

Detention Pond Calculations  
100-year return

Name of Project:	Edgewater Development		
Site Location:	W	enter E for East of I-15 or W for West of I-15	
Drainage Basin Area:	13.02	acres	
Run Off Coefficient:	0.47	I =	3.2 inch/hr
Discharge Rate:	0.2	cfs/acre	
Pond Discharge:	8.33	cfs	
Height of Water Above the Orifice:	3.5	ft	
Orifice Size if Known:	13.3	in (diameter)	
Calculated Orifice Size:	12.00 in (diameter)		
Orifice Area:	138.93 in <sup>2</sup>		
Orifice Q:	8.98 cfs		

Time (min)	Intensity (in/hr)	C*AREA (acres)	Accumulated Storage (ft <sup>3</sup> )	Discharge (cfs)	Accumulated Discharge (ft <sup>3</sup> )	Required Storage (ft <sup>3</sup> )	Provided (yd <sup>3</sup> )	Provided (ft <sup>3</sup> )
0	0	6.12	0	8.98	0	0		
5	7.55	6.12	13,860	8.98	2,694	11,166		
10	5.75	6.12	21,112	8.98	5,388	15,724		
15	4.75	6.12	26,160	8.98	8,082	18,078		
30	3.2	6.12	35,248	8.98	16,165	19,083		
60	1.98	6.12	43,619	8.98	32,330	11,289	407.00	20612
360	0.44	6.12	58,159	8.98	193,978	0		
720	0.28	6.12	74,020	8.98	387,957	0		
1440	0.16	6.12	84,595	8.98	775,913	0		

Required Pond Volume: **19,083 ft<sup>3</sup>** Occurring at: **30**  
 Property Needed for 1.5' Depth: 0.29 acres  
 12,721.93 SF RQD  
 7130 Provided

