

Appendix B
Summary of Unrouted Hydrographs at Beech-Daly Road
Existing and Future Land Use Conditions
100 Year, 24 Hour Type II Design Storm

Date/Time	Existing Land Use		Future Land Use			
			With Storm Water Controls		Without Storm Water Controls	
	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)
1/1/05 12:00 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 12:15 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 12:30 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 12:45 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 1:00 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 1:15 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 1:30 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 1:45 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 2:00 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 2:15 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 2:30 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 2:45 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 3:00 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 3:15 AM	7.7	0.2	7.7	0.2	7.7	0.2
1/1/05 3:30 AM	7.7	0.2	7.9	0.2	7.7	0.2
1/1/05 3:45 AM	7.7	0.2	8.4	0.2	8.3	0.2
1/1/05 4:00 AM	7.7	0.2	9.3	0.2	9.2	0.2
1/1/05 4:15 AM	7.7	0.2	10.7	0.2	10.6	0.2
1/1/05 4:30 AM	7.7	0.2	12.5	0.2	12.5	0.3
1/1/05 4:45 AM	7.7	0.2	14.7	0.2	14.7	0.3
1/1/05 5:00 AM	7.7	0.2	17.3	0.3	17.3	0.4
1/1/05 5:15 AM	7.7	0.2	20.3	0.3	20.3	0.4
1/1/05 5:30 AM	7.7	0.2	23.7	0.3	23.7	0.5
1/1/05 5:45 AM	7.8	0.2	27.4	0.4	27.5	0.6
1/1/05 6:00 AM	8.0	0.2	31.7	0.4	31.8	0.7
1/1/05 6:15 AM	8.4	0.2	36.5	0.5	36.7	0.8
1/1/05 6:30 AM	8.9	0.2	41.9	0.5	42.1	0.9
1/1/05 6:45 AM	9.7	0.2	47.8	0.6	48.0	1.0
1/1/05 7:00 AM	10.5	0.2	54.1	0.7	54.3	1.1
1/1/05 7:15 AM	11.3	0.2	60.9	0.7	61.1	1.3
1/1/05 7:30 AM	12.2	0.3	68.2	0.8	68.5	1.4
1/1/05 7:45 AM	13.2	0.3	76.0	0.9	76.2	1.6
1/1/05 8:00 AM	14.3	0.3	84.3	1.0	84.6	1.7
1/1/05 8:15 AM	15.6	0.3	93.6	1.2	93.9	1.9
1/1/05 8:30 AM	17.2	0.4	104.3	1.3	104.7	2.2
1/1/05 8:45 AM	19.6	0.4	117.0	1.5	117.6	2.4
1/1/05 9:00 AM	22.8	0.5	132.0	1.7	132.7	2.7
1/1/05 9:15 AM	27.0	0.6	149.0	1.9	149.7	3.1
1/1/05 9:30 AM	32.0	0.7	167.3	2.2	168.1	3.5
1/1/05 9:45 AM	37.5	0.8	187.4	2.4	188.3	3.9
1/1/05 10:00 AM	44.0	0.9	210.6	2.8	211.7	4.4
1/1/05 10:15 AM	52.5	1.1	238.0	3.2	239.4	4.9
1/1/05 10:30 AM	63.8	1.3	271.0	3.6	272.8	5.6
1/1/05 10:45 AM	78.7	1.6	311.4	4.2	313.8	6.5
1/1/05 11:00 AM	98.5	2.0	361.1	4.9	365.6	7.6
1/1/05 11:15 AM	125.4	2.6	425.5	5.9	434.0	9.0
1/1/05 11:30 AM	163.6	3.4	522.1	7.5	547.9	11.3
1/1/05 11:45 AM	234.8	4.9	839.4	13.5	943.7	19.5
1/1/05 12:00 PM	531.4	11.0	1543.2	27.1	1842.2	38.1
1/1/05 12:15 PM	1251.2	25.9	1978.0	35.9	2539.2	52.5
1/1/05 12:30 PM	1773.0	36.6	2048.4	37.5	2859.8	59.1

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100 Year, 24 Hour Type II Design Storm

Date/Time	Existing Land Use		Future Land Use			
			With Storm Water Controls		Without Storm Water Controls	
	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)
1/1/05 12:45 PM	1951.3	40.3	2093.1	39.3	3103.4	64.1
1/1/05 1:00 PM	2085.7	43.1	2183.1	41.8	3319.1	68.6
1/1/05 1:15 PM	2234.4	46.2	2248.1	43.5	3433.6	70.9
1/1/05 1:30 PM	2332.9	48.2	2261.0	44.2	3438.2	71.0
1/1/05 1:45 PM	2364.0	48.8	2239.7	44.0	3377.2	69.8
1/1/05 2:00 PM	2351.5	48.6	2197.3	43.4	3279.7	67.8
1/1/05 2:15 PM	2313.0	47.8	2133.3	42.6	3142.6	64.9
1/1/05 2:30 PM	2245.5	46.4	2042.4	41.8	2961.7	61.2
1/1/05 2:45 PM	2144.1	44.3	1937.5	40.7	2755.9	56.9
1/1/05 3:00 PM	2022.0	41.8	1823.7	38.6	2535.4	52.4
1/1/05 3:15 PM	1886.3	39.0	1700.3	35.9	2308.1	47.7
1/1/05 3:30 PM	1740.3	36.0	1576.3	33.0	2089.3	43.2
1/1/05 3:45 PM	1594.3	32.9	1466.0	30.5	1896.1	39.2
1/1/05 4:00 PM	1462.1	30.2	1371.4	28.3	1730.3	35.8
1/1/05 4:15 PM	1347.1	27.8	1288.1	26.4	1583.7	32.7
1/1/05 4:30 PM	1244.1	25.7	1214.7	24.7	1453.3	30.0
1/1/05 4:45 PM	1151.2	23.8	1148.3	23.2	1334.3	27.6
1/1/05 5:00 PM	1065.4	22.0	1087.1	21.8	1224.9	25.3
1/1/05 5:15 PM	985.4	20.4	1031.8	20.6	1126.7	23.3
1/1/05 5:30 PM	912.7	18.9	983.7	19.5	1041.3	21.5
1/1/05 5:45 PM	849.1	17.5	941.9	18.6	967.3	20.0
1/1/05 6:00 PM	793.6	16.4	904.7	17.8	901.7	18.6
1/1/05 6:15 PM	744.0	15.4	871.6	17.1	843.5	17.4
1/1/05 6:30 PM	699.8	14.5	842.2	16.4	792.0	16.4
1/1/05 6:45 PM	660.3	13.6	815.9	15.9	746.0	15.4
1/1/05 7:00 PM	624.9	12.9	792.2	15.4	704.4	14.6
1/1/05 7:15 PM	592.5	12.2	770.7	14.9	666.8	13.8
1/1/05 7:30 PM	563.1	11.6	751.0	14.5	632.2	13.1
1/1/05 7:45 PM	535.8	11.1	732.6	14.1	600.1	12.4
1/1/05 8:00 PM	510.3	10.5	715.9	13.7	570.9	11.8
1/1/05 8:15 PM	486.9	10.1	700.4	13.3	543.8	11.2
1/1/05 8:30 PM	465.1	9.6	686.2	13.0	518.8	10.7
1/1/05 8:45 PM	445.0	9.2	673.3	12.7	496.0	10.2
1/1/05 9:00 PM	426.5	8.8	661.6	12.4	475.1	9.8
1/1/05 9:15 PM	409.6	8.5	651.1	12.2	456.4	9.4
1/1/05 9:30 PM	394.3	8.1	641.6	11.9	439.4	9.1
1/1/05 9:45 PM	380.5	7.9	633.0	11.7	423.8	8.8
1/1/05 10:00 PM	367.9	7.6	624.9	11.5	409.7	8.5
1/1/05 10:15 PM	356.3	7.4	617.6	11.3	396.8	8.2
1/1/05 10:30 PM	345.7	7.1	610.9	11.1	385.2	8.0
1/1/05 10:45 PM	336.2	6.9	604.8	11.0	374.7	7.7
1/1/05 11:00 PM	327.5	6.8	599.2	10.8	365.0	7.5
1/1/05 11:15 PM	319.5	6.6	594.2	10.7	356.4	7.4
1/1/05 11:30 PM	312.3	6.5	589.8	10.5	348.8	7.2
1/1/05 11:45 PM	305.9	6.3	585.8	10.4	341.9	7.1
1/2/05 12:00 AM	300.2	6.2	581.1	10.3	334.1	6.9
1/2/05 12:15 AM	293.4	6.1	571.0	10.0	319.4	6.6
1/2/05 12:30 AM	280.2	5.8	557.5	9.7	299.4	6.2
1/2/05 12:45 AM	262.2	5.4	544.8	9.4	278.4	5.8
1/2/05 1:00 AM	243.6	5.0	532.8	9.1	256.7	5.3
1/2/05 1:15 AM	224.7	4.6	520.5	8.8	234.2	4.8

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Date/Time	Existing Land Use		Future Land Use			
			With Storm Water Controls		Without Storm Water Controls	
	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)
1/2/05 1:30 AM	205.2	4.2	506.6	8.5	211.3	4.4
1/2/05 1:45 AM	185.6	3.8	489.2	8.2	189.1	3.9
1/2/05 2:00 AM	166.4	3.4	467.9	7.8	168.0	3.5
1/2/05 2:15 AM	148.2	3.1	456.4	7.6	148.1	3.1
1/2/05 2:30 AM	131.0	2.7	445.6	7.3	129.5	2.7
1/2/05 2:45 AM	114.9	2.4	435.9	7.0	112.7	2.3
1/2/05 3:00 AM	100.3	2.1	427.1	6.8	97.6	2.0
1/2/05 3:15 AM	87.3	1.8	419.5	6.6	84.4	1.7
1/2/05 3:30 AM	75.8	1.6	412.8	6.4	73.1	1.5
1/2/05 3:45 AM	65.8	1.4	407.2	6.2	63.4	1.3
1/2/05 4:00 AM	57.4	1.2	402.4	6.0	55.2	1.1
1/2/05 4:15 AM	50.2	1.0	398.4	5.9	48.2	1.0
1/2/05 4:30 AM	44.0	0.9	393.8	5.7	42.1	0.9
1/2/05 4:45 AM	38.6	0.8	362.5	5.6	37.0	0.8
1/2/05 5:00 AM	34.1	0.7	360.2	5.4	32.6	0.7
1/2/05 5:15 AM	30.2	0.6	335.2	5.3	28.9	0.6
1/2/05 5:30 AM	26.9	0.6	294.2	5.2	25.8	0.5
1/2/05 5:45 AM	24.2	0.5	290.9	5.1	23.2	0.5
1/2/05 6:00 AM	21.8	0.5	289.4	5.0	21.0	0.4
1/2/05 6:15 AM	19.8	0.4	287.8	4.9	19.0	0.4
1/2/05 6:30 AM	18.1	0.4	286.5	4.8	17.4	0.4
1/2/05 6:45 AM	16.7	0.3	279.5	4.7	16.0	0.3
1/2/05 7:00 AM	15.4	0.3	263.8	4.6	14.8	0.3
1/2/05 7:15 AM	14.3	0.3	263.0	4.6	13.8	0.3
1/2/05 7:30 AM	13.4	0.3	255.9	4.5	12.9	0.3
1/2/05 7:45 AM	12.6	0.3	253.5	4.4	12.1	0.3
1/2/05 8:00 AM	11.9	0.2	252.9	4.3	11.4	0.2
1/2/05 8:15 AM	11.3	0.2	252.4	4.3	10.9	0.2
1/2/05 8:30 AM	10.8	0.2	251.8	4.2	10.4	0.2
1/2/05 8:45 AM	10.3	0.2	247.1	4.1	10.0	0.2
1/2/05 9:00 AM	10.0	0.2	215.0	4.1	9.6	0.2
1/2/05 9:15 AM	9.6	0.2	170.5	4.0	9.3	0.2
1/2/05 9:30 AM	9.4	0.2	168.1	4.0	9.0	0.2
1/2/05 9:45 AM	9.1	0.2	146.5	3.9	8.8	0.2
1/2/05 10:00 AM	8.9	0.2	108.7	3.9	8.6	0.2
1/2/05 10:15 AM	8.7	0.2	34.3	3.8	8.4	0.2
1/2/05 10:30 AM	8.6	0.2	8.5	3.7	8.3	0.2
1/2/05 10:45 AM	8.4	0.2	8.4	3.7	8.1	0.2
1/2/05 11:00 AM	8.3	0.2	8.3	3.6	8.0	0.2
1/2/05 11:15 AM	8.2	0.2	8.2	3.6	7.9	0.2
1/2/05 11:30 AM	8.1	0.2	8.1	3.5	7.9	0.2
1/2/05 11:45 AM	8.1	0.2	8.0	3.5	7.8	0.2
1/2/05 12:00 PM	8.0	0.2	8.0	3.4	7.8	0.2
1/2/05 12:15 PM	8.0	0.2	8.0	3.4	7.7	0.2
1/2/05 12:30 PM	7.9	0.2	7.9	3.3	7.7	0.2
1/2/05 12:45 PM	7.9	0.2	7.9	3.3	7.7	0.2
1/2/05 1:00 PM	7.9	0.2	7.9	3.2	7.7	0.2
1/2/05 1:15 PM	7.8	0.2	7.8	3.2	7.7	0.2
1/2/05 1:30 PM	7.8	0.2	7.8	3.1	7.7	0.2
1/2/05 1:45 PM	7.8	0.2	7.8	3.1	7.7	0.2
1/2/05 2:00 PM	7.8	0.2	7.8	3.0	7.7	0.2

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Date/Time	Existing Land Use		Future Land Use			
			With Storm Water Controls		Without Storm Water Controls	
	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)
1/2/05 2:15 PM	7.8	0.2	7.8	3.0	7.7	0.2
1/2/05 2:30 PM	7.7	0.2	7.7	2.9	7.7	0.2
1/2/05 2:45 PM	7.7	0.2	7.7	2.9	7.7	0.2
1/2/05 3:00 PM	7.7	0.2	7.7	2.8	7.7	0.2
1/2/05 3:15 PM	7.7	0.2	7.7	2.8	7.7	0.2
1/2/05 3:30 PM	7.7	0.2	7.7	2.7	7.7	0.2
1/2/05 3:45 PM	7.7	0.2	7.7	2.7	7.7	0.2
1/2/05 4:00 PM	7.7	0.2	7.7	2.6	7.7	0.2
1/2/05 4:15 PM	7.7	0.2	7.7	2.5	7.7	0.2
1/2/05 4:30 PM	7.7	0.2	7.7	2.4	7.7	0.2
1/2/05 4:45 PM	7.7	0.2	7.7	2.4	7.7	0.2
1/2/05 5:00 PM	7.7	0.2	7.7	2.3	7.7	0.2
1/2/05 5:15 PM	7.7	0.2	7.7	2.2	7.7	0.2
1/2/05 5:30 PM	7.7	0.2	7.7	2.2	7.7	0.2
1/2/05 5:45 PM	7.7	0.2	7.7	2.1	7.7	0.2
1/2/05 6:00 PM	7.7	0.2	7.7	2.1	7.7	0.2
1/2/05 6:15 PM	7.7	0.2	7.7	2.0	7.7	0.2
1/2/05 6:30 PM	7.7	0.2	7.7	1.9	7.7	0.2
1/2/05 6:45 PM	7.7	0.2	7.7	1.9	7.7	0.2
1/2/05 7:00 PM	7.7	0.2	7.7	1.8	7.7	0.2
1/2/05 7:15 PM	7.7	0.2	7.7	1.8	7.7	0.2
1/2/05 7:30 PM	7.7	0.2	7.7	1.7	7.7	0.2
1/2/05 7:45 PM	7.7	0.2	7.7	1.7	7.7	0.2
1/2/05 8:00 PM	7.7	0.2	7.7	1.6	7.7	0.2
1/2/05 8:15 PM	7.7	0.2	7.7	1.6	7.7	0.2
1/2/05 8:30 PM	7.7	0.2	7.7	1.5	7.7	0.2
1/2/05 8:45 PM	7.7	0.2	7.7	1.5	7.7	0.2
1/2/05 9:00 PM	7.7	0.2	7.7	1.5	7.7	0.2
1/2/05 9:15 PM	7.7	0.2	7.7	1.4	7.7	0.2
1/2/05 9:30 PM	7.7	0.2	7.7	1.4	7.7	0.2
1/2/05 9:45 PM	7.7	0.2	7.7	1.3	7.7	0.2
1/2/05 10:00 PM	7.7	0.2	7.7	1.3	7.7	0.2
1/2/05 10:15 PM	7.7	0.2	7.7	1.3	7.7	0.2
1/2/05 10:30 PM	7.7	0.2	7.7	1.2	7.7	0.2
1/2/05 10:45 PM	7.7	0.2	7.7	1.2	7.7	0.2
1/2/05 11:00 PM	7.7	0.2	7.7	1.2	7.7	0.2
1/2/05 11:15 PM	7.7	0.2	7.7	1.1	7.7	0.2
1/2/05 11:30 PM	7.7	0.2	7.7	1.1	7.7	0.2
1/2/05 11:45 PM	7.7	0.2	7.7	1.1	7.7	0.2
1/3/05 12:00 AM	7.7	0.2	7.7	1.1	7.7	0.2
1/3/05 12:15 AM	7.7	0.2	7.7	1.0	7.7	0.2
1/3/05 12:30 AM	7.7	0.2	7.7	1.0	7.7	0.2
1/3/05 12:45 AM	7.7	0.2	7.7	1.0	7.7	0.2
1/3/05 1:00 AM	7.7	0.2	7.7	1.0	7.7	0.2
1/3/05 1:15 AM	7.7	0.2	7.7	0.9	7.7	0.2
1/3/05 1:30 AM	7.7	0.2	7.7	0.9	7.7	0.2
1/3/05 1:45 AM	7.7	0.2	7.7	0.9	7.7	0.2
1/3/05 2:00 AM	7.7	0.2	7.7	0.9	7.7	0.2
1/3/05 2:15 AM	7.7	0.2	7.7	0.8	7.7	0.2
1/3/05 2:30 AM	7.7	0.2	7.7	0.8	7.7	0.2
1/3/05 2:45 AM	7.7	0.2	7.7	0.8	7.7	0.2

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	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)	Flow Rate (cfs)	Incremental Volume (ac-ft)
1/3/05 3:00 AM	7.7	0.2	7.7	0.8	7.7	0.2
1/3/05 3:15 AM	7.7	0.2	7.7	0.8	7.7	0.2
1/3/05 3:30 AM	7.7	0.2	7.7	0.7	7.7	0.2
1/3/05 3:45 AM	7.7	0.2	7.7	0.7	7.7	0.2
1/3/05 4:00 AM	7.7	0.2	7.7	0.7	7.7	0.2
1/3/05 4:15 AM	7.7	0.2	7.7	0.7	7.7	0.2
1/3/05 4:30 AM	7.7	0.2	7.7	0.7	7.7	0.2
1/3/05 4:45 AM	7.7	0.2	7.7	0.7	7.7	0.2
1/3/05 5:00 AM	7.7	0.2	7.7	0.6	7.7	0.2
1/3/05 5:15 AM	7.7	0.2	7.7	0.6	7.7	0.2
1/3/05 5:30 AM	7.7	0.2	7.7	0.6	7.7	0.2
1/3/05 5:45 AM	7.7	0.2	7.7	0.6	7.7	0.2
1/3/05 6:00 AM	7.7	0.2	7.7	0.6	7.7	0.2
Peak Flow Rate (cfs)	2,364		2,261		3,438	
Total Volume (ac-ft)		1,169		1,583		1,597