.45	0.01	0.01	0.00
68.00	0.01	96	-2.45	0.01	0.01	0.00
69.00	0.01	96	-2.45	0.01	0.01	0.00
70.00	0.01	96	-2.45	0.01	0.01	0.00
71.00	0.01	96	-2.46	0.01	0.01	0.00
72.00	0.01	96	-2.46	0.01	0.01	0.00
73.00	0.01	95	-2.46	0.01	0.01	0.00
74.00	0.01	95	-2.46	0.01	0.01	0.00
75.00	0.01	95	-2.46	0.01	0.01	0.00
76.00	0.01	95	-2.46	0.01	0.01	0.00
77.00	0.01	95	-2.46	0.01	0.01	0.00
78.00	0.01	95	-2.46	0.01	0.01	0.00
79.00	0.01	94	-2.46	0.01	0.01	0.00
80.00	0.01	94	-2.46	0.01	0.01	0.00
81.00	0.01	93	-2.46	0.01	0.01	0.00
82.00	0.01	93	-2.46	0.01	0.01	0.00
83.00	0.01	92	-2.46	0.01	0.01	0.00
84.00	0.01	92	-2.46	0.01	0.01	0.00
85.00	0.01	91	-2.46	0.01	0.01	0.00
86.00	0.01	91	-2.46	0.01	0.01	0.00
87.00	0.01	90	-2.46	0.01	0.01	0.00
88.00	0.01	90	-2.46	0.01	0.01	0.00
89.00	0.01	89	-2.46	0.01	0.01	0.00
90.00	0.01	88	-2.46	0.01	0.01	0.00
91.00	0.01	88	-2.46	0.01	0.01	0.00
92.00	0.01	87	-2.46	0.01	0.01	0.00
93.00	0.01	87	-2.46	0.01	0.01	0.00
94.00	0.01	86	-2.46	0.01	0.01	0.00
95.00	0.01	86	-2.46	0.01	0.01	0.00
96.00	0.01	85	-2.46	0.01	0.01	0.00
97.00	0.01	84	-2.46	0.01	0.01	0.00
98.00	0.01	84	-2.46	0.01	0.01	0.00
99.00	0.01	83	-2.46	0.01	0.01	0.00
100.00	0.01	83	-2.46	0.01	0.01	0.00
101.00	0.01	82	-2.46	0.01	0.01	0.00
102.00	0.01	81	-2.46	0.01	0.01	0.00
103.00	0.01	81	-2.46	0.01	0.01	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
104.00	0.01	80	-2.46	0.01	0.01	0.00
105.00	0.01	80	-2.46	0.01	0.01	0.00
106.00	0.01	79	-2.46	0.01	0.01	0.00
107.00	0.01	79	-2.46	0.01	0.01	0.00
108.00	0.01	78	-2.47	0.01	0.01	0.00
109.00	0.01	77	-2.47	0.01	0.01	0.00
110.00	0.01	77	-2.47	0.01	0.01	0.00
111.00	0.01	76	-2.47	0.01	0.01	0.00
112.00	0.01	76	-2.47	0.01	0.01	0.00
113.00	0.00	75	-2.47	0.01	0.01	0.00
114.00	0.00	74	-2.47	0.01	0.01	0.00
115.00	0.00	74	-2.47	0.00	0.00	0.00
116.00	0.00	73	-2.47	0.00	0.00	0.00
117.00	0.00	73	-2.47	0.00	0.00	0.00
118.00	0.00	72	-2.47	0.00	0.00	0.00
119.00	0.00	72	-2.47	0.00	0.00	0.00
120.00	0.00	71	-2.47	0.00	0.00	0.00
121.00	0.00	70	-2.47	0.00	0.00	0.00
122.00	0.00	70	-2.47	0.00	0.00	0.00
123.00	0.00	69	-2.47	0.00	0.00	0.00
124.00	0.00	69	-2.47	0.00	0.00	0.00
125.00	0.00	68	-2.47	0.00	0.00	0.00
126.00	0.00	68	-2.47	0.00	0.00	0.00
127.00	0.00	67	-2.47	0.00	0.00	0.00
128.00	0.00	66	-2.47	0.00	0.00	0.00
129.00	0.00	66	-2.47	0.00	0.00	0.00
130.00	0.00	65	-2.47	0.00	0.00	0.00
131.00	0.00	65	-2.47	0.00	0.00	0.00
132.00	0.00	64	-2.47	0.00	0.00	0.00
133.00	0.00	63	-2.47	0.00	0.00	0.00
134.00	0.00	63	-2.47	0.00	0.00	0.00
135.00	0.00	62	-2.47	0.00	0.00	0.00
136.00	0.00	62	-2.47	0.00	0.00	0.00
137.00	0.00	61	-2.47	0.00	0.00	0.00
138.00	0.00	60	-2.48	0.00	0.00	0.00
139.00	0.00	60	-2.48	0.00	0.00	0.00
140.00	0.00	59	-2.48	0.00	0.00	0.00
141.00	0.00	58	-2.48	0.00	0.00	0.00
142.00	0.00	57	-2.48	0.00	0.00	0.00
143.00	0.00	56	-2.48	0.00	0.00	0.00
144.00	0.00	54	-2.48	0.00	0.00	0.00
145.00	0.00	53	-2.48	0.00	0.00	0.00
146.00	0.00	52	-2.48	0.00	0.00	0.00
147.00	0.00	51	-2.48	0.00	0.00	0.00
148.00	0.00	50	-2.48	0.00	0.00	0.00
149.00	0.00	48	-2.48	0.00	0.00	0.00
150.00	0.00	47	-2.48	0.00	0.00	0.00
151.00	0.00	46	-2.48	0.00	0.00	0.00
152.00	0.00	45	-2.48	0.00	0.00	0.00
153.00	0.00	43	-2.49	0.00	0.00	0.00
154.00	0.00	42	-2.49	0.00	0.00	0.00
155.00	0.00	40	-2.49	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

Prepared by VU for PADEP

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
156.00	0.00	39	-2.49	0.00	0.00	0.00
157.00	0.00	38	-2.49	0.00	0.00	0.00
158.00	0.00	36	-2.49	0.00	0.00	0.00
159.00	0.00	35	-2.49	0.00	0.00	0.00
160.00	0.00	34	-2.49	0.00	0.00	0.00
161.00	0.00	33	-2.49	0.00	0.00	0.00
162.00	0.00	32	-2.49	0.00	0.00	0.00
163.00	0.00	30	-2.49	0.00	0.00	0.00
164.00	0.00	29	-2.49	0.00	0.00	0.00
165.00	0.00	28	-2.49	0.00	0.00	0.00
166.00	0.00	27	-2.49	0.00	0.00	0.00
167.00	0.00	26	-2.49	0.00	0.00	0.00
168.00	0.00	25	-2.50	0.00	0.00	0.00
169.00	0.00	24	-2.50	0.00	0.00	0.00
170.00	0.00	24	-2.50	0.00	0.00	0.00
171.00	0.00	23	-2.50	0.00	0.00	0.00
172.00	0.00	22	-2.50	0.00	0.00	0.00
173.00	0.00	21	-2.50	0.00	0.00	0.00
174.00	0.00	21	-2.50	0.00	0.00	0.00
175.00	0.00	20	-2.50	0.00	0.00	0.00
176.00	0.00	20	-2.50	0.00	0.00	0.00
177.00	0.00	19	-2.50	0.00	0.00	0.00
178.00	0.00	19	-2.50	0.00	0.00	0.00
179.00	0.00	18	-2.50	0.00	0.00	0.00
180.00	0.00	18	-2.50	0.00	0.00	0.00
181.00	0.00	17	-2.50	0.00	0.00	0.00
182.00	0.00	17	-2.50	0.00	0.00	0.00
183.00	0.00	17	-2.50	0.00	0.00	0.00
184.00	0.00	16	-2.50	0.00	0.00	0.00
185.00	0.00	16	-2.50	0.00	0.00	0.00
186.00	0.00	15	-2.50	0.00	0.00	0.00
187.00	0.00	15	-2.50	0.00	0.00	0.00
188.00	0.00	14	-2.50	0.00	0.00	0.00
189.00	0.00	14	-2.50	0.00	0.00	0.00
190.00	0.00	14	-2.50	0.00	0.00	0.00
191.00	0.00	13	-2.50	0.00	0.00	0.00
192.00	0.00	13	-2.50	0.00	0.00	0.00
193.00	0.00	12	-2.50	0.00	0.00	0.00
194.00	0.00	12	-2.50	0.00	0.00	0.00
195.00	0.00	11	-2.50	0.00	0.00	0.00
196.00	0.00	11	-2.50	0.00	0.00	0.00
197.00	0.00	10	-2.50	0.00	0.00	0.00
198.00	0.00	10	-2.50	0.00	0.00	0.00
199.00	0.00	10	-2.50	0.00	0.00	0.00
200.00	0.00	9	-2.50	0.00	0.00	0.00
201.00	0.00	9	-2.50	0.00	0.00	0.00
202.00	0.00	8	-2.51	0.00	0.00	0.00
203.00	0.00	8	-2.51	0.00	0.00	0.00
204.00	0.00	8	-2.51	0.00	0.00	0.00
205.00	0.00	7	-2.51	0.00	0.00	0.00
206.00	0.00	7	-2.51	0.00	0.00	0.00
207.00	0.00	7	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
208.00	0.00	6	-2.51	0.00	0.00	0.00
209.00	0.00	6	-2.51	0.00	0.00	0.00
210.00	0.00	6	-2.51	0.00	0.00	0.00
211.00	0.00	6	-2.51	0.00	0.00	0.00
212.00	0.00	5	-2.51	0.00	0.00	0.00
213.00	0.00	5	-2.51	0.00	0.00	0.00
214.00	0.00	5	-2.51	0.00	0.00	0.00
215.00	0.00	5	-2.51	0.00	0.00	0.00
216.00	0.00	4	-2.51	0.00	0.00	0.00
217.00	0.00	4	-2.51	0.00	0.00	0.00
218.00	0.00	4	-2.51	0.00	0.00	0.00
219.00	0.00	4	-2.51	0.00	0.00	0.00
220.00	0.00	4	-2.51	0.00	0.00	0.00
221.00	0.00	4	-2.51	0.00	0.00	0.00
222.00	0.00	3	-2.51	0.00	0.00	0.00
223.00	0.00	3	-2.51	0.00	0.00	0.00
224.00	0.00	3	-2.51	0.00	0.00	0.00
225.00	0.00	3	-2.51	0.00	0.00	0.00
226.00	0.00	3	-2.51	0.00	0.00	0.00
227.00	0.00	3	-2.51	0.00	0.00	0.00
228.00	0.00	2	-2.51	0.00	0.00	0.00
229.00	0.00	2	-2.51	0.00	0.00	0.00
230.00	0.00	2	-2.51	0.00	0.00	0.00
231.00	0.00	2	-2.51	0.00	0.00	0.00
232.00	0.00	2	-2.51	0.00	0.00	0.00
233.00	0.00	2	-2.51	0.00	0.00	0.00
234.00	0.00	2	-2.51	0.00	0.00	0.00
235.00	0.00	2	-2.51	0.00	0.00	0.00
236.00	0.00	2	-2.51	0.00	0.00	0.00
237.00	0.00	2	-2.51	0.00	0.00	0.00
238.00	0.00	1	-2.51	0.00	0.00	0.00
239.00	0.00	1	-2.51	0.00	0.00	0.00
240.00	0.00	1	-2.51	0.00	0.00	0.00
241.00	0.00	1	-2.51	0.00	0.00	0.00
242.00	0.00	1	-2.51	0.00	0.00	0.00
243.00	0.00	1	-2.51	0.00	0.00	0.00
244.00	0.00	1	-2.51	0.00	0.00	0.00
245.00	0.00	1	-2.51	0.00	0.00	0.00
246.00	0.00	1	-2.51	0.00	0.00	0.00
247.00	0.00	1	-2.51	0.00	0.00	0.00
248.00	0.00	1	-2.51	0.00	0.00	0.00
249.00	0.00	1	-2.51	0.00	0.00	0.00
250.00	0.00	1	-2.51	0.00	0.00	0.00
251.00	0.00	1	-2.51	0.00	0.00	0.00
252.00	0.00	1	-2.51	0.00	0.00	0.00
253.00	0.00	1	-2.51	0.00	0.00	0.00
254.00	0.00	1	-2.51	0.00	0.00	0.00
255.00	0.00	1	-2.51	0.00	0.00	0.00
256.00	0.00	1	-2.51	0.00	0.00	0.00
257.00	0.00	1	-2.51	0.00	0.00	0.00
258.00	0.00	1	-2.51	0.00	0.00	0.00
259.00	0.00	1	-2.51	0.00	0.00	0.00

MRC Example 2

NOAA 24-hr C 100-yr NOAA Rainfall=7.77"

Prepared by VU for PADEP

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Hydrograph for Pond 2P: Managed Release Rain Garden (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
260.00	0.00	0	-2.51	0.00	0.00	0.00
261.00	0.00	0	-2.51	0.00	0.00	0.00
262.00	0.00	0	-2.51	0.00	0.00	0.00
263.00	0.00	0	-2.51	0.00	0.00	0.00
264.00	0.00	0	-2.51	0.00	0.00	0.00
265.00	0.00	0	-2.51	0.00	0.00	0.00
266.00	0.00	0	-2.51	0.00	0.00	0.00
267.00	0.00	0	-2.51	0.00	0.00	0.00
268.00	0.00	0	-2.51	0.00	0.00	0.00
269.00	0.00	0	-2.51	0.00	0.00	0.00
270.00	0.00	0	-2.51	0.00	0.00	0.00
271.00	0.00	0	-2.51	0.00	0.00	0.00
272.00	0.00	0	-2.51	0.00	0.00	0.00
273.00	0.00	0	-2.51	0.00	0.00	0.00
274.00	0.00	0	-2.51	0.00	0.00	0.00
275.00	0.00	0	-2.51	0.00	0.00	0.00
276.00	0.00	0	-2.51	0.00	0.00	0.00
277.00	0.00	0	-2.51	0.00	0.00	0.00
278.00	0.00	0	-2.51	0.00	0.00	0.00
279.00	0.00	0	-2.51	0.00	0.00	0.00
280.00	0.00	0	-2.51	0.00	0.00	0.00
281.00	0.00	0	-2.51	0.00	0.00	0.00
282.00	0.00	0	-2.51	0.00	0.00	0.00
283.00	0.00	0	-2.51	0.00	0.00	0.00
284.00	0.00	0	-2.51	0.00	0.00	0.00
285.00	0.00	0	-2.51	0.00	0.00	0.00
286.00	0.00	0	-2.51	0.00	0.00	0.00
287.00	0.00	0	-2.51	0.00	0.00	0.00
288.00	0.00	0	-2.51	0.00	0.00	0.00
289.00	0.00	0	-2.51	0.00	0.00	0.00
290.00	0.00	0	-2.51	0.00	0.00	0.00
291.00	0.00	0	-2.51	0.00	0.00	0.00
292.00	0.00	0	-2.51	0.00	0.00	0.00
293.00	0.00	0	-2.51	0.00	0.00	0.00
294.00	0.00	0	-2.51	0.00	0.00	0.00
295.00	0.00	0	-2.51	0.00	0.00	0.00
296.00	0.00	0	-2.51	0.00	0.00	0.00
297.00	0.00	0	-2.51	0.00	0.00	0.00
298.00	0.00	0	-2.51	0.00	0.00	0.00
299.00	0.00	0	-2.51	0.00	0.00	0.00
300.00	0.00	0	-2.51	0.00	0.00	0.00