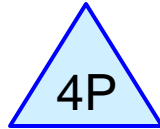
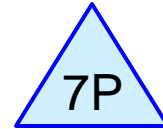


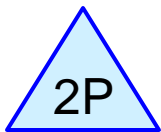
Scenario 1



Scenario 4



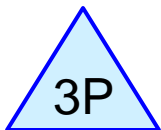
Scenario 7



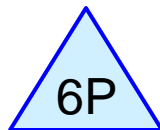
Scenario 2



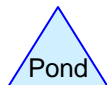
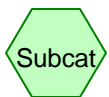
Scenario 5



Scenario 3



Scenario 6



Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.
 HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 2

Summary for Pond 1P: Scenario 1

Inflow = 0 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 1,279 cfs @ 0.00 hrs, Volume= 8,347.851 af, Atten= 0%, Lag= 0.0 min
 Primary = 1,279 cfs @ 0.00 hrs, Volume= 8,347.851 af

Routing by Stor-Ind method, Time Span= 0.00-500.00 hrs, dt= 1.00 hrs
 Starting Elev= 204.0' Surf.Area= 4,148 ac Storage= 8,295.000 af
 Peak Elev= 204.0' @ 0.00 hrs Surf.Area= 4,148 ac Storage= 8,295.000 af

Plug-Flow detention time= (not calculated: no plugs found)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	202.0'	8,295.000 af	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
202.0	4,147	0.000	0.000	4,147
204.0	4,148	8,295.000	8,295.000	4,149

Device	Routing	Invert	Outlet Devices
#1	Primary	199.2'	Special & User-Defined Head (feet) 0.0 0.6 1.5 2.4 2.5 3.4 4.4 5.4 6.3 Disch. (cfs) 0.000 75.000 252.000 465.000 500.000 766.000 1,113.000 1,528.000 1,992.000

Primary OutFlow Max=1,279 cfs @ 0.00 hrs HW=204.0' (Free Discharge)
 ↳ **1=Special & User-Defined** (Custom Controls 1,279 cfs)

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.

HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 3

Hydrograph for Pond 1P: Scenario 1

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0	8,295.000	204.0	1,279	51.00	0	3,835.188	202.9	879
1.00	0	8,189.733	204.0	1,268	52.00	0	3,762.819	202.9	873
2.00	0	8,085.332	203.9	1,258	53.00	0	3,690.949	202.9	867
3.00	0	7,981.791	203.9	1,248	54.00	0	3,619.574	202.9	861
4.00	0	7,879.103	203.9	1,237	55.00	0	3,548.691	202.9	855
5.00	0	7,777.261	203.9	1,227	56.00	0	3,478.296	202.8	849
6.00	0	7,676.257	203.9	1,217	57.00	0	3,408.387	202.8	843
7.00	0	7,576.084	203.8	1,207	58.00	0	3,338.959	202.8	837
8.00	0	7,476.737	203.8	1,197	59.00	0	3,270.009	202.8	831
9.00	0	7,378.208	203.8	1,187	60.00	0	3,201.535	202.8	826
10.00	0	7,280.490	203.8	1,177	61.00	0	3,133.532	202.8	820
11.00	0	7,183.577	203.7	1,168	62.00	0	3,065.998	202.7	814
12.00	0	7,087.461	203.7	1,158	63.00	0	2,998.930	202.7	809
13.00	0	6,992.138	203.7	1,149	64.00	0	2,932.323	202.7	803
14.00	0	6,897.599	203.7	1,139	65.00	0	2,866.176	202.7	798
15.00	0	6,803.839	203.6	1,130	66.00	0	2,800.484	202.7	792
16.00	0	6,710.850	203.6	1,121	67.00	0	2,735.245	202.7	787
17.00	0	6,618.616	203.6	1,112	68.00	0	2,670.456	202.6	781
18.00	0	6,527.069	203.6	1,104	69.00	0	2,606.113	202.6	776
19.00	0	6,436.151	203.6	1,096	70.00	0	2,542.213	202.6	771
20.00	0	6,345.861	203.5	1,089	71.00	0	2,478.749	202.6	765
21.00	0	6,256.192	203.5	1,081	72.00	0	2,415.685	202.6	761
22.00	0	6,167.141	203.5	1,074	73.00	0	2,352.992	202.6	756
23.00	0	6,078.704	203.5	1,066	74.00	0	2,290.666	202.6	752
24.00	0	5,990.876	203.4	1,059	75.00	0	2,228.707	202.5	748
25.00	0	5,903.654	203.4	1,052	76.00	0	2,167.111	202.5	743
26.00	0	5,817.032	203.4	1,044	77.00	0	2,105.877	202.5	739
27.00	0	5,731.007	203.4	1,037	78.00	0	2,045.003	202.5	734
28.00	0	5,645.575	203.4	1,030	79.00	0	1,984.486	202.5	730
29.00	0	5,560.732	203.3	1,023	80.00	0	1,924.325	202.5	726
30.00	0	5,476.473	203.3	1,016	81.00	0	1,864.517	202.4	722
31.00	0	5,392.795	203.3	1,009	82.00	0	1,805.060	202.4	717
32.00	0	5,309.693	203.3	1,002	83.00	0	1,745.952	202.4	713
33.00	0	5,227.164	203.3	995	84.00	0	1,687.192	202.4	709
34.00	0	5,145.204	203.2	988	85.00	0	1,628.776	202.4	705
35.00	0	5,063.808	203.2	981	86.00	0	1,570.704	202.4	701
36.00	0	4,982.973	203.2	975	87.00	0	1,512.972	202.4	696
37.00	0	4,902.695	203.2	968	88.00	0	1,455.580	202.4	692
38.00	0	4,822.971	203.2	961	89.00	0	1,398.525	202.3	688
39.00	0	4,743.795	203.1	955	90.00	0	1,341.804	202.3	684
40.00	0	4,665.166	203.1	948	91.00	0	1,285.417	202.3	680
41.00	0	4,587.078	203.1	942	92.00	0	1,229.361	202.3	676
42.00	0	4,509.528	203.1	935	93.00	0	1,173.634	202.3	672
43.00	0	4,432.512	203.1	929	94.00	0	1,118.234	202.3	668
44.00	0	4,356.027	203.1	922	95.00	0	1,063.160	202.3	664
45.00	0	4,280.069	203.0	916	96.00	0	1,008.409	202.2	661
46.00	0	4,204.635	203.0	910	97.00	0	953.980	202.2	657
47.00	0	4,129.720	203.0	903	98.00	0	899.870	202.2	653
48.00	0	4,055.322	203.0	897	99.00	0	846.078	202.2	649
49.00	0	3,981.436	203.0	891	100.00	0	792.602	202.2	645
50.00	0	3,908.059	202.9	885					

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.
 HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 4

Summary for Pond 2P: Scenario 2

Inflow = 0 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 1,194 cfs @ 0.00 hrs, Volume= 8,344.330 af, Atten= 0%, Lag= 0.0 min
 Primary = 1,194 cfs @ 0.00 hrs, Volume= 8,344.330 af

Routing by Stor-Ind method, Time Span= 0.00-500.00 hrs, dt= 1.00 hrs
 Starting Elev= 204.0' Surf.Area= 4,148 ac Storage= 8,295.000 af
 Peak Elev= 204.0' @ 0.00 hrs Surf.Area= 4,148 ac Storage= 8,295.000 af

Plug-Flow detention time= (not calculated: no plugs found)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	202.0'	8,295.000 af	Custom Stage Data (Conic) Listed below (Recalc)
Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet) Wet.Area (acres)
202.0	4,147	0.000	0.000 4,147
204.0	4,148	8,295.000	8,295.000 4,149

Device	Routing	Invert	Outlet Devices
#1	Primary	199.2'	Special & User-Defined
			Head (feet) 0.0 1.0 2.0 3.0 4.0 4.9 5.7
			Disch. (cfs) 0.000 136.000 336.000 592.000 888.000 1,232.000 1,600.000

Primary OutFlow Max=1,194 cfs @ 0.00 hrs HW=204.0' (Free Discharge)
 ↳ **Special & User-Defined** (Custom Controls 1,194 cfs)

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.

HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 5

Hydrograph for Pond 2P: Scenario 2

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0	8,295.000	204.0	1,194	51.00	0	4,116.571	203.0	827
1.00	0	8,196.715	204.0	1,185	52.00	0	4,048.457	203.0	822
2.00	0	8,099.175	204.0	1,176	53.00	0	3,980.743	203.0	817
3.00	0	8,002.376	203.9	1,167	54.00	0	3,913.428	202.9	812
4.00	0	7,906.311	203.9	1,158	55.00	0	3,846.509	202.9	807
5.00	0	7,810.975	203.9	1,149	56.00	0	3,779.983	202.9	803
6.00	0	7,716.362	203.9	1,140	57.00	0	3,713.848	202.9	798
7.00	0	7,622.466	203.8	1,132	58.00	0	3,648.103	202.9	793
8.00	0	7,529.284	203.8	1,123	59.00	0	3,582.743	202.9	789
9.00	0	7,436.808	203.8	1,115	60.00	0	3,517.769	202.8	784
10.00	0	7,345.033	203.8	1,106	61.00	0	3,453.176	202.8	779
11.00	0	7,253.955	203.7	1,098	62.00	0	3,388.964	202.8	775
12.00	0	7,163.568	203.7	1,090	63.00	0	3,325.129	202.8	770
13.00	0	7,073.867	203.7	1,081	64.00	0	3,261.669	202.8	766
14.00	0	6,984.846	203.7	1,073	65.00	0	3,198.583	202.8	761
15.00	0	6,896.501	203.7	1,065	66.00	0	3,135.867	202.8	757
16.00	0	6,808.826	203.6	1,057	67.00	0	3,073.521	202.7	752
17.00	0	6,721.816	203.6	1,049	68.00	0	3,011.541	202.7	748
18.00	0	6,635.466	203.6	1,041	69.00	0	2,949.925	202.7	743
19.00	0	6,549.771	203.6	1,033	70.00	0	2,888.672	202.7	739
20.00	0	6,464.727	203.6	1,025	71.00	0	2,827.780	202.7	735
21.00	0	6,380.327	203.5	1,017	72.00	0	2,767.245	202.7	730
22.00	0	6,296.568	203.5	1,010	73.00	0	2,707.066	202.7	726
23.00	0	6,213.445	203.5	1,002	74.00	0	2,647.241	202.6	722
24.00	0	6,130.952	203.5	994	75.00	0	2,587.769	202.6	717
25.00	0	6,049.085	203.5	987	76.00	0	2,528.645	202.6	713
26.00	0	5,967.839	203.4	979	77.00	0	2,469.870	202.6	709
27.00	0	5,887.209	203.4	972	78.00	0	2,411.440	202.6	705
28.00	0	5,807.192	203.4	965	79.00	0	2,353.354	202.6	701
29.00	0	5,727.781	203.4	957	80.00	0	2,295.610	202.6	697
30.00	0	5,648.973	203.4	950	81.00	0	2,238.205	202.5	693
31.00	0	5,570.763	203.3	943	82.00	0	2,181.137	202.5	688
32.00	0	5,493.146	203.3	936	83.00	0	2,124.406	202.5	684
33.00	0	5,416.118	203.3	928	84.00	0	2,068.008	202.5	680
34.00	0	5,339.675	203.3	921	85.00	0	2,011.941	202.5	676
35.00	0	5,263.811	203.3	914	86.00	0	1,956.205	202.5	672
36.00	0	5,188.523	203.3	908	87.00	0	1,900.796	202.5	668
37.00	0	5,113.806	203.2	901	88.00	0	1,845.713	202.4	665
38.00	0	5,039.657	203.2	894	89.00	0	1,790.954	202.4	661
39.00	0	4,966.060	203.2	887	90.00	0	1,736.517	202.4	657
40.00	0	4,892.950	203.2	882	91.00	0	1,682.400	202.4	653
41.00	0	4,820.271	203.2	877	92.00	0	1,628.602	202.4	649
42.00	0	4,748.018	203.1	872	93.00	0	1,575.120	202.4	645
43.00	0	4,676.191	203.1	867	94.00	0	1,521.952	202.4	641
44.00	0	4,604.786	203.1	861	95.00	0	1,469.097	202.4	638
45.00	0	4,533.801	203.1	856	96.00	0	1,416.553	202.3	634
46.00	0	4,463.233	203.1	851	97.00	0	1,364.318	202.3	630
47.00	0	4,393.080	203.1	846	98.00	0	1,312.391	202.3	626
48.00	0	4,323.340	203.0	841	99.00	0	1,260.768	202.3	623
49.00	0	4,254.010	203.0	836	100.00	0	1,209.450	202.3	619
50.00	0	4,185.088	203.0	832					

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.
 HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 6

Summary for Pond 3P: Scenario 3

Inflow = 0 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 1,212 cfs @ 0.00 hrs, Volume= 8,345.083 af, Atten= 0%, Lag= 0.0 min
 Primary = 1,212 cfs @ 0.00 hrs, Volume= 8,345.083 af

Routing by Stor-Ind method, Time Span= 0.00-500.00 hrs, dt= 1.00 hrs
 Starting Elev= 204.0' Surf.Area= 4,148 ac Storage= 8,295.000 af
 Peak Elev= 204.0' @ 0.00 hrs Surf.Area= 4,148 ac Storage= 8,295.000 af

Plug-Flow detention time= (not calculated: no plugs found)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	202.0'	8,295.000 af	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
202.0	4,147	0.000	0.000	4,147
204.0	4,148	8,295.000	8,295.000	4,149

Device	Routing	Invert	Outlet Devices
#1	Primary	199.2'	Special & User-Defined
			Head (feet) 0.0 0.6 1.5 2.5 3.5 4.5 5.5
			Disch. (cfs) 0.000 75.000 252.000 492.000 777.000 1,104.000 1,464.000

Primary OutFlow Max=1,212 cfs @ 0.00 hrs HW=204.0' (Free Discharge)
 ↳ **Special & User-Defined** (Custom Controls 1,212 cfs)

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.

HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 7

Hydrograph for Pond 3P: Scenario 3

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0	8,295.000	204.0	1,212	51.00	0	3,980.235	203.0	862
1.00	0	8,195.193	204.0	1,203	52.00	0	3,909.232	202.9	856
2.00	0	8,096.099	204.0	1,195	53.00	0	3,838.690	202.9	851
3.00	0	7,997.713	203.9	1,186	54.00	0	3,768.607	202.9	845
4.00	0	7,900.030	203.9	1,178	55.00	0	3,698.979	202.9	840
5.00	0	7,803.046	203.9	1,169	56.00	0	3,629.803	202.9	834
6.00	0	7,706.754	203.9	1,161	57.00	0	3,561.076	202.9	829
7.00	0	7,611.151	203.8	1,153	58.00	0	3,492.796	202.8	824
8.00	0	7,516.231	203.8	1,144	59.00	0	3,424.959	202.8	818
9.00	0	7,421.990	203.8	1,136	60.00	0	3,357.562	202.8	813
10.00	0	7,328.422	203.8	1,128	61.00	0	3,290.604	202.8	808
11.00	0	7,235.523	203.7	1,120	62.00	0	3,224.080	202.8	802
12.00	0	7,143.288	203.7	1,112	63.00	0	3,157.989	202.8	797
13.00	0	7,051.712	203.7	1,104	64.00	0	3,092.326	202.7	792
14.00	0	6,960.761	203.7	1,097	65.00	0	3,027.090	202.7	787
15.00	0	6,870.401	203.7	1,090	66.00	0	2,962.278	202.7	782
16.00	0	6,780.628	203.6	1,083	67.00	0	2,897.885	202.7	777
17.00	0	6,691.438	203.6	1,076	68.00	0	2,833.881	202.7	772
18.00	0	6,602.828	203.6	1,069	69.00	0	2,770.239	202.7	768
19.00	0	6,514.792	203.6	1,062	70.00	0	2,706.958	202.7	764
20.00	0	6,427.329	203.5	1,055	71.00	0	2,644.036	202.6	759
21.00	0	6,340.433	203.5	1,048	72.00	0	2,581.469	202.6	755
22.00	0	6,254.102	203.5	1,041	73.00	0	2,519.257	202.6	751
23.00	0	6,168.331	203.5	1,034	74.00	0	2,457.398	202.6	746
24.00	0	6,083.118	203.5	1,028	75.00	0	2,395.888	202.6	742
25.00	0	5,998.458	203.4	1,021	76.00	0	2,334.727	202.6	738
26.00	0	5,914.347	203.4	1,014	77.00	0	2,273.912	202.5	734
27.00	0	5,830.783	203.4	1,008	78.00	0	2,213.442	202.5	730
28.00	0	5,747.762	203.4	1,001	79.00	0	2,153.314	202.5	725
29.00	0	5,665.280	203.4	995	80.00	0	2,093.527	202.5	721
30.00	0	5,583.333	203.3	988	81.00	0	2,034.078	202.5	717
31.00	0	5,501.919	203.3	982	82.00	0	1,974.966	202.5	713
32.00	0	5,421.033	203.3	976	83.00	0	1,916.189	202.5	709
33.00	0	5,340.673	203.3	969	84.00	0	1,857.745	202.4	705
34.00	0	5,260.835	203.3	963	85.00	0	1,799.631	202.4	701
35.00	0	5,181.515	203.2	957	86.00	0	1,741.847	202.4	697
36.00	0	5,102.710	203.2	950	87.00	0	1,684.390	202.4	693
37.00	0	5,024.418	203.2	944	88.00	0	1,627.258	202.4	689
38.00	0	4,946.633	203.2	938	89.00	0	1,570.450	202.4	685
39.00	0	4,869.354	203.2	932	90.00	0	1,513.964	202.4	682
40.00	0	4,792.577	203.2	926	91.00	0	1,457.797	202.4	678
41.00	0	4,716.298	203.1	920	92.00	0	1,401.949	202.3	674
42.00	0	4,640.515	203.1	914	93.00	0	1,346.417	202.3	670
43.00	0	4,565.224	203.1	908	94.00	0	1,291.199	202.3	666
44.00	0	4,490.422	203.1	902	95.00	0	1,236.295	202.3	662
45.00	0	4,416.105	203.1	896	96.00	0	1,181.701	202.3	659
46.00	0	4,342.272	203.0	890	97.00	0	1,127.416	202.3	655
47.00	0	4,268.918	203.0	885	98.00	0	1,073.439	202.3	651
48.00	0	4,196.040	203.0	879	99.00	0	1,019.767	202.2	648
49.00	0	4,123.636	203.0	873	100.00	0	966.400	202.2	644
50.00	0	4,051.702	203.0	868					

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.
 HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 8

Summary for Pond 4P: Scenario 4

Inflow = 0 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 1,065 cfs @ 0.00 hrs, Volume= 8,338.988 af, Atten= 0%, Lag= 0.0 min
 Primary = 1,065 cfs @ 0.00 hrs, Volume= 8,338.988 af

Routing by Stor-Ind method, Time Span= 0.00-500.00 hrs, dt= 1.00 hrs
 Starting Elev= 204.0' Surf.Area= 4,148 ac Storage= 8,295.000 af
 Peak Elev= 204.0' @ 0.00 hrs Surf.Area= 4,148 ac Storage= 8,295.000 af

Plug-Flow detention time= (not calculated: no plugs found)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	202.0'	8,295.000 af	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
202.0	4,147	0.000	0.000	4,147
204.0	4,148	8,295.000	8,295.000	4,149

Device	Routing	Invert	Outlet Devices
#1	Primary	199.2'	Special & User-Defined Head (feet) 0.0 0.5 1.1 1.8 2.7 3.6 4.5 5.3 Disch. (cfs) 0.000 50.000 168.000 328.000 518.000 736.000 976.000 1,212.000

Primary OutFlow Max=1,065 cfs @ 0.00 hrs HW=204.0' (Free Discharge)
 ↳ **1=Special & User-Defined** (Custom Controls 1,065 cfs)

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.

HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 9

Hydrograph for Pond 4P: Scenario 4

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0	8,295.000	204.0	1,065	51.00	0	4,392.152	203.1	805
1.00	0	8,207.283	204.0	1,058	52.00	0	4,325.793	203.0	801
2.00	0	8,120.079	204.0	1,052	53.00	0	4,259.785	203.0	797
3.00	0	8,033.387	203.9	1,046	54.00	0	4,194.128	203.0	792
4.00	0	7,947.203	203.9	1,040	55.00	0	4,128.818	203.0	788
5.00	0	7,861.523	203.9	1,034	56.00	0	4,063.854	203.0	784
6.00	0	7,776.346	203.9	1,028	57.00	0	3,999.235	203.0	780
7.00	0	7,691.668	203.9	1,022	58.00	0	3,934.958	202.9	776
8.00	0	7,607.487	203.8	1,016	59.00	0	3,871.022	202.9	772
9.00	0	7,523.798	203.8	1,010	60.00	0	3,807.424	202.9	767
10.00	0	7,440.601	203.8	1,004	61.00	0	3,744.164	202.9	763
11.00	0	7,357.890	203.8	998	62.00	0	3,681.239	202.9	759
12.00	0	7,275.665	203.8	992	63.00	0	3,618.647	202.9	755
13.00	0	7,193.921	203.7	986	64.00	0	3,556.387	202.9	751
14.00	0	7,112.656	203.7	980	65.00	0	3,494.457	202.8	747
15.00	0	7,031.863	203.7	975	66.00	0	3,432.856	202.8	743
16.00	0	6,951.515	203.7	970	67.00	0	3,371.581	202.8	739
17.00	0	6,871.593	203.7	964	68.00	0	3,310.628	202.8	736
18.00	0	6,792.094	203.6	959	69.00	0	3,249.983	202.8	732
19.00	0	6,713.016	203.6	954	70.00	0	3,189.629	202.8	729
20.00	0	6,634.358	203.6	949	71.00	0	3,129.566	202.8	725
21.00	0	6,556.116	203.6	944	72.00	0	3,069.792	202.7	722
22.00	0	6,478.290	203.6	939	73.00	0	3,010.306	202.7	718
23.00	0	6,400.875	203.5	934	74.00	0	2,951.107	202.7	715
24.00	0	6,323.871	203.5	929	75.00	0	2,892.192	202.7	711
25.00	0	6,247.275	203.5	924	76.00	0	2,833.561	202.7	708
26.00	0	6,171.084	203.5	919	77.00	0	2,775.213	202.7	704
27.00	0	6,095.298	203.5	915	78.00	0	2,717.145	202.7	701
28.00	0	6,019.913	203.5	910	79.00	0	2,659.357	202.6	698
29.00	0	5,944.927	203.4	905	80.00	0	2,601.847	202.6	694
30.00	0	5,870.339	203.4	900	81.00	0	2,544.615	202.6	691
31.00	0	5,796.146	203.4	895	82.00	0	2,487.658	202.6	688
32.00	0	5,722.347	203.4	891	83.00	0	2,430.975	202.6	684
33.00	0	5,648.938	203.4	886	84.00	0	2,374.565	202.6	681
34.00	0	5,575.919	203.3	881	85.00	0	2,318.426	202.6	678
35.00	0	5,503.286	203.3	877	86.00	0	2,262.558	202.5	674
36.00	0	5,431.039	203.3	872	87.00	0	2,206.959	202.5	671
37.00	0	5,359.174	203.3	867	88.00	0	2,151.628	202.5	668
38.00	0	5,287.690	203.3	863	89.00	0	2,096.563	202.5	665
39.00	0	5,216.585	203.3	858	90.00	0	2,041.763	202.5	661
40.00	0	5,145.856	203.2	854	91.00	0	1,987.228	202.5	658
41.00	0	5,075.503	203.2	849	92.00	0	1,932.954	202.5	655
42.00	0	5,005.522	203.2	845	93.00	0	1,878.942	202.5	652
43.00	0	4,935.913	203.2	840	94.00	0	1,825.191	202.4	649
44.00	0	4,866.672	203.2	836	95.00	0	1,771.698	202.4	646
45.00	0	4,797.798	203.2	831	96.00	0	1,718.462	202.4	643
46.00	0	4,729.289	203.1	827	97.00	0	1,665.483	202.4	639
47.00	0	4,661.143	203.1	822	98.00	0	1,612.759	202.4	636
48.00	0	4,593.358	203.1	818	99.00	0	1,560.289	202.4	633
49.00	0	4,525.933	203.1	814	100.00	0	1,508.072	202.4	630
50.00	0	4,458.865	203.1	809					

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.
 HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 10

Summary for Pond 5P: Scenario 5

Inflow = 0 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 770 cfs @ 0.00 hrs, Volume= 8,326.828 af, Atten= 0%, Lag= 0.0 min
 Primary = 770 cfs @ 0.00 hrs, Volume= 8,326.828 af

Routing by Stor-Ind method, Time Span= 0.00-500.00 hrs, dt= 1.00 hrs
 Starting Elev= 204.0' Surf.Area= 4,148 ac Storage= 8,295.000 af
 Peak Elev= 204.0' @ 0.00 hrs Surf.Area= 4,148 ac Storage= 8,295.000 af

Plug-Flow detention time= (not calculated: no plugs found)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	202.0'	8,295.000 af	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
202.0	4,147	0.000	0.000	4,147
204.0	4,148	8,295.000	8,295.000	4,149

Device	Routing	Invert	Outlet Devices
#1	Primary	199.2'	Special & User-Defined Head (feet) 0.0 0.3 0.7 1.1 1.7 2.5 3.4 4.2 5.0 5.7 Disch. (cfs) 0.000 25.000 84.000 164.000 259.000 368.000 488.000 606.000 825.000 1,097.000

Primary OutFlow Max=770 cfs @ 0.00 hrs HW=204.0' (Free Discharge)
 ↳1=Special & User-Defined (Custom Controls 770 cfs)

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.

HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 11

Hydrograph for Pond 5P: Scenario 5

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0	8,295.000	204.0	770	51.00	0	5,457.864	203.3	594
1.00	0	8,231.516	204.0	766	52.00	0	5,408.877	203.3	592
2.00	0	8,168.377	204.0	762	53.00	0	5,360.034	203.3	590
3.00	0	8,105.582	204.0	758	54.00	0	5,311.335	203.3	588
4.00	0	8,043.129	203.9	754	55.00	0	5,262.778	203.3	587
5.00	0	7,981.015	203.9	750	56.00	0	5,214.364	203.3	585
6.00	0	7,919.239	203.9	745	57.00	0	5,166.092	203.2	583
7.00	0	7,857.799	203.9	741	58.00	0	5,117.962	203.2	582
8.00	0	7,796.693	203.9	737	59.00	0	5,069.973	203.2	580
9.00	0	7,735.920	203.9	733	60.00	0	5,022.124	203.2	578
10.00	0	7,675.477	203.9	729	61.00	0	4,974.416	203.2	576
11.00	0	7,615.363	203.8	725	62.00	0	4,926.849	203.2	575
12.00	0	7,555.576	203.8	721	63.00	0	4,879.420	203.2	573
13.00	0	7,496.114	203.8	718	64.00	0	4,832.131	203.2	571
14.00	0	7,436.975	203.8	714	65.00	0	4,784.981	203.2	570
15.00	0	7,378.159	203.8	710	66.00	0	4,737.969	203.1	568
16.00	0	7,319.662	203.8	706	67.00	0	4,691.095	203.1	566
17.00	0	7,261.483	203.8	702	68.00	0	4,644.359	203.1	565
18.00	0	7,203.621	203.7	698	69.00	0	4,597.760	203.1	563
19.00	0	7,146.074	203.7	694	70.00	0	4,551.297	203.1	561
20.00	0	7,088.839	203.7	691	71.00	0	4,504.971	203.1	560
21.00	0	7,031.916	203.7	687	72.00	0	4,458.781	203.1	558
22.00	0	6,975.303	203.7	683	73.00	0	4,412.726	203.1	556
23.00	0	6,918.997	203.7	679	74.00	0	4,366.807	203.1	555
24.00	0	6,862.998	203.7	676	75.00	0	4,321.022	203.0	553
25.00	0	6,807.304	203.6	672	76.00	0	4,275.372	203.0	552
26.00	0	6,751.912	203.6	668	77.00	0	4,229.856	203.0	550
27.00	0	6,696.822	203.6	665	78.00	0	4,184.473	203.0	548
28.00	0	6,642.031	203.6	661	79.00	0	4,139.224	203.0	547
29.00	0	6,587.539	203.6	658	80.00	0	4,094.107	203.0	545
30.00	0	6,533.342	203.6	654	81.00	0	4,049.123	203.0	544
31.00	0	6,479.441	203.6	650	82.00	0	4,004.270	203.0	542
32.00	0	6,425.833	203.5	647	83.00	0	3,959.550	203.0	540
33.00	0	6,372.516	203.5	643	84.00	0	3,914.960	202.9	539
34.00	0	6,319.490	203.5	640	85.00	0	3,870.502	202.9	537
35.00	0	6,266.752	203.5	636	86.00	0	3,826.174	202.9	536
36.00	0	6,214.300	203.5	633	87.00	0	3,781.976	202.9	534
37.00	0	6,162.135	203.5	629	88.00	0	3,737.907	202.9	532
38.00	0	6,110.252	203.5	626	89.00	0	3,693.969	202.9	531
39.00	0	6,058.653	203.5	623	90.00	0	3,650.159	202.9	529
40.00	0	6,007.333	203.4	619	91.00	0	3,606.477	202.9	528
41.00	0	5,956.293	203.4	616	92.00	0	3,562.924	202.9	526
42.00	0	5,905.531	203.4	613	93.00	0	3,519.499	202.8	525
43.00	0	5,855.045	203.4	609	94.00	0	3,476.201	202.8	523
44.00	0	5,804.831	203.4	606	95.00	0	3,433.030	202.8	522
45.00	0	5,754.826	203.4	604	96.00	0	3,389.986	202.8	520
46.00	0	5,704.968	203.4	602	97.00	0	3,347.068	202.8	519
47.00	0	5,655.256	203.4	601	98.00	0	3,304.276	202.8	517
48.00	0	5,605.690	203.4	599	99.00	0	3,261.610	202.8	516
49.00	0	5,556.270	203.3	597	100.00	0	3,219.069	202.8	514
50.00	0	5,506.995	203.3	595					

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.
 HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 12

Summary for Pond 6P: Scenario 6

Inflow = 0 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 296 cfs @ 0.00 hrs, Volume= 3,887.561 af, Atten= 0%, Lag= 0.0 min
 Primary = 296 cfs @ 0.00 hrs, Volume= 3,887.561 af

Routing by Stor-Ind method, Time Span= 0.00-500.00 hrs, dt= 1.00 hrs
 Starting Elev= 204.0' Surf.Area= 4,148 ac Storage= 8,295.000 af
 Peak Elev= 204.0' @ 0.00 hrs Surf.Area= 4,148 ac Storage= 8,295.000 af

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	202.0'	8,295.000 af	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
202.0	4,147	0.000	0.000	4,147
204.0	4,148	8,295.000	8,295.000	4,149

Device	Routing	Invert	Outlet Devices
#1	Primary	202.9'	Special & User-Defined Head (feet) 0.0 0.1 0.4 0.7 1.1 Disch. (cfs) 0.000 8.000 72.000 168.000 296.000

Primary OutFlow Max=296 cfs @ 0.00 hrs HW=204.0' (Free Discharge)
 ↳1=Special & User-Defined (Custom Controls 296 cfs)

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.

HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 13

Hydrograph for Pond 6P: Scenario 6

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0	8,295.000	204.0	296	51.00	0	7,229.923	203.7	214
1.00	0	8,270.615	204.0	294	52.00	0	7,212.307	203.7	212
2.00	0	8,246.385	204.0	292	53.00	0	7,194.803	203.7	211
3.00	0	8,222.309	204.0	290	54.00	0	7,177.410	203.7	210
4.00	0	8,198.386	204.0	289	55.00	0	7,160.128	203.7	208
5.00	0	8,174.615	204.0	287	56.00	0	7,142.955	203.7	207
6.00	0	8,150.995	204.0	285	57.00	0	7,125.892	203.7	206
7.00	0	8,127.525	204.0	283	58.00	0	7,108.937	203.7	204
8.00	0	8,104.204	204.0	281	59.00	0	7,092.090	203.7	203
9.00	0	8,081.032	203.9	279	60.00	0	7,075.350	203.7	202
10.00	0	8,058.006	203.9	278	61.00	0	7,058.717	203.7	201
11.00	0	8,035.127	203.9	276	62.00	0	7,042.189	203.7	199
12.00	0	8,012.394	203.9	274	63.00	0	7,025.766	203.7	198
13.00	0	7,989.805	203.9	272	64.00	0	7,009.448	203.7	197
14.00	0	7,967.360	203.9	271	65.00	0	6,993.233	203.7	196
15.00	0	7,945.057	203.9	269	66.00	0	6,977.121	203.7	194
16.00	0	7,922.896	203.9	267	67.00	0	6,961.112	203.7	193
17.00	0	7,900.876	203.9	266	68.00	0	6,945.205	203.7	192
18.00	0	7,878.995	203.9	264	69.00	0	6,929.398	203.7	191
19.00	0	7,857.254	203.9	262	70.00	0	6,913.692	203.7	189
20.00	0	7,835.651	203.9	261	71.00	0	6,898.086	203.7	188
21.00	0	7,814.185	203.9	259	72.00	0	6,882.579	203.7	187
22.00	0	7,792.856	203.9	257	73.00	0	6,867.171	203.7	186
23.00	0	7,771.662	203.9	256	74.00	0	6,851.860	203.7	185
24.00	0	7,750.603	203.9	254	75.00	0	6,836.647	203.6	183
25.00	0	7,729.678	203.9	252	76.00	0	6,821.531	203.6	182
26.00	0	7,708.886	203.9	251	77.00	0	6,806.510	203.6	181
27.00	0	7,688.226	203.9	249	78.00	0	6,791.586	203.6	180
28.00	0	7,667.697	203.8	248	79.00	0	6,776.755	203.6	179
29.00	0	7,647.299	203.8	246	80.00	0	6,762.020	203.6	178
30.00	0	7,627.030	203.8	244	81.00	0	6,747.378	203.6	177
31.00	0	7,606.891	203.8	243	82.00	0	6,732.828	203.6	175
32.00	0	7,586.879	203.8	241	83.00	0	6,718.372	203.6	174
33.00	0	7,566.994	203.8	240	84.00	0	6,704.007	203.6	173
34.00	0	7,547.236	203.8	238	85.00	0	6,689.734	203.6	172
35.00	0	7,527.603	203.8	237	86.00	0	6,675.551	203.6	171
36.00	0	7,508.095	203.8	235	87.00	0	6,661.458	203.6	170
37.00	0	7,488.711	203.8	234	88.00	0	6,647.455	203.6	169
38.00	0	7,469.451	203.8	232	89.00	0	6,633.541	203.6	168
39.00	0	7,450.312	203.8	231	90.00	0	6,619.716	203.6	167
40.00	0	7,431.296	203.8	229	91.00	0	6,605.978	203.6	166
41.00	0	7,412.400	203.8	228	92.00	0	6,592.328	203.6	165
42.00	0	7,393.624	203.8	226	93.00	0	6,578.764	203.6	164
43.00	0	7,374.968	203.8	225	94.00	0	6,565.287	203.6	163
44.00	0	7,356.430	203.8	224	95.00	0	6,551.895	203.6	162
45.00	0	7,338.010	203.8	222	96.00	0	6,538.588	203.6	160
46.00	0	7,319.707	203.8	221	97.00	0	6,525.366	203.6	159
47.00	0	7,301.520	203.8	219	98.00	0	6,512.228	203.6	158
48.00	0	7,283.449	203.8	218	99.00	0	6,499.174	203.6	157
49.00	0	7,265.493	203.8	217	100.00	0	6,486.202	203.6	156
50.00	0	7,247.651	203.7	215					

**23 DAYS
(NOT PRINTED)**

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.

HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 14

Summary for Pond 7P: Scenario 7

Inflow = 0 cfs @ 0.00 hrs, Volume= 0.000 af
 Outflow = 1,165 cfs @ 0.00 hrs, Volume= 8,343.140 af, Atten= 0%, Lag= 0.0 min
 Primary = 1,165 cfs @ 0.00 hrs, Volume= 8,343.140 af

Routing by Stor-Ind method, Time Span= 0.00-500.00 hrs, dt= 1.00 hrs
 Starting Elev= 204.0' Surf.Area= 4,148 ac Storage= 8,295.000 af
 Peak Elev= 204.0' @ 0.00 hrs Surf.Area= 4,148 ac Storage= 8,295.000 af

Plug-Flow detention time= (not calculated: no plugs found)
 Center-of-Mass det. time= (not calculated: no inflow)

Volume	Invert	Avail.Storage	Storage Description
#1	202.0'	8,295.000 af	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (acres)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
202.0	4,147	0.000	0.000	4,147
204.0	4,148	8,295.000	8,295.000	4,149

Device	Routing	Invert	Outlet Devices
#1	Primary	199.2'	Special & User-Defined Head (feet) 0.0 0.3 0.6 1.0 1.7 2.3 3.1 3.8 4.5 5.1 Disch. (cfs) 0.000 25.000 84.000 155.000 278.000 427.000 608.000 812.000 1,042.000 1,288.000

Primary OutFlow Max=1,165 cfs @ 0.00 hrs HW=204.0' (Free Discharge)
 ↳ **1=Special & User-Defined** (Custom Controls 1,165 cfs)

Lake Stage-Discharge Analysis

Prepared by C.T. Male Associates, P.C.

HydroCAD® 9.10 s/n 00410 © 2009 HydroCAD Software Solutions LLC

Type II 24-hr 90% Rainfall=1.00"

Printed 9/2/2010

Page 15

Hydrograph for Pond 7P: Scenario 7

Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Storage (acre-feet)	Elevation (feet)	Primary (cfs)
0.00	0	8,295.000	204.0	1,165	51.00	0	4,197.837	203.0	816
1.00	0	8,199.111	204.0	1,156	52.00	0	4,130.612	203.0	811
2.00	0	8,104.001	204.0	1,146	53.00	0	4,063.795	203.0	806
3.00	0	8,009.666	203.9	1,137	54.00	0	3,997.365	203.0	801
4.00	0	7,916.098	203.9	1,128	55.00	0	3,931.320	202.9	797
5.00	0	7,823.291	203.9	1,118	56.00	0	3,865.657	202.9	792
6.00	0	7,731.240	203.9	1,109	57.00	0	3,800.375	202.9	788
7.00	0	7,639.937	203.8	1,100	58.00	0	3,735.470	202.9	783
8.00	0	7,549.377	203.8	1,091	59.00	0	3,670.941	202.9	779
9.00	0	7,459.554	203.8	1,082	60.00	0	3,606.786	202.9	774
10.00	0	7,370.461	203.8	1,074	61.00	0	3,543.002	202.9	770
11.00	0	7,282.094	203.8	1,065	62.00	0	3,479.588	202.8	765
12.00	0	7,194.445	203.7	1,056	63.00	0	3,416.541	202.8	761
13.00	0	7,107.510	203.7	1,048	64.00	0	3,353.859	202.8	756
14.00	0	7,021.258	203.7	1,040	65.00	0	3,291.540	202.8	752
15.00	0	6,935.615	203.7	1,033	66.00	0	3,229.581	202.8	748
16.00	0	6,850.530	203.7	1,026	67.00	0	3,167.982	202.8	743
17.00	0	6,766.001	203.6	1,019	68.00	0	3,106.739	202.7	739
18.00	0	6,682.024	203.6	1,013	69.00	0	3,045.851	202.7	735
19.00	0	6,598.594	203.6	1,006	70.00	0	2,985.315	202.7	730
20.00	0	6,515.709	203.6	1,000	71.00	0	2,925.130	202.7	726
21.00	0	6,433.365	203.6	993	72.00	0	2,865.294	202.7	722
22.00	0	6,351.558	203.5	987	73.00	0	2,805.804	202.7	718
23.00	0	6,270.285	203.5	980	74.00	0	2,746.658	202.7	714
24.00	0	6,189.542	203.5	974	75.00	0	2,687.855	202.6	709
25.00	0	6,109.326	203.5	967	76.00	0	2,629.392	202.6	705
26.00	0	6,029.634	203.5	961	77.00	0	2,571.268	202.6	701
27.00	0	5,950.462	203.4	955	78.00	0	2,513.481	202.6	697
28.00	0	5,871.806	203.4	949	79.00	0	2,456.028	202.6	693
29.00	0	5,793.664	203.4	942	80.00	0	2,398.908	202.6	689
30.00	0	5,716.031	203.4	936	81.00	0	2,342.118	202.6	685
31.00	0	5,638.905	203.4	930	82.00	0	2,285.657	202.6	681
32.00	0	5,562.283	203.3	924	83.00	0	2,229.524	202.5	677
33.00	0	5,486.160	203.3	918	84.00	0	2,173.715	202.5	673
34.00	0	5,410.534	203.3	912	85.00	0	2,118.230	202.5	669
35.00	0	5,335.402	203.3	906	86.00	0	2,063.066	202.5	666
36.00	0	5,260.760	203.3	900	87.00	0	2,008.221	202.5	662
37.00	0	5,186.605	203.3	894	88.00	0	1,953.694	202.5	658
38.00	0	5,112.934	203.2	889	89.00	0	1,899.482	202.5	654
39.00	0	5,039.743	203.2	883	90.00	0	1,845.585	202.4	650
40.00	0	4,967.031	203.2	877	91.00	0	1,792.000	202.4	647
41.00	0	4,894.792	203.2	871	92.00	0	1,738.724	202.4	643
42.00	0	4,823.026	203.2	866	93.00	0	1,685.758	202.4	639
43.00	0	4,751.727	203.1	860	94.00	0	1,633.098	202.4	635
44.00	0	4,680.894	203.1	854	95.00	0	1,580.743	202.4	632
45.00	0	4,610.523	203.1	849	96.00	0	1,528.691	202.4	628
46.00	0	4,540.611	203.1	843	97.00	0	1,476.941	202.4	624
47.00	0	4,471.156	203.1	838	98.00	0	1,425.490	202.3	621
48.00	0	4,402.154	203.1	832	99.00	0	1,374.338	202.3	617
49.00	0	4,333.602	203.0	827	100.00	0	1,323.481	202.3	614
50.00	0	4,265.497	203.0	821					