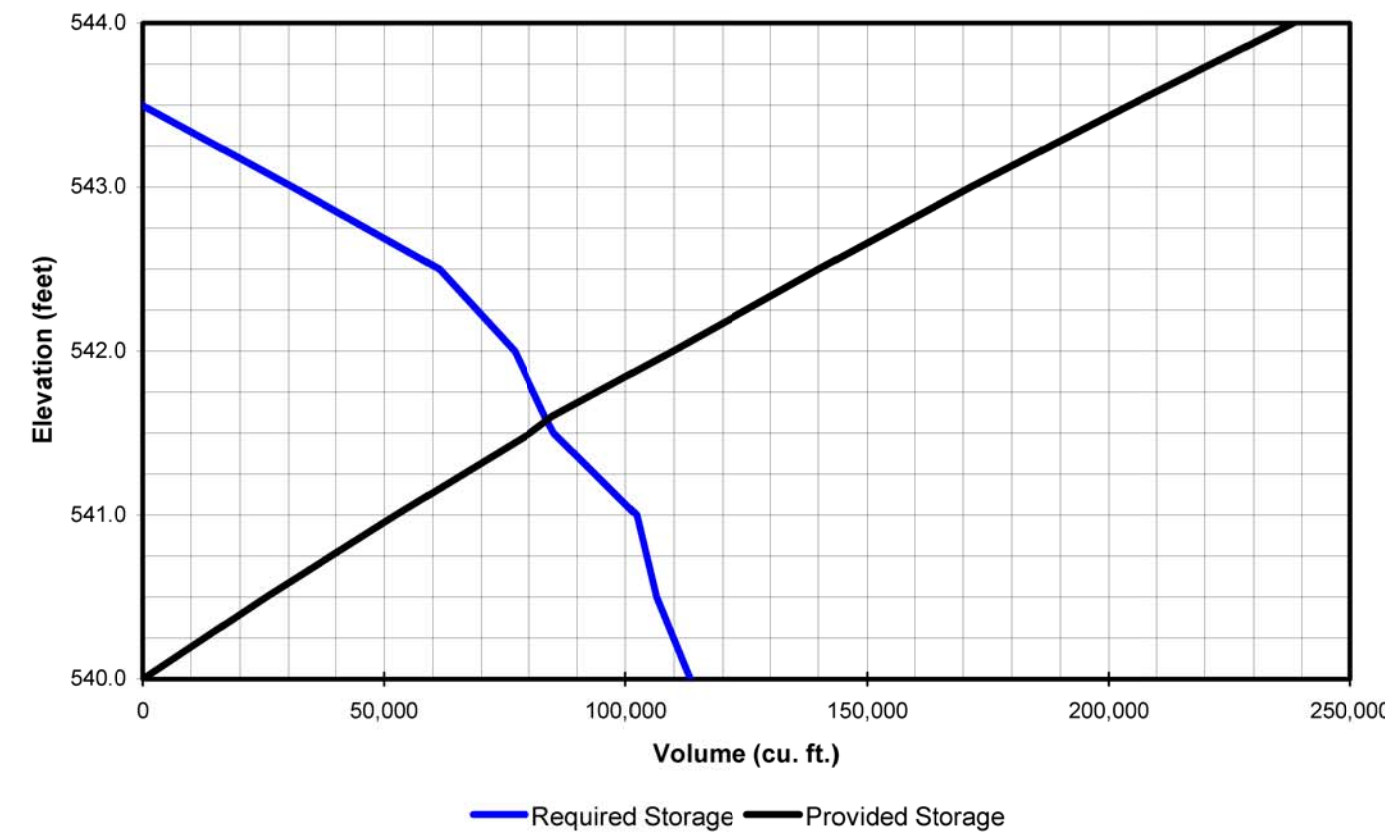


Outfall Structure Discharge Calculations
The Mansions Family - Rockwall, Texas
2 Year Storm Event

Orifice Data				Site and Stormwater Detention Data			
Orifice #1	Orifice #2	Orifice #3	Orifice #4	Area Draining to Pond:	28.37	acres	
2 yr	10 yr	100 yr	Drop Inlet	Existing Time of Concentration:	20	minutes	
Description:	2.25	2.92	20.00	Existing Runoff Coefficient:	0.35		
Length (ft):	1.50	0.75	0.50	Time of Concentration:	10	minutes	
Height (ft):	3.38	2.19	10.00	Runoff Coefficient:	0.75		
Area (sf):	540.00	542.00	542.90	Storm Duration:	40	minutes	
Invert Elevation (ft.):	540.00	542.00	542.90	Rainfall Intensity:	2.65	inches/hr	
Coefficient:	0.80	0.60	0.60	Allowable Release Rate:	20.71	cfs	
Weir Data				Weir Data			
Weir Length:	0.00	feet	Inflow Rate:	47.20	cfs		
Weir Elevation:	0.00	feet	Inflow Volume:	113.288	cf		
Weir Coefficient:	2.68		2-Year WSEL:	541.60			

Elevation (feet)	Orifice 1 Discharge (cfs)	Orifice 2 Discharge (cfs)	Orifice 3 Discharge (cfs)	Orifice 4 Discharge (cfs)	Weir Discharge (cfs)	Outflow Rate (cfs)	Outflow Volume (cf)	Required Storage (cf)	Provided Storage (cf)	Difference (cf)
540.00	0.000	0.000	0.000	0.000	0.000	0.000	0	113.288	0	(113.288)
540.50	4.626	0.000	0.000	0.000	0.000	4.626	6.939	106.349	25.563	(80.786)
541.00	7.343	0.000	0.000	0.000	0.000	7.343	11.014	102.273	52.332	(49.941)
541.50	18.765	0.000	0.000	0.000	0.000	18.765	28.147	85.141	80.329	(4.812)
541.90	19.976	0.000	0.000	0.000	0.000	19.976	29.965	83.323	84.755	1.432
542.00	24.225	0.000	0.000	0.000	0.000	24.225	36.337	76.950	109.573	32.623
542.50	28.663	6.003	0.000	0.000	0.000	34.666	52.000	61.288	140.011	78.723
543.00	32.501	8.336	14.062	0.000	0.000	54.899	82.349	30.938	171.587	140.649
543.50	35.931	11.184	28.486	0.000	0.000	75.602	113.402	-115	204.306	204.421
544.00	39.061	13.442	44.392	0.000	0.000	96.895	145.343	-32.056	238.174	270.229

Stage Storage Curve
Provided Storage vs. Required Storage - 2 Year Storm Event

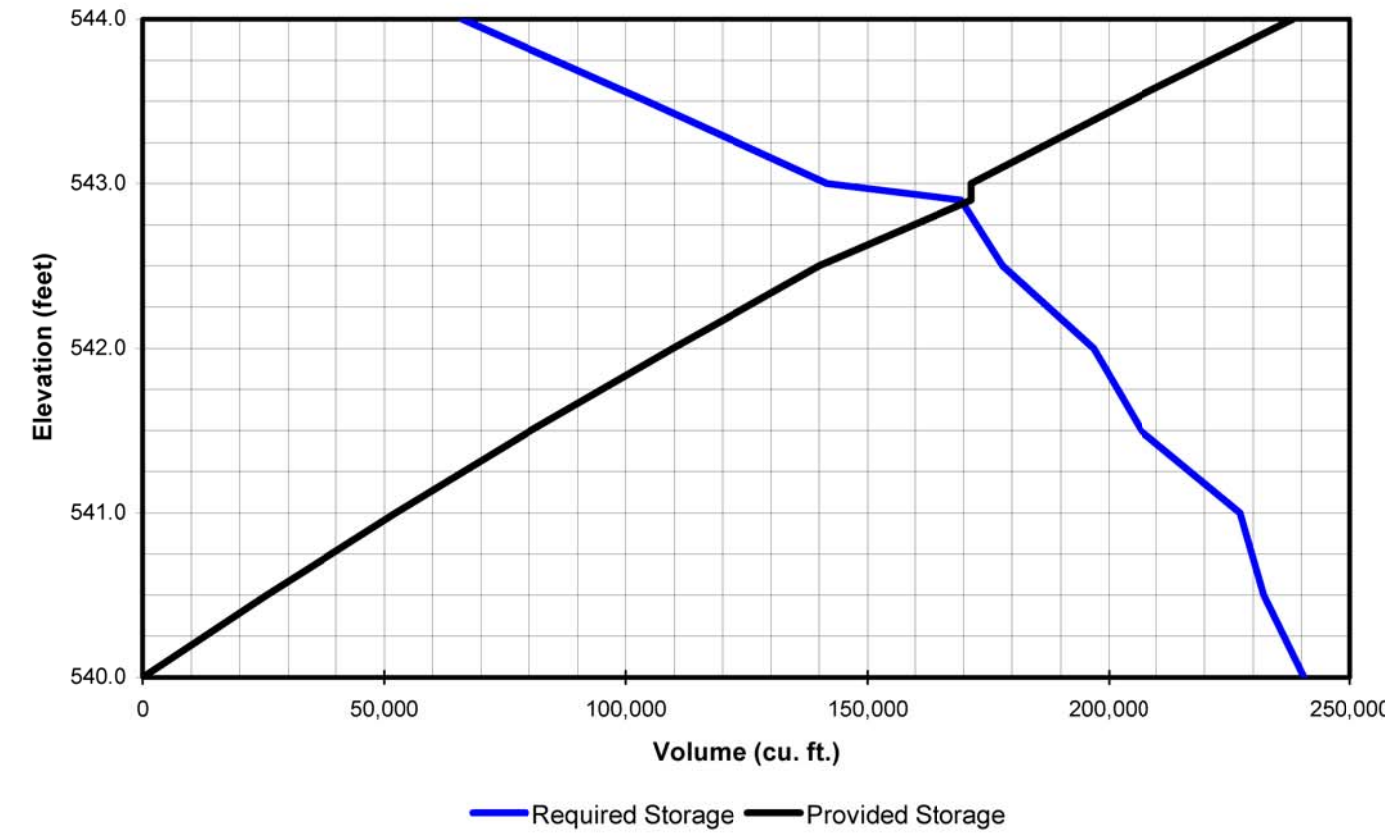


Outfall Structure Discharge Calculations
The Mansions Family - Rockwall, Texas
50 Year Storm Event

Orifice Data				Site and Stormwater Detention Data			
Orifice #1	Orifice #2	Orifice #3	Orifice #4	Area Draining to Pond:	28.37	acres	
2 yr	10 yr	100 yr	Drop Inlet	Existing Time of Concentration:	20	minutes	
Description:	2.25	2.92	20.00	Existing Runoff Coefficient:	0.35		
Length (ft):	1.50	0.75	0.50	Time of Concentration:	10	minutes	
Height (ft):	3.38	2.19	10.00	Runoff Coefficient:	0.75		
Area (sf):	540.00	542.00	542.90	Storm Duration:	50	minutes	
Invert Elevation (ft.):	540.00	542.00	542.90	Rainfall Intensity:	4.50	inches/hr	
Coefficient:	0.80	0.60	0.60	Allowable Release Rate:	42.29	cfs	
Weir Data				Weir Data			
Weir Length:	0.00	feet	Inflow Rate:	80.16	cfs		
Weir Elevation:	0.00	feet	Inflow Volume:	240.469	cf		
Weir Coefficient:	2.68		10-Year WSEL:	542.90			

Elevation (feet)	Orifice 1 Discharge (cfs)	Orifice 2 Discharge (cfs)	Orifice 3 Discharge (cfs)	Orifice 4 Discharge (cfs)	Weir Discharge (cfs)	Outflow Rate (cfs)	Outflow Volume (cf)	Required Storage (cf)	Provided Storage (cf)	Difference (cf)
540.00	0.000	0.000	0.000	0.000	0.000	0.000	0	240.469	0	(240.469)
540.50	4.626	0.000	0.000	0.000	0.000	4.626	8.326	232.142	25.563	(206.580)
541.00	7.343	0.000	0.000	0.000	0.000	7.343	13.217	227.252	52.332	(174.920)
541.50	18.765	0.000	0.000	0.000	0.000	18.765	33.776	206.693	80.329	(126.364)
542.00	24.225	0.000	0.000	0.000	0.000	24.225	43.605	198.854	109.573	(89.281)
542.50	28.663	6.003	0.000	0.000	0.000	34.666	62.400	178.069	140.011	(38.058)
542.90	31.771	7.640	0.000	0.000	0.000	39.411	70.940	169.529	171.587	2.058
543.00	32.501	8.336	14.062	0.000	0.000	54.899	98.819	141.650	171.587	29.937
543.50	35.931	11.184	28.486	0.000	0.000	75.602	136.083	104.386	204.306	99.920
544.00	39.061	13.442	44.392	0.000	0.000	96.895	174.412	66.057	238.174	172.116

Stage Storage Curve
Provided Storage vs. Required Storage - 50 Year Storm Event

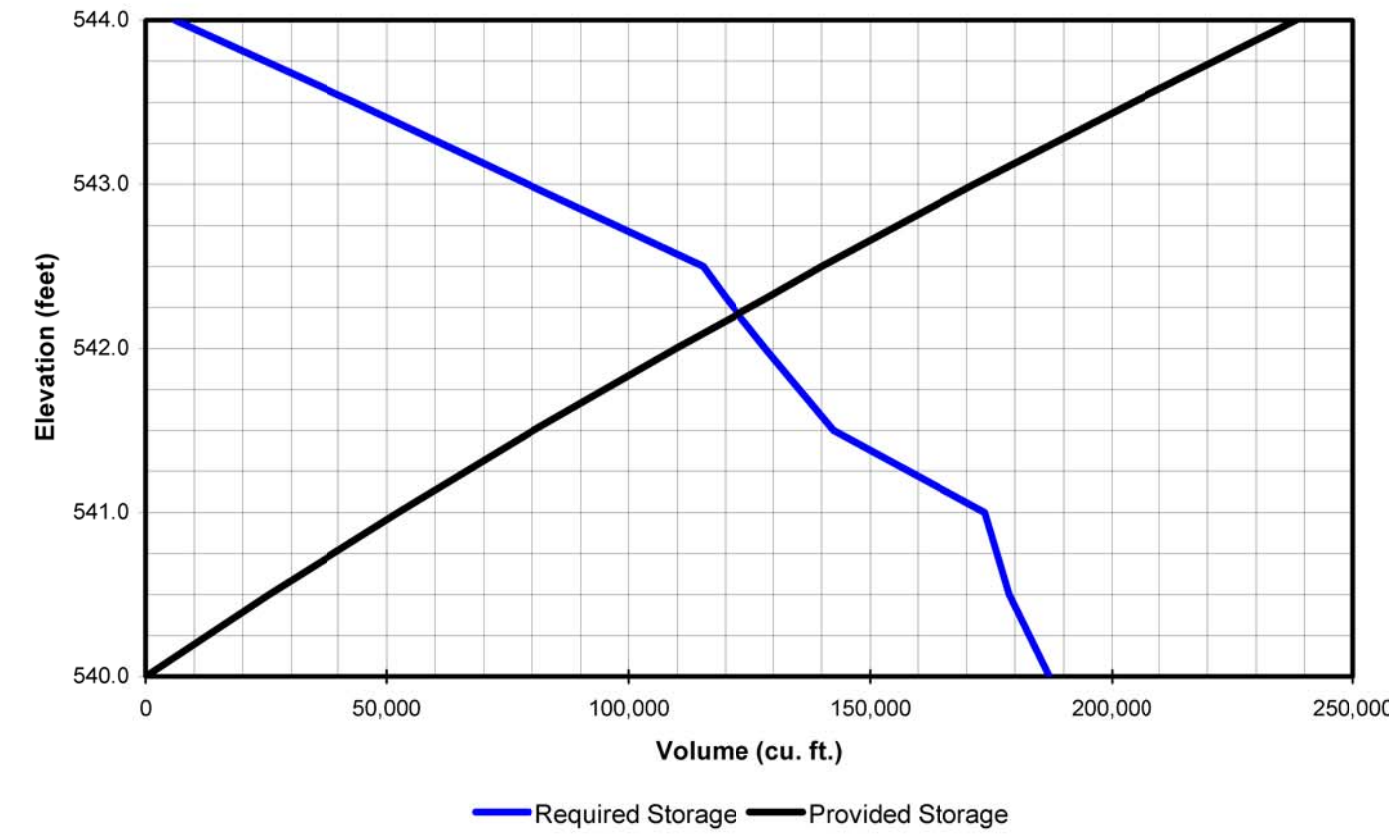


Outfall Structure Discharge Calculations
The Mansions Family - Rockwall, Texas
10 Year Storm Event

Orifice Data				Site and Stormwater Detention Data			
Orifice #1	Orifice #2	Orifice #3	Orifice #4	Area Draining to Pond:	28.37	acres	
2 yr	10 yr	100 yr	Drop Inlet	Existing Time of Concentration:	20	minutes	
Description:	2.25	2.92	20.00	Existing Runoff Coefficient:	0.35		
Length (ft):	1.50	0.75	0.50	Time of Concentration:	10	minutes	
Height (ft):	3.38	2.19	10.00	Runoff Coefficient:	0.75		
Area (sf):	540.00	541.00	542.90	Storm Duration:	50	minutes	
Invert Elevation (ft.):	540.00	541.00	542.90	Rainfall Intensity:	3.50	inches/hr	
Coefficient:	0.80	0.60	0.60	Allowable Release Rate:	32.64	cfs	
Weir Data				Weir Data			
Weir Length:	0.00	feet	Inflow Rate:	62.34	cfs		
Weir Elevation:	0.00	feet	Inflow Volume:	187.031	cf		
Weir Coefficient:	2.68		10-Year WSEL:	542.30			

Elevation (feet)	Orifice 1 Discharge (cfs)	Orifice 2 Discharge (cfs)	Orifice 3 Discharge (cfs)	Orifice 4 Discharge (cfs)	Weir Discharge (cfs)	Outflow Rate (cfs)	Outflow Volume (cf)	Required Storage (cf)	Provided Storage (cf)	Difference (cf)
540.00	0.000	0.000	0.000	0.000	0.000	0.000	0	187.031	0	(187.031)
540.50	4.626	0.000	0.000	0.000	0.000	4.626	8.326	178.705	25.563	(153.142)
541.00	7.343	0.000	0.000	0.000	0.000	7.343	13.217	173.814	52.332	(121.482)
541.50	18.765	6.003	0.000	0.000	0.000	24.768	44.502	142.449	80.329	(62.121)
542.00	24.225	8.336	0.000	0.000	0.000	32.561	59.810	128.421	109.573	(18.848)
542.30	26.976	10.142	0.000	0.000	0.000	37.117	66.811	120.220	128.274	8.054
542.50	28.663	11.184	0.000	0.000	0.000	39.848	71.726	115.305	140.011	24.705
543.00	32.501	13.442	14.062	0.000	0.000	60.005	108.009	79.022	171.587	92.565
543.50	35.931	15.372	28.486	0.000	0.000	79.789	143.620	43.412	204.306	160.895
544.00	39.061	17.085	44.392	0.000	0.000	100.538	180.968	6.063	238.174	232.110

Stage Storage Curve
Provided Storage vs. Required Storage - 10 Year Storm Event

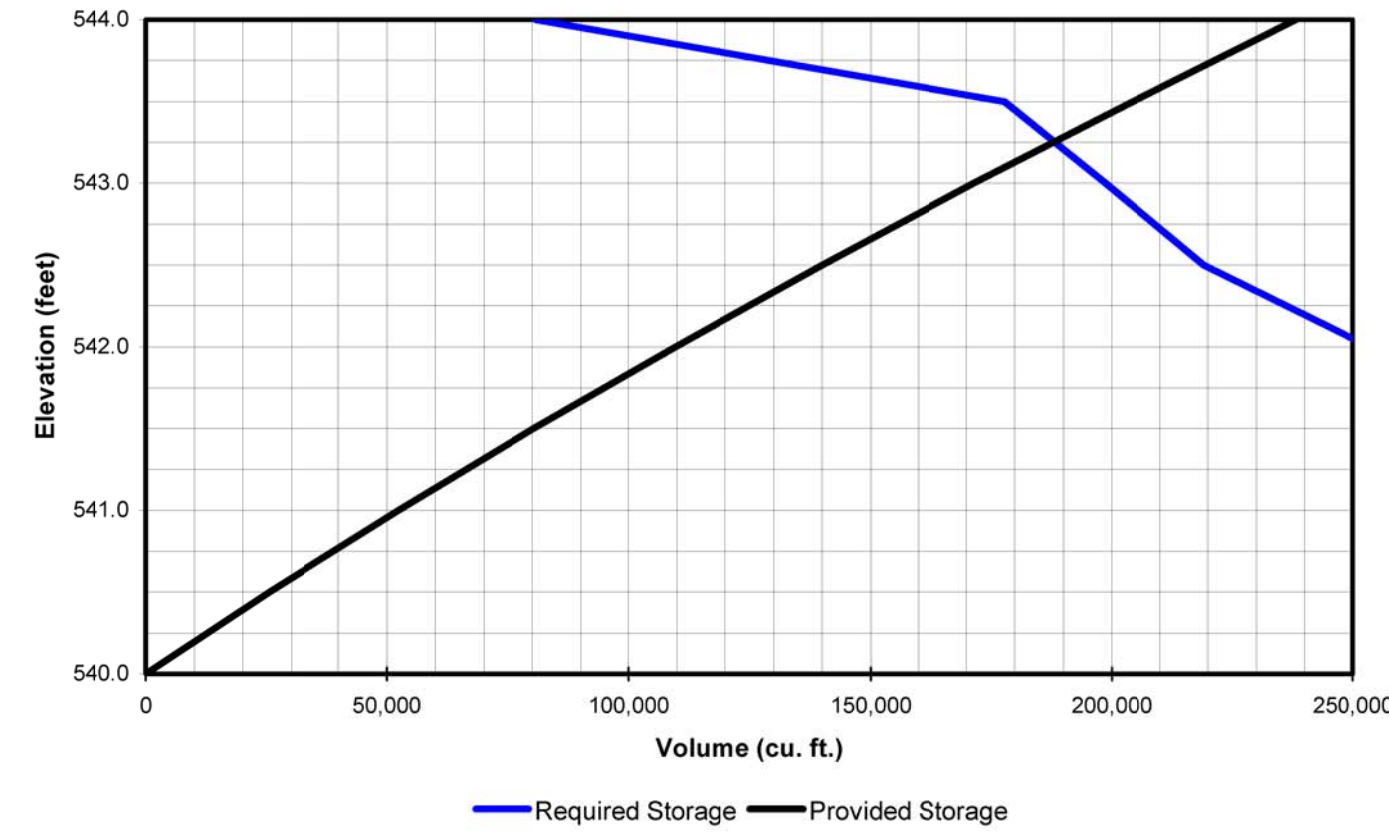


Outfall Structure Discharge Calculations
The Mansions Family - Rockwall, Texas
100 Year Storm Event

Orifice Data				Site and Stormwater Detention Data			
Orifice #1	Orifice #2	Orifice #3	Orifice #4	Area Draining to Pond:	28.37	acres	
2 yr	10 yr	100 yr	Drop Inlet	Existing Time of Concentration:	20	minutes	
Description:	2.25	2.92	20.00	Existing Runoff Coefficient:	0.35		
Length (ft):	1.50	0.75	0.50	Time of Concentration:	10	minutes	
Height (ft):	3.38	2.19	10.00	Runoff Coefficient:	0.75		
Area (sf):	540.00	542.00	543.50	Storm Duration:	100	minutes	
Invert Elevation (ft.):	540.00	542.00	543.50	Rainfall Intensity:	3.40	inches/hr	
Coefficient:	0.80	0.60	0.60	Allowable Release Rate:	48.46	cfs	
Weir Data				Weir Data			
Weir Length:	0.00	feet	Inflow Rate:	60.56	cfs		
Weir Elevation:	0.00	feet	Inflow Volume:	333.450	cf		
Weir Coefficient:	2.68		100 Year WSEL:	543.47			

Elevation (feet)	Orifice 1 Discharge (cfs)	Orifice 2 Discharge (cfs)	Orifice 3 Discharge (cfs)	Orifice 4 Discharge (cfs)	Weir Discharge (cfs)	Outflow Rate (cfs)	Outflow Volume (cf)	Required Storage (cf)	Provided Storage (cf)	Difference (cf)
540.00	0.000	0.000	0.000	0.000	0.000	0.000	0	333.450	0	(333.450)
540.50	4.626	0.000	0.000	0.000	0.000	4.626	15.265	318.185	25.563	(292.622)
541.00	7.343	0.000	0.000	0.000	0.000	7.343	24.231	309.219	52.332	(256.887)
541.50	18.765	0.000	0.000	0.000	0.000	18.765	61.923	271.527	80.329	(191.198)
542.00	24.225	0.000	0.000	0.000	0.000	24.225	79.942	253.508	109.573	(143.935)
542.50	28.663	6.003	0.000	0.000	0.000	34.666	114.359	219.051	140.011	(75.040)
543.00	32.501	8.336	0.000	0.000	0.000	40.837	134.764	198.686	171.587	(27.099)
543.50	35.931	11.184	0.000	0.000	0.000	47.116	155.482	177.968	204.306	26.338
544.00	39.061	13.442	24.075	0.000	0.000	76.578	252.709	80.741	238.174	157.432

Stage Storage Curve
Provided Storage vs. Required Storage - 100 Year Storm Event



Outfall Structure Discharge Calculations
The Mansions Family - Rockwall, Texas
25 Year Storm Event

Orifice Data				Site and Stormwater Detention Data			
Orifice #1	Orifice #2	Orifice #3	Orifice #4	Area Draining to Pond:	28.37	acres	
2 yr	10 yr	100 yr	Drop Inlet	Existing Time of Concentration:	20	minutes	
Description:	2.25	2.92	0.00	Existing Runoff Coefficient:	0.35		
Length (ft):	1.50	0.75	0.50	Time of Concentration:	10	minutes	
Height (ft):	3.38	2.19	10.00	Runoff Coefficient:	0.75		
Area (sf):	540.00	542.00	542.90	Storm Duration:	40	minutes	
Invert Elevation (ft.):	540.00	542.00	542.90	Rainfall Intensity:	4.70	inches/hr	
Coefficient:	0.80	0.60	0.60	Allowable Release Rate:	38.61	cfs	
Weir Data				Weir Data			
Weir Length:	0.00	feet	Inflow Rate:	71.61	cfs		
Weir Elevation:	0.00	feet	Inflow Volume:	200.925	cf		
Weir Coefficient:	2.68		25-Year WSEL:	542.60			

Elevation (feet)	Orifice 1 Discharge (cfs)	Orifice 2 Discharge (cfs)	Orifice 3 Discharge (cfs)	Orifice 4 Discharge (cfs)	Weir Discharge (cfs)	Outflow Rate (cfs)	Outflow Volume (cf)	Required Storage (cf)	Provided Storage (cf)	Difference (cf)
540.00	0.000	0.000	0.000	0.000	0.000	0.000	0	200.925	0	(200.925)
540.50	4.626	0.000	0.000	0.000	0.000	4.626	6.939	193.986	25.563	(168.424)
541.00	7.343	0.000	0.000	0.000	0.000	7.343	11.014	189.911	52.332	(137.579)
541.50	18.765	0.000	0.000	0.000	0.000	18.765	28.147	172.778	80.329	(92.450)
542.00	24.225	0.000	0.000	0.000	0.000	24.225	36.337	164.586	109.573	(55.013)
542.50	28.663	6.003	0.000	0.000	0.000	34.666	52.000	148.925	140.011	(8.