

City of Aurora 100 Year Modified Rational Method for Stormwater Management

Project Name: _____
 Tributary Area: _____ acre

Runoff Coefficient Calculations

Impervious Area : _____ x 0.96 = _____
 Grass Area : _____ x 0.50 = _____
 Porous Pavement : _____ x 0.70 = _____
 Blue/Green Det : _____ x 0.90 = _____
Wet Retention : _____ x 1.00 = _____
Total

$C_r = \text{Total}/A = \underline{\hspace{2cm}}$

$C_f = C_r * 1.25 = \underline{\hspace{2cm}}$

STORAGE VOLUME CALCULATION

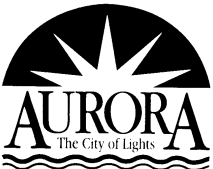
Storm Duration (HRS)	Rainfall Intensity (IN/HR)	Runoff Rate (CFS)	Release Rate (CFS)	Storage Rate (CFS)	Storage Required (AC-FT)
t	I	$Q=C_f*I*A$	Q_r	$Q_s=Q-Q_r$	$Q_s*t/12$
0.50	6.34				
1.00	4.03				
2.00	2.49				
3.00	1.83				
4.00	1.58				
5.00	1.32				
6.00	1.07				
8.00	0.92				
10.00	0.77				
12.00	0.62				
15.00	0.54				
18.00	0.45				
21.00	0.41				
24.00	0.36				

REQUIRED STORAGE ac-ft

REQUIRED STORAGE for INDIAN & BLACKBERRY CREEK WATERSHEDS add 10% ac-ft

TOTAL REQUIRED STORAGE ac-ft

Notes: The detention storage shall be computed by using the Event Hydrograph Routing Method and by using the City of Aurora's Modified Rational Method. Whichever method requires the greatest detention volume shall govern. The Event Hydrograph Routing Method shall be in accordance with the parameters set forth within the Kane County Stormwater Management Ordinance.

 AURORA <small>The City of Lights</small> Engineering Department	Revisions		100 Year Detention Volume – Modified Rational Method		
	Date:	By:	Scale:	Checked	EXHIBIT IV-C-1
	3/2020	DGoewey			
	07/2022	ST	Date:	Drawn:	
		12/03	D.F.		