Table 1: Simplified Approach - Calculating Cistern Storage Volume for 1" Rainfall

Column 1	Column 2	Column 3
Proposed Impervious Area (square feet)	**Volume of Cistern[1] (cubic feet)**	**Volume of Cistern (gallons)**
I	V_{RBcf}	V_{RBgal}
Sum of all Proposed Impervious Areas	$(1*(1/12)*I)/0.75=V_{RBcf}$	$V_{RBcf} * 7.48=V_{RBgal}$
1,000	111	831
1,100	122	913
1,200	133	995
1,300	144	1,077
1,400	156	1,167
1,500	167	1,249
1,600	178	1,331
1,700	188	1,406
1,800	200	1,496
1,900	211	1,578
1,999	222	1,661

[1]It is assumed that the cistern is 25% full prior to receiving runoff.

Table 2: Simplified Approach - Calculating Rain Garden/Bioretention and Dry Well #1 Storage Volume and Surface Area for 1 Inch Rainfall

Column 1	Column 2	Column 3					
Total Proposed Impervious Area (square feet)	**Volume of Rain Garden/Bioretention or Dry Well #1[1] (cubic feet)**	**Surface Area of Rain Garden/Bioretention or Dry Well #1** Acceptable Depths for Each BMP are indicated by the arrows below **(square feet)**					
		Area Required for a BMP with a Depth(D) of 0.5'	*Area Required for a BMP with a Depth(D) of 1.0'*	*Area Required for a BMP with a Depth(D) of 1.5'*	*Area Required for a BMP with a Depth(D) of 2.0'*	*Area Required for a BMP with a Depth(D) of 2.5'*	*Area Required for a BMP with a Depth(D) of 3.0'*
		Rain Garden/ Bioretention (0.5'-1.0')		Dry Well #1 (1.5'-3.0')			
I	**V**	***A(sf)***					
Sum of all Proposed Impervious Areas	**1*(1/12)****I*= V**	**V/D=A**					
1,000	83	166	83	55	42	33	28
1,100	92	184	92	37	46	37	31
1,200	100	200	100	67	50	40	33
1,300	108	216	108	72	54	43	36
1,400	117	234	117	78	59	47	39
1,500	125	250	125	83	63	50	42
1,600	133	266	133	89	67	53	44
1,700	142	284	142	95	71	57	47
1,800	150	300	150	100	75	60	50
1,900	158	316	158	105	79	63	53
1,999	166	332	166	111	83	66	55

[1] It is assumed that the rain garden/bioretention or the dry well #1 are empty prior to receiving runoff (i.e. 0% full)

Table 3: Simplified Approach - Calculating Infiltration Trench and Dry Well #2 Storage Volume and Surface Area for 1 Inch of Rainfall

Column 1	Column 2	Column 3			
Total Proposed Impervious Area (square feet)	**Volume of Infiltration Trench or Dry Well #2[1] (cubic feet)**	**Surface Area of Infiltration Trench or Dry Well #2** Acceptable Depths for Each BMP are indicated by the arrows below **(square feet)**			
		Area Required for a BMP with a Depth(D) of 1.5'	*Area Required for a BMP with a Depth(D) of 2.0'*	*Area Required for a BMP with a Depth(D) of 2.5'*	*Area Required for a BMP with a Depth(D) of 3.0'*
		Infiltration Trench (1.5' – 3.0')			
		Dry Well #2 (1.5' – 3.0')			
I	V	*A(sf)*			
Sum of all Proposed Impervious Areas	(1*(1/12)**I*)/ (0.4)[1] =V	V/D=A			
1,000	208	139	104	83	69
1,100	230	153	115	92	77
1,200	250	167	125	100	83
1,300	270	180	135	108	90
1,400	293	195	147	117	98
1,500	313	209	157	125	104
1,600	333	222	167	133	111
1,700	355	237	178	142	118
1,800	375	250	188	150	125
1,900	395	263	198	158	132
1,999	415	277	208	166	138

[1] **Assumes a percent void volume of 40%**