

PONDS Version 3.3.0276
Retention Pond Recovery - Refined Method
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Summary of Results :: Scenario 8 :: 3YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	183.227	94.17		
Inflow				
Rate - Maximum - Positive	184.000		0.2472	
Rate - Maximum - Negative	240.320		0.0000	
Cumulative Volume - Maximum Positive	240.320			23372.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			23372.6
Infiltration				
Rate - Maximum - Positive	45.267		0.0258	
Rate - Maximum - Negative	184.107		-0.0096	
Cumulative Volume - Maximum Positive	240.347			3469.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			3469.8
Combined Discharge				
Rate - Maximum - Positive	184.000		0.2442	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.133			13514.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			13514.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.2442	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.133			13514.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			13514.2
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 9 :: 5YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	1.120	93.85		
Inflow				
Rate - Maximum - Positive	0.533		3.6359	
Rate - Maximum - Negative	1.320		0.0000	
Cumulative Volume - Maximum Positive	1.320			5277.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			5277.5
Infiltration				
Rate - Maximum - Positive	1.120		0.0159	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.347			49.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			49.3
Combined Discharge				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			0.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			0.0
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 10 :: 5YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	1.840	94.18		
Inflow				
Rate - Maximum - Positive	0.800		2.8486	
Rate - Maximum - Negative	2.320		0.0000	
Cumulative Volume - Maximum Positive	2.320			6817.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			6817.6
Infiltration				
Rate - Maximum - Positive	1.253		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.347			103.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			103.7
Combined Discharge				
Rate - Maximum - Positive	1.840		0.3263	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.160			332.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			332.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.840		0.3263	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.160			332.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			332.7
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 11 :: 5YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	3.013	94.21		
Inflow				
Rate - Maximum - Positive	2.000		1.4146	
Rate - Maximum - Negative	4.320		0.0000	
Cumulative Volume - Maximum Positive	4.320			8381.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			8381.7
Infiltration				
Rate - Maximum - Positive	2.427		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.347			168.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			168.4
Combined Discharge				
Rate - Maximum - Positive	3.013		0.7743	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.133			1833.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			1833.8
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	3.013		0.7743	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.133			1833.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			1833.8
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 12 :: 5YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	4.120	94.20		
Inflow				
Rate - Maximum - Positive	4.000		1.4423	
Rate - Maximum - Negative	8.320		0.0000	
Cumulative Volume - Maximum Positive	8.320			10490.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			10490.7
Infiltration				
Rate - Maximum - Positive	3.867		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.347			332.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			332.9
Combined Discharge				
Rate - Maximum - Positive	4.120		0.6739	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.120			3778.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			3778.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	4.120		0.6739	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.120			3778.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			3778.5
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 13 :: 5YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	12.027	94.18		
Inflow				
Rate - Maximum - Positive	12.000		0.4679	
Rate - Maximum - Negative	24.320		0.0000	
Cumulative Volume - Maximum Positive	24.320			15023.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			15023.9
Infiltration				
Rate - Maximum - Positive	17.813		0.0760	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.347			1116.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			1116.7
Combined Discharge				
Rate - Maximum - Positive	12.027		0.4397	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.120			7525.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			7525.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.027		0.4397	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.120			7525.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			7525.7
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 14 :: 5YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	59.947	94.18		
Inflow				
Rate - Maximum - Positive	59.987		0.2952	
Rate - Maximum - Negative	72.320		0.0000	
Cumulative Volume - Maximum Positive	72.320			19055.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			19055.2
Infiltration				
Rate - Maximum - Positive	37.387		0.0316	
Rate - Maximum - Negative	64.093		-0.0021	
Cumulative Volume - Maximum Positive	72.347			1970.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			1970.6
Combined Discharge				
Rate - Maximum - Positive	59.987		0.2898	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.133			10697.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			10697.4
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	59.987		0.2898	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.133			10697.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			10697.4
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 15 :: 5YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	159.293	94.17		
Inflow				
Rate - Maximum - Positive	160.000		0.2094	
Rate - Maximum - Negative	168.320		0.0000	
Cumulative Volume - Maximum Positive	168.320			23102.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			23102.4
Infiltration				
Rate - Maximum - Positive	40.733		0.0217	
Rate - Maximum - Negative	160.093		-0.0081	
Cumulative Volume - Maximum Positive	168.347			2956.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			2956.1
Combined Discharge				
Rate - Maximum - Positive	160.000		0.2065	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.173			13757.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			13757.6
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	160.000		0.2065	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.173			13757.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			13757.6
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 16 :: 5YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	183.627	94.18		
Inflow				
Rate - Maximum - Positive	184.000		0.2918	
Rate - Maximum - Negative	240.320		0.0000	
Cumulative Volume - Maximum Positive	240.320			27971.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			27971.7
Infiltration				
Rate - Maximum - Positive	43.120		0.0366	
Rate - Maximum - Negative	184.107		-0.0114	
Cumulative Volume - Maximum Positive	240.347			3606.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			3606.2
Combined Discharge				
Rate - Maximum - Positive	184.000		0.2891	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.133			17976.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			17976.8
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.2891	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.133			17976.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			17976.8
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 17 :: 10YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	0.893	94.20		
Inflow				
Rate - Maximum - Positive	0.533		4.6392	
Rate - Maximum - Negative	1.320		0.0000	
Cumulative Volume - Maximum Positive	1.320			6817.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			6817.6
Infiltration				
Rate - Maximum - Positive	0.733		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.347			53.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			53.2
Combined Discharge				
Rate - Maximum - Positive	0.893		0.6491	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.133			384.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			384.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	0.893		0.6491	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.133			384.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			384.7
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 18 :: 10YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	1.453	94.20		
Inflow				
Rate - Maximum - Positive	0.800		3.2440	
Rate - Maximum - Negative	2.320		0.0000	
Cumulative Volume - Maximum Positive	2.320			7858.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			7858.3
Infiltration				
Rate - Maximum - Positive	1.013		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.347			106.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			106.6
Combined Discharge				
Rate - Maximum - Positive	1.453		0.6260	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.160			1370.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			1370.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.453		0.6260	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.160			1370.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			1370.2
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 19 :: 10YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	2.627	94.23		
Inflow				
Rate - Maximum - Positive	2.000		1.5795	
Rate - Maximum - Negative	4.320		0.0000	
Cumulative Volume - Maximum Positive	4.320			9433.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			9433.5
Infiltration				
Rate - Maximum - Positive	2.280		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.347			172.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			172.6
Combined Discharge				
Rate - Maximum - Positive	2.627		0.9332	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.133			2881.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			2881.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	2.627		0.9332	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.133			2881.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			2881.2
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 20 :: 10YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	4.053	94.31		
Inflow				
Rate - Maximum - Positive	4.000		1.7044	
Rate - Maximum - Negative	8.320		0.0000	
Cumulative Volume - Maximum Positive	8.320			12617.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			12617.5
Infiltration				
Rate - Maximum - Positive	3.653		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.347			341.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			341.9
Combined Discharge				
Rate - Maximum - Positive	4.053		1.3833	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.133			5895.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			5895.9
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	4.053		1.3833	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.133			5895.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			5895.9
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 21 :: 10YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	12.000	94.19		
Inflow				
Rate - Maximum - Positive	12.000		0.5223	
Rate - Maximum - Negative	24.320		0.0000	
Cumulative Volume - Maximum Positive	24.320			16902.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			16902.6
Infiltration				
Rate - Maximum - Positive	17.427		0.0755	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.347			1132.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			1132.9
Combined Discharge				
Rate - Maximum - Positive	12.000		0.5055	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.120			9387.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			9387.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.000		0.5055	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.120			9387.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			9387.7
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 22 :: 10YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	59.893	94.18		
Inflow				
Rate - Maximum - Positive	59.987		0.3445	
Rate - Maximum - Negative	72.320		0.0000	
Cumulative Volume - Maximum Positive	72.320			22562.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			22562.1
Infiltration				
Rate - Maximum - Positive	34.853		0.0467	
Rate - Maximum - Negative	64.093		-0.0032	
Cumulative Volume - Maximum Positive	72.347			2007.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			2007.5
Combined Discharge				
Rate - Maximum - Positive	59.987		0.3392	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.147			14167.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			14167.3
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	59.987		0.3392	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.147			14167.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			14167.3
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 23 :: 10YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	158.827	94.17		
Inflow				
Rate - Maximum - Positive	160.000		0.2474	
Rate - Maximum - Negative	168.320		0.0000	
Cumulative Volume - Maximum Positive	168.320			27700.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			27700.9
Infiltration				
Rate - Maximum - Positive	37.987		0.0295	
Rate - Maximum - Negative	160.107		-0.0097	
Cumulative Volume - Maximum Positive	168.347			3010.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			3010.4
Combined Discharge				
Rate - Maximum - Positive	160.000		0.2446	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.173			18301.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			18301.8
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	160.000		0.2446	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.173			18301.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			18301.8
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 24 :: 10YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	183.560	94.18		
Inflow				
Rate - Maximum - Positive	184.000		0.3364	
Rate - Maximum - Negative	240.320		0.0000	
Cumulative Volume - Maximum Positive	240.320			32578.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			32578.6
Infiltration				
Rate - Maximum - Positive	41.453		0.0316	
Rate - Maximum - Negative	184.120		-0.0128	
Cumulative Volume - Maximum Positive	240.347			3639.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			3639.0
Combined Discharge				
Rate - Maximum - Positive	184.000		0.3337	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.147			22550.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			22550.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.3337	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.147			22550.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			22550.7
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 25 :: 25YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	0.867	94.26		
Inflow				
Rate - Maximum - Positive	0.533		4.9733	
Rate - Maximum - Negative	1.320		0.0000	
Cumulative Volume - Maximum Positive	1.320			7336.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			7336.8
Infiltration				
Rate - Maximum - Positive	0.693		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.347			53.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			53.9
Combined Discharge				
Rate - Maximum - Positive	0.867		1.1059	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.133			903.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			903.4
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	0.867		1.1059	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.133			903.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			903.4
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 26 :: 25YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	1.107	94.25		
Inflow				
Rate - Maximum - Positive	0.800		3.8342	
Rate - Maximum - Negative	2.320		0.0000	
Cumulative Volume - Maximum Positive	2.320			9433.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			9433.5
Infiltration				
Rate - Maximum - Positive	0.853		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.347			109.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			109.5
Combined Discharge				
Rate - Maximum - Positive	1.107		1.0677	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.173			2942.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			2942.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.107		1.0677	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.173			2942.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			2942.2
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 27 :: 25YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	2.560	94.31		
Inflow				
Rate - Maximum - Positive	2.000		1.9077	
Rate - Maximum - Negative	4.320		0.0000	
Cumulative Volume - Maximum Positive	4.320			11552.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			11552.3
Infiltration				
Rate - Maximum - Positive	2.040		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.347			179.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			179.2
Combined Discharge				
Rate - Maximum - Positive	2.560		1.4126	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.147			4993.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			4993.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	2.560		1.4126	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.147			4993.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			4993.0
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 28 :: 25YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	4.040	94.38		
Inflow				
Rate - Maximum - Positive	4.000		1.9652	
Rate - Maximum - Negative	8.320		0.0000	
Cumulative Volume - Maximum Positive	8.320			14755.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			14755.9
Infiltration				
Rate - Maximum - Positive	3.493		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.347			349.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			349.3
Combined Discharge				
Rate - Maximum - Positive	4.040		1.7242	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.133			8026.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			8026.6
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	4.040		1.7242	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.133			8026.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			8026.6
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 29 :: 25YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	12.000	94.20		
Inflow				
Rate - Maximum - Positive	12.000		0.6153	
Rate - Maximum - Negative	24.320		0.0000	
Cumulative Volume - Maximum Positive	24.320			20133.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			20133.2
Infiltration				
Rate - Maximum - Positive	16.853		0.0850	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.347			1156.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			1156.0
Combined Discharge				
Rate - Maximum - Positive	12.000		0.5984	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.133			12594.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			12594.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.000		0.5984	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.133			12594.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			12594.5
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 30 :: 25YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	59.760	94.18		
Inflow				
Rate - Maximum - Positive	59.987		0.4163	
Rate - Maximum - Negative	72.320		0.0000	
Cumulative Volume - Maximum Positive	72.320			27700.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			27700.9
Infiltration				
Rate - Maximum - Positive	32.867		0.0486	
Rate - Maximum - Negative	64.093		-0.0046	
Cumulative Volume - Maximum Positive	72.347			2052.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			2052.1
Combined Discharge				
Rate - Maximum - Positive	59.987		0.4113	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.147			19261.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			19261.3
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	59.987		0.4113	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.147			19261.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			19261.3
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 31 :: 25YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	159.320	94.18		
Inflow				
Rate - Maximum - Positive	160.000		0.2787	
Rate - Maximum - Negative	168.320		0.0000	
Cumulative Volume - Maximum Positive	168.320			31494.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			31494.1
Infiltration				
Rate - Maximum - Positive	37.133		0.0224	
Rate - Maximum - Negative	160.107		-0.0109	
Cumulative Volume - Maximum Positive	168.347			3039.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			3039.1
Combined Discharge				
Rate - Maximum - Positive	160.000		0.2759	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.187			22066.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			22066.1
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	160.000		0.2759	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.187			22066.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			22066.1
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 32 :: 25YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	183.640	94.18		
Inflow				
Rate - Maximum - Positive	184.000		0.4097	
Rate - Maximum - Negative	240.320		0.0000	
Cumulative Volume - Maximum Positive	240.320			40176.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			40176.9
Infiltration				
Rate - Maximum - Positive	39.693		0.0608	
Rate - Maximum - Negative	184.120		-0.0150	
Cumulative Volume - Maximum Positive	240.347			3664.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			3664.7
Combined Discharge				
Rate - Maximum - Positive	184.000		0.4070	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.147			30123.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			30123.4
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.4070	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.147			30123.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			30123.4
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 33 :: 50YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	0.853	94.34		
Inflow				
Rate - Maximum - Positive	0.533		5.4736	
Rate - Maximum - Negative	1.320		0.0000	
Cumulative Volume - Maximum Positive	1.320			8119.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			8119.7
Infiltration				
Rate - Maximum - Positive	0.653		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.347			54.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			54.8
Combined Discharge				
Rate - Maximum - Positive	0.853		1.5521	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.173			1684.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			1684.9
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	0.853		1.5521	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.173			1684.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			1684.9
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 34 :: 50YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	1.067	94.32		
Inflow				
Rate - Maximum - Positive	0.800		4.2261	
Rate - Maximum - Negative	2.320		0.0000	
Cumulative Volume - Maximum Positive	2.320			10490.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			10490.7
Infiltration				
Rate - Maximum - Positive	0.813		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.347			111.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			111.0
Combined Discharge				
Rate - Maximum - Positive	1.067		1.4331	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.173			3997.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			3997.8
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.067		1.4331	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.173			3997.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			3997.8
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 35 :: 50YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	2.547	94.38		
Inflow				
Rate - Maximum - Positive	2.000		2.2339	
Rate - Maximum - Negative	4.320		0.0000	
Cumulative Volume - Maximum Positive	4.320			13685.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			13685.5
Infiltration				
Rate - Maximum - Positive	1.893		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.347			184.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			184.4
Combined Discharge				
Rate - Maximum - Positive	2.547		1.7192	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.147			7120.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			7120.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	2.547		1.7192	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.147			7120.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			7120.7
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 36 :: 50YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	4.040	94.45		
Inflow				
Rate - Maximum - Positive	4.000		2.2250	
Rate - Maximum - Negative	8.320		0.0000	
Cumulative Volume - Maximum Positive	8.320			16902.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			16902.6
Infiltration				
Rate - Maximum - Positive	3.373		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.347			355.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			355.7
Combined Discharge				
Rate - Maximum - Positive	4.040		2.0000	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.147			10166.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			10166.6
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	4.040		2.0000	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.147			10166.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			10166.6
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 37 :: 50YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	12.000	94.20		
Inflow				
Rate - Maximum - Positive	12.000		0.7079	
Rate - Maximum - Negative	24.320		0.0000	
Cumulative Volume - Maximum Positive	24.320			23372.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			23372.6
Infiltration				
Rate - Maximum - Positive	16.387		0.0943	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.347			1174.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			1174.2
Combined Discharge				
Rate - Maximum - Positive	12.000		0.6909	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.133			15815.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			15815.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.000		0.6909	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.133			15815.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			15815.2
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 38 :: 50YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	59.733	94.19		
Inflow				
Rate - Maximum - Positive	59.987		0.4767	
Rate - Maximum - Negative	72.320		0.0000	
Cumulative Volume - Maximum Positive	72.320			32036.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			32036.3
Infiltration				
Rate - Maximum - Positive	21.453		0.0287	
Rate - Maximum - Negative	64.093		-0.0056	
Cumulative Volume - Maximum Positive	72.347			2086.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			2086.7
Combined Discharge				
Rate - Maximum - Positive	59.987		0.4718	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.160			23561.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			23561.9
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	59.987		0.4718	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.160			23561.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			23561.9
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 39 :: 50YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	159.107	94.18		
Inflow				
Rate - Maximum - Positive	160.000		0.3211	
Rate - Maximum - Negative	168.320		0.0000	
Cumulative Volume - Maximum Positive	168.320			36647.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			36647.8
Infiltration				
Rate - Maximum - Positive	39.867		0.0434	
Rate - Maximum - Negative	160.107		-0.0124	
Cumulative Volume - Maximum Positive	168.347			3064.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			3064.2
Combined Discharge				
Rate - Maximum - Positive	160.000		0.3183	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.187			27194.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			27194.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	160.000		0.3183	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.187			27194.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			27194.7
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 40 :: 50YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	183.560	94.18		
Inflow				
Rate - Maximum - Positive	184.000		0.4228	
Rate - Maximum - Negative	240.320		0.0000	
Cumulative Volume - Maximum Positive	240.320			41534.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			41534.7
Infiltration				
Rate - Maximum - Positive	39.080		0.0724	
Rate - Maximum - Negative	184.120		-0.0154	
Cumulative Volume - Maximum Positive	240.347			3669.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			3669.8
Combined Discharge				
Rate - Maximum - Positive	184.000		0.4201	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.160			31476.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			31476.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.4201	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.160			31476.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			31476.0
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 41 :: 100YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	0.840	94.48		
Inflow				
Rate - Maximum - Positive	0.520		6.3070	
Rate - Maximum - Negative	1.320		0.0000	
Cumulative Volume - Maximum Positive	1.320			9433.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			9433.5
Infiltration				
Rate - Maximum - Positive	0.600		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.347			56.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			56.1
Combined Discharge				
Rate - Maximum - Positive	0.840		2.1034	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.240			2993.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			2993.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	0.840		2.1034	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.240			2993.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.347			2993.7
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 42 :: 100YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	1.027	94.43		
Inflow				
Rate - Maximum - Positive	0.800		4.8115	
Rate - Maximum - Negative	2.320		0.0000	
Cumulative Volume - Maximum Positive	2.320			12084.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			12084.5
Infiltration				
Rate - Maximum - Positive	0.747		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.347			112.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			112.8
Combined Discharge				
Rate - Maximum - Positive	1.027		1.9271	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.187			5589.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			5589.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.027		1.9271	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.187			5589.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.347			5589.5
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 43 :: 100YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	2.533	94.45		
Inflow				
Rate - Maximum - Positive	2.000		2.5180	
Rate - Maximum - Negative	4.320		0.0000	
Cumulative Volume - Maximum Positive	4.320			15560.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			15560.1
Infiltration				
Rate - Maximum - Positive	1.800		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.347			188.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			188.1
Combined Discharge				
Rate - Maximum - Positive	2.533		1.9702	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.147			8991.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			8991.3
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	2.533		1.9702	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.147			8991.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.347			8991.3
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 44 :: 100YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	4.040	94.53		
Inflow				
Rate - Maximum - Positive	4.000		2.4840	
Rate - Maximum - Negative	8.320		0.0000	
Cumulative Volume - Maximum Positive	8.320			19055.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			19055.2
Infiltration				
Rate - Maximum - Positive	3.280		0.0163	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.347			361.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			361.4
Combined Discharge				
Rate - Maximum - Positive	4.040		2.2522	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.147			12313.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			12313.3
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	4.040		2.2522	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.147			12313.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.347			12313.3
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 45 :: 100YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	12.000	94.22		
Inflow				
Rate - Maximum - Positive	12.000		0.8155	
Rate - Maximum - Negative	24.320		0.0000	
Cumulative Volume - Maximum Positive	24.320			27159.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			27159.4
Infiltration				
Rate - Maximum - Positive	15.933		0.1302	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.347			1191.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			1191.4
Combined Discharge				
Rate - Maximum - Positive	12.000		0.7984	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.147			19584.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			19584.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.000		0.7984	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.147			19584.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.347			19584.5
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 46 :: 100YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	59.773	94.19		
Inflow				
Rate - Maximum - Positive	59.987		0.5144	
Rate - Maximum - Negative	72.320		0.0000	
Cumulative Volume - Maximum Positive	72.320			34748.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			34748.4
Infiltration				
Rate - Maximum - Positive	21.560		0.0286	
Rate - Maximum - Negative	20.907		-0.0132	
Cumulative Volume - Maximum Positive	72.347			2098.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			2098.1
Combined Discharge				
Rate - Maximum - Positive	59.987		0.5095	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.160			26262.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			26262.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	59.987		0.5095	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.160			26262.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.347			26262.5
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 47 :: 100YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	159.373	94.18		
Inflow				
Rate - Maximum - Positive	160.000		0.3546	
Rate - Maximum - Negative	168.320		0.0000	
Cumulative Volume - Maximum Positive	168.320			40720.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			40720.0
Infiltration				
Rate - Maximum - Positive	38.493		0.0447	
Rate - Maximum - Negative	33.027		-0.0147	
Cumulative Volume - Maximum Positive	168.347			3073.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			3073.8
Combined Discharge				
Rate - Maximum - Positive	160.000		0.3518	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.187			31257.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			31257.3
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	160.000		0.3518	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.187			31257.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.347			31257.3
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

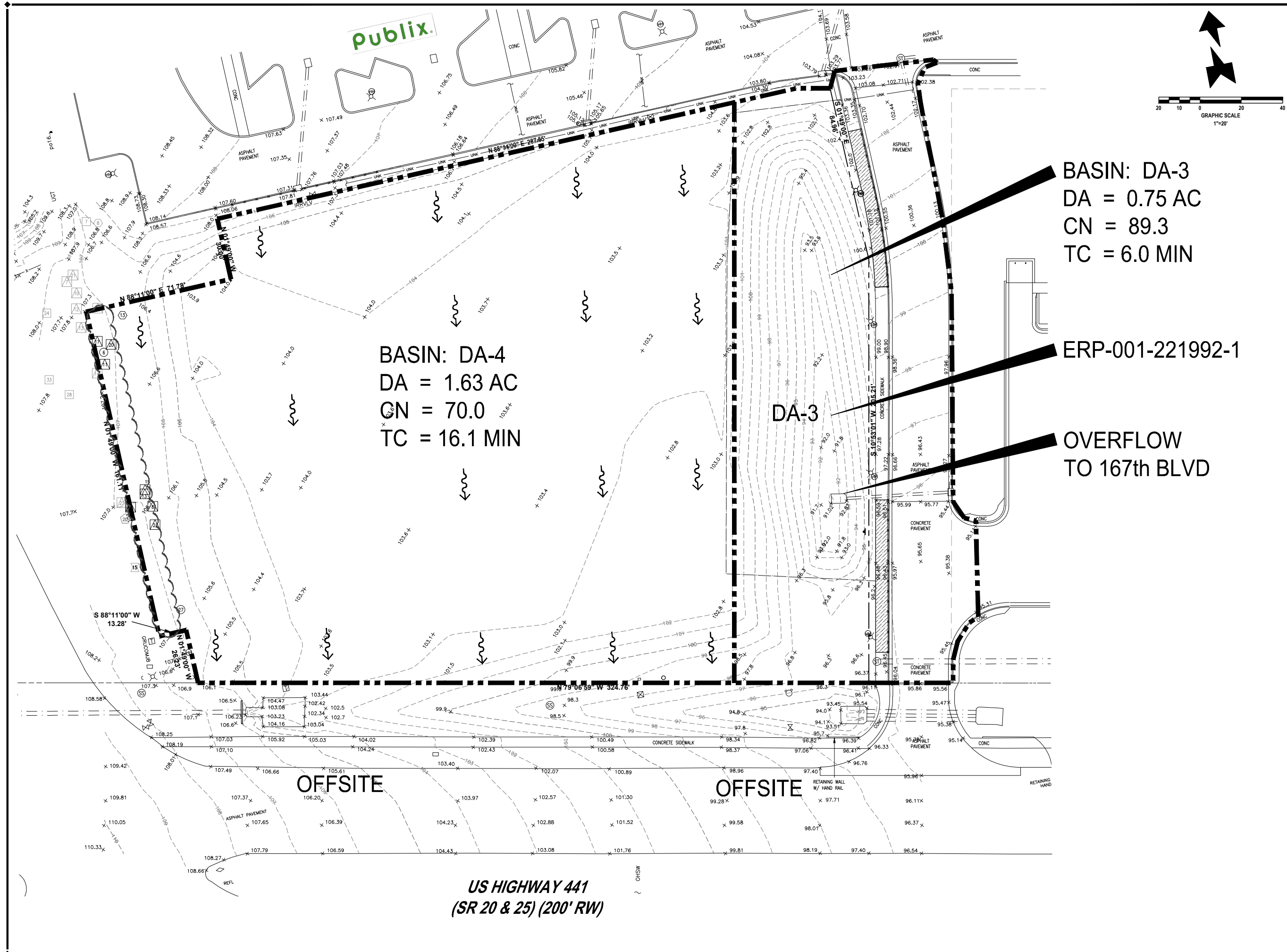
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Summary of Results :: Scenario 48 :: 100YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	90.50		
Maximum	184.000	94.19		
Inflow				
Rate - Maximum - Positive	184.000		0.4672	
Rate - Maximum - Negative	240.320		0.0000	
Cumulative Volume - Maximum Positive	240.320			46153.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			46153.0
Infiltration				
Rate - Maximum - Positive	38.213		0.0614	
Rate - Maximum - Negative	184.120		-0.0164	
Cumulative Volume - Maximum Positive	240.347			3672.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			3672.9
Combined Discharge				
Rate - Maximum - Positive	184.000		0.4646	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.160			36091.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			36091.1
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.4646	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.160			36091.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.347			36091.1
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

APPENDIX D

“PRE-DEVELOPMENT ANALYSIS – BASIN: DA-4”



BASIN: DA-4
DA = 1.63 AC
CN = 70.0
TC = 16.1 MIN

DA-3

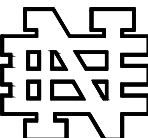
BASIN: DA-3
DA = 0.75 AC
CN = 89.3
TC = 6.0 MIN

ERP-001-221992-1

OVERFLOW
TO 167th BLVD

REVISIONS

DATE	DESCRIPTION
4-18-17	CITY COMMENTS



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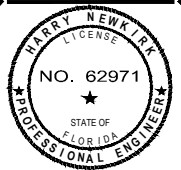


VyStar
Credit Union

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PRE-DEVELOPMENT
DRAINAGE BASIN MAP

VYSTAR CREDIT UNION
16181 NW US HIGHWAY 441
ALACHUA, FLORIDA 32615



HARRY H. NEWKIRK, P.E., # 62971

PROJECT NO:	2016-22
DATE:	JUNE 2016
DESIGN BY:	HHN
DRAWN BY:	DAB
CHECKED BY:	HHN
SCALE:	1" = 20'
DRAWING NUMBER	PRE

PRE-DEVELOPMENT HYDROGRAPH WORKSHEET

Basin ID	DA (Acres)	Pervious (Acres)	Impervious (Acres) *	Wetland (Acres)	Pond Wet (Acres)	Pervious CN	Impervious CN	Wetland CN	Pond Wet CN	Composite CN
DA-4	1.63	1.63	0.00	0.00	0.00	70.0	98.0	85.0	100.0	70.0
TOTAL	1.63	1.63	0.00	0.00	0.00	70.0	98.0	85.0	100.0	70.0

Basin	Soil Type	Hydrologic Group	Area (Acres)	* CN
DA-4	Fort Meade & Kendrick	C*	1.630	70
Pervious Curve Number				70.0

Good condition woods. Hydraulic Group C values used for runoff curve numbers as geotechnical borings test at 0.025 inches per hour, per the USCS guidance, this qualifies the soil hydraulically as a group D. Per the geotechnical report the site contains a near surface clay confining layer and clayey / silty sands which is also consistent with group C/D soils.

PRE-DEVELOPMENT

TIME OF CONCENTRATION CALCULATIONS

Basin: DA-4

Sheet Flow

Tt = Travel time (min)

s = slope

s = 0.01522 ft/ft

L = Flow length (ft)

L = 230 ft

n = Manning's Roughness Coefficient

n = 0.15 dirt/shell, short grass

P2 = 2-year/24-hour rainfall (in)

P2 = 5.6 in

s = (EL2 - EL1)/L

EL 2 = 107.00 Upstream Invert

EL 1 = 103.50 Downstream Invert

Tt = $(0.007 * (nL)^{0.8} * 60) / (P2)^{0.5} * s^{0.4}$ min = **16.1 min**

TC = 16.1 min

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Project Data

Project Name: VyStar Credit Union
Simulation Description: Pre-Development DA-4
Project Number: 2016-22
Engineer : Harry Newkirk, PE
Supervising Engineer:
Date: 04-14-2017

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Scenario Input Data

Scenario 1 :: 3YR-1HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 2.6
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 2 :: 3YR-2HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 3.0
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 3 :: 3YR-4HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 3.6
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 4 :: 3YR-8HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 4.2
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 5 :: 3YR-24HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 6.0
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 6 :: 3YR-72HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 6.8
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 7 :: 3YR-168HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 8.4
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 8 :: 3YR-240HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 9.6
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 9 :: 5YR-1HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 2.8
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 10 :: 5YR-2HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 3.4
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 11 :: 5YR-4HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 4.0
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 12 :: 5YR-8HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 4.8
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 13 :: 5YR-24HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 6.5
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 14 :: 5YR-72HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 8.0
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 15 :: 5YR-168HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 9.5
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 16 :: 5YR-240HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 11.3
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 17 :: 10YR-1HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 3.4
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 18 :: 10YR-2HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 3.8
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 19 :: 10YR-4HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 4.4
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 20 :: 10YR-8HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 5.6
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 21 :: 10YR-24HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 7.2
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 22 :: 10YR-72HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 9.3
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 23 :: 10YR-168HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 11.2
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 24 :: 10YR-240HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 13.0
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 25 :: 25YR-1HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 3.6
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 26 :: 25YR-2HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 4.4
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 27 :: 25YR-4HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 5.2
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 28 :: 25YR-8HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 6.4
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 29 :: 25YR-24HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 8.4
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 30 :: 25YR-72HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 11.2
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario Input Data (cont'd.)

Scenario 31 :: 25YR-168HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 12.6
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 32 :: 25YR-240HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 15.8
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 33 :: 50YR-1HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 3.9
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 34 :: 50YR-2HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 4.8
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 35 :: 50YR-4HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 6.0
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 36 :: 50YR-8HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 7.2
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 37 :: 50YR-24HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 9.6
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 38 :: 50YR-72HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 12.8
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 39 :: 50YR-168HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 14.5
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario Input Data (cont'd.)

Scenario 40 :: 50YR-240HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 16.3
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 41 :: 100YR-1HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 4.4
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 42 :: 100YR-2HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 5.4
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 43 :: 100YR-4HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 6.7
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 44 :: 100YR-8HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 8.0
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 45 :: 100YR-24HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 11.0
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 46 :: 100YR-72HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 13.8
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 47 :: 100YR-168HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 16.0
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

Scenario 48 :: 100YR-240HR

Hydrograph Type: Inline SCS
• **Modflow Routing:** **Not routed**
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 16.1
DCIA (%) 0.0
Curve Number 70
Design Rainfall Depth (inches) 18.0
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 0.00 (default)

No times after storm specified.

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Modflow Log

MODFLOW CONTROL PARAMETERS

Perimeter boundary condition: constant head
Maximum iterations of outer loop: 150
Maximum iterations of inner loop: 60
Horizontal conductivity within pond: 1000000 (if ground water mound is expected to intersect pond bottom)
Instantaneous storage coefficient: Volumetric balance
Default head closure tolerance: .01
Default residual closure tolerance: .5
Target water budget error: 1
On failure to converge: Rerun limiting inner loop to one iteration
 > Maximum number of iterations of outer loop: 500
Running Average Porosity is active
 > Starting on pass: 2
 > When outer iteration reaches: 50
 > Number of data points: 4
Running Average Pond Stage (for discharge structures with tailwater) is active
 > Starting on pass: 2
 > When outer iteration reaches: 50
 > Number of data points: 4
Grid size: 1000 ft (from pond centerline)
Mound Output: none

Begin Scenario 1 4/13/2017 15:30:25
End Scenario 1 4/13/2017 15:30:25

Begin Scenario 2 4/13/2017 15:30:25
End Scenario 2 4/13/2017 15:30:25

Begin Scenario 3 4/13/2017 15:30:26
End Scenario 3 4/13/2017 15:30:26

Begin Scenario 4 4/13/2017 15:30:26
End Scenario 4 4/13/2017 15:30:26

Begin Scenario 5 4/13/2017 15:30:27
End Scenario 5 4/13/2017 15:30:27

Begin Scenario 6 4/13/2017 15:30:27
End Scenario 6 4/13/2017 15:30:27

Begin Scenario 7 4/13/2017 15:30:28
End Scenario 7 4/13/2017 15:30:28

Begin Scenario 8 4/13/2017 15:30:28
End Scenario 8 4/13/2017 15:30:28

Begin Scenario 9 4/13/2017 15:30:29
End Scenario 9 4/13/2017 15:30:29

Begin Scenario 10 4/13/2017 15:30:29
End Scenario 10 4/13/2017 15:30:29

Begin Scenario 11 4/13/2017 15:30:30
End Scenario 11 4/13/2017 15:30:30

Begin Scenario 12 4/13/2017 15:30:30
End Scenario 12 4/13/2017 15:30:30

Begin Scenario 13 4/13/2017 15:30:31
End Scenario 13 4/13/2017 15:30:31

Begin Scenario 14 4/13/2017 15:30:31

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Modflow Log (cont'd.)

End Scenario 14 4/13/2017 15:30:31

Begin Scenario 15 4/13/2017 15:30:32
End Scenario 15 4/13/2017 15:30:32

Begin Scenario 16 4/13/2017 15:30:32
End Scenario 16 4/13/2017 15:30:32

Begin Scenario 17 4/13/2017 15:30:33
End Scenario 17 4/13/2017 15:30:33

Begin Scenario 18 4/13/2017 15:30:33
End Scenario 18 4/13/2017 15:30:33

Begin Scenario 19 4/13/2017 15:30:34
End Scenario 19 4/13/2017 15:30:34

Begin Scenario 20 4/13/2017 15:30:34
End Scenario 20 4/13/2017 15:30:34

Begin Scenario 21 4/13/2017 15:30:35
End Scenario 21 4/13/2017 15:30:35

Begin Scenario 22 4/13/2017 15:30:35
End Scenario 22 4/13/2017 15:30:35

Begin Scenario 23 4/13/2017 15:30:36
End Scenario 23 4/13/2017 15:30:36

Begin Scenario 24 4/13/2017 15:30:36
End Scenario 24 4/13/2017 15:30:37

Begin Scenario 25 4/13/2017 15:30:37
End Scenario 25 4/13/2017 15:30:37

Begin Scenario 26 4/13/2017 15:30:37
End Scenario 26 4/13/2017 15:30:37

Begin Scenario 27 4/13/2017 15:30:38
End Scenario 27 4/13/2017 15:30:38

Begin Scenario 28 4/13/2017 15:30:38
End Scenario 28 4/13/2017 15:30:38

Begin Scenario 29 4/13/2017 15:30:39
End Scenario 29 4/13/2017 15:30:39

Begin Scenario 30 4/13/2017 15:30:39
End Scenario 30 4/13/2017 15:30:39

Begin Scenario 31 4/13/2017 15:30:40
End Scenario 31 4/13/2017 15:30:40

Begin Scenario 32 4/13/2017 15:30:40
End Scenario 32 4/13/2017 15:30:41

Begin Scenario 33 4/13/2017 15:30:41
End Scenario 33 4/13/2017 15:30:41

Begin Scenario 34 4/13/2017 15:30:41
End Scenario 34 4/13/2017 15:30:41

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Modflow Log (cont'd.)

Begin Scenario 35 4/13/2017 15:30:42
End Scenario 35 4/13/2017 15:30:42

Begin Scenario 36 4/13/2017 15:30:42
End Scenario 36 4/13/2017 15:30:42

Begin Scenario 37 4/13/2017 15:30:43
End Scenario 37 4/13/2017 15:30:43

Begin Scenario 38 4/13/2017 15:30:43
End Scenario 38 4/13/2017 15:30:43

Begin Scenario 39 4/13/2017 15:30:44
End Scenario 39 4/13/2017 15:30:44

Begin Scenario 40 4/13/2017 15:30:44
End Scenario 40 4/13/2017 15:30:44

Begin Scenario 41 4/13/2017 15:30:45
End Scenario 41 4/13/2017 15:30:45

Begin Scenario 42 4/13/2017 15:30:45
End Scenario 42 4/13/2017 15:30:45

Begin Scenario 43 4/13/2017 15:30:46
End Scenario 43 4/13/2017 15:30:46

Begin Scenario 44 4/13/2017 15:30:46
End Scenario 44 4/13/2017 15:30:46

Begin Scenario 45 4/13/2017 15:30:47
End Scenario 45 4/13/2017 15:30:47

Begin Scenario 46 4/13/2017 15:30:47
End Scenario 46 4/13/2017 15:30:47

Begin Scenario 47 4/13/2017 15:30:48
End Scenario 47 4/13/2017 15:30:48

Begin Scenario 48 4/13/2017 15:30:48
End Scenario 48 4/13/2017 15:30:48

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Summary of Results :: Scenario 1 :: 3YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.751		3.2531	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			5075.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			5075.2
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.751		3.2531	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			5075.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			5075.2
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 2 :: 3YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.894		2.4833	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			6588.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			6588.2
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.894		2.4833	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			6588.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			6588.2
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 3 :: 3YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	2.540		1.6393	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			9042.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			9042.0
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	2.540		1.6393	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			9042.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			9042.0
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 4 :: 3YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	4.043		1.8698	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			11670.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			11670.1
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	4.043		1.8698	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			11670.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			11670.1
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 5 :: 3YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	12.021		0.6862	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			20265.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			20265.1
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	12.021		0.6862	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			20265.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			20265.1
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 6 :: 3YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	59.999		0.4841	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			24319.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			24319.4
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	59.999		0.4841	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			24319.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			24319.4
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 7 :: 3YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	159.998		0.3798	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			32706.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			32706.3
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	159.998		0.3798	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			32706.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			32706.3
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 8 :: 3YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	184.005		0.5017	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			39172.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			39172.2
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	184.005		0.5017	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			39172.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			39172.2
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 9 :: 5YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.716		3.6991	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			5817.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			5817.8
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.716		3.6991	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			5817.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			5817.8
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 10 :: 5YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.894		3.1098	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			8202.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			8202.4
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.894		3.1098	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			8202.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			8202.4
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 11 :: 5YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	2.540		1.9153	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			10777.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			10777.4
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	2.540		1.9153	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			10777.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			10777.4
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 12 :: 5YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	4.043		2.2799	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			14434.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			14434.1
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	4.043		2.2799	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			14434.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			14434.1
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 13 :: 5YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	12.021		0.7702	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			22786.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			22786.1
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	12.021		0.7702	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			22786.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			22786.1
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 14 :: 5YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	59.999		0.5874	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			30580.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			30580.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	59.999		0.5874	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			30580.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			30580.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 15 :: 5YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	159.998		0.4356	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			38628.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			38628.8
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	159.998		0.4356	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			38628.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			38628.8
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 16 :: 5YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	184.005		0.6028	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			48510.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			48510.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	184.005		0.6028	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			48510.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			48510.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 17 :: 10YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.716		5.1565	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			8202.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			8202.4
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.716		5.1565	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			8202.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			8202.4
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 18 :: 10YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.894		3.7625	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			9900.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			9900.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.894		3.7625	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			9900.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			9900.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 19 :: 10YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	2.540		2.1956	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			12577.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			12577.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	2.540		2.1956	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			12577.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			12577.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 20 :: 10YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	4.007		2.8437	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			18283.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			18283.5
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	4.007		2.8437	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			18283.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			18283.5
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 21 :: 10YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	12.021		0.8891	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			26385.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			26385.3
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	12.021		0.8891	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			26385.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			26385.3
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 22 :: 10YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	59.999		0.6991	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			37544.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			37544.4
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	59.999		0.6991	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			37544.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			37544.4
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 23 :: 10YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	159.998		0.5213	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			47956.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			47956.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	159.998		0.5213	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			47956.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			47956.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 24 :: 10YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	184.005		0.7033	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			58000.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			58000.3
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	184.005		0.7033	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			58000.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			58000.3
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 25 :: 25YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.716		5.6625	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			9042.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			9042.0
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.716		5.6625	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			9042.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			9042.0
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 26 :: 25YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.894		4.7793	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			12577.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			12577.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.894		4.7793	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			12577.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			12577.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 27 :: 25YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	2.111		2.7796	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			16338.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			16338.1
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	2.111		2.7796	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			16338.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			16338.1
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 28 :: 25YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	4.007		3.4166	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			22278.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			22278.3
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	4.007		3.4166	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			22278.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			22278.3
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 29 :: 25YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	11.986		1.0950	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			32706.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			32706.3
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	11.986		1.0950	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			32706.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			32706.3
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 30 :: 25YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	59.999		0.8615	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			47956.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			47956.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	59.999		0.8615	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			47956.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			47956.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 31 :: 25YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	159.998		0.5915	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			55756.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			55756.5
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	159.998		0.5915	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			55756.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			55756.5
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 32 :: 25YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	184.005		0.8677	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			73852.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			73852.0
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	184.005		0.8677	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			73852.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			73852.0
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 33 :: 50YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.716		6.4368	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			10337.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			10337.0
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.716		6.4368	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			10337.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			10337.0
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 34 :: 50YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.894		5.4768	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			14434.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			14434.1
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.894		5.4768	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			14434.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			14434.1
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 35 :: 50YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	2.075		3.4441	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			20265.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			20265.1
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	2.075		3.4441	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			20265.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			20265.1
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 36 :: 50YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	4.007		3.9946	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			26385.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			26385.3
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	4.007		3.9946	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			26385.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			26385.3
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 37 :: 50YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	11.986		1.3029	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			39172.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			39172.2
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	11.986		1.3029	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			39172.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			39172.2
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 38 :: 50YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	59.964		0.9976	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			56877.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			56877.6
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	59.964		0.9976	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			56877.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			56877.6
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 39 :: 50YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	159.998		0.6863	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			66464.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			66464.1
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	159.998		0.6863	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			66464.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			66464.1
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 40 :: 50YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	184.005		0.8970	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			76704.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			76704.3
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	184.005		0.8970	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			76704.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			76704.3
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 41 :: 100YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.716		7.7608	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			12577.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			12577.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.716		7.7608	
Rate - Maximum - Negative	1.860		0.0000	
Cumulative Volume - Maximum Positive	1.860			12577.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.896			12577.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 42 :: 100YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	0.894		6.7255	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			17793.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			17793.6
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	0.894		6.7255	
Rate - Maximum - Negative	2.862		0.0000	
Cumulative Volume - Maximum Positive	2.862			17793.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.898			17793.6
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 43 :: 100YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	2.075		4.0438	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			23806.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			23806.7
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	2.075		4.0438	
Rate - Maximum - Negative	4.866		0.0000	
Cumulative Volume - Maximum Positive	4.866			23806.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.902			23806.7
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 44 :: 100YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	4.007		4.5757	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			30580.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			30580.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	4.007		4.5757	
Rate - Maximum - Negative	8.873		0.0000	
Cumulative Volume - Maximum Positive	8.873			30580.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.909			30580.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 45 :: 100YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	11.986		1.5461	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			46850.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			46850.5
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	11.986		1.5461	
Rate - Maximum - Negative	24.866		0.0000	
Cumulative Volume - Maximum Positive	24.866			46850.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.901			46850.5
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 46 :: 100YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	59.964		1.0823	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			62505.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			62505.3
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	59.964		1.0823	
Rate - Maximum - Negative	72.879		0.0000	
Cumulative Volume - Maximum Positive	72.879			62505.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.915			62505.3
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 47 :: 100YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	159.998		0.7609	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			74992.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			74992.2
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	159.998		0.7609	
Rate - Maximum - Negative	168.871		0.0000	
Cumulative Volume - Maximum Positive	168.871			74992.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.907			74992.2
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 48 :: 100YR-240HR

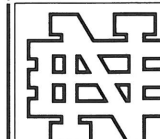
	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	Not Available	Not Available		
Maximum	Not Available	Not Available		
Inflow				
Rate - Maximum - Positive	184.005		0.9962	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			86439.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			86439.9
Infiltration				
Rate - Maximum - Positive	Not Available		Not Available	
Rate - Maximum - Negative	Not Available		Not Available	
Cumulative Volume - Maximum Positive	Not Available			Not Available
Cumulative Volume - Maximum Negative	Not Available			Not Available
Cumulative Volume - End of Simulation	Not Available			Not Available
Combined Discharge				
Rate - Maximum - Positive	184.005		0.9962	
Rate - Maximum - Negative	240.892		0.0000	
Cumulative Volume - Maximum Positive	240.892			86439.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.928			86439.9
Discharge Structure 1 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 2 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Discharge Structure 3 - inactive				
Rate - Maximum - Positive	disabled		disabled	
Rate - Maximum - Negative	disabled		disabled	
Cumulative Volume - Maximum Positive	disabled			disabled
Cumulative Volume - Maximum Negative	disabled			disabled
Cumulative Volume - End of Simulation	disabled			disabled
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

APPENDIX E

“POST-DEVELOPMENT ANALYSIS – BASIN: DA-4”

REVISIONS

DATE	DESCRIPTION
4-18-17	CITY COMMENTS



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POST DEVELOPMENT
DRAINAGE BASIN MAP
VYSTAR CREDIT UNION
16181 NW US HIGHWAY 441
ALACHUA, FLORIDA 32615



HARRY H. NEWKIRK, P.E., # 62971

PROJECT No: 2016-22

DATE: JUNE 2016

DESIGN BY: HHN

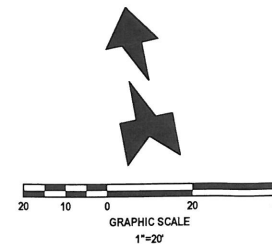
DRAWN BY: DAB

CHECKED BY: HHN

SCALE: 1" = 20'

DRAWING NUMBER

POST



BASIN: DA-3
DA = 0.75 AC
CN = 91.6
TC = 6.0 MIN

ERP-001-221992-1

**OVERFLOW
TO 167th BLVD**

BASIN: DA-4
DA = 1.63 AC
CN = 88.7
TC = 10.0 MIN

VYSTAR CREDIT UNION
4,000 SF
FINISH FLOOR EL 105.00

DA-4

DA-3

CS-01

OFFSITE

OFFSITE

**US HIGHWAY 441
(SR 20 & 25) (200' RW)**

POST-DEVELOPMENT HYDROGRAPH WORKSHEET

Basin ID	Overall DA (Acres)	Pervious (Acres)	Overall Impervious (Acres)	DCIA (Acres)	Wetland (Acres)	Pond Wet (Acres)	Pervious CN	Impervious CN	Wetland CN	Pond Wet CN	Composite CN	Non-DCIA CN
DA-4	1.63	0.64	0.86	0.77	0.00	0.13	74.0	98.0	85.0	100.0	88.7	80.5
TOTAL	1.63	0.64	0.86	0.77	0.00	0.13	74.0	98.0	85.0	100.0	88.7	80.5

Basin	Soil Type	Hydrologic Group	Area (Acres)	* CN
DA-4	Fort Meade & Kendrick	C*	0.64	74
Pervious Curve Number				74.0

Open Space Good Condition (>75% grass cover), hydraulic group C runoff values used in model to match pre-existing conditions and account for shallow clay confining layer.

Directly Connected Impervious Area	
Surface	Acres
Parking Lot	0.711
Sidewalks	0.058
Total Basin	1.63
DCIA %	47.1%

WATER QUALITY REQUIREMENTS FOR ONLINE DRY DETENTION

Basin No.	Area (Ac)	Imp. Area (Ac)
DA-4	1.630	0.860

Treatment Volume Required

A. 1.0 inches of runoff over the drainage basin

0.136	Ac-Ft
-------	-------

Minimum Required Water Quality =	0.158 Ac-Ft	=	6,861 CF
Provided Water Quality =	0.300 Ac-Ft	=	13,063 CF

STAGE VERSUS STORAGE

Stage (Ft)	Area (sf)	Area (acres)	Volume (cf)	Volume (Ac-Ft)	Remarks
98.00	598	0.014	-	0.000	Pond Bottom
99.00	2078	0.048	1,338	0.031	
100.00	3305	0.076	4,030	0.093	
100.67	4224	0.097	6,552	0.150	Half Treatment Volume
101.00	4676	0.107	8,020	0.184	
101.50	4910	0.113	10,417	0.239	
102.00	5677	0.130	13,063	0.300	Treatment Volume, Weir
103.00	7307	0.168	19,555	0.449	
104.00	9047	0.208	27,732	0.637	
					Top of Bank

EFFECTIVE LENGTH AND WIDTH OF A POND

Perimeter (P)	359	FT
Volume (V)	8020	CF
Depth (h)	3.00	FT

$$L = [(P/2) + \text{SQRT} ((P^2/4) - (4*v)/h))]/2$$

$$W = [(P/2) - \text{SQRT} ((P^2/4) - (4*v)/h))]/2$$

$$L = 180 \text{ FT}$$

$$W = 16 \text{ FT}$$

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Project Data

Project Name: VyStar Credit Union
Simulation Description: Post-Development DA-4
Project Number: 2016-22
Engineer : Harry Newkirk, PE
Supervising Engineer:
Date: 04-17-2017

Aquifer Data

Base Of Aquifer Elevation, [B] (ft datum): 92.10
Water Table Elevation, [WT] (ft datum): 94.10
Horizontal Saturated Hydraulic Conductivity, [Kh] (ft/day): 0.80
Fillable Porosity, [n] (%): 20.00
Unsaturated Vertical Infiltration Rate, [Iv] (ft/day): 0.4
Maximum Area For Unsaturated Infiltration, [Av] (ft²): 9047.0

Geometry Data

Equivalent Pond Length, [L] (ft): 180.0
Equivalent Pond Width, [W] (ft): 16.0
Ground water mound is expected to intersect the pond bottom

Stage vs Area Data

Stage (ft datum)	Area (ft²)
98.00	598.0
99.00	2078.0
100.00	3305.0
101.00	4676.0
102.00	5677.0
103.00	7307.0
104.00	9047.0

Discharge Structures

Discharge Structure #1 is active as orifice

Structure Parameters

Description: 8" Orifice

Orifice elevation, (ft datum):	102
Orifice coefficient:	4.9
Orifice area, (ft²):	.342
Orifice exponent:	.5

Tailwater - disabled, free discharge

Discharge Structure #2 is active as orifice

Structure Parameters

Description: 4" Orifice

Orifice elevation, (ft datum):	102.25
Orifice coefficient:	4.9
Orifice area, (ft²):	.136
Orifice exponent:	.5

Tailwater - disabled, free discharge

Discharge Structure #3 is active as weir

Structure Parameters

Description: Overflow Weir

Weir elevation, (ft datum):	102.4
Weir coefficient:	3.13
Weir length, (ft):	2.8
Weir exponent:	1.5

Tailwater - disabled, free discharge

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Scenario Input Data

Scenario 1 :: 3YR-1HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 2.6
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 2 :: 3YR-2HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 3.0
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 3 :: 3YR-4HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 3.6
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 4 :: 3YR-8HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 4.2
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 5 :: 3YR-24HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 6.0
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 6 :: 3YR-72HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 6.8
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 7 :: 3YR-168HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 8.4
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 8 :: 3YR-240HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 9.6
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 9 :: 5YR-1HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 2.8
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 10 :: 5YR-2HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 3.4
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 11 :: 5YR-4HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 4.0
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 12 :: 5YR-8HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 4.8
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 13 :: 5YR-24HR

Hydrograph Type:	Inline SCS
Modflow Routing:	Routed with infiltration
Repetitions:	1
Basin Area (acres)	1.630
Time Of Concentration (minutes)	10.0
DCIA (%)	47.1
Curve Number	80.5
Design Rainfall Depth (inches)	6.5
Design Rainfall Duration (hours)	24.0
Shape Factor	UHG 484
Rainfall Distribution	FDOT 24 Hour
Initial ground water level (ft datum)	94.10 (default)
No times after storm specified.	

Scenario 14 :: 5YR-72HR

Hydrograph Type:	Inline SCS
Modflow Routing:	Routed with infiltration
Repetitions:	1
Basin Area (acres)	1.630
Time Of Concentration (minutes)	10.0
DCIA (%)	47.1
Curve Number	80.5
Design Rainfall Depth (inches)	8.0
Design Rainfall Duration (hours)	72.0
Shape Factor	UHG 484
Rainfall Distribution	FDOT 72 Hour
Initial ground water level (ft datum)	94.10 (default)
No times after storm specified.	

Scenario 15 :: 5YR-168HR

Hydrograph Type:	Inline SCS
Modflow Routing:	Routed with infiltration
Repetitions:	1
Basin Area (acres)	1.630
Time Of Concentration (minutes)	10.0
DCIA (%)	47.1
Curve Number	80.5
Design Rainfall Depth (inches)	9.5
Design Rainfall Duration (hours)	168.0
Shape Factor	UHG 484
Rainfall Distribution	FDOT 168 Hour
Initial ground water level (ft datum)	94.10 (default)
No times after storm specified.	

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Scenario Input Data (cont'd.)

Scenario 16 :: 5YR-240HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 11.3
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 17 :: 10YR-1HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 3.4
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 18 :: 10YR-2HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 3.8
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 19 :: 10YR-4HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 4.4
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 20 :: 10YR-8HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 5.6
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 21 :: 10YR-24HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 7.2
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 22 :: 10YR-72HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 9.3
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 23 :: 10YR-168HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 11.2
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 24 :: 10YR-240HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 13.0
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 25 :: 25YR-1HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 3.6
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 26 :: 25YR-2HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 4.4
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 27 :: 25YR-4HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 5.2
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 28 :: 25YR-8HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 6.4
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 29 :: 25YR-24HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 8.4
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 30 :: 25YR-72HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 11.2
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 31 :: 25YR-168HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 12.6
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 32 :: 25YR-240HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 15.8
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 33 :: 50YR-1HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 3.9
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 34 :: 50YR-2HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 4.8
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 35 :: 50YR-4HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 6.0
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 36 :: 50YR-8HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 7.2
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 37 :: 50YR-24HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 9.6
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 38 :: 50YR-72HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 12.8
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 39 :: 50YR-168HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 14.5
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

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Scenario Input Data (cont'd.)

Scenario 40 :: 50YR-240HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 16.3
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 94.10 (default)

No times after storm specified.

Scenario 41 :: 100YR-1HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 4.4
Design Rainfall Duration (hours) 1.0
Shape Factor UHG 484
Rainfall Distribution FDOT 1 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	19.000
2.000	7.000	22.000
3.000	10.000	25.000
4.000	13.000	28.000
5.000	16.000	30.000

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Scenario Input Data (cont'd.)

Scenario 42 :: 100YR-2HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 5.4
Design Rainfall Duration (hours) 2.0
Shape Factor UHG 484
Rainfall Distribution FDOT 2 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	19.000
2.000	7.000	22.000
3.000	10.000	25.000
4.000	13.000	28.000
5.000	16.000	30.000

Scenario 43 :: 100YR-4HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 6.7
Design Rainfall Duration (hours) 4.0
Shape Factor UHG 484
Rainfall Distribution FDOT 4 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	19.000
2.000	7.000	22.000
3.000	10.000	25.000
4.000	13.000	28.000
5.000	16.000	30.000

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Scenario Input Data (cont'd.)

Scenario 44 :: 100YR-8HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 8.0
Design Rainfall Duration (hours) 8.0
Shape Factor UHG 484
Rainfall Distribution FDOT 8 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	19.000
2.000	7.000	22.000
3.000	10.000	25.000
4.000	13.000	28.000
5.000	16.000	30.000

Scenario 45 :: 100YR-24HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 11.0
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	19.000
2.000	7.000	22.000
3.000	10.000	25.000
4.000	13.000	28.000
5.000	16.000	30.000

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Scenario Input Data (cont'd.)

Scenario 46 :: 100YR-72HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 13.8
Design Rainfall Duration (hours) 72.0
Shape Factor UHG 484
Rainfall Distribution FDOT 72 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	19.000
2.000	7.000	22.000
3.000	10.000	25.000
4.000	13.000	28.000
5.000	16.000	30.000

Scenario 47 :: 100YR-168HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 16.0
Design Rainfall Duration (hours) 168.0
Shape Factor UHG 484
Rainfall Distribution FDOT 168 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	19.000
2.000	7.000	22.000
3.000	10.000	25.000
4.000	13.000	28.000
5.000	16.000	30.000

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Scenario Input Data (cont'd.)

Scenario 48 :: 100YR-240HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 18.0
Design Rainfall Duration (hours) 240.0
Shape Factor UHG 484
Rainfall Distribution FDOT 240 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	19.000
2.000	7.000	22.000
3.000	10.000	25.000
4.000	13.000	28.000
5.000	16.000	30.000

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Modflow Log

MODFLOW CONTROL PARAMETERS

Perimeter boundary condition: constant head
Maximum iterations of outer loop: 150
Maximum iterations of inner loop: 60
Horizontal conductivity within pond: 1000000 (if ground water mound is expected to intersect pond bottom)
Instantaneous storage coefficient: Volumetric balance
Default head closure tolerance: .01
Default residual closure tolerance: .5
Target water budget error: 1
On failure to converge: Rerun limiting inner loop to one iteration
 > Maximum number of iterations of outer loop: 500
Running Average Porosity is active
 > Starting on pass: 2
 > When outer iteration reaches: 50
 > Number of data points: 4
Running Average Pond Stage (for discharge structures with tailwater) is active
 > Starting on pass: 2
 > When outer iteration reaches: 50
 > Number of data points: 4
Grid size: 1000 ft (from pond centerline)
Mound Output: none

Begin Scenario 1 4/17/2017 14:58:56
End Scenario 1 4/17/2017 14:58:56

Begin Scenario 2 4/17/2017 14:58:56
End Scenario 2 4/17/2017 14:58:56

Begin Scenario 3 4/17/2017 14:58:57
End Scenario 3 4/17/2017 14:58:57

Begin Scenario 4 4/17/2017 14:58:57
End Scenario 4 4/17/2017 14:58:57

Begin Scenario 5 4/17/2017 14:58:58
End Scenario 5 4/17/2017 14:58:58

Begin Scenario 6 4/17/2017 14:58:58
End Scenario 6 4/17/2017 14:58:59

Begin Scenario 7 4/17/2017 14:58:59
End Scenario 7 4/17/2017 14:59:0

Begin Scenario 8 4/17/2017 14:59:0
End Scenario 8 4/17/2017 14:59:4

Begin Scenario 9 4/17/2017 14:59:4
End Scenario 9 4/17/2017 14:59:4

Begin Scenario 10 4/17/2017 14:59:4
End Scenario 10 4/17/2017 14:59:5

Begin Scenario 11 4/17/2017 14:59:5
End Scenario 11 4/17/2017 14:59:5

Begin Scenario 12 4/17/2017 14:59:5
End Scenario 12 4/17/2017 14:59:6

Begin Scenario 13 4/17/2017 14:59:6
End Scenario 13 4/17/2017 14:59:6

Begin Scenario 14 4/17/2017 14:59:6

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Modflow Log (cont'd.)

End Scenario 14 4/17/2017 14:59:7
Begin Scenario 15 4/17/2017 14:59:7
End Scenario 15 4/17/2017 14:59:8
Begin Scenario 16 4/17/2017 14:59:8
End Scenario 16 4/17/2017 14:59:13
Begin Scenario 17 4/17/2017 14:59:13
End Scenario 17 4/17/2017 14:59:13
Begin Scenario 18 4/17/2017 14:59:14
End Scenario 18 4/17/2017 14:59:14
Begin Scenario 19 4/17/2017 14:59:14
End Scenario 19 4/17/2017 14:59:14
Begin Scenario 20 4/17/2017 14:59:15
End Scenario 20 4/17/2017 14:59:15
Begin Scenario 21 4/17/2017 14:59:15
End Scenario 21 4/17/2017 14:59:15
Begin Scenario 22 4/17/2017 14:59:16
End Scenario 22 4/17/2017 14:59:16
Begin Scenario 23 4/17/2017 14:59:16
End Scenario 23 4/17/2017 14:59:18
Begin Scenario 24 4/17/2017 14:59:18
End Scenario 24 4/17/2017 14:59:23
Begin Scenario 25 4/17/2017 14:59:23
End Scenario 25 4/17/2017 14:59:23
Begin Scenario 26 4/17/2017 14:59:24
End Scenario 26 4/17/2017 14:59:24
Begin Scenario 27 4/17/2017 14:59:24
End Scenario 27 4/17/2017 14:59:24
Begin Scenario 28 4/17/2017 14:59:25
End Scenario 28 4/17/2017 14:59:25
Begin Scenario 29 4/17/2017 14:59:25
End Scenario 29 4/17/2017 14:59:25
Begin Scenario 30 4/17/2017 14:59:26
End Scenario 30 4/17/2017 14:59:26
Begin Scenario 31 4/17/2017 14:59:26
End Scenario 31 4/17/2017 14:59:28
Begin Scenario 32 4/17/2017 14:59:29
End Scenario 32 4/17/2017 14:59:34
Begin Scenario 33 4/17/2017 14:59:34
End Scenario 33 4/17/2017 14:59:34
Begin Scenario 34 4/17/2017 14:59:34
End Scenario 34 4/17/2017 14:59:34

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Modflow Log (cont'd.)

Begin Scenario 35 4/17/2017 14:59:35
End Scenario 35 4/17/2017 14:59:35

Begin Scenario 36 4/17/2017 14:59:35
End Scenario 36 4/17/2017 14:59:35

Begin Scenario 37 4/17/2017 14:59:36
End Scenario 37 4/17/2017 14:59:36

Begin Scenario 38 4/17/2017 14:59:36
End Scenario 38 4/17/2017 14:59:36

Begin Scenario 39 4/17/2017 14:59:37
End Scenario 39 4/17/2017 14:59:39

Begin Scenario 40 4/17/2017 14:59:39
End Scenario 40 4/17/2017 14:59:44

Begin Scenario 41 4/17/2017 14:59:44
End Scenario 41 4/17/2017 14:59:44

Begin Scenario 42 4/17/2017 14:59:45
End Scenario 42 4/17/2017 14:59:45

Begin Scenario 43 4/17/2017 14:59:45
End Scenario 43 4/17/2017 14:59:45

Begin Scenario 44 4/17/2017 14:59:46
End Scenario 44 4/17/2017 14:59:46

Begin Scenario 45 4/17/2017 14:59:46
End Scenario 45 4/17/2017 14:59:46

Begin Scenario 46 4/17/2017 14:59:47
End Scenario 46 4/17/2017 14:59:47

Begin Scenario 47 4/17/2017 14:59:47
End Scenario 47 4/17/2017 14:59:50

Begin Scenario 48 4/17/2017 14:59:50
End Scenario 48 4/17/2017 14:59:55

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Summary of Results :: Scenario 1 :: 3YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	1.244	101.33		
Inflow				
Rate - Maximum - Positive	0.600		5.9815	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.533			9696.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			9696.9
Infiltration				
Rate - Maximum - Positive	1.244		0.0232	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			92.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			92.1
Combined Discharge				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 2 :: 3YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	2.267	101.71		
Inflow				
Rate - Maximum - Positive	0.822		4.5129	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.533			11731.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			11731.4
Infiltration				
Rate - Maximum - Positive	2.267		0.0249	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			174.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			174.4
Combined Discharge				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			0.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			0.0
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 3 :: 3YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	3.578	102.07		
Inflow				
Rate - Maximum - Positive	2.022		2.3986	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.533			14874.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			14874.2
Infiltration				
Rate - Maximum - Positive	3.556		0.0268	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			291.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			291.3
Combined Discharge				
Rate - Maximum - Positive	3.578		0.4293	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.378			1407.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			1407.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	3.578		0.4293	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.378			1407.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			1407.0
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 4 :: 3YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	5.133	102.13		
Inflow				
Rate - Maximum - Positive	4.000		2.4752	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.533			18097.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			18097.4
Infiltration				
Rate - Maximum - Positive	5.133		0.0273	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.578			562.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			562.6
Combined Discharge				
Rate - Maximum - Positive	5.133		0.5991	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.289			4365.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			4365.3
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	5.133		0.5991	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.289			4365.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			4365.3
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 5 :: 3YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	15.044	102.09		
Inflow				
Rate - Maximum - Positive	12.000		0.8663	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.533			28066.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			28066.2
Infiltration				
Rate - Maximum - Positive	15.022		0.0270	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.578			1718.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			1718.2
Combined Discharge				
Rate - Maximum - Positive	15.044		0.5137	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.178			13184.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			13184.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	15.044		0.5137	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.178			13184.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			13184.7
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 6 :: 3YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	60.000	102.09		
Inflow				
Rate - Maximum - Positive	59.978		0.5233	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.533			32587.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			32587.8
Infiltration				
Rate - Maximum - Positive	60.000		0.0270	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.578			5078.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			5078.0
Combined Discharge				
Rate - Maximum - Positive	60.000		0.4945	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.133			14350.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			14350.9
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	60.000		0.4945	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.133			14350.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			14350.9
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 7 :: 3YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	159.978	102.05		
Inflow				
Rate - Maximum - Positive	160.000		0.3930	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.533			41730.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			41730.8
Infiltration				
Rate - Maximum - Positive	159.978		0.0267	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.578			12205.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			12205.2
Combined Discharge				
Rate - Maximum - Positive	160.000		0.3661	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.156			16363.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			16363.8
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	160.000		0.3661	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.156			16363.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			16363.8
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 8 :: 3YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	183.778	102.09		
Inflow				
Rate - Maximum - Positive	184.000		0.5252	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.533			48647.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			48647.8
Infiltration				
Rate - Maximum - Positive	183.800		0.1830	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.578			18054.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			18054.6
Combined Discharge				
Rate - Maximum - Positive	183.778		0.4972	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.133			17418.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			17418.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	183.778		0.4972	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.133			17418.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			17418.5
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 9 :: 5YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	1.244	101.53		
Inflow				
Rate - Maximum - Positive	0.600		6.6024	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.533			10707.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			10707.1
Infiltration				
Rate - Maximum - Positive	1.244		0.0241	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			95.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			95.9
Combined Discharge				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 10 :: 5YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	2.089	102.04		
Inflow				
Rate - Maximum - Positive	0.822		5.3031	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.533			13816.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			13816.3
Infiltration				
Rate - Maximum - Positive	2.089		0.0266	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			186.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			186.5
Combined Discharge				
Rate - Maximum - Positive	2.089		0.3151	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.467			445.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			445.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	2.089		0.3151	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.467			445.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			445.2
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 11 :: 5YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	3.178	102.22		
Inflow				
Rate - Maximum - Positive	2.022		2.7414	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.533			17015.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			17015.6
Infiltration				
Rate - Maximum - Positive	3.178		0.0280	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			304.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			304.8
Combined Discharge				
Rate - Maximum - Positive	3.178		0.7896	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			3516.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			3516.4
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	3.178		0.7896	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			3516.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			3516.4
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 12 :: 5YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	5.067	102.27		
Inflow				
Rate - Maximum - Positive	4.000		2.9012	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.533			21379.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			21379.4
Infiltration				
Rate - Maximum - Positive	5.067		0.0284	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.578			584.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			584.4
Combined Discharge				
Rate - Maximum - Positive	5.067		0.9630	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.311			7622.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			7622.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	5.067		0.8699	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.311			7541.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			7541.5
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	5.067		0.0930	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	5.222			81.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			81.2
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 13 :: 5YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	13.111	102.13		
Inflow				
Rate - Maximum - Positive	12.000		0.9510	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.533			30887.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			30887.5
Infiltration				
Rate - Maximum - Positive	13.111		0.0273	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.578			1752.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			1752.0
Combined Discharge				
Rate - Maximum - Positive	13.111		0.6052	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.200			15971.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			15971.8
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	13.111		0.6052	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.200			15971.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			15971.8
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 14 :: 5YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	60.000	102.13		
Inflow				
Rate - Maximum - Positive	59.978		0.6236	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.533			39435.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			39435.1
Infiltration				
Rate - Maximum - Positive	60.000		0.0273	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.578			5331.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			5331.6
Combined Discharge				
Rate - Maximum - Positive	60.000		0.5937	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.133			20943.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			20943.4
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	60.000		0.5937	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.133			20943.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			20943.4
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 15 :: 5YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	159.978	102.06		
Inflow				
Rate - Maximum - Positive	160.000		0.4471	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.533			48069.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			48069.9
Infiltration				
Rate - Maximum - Positive	164.444		0.0889	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.578			13853.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			13853.2
Combined Discharge				
Rate - Maximum - Positive	160.000		0.4200	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.133			21092.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			21092.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	160.000		0.4200	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.133			21092.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			21092.5
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 16 :: 5YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	184.000	102.12		
Inflow				
Rate - Maximum - Positive	184.000		0.6233	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.533			58505.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			58505.0
Infiltration				
Rate - Maximum - Positive	171.444		0.0870	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.578			18796.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			18796.3
Combined Discharge				
Rate - Maximum - Positive	184.000		0.5904	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.156			26530.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			26530.8
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.5904	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.156			26530.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			26530.8
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 17 :: 10YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	1.089	102.05		
Inflow				
Rate - Maximum - Positive	0.600		8.5026	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.533			13816.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			13816.3
Infiltration				
Rate - Maximum - Positive	1.067		0.0267	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			106.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			106.5
Combined Discharge				
Rate - Maximum - Positive	1.089		0.3842	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.511			520.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			520.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.089		0.3842	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.511			520.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			520.2
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 18 :: 10YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	1.911	102.17		
Inflow				
Rate - Maximum - Positive	0.822		6.1028	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.533			15940.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			15940.9
Infiltration				
Rate - Maximum - Positive	1.911		0.0277	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			196.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			196.3
Combined Discharge				
Rate - Maximum - Positive	1.911		0.6997	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			2406.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			2406.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.911		0.6997	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			2406.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			2406.7
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 19 :: 10YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	3.111	102.36		
Inflow				
Rate - Maximum - Positive	2.022		3.0870	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.533			19185.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			19185.7
Infiltration				
Rate - Maximum - Positive	3.111		0.0291	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			316.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			316.8
Combined Discharge				
Rate - Maximum - Positive	3.111		1.2272	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			5629.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			5629.8
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	3.111		1.0059	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			5182.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			5182.4
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	3.111		0.2213	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	3.622			447.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			447.4
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 20 :: 10YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	4.378	102.41		
Inflow				
Rate - Maximum - Positive	4.000		3.4707	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.533			25822.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			25822.5
Infiltration				
Rate - Maximum - Positive	4.378		0.0295	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.578			609.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			609.9
Combined Discharge				
Rate - Maximum - Positive	4.378		1.3385	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.378			12036.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			12036.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	4.378		1.0692	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.378			10756.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			10756.3
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	4.378		0.2641	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	5.578			1268.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			1268.2
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	4.378		0.0052	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	5.111			11.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			11.9
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 21 :: 10YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	12.244	102.20		
Inflow				
Rate - Maximum - Positive	12.000		1.0697	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.533			34862.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			34862.8
Infiltration				
Rate - Maximum - Positive	12.222		0.0279	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.578			1796.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			1796.7
Combined Discharge				
Rate - Maximum - Positive	12.244		0.7541	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.200			19901.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			19901.3
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.244		0.7541	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.200			19901.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			19901.3
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 22 :: 10YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	60.022	102.17		
Inflow				
Rate - Maximum - Positive	59.978		0.7318	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.533			46914.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			46914.8
Infiltration				
Rate - Maximum - Positive	60.000		0.0277	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.578			5546.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			5546.5
Combined Discharge				
Rate - Maximum - Positive	60.022		0.6999	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.156			28207.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			28207.4
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	60.022		0.6999	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.156			28207.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			28207.4
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 23 :: 10YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	156.889	102.09		
Inflow				
Rate - Maximum - Positive	160.000		0.5305	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.533			57923.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			57923.7
Infiltration				
Rate - Maximum - Positive	156.911		0.1903	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.578			14685.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			14685.2
Combined Discharge				
Rate - Maximum - Positive	156.889		0.5011	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.200			30085.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			30085.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	156.889		0.5011	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.200			30085.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			30085.5
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 24 :: 10YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	184.000	102.17		
Inflow				
Rate - Maximum - Positive	184.000		0.7210	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.533			68409.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			68409.2
Infiltration				
Rate - Maximum - Positive	164.333		0.0866	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.578			19132.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			19132.8
Combined Discharge				
Rate - Maximum - Positive	184.000		0.6935	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.178			36097.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			36097.1
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.6935	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.178			36097.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			36097.1
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 25 :: 25YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	1.022	102.18		
Inflow				
Rate - Maximum - Positive	0.600		9.1456	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.533			14874.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			14874.2
Infiltration				
Rate - Maximum - Positive	1.022		0.0277	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			109.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			109.7
Combined Discharge				
Rate - Maximum - Positive	1.022		0.7058	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			1410.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			1410.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.022		0.7058	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			1410.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			1410.2
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 26 :: 25YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	1.689	102.36		
Inflow				
Rate - Maximum - Positive	0.822		7.3145	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.533			19185.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			19185.7
Infiltration				
Rate - Maximum - Positive	1.667		0.0291	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			209.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			209.0
Combined Discharge				
Rate - Maximum - Positive	1.689		1.2305	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			5265.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			5265.1
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.689		1.0078	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			4660.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			4660.9
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	1.689		0.2227	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.200			604.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			604.2
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 27 :: 25YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	3.044	102.54		
Inflow				
Rate - Maximum - Positive	2.022		3.7838	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.533			23592.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			23592.7
Infiltration				
Rate - Maximum - Positive	3.044		0.0306	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			337.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			337.0
Combined Discharge				
Rate - Maximum - Positive	3.044		2.0760	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			9885.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			9885.3
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	3.044		1.2360	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			7567.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			7567.2
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	3.044		0.3613	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	3.867			1415.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			1415.3
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	3.044		0.4787	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	3.467			902.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			902.8
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 28 :: 25YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	4.133	102.61		
Inflow				
Rate - Maximum - Positive	4.000		4.0407	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.533			30321.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			30321.9
Infiltration				
Rate - Maximum - Positive	4.133		0.0311	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.578			630.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			630.4
Combined Discharge				
Rate - Maximum - Positive	4.133		2.5279	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.422			16511.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			16511.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	4.133		1.3054	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.422			12944.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			12944.0
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	4.133		0.3981	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	5.778			1974.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			1974.3
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	4.133		0.8244	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	5.267			1592.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			1592.8
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 29 :: 25YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	12.089	102.32		
Inflow				
Rate - Maximum - Positive	12.000		1.2730	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.533			41730.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			41730.8
Infiltration				
Rate - Maximum - Positive	12.089		0.0288	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.578			1864.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			1864.6
Combined Discharge				
Rate - Maximum - Positive	12.089		1.1202	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.222			26700.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			26700.1
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.089		0.9458	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.222			26014.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			26014.1
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	12.089		0.1744	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	13.222			686.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			686.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 30 :: 25YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	59.978	102.25		
Inflow				
Rate - Maximum - Positive	59.978		0.8895	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.533			57923.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			57923.7
Infiltration				
Rate - Maximum - Positive	59.978		0.0283	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.578			5796.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			5796.6
Combined Discharge				
Rate - Maximum - Positive	60.000		0.8609	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.178			38965.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			38965.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	60.000		0.8396	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.178			38891.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			38891.0
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	60.000		0.0213	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	60.089			73.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			73.9
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 31 :: 25YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	154.556	102.11		
Inflow				
Rate - Maximum - Positive	160.000		0.5990	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.533			66075.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			66075.4
Infiltration				
Rate - Maximum - Positive	154.578		0.2089	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.578			14960.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			14960.6
Combined Discharge				
Rate - Maximum - Positive	154.556		0.5626	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.222			37955.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			37955.6
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	154.556		0.5626	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.222			37955.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			37955.6
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 32 :: 25YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	183.933	102.25		
Inflow				
Rate - Maximum - Positive	184.000		0.8815	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.533			84788.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			84788.6
Infiltration				
Rate - Maximum - Positive	160.067		0.0886	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.578			19345.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			19345.1
Combined Discharge				
Rate - Maximum - Positive	184.000		0.8572	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.200			52262.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			52262.9
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.8392	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.200			52042.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			52042.3
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	184.000		0.0179	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	184.089			220.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			220.6
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 33 :: 50YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	0.978	102.36		
Inflow				
Rate - Maximum - Positive	0.600		10.1167	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.533			16477.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			16477.3
Infiltration				
Rate - Maximum - Positive	0.978		0.0291	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			114.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			114.5
Combined Discharge				
Rate - Maximum - Positive	0.978		1.2258	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			2548.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			2548.1
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	0.978		1.0051	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			2313.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			2313.4
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	0.978		0.2207	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.267			234.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			234.6
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	1.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 34 :: 50YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	1.489	102.48		
Inflow				
Rate - Maximum - Positive	0.822		8.1276	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.533			21379.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			21379.4
Infiltration				
Rate - Maximum - Positive	1.489		0.0301	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			216.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			216.4
Combined Discharge				
Rate - Maximum - Positive	1.489		1.6718	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			7245.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			7245.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.489		1.1595	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			5763.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			5763.3
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	1.489		0.3187	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.311			1157.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			1157.6
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	1.489		0.1936	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.978			324.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	2.578			324.4
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 35 :: 50YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	2.644	102.66		
Inflow				
Rate - Maximum - Positive	2.022		4.4848	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.533			28066.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			28066.2
Infiltration				
Rate - Maximum - Positive	2.644		0.0315	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			352.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			352.2
Combined Discharge				
Rate - Maximum - Positive	2.644		2.9715	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			14254.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			14254.6
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	2.644		1.3641	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			9139.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			9139.4
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	2.644		0.4281	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	3.978			2033.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			2033.8
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	2.644		1.1794	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	3.622			3081.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	4.578			3081.4
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 36 :: 50YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	4.089	102.74		
Inflow				
Rate - Maximum - Positive	4.000		4.6102	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.533			34862.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			34862.8
Infiltration				
Rate - Maximum - Positive	4.089		0.0322	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.578			648.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			648.0
Combined Discharge				
Rate - Maximum - Positive	4.089		3.6549	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.489			21028.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			21028.9
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	4.089		1.4426	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.489			14704.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			14704.9
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	4.089		0.4670	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	5.956			2520.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			2520.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	4.089		1.7454	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	5.356			3803.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	8.578			3803.9
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 37 :: 50YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	12.089	102.40		
Inflow				
Rate - Maximum - Positive	12.000		1.4761	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.533			48647.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			48647.8
Infiltration				
Rate - Maximum - Positive	12.067		0.0294	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.578			1923.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			1923.5
Combined Discharge				
Rate - Maximum - Positive	12.089		1.3219	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.244			33557.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			33557.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.089		1.0619	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.244			31520.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			31520.1
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	12.089		0.2594	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	15.178			2036.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			2036.9
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	12.089		0.0005	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	12.133			0.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	24.578			0.1
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 38 :: 50YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	60.000	102.28		
Inflow				
Rate - Maximum - Positive	59.978		1.0219	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.533			67242.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			67242.1
Infiltration				
Rate - Maximum - Positive	59.978		0.0285	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.578			5966.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			5966.9
Combined Discharge				
Rate - Maximum - Positive	60.000		0.9921	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.178			48111.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			48111.8
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	60.000		0.8823	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.178			47082.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			47082.2
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	60.000		0.1098	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	60.267			1029.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			1029.6
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	72.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 39 :: 50YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	160.000	102.15		
Inflow				
Rate - Maximum - Positive	160.000		0.6918	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.533			77175.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			77175.6
Infiltration				
Rate - Maximum - Positive	152.533		0.1787	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.578			15187.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			15187.2
Combined Discharge				
Rate - Maximum - Positive	160.000		0.6442	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.244			48824.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			48824.4
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	160.000		0.6442	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.244			48824.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			48824.4
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	168.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 40 :: 50YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	184.000	102.25		
Inflow				
Rate - Maximum - Positive	184.000		0.9101	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.533			87719.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			87719.8
Infiltration				
Rate - Maximum - Positive	159.511		0.0886	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.578			19371.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			19371.7
Combined Discharge				
Rate - Maximum - Positive	184.000		0.8858	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.200			55167.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			55167.4
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.8444	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.200			54427.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			54427.9
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	184.000		0.0414	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	184.111			739.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			739.5
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	240.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 41 :: 100YR-1HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	0.933	102.61		
Inflow				
Rate - Maximum - Positive	0.600		11.7491	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.533			19185.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	721.578			19185.7
Infiltration				
Rate - Maximum - Positive	0.933		0.0311	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			121.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	721.578			14471.6
Combined Discharge				
Rate - Maximum - Positive	0.933		2.5757	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			4714.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	721.578			4714.1
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	0.933		1.3121	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.578			3282.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	721.578			3282.2
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	0.933		0.4015	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.489			722.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	721.578			722.1
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	0.933		0.8620	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	1.244			709.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	721.578			709.8
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 42 :: 100YR-2HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	1.222	102.62		
Inflow				
Rate - Maximum - Positive	0.822		9.3523	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.533			24705.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	722.578			24705.7
Infiltration				
Rate - Maximum - Positive	1.200		0.0312	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			224.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	722.578			14284.2
Combined Discharge				
Rate - Maximum - Positive	1.222		2.6357	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			10421.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	722.578			10421.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	1.222		1.3204	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.578			6779.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	722.578			6779.6
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	1.222		0.4058	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.378			1642.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	722.578			1642.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	1.222		0.9095	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	2.111			1999.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	722.578			1999.8
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 43 :: 100YR-4HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	2.600	102.76		
Inflow				
Rate - Maximum - Positive	2.022		5.0999	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.533			32020.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	724.578			32020.5
Infiltration				
Rate - Maximum - Positive	2.578		0.0323	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			363.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	724.578			13890.0
Combined Discharge				
Rate - Maximum - Positive	2.600		3.8097	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			18130.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	724.578			18130.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	2.600		1.4588	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.578			10218.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	724.578			10218.7
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	2.600		0.4749	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	4.067			2482.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	724.578			2482.8
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	2.600		1.8759	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	3.689			5429.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	724.578			5429.1
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 44 :: 100YR-8HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	4.067	102.83		
Inflow				
Rate - Maximum - Positive	4.000		5.1790	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.533			39435.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	728.578			39435.1
Infiltration				
Rate - Maximum - Positive	4.067		0.0330	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	248.578			13855.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	728.578			13855.1
Combined Discharge				
Rate - Maximum - Positive	4.067		4.5540	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.533			25580.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	728.578			25580.0
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	4.067		1.5312	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	8.533			16247.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	728.578			16247.3
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	4.067		0.5096	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	6.156			3023.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	728.578			3023.2
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	4.067		2.5132	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	5.444			6309.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	728.578			6309.4
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 45 :: 100YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	12.067	102.47		
Inflow				
Rate - Maximum - Positive	12.000		1.7125	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.533			56761.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			56761.6
Infiltration				
Rate - Maximum - Positive	12.044		0.0300	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	264.578			15151.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			15151.9
Combined Discharge				
Rate - Maximum - Positive	12.067		1.6198	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.267			41609.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			41609.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.067		1.1480	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.267			37433.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			37433.9
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	12.067		0.3121	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	16.089			3810.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			3810.8
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	12.067		0.1598	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	12.644			365.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			365.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 46 :: 100YR-72HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	60.000	102.30		
Inflow				
Rate - Maximum - Positive	59.978		1.1044	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.533			73081.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	792.578			73081.9
Infiltration				
Rate - Maximum - Positive	59.978		0.0287	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	528.578			19218.4
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	792.578			19218.4
Combined Discharge				
Rate - Maximum - Positive	60.000		1.0738	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.200			53863.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	792.578			53863.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	60.000		0.9214	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	72.200			52263.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	792.578			52263.7
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	60.000		0.1524	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	60.378			1599.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	792.578			1599.8
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	792.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 47 :: 100YR-168HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	160.000	102.19		
Inflow				
Rate - Maximum - Positive	160.000		0.7650	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.533			85960.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	888.578			85960.9
Infiltration				
Rate - Maximum - Positive	151.311		0.0998	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	888.578			27157.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	888.578			27157.5
Combined Discharge				
Rate - Maximum - Positive	160.000		0.7208	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.267			57477.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	888.578			57477.2
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	160.000		0.7208	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	168.267			57477.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	888.578			57477.2
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	888.578			0.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	888.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Summary of Results :: Scenario 48 :: 100YR-240HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	184.000	102.27		
Inflow				
Rate - Maximum - Positive	184.000		1.0072	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.533			97696.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	960.578			97696.7
Infiltration				
Rate - Maximum - Positive	157.800		0.0888	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	960.578			29982.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	960.578			29982.0
Combined Discharge				
Rate - Maximum - Positive	184.000		0.9833	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.200			65061.5
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	960.578			65061.5
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	184.000		0.8784	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.200			62691.2
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	960.578			62691.2
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	184.000		0.1049	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	184.200			2370.3
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	960.578			2370.3
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	960.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

APPENDIX F

“PIPE SIZING CALCULATIONS”

Storm Sewer Design

Project: VYSTAR Engineer:NEWKIRK ENG Road: US HIGHWAY 441 Location:ALACHUA
 Return Period: 25 years County:Alachua Drainage Coefficients: C1 = 0.98 C2 = 0.03 C3 = 0.00
 Outfall Ground Elevation (feet) :97.00 Outfall Hydraulic Grade (feet) :100.00

Str	To	Length	Incr ment	Sub Total	Total CxAcres	Rain i Inc TC Cum TC	Total Runoff cfs	Inlet Top Curb	Up HGL Crown Invert	Dn HGL Crown Invert	Fall HGL Pipe	Pipe Dia n	Slope HGL Pipe	Vel Act Des	Act Q Cap	K V HI
1	2	66.00	0.85	0.85	0.83	6.4	5.3	102.61	102.11	101.97	0.14	18.0	0.216	2.99	5.3	0.50
			0.01	0.01		10.0			100.50	100.23						
I-01						10.0			99.00	98.73	0.27	0.012	0.410		7.3	
2	3	170.00	0.18	1.03	1.01	6.3	6.4	102.61	101.97	101.44	0.53	18.0	0.312	3.60	6.4	0.50
			0.04	0.05		10.0			100.23	99.55						
I-02						10.4			98.73	98.05	0.68	0.012	0.400		7.2	0.10
3	4	116.00	0.17	1.20	1.18	6.2	7.3	102.61	101.44	100.96	0.47	18.0	0.409	4.12	7.3	0.50
			0.03	0.08		10.0			99.55	99.13						
I-03						11.2			98.05	97.63	0.42	0.012	0.360		6.9	0.13
4	5	150.00	0.17	1.37	1.35	6.1	8.2	103.11	100.96	100.18	0.78	18.0	0.521	4.65	8.2	0.50
			0.02	0.10		10.0			99.13	98.60						
I-04						11.6			97.63	97.10	0.53	0.012	0.350		6.8	0.17
5	6	28.00	0.18	1.55	1.52	6.0	9.2	103.00	100.18	100.00	0.18	18.0	0.651	5.19	9.2	0.50
			0.02	0.12		10.0			98.60	98.50						
I-05						12.2			97.10	97.00	0.10	0.012	0.360		6.8	0.21

MANNING'S EQUATION FOR PIPE FLOW

Project: VYSTAR CREDIT UNION Location: 161810 NW US Highway 441, Alachua, FL

By: Harry Newkirk Date: 5/1/2017

Chk. By: Date: mdo version 12.8.00

Clear Data
Entry Cells

INPUT

D= 12 inches
d= 12 inches
n= 0.012 manning's coeff
θ= 0.0 degrees
S= 0.0046 slope in/in

Mannings Formula

$$Q = (1.486/n) A R_h^{2/3} S^{1/2}$$

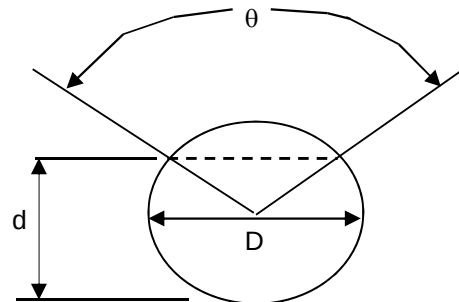
$$R = A/P$$

A=cross sectional area

P=wetted perimeter

S=slope of channel

n=Manning's roughness coefficient



$$V = (1.49/n) R_h^{2/3} S^{1/2}$$

$$Q = V \times A$$

			Solution to Mannings Equation		Manning's n-values	
Area, ft ²	Wetted Perimeter, ft	Hydraulic Radius, ft	velocity ft/s	flow, cfs		
0.79	3.14	0.25	3.33	2.62	PVC	0.01
					PE (<9"dia)	0.015
					PE (>12"dia)	0.02
					PE(9-12"dia)	0.017
					CMP	0.025
					ADS N12	0.012
					HCMP	0.023
					Conc	0.013

Created by: Mike O'Shea

APPENDIX G

“POND RECOVERY”

PONDS Version 3.3.0276
Retention Pond Recovery - Refined Method
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Project Data

Project Name: VyStar Credit Union
Simulation Description: Post-Development DA-4 Recovery
Project Number: 2016-22
Engineer : Harry Newkirk, PE
Supervising Engineer:
Date: 04-18-2017

Aquifer Data

Base Of Aquifer Elevation, [B] (ft datum): 92.10
Water Table Elevation, [WT] (ft datum): 94.10
Horizontal Saturated Hydraulic Conductivity, [Kh] (ft/day): 0.80
Fillable Porosity, [n] (%): 20.00
Unsaturated Vertical Infiltration Rate, [Iv] (ft/day): 0.4
Maximum Area For Unsaturated Infiltration, [Av] (ft²): 9047.0

Geometry Data

Equivalent Pond Length, [L] (ft): 180.0
Equivalent Pond Width, [W] (ft): 16.0
Ground water mound is expected to intersect the pond bottom

Stage vs Area Data

Stage (ft datum)	Area (ft²)
98.00	598.0
99.00	2078.0
100.00	3305.0
101.00	4676.0
102.00	5677.0
103.00	7307.0
104.00	9047.0

Discharge Structures

Discharge Structure #1 is active as orifice

Structure Parameters

Description: 8" Orifice

Orifice elevation, (ft datum):	102
Orifice coefficient:	4.9
Orifice area, (ft ²):	.342
Orifice exponent:	.5

Tailwater - disabled, free discharge

Discharge Structure #2 is active as orifice

Structure Parameters

Description: 4" Orifice

Orifice elevation, (ft datum):	102.25
Orifice coefficient:	4.9
Orifice area, (ft ²):	.136
Orifice exponent:	.5

Tailwater - disabled, free discharge

Discharge Structure #3 is active as weir

Structure Parameters

Description: Overflow Weir

Weir elevation, (ft datum):	102.4
Weir coefficient:	3.13
Weir length, (ft):	2.8
Weir exponent:	1.5

Tailwater - disabled, free discharge

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Scenario Input Data

Scenario 29 :: 25YR-24HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 8.4
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	11.000	18.000	28.000
2.000	7.000	12.000	20.000	30.000
3.000	8.000	13.000	22.000	
4.000	9.000	14.000	24.000	
5.000	10.000	16.000	26.000	

Scenario 45 :: 100YR-24HR

Hydrograph Type: Inline SCS
Modflow Routing: Routed with infiltration
Repetitions: 1

Basin Area (acres) 1.630
Time Of Concentration (minutes) 10.0
DCIA (%) 47.1
Curve Number 80.5
Design Rainfall Depth (inches) 11.0
Design Rainfall Duration (hours) 24.0
Shape Factor UHG 484
Rainfall Distribution FDOT 24 Hour

Initial ground water level (ft datum) 94.10 (default)

Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)	Time After Storm Event (days)
1.000	6.000	11.000	18.000	28.000
2.000	7.000	12.000	20.000	30.000
3.000	8.000	13.000	22.000	
4.000	9.000	14.000	24.000	
5.000	10.000	16.000	26.000	

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Modflow Log

MODFLOW CONTROL PARAMETERS

Perimeter boundary condition: constant head

Maximum iterations of outer loop: 150

Maximum iterations of inner loop: 60

Horizontal conductivity within pond: 1000000 (if ground water mound is expected to intersect pond bottom)

Instantaneous storage coefficient: Volumetric balance

Default head closure tolerance: .01

Default residual closure tolerance: .5

Target water budget error: 1

On failure to converge: Rerun limiting inner loop to one iteration

> Maximum number of iterations of outer loop: 500

Running Average Porosity is active

> Starting on pass: 2

> When outer iteration reaches: 50

> Number of data points: 4

Running Average Pond Stage (for discharge structures with tailwater) is active

> Starting on pass: 2

> When outer iteration reaches: 50

> Number of data points: 4

Grid size: 1000 ft (from pond centerline)

Mound Output: none

Begin Scenario 29 4/18/2017 13:28:16

End Scenario 29 4/18/2017 13:28:16

Begin Scenario 45 4/18/2017 13:28:16

End Scenario 45 4/18/2017 13:28:17

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Detailed Results :: Scenario 29 :: 25YR-24HR

Elapsed Time	Instantaneous Inflow Rate	Outside Recharge	Stage Elevation	Infiltration Rate	Combined Instantaneous Discharge	Cumulative Inflow	Cumulative Infiltration	Combined Cumulative	
0.000	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	N.A.
0.022	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.044	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.067	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.089	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.111	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.133	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.156	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.178	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.200	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.222	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.244	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.267	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.289	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.311	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.333	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.356	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.378	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.400	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.422	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.444	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.467	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.489	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.511	0.0000	0.00000	94.10000	0.00002	0	0.000	0.00046	0	U
0.533	0.0001	0.00000	94.10000	0.00009	0	0.003	0.00342	0	U
0.556	0.0002	0.00000	94.10001	0.00024	0	0.014	0.01413	0	U
0.578	0.0005	0.00000	94.10002	0.00053	0	0.042	0.04189	0	U
0.600	0.0009	0.00000	94.10005	0.00098	0	0.099	0.09889	0	U
0.622	0.0015	0.00000	94.10011	0.00157	0	0.198	0.19790	0	U
0.644	0.0023	0.00000	94.10020	0.00230	0	0.350	0.35041	0	U
0.667	0.0031	0.00000	94.10031	0.00273	0	0.565	0.56543	0	U
0.689	0.0040	0.00000	98.00011	0.00277	0	0.849	0.78717	0	U/P
0.711	0.0049	0.00000	98.00033	0.00277	0	1.205	1.00903	0	U/P
0.733	0.0058	0.00000	98.00067	0.00278	0	1.635	1.23109	0	U/P
0.756	0.0068	0.00000	98.00114	0.00278	0	2.140	1.45340	0	U/P
0.778	0.0077	0.00000	98.00175	0.00279	0	2.721	1.67604	0	U/P
0.800	0.0087	0.00000	98.00246	0.00279	0	3.377	1.89908	0	U/P
0.822	0.0096	0.00000	98.00330	0.00280	0	4.107	2.12257	0	U/P
0.844	0.0105	0.00000	98.00426	0.00280	0	4.909	2.34660	0	U/P
0.867	0.0114	0.00000	98.00534	0.00281	0	5.784	2.57121	0	U/P
0.889	0.0122	0.00000	98.00652	0.00282	0	6.729	2.79647	0	U/P
0.911	0.0131	0.00000	98.00782	0.00283	0	7.742	3.02244	0	U/P
0.933	0.0139	0.00000	98.00922	0.00284	0	8.824	3.24917	0	U/P
0.956	0.0147	0.00000	98.01072	0.00285	0	9.971	3.47673	0	U/P
0.978	0.0155	0.00000	98.01231	0.00286	0	11.183	3.70517	0	U/P
1.000	0.0163	0.00000	98.01401	0.00287	0	12.458	3.93453	0	U/P
1.022	0.0174	0.00000	98.01582	0.00289	0	13.807	4.16488	0	U/P
1.044	0.0192	0.00000	98.01779	0.00290	0	15.269	4.39632	0	U/P
1.067	0.0221	0.00000	98.02006	0.00292	0	16.920	4.62900	0	U/P
1.089	0.0261	0.00000	98.02275	0.00294	0	18.850	4.86315	0	U/P
1.111	0.0306	0.00000	98.02596	0.00296	0	21.121	5.09907	0	U/P
1.133	0.0352	0.00000	98.02970	0.00299	0	23.752	5.33703	0	U/P
1.156	0.0394	0.00000	98.03395	0.00302	0	26.735	5.57733	0	U/P
1.178	0.0431	0.00000	98.03865	0.00305	0	30.037	5.82020	0	U/P
1.200	0.0464	0.00000	98.04371	0.00309	0	33.617	6.06584	0	U/P
1.222	0.0493	0.00000	98.04907	0.00313	0	37.443	6.31443	0	U/P
1.244	0.0519	0.00000	98.05470	0.00317	0	41.491	6.56610	0	U/P
1.267	0.0544	0.00000	98.06055	0.00321	0	45.744	6.82097	0	U/P
1.289	0.0567	0.00000	98.06660	0.00325	0	50.186	7.07916	0	U/P
1.311	0.0588	0.00000	98.07281	0.00329	0	54.804	7.34076	0	U/P
1.333	0.0608	0.00000	98.07917	0.00334	0	59.588	7.60584	0	U/P
1.356	0.0627	0.00000	98.08566	0.00338	0	64.528	7.87448	0	U/P
1.378	0.0645	0.00000	98.09226	0.00343	0	69.617	8.14673	0	U/P
1.400	0.0662	0.00000	98.09896	0.00347	0	74.847	8.42266	0	U/P
1.422	0.0679	0.00000	98.10574	0.00352	0	80.213	8.70231	0	U/P
1.444	0.0695	0.00000	98.11260	0.00357	0	85.707	8.98572	0	U/P
1.467	0.0710	0.00000	98.11953	0.00361	0	91.326	9.27292	0	U/P
1.489	0.0725	0.00000	98.12651	0.00366	0	97.064	9.56396	0	U/P
1.511	0.0739	0.00000	98.13354	0.00371	0	102.916	9.85884	0	U/P
1.533	0.0752	0.00000	98.14062	0.00376	0	108.879	10.15761	0	U/P
1.556	0.0765	0.00000	98.14772	0.00381	0	114.947	10.46027	0	U/P
1.578	0.0777	0.00000	98.15485	0.00386	0	121.116	10.76683	0	U/P
1.600	0.0790	0.00000	98.16201	0.00391	0	127.384	11.07733	0	U/P
1.622	0.0801	0.00000	98.16919	0.00395	0	133.747	11.39175	0	U/P

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Detailed Results (cont,d.) :: Scenario 29 :: 25YR-24HR

Elapsed Time	Instantaneous Inflow Rate	Outside Recharge	Stage Elevation	Infiltration Rate	Combined Instantaneous Discharge	Cumulative Inflow	Cumulative Infiltration	Combined Cumulative	
23.022	0.1342	0.00000	102.00420	0.02633	.1082436	41195.360	1717.20700	26257.96	U/P
23.044	0.1342	0.00000	102.00420	0.02633	.1081823	41206.100	1719.31300	26266.61	U/P
23.067	0.1342	0.00000	102.00420	0.02633	.1081275	41216.830	1721.41900	26275.26	U/P
23.089	0.1341	0.00000	102.00420	0.02633	.1080756	41227.560	1723.52600	26283.91	U/P
23.111	0.1341	0.00000	102.00420	0.02633	.1080248	41238.290	1725.63200	26292.56	U/P
23.133	0.1340	0.00000	102.00420	0.02633	.107975	41249.020	1727.73800	26301.2	U/P
23.156	0.1340	0.00000	102.00420	0.02633	.1079269	41259.740	1729.84400	26309.83	U/P
23.178	0.1340	0.00000	102.00410	0.02633	.1078818	41270.460	1731.95100	26318.46	U/P
23.200	0.1340	0.00000	102.00410	0.02633	.1078406	41281.180	1734.05700	26327.09	U/P
23.222	0.1339	0.00000	102.00410	0.02633	.107804	41291.890	1736.16300	26335.72	U/P
23.244	0.1339	0.00000	102.00410	0.02633	.1077718	41302.610	1738.26900	26344.34	U/P
23.267	0.1339	0.00000	102.00410	0.02633	.1077438	41313.320	1740.37500	26352.96	U/P
23.289	0.1339	0.00000	102.00410	0.02633	.1077197	41324.040	1742.48200	26361.58	U/P
23.311	0.1339	0.00000	102.00410	0.02633	.1076992	41334.750	1744.58800	26370.2	U/P
23.333	0.1339	0.00000	102.00410	0.02633	.1076819	41345.460	1746.69400	26378.81	U/P
23.356	0.1339	0.00000	102.00410	0.02633	.1076673	41356.180	1748.80000	26387.43	U/P
23.378	0.1339	0.00000	102.00410	0.02633	.1076552	41366.890	1750.90700	26396.04	U/P
23.400	0.1339	0.00000	102.00410	0.02633	.1076452	41377.610	1753.01300	26404.65	U/P
23.422	0.1339	0.00000	102.00410	0.02633	.1076369	41388.320	1755.11900	26413.26	U/P
23.444	0.1339	0.00000	102.00410	0.02633	.1076302	41399.030	1757.22500	26421.88	U/P
23.467	0.1339	0.00000	102.00410	0.02633	.1076248	41409.750	1759.33100	26430.48	U/P
23.489	0.1339	0.00000	102.00410	0.02633	.1076205	41420.460	1761.43800	26439.1	U/P
23.511	0.1339	0.00000	102.00410	0.02633	.1076171	41431.180	1763.54400	26447.71	U/P
23.533	0.1339	0.00000	102.00410	0.02633	.1076145	41441.890	1765.65000	26456.31	U/P
23.556	0.1339	0.00000	102.00410	0.02633	.1076126	41452.600	1767.75600	26464.92	U/P
23.578	0.1339	0.00000	102.00410	0.02633	.1076113	41463.320	1769.86300	26473.53	U/P
23.600	0.1339	0.00000	102.00410	0.02633	.1076104	41474.030	1771.96900	26482.14	U/P
23.622	0.1339	0.00000	102.00410	0.02633	.10761	41484.750	1774.07500	26490.75	U/P
23.644	0.1339	0.00000	102.00410	0.02633	.1076098	41495.460	1776.18100	26499.36	U/P
23.667	0.1339	0.00000	102.00410	0.02633	.1076099	41506.180	1778.28700	26507.97	U/P
23.689	0.1339	0.00000	102.00410	0.02633	.1076103	41516.890	1780.39400	26516.58	U/P
23.711	0.1339	0.00000	102.00410	0.02633	.1076109	41527.610	1782.50000	26525.18	U/P
23.733	0.1339	0.00000	102.00410	0.02633	.1076116	41538.320	1784.60600	26533.79	U/P
23.756	0.1339	0.00000	102.00410	0.02633	.1076124	41549.040	1786.71200	26542.4	U/P
23.778	0.1339	0.00000	102.00410	0.02633	.1076133	41559.750	1788.81900	26551.01	U/P
23.800	0.1339	0.00000	102.00410	0.02633	.1076144	41570.470	1790.92500	26559.62	U/P
23.822	0.1339	0.00000	102.00410	0.02633	.1076155	41581.190	1793.03100	26568.23	U/P
23.844	0.1340	0.00000	102.00410	0.02633	.1076166	41591.900	1795.13700	26576.84	U/P
23.867	0.1340	0.00000	102.00410	0.02633	.1076178	41602.620	1797.24300	26585.45	U/P
23.889	0.1340	0.00000	102.00410	0.02633	.1076191	41613.340	1799.35000	26594.06	U/P
23.911	0.1340	0.00000	102.00410	0.02633	.1076204	41624.050	1801.45600	26602.67	U/P
23.933	0.1340	0.00000	102.00410	0.02633	.1076217	41634.770	1803.56200	26611.28	U/P
23.956	0.1340	0.00000	102.00410	0.02633	.1076231	41645.480	1805.66800	26619.89	U/P
23.978	0.1340	0.00000	102.00410	0.02633	.1076245	41656.200	1807.77500	26628.5	U/P
24.000	0.1340	0.00000	102.00410	0.02633	.1076258	41666.920	1809.88100	26637.11	U/P
24.022	0.1320	0.00000	102.00410	0.02633	.1074582	41677.550	1811.98700	26645.71	U/P
24.044	0.1257	0.00000	102.00410	0.02633	.1066225	41687.860	1814.09300	26654.27	U/P
24.067	0.1125	0.00000	102.00390	0.02632	.1042492	41697.390	1816.19900	26662.71	U/P
24.089	0.0938	0.00000	102.00350	0.02632	9.939405E-02	41705.640	1818.30500	26670.85	U/P
24.111	0.0737	0.00000	102.00300	0.02631	9.151963E-02	41712.340	1820.41000	26678.49	U/P
24.133	0.0550	0.00000	102.00230	0.02631	8.049645E-02	41717.490	1822.51500	26685.37	U/P
24.156	0.0394	0.00000	102.00160	0.02630	6.634742E-02	41721.270	1824.62000	26691.24	U/P
24.178	0.0281	0.00000	102.00090	0.02629	4.911673E-02	41723.960	1826.72400	26695.86	U/P
24.200	0.0203	0.00000	102.00030	0.02629	2.826268E-02	41725.900	1828.82700	26698.96	U/P
24.222	0.0147	0.00000	102.00000	0.02628	0	41727.300	1830.93000	26700.09	U/P
24.244	0.0105	0.00000	101.99980	0.02628	0	41728.300	1833.03200	26700.09	U/P
24.267	0.0075	0.00000	101.99950	0.02628	0	41729.030	1835.13500	26700.09	U/P
24.289	0.0054	0.00000	101.99920	0.02628	0	41729.540	1837.23700	26700.09	U/P
24.311	0.0039	0.00000	101.99890	0.02628	0	41729.910	1839.34000	26700.09	U/P
24.333	0.0027	0.00000	101.99860	0.02628	0	41730.180	1841.44200	26700.09	U/P
24.356	0.0019	0.00000	101.99830	0.02628	0	41730.370	1843.54400	26700.09	U/P
24.378	0.0014	0.00000	101.99790	0.02627	0	41730.500	1845.64600	26700.09	U/P
24.400	0.0009	0.00000	101.99760	0.02627	0	41730.590	1847.74800	26700.09	U/P
24.422	0.0006	0.00000	101.99720	0.02627	0	41730.650	1849.85000	26700.09	U/P
24.444	0.0004	0.00000	101.99690	0.02627	0	41730.700	1851.95100	26700.09	U/P
24.467	0.0002	0.00000	101.99650	0.02627	0	41730.720	1854.05300	26700.09	U/P
24.489	0.0001	0.00000	101.99610	0.02627	0	41730.740	1856.15400	26700.09	U/P
24.511	0.0000	0.00000	101.99580	0.02626	0	41730.740	1858.25500	26700.09	U/P
24.533	0.0000	0.00000	101.99540	0.02626	0	41730.750	1860.35600	26700.09	U/P
24.556	0.0000	0.00000	101.99500	0.02626	0	41730.750	1862.45700	26700.09	U/P
24.578	0.0000	0.00000	101.99460	0.02626	0	41730.750	1864.55800	26700.09	U/P
48.578	0.0000	0.00000	101.59460	0.02441	0	41730.750	4053.45400	26700.09	U/P
72.578	0.0000	0.00000	101.19450	0.02251	0	41730.750	6082.16500	26700.09	U/P
96.578	0.0000	0.00000	100.79440	0.02031	0	41730.750	7942.93500	26700.09	U/P

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Detailed Results (cont,d.) :: Scenario 29 :: 25YR-24HR

Elapsed Time	Instantaneous Inflow Rate	Outside Recharge	Stage Elevation	Infiltration Rate	Combined Instantaneous Discharge	Cumulative Inflow	Cumulative Infiltration	Combined Cumulative	
120.578	0.0000	0.00000	100.39430	0.01781	0	41730.750	9591.34700	26700.09	U/P
144.578	0.0000	0.00000	99.99419	0.01534	0	41730.750	11020.34000	26700.09	U/P
168.578	0.0000	0.00000	99.59406	0.01720	0	41730.750	12241.70000	26700.09	U/P
192.578	0.0000	0.00000	98.84769	0.01413	0	41730.750	13991.98000	26700.09	U/S
216.578	0.0000	0.00000	98.39195	0.00601	0	41730.750	14682.58000	26700.09	S
240.578	0.0000	0.00000	97.94804	0.00201	0	41730.750	15030.66000	26700.09	S
264.578	0.0000	0.00000	97.55538	0.00000	0	41730.750	15030.66000	26700.09	S
288.578	0.0000	0.00000	97.27618	0.00000	0	41730.750	15030.66000	26700.09	S
312.578	0.0000	0.00000	97.06168	0.00000	0	41730.750	15030.66000	26700.09	S
336.578	0.0000	0.00000	96.88905	0.00000	0	41730.750	15030.66000	26700.09	S
360.578	0.0000	0.00000	96.74565	0.00000	0	41730.750	15030.66000	26700.09	S
408.578	0.0000	0.00000	96.52934	0.00000	0	41730.750	15030.66000	26700.09	S
456.578	0.0000	0.00000	96.35861	0.00000	0	41730.750	15030.66000	26700.09	S
504.578	0.0000	0.00000	96.21931	0.00000	0	41730.750	15030.66000	26700.09	S
552.578	0.0000	0.00000	96.10276	0.00000	0	41730.750	15030.66000	26700.09	S
600.578	0.0000	0.00000	96.00332	0.00000	0	41730.750	15030.66000	26700.09	S
648.578	0.0000	0.00000	95.91710	0.00000	0	41730.750	15030.66000	26700.09	S
696.578	0.0000	0.00000	95.84138	0.00000	0	41730.750	15030.66000	26700.09	S
744.578	0.0000	0.00000	95.77415	----	----	41730.750	15030.66000	26700.09	N.A.

1/2 Volume recovery between day 3 and day 4 after storm

Full Volume recovery between day 8 and 9 after storm

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Summary of Results :: Scenario 29 :: 25YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	12.089	102.32		
Inflow				
Rate - Maximum - Positive	12.000		1.2730	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.533			41730.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			41730.8
Infiltration				
Rate - Maximum - Positive	12.089		0.0288	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.578			15030.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			15030.7
Combined Discharge				
Rate - Maximum - Positive	12.089		1.1202	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.222			26700.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			26700.1
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.089		0.9458	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.222			26014.1
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			26014.1
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	12.089		0.1744	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	13.222			686.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			686.0
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	None		None	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	None			None
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			0.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.

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Detailed Results :: Scenario 45 :: 100YR-24HR

Elapsed Time	Instantaneous Inflow Rate	Outside Recharge	Stage Elevation	Infiltration Rate	Combined Instantaneous Discharge	Cumulative Inflow	Cumulative Infiltration	Combined Cumulative	
0.000	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	N.A.
0.022	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.044	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.067	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.089	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.111	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.133	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.156	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.178	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.200	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.222	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.244	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.267	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.289	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.311	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.333	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.356	0.0000	0.00000	94.10000	0.00000	0	0.000	0.00000	0	U
0.378	0.0000	0.00000	94.10000	0.00001	0	0.000	0.00005	0	U
0.400	0.0000	0.00000	94.10000	0.00005	0	0.001	0.00121	0	U
0.422	0.0001	0.00000	94.10001	0.00018	0	0.008	0.00771	0	U
0.444	0.0004	0.00000	94.10001	0.00048	0	0.030	0.02964	0	U
0.467	0.0009	0.00000	94.10004	0.00101	0	0.084	0.08387	0	U
0.489	0.0017	0.00000	94.10011	0.00181	0	0.191	0.19142	0	U
0.511	0.0028	0.00000	94.10020	0.00252	0	0.374	0.37350	0	U
0.533	0.0041	0.00000	98.00009	0.00277	0	0.649	0.59524	0	U/P
0.556	0.0055	0.00000	98.00036	0.00278	0	1.030	0.81712	0	U/P
0.578	0.0070	0.00000	98.00082	0.00278	0	1.528	1.03925	0	U/P
0.600	0.0085	0.00000	98.00147	0.00278	0	2.146	1.26174	0	U/P
0.622	0.0100	0.00000	98.00233	0.00279	0	2.887	1.48471	0	U/P
0.644	0.0116	0.00000	98.00340	0.00280	0	3.751	1.70826	0	U/P
0.667	0.0131	0.00000	98.00466	0.00281	0	4.738	1.93250	0	U/P
0.689	0.0146	0.00000	98.00612	0.00282	0	5.845	2.15754	0	U/P
0.711	0.0161	0.00000	98.00777	0.00283	0	7.072	2.38348	0	U/P
0.733	0.0175	0.00000	98.00959	0.00284	0	8.414	2.61042	0	U/P
0.756	0.0189	0.00000	98.01160	0.00286	0	9.871	2.83846	0	U/P
0.778	0.0203	0.00000	98.01376	0.00287	0	11.437	3.06769	0	U/P
0.800	0.0216	0.00000	98.01609	0.00289	0	13.112	3.29820	0	U/P
0.822	0.0229	0.00000	98.01857	0.00291	0	14.891	3.53006	0	U/P
0.844	0.0241	0.00000	98.02119	0.00293	0	16.771	3.76336	0	U/P
0.867	0.0254	0.00000	98.02396	0.00295	0	18.751	3.99818	0	U/P
0.889	0.0265	0.00000	98.02686	0.00297	0	20.826	4.23459	0	U/P
0.911	0.0277	0.00000	98.02987	0.00299	0	22.995	4.47264	0	U/P
0.933	0.0288	0.00000	98.03300	0.00301	0	25.254	4.71242	0	U/P
0.956	0.0299	0.00000	98.03625	0.00303	0	27.601	4.95397	0	U/P
0.978	0.0309	0.00000	98.03960	0.00305	0	30.034	5.19736	0	U/P
1.000	0.0320	0.00000	98.04304	0.00308	0	32.550	5.44263	0	U/P
1.022	0.0335	0.00000	98.04661	0.00310	0	35.168	5.68987	0	U/P
1.044	0.0363	0.00000	98.05040	0.00313	0	37.960	5.93918	0	U/P
1.067	0.0412	0.00000	98.05461	0.00316	0	41.058	6.19080	0	U/P
1.089	0.0478	0.00000	98.05946	0.00320	0	44.617	6.44508	0	U/P
1.111	0.0552	0.00000	98.06506	0.00324	0	48.740	6.70242	0	U/P
1.133	0.0626	0.00000	98.07143	0.00328	0	53.452	6.96326	0	U/P
1.156	0.0693	0.00000	98.07849	0.00334	0	58.726	7.22797	0	U/P
1.178	0.0749	0.00000	98.08614	0.00339	0	64.495	7.49687	0	U/P
1.200	0.0797	0.00000	98.09422	0.00345	0	70.678	7.77020	0	U/P
1.222	0.0837	0.00000	98.10263	0.00350	0	77.214	8.04814	0	U/P
1.244	0.0874	0.00000	98.11131	0.00356	0	84.060	8.33083	0	U/P
1.267	0.0907	0.00000	98.12019	0.00363	0	91.182	8.61840	0	U/P
1.289	0.0936	0.00000	98.12923	0.00369	0	98.553	8.91093	0	U/P
1.311	0.0963	0.00000	98.13840	0.00375	0	106.151	9.20848	0	U/P
1.333	0.0988	0.00000	98.14767	0.00381	0	113.958	9.51111	0	U/P
1.356	0.1012	0.00000	98.15702	0.00388	0	121.959	9.81886	0	U/P
1.378	0.1034	0.00000	98.16641	0.00394	0	130.142	10.13177	0	U/P
1.400	0.1055	0.00000	98.17586	0.00401	0	138.496	10.44985	0	U/P
1.422	0.1074	0.00000	98.18533	0.00407	0	147.011	10.77312	0	U/P
1.444	0.1093	0.00000	98.19481	0.00414	0	155.678	11.10158	0	U/P
1.467	0.1110	0.00000	98.20430	0.00420	0	164.491	11.43525	0	U/P
1.489	0.1127	0.00000	98.21379	0.00427	0	173.443	11.77413	0	U/P
1.511	0.1144	0.00000	98.22327	0.00433	0	182.526	12.11820	0	U/P
1.533	0.1159	0.00000	98.23274	0.00440	0	191.736	12.46746	0	U/P
1.556	0.1174	0.00000	98.24220	0.00446	0	201.066	12.82191	0	U/P
1.578	0.1188	0.00000	98.25163	0.00453	0	210.510	13.18152	0	U/P
1.600	0.1201	0.00000	98.26103	0.00459	0	220.065	13.54629	0	U/P
1.622	0.1214	0.00000	98.27040	0.00466	0	229.726	13.91620	0	U/P

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Detailed Results (cont,d.) :: Scenario 45 :: 100YR-24HR

Elapsed Time	Instantaneous Inflow Rate	Outside Recharge	Stage Elevation	Infiltration Rate	Combined Instantaneous Discharge	Cumulative Inflow	Cumulative Infiltration	Combined Cumulative	
23.022	0.1777	0.00000	102.00860	0.02637	.1553771	56052.730	1835.49700	40971.87	U/P
23.044	0.1777	0.00000	102.00850	0.02637	.1548933	56066.950	1837.60700	40984.28	U/P
23.067	0.1776	0.00000	102.00850	0.02637	.1544626	56081.160	1839.71600	40996.66	U/P
23.089	0.1776	0.00000	102.00850	0.02637	.1540767	56095.370	1841.82500	41009	U/P
23.111	0.1775	0.00000	102.00840	0.02636	.1537292	56109.570	1843.93400	41021.31	U/P
23.133	0.1775	0.00000	102.00840	0.02636	.1534157	56123.770	1846.04400	41033.59	U/P
23.156	0.1774	0.00000	102.00830	0.02636	.1531333	56137.970	1848.15300	41045.86	U/P
23.178	0.1774	0.00000	102.00830	0.02636	.1528796	56152.160	1850.26200	41058.1	U/P
23.200	0.1774	0.00000	102.00830	0.02636	.1526529	56166.350	1852.37100	41070.32	U/P
23.222	0.1773	0.00000	102.00830	0.02636	.1524511	56180.540	1854.48000	41082.52	U/P
23.244	0.1773	0.00000	102.00830	0.02636	.1522718	56194.730	1856.58900	41094.71	U/P
23.267	0.1773	0.00000	102.00820	0.02636	.1521131	56208.910	1858.69800	41106.89	U/P
23.289	0.1773	0.00000	102.00820	0.02636	.1519727	56223.100	1860.80700	41119.05	U/P
23.311	0.1773	0.00000	102.00820	0.02636	.1518488	56237.290	1862.91600	41131.2	U/P
23.333	0.1773	0.00000	102.00820	0.02636	.1517396	56251.470	1865.02600	41143.35	U/P
23.356	0.1773	0.00000	102.00820	0.02636	.1516435	56265.660	1867.13500	41155.48	U/P
23.378	0.1773	0.00000	102.00820	0.02636	.151559	56279.840	1869.24400	41167.61	U/P
23.400	0.1773	0.00000	102.00820	0.02636	.1514848	56294.030	1871.35300	41179.73	U/P
23.422	0.1773	0.00000	102.00820	0.02636	.1514196	56308.210	1873.46200	41191.85	U/P
23.444	0.1773	0.00000	102.00820	0.02636	.1513625	56322.400	1875.57100	41203.96	U/P
23.467	0.1773	0.00000	102.00820	0.02636	.1513124	56336.580	1877.68000	41216.07	U/P
23.489	0.1773	0.00000	102.00810	0.02636	.1512685	56350.770	1879.78900	41228.17	U/P
23.511	0.1773	0.00000	102.00810	0.02636	.1512302	56364.950	1881.89800	41240.27	U/P
23.533	0.1773	0.00000	102.00810	0.02636	.1511966	56379.140	1884.00700	41252.37	U/P
23.556	0.1773	0.00000	102.00810	0.02636	.1511674	56393.320	1886.11600	41264.46	U/P
23.578	0.1773	0.00000	102.00810	0.02636	.1511419	56407.510	1888.22500	41276.55	U/P
23.600	0.1773	0.00000	102.00810	0.02636	.1511196	56421.700	1890.33400	41288.64	U/P
23.622	0.1773	0.00000	102.00810	0.02636	.1511002	56435.880	1892.44300	41300.73	U/P
23.644	0.1773	0.00000	102.00810	0.02636	.1510834	56450.070	1894.55200	41312.82	U/P
23.667	0.1773	0.00000	102.00810	0.02636	.1510688	56464.250	1896.66100	41324.91	U/P
23.689	0.1773	0.00000	102.00810	0.02636	.1510562	56478.440	1898.77000	41336.99	U/P
23.711	0.1773	0.00000	102.00810	0.02636	.1510452	56492.630	1900.87900	41349.07	U/P
23.733	0.1773	0.00000	102.00810	0.02636	.1510358	56506.810	1902.98800	41361.16	U/P
23.756	0.1773	0.00000	102.00810	0.02636	.1510277	56521.000	1905.09700	41373.24	U/P
23.778	0.1773	0.00000	102.00810	0.02636	.1510207	56535.190	1907.20600	41385.32	U/P
23.800	0.1773	0.00000	102.00810	0.02636	.1510148	56549.380	1909.31500	41397.4	U/P
23.822	0.1773	0.00000	102.00810	0.02636	.1510097	56563.560	1911.42400	41409.48	U/P
23.844	0.1773	0.00000	102.00810	0.02636	.1510054	56577.750	1913.53300	41421.57	U/P
23.867	0.1773	0.00000	102.00810	0.02636	.1510018	56591.930	1915.64200	41433.64	U/P
23.889	0.1773	0.00000	102.00810	0.02636	.1509988	56606.120	1917.75100	41445.73	U/P
23.911	0.1773	0.00000	102.00810	0.02636	.1509963	56620.310	1919.86000	41457.8	U/P
23.933	0.1773	0.00000	102.00810	0.02636	.1509943	56634.500	1921.96900	41469.89	U/P
23.956	0.1773	0.00000	102.00810	0.02636	.1509927	56648.680	1924.07800	41481.96	U/P
23.978	0.1773	0.00000	102.00810	0.02636	.1509915	56662.870	1926.18700	41494.04	U/P
24.000	0.1773	0.00000	102.00810	0.02636	.1509905	56677.060	1928.29600	41506.13	U/P
24.022	0.1747	0.00000	102.00810	0.02636	.1508266	56691.140	1930.40500	41518.2	U/P
24.044	0.1664	0.00000	102.00800	0.02636	.1500113	56704.790	1932.51400	41530.23	U/P
24.067	0.1489	0.00000	102.00780	0.02636	.1476855	56717.400	1934.62200	41542.14	U/P
24.089	0.1242	0.00000	102.00730	0.02635	.142913	56728.320	1936.73100	41553.76	U/P
24.111	0.0976	0.00000	102.00650	0.02634	.1351701	56737.190	1938.83900	41564.89	U/P
24.133	0.0729	0.00000	102.00550	0.02634	.1243785	56744.010	1940.94600	41575.27	U/P
24.156	0.0521	0.00000	102.00440	0.02633	.1106966	56749.010	1943.05200	41584.67	U/P
24.178	0.0372	0.00000	102.00320	0.02631	9.446572E-02	56752.580	1945.15800	41592.88	U/P
24.200	0.0269	0.00000	102.00210	0.02631	7.602148E-02	56755.140	1947.26300	41599.7	U/P
24.222	0.0194	0.00000	102.00110	0.02630	5.528751E-02	56757.000	1949.36700	41604.95	U/P
24.244	0.0139	0.00000	102.00030	0.02629	.031089	56758.330	1951.47000	41608.4	U/P
24.267	0.0100	0.00000	101.99990	0.02628	0	56759.290	1953.57300	41609.65	U/P
24.289	0.0071	0.00000	101.99970	0.02628	0	56759.970	1955.67600	41609.65	U/P
24.311	0.0051	0.00000	101.99940	0.02628	0	56760.460	1957.77800	41609.65	U/P
24.333	0.0036	0.00000	101.99910	0.02628	0	56760.810	1959.88100	41609.65	U/P
24.356	0.0026	0.00000	101.99880	0.02628	0	56761.060	1961.98300	41609.65	U/P
24.378	0.0018	0.00000	101.99840	0.02628	0	56761.230	1964.08500	41609.65	U/P
24.400	0.0012	0.00000	101.99810	0.02627	0	56761.360	1966.18700	41609.65	U/P
24.422	0.0008	0.00000	101.99770	0.02627	0	56761.440	1968.28900	41609.65	U/P
24.444	0.0006	0.00000	101.99740	0.02627	0	56761.490	1970.39100	41609.65	U/P
24.467	0.0003	0.00000	101.99700	0.02627	0	56761.530	1972.49200	41609.65	U/P
24.489	0.0002	0.00000	101.99660	0.02627	0	56761.550	1974.59400	41609.65	U/P
24.511	0.0001	0.00000	101.99620	0.02627	0	56761.550	1976.69500	41609.65	U/P
24.533	0.0000	0.00000	101.99590	0.02626	0	56761.560	1978.79600	41609.65	U/P
24.556	0.0000	0.00000	101.99550	0.02626	0	56761.560	1980.89700	41609.65	U/P
24.578	0.0000	0.00000	101.99510	0.02626	0	56761.560	1982.99800	41609.65	U/P
48.578	0.0000	0.00000	101.59510	0.02441	0	56761.560	4172.09300	41609.65	U/P
72.578	0.0000	0.00000	101.19500	0.02251	0	56761.560	6201.00300	41609.65	U/P
96.578	0.0000	0.00000	100.79490	0.02031	0	56761.560	8062.00900	41609.65	U/P

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Detailed Results (cont,d.) :: Scenario 45 :: 100YR-24HR

Elapsed Time	Instantaneous Inflow Rate	Outside Recharge	Stage Elevation	Infiltration Rate	Combined Instantaneous Discharge	Cumulative Inflow	Cumulative Infiltration	Combined Cumulative	
120.578	0.0000	0.00000	100.39480	0.01781	0	56761.560	9710.69300	41609.65	U/P
144.578	0.0000	0.00000	99.99469	0.02491	0	56761.560	11139.95000	41609.65	U/P
168.578	0.0000	0.00000	98.89920	0.02074	0	56761.560	14015.86000	41609.65	U/S
192.578	0.0000	0.00000	98.45715	0.00642	0	56761.560	14723.88000	41609.65	S
216.578	0.0000	0.00000	98.04295	0.00248	0	56761.560	15124.87000	41609.65	S
240.578	0.0000	0.00000	97.63743	0.00016	0	56761.560	15151.91000	41609.65	S
264.578	0.0000	0.00000	97.34873	0.00000	0	56761.560	15151.91000	41609.65	S
288.578	0.0000	0.00000	97.12772	0.00000	0	56761.560	15151.91000	41609.65	S
312.578	0.0000	0.00000	96.95024	0.00000	0	56761.560	15151.91000	41609.65	S
336.578	0.0000	0.00000	96.80300	0.00000	0	56761.560	15151.91000	41609.65	S
360.578	0.0000	0.00000	96.67792	0.00000	0	56761.560	15151.91000	41609.65	S
408.578	0.0000	0.00000	96.48411	0.00000	0	56761.560	15151.91000	41609.65	S
456.578	0.0000	0.00000	96.32816	0.00000	0	56761.560	15151.91000	41609.65	S
504.578	0.0000	0.00000	96.19906	0.00000	0	56761.560	15151.91000	41609.65	S
552.578	0.0000	0.00000	96.08983	0.00000	0	56761.560	15151.91000	41609.65	S
600.578	0.0000	0.00000	95.99580	0.00000	0	56761.560	15151.91000	41609.65	S
648.578	0.0000	0.00000	95.91368	0.00000	0	56761.560	15151.91000	41609.65	S
696.578	0.0000	0.00000	95.84113	0.00000	0	56761.560	15151.91000	41609.65	S
744.578	0.0000	0.00000	95.77640	----	----	56761.560	15151.91000	41609.65	N.A.

1/2 Volume recovery between day 3 and day 4 after storm
Full Volume recovery between day 8 and 9 after storm

PONDS Version 3.3.0276
Retention Pond Recovery - Refined Method
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Summary of Results :: Scenario 45 :: 100YR-24HR

	Time (hours)	Stage (ft datum)	Rate (ft ³ /s)	Volume (ft ³)
Stage				
Minimum	0.000	94.10		
Maximum	12.067	102.47		
Inflow				
Rate - Maximum - Positive	12.000		1.7125	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.533			56761.6
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			56761.6
Infiltration				
Rate - Maximum - Positive	12.044		0.0300	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	240.578			15151.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			15151.9
Combined Discharge				
Rate - Maximum - Positive	12.067		1.6198	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.267			41609.7
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			41609.7
Discharge Structure 1 - simple orifice				
Rate - Maximum - Positive	12.067		1.1480	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	24.267			37433.9
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			37433.9
Discharge Structure 2 - simple orifice				
Rate - Maximum - Positive	12.067		0.3121	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	16.089			3810.8
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			3810.8
Discharge Structure 3 - simple weir				
Rate - Maximum - Positive	12.067		0.1598	
Rate - Maximum - Negative	None		None	
Cumulative Volume - Maximum Positive	12.644			365.0
Cumulative Volume - Maximum Negative	None			None
Cumulative Volume - End of Simulation	744.578			365.0
Pollution Abatement:				
36 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.
72 Hour Stage and Infiltration Volume	N.A.	N.A.		N.A.



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REPORT OF GEOTECHNICAL CONSULTING SERVICES

**VyStar Credit Union
Tax Parcel: 03053-001-004
Alachua, Alachua County, Florida**

**UES Project No. 0230.1600007.0000
UES Report No. 1308974**

Prepared For:

**VyStar Credit Union
4949 Blanding Boulevard
Jacksonville, FL 32210**

Prepared by:

**Universal Engineering Sciences, Inc.
4475 SW 35th Terrace
Gainesville, Florida 32608
(352) 372-3392**

February 17, 2016

Consultants in: Geotechnical Engineering • Environmental Sciences • Construction Materials Testing
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Consultants in: Geotechnical Engineering • Environmental Engineering
Construction Materials Testing • Threshold Inspection • Private Provider Inspection

February 17, 2016

VyStar Credit Union
4949 Blanding Boulevard
Jacksonville, FL 32210

Attention: Mr. Brian J. Kitchens

Reference: **Report of Geotechnical Consulting Services**
VyStar Credit Union
Tax Parcel: 03053-001-004
Alachua, Alachua County, Florida
UES Project No. 0230.1600007.0000 UES Report No. 1308974

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• Tampa, FL
• West Palm Beach, FL

Dear Mr. Kitchens:

Universal Engineering Sciences, Inc. (UES) has completed the geotechnical engineering services for the subject project in Alachua, Alachua County, Florida. This geotechnical Report is submitted in satisfaction of the contracted scope of services as summarized in UES Proposal No. 1304695, dated January 25, 2016. This exploration was performed in accordance with generally accepted soil and foundation engineering practices.

The following report presents the results of our field explorations and a geotechnical engineering interpretation of those results with respect to the project characteristics provided to us. Included are: recommendations for site preparation procedures, foundation design and construction, and site preparation recommendations, pavement design and stormwater management facilities

We appreciate the opportunity to have assisted you on this phase of the project and look forward to a continued association. Please do not hesitate to contact our office if you should have any questions, or to assist your office with the remaining phases of project design and construction.

Respectfully submitted,
UNIVERSAL ENGINEERING SCIENCES, INC.
Certificate of Authorization 549

Timothy Kwiatkowski, EI
Staff Geotechnical Engineer

Eduardo Suarez, P.E.
Senior Geotechnical Engineer
Florida P.E. No. 60272
Date: 2-17-16

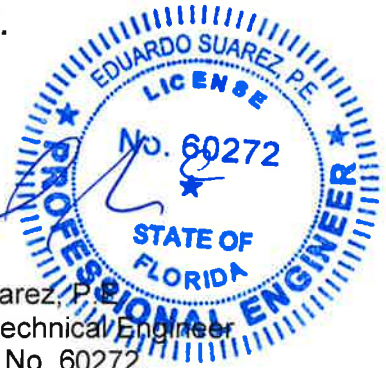


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EXECUTIVE SUMMARY

We have prepared this executive summary solely to provide a general overview. Do not rely on this executive summary for any purpose except that for which it was prepared. Rely on the full report for information about findings, recommendations, and other concerns.

Project Location and Description

We understand that this project will consist of building a new VyStar Credit Union, located at tax parcel: 03053-001-004 in Alachua, Alachua County, Florida. We have been provided with a conceptual site plan showing the location of the buildings, parking areas and associated stormwater management system by Newkirk Engineering. The proposed project will consist of constructing a one story bank with a drive through canopy area and with surrounding parking/drive areas. The concept plan indicates that the building will be approximately 4,121 square feet.

Soil and Groundwater Conditions

The soil test borings within the building footprint generally encountered very loose to medium dense silty sand to silty-clayey [SM/SM-SC] to depths of 12 to 13.5 feet followed by clayey sand to sandy clay [SC/CH] to the boring termination depths of 20 feet below surface.

The stormwater pond borings generally encountered silty sand [SM] to depths of 11 to 12 feet below the ground surface followed by clayey sand and sandy clay [SC/CH] to the boring termination depths of 20 feet below the ground surface.

The soil borings within the parking/driveway areas generally encountered silty sand to silty-clayey sand [SM/SM-SC] to boring termination depths of 6 feet.

The groundwater level was not encountered in any of the soil test borings upon work completion. Fluctuations of the groundwater levels should be expected to occur seasonally as a result of rainfall, surface runoff, and nearby construction activities.

Site Preparation and Foundation Design

Based on our exploration, the primary geotechnical consideration for the design and construction of the proposed building is the presence of loose sandy layers in the shallow subsurface soil profile, and near-surface silty-clayey sand soils that may require stringent moisture control for compaction. Subsurface sandy soils will undergo immediate settlements upon application of surface loads, and this could be a result of both fill placement for building pad construction and building construction. In light of the above, it becomes important to compact the subgrade soils as much as possible prior to both building pad fill placement and foundation construction. Following completion of the recommend geotechnical site preparation and building pad preparation activities, the proposed structures may be supported on shallow foundation systems designed with a maximum average soil bearing pressure of 2,500 pounds per square foot (psf).

1.0 INTRODUCTION

1.1 GENERAL

In this report, we present the results of the subsurface exploration of the proposed VyStar Credit Union located in Alachua, Florida. We have divided this report into the following sections:

- SCOPE OF SERVICES - Defines what we did
- FINDINGS - Describes what we encountered
- RECOMMENDATIONS - Describes what we encourage you to do
- LIMITATIONS - Describes the restrictions inherent in this report
- APPENDICES - Presents support materials referenced in this report

2.0 SCOPE OF SERVICES

2.1 PROJECT DESCRIPTION

We understand that this project will consist of building a new VyStar Credit Union, located at tax parcel: 03053-001-004 in Alachua, Alachua County, Florida. We have been provided with a conceptual site plan showing the location of the buildings, parking areas and associated stormwater management system by Newkirk Engineering. The proposed project will consist of constructing a one story bank with a drive through canopy area and with surrounding parking/drive areas. The concept plan indicates that the building will be approximately 4,121 square feet.

Our office was not provided with Foundation Plans or any other construction-related information other than that discussed herein. Considering the limitations stated above and based on prior experience with structures of this type, we assumed the following structural loading conditions: ground floor slab loads not exceeding 100 psf, a maximum of 3 kips per linear feet (klf) on wall footings, and a maximum load of 50 kips on individual footings. We understand the building construction will require nominal fill (2 feet or less) placement for leveling of the proposed building footprint and building pad construction.

If our understandings and assumptions of project issues are incorrect our conclusions and recommendations will not be considered valid until we have had the opportunity to review all pertinent issues. The above constitutes all of the project information provided to our office at the time of this Report preparation.

We note that, our authorized scope of services and this Report do not address any other project elements, such as earth retaining walls, sidewalks, or slope stability issues that may be part of the overall project site plan. Since other site improvements could have detrimental effects on the performance of a foundation system at this site, UES, or other qualified geotechnical consultant, should be consulted to review the entire site development plan and conduct additional services as required to minimize any impact of associated improvements on foundation performance.

2.2 PURPOSE

The purposes of this exploration were:

- To explore the prevailing site subsurface conditions within the proposed building footprint, parking area, and proposed stormwater management system,

- To perform a series of laboratory tests on selected subsurface soil specimens, recovered from the field exploration program to assist with engineering soil classifications,
- To evaluate the subsurface response to anticipated structural loadings and discuss the groundwater level characteristics,
- To evaluate and discuss geotechnical issues deemed relevant to the proposed on-site building construction,
- To prepare building foundation design and construction recommendations,
- To discuss technical suitability of subgrade soils for pavement section support and provide parameters for pavement design,
- Recommend appropriate subsurface soil design parameter values for the design of the on-site stormwater management area.

This report presents an evaluation of site conditions on the basis of traditional geotechnical procedures for site characterization. The recovered samples were not examined, either visually or analytically, for chemical composition or environmental hazards. Universal Engineering Sciences would be pleased to perform these services, if you desire.

Our exploration was confined to the zone of soil likely to be stressed by the proposed construction. Our work did not address the potential for surface expression of deep geological conditions such as sinkholes. This evaluation requires a more extensive range of field services than performed in this study. We will be pleased to conduct an exploration to evaluate the probable effect of the regional geology upon the proposed construction, if you desire.

2.3 FIELD EXPLORATION

The field geotechnical testing activities were started and completed on February 5, 2016. Field tests for the geotechnical study included three (3) soil test borings to depths of 25 feet below the ground surface within the vicinity of the proposed building area, two (2) soil test borings to a depth of 20 feet below the ground surface within the vicinity of the stormwater management area, and two (2) soil test borings to a depth of 6 feet below the ground surface within the proposed parking lot. The actual test locations shown are approximate and were staked in the field by other. All boreholes were backfilled upon field work completion. The soil test boring locations are shown in the attached Boring Location Plan drawing.

Representative portions of the subsurface soil samples recovered were transported to our Gainesville soils laboratory. The soil samples were visually classified by an experienced Geotechnical Engineer. It should be noted that soil conditions might vary between soil test boring locations, and between the subsurface soil strata interfaces which have been shown on the Boring Logs. The soil test boring data reflect information from the specific test locations only.

2.3.1 Standard Penetration Test (SPT) Borings

Penetration tests were performed in accordance with ASTM Procedure D-1586, Penetration Test and Split-Barrel Sampling of Soils. This test procedure generally involves driving a 1.4-inch I.D. split-tube sampler into the soil profile in six inch increments for a minimum distance of 18 inches using a 140-pound hammer free-falling 30 inches. The total number of blows required to drive the sampler the second and third 6-inch increments is designated as the N-value, and provides an indication of in-place soil strength, density and consistency.

2.3.2 Auger Borings

Auger borings were performed in accordance with ASTM Procedure D-1452, *Standard Practice for Soil Investigation and Sampling by Auger Borings*. This test procedure advances a solid stem auger into the soil in a manner which reduces soil disturbance. At the selected depth, the auger advance and rotation was stopped, and the auger flight retracted from the borehole. The in-place soil profile was determined by visual inspection of the soils recovered from the auger flights.

2.4 LABORATORY TESTING

2.4.1 Visual Classification

The soil samples recovered from the soil test borings were returned to our laboratory where an engineer visually reviewed the field descriptions in accordance with ASTM D-2488. Using the results of the laboratory tests, our visual examination, and our review of the field boring logs we classified the soil borings in accordance with the current Unified Soil Classification System (USCS). We then selected representative soil samples for laboratory testing.

2.4.2 Index Testing

Laboratory testing was performed on selected samples of the soils encountered in the field exploration to better define soil composition and properties. Testing was performed in accordance to ASTM procedures and included moisture content (ASTM D-2216), Percent Passing No. 200 Sieve (ASTM D-1140), and permeability tests (ASTM D-2434). The test results have been presented on the attached Boring Logs.

3.0 FINDINGS

3.1 REGIONAL GEOLOGY

The general geology of central Alachua County is characterized by a surface veneer of Pleistocene and Pliocene sands and sandy clays overlying the Miocene age Hawthorn Group, a highly variable mixture of interbedded quartz sands, clays, carbonates, pebbles and grains occurring in thickness of up to 150 feet. Underlying the Hawthorn Group is the upper Eocene age Ocala Formation, occurring as a uniform limestone, which is approximately 200 feet thick and overlies the Eocene age Avon Park Formation, which can be up to 500 feet thick. Both the Ocala and Hawthorn Formations dip to the northeast by approximately one degree.

The general hydrogeology of Alachua County consists of three aquifer systems; a surficial aquifer, an intermediate aquifer, and the Floridan aquifer system. The surficial aquifer exists as an unconfined water table situated over the impermeable Hawthorn Group and is usually a subdued reflection of surface topography. The intermediate aquifer system includes all material that collectively retards the exchange of water between the overlying surficial aquifer system and the underlying Floridan aquifer system. Water in this system is contained under confined conditions.

The Floridan aquifer system is a thick carbonate sequence that functions regionally as a water-yielding hydraulic unit. The direction of shallow groundwater flow is generally toward surface water bodies. The surface of the upper Floridan Aquifer in the general project site area is estimated in the elevation range of +35 to +40 feet NGVD.

3.2 GENERAL AREA SOIL INFORMATION

The United States Department of Agriculture (USDA) *Soil Survey of Alachua County, Florida* describes the near-surface soil profile in the project parcel as Fort Meade sand, 0-5% slopes, and Kendrick soils, 2-5% slopes. The Fort Meade sand soils are characterized as nearly level to gently sloping, and excessively drained with a normal seasonal high water level greater than 6 feet below ground surface. Relevant engineering index properties for Fort Meade sand soils have been summarized below in Table 1.

Table 1 – Relevant Engineering Index Properties of Fort Meade sand Soils, 0-5% Slopes						
Depth, Inches	Texture	Classification	% Passing #200 Sieve	Plasticity Index	Shrink-swell Potential	Permeability
0 - 14	Fine sand	SM	13 – 25	NP	Low	6.0 - 20 in/hr
14 - 85	Loamy sand, loamy fine sand,	SM	13 – 25	NP	Low	6.0 - 20 in/hr

The Kendrick sand soils, 2-5% slopes, are characterized as gently sloping, and well drained with a normal seasonal high water level greater than 6 feet below ground surface. Relevant engineering index properties for Kendrick sand soils, 2-5% slopes, have been summarized below in Table 2.

Table 2 – Relevant Engineering Index Properties of Kendrick Soils, 2-5 % slopes						
Depth, Inches	Texture	Classification	% Passing #200 Sieve	Plasticity Index	Shrink-swell Potential	Permeability
0 - 26	Sand	SP-SM	5 – 12	NP	Low	6.0 - 20 in/hr
26 - 31	Sandy clay loam, fine sandy loam	SM-SC, SC	25 – 35	4 – 18	Low	0.6 – 6.0 in/hr
31 - 73	Sandy clay loam	SC	25 - 45	11 - 20	Low	0.06 – 2.0 in/hr
73 - 90	Sandy clay loam	SM-SC, SC	25 - 35	4 - 18	Low	< 0.0 – 2.0 in/hr

3.3 SURFACE CONDITIONS

UES engineering personnel visited the project site prior to and during the performance of the field portion of this geotechnical study. Our on-site observations have been summarized as follows. At the time of our exploration, the project parcel was undeveloped and clear. Exposed surface soils were observed to be sandy dry. The above constitutes all of the project information provided to our office at the time of this report preparation.

3.4 SUBSURFACE CONDITIONS

The soil test borings performed beneath the proposed structures were reviewed to evaluate the subsurface soil strata lateral continuity and uniformity, both parameters that would have an impact in foundation system selection and performance. Soil classifications and descriptions for this geotechnical study are based both on the results of the laboratory soil testing programs and on visual examinations of soil specimens by the Geotechnical Engineer. The subsurface soil conditions encountered in the soil test borings have been summarized in the attached Boring Logs and described below.

The soil test borings within the building footprint generally encountered very loose to medium dense silty sand to silty-clayey [SM/SM-SC] to depths of 12 to 13.5 feet followed by clayey sand to sandy clay [SC/CH] to the boring termination depths of 20 feet below surface.

The stormwater pond borings generally encountered silty sand [SM] to depths of 11 to 12 feet below the ground surface followed by clayey sand and sandy clay [SC/CH] to the boring termination depths of 20 feet below the ground surface.

The soil borings within the parking/driveway areas generally encountered silty sand to silty-clayey sand [SM/SM-SC] to boring termination depths of 6 feet.

3.5 GROUNDWATER DEPTH

The groundwater level was not encountered in any of the soil test borings upon work completion. Fluctuations of the groundwater levels should be expected to occur seasonally as a result of rainfall, surface runoff, and nearby construction activities.

3.6 LABORATORY TESTING

The soil samples recovered from the field exploration program were placed in plastic containers and returned to our soils laboratory, where the Geotechnical Engineer visually examined and classified the samples. Laboratory soil tests are performed to aid in the classification of the soils, and to help in the evaluation of engineering characteristics of the soils. Representative soil samples were selected for moisture content and percent fines determination. The test results have been presented on the attached Boring Logs and summarized in Table 3.

3.6.1 Percent Passing No. 200 Sieve

Certain recovered soil samples were selected to determine the percentage of fines. In these tests the soil sample was dried and washed over a U.S. No. 200 mesh sieve. The percent of soil by weight passing the sieve was the percentage of fines or portion of the sample in the silt and clay size range. This test was conducted in accordance with ASTM Procedure D-1140, *Standard Test Methods for Amount of Material in Soils Finer than the No. 200 Sieve*.

3.6.2 Moisture Content

Certain recovered soil samples were selected to determine their moisture content. The moisture content was the ratio expressed as a percentage of the weight of water in a given mass of soil to the weight of the solid particles. These tests were conducted in accordance with ASTM Procedure D-2216, Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock.

3.6.3 Permeability Testing

Representative soil samples were selected to determine the permeability rate of the soils. Constant head permeability tests were performed on representative samples of the near surface soils from the proposed stormwater management areas. These tests were conducted following the concepts outlined in ASTM D-2434, *Standard Test Method for Permeability of Granular Soils (Constant Head)*.

Table 3 - Laboratory Soil Test Results				
Test Location	Sample Depth	Type of Test	Results	Soil Description
B-3	2.5 feet	% Finer #200	22 %	Silty-Clayey Sand
		Moisture Content	13 %	
B-4	4 feet	% Finer #200	16 %	Silty Sand
		Moisture Content	6 %	
		Permeability	1.6 ft/day	
B-5	5.5 feet	% Finer #200	18 %	Silty Sand
		Moisture Content	10 %	
		Permeability	0.9 ft/day	
B-5	8.5 feet	% Finer #200	17 %	Silty Sand
		Moisture Content	9 %	
A-6	0.5 feet	% Finer #200	22 %	Silty-Clayey Sand
		Moisture Content	11 %	
A-7	1 feet	% Finer #200	26 %	Clayey Sand
		Moisture Content	14 %	

4.0 RECOMMENDATIONS

4.1 GENERAL

The following recommendations are made based upon a review of the attached soil test data, and experience with similar projects and subsurface conditions. If plans change from those discussed previously, we request the opportunity to review and possibly amend our recommendations with respect to those changes. Additionally, if subsurface conditions are encountered during construction, which were not encountered in the borings, report those conditions immediately to us for observation and recommendations. In this section of the report, we present our recommendations for groundwater control, building foundations, site preparation, and construction related services.

4.2 GEOTECHNICAL CONSIDERATIONS

Recommendations for foundation design are dependent, among other factors, on the amount of total settlement and more importantly differential settlement between various structural elements that can be safely tolerated by the structure.

If the anticipated total and differential settlements estimated herein exceed the tolerable limits as set forth by the Structural Engineer, we should be so advised so that we may consider other foundation system alternatives. It should further be noted that the estimated magnitudes of total and differential settlements are dependent on foundation loading conditions among other factors, and that we have made certain assumptions regarding those loading conditions in this Report. If unusually heavy foundation loading conditions are expected for some of the proposed project elements, or if our estimates vary significantly from actual anticipated conditions, we should be so advised so that we may revisit our engineering evaluations and foundation settlement estimates.

Based on our exploration, the primary geotechnical consideration for the design and construction of the proposed building is the presence of loose sandy layers in the shallow subsurface soil profile, and near-surface silty-clayey sand soils that may require stringent moisture control for compaction. Subsurface sandy soils will undergo immediate settlements upon application of surface loads, and this could be a result of both fill placement for building pad construction and building construction. In light of the above, it becomes important to compact the subgrade soils as much as possible prior to both building pad fill placement and foundation construction.

Our local experience has found that clay layers are often laterally discontinuous, which makes it more difficult to ascertain their presence on a given project parcel with a few soil test borings. If at the time of construction the contractor encounters or suspects that clay soils may be near the grade slab or foundation bearing elevations, UES should be contacted to prepare appropriate recommendations. If encountered, these shallow deposits of clay soils must be addressed through site grading, over-excavation and replacement, site drainage and stiffened foundation.

The silty-clayey sand soils may require stringent moisture control during compaction, particularly during rainy periods. Footings that are excavated through the upper layer of compacted sand fill soils into the native clayey sands, should be visually inspected and tested to verify the in-place density and condition of the subgrade bearing soils.

We recommend that we be provided the opportunity to review the project plans and specifications to confirm that our recommendations have been properly interpreted and implemented. If the structural loadings or the building location changes significantly from those discussed previously, we request the opportunity to review and possibly amend our recommendations with respect to those changes. The discovery of any subsurface conditions during construction which deviate from those encountered in the borings should be reported to us immediately for observation, evaluation, and recommendations.

4.3 GROUNDWATER CONSIDERATIONS

The groundwater level will fluctuate seasonally depending upon local rainfall. The rainy seasons in North Florida are normally between June and September and December and February. Based upon our review of regional hydrogeology and the Alachua County Soil Survey, we estimate the normal seasonal high groundwater level will be deeper than 6 feet below the ground surface at the boring locations; however stormwater can perch on the clayey sands when sandy soils are present at the surface. Isolated areas with a transient perched groundwater should be expected to occur. The perched groundwater will be a transient condition, directly related to rainfall, irrigation and site grading.

It should be noted that the normal estimated seasonal high water levels do not provide any assurance that groundwater levels will not exceed these estimated levels during any given year in the future. Should the impediments to surface water drainage be present, or should rainfall intensity and duration, or total rainfall quantities, exceed the normally anticipated rainfall quantities, groundwater levels might once again exceed our seasonal high estimates. We recommend positive drainage be established and maintained on the site during construction. We further recommend permanent measures be constructed to maintain positive drainage from the site throughout the life of the project.

4.4 BUILDING FOUNDATION

Based on the results of our exploration, we consider the subsurface conditions at the site adaptable for support of the proposed structure when constructed on a properly designed conventional shallow foundation system. Provided the foundation design and earthwork recommendations presented herein are followed, we expect the foundation system to perform comparably to any typical structure founded on a conventional foundation system bearing on granular fill soils.

4.4.1 Bearing Pressure

The net maximum allowable soil bearing pressure for use in shallow foundation design should not exceed 2,500 psf. Net bearing pressure is defined as the soil bearing pressure at the foundation bearing level in excess of the natural overburden pressure at that level. The foundations should be designed based on the maximum load which could be imposed by all loading conditions.

In designing foundations for canopies, special consideration must be given to the effect of wind loads on the foundations. The footings should be designed to provide adequate uplift resistance and stability against overturning. Should temporary wind load conditions causes footing edge pressure to exceed 30% or if any portion of the footings is in tension, additional evaluation will be required. For spread footings, bearing pressures up to 30% in excess of nominal bearing pressure is permitted.

4.4.2 Foundation Size

The minimum widths recommended for any isolated column footings and continuous wall footings are 24 inches and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be achieved, these width recommendations should control the minimum size of the foundations.

4.4.3 Bearing Depth

The exterior foundations should bear at a depth of at least 18 inches below the finished exterior grades and the interior foundations should bear at a depth of at least 12 inches below the finish floor elevation to provide confinement to the bearing level soils. It is recommended that stormwater be diverted away from the building exteriors to reduce the possibility of erosion beneath the exterior footings.

4.4.4 Bearing Material

The foundations may bear on either the compacted natural soils or compacted structural fill. The bearing level soils should be densified to at least 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) to a depth of at least **two feet** below the bearing levels. We recommend probing the footing excavation to a depth of 4 feet to check for loose soils. In addition to compaction, the bearing soils must exhibit stability and be free of "pumping" conditions.

4.4.5 Settlement Estimates

Post-construction settlement of the structure will be influenced by several interrelated factors, such as (1) subsurface stratification and strength/compressibility characteristics; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; and (3) site preparation and earthwork construction techniques used by the Contractor. Our settlement estimates for the structure are based on the use of site preparation/earthwork construction techniques as recommended in Section 4.5 of this report. Any deviation from these recommendations could result in an increase in the estimated post-construction settlement of the structure.

Using the recommended allowable bearing pressure, the assumed maximum structural loads and the field data which we have correlated to geotechnical strength and compressibility characteristics of the subsurface soils, we estimate that total settlements of the structures could be on the order of one inch or less.

Differential settlement result from differences in applied bearing pressures and variations in the compressibility characteristics of the subsurface soils. Because of the general uniformity of the subsurface conditions and the recommended site preparation and earthwork construction techniques outlined in Section 4.5, we anticipate that differential settlement of the structure should be within tolerable magnitudes ($\frac{1}{2}$ inch or less).

4.4.6 Ground Floor Slab

The floor slab can be constructed as a slab-on-grade provided the subgrade and subsequent lifts of structural backfill are compacted and tested in accordance with the recommendations included in this report. The floor slab can be designed using a modulus of subgrade reaction (K) of 100 pounds per cubic inch (pci). It is recommended the floor slab bearing soils be covered with an impervious membrane to reduce moisture entry and floor dampness. A 10-mil thick plastic membrane is commonly used for this purpose. Care should be exercised not to tear large sections of the membrane during placement of reinforcing steel and concrete.

4.5 BUILDING/STRUCTURE SITE PREPARATION

We recommend normal, good practice site preparation procedures. These procedures include: stripping/demolition of the site to remove vegetation, and other debris. Following stripping/demolition, the exposed subgrade soils in areas to receive fill or at the subgrade elevation in cut areas should be proof-rolled to detect soft or loose soils. A more detailed synopsis of this work is as follows:

1. Prior to construction, the location of any existing underground utility lines within the construction area should be established. Provisions should then be made to relocate interfering utilities to appropriate locations. It should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may subsequently lead to excessive settlement of the overlying structure.
2. Strip the proposed construction limits of all grass, roots, topsoil, and other deleterious materials within 5 feet beyond the perimeter of the proposed structure and pavement areas. Expect typical stripping at this site to depths of 6 to 12 inches. Deeper clearing and grubbing depths may be encountered in heavily vegetated areas. The building pad area, including 5 feet beyond the perimeter, shall be proof-rolled and tested for compliance to compaction requirements, to a depth of two (2) feet below stripped subgrade, prior to any fill placement.
3. The site should be grade to direct surface water runoff away from the construction areas. Positive drainage of improved areas should be maintained during construction and throughout the design life of the project. If required, perform remedial dewatering prior to any earthwork operations. Dewatering operations scheduled immediately adjacent to existing structure footings should be carefully evaluated for possible impacts to the existing foundation systems. Dewatering systems should not be decommissioned until the excavation is backfilled two feet above the groundwater level at the time of construction. Further, the site should always be graded to prohibit ponding of stormwater runoff.
4. Following site clearing, grubbing and rough grading, the same project areas should be proof-rolled using a large, fully loaded rubber-tired vehicle (dump truck) or similar equipment. Proof-rolling will help locate any surficial zones of especially loose or soft or unsuitable soils not encountered in the soil test borings, and should help provide more uniformity in the sandy subsurface soil profile. Unusual or unanticipated conditions identified during this process must be immediately brought to the attention of the UES Geotechnical Engineer.
5. Weak subgrade soils identified during proof-rolling operations should be excavated and removed from the site, and replaced with granular fill soils. We recommend that the bottom of all footings be probed to confirm the suitability of the bearing soils. Granular soils used for this purpose should meet the material and placement specifications outlined below.

6. Proof-rolling operations should be followed by subgrade/backfill compaction operation. In the areas to receive fill or at subgrade cut elevation, the subgrade shall be compacted with a compactor of appropriate size and should be performed until an in-place soil density of 95 percent of the modified Proctor maximum dry density (ASTM D-1557) is achieved to a depth of 2 feet below the final subgrade, or foundation bearing elevations, whichever is greater. If necessary to achieve the recommended soil compaction at depth, the entire project area may be undercut, the exposed subgrade soils compacted, and then the areas backfilled using 6-inch lifts to final subgrade elevation. In non-building areas, compaction shall continue until densities of at least 95 percent of the modified Proctor maximum dry density (ASTM D-1557) have been uniformly achieved within the upper 24 inches of the compacted subgrade surface.
7. Compaction operations should extend to the limits of the cleared/grubbed project areas. Compaction of the existing, near-surface sandy soils will provide for uniformity of foundation/slab settlements and improve the soils' bearing capacity conditions. Typically, the soils should exhibit moisture contents within ± 3 percent of the modified Proctor optimum moisture content during compaction. A minimum of eight (8) complete coverages (in perpendicular directions) should be made in the building area with the roller to improve the uniformity and increase the density of the underlying sandy soils. It should be anticipated that moisture will need to be added to the subgrade in order to achieve the required compaction.
8. Should the bearing level soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated and (1) the disturbed soils removed and backfilled with dry structural fill soils which are then compacted, or (2) the excess pore pressures within the disturbed soils allowed to dissipate before recompacting.
9. Care should be exercised to avoid damaging any nearby structures while the compaction operation is underway. Prior to commencing compaction, occupants of adjacent structures should be notified and the existing conditions of the structures be documented with photographs and survey (if deemed necessary). Compaction should cease if deemed detrimental to adjacent structures. Universal Engineering Sciences can provide vibration monitoring services to help document and evaluate the effects of the surface compaction operation on existing structures. In the absence of vibration monitoring it is recommended the vibratory roller remain a minimum of 50 feet from existing structures. Within this zone, use of a vibratory roller operating in the static mode is recommended.
10. Test the subgrade for compaction at a frequency of not less than one test per 2,500 square feet in the building area, or a minimum of three test locations, whichever is greater.
11. Place fill material, as required. Offsite fill material should contain less than 10 percent passing the No. 200 sieve. Place backfill and fill in uniform 10- to 12-inch loose lifts and compact each lift to a minimum density of 95 percent of the modified Proctor maximum dry density. Verification testing should be performed prior to the next lift being placed.
12. Additionally, we recommend that you test every other column footing, and one test per every 50 lineal feet of wall footing. Footings should be visually inspected and probed with a static cone penetrometer to verify stability.

4.6 PAVEMENTS

4.6.1 General

A rigid or flexible pavement section could be used on this project. Flexible pavement combines the strength and durability of several layer components to produce an appropriate and cost-effective combination of available construction materials. Concrete pavement has the advantage of the ability to “bridge” over isolated soft areas, it requires less security lighting, and it typically has a longer service life than asphalt pavement. Disadvantages of rigid pavement include an initial higher cost and more difficult patching of distressed areas than occurs with flexible pavement.

We assume that a combination of flexible asphaltic and rigid concrete pavement sections will be used for the new pavement areas on this project. Our recommendations for both pavement types are listed in the following sections. The following recommendations are based on the pavement areas being prepared as recommended in this report.

At the time of this exploration, specific traffic loading information was not provided to us. We have assumed the following conditions for our recommended minimum pavement design.

- the subgrade soils are prepared as described in this report
- a twenty (20) year design life
- terminal serviceability index (P_t) of 2.5
- reliability of 85 percent
- total equivalent 18 kip single axle loads ($E_{18}SAL$) up to 30,000 for light duty pavements – primarily car and pickup truck traffic (parking stalls)
- total equivalent 18 kip single axle loads ($E_{18}SAL$) up to 50,000 for heavy duty pavements – occasional heavy truck traffic (entrance drives, services lanes, etc.)

The available subsurface data relies on two soil borings, and suggests that the subgrade soils in these areas consist of silty to silty-clayey sands. These soils tend to readily hold moisture and may require more stringent compactive efforts than clean sands. Where encountered, we recommend undercutting the very clayey sands to a minimum depth of 24 inches below the proposed bottom of the base course in accordance with FDOT index 500. We recommend proof-rolling of the exposed subgrade to help determine area that will need to be undercut. Positive drainage must be established to prevent irrigation and stormwater from migrating into the pavement area

We recommend using a flexible pavement section on this project. Flexible pavements combine the strength and durability of several layer components to produce an appropriate and cost-effective combination of available materials.

4.6.2 Asphalt (Flexible) Pavements

Based on the results of our soil borings, the assumed traffic loading information and review of the 2008 FDOT Flexible Pavement Design Manual, our minimum recommended pavement component thicknesses for new construction are presented in Table 4.

Table 4 Minimum Asphaltic Pavement Component Thickness				
Service Level	Maximum Traffic Loading	Layer Component		Estimated Structural Number *
		Surface Course (inches)	Base Course (inches)	
Light Duty	up to 30,000 E ₁₈ SAL	1½	6	2.7
Heavy Duty	up to 50,000 E ₁₈ SAL	2	8	3.3

* Estimated structural number is based on 12 inches of stabilized subgrade below the base course.

4.6.2.1 Stabilized Subgrade

We recommend that subgrade materials be compacted in place according to the requirements in the "Site Preparation" section of this report. Further, beneath the limerock base course, stabilize the subgrade materials to a minimum Limerock Bearing Ratio (LBR) of 40, as specified by Florida Department of Transportation (FDOT) requirements for Type B Stabilized Subgrade. The subgrade material should be compacted to at least 98 percent of the modified Proctor maximum dry density (AASHTO T-180).

The stabilized subgrade can be a blend of existing soil and imported material such as limerock. If a blend is proposed, we recommend that the Contractor perform a mix design to find the optimum mix proportions.

The primary function of stabilized subgrade beneath the base course is to provide a stable and firm subgrade so that the limerock can be properly and uniformly placed and compacted. Depending upon the soil type, the subgrade material may have sufficient stability to provide the needed support without additional stabilizing material. Generally, sands with silt or clay should have sufficient stability and may not require additional stabilizing material. Conversely, relatively "clean" sand will not provide sufficient stability to adequately construct the limerock base course. Universal Engineering Sciences should observe the soils exposed on the finish grades to evaluate whether or not additional stabilization will be required beneath the base course.

4.6.2.2 Base Course

We recommend the base course consist of limerock. The limerock base course should have a minimum Limerock Bearing Ratio (LBR) of 100 and should be compacted to 98 percent of the modified Proctor maximum dry density (AASHTO T-180).

As an alternative base course, crushed concrete could be used. An advantage to using crushed concrete is a lower sensitivity to water than what occurs with limerock. The main disadvantage is that crushed concrete may not be available at the time of construction.

Crushed concrete should be supplied by an FDOT approved plant with appropriate quality control procedures. The crushed concrete stockpile should be free of sandy pockets, foreign materials, or uncrushed particles. We recommend the following specifications be enforced.

1. Crushed concrete shall not contain extremely hard pieces, lumps, balls or pockets of sand or clay sized material in sufficient quantity as to be detrimental to the proper binding, finishing or strength of the crushed concrete base.
2. Samples of base course materials shall be supplied to the Engineer prior to use in the work. Additional samples shall be furnished during construction, as necessary.

3. At least 97 percent (by weight) of the material shall pass a 3-1/2 inch sieve and the material shall be graded uniformly down to dust. The fine material shall consist entirely of dust or fracture. All crushing or breaking-up which might be necessary in order to meet such size requirements shall be done before the material is placed within the area to be paved.
4. The base shall be bladed and shaped to conform to the typical sections shown on the plans. Then the base shall be compacted by rolling with a combination of steel wheel and rubber tired rollers until a minimum density of at least 98 percent of the maximum density obtainable under AASHTO T-180 is reached. The base shall have an average LBR of not less than 100. The LBR value of material produced at a particular source shall be determined in accordance with an approved quality control procedure.
5. Testing shall be performed at the following frequencies:
 - Perform in-place density on crushed concrete base at a frequency of 1 test per 300 linear foot of roadway or 5,000 square feet of pavement.
 - Perform Limerock Bearing Ratio tests at a frequency of 1 test per visual change in material and a minimum of 1 test per 15,000 square feet of pavement.
 - Engineer should perform a final visual base inspection prior to placement of prime or tack coat and paving.

Regardless of the base type selected, a minimum of 2 feet separation should be maintained between the bottom of the base course and the clayey soils. If necessary, the minimum separation can be obtained by undercutting the clays or filling the site.

4.6.2.3 Wearing Surface

For the new pavement areas, we recommend that the surfacing consist of FDOT SuperPave (SP) asphaltic concrete, FDOT SP-9.5 fine mix, for both light-duty areas and heavy duty areas. The asphaltic concrete should be compacted to a field density of 90 to 93 percent of the laboratory maximum density determined from specific gravity (Gmm) methods. Specific requirements for the SuperPave asphaltic concrete structural course are outlined in the latest edition of FDOT, Standard Specifications for Road and Bridge Construction.

After placement and field compaction, the surfacing should be cored to evaluate material thickness and density. Cores should be obtained at frequencies of at least one (1) core per 5,000 square feet of placed pavement or a minimum of two (2) cores per day's production.

4.6.3 Effects of Groundwater

One of the most critical factors influencing pavement performance in Northeast Florida is the relationship between the pavement subgrade and the normal seasonal high groundwater level. Many roadways and parking areas have been damaged as a result of deterioration of the base conditions and/or the base/surface course bond. We recommend that the normal seasonal high groundwater level and the bottom of the flexible pavement limerock base course be separated by at least 24 inches. We recommend a separation of at least 18 inches below the bottom of a flexible pavement with a crushed concrete base. If this separation cannot be establish and maintained by grading and surface drainage improvements, permanent groundwater control measures (underdrains) will be required.

4.6.4 Curbing

Typical curbing is extruded and placed atop the asphaltic concrete surface. This type of curbing does not act as a horizontal cutoff for lateral migration of storm and irrigation water into the base material and as a result of this it is not uncommon for base and subgrade materials adjacent to these areas to become saturated, promoting subsequent localized pavement deterioration. Consequently, we recommend that most pavements abutting irrigated landscape areas be equipped with an underdrain system that penetrates a minimum depth equivalent to the bottom of the stabilized subgrade to intercept trapped shallow water and discharge it into a closed system or other acceptable discharge point.

Alternatively, curbing around landscaped sections adjacent to the parking lots and driveways could be constructed with full-depth curb sections to reduce horizontal water migration. However, underdrains may still be recommended dependent upon the soil type and spatial relationships. UES should review final grading plans to evaluate the need and placement of pavement and landscape underdrains.

4.6.5 Concrete (Rigid) Pavement

Concrete pavement is a rigid pavement that is strong, durable and handles the heavy loads more effectively than asphalt pavement.

We recommend using the existing surficial sands or approved structural fill densified to at least 95 percent of Modified Proctor test maximum dry density (ASTM D 1557) without additional stabilization under concrete pavement, with the following stipulations:

1. Prior to placement of concrete, the subgrade soils should be densified as recommended in Section 4.6.7 of this report.
2. The surface of the subgrade soils must be smooth, and any disturbances or wheel rutting corrected prior to placement of concrete.
3. The subgrade soils must be moistened prior to placement of concrete.
4. Concrete pavement thickness should be uniform throughout, with exception to the thickened edges (curb or footing).
5. The bottom of the pavement should be separated from the seasonal high groundwater level by at least 12 inches.

Based on review of the FDOT Rigid Pavement Design Manual and provided that the site is prepared as recommended in this report, we recommend using the minimum design shown in Table 5 for concrete pavements.

Table 5 Minimum Concrete Pavement Thickness			
Maximum Traffic Loading	Minimum Pavement Thickness	Maximum Control Joint Spacing	Recommended Saw Cut Depth
up to 50,000 E ₁₈ SAL	6 inches	12 feet x 12 feet	2 inches

For loading conditions greater than those presented in Table 5, we recommend that you have a complete pavement design performed based on projected traffic data.

We recommend using concrete with a minimum 28-day compressive strength of at least 4,000 pounds per square inch. Layout of the saw cut control joints should form square panels, and the depth of Saw cut joints should be made to a depth of $\frac{1}{3}$ of the concrete slab thickness. We recommend allowing Universal to review and comment on the final concrete pavement design, including section and joint details (type of joints, joint spacing, etc.), prior to the start of construction.

For further details on concrete pavement construction, please reference the "Guide to Jointing of Non-Reinforced Concrete Pavements" published by the Florida Concrete and Products Association, Inc., and "Building Quality Concrete Parking Areas", published by the Portland Cement Association.

Specimens should be obtained to verify the compressive strength of the pavement concrete at least every 50 cubic yards, or at least once for each day's placement, whichever is greater.

4.6.6 Construction Traffic

Light duty roadways and incomplete pavement sections will not perform satisfactorily under construction traffic loadings. We recommend that construction traffic (construction equipment, concrete trucks, sod trucks, garbage trucks, dump trucks, etc.) be re-routed away from these roadways or that the pavement section is designed for these loadings.

4.6.7 Site Preparation for the New Pavement Areas

Following is a list of our recommended site preparation procedures to prepare the new pavement areas for the proposed construction.

1. Strip the pavement areas of any roots, vegetation, old pavements and base courses, debris, organics, etc. Stripping should be performed at least 3 feet beyond pavement edges. We recommend that the stripped surface be observed and probed by representatives of Universal.
2. Following site clearing, grubbing and rough grading, the pavement areas should be proof-rolled using a large, fully loaded rubber-tired vehicle (dump truck) or similar equipment. Proof-rolling will help locate any surficial zones of especially loose or soft or unsuitable soils not encountered in the soil test borings, and should help provide more uniformity in the sandy subsurface soil profile. Unusual or unanticipated conditions identified during this process must be immediately brought to the attention of the UES Geotechnical Engineer. Field density testing is not required during proof-rolling operations.
3. Within the pavement areas, compact the exposed soils to at least 95 percent of the Modified Proctor test maximum dry density (ASTM D 1557) to a depth of at least 1 foot below the stripped surface and full depth of fill, or at least 2 feet below the bottom of base course (or concrete pavement) level, whichever is greater.

Please note that the surficial soils within the new parking areas may contain varying quantities of silt and clay. These silty/clayey soils tend to readily hold moisture and may require more stringent compactive efforts than clean fine sands.

4. Soil density testing to verify the uniformity of compactive efforts should be performed at a frequency of at least one (1) test for every 5,000 square feet per foot of compacted increment, or at a minimum of two test locations, whichever is greater.

5. Prior to the placement of the base course within the asphaltic pavement areas, stabilize the subgrade to a depth of 10 inches by "pounding" limerock into the soils to provide a stable and firm surface so that the base course can be properly and uniformly placed. The subgrade should be compacted to at least 98 percent of the Modified Proctor maximum dry density (ASTM D 1557).

Vibrations produced during vibratory compaction operations at the site may be significantly noticeable within 100 feet and may cause distress to adjacent structures if not properly regulated. Provisions should be made to monitor these vibrations so that any necessary modifications in the compaction operations can be made in the field before potential damages occur.

4.7 STORMWATER MANAGEMENT SYSTEM

The laboratory test data indicates that the surficial sandy soils in the proposed stormwater management areas for this project generally have a permeability rate of 0.9 to 1.6 feet per day at the boring locations. Based upon the above findings, we recommend that you consider the soil parameters presented in Table 6 for design of the stormwater management system on the subject project site. It should be noted that the below referenced values are measured values and do not incorporate factors of safety.

Table 6 - Stormwater Management System Soil Design Parameters	
Corresponding Soil Boring Test Locations	B-4/B-5
Average Depth to Confining Layer, feet	11
Average Unsaturated Vertical Infiltration Rate, feet per day	0.8
Average Saturated Vertical Infiltration Rate, feet per day	1.3
Estimated Horizontal Hydraulic Conductivity, feet per day	1.6
Estimated Fillable Porosity, percentage	20
Estimated Average Depth of Seasonal High Water Table, feet ¹	10

¹Normal seasonal high water table (SHWT) will be the result of perched conditions

4.8 FILL SUITABILITY

The recovered soil samples were classified using visual and textural means, and limited laboratory testing. We offer below ***preliminary guidelines*** for the use of on-site soils, such as those excavated from the proposed retention pond, as fill material for the project.

Soil materials excavated and classified as fine sands to sand with silt and sand with clay (SP, SP-SM, SP-SC), with typically 12% fines or less (silt/clay fraction), may be considered suitable for use as utility trench backfill, as well as building pad and pavement subgrade structural fill, provided the materials are properly dried, placed, and compacted.

Soil materials excavated and classified as silty fine sands [SM], with typically 12% to 25% fines, may also be considered suitable for use as utility trench backfill, as well as building pad and pavement subgrade structural fill, after significant drying and some mixing with the fine sand material described above. Proper placement, proof rolling and compaction must also be performed.

Soil materials excavated and classified as clayey sand, silt or clay (SC, ML, MH, CL, and CH) and any organic-laden soils (5% or greater organics by weight) should not be reused as fill beneath buildings or pavement sections. These materials could be used in green areas, if applicable and in non-structural applications where excessive ground subsidence will not create functional or aesthetic problems. It should be noted that silt and clay materials will retain water and if used near the final grade may become saturated and soft for a significant period of time following a rain event.

Soil borings for a typical geotechnical report are widely spaced and generally not sufficient for reliably detecting the presence of isolated, anomalous surface or subsurface conditions, or reliably estimating unsuitable or suitable material quantities. Accordingly, UES does not recommend relying on our boring information to negate presence of anomalous materials or for estimation of material quantities unless our contracted services ***specifically*** include sufficient exploration for such purpose(s) and within the report we so state that the level of exploration provided should be sufficient to detect such anomalous conditions or estimate such quantities. Therefore, UES will not be responsible for any extrapolation or use of our data by others beyond the purpose(s) for which it is applicable or intended

4.9 CONSTRUCTION RELATED SERVICES

We recommend the Owner retain Universal Engineering Sciences to perform construction materials tests and observations on this project. Field tests and observations include verification of foundation subgrades by performing quality assurance tests on the placement of compacted structural fill and pavement courses. We can also provide concrete testing, pavement section testing, and general construction observation services.

The geotechnical engineering design does not end with the advertisement of the construction documents. The design is an on-going process throughout construction. Because of our familiarity with the site conditions and the intent of the engineering design, we are most qualified to address problems that might arise during construction in a timely and cost-effective manner.

5.0 REPORT LIMITATIONS

This report has been prepared for the exclusive use of VyStar Credit Union, its affiliates, successors, and to aid the architect/engineer in the design of the proposed credit union. The scope is limited to the specific project and locations described herein. Our description of the project's design parameters represents our understanding of the significant aspects relevant to soil and foundation characteristics. In the event that any changes in the design or location of the structures or improvements as outlined in this report are planned, we should be informed so the changes can be reviewed and the conclusions of this report modified, if required, and approved in writing by UES.

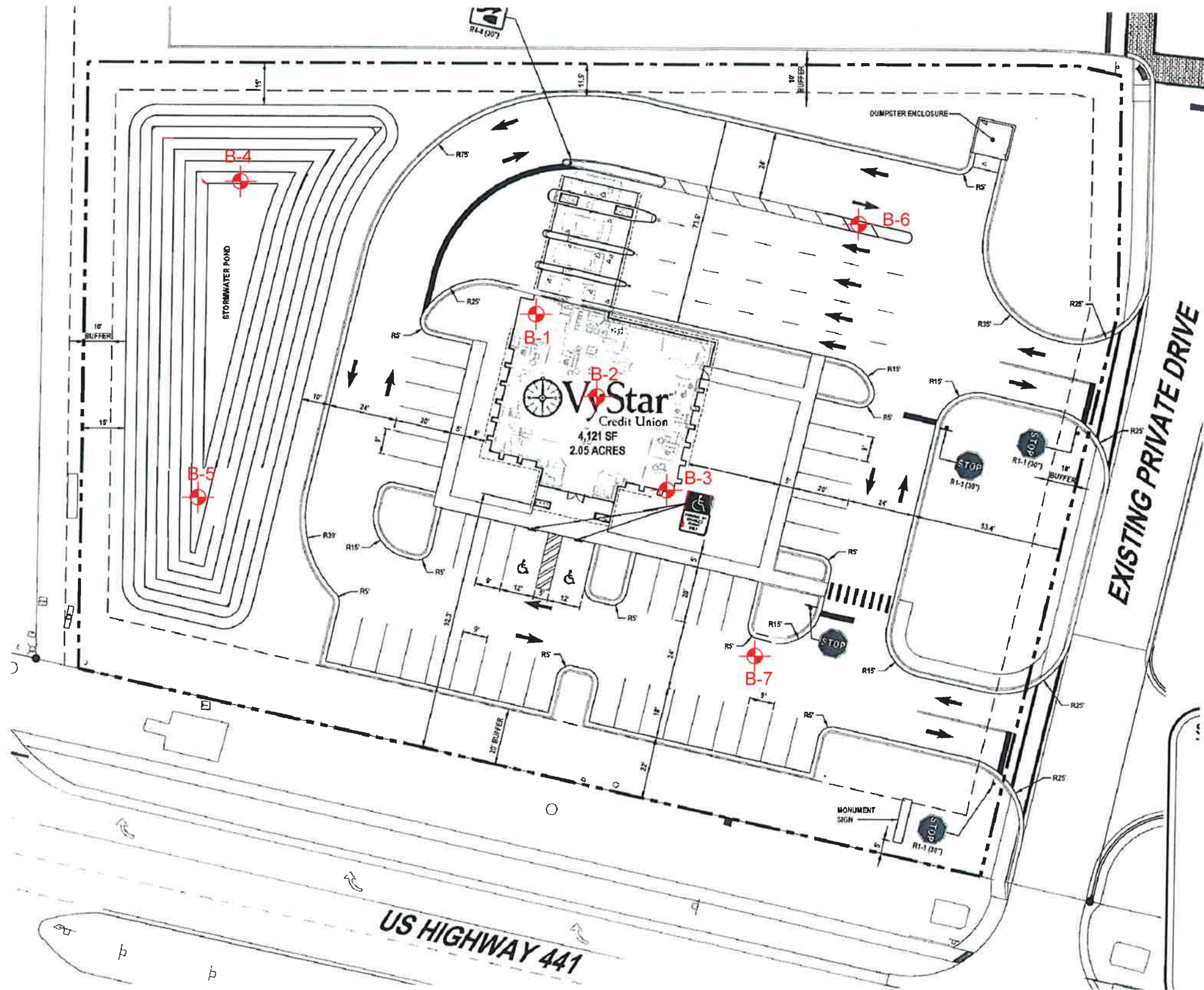
The recommendations submitted in this report are based upon the data obtained from the soil borings performed at the locations indicated on the Boring Location Plan and from other information as referenced. This report does not reflect any variations which may occur between the boring locations. The nature and extent of such variations may not become evident until the course of construction. If variations become evident, it will then be necessary for a re-evaluation of the recommendations of this report after performing on-site observations during the construction period and noting the characteristics of the variations.

All users of this report are cautioned that there was no requirement for UES to attempt to locate any man-made buried objects or identify any other potentially hazardous conditions that may exist at the site during the course of this exploration. Therefore, no attempt was made by UES to locate or identify such concerns. UES cannot be responsible for any buried man-made objects or subsurface hazards which may be subsequently encountered during construction that are not discussed within the text of this report. We can provide this service if requested.

For a further description of the scope and limitations of this report please review the document attached within Appendix B, "Important Information About Your Geotechnical Engineering Report" prepared by GBC.

APPENDIX A





LEGEND

 BORING LOCATION

NOTE: ALL SOIL TEST BORING LOCATIONS SHOWN ARE APPROXIMATE.



VYSTAR CREDIT UNION
TAX PARCEL 03053-001-004
ALACHUA, FLORIDA
BORING LOCATION PLAN



PAGE NO:
A - 1

CLIENT: VYSTAR CREDIT UNION

DRAWN BY: KD	DATE: 2/8/16
CHECKED BY: ES	DATE: 2/8/16
SCALE: 1"=40'	ACADFILE: 0230.1600007-A
PROJECT NO: 0230.1600007.0000 REPORT NO: 1308974	



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0230.1600007.0000

REPORT NO.: 1308974

PAGE: A-2

PROJECT: VYSTAR CREDIT UNION
TAX PARCEL 03053-001-004
ALACHUA, FLORIDA

BORING NO: **B-1**SHEET: **1 of 1**

CLIENT: VYSTAR CREDIT UNION
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

SECTION:

TOWNSHIP:

RANGE:

GS ELEVATION(ft):

DATE STARTED: 2/5/16

WATER TABLE (ft): NE

DATE FINISHED: 2/5/16

DATE OF READING: NA

DRILLED BY: M. BOATRIGHT

EST. WSWT (ft):

TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown SAND, with silt [SP-SM]						
1						Loose to medium dense dark brown silty SAND [SM]						
2		5-3-2	5									
3												
4		4-6-6	12									
5		2-2-1	3									
6												
7		1-2-1	3									
8		1-1-1	2									
9												
10		1-2-2	4			Loose to medium dense light brown and tan SAND, with silt [SP-SM]						
11												
12												
13												
14						Medium dense gray and brown very clayey SAND to sandy CLAY [SC/CH]						
15		4-5-5	10									
16												
17						Stiff brown and orange sandy CLAY [CH]						
18												
19												
20		5-6-7	13									
21												
22						Medium dense brown silty clayey SAND [SM-SC]						
23												
24												
25		5-6-6	12									
						Boring Terminated at 25'						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0230.1600007.0000

REPORT NO.: 1308974

PAGE: A-3

PROJECT: VYSTAR CREDIT UNION
TAX PARCEL 03053-001-004
ALACHUA, FLORIDA

CLIENT: VYSTAR CREDIT UNION

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **B-2** SHEET: **1 of 1**

SECTION: TOWNSHIP: RANGE:

GS ELEVATION(ft): DATE STARTED: 2/5/16

WATER TABLE (ft): NE DATE FINISHED: 2/5/16

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0						Loose brown SAND, with silt [SP-SM]						
1												
2		3-2-2	4									
3						Medium dense to very loose dark brown silty SAND [SM]						
4		2-5-7	12									
5		4-3-3	6									
6												
7		2-1-1	2									
8		WOH-1-2	3									
9												
10		3-3-3	6									
11												
12						Medium dense gray and brown clayey SAND [SC]						
13												
14												
15		5-5-6	11									
16						Medium dense tan and orange very clayey SAND to sandy CLAY [SC/CH]						
17												
18												
19												
20		6-7-8	15									
21						Firm green and orange CLAY [CH]						
22												
23												
24												
25		2-2-4	6			Boring Terminated at 25'						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0230.1600007.0000

REPORT NO.: 1308974

PAGE: A-4

PROJECT: VYSTAR CREDIT UNION
TAX PARCEL 03053-001-004
ALACHUA, FLORIDA

CLIENT: VYSTAR CREDIT UNION

LOCATION: SEE BORING LOCATION PLAN

REMARKS:

BORING NO: **B-3**SHEET: **1 of 1**

SECTION: TOWNSHIP: RANGE:

GS ELEVATION(ft): DATE STARTED: 2/5/16

WATER TABLE (ft): NE DATE FINISHED: 2/5/16

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0						Loose brown silty SAND [SM]						
1	X											
2	X	4-2-5	7									
3	X					Medium dense brown and orange silty clayey SAND [SM-SC]						
4	X	5-6-7	13				22	13				
5	X	5-4-4	8									
6	X											
7	X	1-1-1	2									
8	X	1-1-1	2									
9	X											
10	X	1-1-2	3									
11												
12												
13						Medium dense gray and orange very clayey SAND to sandy CLAY [SC/CH]						
14	X											
15	X	4-5-6	11									
16												
17						Stiff to firm green and orange CLAY, with trace of sand [CH]						
18												
19	X											
20	X	4-4-6	10									
21												
22												
23												
24	X											
25	X	2-3-4	7			Boring Terminated at 25'						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0230.1600007.0000

REPORT NO.: 1308974

PAGE: A-5

PROJECT: VYSTAR CREDIT UNION
TAX PARCEL 03053-001-004
ALACHUA, FLORIDABORING NO: **B-4**SHEET: **1 of 1**

SECTION: TOWNSHIP: RANGE:

GS ELEVATION(ft): DATE STARTED: 2/5/16

WATER TABLE (ft): NE DATE FINISHED: 2/5/16

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0						Brown silty SAND, with trace of clay [SM]						
1						Loose to very loose brown silty SAND [SM]						
2		4-3-2	5									
3												
4		2-1-2	3									
5		1-1-1	2				16	6			1.6	
6												
7		2-2-2	4									
8		2-2-3	5									
9												
10		3-4-5	9									
11						Loose to medium dense brown, gray and orange clayey SAND [SC]						
12												
13												
14												
15		3-3-5	8									
16												
17												
18												
19												
20		5-5-6	11			Boring Terminated at 20'						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0230.1600007.0000

REPORT NO.: 1308974

PAGE: A-6

PROJECT: VYSTAR CREDIT UNION
TAX PARCEL 03053-001-004
ALACHUA, FLORIDA

CLIENT: VYSTAR CREDIT UNION
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

BORING NO: **B-5** SHEET: **1 of 1**

SECTION: TOWNSHIP: RANGE:

GS ELEVATION(ft): DATE STARTED: 2/5/16

WATER TABLE (ft): NE DATE FINISHED: 2/5/16

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1586

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0						Light brown SAND [SP], with rock						
1						Dark brown silty SAND, with trace of clay [SM]						
2		2-3-2	5			Loose brown silty SAND [SM]						
3												
4		1-1-1	2									
5		1/12"-1	1									
6												
7		1-1-2	3				18	10			0.9	
8		2-2-2	4									
9												
10		2-2-3	5				17	9				
11												
12						Loose gray clayey SAND [SC]						
13												
14												
15		3-3-4	7									
16						Stiff green and orange CLAY [CH]						
17												
18												
19												
20		3-4-6	10			Boring Terminated at 20'						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0230.1600007.0000

REPORT NO.: 1308974

PAGE: A-7

PROJECT: VYSTAR CREDIT UNION
TAX PARCEL 03053-001-004
ALACHUA, FLORIDA

CLIENT: VYSTAR CREDIT UNION
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

BORING NO: **B-6** SHEET: 1 of 1

SECTION: TOWNSHIP: RANGE:

GS ELEVATION(ft): DATE STARTED: 2/5/16

WATER TABLE (ft): NE DATE FINISHED: 2/5/16

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1452

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0	X					Brown silty clayey SAND [SM-SC]	22	11				
1	X											
2	X											
3												
4	X					Brown silty SAND [SM]						
5	X											
6						Boring Terminated at 6'						



UNIVERSAL ENGINEERING SCIENCES BORING LOG

PROJECT NO.: 0230.1600007.0000

REPORT NO.: 1308974

PAGE: A-8

PROJECT: VYSTAR CREDIT UNION
TAX PARCEL 03053-001-004
ALACHUA, FLORIDA

CLIENT: VYSTAR CREDIT UNION
LOCATION: SEE BORING LOCATION PLAN
REMARKS:

BORING NO: **B-7** SHEET: **1 of 1**

SECTION: TOWNSHIP: RANGE:

GS ELEVATION(ft): DATE STARTED: 2/5/16

WATER TABLE (ft): NE DATE FINISHED: 2/5/16

DATE OF READING: NA DRILLED BY: M. BOATRIGHT

EST. WSWT (ft): TYPE OF SAMPLING: ASTM D-1452

DEPTH (FT.)	S A M P L E	BLOWS PER 6" INCREMENT	N VALUE	W.T.	S Y M B O L	DESCRIPTION	-200 (%)	MC (%)	ATTERBERG LIMITS		K (FT/ DAY)	ORG. CONT. (%)
									LL	PI		
0												
1	X					Brown clayey SAND, with silt [SC]						
2	X						26	14				
3												
4												
5	X					Brown silty SAND, with trace of clay [SM]						
6	X					Boring Terminated at 6'						



KEY TO BORING LOGS

SYMBOLS

22	Number of Blows of a 140-lb Weight Falling 30 in. Required to Drive Standard Spoon One Foot
WOR	Weight of Drill Rods
S	Thin-Wall Shelby Tube Undisturbed Sampler Used
90% Rec.	Percent Core Recovery from Rock Core-Drilling Operations
	Sample Taken at this Level
	Sample Not Taken at this Level
	Change in Soil Strata
	Free Ground Water Level
	Seasonal High Ground Water Level

RELATIVE DENSITY (sand-silt)

Very loose – Less Than 4 Blows/Ft.
Loose – 4 to 10 Blows/Ft.
Medium Dense – 10 to 30 Blows/Ft.
Dense – 30 to 50 Blows/Ft.
Very Dense – More Than 50 Blows/Ft.

CONSISTANCY (clay)

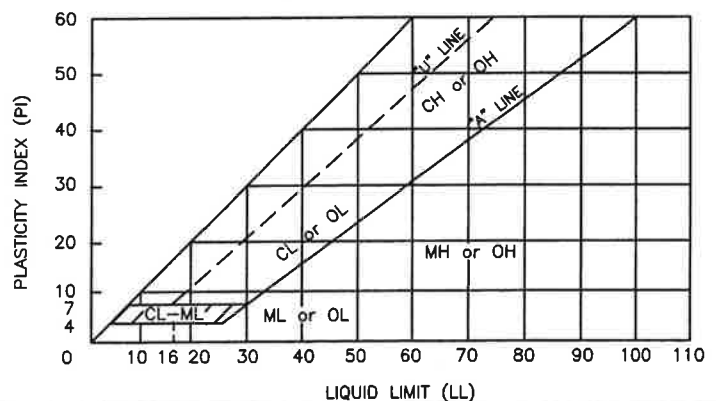
Very Soft – Less Than 2 Blows/Ft.
Soft – 2 to 4 Blows/Ft.
Firm – 4 to 8 Blows/Ft.
Stiff – 8 to 15 Blows/Ft.
Very Stiff – 15 to 30 Blows/Ft.
Hard – More Than 30 Blows/Ft.

Based on Safety Hammer N-Values

UNIFIED CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE-GRAINED SOILS More than 50% retained on No. 200 sieve*	GRAVELS 50% or more of coarse fraction retained on No. 200 sieve	CLEAN GRAVELS	GW	Well-graded gravels and gravel-sand mixtures, little or no fines
			GP	Poorly graded gravels and gravel-sand mixtures, little or no fines
		GRAVELS WITH FINES	GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	SANDS More than 50% of coarse fraction passes No. 4 sieve	CLEAN SANDS	SW	Well-graded sands and gravelly sands, little or no fines
			SP	Poorly graded sands and gravelly sands, little or no fines
		SANDS WITH FINES	SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS 50% or more passes No. 200 sieve*	SILTS AND CLAYS Liquid limit 50% or less		ML	Inorganic silts, very fine sands, rock flour, silty or clayey fine sands
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays silty clays, lean clays
			OL	Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS Liquid limit greater than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sands or silts, elastic silts
			CH	Inorganic clays or high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
	Highly organic Soils		PT	Peat, muck and other highly organic soils
* Based on the material passing the 3-in. (75mm) sieve.				

PLASTICITY CHART



APPENDIX B



Important Information about This Geotechnical-Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

While you cannot eliminate all such risks, you can manage them. The following information is provided to help.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical-engineering study conducted for a civil engineer may not fulfill the needs of a constructor — a construction contractor — or even another civil engineer. Because each geotechnical-engineering study is unique, each geotechnical-engineering report is unique, prepared *solely* for the client. No one except you should rely on this geotechnical-engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you — should apply this report for any purpose or project except the one originally contemplated.*

Read the Full Report

Serious problems have occurred because those relying on a geotechnical-engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

Geotechnical Engineers Base Each Report on a Unique Set of Project-Specific Factors

Geotechnical engineers consider many unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk-management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical-engineering report that was:

- not prepared for you;
- not prepared for your project;
- not prepared for the specific site explored; or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical-engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light-industrial plant to a refrigerated warehouse;
- the elevation, configuration, location, orientation, or weight of the proposed structure;
- the composition of the design team; or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an

assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical-engineering report is based on conditions that existed at the time the geotechnical engineer performed the study. *Do not rely on a geotechnical-engineering report whose adequacy may have been affected by:* the passage of time; man-made events, such as construction on or adjacent to the site; or natural events, such as floods, droughts, earthquakes, or groundwater fluctuations. *Contact the geotechnical engineer before applying this report to determine if it is still reliable.* A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ — sometimes significantly — from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide geotechnical-construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are Not Final

Do not overrely on the confirmation-dependent recommendations included in your report. *Confirmation-dependent recommendations are not final*, because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations *only* by observing actual subsurface conditions revealed during construction. *The geotechnical engineer who developed your report cannot assume responsibility or liability for the report's confirmation-dependent recommendations if that engineer does not perform the geotechnical-construction observation required to confirm the recommendations' applicability.*

A Geotechnical-Engineering Report Is Subject to Misinterpretation

Other design-team members' misinterpretation of geotechnical-engineering reports has resulted in costly

problems. Confront that risk by having your geotechnical engineer confer with appropriate members of the design team after submitting the report. Also retain your geotechnical engineer to review pertinent elements of the design team's plans and specifications. Constructors can also misinterpret a geotechnical-engineering report. Confront that risk by having your geotechnical engineer participate in prebid and preconstruction conferences, and by providing geotechnical construction observation.

Do Not Redraw the Engineer's Logs

Geotechnical engineers prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in a geotechnical-engineering report should *never* be redrawn for inclusion in architectural or other design drawings. Only photographic or electronic reproduction is acceptable, *but recognize that separating logs from the report can elevate risk.*

Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can make constructors liable for unanticipated subsurface conditions by limiting what they provide for bid preparation. To help prevent costly problems, give constructors the complete geotechnical-engineering report, *but* preface it with a clearly written letter of transmittal. In that letter, advise constructors that the report was not prepared for purposes of bid development and that the report's accuracy is limited; encourage them to confer with the geotechnical engineer who prepared the report (a modest fee may be required) and/or to conduct additional study to obtain the specific types of information they need or prefer. A prebid conference can also be valuable. *Be sure constructors have sufficient time to perform additional study.* Only then might you be in a position to give constructors the best information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions.

Read Responsibility Provisions Closely

Some clients, design professionals, and constructors fail to recognize that geotechnical engineering is far less exact than other engineering disciplines. This lack of understanding has created unrealistic expectations that have led to disappointments, claims, and disputes. To help reduce the risk of such outcomes, geotechnical engineers commonly include a variety of explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help

others recognize their own responsibilities and risks. *Read these provisions closely.* Ask questions. Your geotechnical engineer should respond fully and frankly.

Environmental Concerns Are Not Covered

The equipment, techniques, and personnel used to perform an *environmental* study differ significantly from those used to perform a *geotechnical* study. For that reason, a geotechnical-engineering report does not usually relate any environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. *Unanticipated environmental problems have led to numerous project failures.* If you have not yet obtained your own environmental information, ask your geotechnical consultant for risk-management guidance. *Do not rely on an environmental report prepared for someone else.*

Obtain Professional Assistance To Deal with Mold

Diverse strategies can be applied during building design, construction, operation, and maintenance to prevent significant amounts of mold from growing on indoor surfaces. To be effective, all such strategies should be devised for the *express purpose* of mold prevention, integrated into a comprehensive plan, and executed with diligent oversight by a professional mold-prevention consultant. Because just a small amount of water or moisture can lead to the development of severe mold infestations, many mold-prevention strategies focus on keeping building surfaces dry. While groundwater, water infiltration, and similar issues may have been addressed as part of the geotechnical-engineering study whose findings are conveyed in this report, the geotechnical engineer in charge of this project is not a mold prevention consultant; *none of the services performed in connection with the geotechnical engineer's study were designed or conducted for the purpose of mold prevention.* Proper implementation of the recommendations conveyed in this report will not of itself be sufficient to prevent mold from growing in or on the structure involved.

Rely, on Your GBC-Member Geotechnical Engineer for Additional Assistance

Membership in the Geotechnical Business Council of the Geoprofessional Business Association exposes geotechnical engineers to a wide array of risk-confrontation techniques that can be of genuine benefit for everyone involved with a construction project. Confer with your GBC-Member geotechnical engineer for more information.



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CONSTRAINTS & RESTRICTIONS

The intent of this document is to bring to your attention the potential concerns and the basic limitations of a typical geotechnical report.

WARRANTY

Universal Engineering Sciences has prepared this report for our client for his exclusive use, in accordance with generally accepted soil and foundation engineering practices, and makes no other warranty either expressed or implied as to the professional advice provided in the report.

UNANTICIPATED SOIL CONDITIONS

The analysis and recommendations submitted in this report are based upon the data obtained from soil borings performed at the locations indicated on the Boring Location Plan. This report does not reflect any variations which may occur between these borings.

The nature and extent of variations between borings may not become known until excavation begins. If variations appear, we may have to re-evaluate our recommendations after performing on-site observations and noting the characteristics of any variations.

CHANGED CONDITIONS

We recommend that the specifications for the project require that the contractor immediately notify Universal Engineering Sciences, as well as the owner, when subsurface conditions are encountered that are different from those present in this report.

No claim by the contractor for any conditions differing from those anticipated in the plans, specifications, and those found in this report, should be allowed unless the contractor notifies the owner and Universal Engineering Sciences of such changed conditions. Further, we recommend that all foundation work and site improvements be observed by a representative of Universal Engineering Sciences to monitor field conditions and changes, to verify design assumptions and to evaluate and recommend any appropriate modifications to this report.

MISINTERPRETATION OF SOIL ENGINEERING REPORT

Universal Engineering Sciences is responsible for the conclusions and opinions contained within this report based upon the data relating only to the specific project and location discussed herein. If the conclusions or recommendations based upon the data presented are made by others, those conclusions or recommendations are not the responsibility of Universal Engineering Sciences.

CHANGED STRUCTURE OR LOCATION

This report was prepared in order to aid in the evaluation of this project and to assist the architect or engineer in the design of this project. If any changes in the design or location of the structure as outlined in this report are planned, or if any structures are included or added that are not discussed in the report, the conclusions and recommendations contained in this report shall not be considered valid unless the changes are reviewed and the conclusions modified or approved by Universal Engineering Sciences.

USE OF REPORT BY BIDDERS

Bidders who are examining the report prior to submission of a bid are cautioned that this report was prepared as an aid to the designers of the project and it may affect actual construction operations.

Bidders are urged to make their own soil borings, test pits, test caissons or other investigations to determine those conditions that may affect construction operations. Universal Engineering Sciences cannot be responsible for any interpretations made from this report or the attached boring logs with regard to their adequacy in reflecting subsurface conditions which will affect construction operations.

STRATA CHANGES

Strata changes are indicated by a definite line on the boring logs which accompany this report. However, the actual change in the ground may be more gradual. Where changes occur between soil samples, the location of the change must necessarily be estimated using all available information and may not be shown at the exact depth.

OBSERVATIONS DURING DRILLING

Attempts are made to detect and/or identify occurrences during drilling and sampling, such as: water level, boulders, zones of lost circulation, relative ease or resistance to drilling progress, unusual sample recovery, variation of driving resistance, obstructions, etc.; however, lack of mention does not preclude their presence.

WATER LEVELS

Water level readings have been made in the drill holes during drilling and they indicate normally occurring conditions. Water levels may not have been stabilized at the last reading. This data has been reviewed and interpretations made in this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall, temperature, tides, and other factors not evident at the time measurements were made and reported. Since the probability of such variations is anticipated, design drawings and specifications should accommodate such possibilities and construction planning should be based upon such assumptions of variations.

LOCATION OF BURIED OBJECTS

All users of this report are cautioned that there was no requirement for Universal Engineering Sciences to attempt to locate any man-made buried objects during the course of this exploration and that no attempt was made by Universal Engineering Sciences to locate any such buried objects. Universal Engineering Sciences cannot be responsible for any buried man-made objects which are subsequently encountered during construction that are not discussed within the text of this report.

TIME

This report reflects the soil conditions at the time of exploration. If the report is not used in a reasonable amount of time, significant changes to the site may occur and additional reviews may be required.



Universal Engineering Sciences, Inc.
GENERAL CONDITIONS

SECTION 1: RESPONSIBILITIES

- 1.1 *Universal Engineering Sciences, Inc.*, ("UES"), has the responsibility for providing the services described under the Scope of Services section. The work is to be performed according to accepted standards of care and is to be completed in a timely manner. The term "UES" as used herein includes all of *Universal Engineering Sciences, Inc.*'s agents, employees, professional staff, and subcontractors.
- 1.2 The Client or a duly authorized representative is responsible for providing UES with a clear understanding of the project nature and scope. The Client shall supply UES with sufficient and adequate information, including, but not limited to, maps, site plans, reports, surveys and designs, to allow UES to properly complete the specified services. The Client shall also communicate changes in the nature and scope of the project as soon as possible during performance of the work so that the changes can be incorporated into the work product.
- 1.3 The Client acknowledges that UES's responsibilities in providing the services described under the Scope of Services section is limited to those services described therein, and the Client hereby assumes any collateral or affiliated duties necessitated by or for those services. Such duties may include, but are not limited to, reporting requirements imposed by any third party such as federal, state, or local entities, the provision of any required notices to any third party, or the securing of necessary permits or permissions from any third parties required for UES's provision of the services so described, unless otherwise agreed upon by both parties.
- 1.4 Universal will not be responsible for scheduling our services and will not be responsible for tests or inspections that are not performed due to a failure to schedule our services on the project or any resulting damages.
- 1.5 **PURSUANT TO FLORIDA STATUTES §558.0035, ANY INDIVIDUAL EMPLOYEE OR AGENT OF UES MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.**

SECTION 2: STANDARD OF CARE

- 2.1 Services performed by UES under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of UES's profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, express or implied, is made.
- 2.2 The Client recognizes that subsurface conditions may vary from those observed at locations where borings, surveys, or other explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by UES will be based solely on information available to UES at the time of service. UES is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.
- 2.3 Execution of this document by UES is not a representation that UES has visited the site, become generally familiar with local conditions under which the services are to be performed, or correlated personal observations with the requirements of the Scope of Services. It is the Client's responsibility to provide UES with all information necessary for UES to provide the services described under the Scope of Services, and the Client assumes all liability for information not provided to UES that may affect the quality or sufficiency of the services so described.
- 2.4 Should UES be retained to provide threshold inspection services under Florida Statutes §553.79, Client acknowledges that UES's services thereunder do not constitute a guarantee that the construction in question has been properly designed or constructed, and UES's services do not replace any of the obligations or liabilities associated with any architect, contractor, or structural engineer. Therefore it is explicitly agreed that the Client will not hold UES responsible for the proper performance of service by any architect, contractor, structural engineer or any other entity associated with the project.

SECTION 3: SITE ACCESS AND SITE CONDITIONS

- 3.1 Client will grant or obtain free access to the site for all equipment and personnel necessary for UES to perform the work set forth in this Agreement. The Client will notify any and all possessors of the project site that Client has granted UES free access to the site. UES will take reasonable precautions to minimize damage to the site, but it is understood by Client that, in the normal course of work, some damage may occur, and the correction of such damage is not part of this Agreement unless so specified in the Proposal.
- 3.2 The Client is responsible for the accuracy of locations for all subterranean structures and utilities. UES will take reasonable precautions to avoid known subterranean structures, and the Client waives any claim against UES, and agrees to defend, indemnify, and hold UES harmless from any claim or liability for injury or loss, including costs of defense, arising from damage done to subterranean structures and utilities not identified or accurately located. In addition, Client agrees to compensate UES for any time spent or expenses incurred by UES in defense of any such claim with compensation to be based upon UES's prevailing fee schedule and expense reimbursement policy.

SECTION 4: SAMPLE OWNERSHIP AND DISPOSAL

- 4.1 Soil or water samples obtained from the project during performance of the work shall remain the property of the Client.
- 4.2 UES will dispose of or return to Client all remaining soils and rock samples 60 days after submission of report covering those samples. Further storage or transfer of samples can be made at Client's expense upon Client's prior written request.
- 4.3 Samples which are contaminated by petroleum products or other chemical waste will be returned to Client for treatment or disposal, consistent with all appropriate federal, state, or local regulations.

SECTION 5: BILLING AND PAYMENT

- 5.1 UES will submit invoices to Client monthly or upon completion of services. Invoices will show charges for different personnel and expense classifications.
- 5.2 Payment is due 30 days after presentation of invoice and is past due 31 days from invoice date. Client agrees to pay a finance charge of one and one-half percent (1 ½ %) per month, or the maximum rate allowed by law, on past due accounts.
- 5.3 If UES incurs any expenses to collect overdue billings on invoices, the sums paid by UES for reasonable attorneys' fees, court costs, UES's time, UES's expenses, and interest will be due and owing by the Client.

SECTION 6: OWNERSHIP AND USE OF DOCUMENTS

- 6.1 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, as instruments of service, shall remain the property of UES.
- 6.2 Client agrees that all reports and other work furnished to the Client or his agents, which are not paid for, will be returned upon demand and will not be used by the Client for any purpose.
- 6.3 UES will retain all pertinent records relating to the services performed for a period of five years following submission of the report, during which period the records will be made available to the Client at all reasonable times.
- 6.4 All reports, boring logs, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by UES, are prepared for the sole and exclusive use of Client, and may not be given to any other party or used or relied upon by any such party without the express written consent of UES.

SECTION 7: DISCOVERY OF UNANTICIPATED HAZARDOUS MATERIALS

- 7.1 Client warrants that a reasonable effort has been made to inform UES of known or suspected hazardous materials on or near the project site.
- 7.2 Under this agreement, the term hazardous materials include hazardous materials (40 CFR 172.01), hazardous wastes (40 CFR 261.2), hazardous substances (40 CFR 300.6), petroleum products, polychlorinated biphenyls, and asbestos.
- 7.3 Hazardous materials may exist at a site where there is no reason to believe they could or should be present. UES and Client agree that the discovery of unanticipated hazardous materials constitutes a changed condition mandating a renegotiation of the scope of work. UES and Client also agree that the discovery of unanticipated hazardous materials may make it necessary for UES to take immediate measures to protect health and safety. Client agrees to compensate UES for any equipment decontamination or other costs incident to the discovery of unanticipated hazardous waste.
- 7.4 UES agrees to notify Client when unanticipated hazardous materials or suspected hazardous materials are encountered. Client agrees to make any disclosures required by law to the appropriate governing agencies. Client also agrees to hold UES harmless for any and all consequences of disclosures made by UES which are required by governing law. In the event the project site is not owned by Client, Client recognizes that it is the Client's responsibility to inform the property owner of the discovery of unanticipated hazardous materials or suspected hazardous materials.
- 7.5 Notwithstanding any other provision of the Agreement, Client waives any claim against UES, and to the maximum extent permitted by law, agrees to defend, indemnify, and save UES harmless from any claim, liability, and/or defense costs for injury or loss arising from UES's discovery of unanticipated hazardous materials or suspected hazardous materials including any costs created by delay of the project and any cost associated with possible reduction of the property's value. Client will be responsible for ultimate disposal of any samples secured by UES which are found to be contaminated.

SECTION 8: RISK ALLOCATION

- 8.1 Client agrees that UES's liability for any damage on account of any breach of contract, error, omission or other professional negligence will be limited to a sum not to exceed \$50,000 or UES's fee, whichever is greater. If Client prefers to have higher limits on contractual or professional liability, UES agrees to increase the limits up to a maximum of \$1,000,000.00 upon Client's written request at the time of accepting our proposal provided that Client agrees to pay an additional consideration of four percent of the total fee, or \$400.00, whichever is greater. The additional charge for the higher liability limits is because of the greater risk assumed and is not strictly a charge for additional professional liability insurance.

SECTION 9: INSURANCE

- 9.1 UES represents and warrants that it and its agents, staff and consultants employed by it, is and are protected by worker's compensation insurance and that UES has such coverage under public liability and property damage insurance policies which UES deems to be adequate. Certificates for all such policies of insurance shall be provided to Client upon request in writing. Within the limits and conditions of such insurance, UES agrees to indemnify and save Client harmless from and against loss, damage, or liability arising from negligent acts by UES, its agents, staff, and consultants employed by it. UES shall not be responsible for any loss, damage or liability beyond the amounts, limits, and conditions of such insurance or the limits described in Section 8, whichever is less. The Client agrees to defend, indemnify and save UES harmless for loss, damage or liability arising from acts by Client, Client's agent, staff, and other UESs employed by Client.

SECTION 10: DISPUTE RESOLUTION

- 10.1 All claims, disputes, and other matters in controversy between UES and Client arising out of or in any way related to this Agreement will be submitted to alternative dispute resolution (ADR) such as mediation or arbitration, before and as a condition precedent to other remedies provided by law, including the commencement of litigation.
- 10.2 If a dispute arises related to the services provided under this Agreement and that dispute requires litigation instead of ADR as provided above, then:
- (a) the claim will be brought and tried in judicial jurisdiction of the court of the county where UES's principal place of business is located and Client waives the right to remove the action to any other county or judicial jurisdiction, and
 - (b) The prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees, and other claim related expenses.

SECTION 11: TERMINATION

- 11.1 This agreement may be terminated by either party upon seven (7) days written notice in the event of substantial failure by the other party to perform in accordance with the terms hereof. Such termination shall not be effective if that substantial failure has been remedied before expiration of the period specified in the written notice. In the event of termination, UES shall be paid for services performed to the termination notice date plus reasonable termination expenses.
- 11.2 In the event of termination, or suspension for more than three (3) months, prior to completion of all reports contemplated by the Agreement, UES may complete such analyses and records as are necessary to complete its files and may also complete a report on the services performed to the date of notice of termination or suspension. The expense of termination or suspension shall include all direct costs of UES in completing such analyses, records and reports.

SECTION 12: ASSIGNS

- 12.1 Neither the Client nor UES may delegate, assign, sublet or transfer their duties or interest in this Agreement without the written consent of the other party.

SECTION 13. GOVERNING LAW AND SURVIVAL

- 13.1 The laws of the State of Florida will govern the validity of these Terms, their interpretation and performance.
- 13.2 If any of the provisions contained in this Agreement are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired. Limitations of liability and indemnities will survive termination of this Agreement for any cause.

SECTION 14. INTEGRATION CLAUSE

- 14.1 This Agreement represents and contains the entire and only agreement and understanding among the parties with respect to the subject matter of this Agreement, and supersedes any and all prior and contemporaneous oral and written agreements, understandings, representations, inducements, promises, warranties, and conditions among the parties. No agreement, understanding, representation, inducement, promise, warranty, or condition of any kind with respect to the subject matter of this Agreement shall be relied upon by the parties unless expressly incorporated herein.
- 14.2 This Agreement may not be amended or modified except by an agreement in writing signed by the party against whom the enforcement of any modification or amendment is sought.



UNIVERSAL ENGINEERING SCIENCES

Consultants In: Geotechnical Engineering • Environmental Sciences
Geophysical Services • Construction Materials Testing • Threshold Inspection
Building Inspection • Plan Review • Building Code Administration

LOCATIONS:

- Atlanta, GA
- Daytona Beach, FL
- Fort Myers, FL
- Fort Pierce, FL
- Gainesville, FL
- Jacksonville, FL
- Miami, FL
- Ocala, FL
- Orlando, FL (Headquarters)
- Palm Coast, FL
- Panama City, FL
- Pensacola, FL
- Rockledge, FL
- Sarasota, FL
- Tampa, FL
- Tifton, GA
- West Palm Beach, FL

January 25, 2016

VyStar Credit Union
4949 Blanding Boulevard
Jacksonville, Florida 32210

Attention: Mr. Brian J. Kitchens

Reference: **Reliance Letter – Phase I ESA**
Proposed Retail Development
NWC of US Highway 441 & NW 167th Blvd
Alachua, Alachua County, Florida
Docs No. 1304845 v1

Dear Mr. Kitchens:

At the request of Windcrest Development Group, Inc. we are providing this letter of authorization so that VyStar Credit Union may use and rely upon our environmental report submitted for the subject property referenced above, as if originally prepared for them. The specific report is identified as follows:

Phase I ESA - Project No.: 0240.1400038.0000; Report No.: 1136564 v1; Dated 06/20/14

This authorization is granted with the explicit understanding that the limitations expressed in the report continue to apply and you accept Universal Engineering Sciences' General Conditions (enclosed) as a condition of their reliance on our report. Please indicate your acceptance in the signature space provided below and return a copy of this letter within fifty (days) days if you wish to rely on our report.

We appreciate this opportunity to provide service to you on this project. If you should have any questions, or if we can be of further assistance, please contact us.

Sincerely,
UNIVERSAL ENGINEERING SCIENCES, INC.

Randy K Wacha
Environmental Scientist

Enclosure: General Conditions

Acceptance:

Signature

Print Name

Title

Date

Universal Engineering Sciences, Inc.
GENERAL CONDITIONS

SECTION 1: RESPONSIBILITIES

- 1.1 Universal Engineering Sciences, Inc., ("UES"), has the responsibility for providing the services described under the Scope of Services section. The work is to be performed according to accepted standards of care and is to be completed in a timely manner. The term "UES" as used herein includes all of Universal Engineering Sciences, Inc.'s agents, employees, professional staff, and subcontractors.
- 1.2 The Client or a duly authorized representative is responsible for providing UES with a clear understanding of the project nature and scope. The Client shall supply UES with sufficient and adequate information, including, but not limited to, maps, site plans, reports, surveys and designs, to allow UES to properly complete the specified services. The Client shall also communicate changes in the nature and scope of the project as soon as possible during performance of the work so that the changes can be incorporated into the work product.
- 1.3 The Client acknowledges that UES's responsibilities in providing the services described under the Scope of Services section is limited to those services described therein, and the Client hereby assumes any collateral or affiliated duties necessitated by or for those services. Such duties may include, but are not limited to, reporting requirements imposed by any third party such as federal, state, or local entities, the provision of any required notices to any third party, or the securing of necessary permits or permissions from any third parties required for UES's provision of the services so described, unless otherwise agreed upon by both parties.
- 1.4 Universal will not be responsible for scheduling our services and will not be responsible for tests or inspections that are not performed due to a failure to schedule our services on the project or any resulting damages.
- 1.5 **PURSUANT TO FLORIDA STATUTES §558.0035, ANY INDIVIDUAL EMPLOYEE OR AGENT OF UES MAY NOT BE HELD INDIVIDUALLY LIABLE FOR NEGLIGENCE.**

SECTION 2: STANDARD OF CARE

- 2.1 Services performed by UES under this Agreement will be conducted in a manner consistent with the level of care and skill ordinarily exercised by members of UES's profession practicing contemporaneously under similar conditions in the locality of the project. No other warranty, express or implied, is made.
- 2.2 The Client recognizes that subsurface conditions may vary from those observed at locations where borings, surveys, or other explorations are made, and that site conditions may change with time. Data, interpretations, and recommendations by UES will be based solely on information available to UES at the time of service. UES is responsible for those data, interpretations, and recommendations, but will not be responsible for other parties' interpretations or use of the information developed.
- 2.3 Execution of this document by UES is not a representation that UES has visited the site, become generally familiar with local conditions under which the services are to be performed, or correlated personal observations with the requirements of the Scope of Services. It is the Client's responsibility to provide UES with all information necessary for UES to provide the services described under the Scope of Services, and the Client assumes all liability for information not provided to UES that may affect the quality or sufficiency of the services so described.
- 2.4 Should UES be retained to provide threshold inspection services under Florida Statutes §553.79, Client acknowledges that UES's services thereunder do not constitute a guarantee that the construction in question has been properly designed or constructed, and UES's services do not replace any of the obligations or liabilities associated with any architect, contractor, or structural engineer. Therefore it is explicitly agreed that the Client will not hold UES responsible for the proper performance of service by any architect, contractor, structural engineer or any other entity associated with the project.

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- 10.2 If a dispute arises related to the services provided under this Agreement and that dispute requires litigation instead of ADR as provided above, then:
- (a) the claim will be brought and tried in judicial jurisdiction of the court of the county where UES's principal place of business is located and Client waives the right to remove the action to any other county or judicial jurisdiction, and
 - (b) The prevailing party will be entitled to recovery of all reasonable costs incurred, including staff time, court costs, attorneys' fees, and other claim related expenses.

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- 11.2 In the event of termination, or suspension for more than three (3) months, prior to completion of all reports contemplated by the Agreement, UES may complete such analyses and records as are necessary to complete its files and may also complete a report on the services performed to the date of notice of termination or suspension. The expense of termination or suspension shall include all direct costs of UES in completing such analyses, records and reports.

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- 13.1 The laws of the State of Florida will govern the validity of these Terms, their interpretation and performance.
- 13.2 If any of the provisions contained in this Agreement are held illegal, invalid, or unenforceable, the enforceability of the remaining provisions will not be impaired. Limitations of liability and indemnities will survive termination of this Agreement for any cause.

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- 14.1 This Agreement represents and contains the entire and only agreement and understanding among the parties with respect to the subject matter of this Agreement, and supersedes any and all prior and contemporaneous oral and written agreements, understandings, representations, inducements, promises, warranties, and conditions among the parties. No agreement, understanding, representation, inducement, promise, warranty, or condition of any kind with respect to the subject matter of this Agreement shall be relied upon by the parties unless expressly incorporated herein.
- 14.2 This Agreement may not be amended or modified except by an agreement in writing signed by the party against whom the enforcement of any modification or amendment is sought.