

Overall Detention Pond Modified Rational				POND B			
Present Conditions				Area 3			
Q=CIA		By-Pass Acreage	New Acreage				
A=	2.510	0.240	2.27				
C=	0.35						
Tc=	20.00						
I100=	8.30						
Q100=	7.29						
Future Conditions				Offsite Condition			
A=	2.51	0.260	0.24	Q Allow			
A (adj)	2.27						
C=	0.90	0.350	0.90				
Tc	10.00	20	10.00				
I100=	9.80	8.30	9.80				
Q100=	22.14	0.755	2.12	5.93			
Flow for Storm Duration				Flow for Storm Durations (Offsite)			
Time	I	C	Q (cfs)	Time	I	C	Q (cfs)
10 min	9.80	0.90	20.021	10 min	9.80	0.35	0.892
15 min	9.00	0.90	18.387	15 min	9.00	0.35	0.819
20 min	8.30	0.90	16.957	20 min	8.30	0.35	0.755
30 min	6.90	0.90	14.097	30 min	6.90	0.35	0.628
40 min	5.80	0.90	11.849	40 min	5.80	0.35	0.528
50 min	5.00	0.90	10.215	50 min	5.00	0.35	0.455
60 min	4.50	0.90	9.194	60 min	4.50	0.35	0.410
70 min	4.00	0.90	8.172	70 min	4.00	0.35	0.364
80 min	3.70	0.90	7.559	80 min	3.70	0.35	0.337
90 min	3.50	0.90	7.151	90 min	3.50	0.35	0.319
100 min	3.40	0.90	6.946	100 min	3.40	0.35	0.309
110 min	3.20	0.90	6.538	110 min	3.20	0.35	0.291
Storage Calculations				Storage Calculations			
10 min			CF	10 min			CF
Inflow	12,548		8,990	Inflow	10,627		8,123
Outflow	3,558			Outflow	2,504		
15 min			Storage	15 min			Storage
Inflow	17,285		12,838	Inflow	14,405		11,275
Outflow	4,448			Outflow	3,130		
20 min			Storage	20 min			Storage
Inflow	21,255		15,918	Inflow	16,901		13,146
Outflow	5,337			Outflow	3,756		
30 min			Storage	30 min			Storage
Inflow	26,504		19,388	Inflow	21,127		16,119
Outflow	7,116			Outflow	5,008		
40 min			Storage	40 min			Storage
Inflow	29,705		20,810	Inflow	23,559		17,300
Outflow	8,895			Outflow	6,260		
50 min			Storage	50 min			Storage
Inflow	32,010		21,336	Inflow	25,608		18,097
Outflow	10,674			Outflow	7,511		
60 min			Storage	60 min			Storage
Inflow	34,571		22,118	Inflow	26,888		18,125
Outflow	12,453			Outflow	8,763		
70 min			Storage	70 min			Storage
Inflow	35,851		21,619	Inflow	29,577		19,562
Outflow	14,232			Outflow	10,015		
80 min			Storage	80 min			Storage
Inflow	37,900		21,889	Inflow	31,754		20,487
Outflow	16,011			Outflow	11,267		
90 min			Storage	90 min			Storage
Inflow	40,333		22,542	Inflow	33,418		20,899
Outflow	17,790			Outflow	12,519		
100 min			Storage	100 min			Storage
Inflow	43,534		23,964	Inflow	34,571		20,800
Outflow	19,569			Outflow	13,771		
110 min			Storage	110 min			Storage
Inflow	40,973		19,625	Inflow	32,010		16,987
Outflow	21,348			Outflow	15,023		

Overall Detention Pond Modified Rational				POND B			
Present Conditions				By-Pass Acreage			
Q=CIA		By-Pass Acreage	New Acreage				
A=	2.510	0.240	2.27				
C=	0.35						
Tc=	20.00						
I100=	8.30						
Q100=	5.53						
Future Conditions				Offsite Condition			
A=	2.51	0.260	0.24	Q Allow			
A (adj)	2.27						
C=	0.90	0.350	0.90				
Tc	10.00	20	10.00				
I100=	9.80	8.30	9.80				
Q100=	18.75	0.755	2.12	4.17			
Flow for Storm Duration				Flow for Storm Durations (Offsite)			
Time	I	C	Q (cfs)	Time	I	C	Q (cfs)
10 min	8.30	0.90	16.957	10 min	8.30	0.35	0.755
15 min	7.50	0.90	15.323	15 min	7.50	0.35	0.683
20 min	6.60	0.90	13.484	20 min	6.60	0.35	0.601
30 min	5.50	0.90	11.237	30 min	5.50	0.35	0.501
40 min	4.60	0.90	9.398	40 min	4.60	0.35	0.419
50 min	4.00	0.90	8.172	50 min	4.00	0.35	0.364
60 min	3.50	0.90	7.151	60 min	3.50	0.35	0.319
70 min	3.30	0.90	6.742	70 min	3.30	0.35	0.300
80 min	3.10	0.90	6.333	80 min	3.10	0.35	0.282
90 min	2.90	0.90	5.925	90 min	2.90	0.35	0.264
100 min	2.70	0.90	5.516	100 min	2.70	0.35	0.246
110 min	2.50	0.90	5.108	110 min	2.50	0.35	0.228
Storage Calculations				Storage Calculations			
10 min			CF	10 min			CF
Inflow	10,627		8,123	Inflow	9,091		6,798
Outflow	2,504			Outflow	2,293		
15 min			Storage	15 min			Storage
Inflow	14,405		11,275	Inflow	12,484		9,618
Outflow	3,130			Outflow	2,866		
20 min			Storage	20 min			Storage
Inflow	16,901		13,146	Inflow	15,109		11,669
Outflow	3,756			Outflow	3,439		
30 min			Storage	30 min			Storage
Inflow	21,127		16,119	Inflow	18,438		13,852
Outflow	5,008			Outflow	4,586		
40 min			Storage	40 min			Storage
Inflow	23,559		17,300	Inflow	20,486		14,754
Outflow	6,260			Outflow	5,732		
50 min			Storage	50 min			Storage
Inflow	25,608		18,097	Inflow	22,407		15,528
Outflow	7,511			Outflow	6,879		
60 min			Storage	60 min			Storage
Inflow	26,888		18,125	Inflow	23,047		15,022
Outflow	8,763			Outflow	8,025		
70 min			Storage	70 min			Storage
Inflow	29,577		19,562	Inflow	25,096		15,924
Outflow	10,015			Outflow	9,172		
80 min			Storage	80 min			Storage
Inflow	31,754		20,487	Inflow	26,632		16,314
Outflow	11,267			Outflow	10,318		
90 min			Storage	90 min			Storage
Inflow	33,418		20,899	Inflow	28,809		17,344
Outflow	12,519			Outflow	11,465		
100 min			Storage	100 min			Storage
Inflow	34,571		20,800	Inflow	30,730		18,118
Outflow	13,771			Outflow	12,611		
110 min			Storage	110 min			Storage
Inflow	32,010		16,987	Inflow	29,449		15,691
Outflow	15,023			Outflow	13,758		

Overall Detention Pond Modified Rational				POND A			
Present Conditions				By-Pass Acreage			
Q=CIA		By-Pass Acreage	New Acreage				
A=	2.510	0.240	2.27				
C=	0.35						
Tc=	20.00						
I100=	8.30						
Q100=	5.18						
Future Conditions				Offsite Condition			
A=	2.51	0.260	0.24	Q Allow			
A (adj)	2.27						
C=	0.90	0.350	0.90				
Tc	10.00	20	10.00				
I100=	9.80	8.30	9.80				
Q100=	16.04	0.755	2.12	3.82			
Flow for Storm Duration				Flow for Storm Durations (Offsite)			
Time	I	C	Q (cfs)	Time	I	C	Q (cfs)
10 min	7.10	0.90	14.505	10 min	7.10	0.35	0.646
15 min	6.50	0.90	13.280	15 min	6.50	0.35	0.592
20 min	5.90	0.90	12.054	20 min	5.90	0.35	0.537
30 min	4.80	0.90	9.806	30 min	4.80	0.35	0.437
40 min	4.00	0.90	8.172	40 min	4.00	0.35	0.364
50 min	3.50	0.90	7.151	50 min	3.50	0.35	0.319
60 min	3.00	0.90	6.129	60 min	3.00	0.35	0.273
70 min	2.80	0.90	5.720	70 min	2.80	0.35	0.255
80 min	2.60	0.90	5.312	80 min	2.60	0.35	0.237
90 min	2.50	0.90	5.108	90 min	2.50	0.35	0.228
100 min	2.40	0.90	4.903	100 min	2.40	0.35	0.218
110 min	2.30	0.90	4.699	110 min	2.30	0.35	0.209
Storage Calculations				Storage Calculations			
10 min			CF	10 min			CF
Inflow	9,091		6,798	Inflow	8,012		6,247
Outflow	2,293			Outflow	1,766		
15 min			Storage	15 min			Storage
Inflow	12,484		9,618	Inflow	10,850		8,643
Outflow	2,866			Outflow	2,207		
20 min			Storage	20 min			Storage
Inflow	15,109		11,669	Inflow	12,919		10,270
Outflow	3,439			Outflow	2,649		
30 min			Storage	30 min			Storage
Inflow	18,438		13,852	Inflow	16,208		12,676
Outflow	4,586			Outflow	3,532		
40 min			Storage	40 min			Storage
Inflow	20,486		14,754	Inflow	17,938		13,523
Outflow	5,732			Outflow	4,415		
50 min			Storage	50 min			Storage
Inflow	22,407		15,528	Inflow	18,526		13,229
Outflow	6,879			Outflow	5,298		
60 min			Storage	60 min			Storage
Inflow	23,047		15,022	Inflow	20,597		14,416
Outflow	8,025			Outflow	6,181		
70 min			Storage	70 min			Storage
Inflow	25,096		15,924	Inflow	22,122		15,059
Outflow	9,172						