File

STORM WATER DETENTION

CALCULATIONS AND REPORT

FOR

DELMAR GARDENS

O'FALLON, MISSOURI

Prepared For:

DELMAR GARDENS ENTERPRISES, INC.
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CEC Project No. 00228.10

May 20, 2002
Revised: August 6, 2002
Revised: September 18, 2002
Revised January 28, 2007
Revised December 14, 2007

DESCRIPTION AND PROCEDURE

Delmar Gardens is planning to construct a New Self-Care facility and construct additions to the Existing Skilled-Care Facility west of the Highway K and south of Highway N and the Page Avenue extension. The existing site conditions consist of the Existing Skilled-Care facility and associated parking lots and drives. During the first phase of the project (the Skilled Care Facility), the wet detention basin and 2 dry detention basins were designed and constructed for the future conditions. The building additions to the Skilled Care Facility and the New Self Care Facility have been accounted for in the detention basin design during phase 1.
The site slopes from the north to the south. The following calculations have been revised to reflect the revised wet basin configuration and the revised drainage areas.

Calculations for the existing conditions as described above are located in the following report. See the drainage area maps located in the plans for details. We used Version 7.5 of Pond Pack for Windows created by Haested Methods to perform the detention calculations. The Rational Method was used to determine the hydrographs for the site. The existing hydrograph consists of using a runoff factor based on the intensity and duration of the 2-, 15-, 25-, and 100-year storm events to calculate the peak runoff. Trapezoidal hydrographs were created by using the peak flow for a duration equal to the time of concentration. We modeled the site as one watershed. Our goal for the proposed conditions was to at least meet the existing undeveloped runoff conditions from the entire site for the 25-year design storm.

The existing conditions consist of 24.45 acres of undeveloped onsite area. The existing conditions hydrograph determined the maximum allowable release rate for the site. See Table 2 Existing Conditions for the existing conditions release rate for the site.

The proposed conditions consist of three onsite detention basins. Two will be dry basins that drain a majority of the site. The third is a water feature that will detain a minimal amount of runoff from surrounding sheet flow. There are some areas that were not physically able to be drained to a detention basin and therefore will leave the site undetained and labeled as bypass areas. These areas and runoff are deducted from the allowable release rate for the site. Included in the bypass are areas along Twin Chimneys Boulevard and slope areas from the south end of the site that drain to the bounding Twin Chimneys Lindenwood Village B subdivision. As a worst-case scenario, we have modeled the detention as if there were two years of sedimentation in the bottom of the South and Southwest basins per the Soil and Water Conservation District. This was modeled by inserting a node in the volume table for the basins at the 2-year sediment elevation in the respective basin with a surface area of one cubic foot. PondPack requires increasing areas for successive elevations or the program will assume that you want an elevation interpreted. See Table 1 List of Drainage Areas and the submitted Proposed Drainage Area Map for breakdown of all drainage areas.

Inflow and bypass areas for each of the three basins are located in Tables 3, 4, and 5, respectively. The results of detention calculations for the three basins, as well as the overall watershed conditions and outflow structure information, are located in Table 6 Detention Summary. See the plans for details of the outflow structures.

DELMAR GARDENS
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TABLE 5. PROPOSED CONDITIONS - SOUTHWEST BASIN

Area No.	Area (Ac.)	2-Year PI Factor (cfs/Ac.)	2-Year Q (cfs)	15-Minute Duration 15-Year PI Factor (cfs/Ac.)	15-Year Q (cfs)	25-Year PI Factor (cfs/Ac.)	25-Year Q (cfs)	100-Year PI Factor (cfs/Ac.)	100-Year Q (cfs)	Off- Site
INFLOW										
89	0.80	2.11	1.69	3.44	2.75	4.24	3.39	5.43	4.34	
90	0.54	1.95	1.05	3.17	1.71	3.91	2.11	5.01	2.70	
91	0.70	1.77	1.24	2.88	2.01	3.55	2.48	4.54	3.18	
92	0.46	2.12	0.98	3.45	1.59	4.26	1.96	5.45	2.51	
94	0.13	1.25	0.16	2.04	0.27	2.52	0.33	3.22	0.42	
95	0.96	1.19	1.15	1.94	1.86	2.39	2.30	3.06	2.94	
97	0.46	2.50	1.15	4.07	1.87	5.02	2.31	6.43	2.96	
98	3.09	2.50	7.73	4.07	12.58	5.02	15.51	6.43	19.86	
99	0.06	2.50	0.15	4.07	0.24	5.02	0.30	6.43	0.39	
101	0.04	2.50	0.10	4.07	0.16	5.02	0.20	6.43	0.26	
102	0.11	2.50	0.29	4.07	0.46	5.02	0.57	6.43	0.73	
104	0.06	2.50	0.15	4.07	0.24	5.02	0.30	6.43	0.39	
110	0.03	2.50	0.08	4.07	0.12	5.02	0.15	6.43	0.19	
TOTALS	4.94		10.95		17.81		21.98		28.14	
BYPASS										
100	0.74	1.15	0.85	1.87	1.38	2.31	1.71	2.95	2.19	
TOTALS	5.68		11.80		19.20		23.68		30.32	

NOTE: AREAS ABOVE ARE BASED ON ACTUAL TIME OF CONCENTRATION FOR THE DETENTION CALCS ONLY. TIME OF CONCENTRATION IS 15-MIN.

DELMAR GARDENS

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TABLE 2. EXISTING CONDITIONS

OVERALL SITE

				20-Minute Duration					
% Imp	Area (Ac.)	2-Year PI Factor (cfs/Ac.)	2-Year Q (cfs)	15-Year PI Factor (cfs/Ac.)	15-Year Q (cfs)	25-Year PI Factor (cfs/Ac.)	25-Year Q (cfs)	100-Year PI Factor (cfs/Ac.)	100-Year Q (cfs)
5	24.45	1.15	28.12	1.87	45.72	2.31	56.48	2.95	72.13

SOUTHWEST BASIN

				20-Minute Duration					
% Imp	Area (Ac.)	2-Year PI Factor (cfs/Ac.)	2-Year Q (cfs)	15-Year PI Factor (cfs/Ac.)	15-Year Q (cfs)	25-Year PI Factor (cfs/Ac.)	25-Year Q (cfs)	100-Year PI Factor (cfs/Ac.)	100-Year Q (cfs)
5	0.60	1.15	0.69	1.87	1.12	2.31	1.39	2.95	1.77
5	0.49	1.15	0.56	1.87	0.92	2.31	1.13	2.95	1.45
5	2.02	1.15	2.32	1.87	3.78	2.31	4.67	2.95	5.96
	3.11		3.58		5.82		7.18		9.17

NOTE: SOUTHWEST BASIN AREAS TAKEN FROM CALCULATIONS PERFORMED BY PICKETT, RAY & SILVER, INC. DATED 8/19/1988 & REVISED 9/29/1988 AS SUPPLIED BY THE CITY OF O'FALLON.

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TABLE 3. PROPOSED CONDITIONS - WET BASIN

Area No.	Area (Ac.)	2-Year PI Factor (cfs/Ac.)	2-Year Q (cfs)	15-Year PI Factor (cfs/Ac.)	15-Minute Duration 15-Year Q (cfs)	25-Year PI Factor (cfs/Ac.)	25-Year Q (cfs)	100-Year PI Factor (cfs/Ac.)	100-Year Q (cfs)	Off- Site
INFLOW										
5	0.95	1.15	1.09	1.87	1.78	2.31	2.19	2.95	2.81	
93	0.19	1.85	0.35	3.02	0.57	3.72	0.71	4.76	0.91	
96	0.36	2.00	0.72	3.25	1.17	4.00	1.44	5.13	1.85	
108	0.29	2.37	0.68	3.85	1.10	4.75	1.36	6.08	1.75	
109	0.03	2.37	0.07	3.85	0.12	4.75	0.14	6.08	0.18	
TOTALS	1.82		2.91		4.74		5.85		7.48	
BYPASS WET BASIN										
4	0.08	2.37	0.19	3.85	0.31	4.75	0.38	6.08	0.49	

NOTE: AREAS ABOVE ARE BASED ON ACTUAL TIME OF CONCENTRATION FOR THE DETENTION CALCS ONLY. TIME OF CONCENTRATION IS 15-MIN.

DELMAR GARDENS

O'Fallon, MO

TABLE 4. PROPOSED CONDITIONS - SOUTH BASIN

Area No.	% Imp	Area (Ac.)	2-Year PI Factor (cfs/Ac.)	2-Year Q (cfs)	20-Minute Duration 15-Year PI Factor (cfs/Ac.)	20-Minute Duration 15-Year Q (cfs)	25-Year PI Factor (cfs/Ac.)	25-Year Q (cfs)	100-Year PI Factor (cfs/Ac.)	100-Year Q (cfs)	Off- Site
INFLOW											
1	0	0.51	2.39	1.22	3.85	1.96	4.75	2.42	6.08	3.10	X
2	0.43	0.43	1.15	0.49	1.87	0.80	2.31	0.99	2.95	1.27	X
6	0.27	0.73	2.50	1.83	3.70	2.70	4.56	3.33	5.84	4.27	
7	0.03	0.19	2.18	0.41	3.22	0.61	3.97	0.75	5.09	0.97	
8	0.16	0.48	1.98	0.95	3.19	1.53	3.94	1.89	5.04	2.42	
9	0	0.54	2.60	1.41	3.85	2.08	4.75	2.56	6.08	3.28	
10	0.394	0.99	2.07	2.05	3.06	3.03	3.77	3.74	4.83	4.79	
11	0.18	0.35	1.75	0.61	2.83	0.99	3.49	1.22	4.47	1.57	X
12	0.096	0.13	1.47	0.19	2.39	0.31	2.95	0.38	3.77	0.49	
26	0.055	0.13	2.03	0.26	3.00	0.39	3.70	0.48	4.74	0.62	
27	0.017	0.15	2.44	0.37	3.60	0.54	4.44	0.67	5.69	0.85	
28	0.13	0.37	2.13	0.79	3.15	1.17	3.89	1.44	4.98	1.84	
30	0	0.01	2.39	0.02	3.85	0.04	4.75	0.05	6.08	0.06	
31	0.06	0.13	1.99	0.26	2.94	0.38	3.63	0.47	4.64	0.60	
32	0.09	0.21	2.08	0.44	3.07	0.64	3.79	0.80	4.85	1.02	
33	0.01	0.08	2.44	0.19	3.60	0.29	4.44	0.36	5.69	0.45	
34	0	0.08	2.39	0.19	3.85	0.31	4.75	0.38	6.08	0.49	
35	0.06	0.15	1.89	0.28	3.06	0.46	3.77	0.57	4.83	0.72	
36	0	0.02	2.39	0.05	3.85	0.08	4.75	0.09	6.08	0.12	
37	0	0.05	2.39	0.12	3.85	0.19	4.75	0.24	6.08	0.30	
38	0	0.02	2.39	0.05	3.85	0.08	4.75	0.09	6.08	0.12	
39	0	0.01	2.39	0.02	3.85	0.04	4.75	0.05	6.08	0.06	
40	0	0.01	2.39	0.02	3.85	0.04	4.75	0.05	6.08	0.06	
41	0	0.02	2.39	0.05	3.85	0.08	4.75	0.09	6.08	0.12	
42	0	0.01	2.39	0.02	3.85	0.04	4.75	0.05	6.08	0.06	
43	0	0.01	2.39	0.02	3.85	0.04	4.75	0.05	6.08	0.06	
44	0	0.06	2.39	0.14	3.85	0.23	4.75	0.28	6.08	0.36	
45	0.05	0.17	1.85	0.31	2.73	0.46	3.37	0.57	4.31	0.73	
46	0.01	0.03	1.98	0.06	3.19	0.10	3.94	0.12	5.04	0.15	
47	0.008	0.09	2.48	0.22	3.67	0.33	4.53	0.41	5.80	0.52	
48	0.053	0.12	2.03	0.24	3.00	0.36	3.70	0.44	4.74	0.57	
49	0.037	0.12	2.20	0.26	3.25	0.39	4.01	0.48	5.13	0.62	
50	0.06	0.19	1.99	0.38	2.94	0.56	3.63	0.69	4.64	0.88	
51	0	0.06	2.39	0.14	3.85	0.23	4.75	0.28	6.08	0.36	
52	0	0.02	2.39	0.05	3.85	0.08	4.75	0.09	6.08	0.12	
53	0	0.03	2.39	0.07	3.85	0.12	4.75	0.14	6.08	0.18	
54	0	0.03	2.39	0.07	3.85	0.12	4.75	0.14	6.08	0.18	
55	0	0.02	2.39	0.05	3.85	0.08	4.75	0.09	6.08	0.12	
56	0	0.03	2.39	0.07	3.85	0.12	4.75	0.14	6.08	0.18	
57	0	0.05	2.39	0.12	3.85	0.19	4.75	0.24	6.08	0.30	
58	0.01	0.01	1.15	0.01	1.87	0.02	2.31	0.02	2.95	0.03	
59	0	0.01	2.39	0.02	3.85	0.04	4.75	0.05	6.08	0.06	
60	0	0.01	2.39	0.02	3.85	0.04	4.75	0.05	6.08	0.06	
61	0.01	0.01	1.26	0.01	1.87	0.02	2.31	0.02	2.95	0.03	
62	0.01	0.01	1.26	0.01	1.87	0.02	2.31	0.02	2.95	0.03	
63	0.016	0.02	1.69	0.03	2.50	0.05	3.08	0.06	3.95	0.08	
64	0.039	0.05	1.42	0.07	2.31	0.12	2.84	0.14	3.64	0.18	
65	0	0.02	2.39	0.05	3.85	0.08	4.75	0.09	6.08	0.12	
66	0	0.01	2.39	0.02	3.85	0.04	4.75	0.05	6.08	0.06	
67	0	0.02	2.39	0.05	3.85	0.08	4.75	0.09	6.08	0.12	
68	0	0.04	2.39	0.10	3.85	0.15	4.75	0.19	6.08	0.24	

DELMAR GARDENS
O'Fallon, MO

TABLE 4. PROPOSED CONDITIONS - SOUTH BASIN

Area No.	% Imp	Area (Ac.)	2-Year PI Factor (cfs/Ac.)	2-Year Q (cfs)	15-Year PI Factor (cfs/Ac.)	20-Minute Duration 15-Year Q (cfs)	25-Year PI Factor (cfs/Ac.)	25-Year Q (cfs)	100-Year PI Factor (cfs/Ac.)	100-Year Q (cfs)	Off- Site
69	0	0.03	2.39	0.07	3.85	0.12	4.75	0.14	6.08	0.18	
70	0.008	0.01	1.40	0.01	2.27	0.02	2.80	0.03	3.58	0.04	
71	0	0.02	2.39	0.05	3.85	0.08	4.75	0.09	6.08	0.12	
72	0.014	0.02	1.52	0.03	2.46	0.05	3.04	0.06	3.89	0.08	
73	0	0.02	2.39	0.05	3.85	0.08	4.75	0.09	6.08	0.12	
74	0.018	0.03	1.65	0.05	2.66	0.08	3.28	0.10	4.20	0.13	
75	0.046	0.06	1.44	0.09	2.33	0.14	2.88	0.17	3.68	0.22	
76	0.011	0.07	2.41	0.17	3.57	0.25	4.40	0.31	5.64	0.39	
77	0.01	0.07	2.41	0.17	3.56	0.25	4.39	0.31	5.62	0.39	
78	0.04	0.16	2.27	0.36	3.35	0.54	4.13	0.66	5.29	0.85	
79	0.01	0.07	2.41	0.17	3.56	0.25	4.39	0.31	5.62	0.39	
80	0	0.05	2.60	0.13	3.85	0.19	4.75	0.24	6.08	0.30	
81	0.05	0.16	2.18	0.35	3.23	0.52	3.98	0.64	5.10	0.82	
82	0.03	0.07	2.03	0.14	3.00	0.21	3.70	0.26	4.74	0.33	
83	0.04	0.30	2.43	0.73	3.59	1.08	4.43	1.33	5.67	1.70	
84	0	0.01	2.60	0.03	3.85	0.04	4.75	0.05	6.08	0.06	
85	0.15	0.58	2.26	1.31	3.34	1.94	4.12	2.39	5.28	3.06	
86	1.14	1.19	1.20	1.43	1.95	2.32	2.41	2.87	3.09	3.67	
87	0.07	0.25	2.23	0.56	3.30	0.83	4.07	1.02	5.21	1.30	
88	0.1	0.43	2.37	1.02	3.50	1.51	4.32	1.86	5.53	2.38	
103	0	0.32	2.39	0.76	3.85	1.23	4.75	1.52	6.08	1.95	
105	0	0.39	2.39	0.93	3.85	1.50	4.75	1.85	6.08	2.37	
106	0.16	0.18	1.29	0.23	2.09	0.38	2.58	0.46	3.30	0.59	
107	0.31	0.57	1.72	0.98	2.77	1.58	3.42	1.95	4.38	2.50	
SUB-TOTALS		11.59		23.53		36.01		44.43		56.88	
BYPASS											
3	0.8	0.80	1.15	0.92	1.87	1.50	2.31	1.85	2.95	2.36	
13	0.117	0.24	2.23	0.54	3.30	0.79	4.07	0.98	5.21	1.25	
14	0.123	0.24	2.23	0.54	3.30	0.79	4.07	0.98	5.21	1.25	
15	0.062	0.08	2.23	0.18	3.30	0.26	4.07	0.33	5.21	0.42	
16	0.09	0.09	1.15	0.10	1.87	0.17	2.31	0.21	2.95	0.27	
17	0.04	0.04	1.15	0.05	1.87	0.07	2.31	0.09	2.95	0.12	
18	0.119	0.15	1.54	0.23	2.27	0.34	2.80	0.42	3.59	0.54	
19	0	0.14	2.60	0.36	3.85	0.54	4.75	0.66	6.08	0.85	
20	0.14	0.22	1.75	0.39	2.59	0.57	3.20	0.70	4.09	0.90	
21	0.01	0.10	2.47	0.25	3.65	0.37	4.50	0.45	5.77	0.58	
22	0.094	0.13	1.56	0.20	2.31	0.30	2.85	0.37	3.65	0.47	
23	0.065	0.23	2.04	0.47	3.29	0.76	4.06	0.93	5.20	1.20	
24	0.07	0.07	1.15	0.08	1.87	0.13	2.31	0.16	2.95	0.21	
25	0.013	0.09	2.41	0.22	3.56	0.32	4.39	0.40	5.62	0.51	
29	0.35	0.35	1.15	0.40	1.87	0.65	2.31	0.81	2.95	1.03	
SUB-TOTALS		2.97		4.92		7.56		9.33		11.95	
TOTALS		14.56		28.45		43.58		53.76		68.83	

DELMAR GARDENS

O'Fallon, MO

TABLE 4. PROPOSED CONDITIONS - SOUTH BASIN

						20-Minute Duration					
Area No.	% Imp	Area (Ac.)	2-Year PI Factor (cfs/Ac.)	2-Year Q (cfs)	15-Year PI Factor (cfs/Ac.)	15-Year Q (cfs)	25-Year PI Factor (cfs/Ac.)	25-Year Q (cfs)	100-Year PI Factor (cfs/Ac.)	100-Year Q (cfs)	Off- Site

BASED ON PROPOSED SITE PLAN - ACTUAL PERCENT OF SITE IMPERVIOUS = 53%

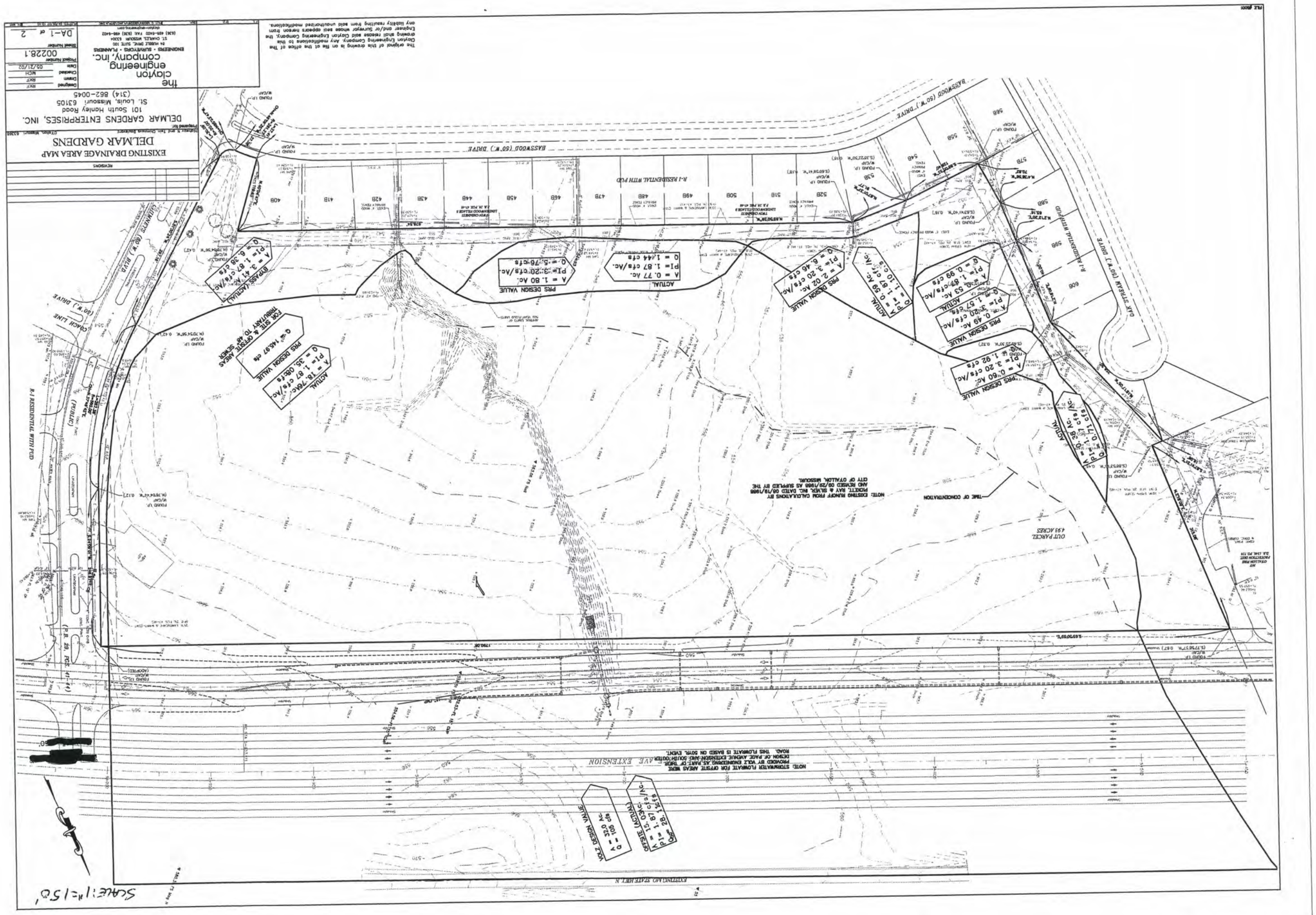
SATURATION FACTOR WAS NOT USED ON ROOF & PAVEMENT SURFACES
BECAUSE THEY ARE IMPERVIOUS.

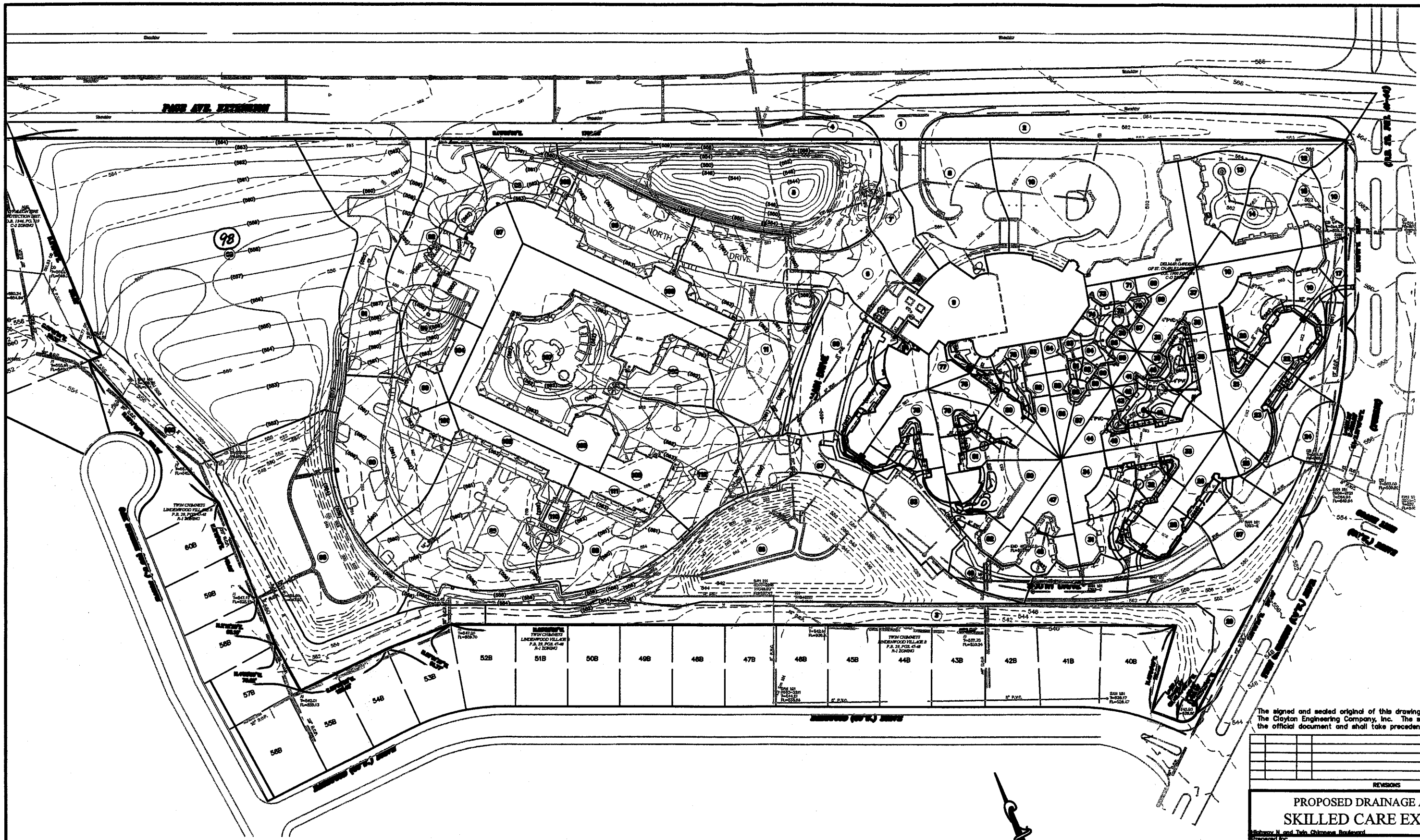
DELMAR GARDENS
O'Fallon, MO

TABLE 5. PROPOSED CONDITIONS - SOUTHWEST BASIN

Area No.	Area (Ac.)	2-Year PI Factor (cfs/Ac.)	2-Year Q (cfs)	15-Minute Duration 15-Year PI Factor (cfs/Ac.)	15-Year Q (cfs)	25-Year PI Factor (cfs/Ac.)	25-Year Q (cfs)	100-Year PI Factor (cfs/Ac.)	100-Year Q (cfs)	Off- Site
INFLOW										
89	0.80	2.11	1.69	3.44	2.75	4.24	3.39	5.43	4.34	
90	0.54	1.95	1.05	3.17	1.71	3.91	2.11	5.01	2.70	
91	0.70	1.77	1.24	2.88	2.01	3.55	2.48	4.54	3.18	
92	0.46	2.12	0.98	3.45	1.59	4.26	1.96	5.45	2.51	
94	0.13	1.25	0.16	2.04	0.27	2.52	0.33	3.22	0.42	
95	0.96	1.19	1.15	1.94	1.86	2.39	2.30	3.06	2.94	
97	0.46	2.50	1.15	4.07	1.87	5.02	2.31	6.43	2.96	
98	3.09	2.50	7.73	4.07	12.58	5.02	15.51	6.43	19.86	
99	0.06	2.50	0.15	4.07	0.24	5.02	0.30	6.43	0.39	
101	0.04	2.50	0.10	4.07	0.16	5.02	0.20	6.43	0.26	
102	0.11	2.50	0.29	4.07	0.46	5.02	0.57	6.43	0.73	
104	0.06	2.50	0.15	4.07	0.24	5.02	0.30	6.43	0.39	
110	0.03	2.50	0.08	4.07	0.12	5.02	0.15	6.43	0.19	
TOTALS	4.94		10.95		17.81		21.98		28.14	
BYPASS										
100	0.74	1.15	0.85	1.87	1.38	2.31	1.71	2.95	2.19	
TOTALS	5.68		11.80		19.20		23.68		30.32	

NOTE: AREAS ABOVE ARE BASED ON ACTUAL TIME OF CONCENTRATION FOR THE DETENTION CALCS ONLY. TIME OF CONCENTRATION IS 15-MIN.


EXISTING DRAINAGE AREA MAP
DELMAR GARDENS
DELMAR GARDENS ENTERPRISES, INC.
101 South Hanley Road
St. Louis, Missouri 63105
(314) 862-0045
the clayton engineering company, inc.
ENGINEERS • SURVEYORS • PLANNERS
11 HURLEY DRIVE, SUITE 100
ST. CHARLES, MISSOURI 63304
(636) 498-6420 FAX (636) 498-6422
DA-1 of 2
00228.1
05/21/02
SCALE: 1"=150'
BASSWOOD (60'W.) DRIVE
R-1 RESIDENTIAL WITH PUD
OAK STREAM (60'W.) DRIVE
R-1 RESIDENTIAL WITH PUD
EXISTING MO STATE HWY N
OUT PARCEL 4.91 ACRES
TIME OF CONCENTRATION
NOTE: EXISTING RUNOFF FLOW CALCULATIONS BY POCOTT, RAY & SLYCK, INC. DATED 09/19/1989 AND REVISED 09/29/1989 AS SUPPLIED BY THE CITY OF O'FALLON, MISSOURI.
NOTE: STORMWATER FLOWRATE FOR OFFSITE AREAS WERE PROVIDED BY VOLZ ENGINEERING AS PART OF THEIR DESIGN OF PACE AVENUE EXTENSION AND SOUTH OUTER ROAD. THIS FLOWRATE IS BASED ON 50YR. EVENT.
PACE AVENUE EXTENSION
OFFSITE LANDS OF: A = 15.0 ac. Pi = 1.87 cfs/ac. Q = 28.1 cfs
PRS DESIGN VALUE A = 15.0 ac. Q = 28.1 cfs
ACTUAL A = 0.77 Ac. Pi= 1.87 cfs/Ac. Q = 1.44 cfs
PRS DESIGN VALUE A = 1.80 Ac. Pi= 3.20 cfs/Ac. Q= 5.76 cfs
ACTUAL A = 2.02 Ac. Pi= 1.87 cfs/Ac. Q = 3.78 cfs
PRS DESIGN VALUE A = 2.20 Ac. Pi= 3.20 cfs/Ac. Q = 6.46 cfs
ACTUAL A = 0.59 Ac. Pi= 1.10 cfs/Ac. Q = 0.65 cfs
ACTUAL A = 0.53 Ac. Pi= 1.87 cfs/Ac. Q = 0.99 cfs
PRS DESIGN VALUE A = 0.49 Ac. Pi= 3.20 cfs/Ac. Q = 1.57 cfs
PRS DESIGN VALUE A = 0.60 Ac. Pi= 3.20 cfs/Ac. Q = 1.92 cfs
ACTUAL A = 0.71 Ac. Pi= 1.10 cfs/Ac. Q = 0.78 cfs
ACTUAL A = 18.76Ac. Pi= 1.87 cfs/Ac. Q = 35.08 cfs
PRS DESIGN VALUE Q = 145.97 cfs
FOR SITE & OFFSITE AREAS REFER TO AP SCREEN
BYPASS (ACTUAL) A = 3.41 Ac. Pi= 1.87 cfs/Ac. Q = 6.38 cfs
CHAIN LINE
P-1 RESIDENTIAL WITH PUD



The signed and sealed original of this drawing is on file at the offices of The Clayton Engineering Company, Inc. The signed and sealed original is the official document and shall take precedence over any digital version.

REVISIONS

PROPOSED DRAINAGE AREA MAP

SKILLED CARE EXPANSION

Highway N and Twin Chimneys Boulevard — O'Fallon, Missouri 63366

Prepared for:

DELMAR GARDENS ENTERPRISES, INC.
14805 N. Outer 40
Chesterfield, MO 63017
636-733-7000

STATE OF MISSOURI — MICHAEL JAMES VELLOFF — NUMBER E-2000161882 — REGISTERED PROFESSIONAL ENGINEER

the clayton engineering company, inc.
ENGINEERS • SURVEYORS • PLANNERS
11800 RIDGELINE INDUSTRIAL DRIVE
ST. LOUIS, MISSOURI 63146
(314) 682-8888 FAX: (314) 682-8688
clayton-engineering.com

Designed	RKF
Drawn	RKF
Checked	MJV
Date	12/17/07
Project Number	00228.11
Sheet Number	C-10 of 10

DETENTION BASIN

2 -, 15 -, 25 -, 100 - Year Storm Calculations

Job File: G:\00XXX\00228-10\DETEN\PROPOSED2.PPW
Rain Dir: F:\PPK7\STORM FILES\

==========
JOB TITLE
==========

DELMAR GARDENS
O'Fallon, Missouri

Detention Calculations

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Table of Contents (continued)

Table of Contents (continued)

Table of Contents (continued)

Table of Contents (continued)

MASTER NETWORK SUMMARY
(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Storage Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak min	Qpeak cfs	Max WSEL ft	Max Pond cu.ft
*SITE OUTFALL	JCT	002	67417		30.00	29.52		
*SITE OUTFALL	JCT	015	104361		30.00	44.16		
*SITE OUTFALL	JCT	025	128781		30.00	53.99		
*SITE OUTFALL	JCT	100	164867		30.00	74.27		
SOUTH BASIN IN	POND	002	47500		30.00	25.41		
SOUTH BASIN IN	POND	015	73203		30.00	39.07		
SOUTH BASIN IN	POND	025	90324		30.00	48.46		
SOUTH BASIN IN	POND	100	115619		30.00	62.47		
SOUTH BASIN OUT	POND	002	47500		30.00	22.33	542.87	12550
SOUTH BASIN OUT	POND	015	73203		30.00	33.68	543.63	23372
SOUTH BASIN OUT	POND	025	90324		30.00	41.38	544.09	30572
SOUTH BASIN OUT	POND	100	115619		30.00	58.48	544.58	38726
SOUTH BASIN INFL	HYG	002	41648		1.00	23.53		
SOUTH BASIN INFL	HYG	015	63738		1.00	36.01		
SOUTH BASIN INFL	HYG	025	78641		1.00	44.43		
SOUTH BASIN INFL	HYG	100	100678		1.00	56.88		
SOUTH BYPASS	HYG	002	8708		1.00	4.92		
SOUTH BYPASS	HYG	015	13381		1.00	7.56		
SOUTH BYPASS	HYG	025	16514		1.00	9.33		
SOUTH BYPASS	HYG	100	21152		1.00	11.95		
SW BASIN IN	POND	002	9855		1.00	10.95		
SW BASIN IN	POND	015	16029		1.00	17.81		
SW BASIN IN	POND	025	19782		1.00	21.98		
SW BASIN IN	POND	100	25326		1.00	28.14		
SW BASIN OUT	POND	002	9855		16.00	2.52	548.14	7716
SW BASIN OUT	POND	015	16029		16.00	3.21	548.47	13739
SW BASIN OUT	POND	025	19782		16.00	3.63	548.66	17302
SW BASIN OUT	POND	100	25326		16.00	4.68	548.93	22552
SW BASIN INFLOW	HYG	002	9855		1.00	10.95		
SW BASIN INFLOW	HYG	015	16029		1.00	17.81		
SW BASIN INFLOW	HYG	025	19782		1.00	21.98		
SW BASIN INFLOW	HYG	100	25326		1.00	28.14		

MASTER NETWORK SUMMARY
Hydrograph File Import Option Used for 6 Node(s)

(*Node=Outfall; +Node=Diversion;)
(Trun= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left&Rt)

Storage Node ID	Type	Return Event	HYG Vol cu.ft	Trun	Qpeak min	Qpeak cfs	Max WSEL ft	Max Pond cu.ft
SW BYPASS	HYG	002	1035		1.00	1.15		
SW BYPASS	HYG	015	1242		1.00	1.38		
SW BYPASS	HYG	025	1539		1.00	1.71		
SW BYPASS	HYG	100	1971		1.00	2.19		
WET BASIN IN	POND	002	5151		1.00	2.91		
WET BASIN IN	POND	015	8390		1.00	4.74		
WET BASIN IN	POND	025	10355		1.00	5.85		
WET BASIN IN	POND	100	13240		1.00	7.48		
WET BASIN OUT	POND	002	5146		30.00	1.88	555.64	135925
WET BASIN OUT	POND	015	8385		30.00	3.06	555.72	137953
WET BASIN OUT	POND	025	10350		30.00	4.03	555.78	139136
WET BASIN OUT	POND	100	13235		30.00	5.59	555.84	140617
WET BASIN BYPASS	HYG	002	171		1.00	.19		
WET BASIN BYPASS	HYG	015	279		1.00	.31		
WET BASIN BYPASS	HYG	025	342		1.00	.38		
WET BASIN BYPASS	HYG	100	441		1.00	.49		
WET BASIN INFLOW	HYG	002	5151		1.00	2.91		
WET BASIN INFLOW	HYG	015	8390		1.00	4.74		
WET BASIN INFLOW	HYG	025	10355		1.00	5.85		
WET BASIN INFLOW	HYG	100	13240		1.00	7.48		

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

	Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak min	Qpeak cfs	Max WSEL ft
Outfall	SITE OUTFALL	JCT	67417		30.00	29.52	
	SOUTH BASIN IN	POND	47500		30.00	25.41	
	SOUTH BASIN OUT	POND	47500		30.00	22.33	542.87
	SOUTH BASIN INFL	HYG	41648		1.00	23.53	
	SOUTH BYPASS	HYG	8708		1.00	4.92	
	SW BASIN IN	POND	9855		1.00	10.95	
	SW BASIN OUT	POND	9855		16.00	2.52	548.14
	SW BASIN INFLOW	HYG	9855		1.00	10.95	
	SW BYPASS	HYG	1035		1.00	1.15	
	WET BASIN IN	POND	5151		1.00	2.91	
	WET BASIN OUT	POND	5146		30.00	1.88	555.64
	WET BASIN BYPASS	HYG	171		1.00	.19	
	WET BASIN INFLOW	HYG	5151		1.00	2.91	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time min	Peak Q cfs	End Points
A 20	ADD	UN	171		1.00	.19	WET BASIN BYPASS
		DL	171		1.00	.19	
		DN	67417		30.00	29.52	SITE OUTFALL
BYPASS AREAS	ADD	UN	8708		1.00	4.92	SOUTH BYPASS
		DL	8708		1.00	4.92	
		DN	67417		30.00	29.52	SITE OUTFALL
SOUTH BASIN INFL	ADD	UN	41648		1.00	23.53	SOUTH BASIN INFL
		DL	41648		1.00	23.53	
		DN	47500		30.00	25.41	SOUTH BASIN IN
SOUTH BASIN OUT	PONDrt	UN	47500		30.00	25.41	SOUTH BASIN IN
SOUTH BASIN OUT			47500		30.00	22.33	SOUTH BASIN OUT
		DL	47500		30.00	22.33	
		DN	67417		30.00	29.52	SITE OUTFALL
SW BASIN INFLOW	ADD	UN	9855		1.00	10.95	SW BASIN INFLOW
		DL	9855		1.00	10.95	
		DN	9855		1.00	10.95	SW BASIN IN
SW BASIN OUT	PONDrt	UN	9855		1.00	10.95	SW BASIN IN
SW BASIN OUT			9855		16.00	2.52	SW BASIN OUT
		DL	9855		16.00	2.52	
		DN	67417		30.00	29.52	SITE OUTFALL
SW BYPASS	ADD	UN	1035		1.00	1.15	SW BYPASS
		DL	1035		1.00	1.15	
		DN	67417		30.00	29.52	SITE OUTFALL
WET BASIN INFLOW	ADD	UN	5151		1.00	2.91	WET BASIN INFLOW
		DL	5151		1.00	2.91	
		DN	5151		1.00	2.91	WET BASIN IN
WET BASIN OUTFLW	PONDrt	UN	5151		1.00	2.91	WET BASIN IN
WET BASIN OUTFLW			5146		30.00	1.88	WET BASIN OUT
		DL	5146		30.00	1.88	
		DN	47500		30.00	25.41	SOUTH BASIN IN

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

	Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak min	Qpeak cfs	Max WSEL ft
Outfall	SITE OUTFALL	JCT	104361		30.00	44.16	
	SOUTH BASIN IN	POND	73203		30.00	39.07	
	SOUTH BASIN OUT	POND	73203		30.00	33.68	543.63
	SOUTH BASIN INFL	HYG	63738		1.00	36.01	
	SOUTH BYPASS	HYG	13381		1.00	7.56	
	SW BASIN IN	POND	16029		1.00	17.81	
	SW BASIN OUT	POND	16029		16.00	3.21	548.47
	SW BASIN INFLOW	HYG	16029		1.00	17.81	
	SW BYPASS	HYG	1242		1.00	1.38	
	WET BASIN IN	POND	8390		1.00	4.74	
	WET BASIN OUT	POND	8385		30.00	3.06	555.72
	WET BASIN BYPASS	HYG	279		1.00	.31	
	WET BASIN INFLOW	HYG	8390		1.00	4.74	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time min	Peak Q cfs	End Points
A 20	ADD	UN	279		1.00	.31	WET BASIN BYPASS
		DL	279		1.00	.31	
		DN	104361		30.00	44.16	SITE OUTFALL
BYPASS AREAS	ADD	UN	13381		1.00	7.56	SOUTH BYPASS
		DL	13381		1.00	7.56	
		DN	104361		30.00	44.16	SITE OUTFALL
SOUTH BASIN INFL	ADD	UN	63738		1.00	36.01	SOUTH BASIN INFL
		DL	63738		1.00	36.01	
		DN	73203		30.00	39.07	SOUTH BASIN IN
SOUTH BASIN OUT	PONDrt	UN	73203		30.00	39.07	SOUTH BASIN IN
SOUTH BASIN OUT			73203		30.00	33.68	SOUTH BASIN OUT
		DL	73203		30.00	33.68	
		DN	104361		30.00	44.16	SITE OUTFALL
SW BASIN INFLOW	ADD	UN	16029		1.00	17.81	SW BASIN INFLOW
		DL	16029		1.00	17.81	
		DN	16029		1.00	17.81	SW BASIN IN
SW BASIN OUT	PONDrt	UN	16029		1.00	17.81	SW BASIN IN
SW BASIN OUT			16029		16.00	3.21	SW BASIN OUT
		DL	16029		16.00	3.21	
		DN	104361		30.00	44.16	SITE OUTFALL
SW BYPASS	ADD	UN	1242		1.00	1.38	SW BYPASS
		DL	1242		1.00	1.38	
		DN	104361		30.00	44.16	SITE OUTFALL
WET BASIN INFLOW	ADD	UN	8390		1.00	4.74	WET BASIN INFLOW
		DL	8390		1.00	4.74	
		DN	8390		1.00	4.74	WET BASIN IN
WET BASIN OUTFLW	PONDrt	UN	8390		1.00	4.74	WET BASIN IN
WET BASIN OUTFLW			8385		30.00	3.06	WET BASIN OUT
		DL	8385		30.00	3.06	
		DN	73203		30.00	39.07	SOUTH BASIN IN

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

	Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak min	Qpeak cfs	Max WSEL ft
Outfall	SITE OUTFALL	JCT	128781		30.00	53.99	
	SOUTH BASIN IN	POND	90324		30.00	48.46	
	SOUTH BASIN OUT	POND	90324		30.00	41.38	544.09
	SOUTH BASIN INFL	HYG	78641		1.00	44.43	
	SOUTH BYPASS	HYG	16514		1.00	9.33	
	SW BASIN IN	POND	19782		1.00	21.98	
	SW BASIN OUT	POND	19782		16.00	3.63	548.66
	SW BASIN INFLOW	HYG	19782		1.00	21.98	
	SW BYPASS	HYG	1539		1.00	1.71	
	WET BASIN IN	POND	10355		1.00	5.85	
	WET BASIN OUT	POND	10350		30.00	4.03	555.78
	WET BASIN BYPASS	HYG	342		1.00	.38	
	WET BASIN INFLOW	HYG	10355		1.00	5.85	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time min	Peak Q cfs	End Points
A 20	ADD	UN	342		1.00	.38	WET BASIN BYPASS
		DL	342		1.00	.38	
		DN	128781		30.00	53.99	SITE OUTFALL
BYPASS AREAS	ADD	UN	16514		1.00	9.33	SOUTH BYPASS
		DL	16514		1.00	9.33	
		DN	128781		30.00	53.99	SITE OUTFALL
SOUTH BASIN INFL	ADD	UN	78641		1.00	44.43	SOUTH BASIN INFL
		DL	78641		1.00	44.43	
		DN	90324		30.00	48.46	SOUTH BASIN IN
SOUTH BASIN OUT	PONDrt	UN	90324		30.00	48.46	SOUTH BASIN IN
SOUTH BASIN OUT			90324		30.00	41.38	SOUTH BASIN OUT
		DL	90324		30.00	41.38	
		DN	128781		30.00	53.99	SITE OUTFALL
SW BASIN INFLOW	ADD	UN	19782		1.00	21.98	SW BASIN INFLOW
		DL	19782		1.00	21.98	
		DN	19782		1.00	21.98	SW BASIN IN
SW BASIN OUT	PONDrt	UN	19782		1.00	21.98	SW BASIN IN
SW BASIN OUT			19782		16.00	3.63	SW BASIN OUT
		DL	19782		16.00	3.63	
		DN	128781		30.00	53.99	SITE OUTFALL
SW BYPASS	ADD	UN	1539		1.00	1.71	SW BYPASS
		DL	1539		1.00	1.71	
		DN	128781		30.00	53.99	SITE OUTFALL
WET BASIN INFLOW	ADD	UN	10355		1.00	5.85	WET BASIN INFLOW
		DL	10355		1.00	5.85	
		DN	10355		1.00	5.85	WET BASIN IN
WET BASIN OUTFLW	PONDrt	UN	10355		1.00	5.85	WET BASIN IN
WET BASIN OUTFLW			10350		30.00	4.03	WET BASIN OUT
		DL	10350		30.00	4.03	
		DN	90324		30.00	48.46	SOUTH BASIN IN

NETWORK SUMMARY -- NODES
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

	Node ID	Type	HYG Vol cu.ft	Trun.	Qpeak min	Qpeak cfs	Max WSEL ft
Outfall	SITE OUTFALL	JCT	164867		30.00	74.27	
	SOUTH BASIN IN	POND	115619		30.00	62.47	
	SOUTH BASIN OUT	POND	115619		30.00	58.48	544.58
	SOUTH BASIN INFL	HYG	100678		1.00	56.88	
	SOUTH BYPASS	HYG	21152		1.00	11.95	
	SW BASIN IN	POND	25326		1.00	28.14	
	SW BASIN OUT	POND	25326		16.00	4.68	548.93
	SW BASIN INFLOW	HYG	25326		1.00	28.14	
	SW BYPASS	HYG	1971		1.00	2.19	
	WET BASIN IN	POND	13240		1.00	7.48	
	WET BASIN OUT	POND	13235		30.00	5.59	555.84
	WET BASIN BYPASS	HYG	441		1.00	.49	
	WET BASIN INFLOW	HYG	13240		1.00	7.48	

NETWORK SUMMARY -- LINKS
(UN=Upstream Node; DL=DNstream End of Link; DN=DNstream Node)
(Trun.= HYG Truncation: Blank=None; L=Left; R=Rt; LR=Left & Rt)

Link ID	Type		HYG Vol cu.ft	Trun.	Peak Time min	Peak Q cfs	End Points
A 20	ADD	UN	441		1.00	.49	WET BASIN BYPASS
		DL	441		1.00	.49	
		DN	164867		30.00	74.27	SITE OUTFALL
BYPASS AREAS	ADD	UN	21152		1.00	11.95	SOUTH BYPASS
		DL	21152		1.00	11.95	
		DN	164867		30.00	74.27	SITE OUTFALL
SOUTH BASIN INFL	ADD	UN	100678		1.00	56.88	SOUTH BASIN INFL
		DL	100678		1.00	56.88	
		DN	115619		30.00	62.47	SOUTH BASIN IN
SOUTH BASIN OUT	PONDrt	UN	115619		30.00	62.47	SOUTH BASIN IN
SOUTH BASIN OUT			115619		30.00	58.48	SOUTH BASIN OUT
		DL	115619		30.00	58.48	
		DN	164867		30.00	74.27	SITE OUTFALL
SW BASIN INFLOW	ADD	UN	25326		1.00	28.14	SW BASIN INFLOW
		DL	25326		1.00	28.14	
		DN	25326		1.00	28.14	SW BASIN IN
SW BASIN OUT	PONDrt	UN	25326		1.00	28.14	SW BASIN IN
SW BASIN OUT			25326		16.00	4.68	SW BASIN OUT
		DL	25326		16.00	4.68	
		DN	164867		30.00	74.27	SITE OUTFALL
SW BYPASS	ADD	UN	1971		1.00	2.19	SW BYPASS
		DL	1971		1.00	2.19	
		DN	164867		30.00	74.27	SITE OUTFALL
WET BASIN INFLOW	ADD	UN	13240		1.00	7.48	WET BASIN INFLOW
		DL	13240		1.00	7.48	
		DN	13240		1.00	7.48	WET BASIN IN
WET BASIN OUTFLW	PONDrt	UN	13240		1.00	7.48	WET BASIN IN
WET BASIN OUTFLW			13235		30.00	5.59	WET BASIN OUT
		DL	13235		30.00	5.59	
		DN	115619		30.00	62.47	SOUTH BASIN IN

NETWORK RUNOFF NODE SEQUENCE

Runoff Data	Apply to Node		Receiving Link	
Read HYGWET BASIN INFLOW	HYG Qin	WET BASIN INFLOW	Add Hyd	WET BASIN INFLOW
Read HYGSOUTH BASIN INFL	HYG Qin	SOUTH BASIN INFL	Add Hyd	SOUTH BASIN INFL
Read HYGSOUTH BYPASS	HYG Qin	SOUTH BYPASS	Add Hyd	SOUTH BYPASS
Read HYGSW BASIN INFLOW	HYG Qin	SW BASIN INFLOW	Add Hyd	SW BASIN INFLOW
Read HYGSW BYPASS	HYG Qin	SW BYPASS	Add Hyd	SW BYPASS
Read HYGWet Basin ByPass	HYG Qin	WET BASIN BYPASS	Add Hyd	WET BASIN BYPASS

NETWORK ROUTING SEQUENCE

Link Operation	UPstream Node			DNstream Node		
Add Hyd WET BASIN INFLOW	HYG Qin WET BASIN INFLOW			Pond	WET BASIN	IN
POND ROUTE TOTAL OUTFLOW...						
Total Pond Outflow	Pond	WET BASIN	IN	Outflow	WET BASIN	OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...						
Outlet WET BASIN OUTFLW	Outflow WET BASIN		OUT	Pond	SOUTH BASIN	IN
Add Hyd SW BASIN INFLOW	HYG Qin SW BASIN INFLOW			Pond	SW BASIN	IN
POND ROUTE TOTAL OUTFLOW...						
Total Pond Outflow	Pond	SW BASIN	IN	Outflow	SW BASIN	OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...						
Outlet SW BASIN OUT	Outflow SW BASIN		OUT	Jct	SITE OUTFALL	
Add Hyd SOUTH BASIN INFL	HYG Qin SOUTH BASIN INFL			Pond	SOUTH BASIN	IN
POND ROUTE TOTAL OUTFLOW...						
Total Pond Outflow	Pond	SOUTH BASIN	IN	Outflow	SOUTH BASIN	OUT
SET POND ROUTING LINK TO TOTAL POND OUTFLOW...						
Outlet SOUTH BASIN OUT	Outflow SOUTH BASIN		OUT	Jct	SITE OUTFALL	
Add Hyd SW BYPASS	HYG Qin SW BYPASS			Jct	SITE OUTFALL	
Add Hyd BYPASS AREAS	HYG Qin SOUTH BYPASS			Jct	SITE OUTFALL	
Add Hyd A 20	HYG Qin WET BASIN BYPASS			Jct	SITE OUTFALL	

HYG file = G:\00XXX\00228-10\DETEN\S-BASIN.HYG
HYG ID = 002 YEAR
HYG Tag = 002

Peak Discharge =	23.53 cfs
Time to Peak =	1.00 min
HYG Volume =	41648 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	23.53	23.53	23.53	23.53
5.00	23.53	23.53	23.53	23.53	23.53
10.00	23.53	23.53	23.53	23.53	23.53
15.00	23.53	23.53	23.53	23.53	23.53
20.00	23.53	23.53	23.53	23.53	23.53
25.00	23.53	23.53	23.53	23.53	23.53
30.00	23.53				

HYG file = G:\00XXX\00228-10\DETEN\S-BASIN.HYG
HYG ID = 015 YEAR
HYG Tag = 015

Peak Discharge =	36.01 cfs
Time to Peak =	1.00 min
HYG Volume =	63738 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	36.01	36.01	36.01	36.01
5.00	36.01	36.01	36.01	36.01	36.01
10.00	36.01	36.01	36.01	36.01	36.01
15.00	36.01	36.01	36.01	36.01	36.01
20.00	36.01	36.01	36.01	36.01	36.01
25.00	36.01	36.01	36.01	36.01	36.01
30.00	36.01				

HYG file = G:\00XXX\00228-10\DETEN\S-BASIN.HYG
HYG ID = 025 YEAR
HYG Tag = 025

Peak Discharge =	44.43 cfs
Time to Peak =	1.00 min
HYG Volume =	78641 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	44.43	44.43	44.43	44.43
5.00	44.43	44.43	44.43	44.43	44.43
10.00	44.43	44.43	44.43	44.43	44.43
15.00	44.43	44.43	44.43	44.43	44.43
20.00	44.43	44.43	44.43	44.43	44.43
25.00	44.43	44.43	44.43	44.43	44.43
30.00	44.43				

HYG file = G:\00XXX\00228-10\DETEN\S-BASIN.HYG
HYG ID = 100 YEAR
HYG Tag = 100

Peak Discharge =	56.88 cfs
Time to Peak =	1.00 min
HYG Volume =	100678 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	56.88	56.88	56.88	56.88
5.00	56.88	56.88	56.88	56.88	56.88
10.00	56.88	56.88	56.88	56.88	56.88
15.00	56.88	56.88	56.88	56.88	56.88
20.00	56.88	56.88	56.88	56.88	56.88
25.00	56.88	56.88	56.88	56.88	56.88
30.00	56.88				

HYG file = G:\00XXX\00228-10\DETEN\BYPASS.HYG
HYG ID = 002 YEAR
HYG Tag = 002

Peak Discharge =	4.92 cfs
Time to Peak =	1.00 min
HYG Volume =	8708 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	4.92	4.92	4.92	4.92
5.00	4.92	4.92	4.92	4.92	4.92
10.00	4.92	4.92	4.92	4.92	4.92
15.00	4.92	4.92	4.92	4.92	4.92
20.00	4.92	4.92	4.92	4.92	4.92
25.00	4.92	4.92	4.92	4.92	4.92
30.00	4.92				

HYG file = G:\00XXX\00228-10\DETEN\BYPASS.HYG
HYG ID = 015 YEAR
HYG Tag = 015

Peak Discharge =	7.56 cfs
Time to Peak =	1.00 min
HYG Volume =	13381 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	7.56	7.56	7.56	7.56
5.00	7.56	7.56	7.56	7.56	7.56
10.00	7.56	7.56	7.56	7.56	7.56
15.00	7.56	7.56	7.56	7.56	7.56
20.00	7.56	7.56	7.56	7.56	7.56
25.00	7.56	7.56	7.56	7.56	7.56
30.00	7.56				

HYG file = G:\00XXX\00228-10\DETEN\BYPASS.HYG
HYG ID = 025 YEAR
HYG Tag = 025

Peak Discharge =	9.33 cfs
Time to Peak =	1.00 min
HYG Volume =	16514 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	9.33	9.33	9.33	9.33
5.00	9.33	9.33	9.33	9.33	9.33
10.00	9.33	9.33	9.33	9.33	9.33
15.00	9.33	9.33	9.33	9.33	9.33
20.00	9.33	9.33	9.33	9.33	9.33
25.00	9.33	9.33	9.33	9.33	9.33
30.00	9.33				

HYG file = G:\00XXX\00228-10\DETEN\BYPASS.HYG
HYG ID = 100 YEAR
HYG Tag = 100

Peak Discharge =	11.95 cfs
Time to Peak =	1.00 min
HYG Volume =	21152 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	11.95	11.95	11.95	11.95
5.00	11.95	11.95	11.95	11.95	11.95
10.00	11.95	11.95	11.95	11.95	11.95
15.00	11.95	11.95	11.95	11.95	11.95
20.00	11.95	11.95	11.95	11.95	11.95
25.00	11.95	11.95	11.95	11.95	11.95
30.00	11.95				

HYG file = G:\00XXX\00228-10\DETEN\SW-BASIN.HYG
HYG ID = 002 YEAR
HYG Tag = 002

Peak Discharge =	10.95 cfs
Time to Peak =	1.00 min
HYG Volume =	9855 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	10.95	10.95	10.95	10.95
5.00	10.95	10.95	10.95	10.95	10.95
10.00	10.95	10.95	10.95	10.95	10.95
15.00	10.95	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\SW-BASIN.HYG
HYG ID = 015 YEAR
HYG Tag = 015

Peak Discharge =	17.81 cfs
Time to Peak =	1.00 min
HYG Volume =	16029 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	17.81	17.81	17.81	17.81
5.00	17.81	17.81	17.81	17.81	17.81
10.00	17.81	17.81	17.81	17.81	17.81
15.00	17.81	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\SW-BASIN.HYG
HYG ID = 025 YEAR
HYG Tag = 025

Peak Discharge =	21.98 cfs
Time to Peak =	1.00 min
HYG Volume =	19782 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	21.98	21.98	21.98	21.98
5.00	21.98	21.98	21.98	21.98	21.98
10.00	21.98	21.98	21.98	21.98	21.98
15.00	21.98	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\SW-BASIN.HYG
HYG ID = 100 YEAR
HYG Tag = 100

Peak Discharge = 28.14 cfs
Time to Peak = 1.00 min
HYG Volume = 25326 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	28.14	28.14	28.14	28.14
5.00	28.14	28.14	28.14	28.14	28.14
10.00	28.14	28.14	28.14	28.14	28.14
15.00	28.14	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\SW-BYPAS.HYG
HYG ID = 002 YEAR
HYG Tag = 002

Peak Discharge =	1.15 cfs
Time to Peak =	1.00 min
HYG Volume =	1035 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	1.15	1.15	1.15	1.15
5.00	1.15	1.15	1.15	1.15	1.15
10.00	1.15	1.15	1.15	1.15	1.15
15.00	1.15	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\SW-BYPAS.HYG
HYG ID = 015 YEAR
HYG Tag = 015

Peak Discharge =	1.38 cfs
Time to Peak =	1.00 min
HYG Volume =	1242 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	1.38	1.38	1.38	1.38
5.00	1.38	1.38	1.38	1.38	1.38
10.00	1.38	1.38	1.38	1.38	1.38
15.00	1.38	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\SW-BYPAS.HYG
HYG ID = 025 YEAR
HYG Tag = 025

Peak Discharge =	1.71 cfs
Time to Peak =	1.00 min
HYG Volume =	1539 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	1.71	1.71	1.71	1.71
5.00	1.71	1.71	1.71	1.71	1.71
10.00	1.71	1.71	1.71	1.71	1.71
15.00	1.71	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\SW-BYPAS.HYG
HYG ID = 100 YEAR
HYG Tag = 100

Peak Discharge =	2.19 cfs
Time to Peak =	1.00 min
HYG Volume =	1971 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	2.19	2.19	2.19	2.19
5.00	2.19	2.19	2.19	2.19	2.19
10.00	2.19	2.19	2.19	2.19	2.19
15.00	2.19	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\WETBYPSS.HYG
HYG ID = HYG 10
HYG Tag = 2-yr

Peak Discharge =	.19 cfs
Time to Peak =	1.00 min
HYG Volume =	171 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.19	.19	.19	.19
5.00	.19	.19	.19	.19	.19
10.00	.19	.19	.19	.19	.19
15.00	.19	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\WETBYPSS.HYG
HYG ID = HYG 20
HYG Tag =

Peak Discharge =	.31 cfs
Time to Peak =	1.00 min
HYG Volume =	279 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.31	.31	.31	.31
5.00	.31	.31	.31	.31	.31
10.00	.31	.31	.31	.31	.31
15.00	.31	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\WETBYPSS.HYG
HYG ID = HYG 30
HYG Tag = 25yr

Peak Discharge =	.38 cfs
Time to Peak =	1.00 min
HYG Volume =	342 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.38	.38	.38	.38
5.00	.38	.38	.38	.38	.38
10.00	.38	.38	.38	.38	.38
15.00	.38	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\WETBYPSS.HYG
HYG ID = 100yr
HYG Tag = 15 min

Peak Discharge =	.49 cfs
Time to Peak =	1.00 min
HYG Volume =	441 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.49	.49	.49	.49
5.00	.49	.49	.49	.49	.49
10.00	.49	.49	.49	.49	.49
15.00	.49	.00	.00	.00	.00
20.00	.00	.00	.00	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00				

HYG file = G:\00XXX\00228-10\DETEN\WETBASIN.HYG
HYG ID = 002 YEAR
HYG Tag = 002

Peak Discharge =	2.91 cfs
Time to Peak =	1.00 min
HYG Volume =	5151 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	2.91	2.91	2.91	2.91
5.00	2.91	2.91	2.91	2.91	2.91
10.00	2.91	2.91	2.91	2.91	2.91
15.00	2.91	2.91	2.91	2.91	2.91
20.00	2.91	2.91	2.91	2.91	2.91
25.00	2.91	2.91	2.91	2.91	2.91
30.00	2.91				

HYG file = G:\00XXX\00228-10\DETEN\WETBASIN.HYG
HYG ID = 015 YEAR
HYG Tag = 015

Peak Discharge =	4.74 cfs
Time to Peak =	1.00 min
HYG Volume =	8390 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	4.74	4.74	4.74	4.74
5.00	4.74	4.74	4.74	4.74	4.74
10.00	4.74	4.74	4.74	4.74	4.74
15.00	4.74	4.74	4.74	4.74	4.74
20.00	4.74	4.74	4.74	4.74	4.74
25.00	4.74	4.74	4.74	4.74	4.74
30.00	4.74				

HYG file = G:\00XXX\00228-10\DETEN\WETBASIN.HYG
HYG ID = 025 YEAR
HYG Tag = 025

Peak Discharge =	5.85 cfs
Time to Peak =	1.00 min
HYG Volume =	10355 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	5.85	5.85	5.85	5.85
5.00	5.85	5.85	5.85	5.85	5.85
10.00	5.85	5.85	5.85	5.85	5.85
15.00	5.85	5.85	5.85	5.85	5.85
20.00	5.85	5.85	5.85	5.85	5.85
25.00	5.85	5.85	5.85	5.85	5.85
30.00	5.85				

HYG file = G:\00XXX\00228-10\DETEN\WETBASIN.HYG
HYG ID = 100 YEAR
HYG Tag = 100

Peak Discharge =	7.48 cfs
Time to Peak =	1.00 min
HYG Volume =	13240 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	7.48	7.48	7.48	7.48
5.00	7.48	7.48	7.48	7.48	7.48
10.00	7.48	7.48	7.48	7.48	7.48
15.00	7.48	7.48	7.48	7.48	7.48
20.00	7.48	7.48	7.48	7.48	7.48
25.00	7.48	7.48	7.48	7.48	7.48
30.00	7.48				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SITE OUTFALL

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
SOUTH BASIN OUT	SOUTH BASIN IN		SOUTH BASIN OUT	002
SW BYPASS	SW BYPASS		002 YEAR	002
BYPASS AREAS	SOUTH BYPASS		002 YEAR	002
SW BASIN OUT	SW BASIN IN		SW BASIN OUT	002
A 20	WET BASIN BYPASS		HYG 10	2-yr

INFLOWS TO: SITE OUTFALL

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SOUTH BASIN OUT	002	47500	30.00	22.33
	002 YEAR	002	1035	1.00	1.15
	002 YEAR	002	8708	1.00	4.92
	SW BASIN OUT	002	9855	16.00	2.52
	HYG 10	2-yr	171	1.00	.19

TOTAL FLOW INTO: SITE OUTFALL

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SITE OUTFALL	002	67417	30.00	29.52

TOTAL NODE INFLOW...
HYG file =
HYG ID = SITE OUTFALL
HYG Tag = 002

Peak Discharge =	29.52 cfs
Time to Peak =	30.00 min
HYG Volume =	67417 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	15.36	18.83	19.76	20.65
5.00	21.35	22.01	22.65	23.26	23.85
10.00	24.41	24.94	25.45	25.95	26.44
15.00	26.91	25.98	26.33	26.66	26.98
20.00	27.28	27.56	27.83	28.08	28.32
25.00	28.55	28.77	28.97	29.17	29.35
30.00	29.52	24.07	22.87	21.74	20.67
35.00	19.66	18.74	17.88	17.07	16.30
40.00	15.57	14.88	14.22	13.59	12.33
45.00	10.29	7.73	3.05	3.00	2.95
50.00	2.90	2.86	2.81	2.77	2.72
55.00	2.68	2.64	2.60	2.56	2.52
60.00	2.48	2.45	2.41	2.37	2.31
65.00	2.25	2.19	2.13	2.07	2.01
70.00	1.96	1.91	1.86	1.81	1.76
75.00	1.71	1.67	1.62	1.58	1.54
80.00	1.50	1.46	1.42	1.38	1.35
85.00	1.31	1.28	1.24	.88	.24
90.00	.23	.22	.22	.21	.20
95.00	.19	.19	.18	.17	.17
100.00	.16	.16	.15	.15	.14
105.00	.14	.13	.13	.12	.12
110.00	.11	.11	.11	.10	.10
115.00	.10	.09	.09	.09	.08
120.00	.08	.08	.08	.07	.07
125.00	.07	.07	.06	.06	.06
130.00	.06	.05	.05	.05	.05
135.00	.05	.05	.04	.04	.04
140.00	.04	.04	.04	.04	.03
145.00	.03	.03	.03	.03	.03
150.00	.03	.03	.03	.03	.02
155.00	.02	.02	.02	.02	.02
160.00	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.02	.02	.02	.01	.01
170.00	.01	.01	.01	.01	.01
175.00	.01	.01	.01	.01	.01
180.00	.01	.01	.01	.01	.01
185.00	.01	.01	.01	.01	.01
190.00	.01	.01	.01	.01	.01
195.00	.01	.01	.01	.01	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SITE OUTFALL

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
SOUTH BASIN OUT	SOUTH BASIN IN		SOUTH BASIN OUT	015
SW BYPASS	SW BYPASS		015 YEAR	015
BYPASS AREAS	SOUTH BYPASS		015 YEAR	015
SW BASIN OUT	SW BASIN IN		SW BASIN OUT	015
A 20	WET BASIN BYPASS		HYG 20	

INFLOWS TO: SITE OUTFALL

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SOUTH BASIN OUT	015	73203	30.00	33.68
	015 YEAR	015	1242	1.00	1.38
	015 YEAR	015	13381	1.00	7.56
	SW BASIN OUT	015	16029	16.00	3.21
	HYG 20		279	1.00	.31

TOTAL FLOW INTO: SITE OUTFALL

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SITE OUTFALL	015	104361	30.00	44.16

TOTAL NODE INFLOW...
HYG file =
HYG ID = SITE OUTFALL
HYG Tag = 015

Peak Discharge =	44.16 cfs
Time to Peak =	30.00 min
HYG Volume =	104361 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	19.81	23.04	24.65	26.05
5.00	27.38	28.65	29.93	31.15	32.30
10.00	33.41	34.46	35.45	36.41	37.34
15.00	38.23	37.32	38.00	38.64	39.25
20.00	39.83	40.37	40.89	41.37	41.83
25.00	42.27	42.69	43.09	43.46	43.82
30.00	44.16	35.79	33.91	32.16	30.52
35.00	28.96	27.50	26.14	24.88	23.69
40.00	22.56	21.50	20.49	19.55	18.70
45.00	17.88	17.11	16.38	15.68	15.02
50.00	14.39	13.79	11.93	10.13	6.34
55.00	3.72	3.66	3.60	3.54	3.48
60.00	3.42	3.37	3.31	3.26	3.21
65.00	3.16	3.11	3.07	3.02	2.98
70.00	2.93	2.89	2.85	2.81	2.77
75.00	2.73	2.69	2.66	2.62	2.59
80.00	2.55	2.52	2.49	2.45	2.42
85.00	2.39	2.36	2.33	2.30	2.28
90.00	2.25	2.22	2.19	2.17	2.14
95.00	2.12	2.09	2.06	2.01	1.96
100.00	1.91	1.86	1.81	1.76	1.72
105.00	1.67	1.63	1.59	1.55	1.51
110.00	1.47	1.43	1.40	1.36	1.33
115.00	1.29	1.26	1.23	1.20	1.17
120.00	1.14	1.11	.61	.12	.11
125.00	.11	.11	.10	.10	.10
130.00	.09	.09	.09	.08	.08
135.00	.08	.07	.07	.07	.07
140.00	.06	.06	.06	.06	.06
145.00	.05	.05	.05	.05	.05
150.00	.05	.04	.04	.04	.04
155.00	.04	.04	.04	.03	.03
160.00	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.03	.03	.03	.02	.02
170.00	.02	.02	.02	.02	.02
175.00	.02	.02	.02	.02	.02
180.00	.02	.02	.01	.01	.01
185.00	.01	.01	.01	.01	.01
190.00	.01	.01	.01	.01	.01
195.00	.01	.01	.01	.01	.01
200.00	.01	.01	.01	.01	.01
205.00	.01	.01	.01	.01	.01
210.00	.01	.01	.01	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SITE OUTFALL

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
SOUTH BASIN OUT	SOUTH BASIN IN		SOUTH BASIN OUT	025
SW BYPASS	SW BYPASS		025 YEAR	025
BYPASS AREAS	SOUTH BYPASS		025 YEAR	025
SW BASIN OUT	SW BASIN IN		SW BASIN OUT	025
A 20	WET BASIN BYPASS		HYG 30	25yr

INFLOWS TO: SITE OUTFALL

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SOUTH BASIN OUT	025	90324	30.00	41.38
	025 YEAR	025	1539	1.00	1.71
	025 YEAR	025	16514	1.00	9.33
	SW BASIN OUT	025	19782	16.00	3.63
	HYG 30	25yr	342	1.00	.38

TOTAL FLOW INTO: SITE OUTFALL

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SITE OUTFALL	025	128781	30.00	53.99

TOTAL NODE INFLOW...
HYG file =
HYG ID = SITE OUTFALL
HYG Tag = 025

Peak Discharge =	53.99 cfs
Time to Peak =	30.00 min
HYG Volume =	128781 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	22.96	26.01	27.99	29.83
5.00	31.63	33.39	35.07	36.66	38.18
10.00	39.65	41.06	42.40	43.67	44.88
15.00	46.03	44.96	45.87	46.73	47.53
20.00	48.30	49.02	49.70	50.34	50.95
25.00	51.52	52.06	52.58	53.07	53.55
30.00	53.99	43.68	41.36	39.18	37.12
35.00	35.18	33.39	31.70	30.11	28.60
40.00	27.19	25.89	24.67	23.51	22.42
45.00	21.38	20.40	19.51	18.68	17.89
50.00	17.13	16.42	15.74	15.09	14.48
55.00	13.78	11.66	9.99	5.28	4.05
60.00	3.98	3.92	3.85	3.79	3.73
65.00	3.67	3.62	3.56	3.50	3.45
70.00	3.40	3.35	3.30	3.25	3.21
75.00	3.16	3.11	3.07	3.03	2.99
80.00	2.95	2.91	2.87	2.83	2.79
85.00	2.76	2.72	2.69	2.65	2.62
90.00	2.59	2.56	2.53	2.49	2.47
95.00	2.44	2.41	2.38	2.35	2.33
100.00	2.30	2.27	2.25	2.22	2.20
105.00	2.17	2.15	2.13	2.11	2.08
110.00	2.06	2.04	2.02	2.00	1.97
115.00	1.92	1.88	1.83	1.78	1.74
120.00	1.69	1.65	1.61	1.57	1.53
125.00	1.49	1.45	1.42	1.38	1.35
130.00	1.31	1.28	1.25	1.22	1.19
135.00	1.16	1.13	1.10	1.07	.82
140.00	.08	.08	.07	.07	.07
145.00	.07	.06	.06	.06	.06
150.00	.06	.05	.05	.05	.05
155.00	.05	.05	.04	.04	.04
160.00	.04	.04	.04	.04	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.03	.03	.03	.03	.03
170.00	.03	.03	.03	.02	.02
175.00	.02	.02	.02	.02	.02
180.00	.02	.02	.02	.02	.02
185.00	.02	.02	.02	.01	.01
190.00	.01	.01	.01	.01	.01
195.00	.01	.01	.01	.01	.01
200.00	.01	.01	.01	.01	.01
205.00	.01	.01	.01	.01	.01
210.00	.01	.01	.01	.01	.01
215.00	.01	.01	.01	.01	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SITE OUTFALL

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
SOUTH BASIN OUT	SOUTH BASIN	IN	SOUTH BASIN OUT	100
SW BYPASS	SW BYPASS		100 YEAR	100
BYPASS AREAS	SOUTH BYPASS		100 YEAR	100
SW BASIN OUT	SW BASIN	IN	SW BASIN OUT	100
A 20	WET BASIN BYPASS		100yr	15 min

INFLOWS TO: SITE OUTFALL

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SOUTH BASIN OUT	100	115619	30.00	58.48
	100 YEAR	100	1971	1.00	2.19
	100 YEAR	100	21152	1.00	11.95
	SW BASIN OUT	100	25326	16.00	4.68
	100yr	15 min	441	1.00	.49

TOTAL FLOW INTO: SITE OUTFALL

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SITE OUTFALL	100	164867	30.00	74.27

TOTAL NODE INFLOW...
HYG file =
HYG ID = SITE OUTFALL
HYG Tag = 100

Peak Discharge =	74.27 cfs
Time to Peak =	30.00 min
HYG Volume =	164867 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	27.23	30.33	32.95	35.53
5.00	38.03	40.41	42.71	44.92	47.02
10.00	49.00	50.91	52.74	54.47	56.12
15.00	57.68	56.81	57.83	59.08	60.99
20.00	62.74	64.31	65.73	67.01	68.16
25.00	69.20	70.25	71.52	72.59	73.49
30.00	74.27	58.13	52.46	47.49	44.35
35.00	42.05	39.88	37.83	35.89	34.08
40.00	32.39	30.80	29.29	27.87	26.56
45.00	25.33	24.17	23.07	22.03	21.04
50.00	20.13	19.30	18.50	17.74	17.02
55.00	16.34	15.68	15.06	14.48	12.74
60.00	10.95	7.76	4.55	4.48	4.41
65.00	4.34	4.27	4.20	4.14	4.08
70.00	4.02	3.96	3.90	3.85	3.79
75.00	3.74	3.68	3.63	3.58	3.53
80.00	3.49	3.44	3.39	3.35	3.30
85.00	3.26	3.22	3.18	3.14	3.10
90.00	3.06	3.02	2.98	2.95	2.91
95.00	2.88	2.84	2.81	2.78	2.75
100.00	2.72	2.68	2.65	2.63	2.60
105.00	2.57	2.54	2.51	2.49	2.46
110.00	2.43	2.41	2.38	2.36	2.33
115.00	2.31	2.29	2.26	2.24	2.22
120.00	2.20	2.18	2.15	2.13	2.11
125.00	2.09	2.07	2.05	2.03	2.02
130.00	2.00	1.98	1.96	1.94	1.92
135.00	1.91	1.89	1.84	1.80	1.75
140.00	1.71	1.67	1.62	1.58	1.54
145.00	1.51	1.47	1.43	1.40	1.36
150.00	1.33	1.30	1.26	1.23	1.20
155.00	1.17	1.14	1.12	1.09	1.06
160.00	1.04	.81	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.04	.04	.04	.04	.03
170.00	.03	.03	.03	.03	.03
175.00	.03	.03	.03	.03	.02
180.00	.02	.02	.02	.02	.02
185.00	.02	.02	.02	.02	.02
190.00	.02	.02	.02	.01	.01
195.00	.01	.01	.01	.01	.01
200.00	.01	.01	.01	.01	.01
205.00	.01	.01	.01	.01	.01
210.00	.01	.01	.01	.01	.01
215.00	.01	.01	.01	.01	.01
220.00	.01	.01	.01	.01	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	540.50	541.69	542.01	542.06	542.12
5.00	542.17	542.22	542.27	542.31	542.36
10.00	542.40	542.44	542.47	542.51	542.54
15.00	542.57	542.60	542.62	542.65	542.67
20.00	542.70	542.72	542.74	542.76	542.78
25.00	542.80	542.81	542.83	542.85	542.86
30.00	542.87	542.84	542.75	542.67	542.59
35.00	542.52	542.45	542.38	542.31	542.25
40.00	542.19	542.13	542.08	542.03	541.91
45.00	541.71	541.56	541.02	541.01	541.00
50.00	540.99	540.97	540.95	540.94	540.92
55.00	540.91	540.89	540.88	540.87	540.85
60.00	540.84	540.83	540.82	540.81	540.80
65.00	540.79	540.78	540.77	540.76	540.75
70.00	540.74	540.73	540.72	540.72	540.71
75.00	540.70	540.69	540.69	540.68	540.68
80.00	540.67	540.66	540.66	540.65	540.65
85.00	540.64	540.64	540.63	540.63	540.62
90.00	540.62	540.61	540.61	540.61	540.60
95.00	540.60	540.60	540.59	540.59	540.59
100.00	540.58	540.58	540.58	540.58	540.57
105.00	540.57	540.57	540.57	540.56	540.56
110.00	540.56	540.56	540.55	540.55	540.55
115.00	540.55	540.55	540.55	540.54	540.54
120.00	540.54	540.54	540.54	540.54	540.54
125.00	540.53	540.53	540.53	540.53	540.53
130.00	540.53	540.53	540.53	540.53	540.53
135.00	540.52	540.52	540.52	540.52	540.52
140.00	540.52	540.52	540.52	540.52	540.52
145.00	540.52	540.52	540.52	540.52	540.52
150.00	540.51	540.51	540.51	540.51	540.51
155.00	540.51	540.51	540.51	540.51	540.51
160.00	540.51	540.51	540.51	540.51	540.51
165.00	540.51	540.51	540.51	540.51	540.51
170.00	540.51	540.51	540.51	540.51	540.51
175.00	540.51	540.51	540.51	540.51	540.51
180.00	540.51	540.50	540.50	540.50	540.50
185.00	540.50	540.50	540.50	540.50	540.50
190.00	540.50	540.50	540.50	540.50	540.50
195.00	540.50	540.50	540.50	540.50	540.50
200.00	540.50	540.50	540.50	540.50	540.50
205.00	540.50	540.50	540.50	540.50	540.50
210.00	540.50	540.50	540.50	540.50	540.50

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	540.50	541.83	542.09	542.20	542.30
5.00	542.40	542.50	542.59	542.67	542.74
10.00	542.81	542.88	542.95	543.01	543.06
15.00	543.12	543.16	543.21	543.26	543.30
20.00	543.34	543.37	543.41	543.44	543.47
25.00	543.50	543.53	543.56	543.58	543.60
30.00	543.63	543.58	543.46	543.35	543.24
35.00	543.14	543.04	542.95	542.86	542.77
40.00	542.69	542.62	542.54	542.47	542.40
45.00	542.34	542.28	542.22	542.16	542.11
50.00	542.06	542.01	541.83	541.66	541.52
55.00	541.08	541.07	541.06	541.05	541.04
60.00	541.03	541.02	541.01	541.00	540.98
65.00	540.97	540.95	540.94	540.92	540.91
70.00	540.89	540.88	540.87	540.85	540.84
75.00	540.83	540.82	540.81	540.80	540.79
80.00	540.78	540.77	540.76	540.75	540.74
85.00	540.73	540.72	540.72	540.71	540.70
90.00	540.69	540.69	540.68	540.67	540.67
95.00	540.66	540.66	540.65	540.65	540.64
100.00	540.64	540.63	540.63	540.62	540.62
105.00	540.61	540.61	540.61	540.60	540.60
110.00	540.60	540.59	540.59	540.59	540.58
115.00	540.58	540.58	540.58	540.57	540.57
120.00	540.57	540.57	540.56	540.56	540.56
125.00	540.56	540.55	540.55	540.55	540.55
130.00	540.55	540.55	540.54	540.54	540.54
135.00	540.54	540.54	540.54	540.54	540.53
140.00	540.53	540.53	540.53	540.53	540.53
145.00	540.53	540.53	540.53	540.53	540.52
150.00	540.52	540.52	540.52	540.52	540.52
155.00	540.52	540.52	540.52	540.52	540.52
160.00	540.52	540.52	540.52	540.51	540.51
165.00	540.51	540.51	540.51	540.51	540.51
170.00	540.51	540.51	540.51	540.51	540.51
175.00	540.51	540.51	540.51	540.51	540.51
180.00	540.51	540.51	540.51	540.51	540.51
185.00	540.51	540.51	540.51	540.51	540.51
190.00	540.51	540.51	540.51	540.51	540.51
195.00	540.50	540.50	540.50	540.50	540.50
200.00	540.50	540.50	540.50	540.50	540.50
205.00	540.50	540.50	540.50	540.50	540.50
210.00	540.50	540.50	540.50	540.50	540.50
215.00	540.50	540.50	540.50	540.50	540.50
220.00	540.50	540.50	540.50	540.50	540.50

TIME vs. ELEVATION (ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min				
225.00	540.50	540.50	540.50	540.50

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	540.50	541.92	542.14	542.29	542.43
5.00	542.56	542.68	542.79	542.89	542.99
10.00	543.08	543.17	543.25	543.32	543.39
15.00	543.46	543.52	543.58	543.63	543.68
20.00	543.73	543.78	543.82	543.86	543.90
25.00	543.94	543.97	544.00	544.03	544.06
30.00	544.09	544.03	543.90	543.76	543.64
35.00	543.52	543.41	543.30	543.19	543.10
40.00	543.00	542.91	542.82	542.74	542.66
45.00	542.59	542.52	542.45	542.38	542.32
50.00	542.26	542.20	542.14	542.09	542.04
55.00	541.98	541.78	541.62	541.39	541.10
60.00	541.09	541.07	541.06	541.05	541.04
65.00	541.03	541.02	541.02	541.01	541.00
70.00	540.98	540.96	540.95	540.93	540.92
75.00	540.90	540.89	540.87	540.86	540.85
80.00	540.84	540.83	540.81	540.80	540.79
85.00	540.78	540.77	540.76	540.75	540.75
90.00	540.74	540.73	540.72	540.71	540.71
95.00	540.70	540.69	540.69	540.68	540.67
100.00	540.67	540.66	540.66	540.65	540.64
105.00	540.64	540.63	540.63	540.63	540.62
110.00	540.62	540.61	540.61	540.61	540.60
115.00	540.60	540.59	540.59	540.59	540.59
120.00	540.58	540.58	540.58	540.57	540.57
125.00	540.57	540.57	540.56	540.56	540.56
130.00	540.56	540.56	540.55	540.55	540.55
135.00	540.55	540.55	540.55	540.54	540.54
140.00	540.54	540.54	540.54	540.54	540.54
145.00	540.53	540.53	540.53	540.53	540.53
150.00	540.53	540.53	540.53	540.53	540.52
155.00	540.52	540.52	540.52	540.52	540.52
160.00	540.52	540.52	540.52	540.52	540.52
165.00	540.52	540.52	540.52	540.52	540.51
170.00	540.51	540.51	540.51	540.51	540.51
175.00	540.51	540.51	540.51	540.51	540.51
180.00	540.51	540.51	540.51	540.51	540.51
185.00	540.51	540.51	540.51	540.51	540.51
190.00	540.51	540.51	540.51	540.51	540.51
195.00	540.51	540.51	540.51	540.51	540.51
200.00	540.50	540.50	540.50	540.50	540.50
205.00	540.50	540.50	540.50	540.50	540.50
210.00	540.50	540.50	540.50	540.50	540.50
215.00	540.50	540.50	540.50	540.50	540.50
220.00	540.50	540.50	540.50	540.50	540.50

TIME vs. ELEVATION (ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
225.00	540.50	540.50	540.50	540.50	540.50
230.00	540.50	540.50	540.50	540.50	540.50

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	540.50	542.01	542.22	542.42	542.61
5.00	542.78	542.94	543.08	543.22	543.34
10.00	543.46	543.57	543.67	543.77	543.86
15.00	543.94	544.02	544.09	544.16	544.22
20.00	544.27	544.32	544.37	544.41	544.44
25.00	544.48	544.51	544.53	544.55	544.57
30.00	544.58	544.51	544.34	544.19	544.04
35.00	543.91	543.78	543.66	543.54	543.42
40.00	543.31	543.21	543.11	543.02	542.93
45.00	542.84	542.76	542.68	542.60	542.53
50.00	542.47	542.40	542.33	542.27	542.22
55.00	542.16	542.11	542.06	542.01	541.85
60.00	541.67	541.54	541.12	541.11	541.10
65.00	541.09	541.08	541.07	541.06	541.05
70.00	541.04	541.03	541.02	541.01	541.00
75.00	540.98	540.97	540.95	540.93	540.92
80.00	540.90	540.89	540.88	540.86	540.85
85.00	540.84	540.83	540.82	540.81	540.80
90.00	540.78	540.77	540.77	540.76	540.75
95.00	540.74	540.73	540.72	540.71	540.71
100.00	540.70	540.69	540.69	540.68	540.67
105.00	540.67	540.66	540.66	540.65	540.65
110.00	540.64	540.64	540.63	540.63	540.62
115.00	540.62	540.61	540.61	540.61	540.60
120.00	540.60	540.60	540.59	540.59	540.59
125.00	540.58	540.58	540.58	540.57	540.57
130.00	540.57	540.57	540.56	540.56	540.56
135.00	540.56	540.56	540.55	540.55	540.55
140.00	540.55	540.55	540.55	540.54	540.54
145.00	540.54	540.54	540.54	540.54	540.54
150.00	540.53	540.53	540.53	540.53	540.53
155.00	540.53	540.53	540.53	540.53	540.53
160.00	540.52	540.52	540.52	540.52	540.52
165.00	540.52	540.52	540.52	540.52	540.52
170.00	540.52	540.52	540.52	540.52	540.51
175.00	540.51	540.51	540.51	540.51	540.51
180.00	540.51	540.51	540.51	540.51	540.51
185.00	540.51	540.51	540.51	540.51	540.51
190.00	540.51	540.51	540.51	540.51	540.51
195.00	540.51	540.51	540.51	540.51	540.51
200.00	540.51	540.51	540.51	540.51	540.51
205.00	540.51	540.50	540.50	540.50	540.50
210.00	540.50	540.50	540.50	540.50	540.50
215.00	540.50	540.50	540.50	540.50	540.50
220.00	540.50	540.50	540.50	540.50	540.50

TIME vs. ELEVATION (ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
225.00	540.50	540.50	540.50	540.50	540.50
230.00	540.50	540.50	540.50	540.50	540.50
235.00	540.50	540.50	540.50	540.50	540.50

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	546.25	547.32	547.46	547.61	547.75
5.00	547.78	547.82	547.85	547.89	547.92
10.00	547.96	547.99	548.02	548.06	548.09
15.00	548.12	548.14	548.13	548.12	548.11
20.00	548.10	548.09	548.08	548.07	548.06
25.00	548.05	548.04	548.03	548.02	548.01
30.00	548.01	548.00	547.99	547.98	547.97
35.00	547.96	547.95	547.95	547.94	547.93
40.00	547.92	547.91	547.90	547.90	547.89
45.00	547.88	547.87	547.87	547.86	547.85
50.00	547.84	547.83	547.83	547.82	547.81
55.00	547.81	547.80	547.79	547.78	547.78
60.00	547.77	547.76	547.76	547.74	547.72
65.00	547.69	547.67	547.64	547.62	547.60
70.00	547.57	547.55	547.53	547.51	547.49
75.00	547.47	547.45	547.43	547.41	547.39
80.00	547.37	547.36	547.34	547.32	547.31
85.00	547.29	547.28	547.26	547.05	546.25

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	546.25	547.37	547.62	547.78	547.84
5.00	547.90	547.96	548.02	548.08	548.14
10.00	548.20	548.26	548.30	548.35	548.40
15.00	548.45	548.47	548.46	548.45	548.44
20.00	548.43	548.42	548.41	548.40	548.39
25.00	548.38	548.37	548.36	548.35	548.34
30.00	548.33	548.32	548.31	548.30	548.29
35.00	548.28	548.27	548.26	548.26	548.25
40.00	548.24	548.22	548.21	548.20	548.19
45.00	548.18	548.17	548.16	548.15	548.14
50.00	548.13	548.12	548.11	548.10	548.10
55.00	548.09	548.08	548.07	548.06	548.05
60.00	548.04	548.03	548.02	548.01	548.00
65.00	548.00	547.99	547.98	547.97	547.96
70.00	547.95	547.94	547.94	547.93	547.92
75.00	547.91	547.90	547.90	547.89	547.88
80.00	547.87	547.86	547.86	547.85	547.84
85.00	547.83	547.83	547.82	547.81	547.80
90.00	547.80	547.79	547.78	547.78	547.77
95.00	547.76	547.75	547.74	547.71	547.69
100.00	547.66	547.64	547.62	547.59	547.57
105.00	547.55	547.53	547.50	547.48	547.46
110.00	547.44	547.43	547.41	547.39	547.37
115.00	547.35	547.34	547.32	547.30	547.29
120.00	547.27	547.26	546.96	546.25	

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	546.25	547.40	547.71	547.82	547.89
5.00	547.97	548.05	548.12	548.20	548.27
10.00	548.33	548.39	548.45	548.51	548.57
15.00	548.63	548.66	548.64	548.63	548.62
20.00	548.61	548.60	548.59	548.58	548.57
25.00	548.55	548.54	548.53	548.52	548.51
30.00	548.50	548.49	548.48	548.47	548.46
35.00	548.45	548.44	548.43	548.42	548.41
40.00	548.40	548.39	548.38	548.37	548.36
45.00	548.35	548.34	548.33	548.32	548.31
50.00	548.30	548.29	548.28	548.28	548.27
55.00	548.26	548.25	548.24	548.23	548.22
60.00	548.21	548.20	548.19	548.18	548.17
65.00	548.16	548.15	548.14	548.13	548.12
70.00	548.11	548.10	548.09	548.08	548.07
75.00	548.06	548.05	548.04	548.03	548.02
80.00	548.02	548.01	548.00	547.99	547.98
85.00	547.97	547.96	547.96	547.95	547.94
90.00	547.93	547.92	547.91	547.91	547.90
95.00	547.89	547.88	547.87	547.87	547.86
100.00	547.85	547.84	547.84	547.83	547.82
105.00	547.81	547.81	547.80	547.79	547.78
110.00	547.78	547.77	547.76	547.76	547.75
115.00	547.72	547.69	547.67	547.65	547.62
120.00	547.60	547.58	547.55	547.53	547.51
125.00	547.49	547.47	547.45	547.43	547.41
130.00	547.39	547.38	547.36	547.34	547.32
135.00	547.31	547.29	547.28	547.26	547.12
140.00	546.25				

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	546.25	547.45	547.77	547.88	547.98
5.00	548.08	548.18	548.27	548.35	548.43
10.00	548.51	548.59	548.67	548.75	548.83
15.00	548.90	548.93	548.92	548.90	548.89
20.00	548.88	548.86	548.85	548.84	548.83
25.00	548.81	548.80	548.79	548.78	548.76
30.00	548.75	548.74	548.73	548.72	548.70
35.00	548.69	548.68	548.67	548.66	548.65
40.00	548.63	548.62	548.61	548.60	548.59
45.00	548.58	548.57	548.55	548.54	548.53
50.00	548.52	548.51	548.50	548.49	548.48
55.00	548.47	548.46	548.45	548.44	548.43
60.00	548.42	548.41	548.40	548.39	548.38
65.00	548.37	548.36	548.35	548.34	548.33
70.00	548.32	548.31	548.30	548.29	548.28
75.00	548.28	548.27	548.26	548.25	548.24
80.00	548.23	548.22	548.21	548.20	548.19
85.00	548.18	548.17	548.16	548.15	548.14
90.00	548.13	548.12	548.11	548.10	548.09
95.00	548.08	548.07	548.06	548.05	548.04
100.00	548.03	548.02	548.02	548.01	548.00
105.00	547.99	547.98	547.97	547.96	547.96
110.00	547.95	547.94	547.93	547.92	547.91
115.00	547.91	547.90	547.89	547.88	547.87
120.00	547.87	547.86	547.85	547.84	547.84
125.00	547.83	547.82	547.81	547.81	547.80
130.00	547.79	547.78	547.78	547.77	547.76
135.00	547.76	547.75	547.72	547.70	547.67
140.00	547.65	547.62	547.60	547.58	547.55
145.00	547.53	547.51	547.49	547.47	547.45
150.00	547.43	547.41	547.39	547.38	547.36
155.00	547.34	547.32	547.31	547.29	547.28
160.00	547.26	547.14	546.25		

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	555.50	555.50	555.51	555.52	555.52
5.00	555.53	555.54	555.54	555.55	555.56
10.00	555.56	555.57	555.57	555.58	555.58
15.00	555.59	555.59	555.59	555.60	555.60
20.00	555.61	555.61	555.61	555.62	555.62
25.00	555.62	555.63	555.63	555.63	555.64
30.00	555.64	555.63	555.63	555.62	555.62
35.00	555.62	555.61	555.61	555.60	555.60
40.00	555.60	555.59	555.59	555.59	555.58
45.00	555.58	555.58	555.58	555.57	555.57
50.00	555.57	555.57	555.56	555.56	555.56
55.00	555.56	555.56	555.55	555.55	555.55
60.00	555.55	555.55	555.54	555.54	555.54
65.00	555.54	555.54	555.54	555.54	555.54
70.00	555.53	555.53	555.53	555.53	555.53
75.00	555.53	555.53	555.53	555.53	555.52
80.00	555.52	555.52	555.52	555.52	555.52
85.00	555.52	555.52	555.52	555.52	555.52
90.00	555.52	555.52	555.52	555.52	555.51
95.00	555.51	555.51	555.51	555.51	555.51
100.00	555.51	555.51	555.51	555.51	555.51
105.00	555.51	555.51	555.51	555.51	555.51
110.00	555.51	555.51	555.51	555.51	555.51
115.00	555.51	555.51	555.51	555.51	555.51
120.00	555.51	555.51	555.51	555.51	555.51
125.00	555.50	555.50	555.50	555.50	555.50
130.00	555.50	555.50	555.50	555.50	555.50
135.00	555.50	555.50	555.50	555.50	555.50
140.00	555.50	555.50	555.50	555.50	555.50
145.00	555.50	555.50	555.50	555.50	555.50
150.00	555.50	555.50	555.50	555.50	555.50
155.00	555.50	555.50	555.50	555.50	555.50
160.00	555.50	555.50	555.50	555.50	555.50
165.00	555.50	555.50	555.50	555.50	555.50
170.00	555.50	555.50	555.50	555.50	555.50
175.00	555.50	555.50	555.50	555.50	555.50
180.00	555.50	555.50	555.50	555.50	555.50
185.00	555.50	555.50	555.50	555.50	555.50
190.00	555.50	555.50	555.50	555.50	555.50
195.00	555.50	555.50	555.50	555.50	555.50
200.00	555.50	555.50	555.50	555.50	555.50
205.00	555.50	555.50	555.50	555.50	555.50
210.00	555.50	555.50	555.50	555.50	

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	555.50	555.51	555.52	555.53	555.54
5.00	555.55	555.56	555.57	555.58	555.59
10.00	555.60	555.61	555.62	555.62	555.63
15.00	555.64	555.65	555.65	555.66	555.67
20.00	555.67	555.68	555.68	555.69	555.70
25.00	555.70	555.71	555.71	555.72	555.72
30.00	555.72	555.72	555.71	555.70	555.70
35.00	555.69	555.68	555.68	555.67	555.66
40.00	555.66	555.65	555.65	555.64	555.64
45.00	555.63	555.63	555.62	555.62	555.62
50.00	555.61	555.61	555.60	555.60	555.60
55.00	555.59	555.59	555.59	555.58	555.58
60.00	555.58	555.58	555.57	555.57	555.57
65.00	555.57	555.56	555.56	555.56	555.56
70.00	555.56	555.55	555.55	555.55	555.55
75.00	555.55	555.54	555.54	555.54	555.54
80.00	555.54	555.54	555.54	555.53	555.53
85.00	555.53	555.53	555.53	555.53	555.53
90.00	555.53	555.53	555.53	555.52	555.52
95.00	555.52	555.52	555.52	555.52	555.52
100.00	555.52	555.52	555.52	555.52	555.52
105.00	555.52	555.52	555.52	555.51	555.51
110.00	555.51	555.51	555.51	555.51	555.51
115.00	555.51	555.51	555.51	555.51	555.51
120.00	555.51	555.51	555.51	555.51	555.51
125.00	555.51	555.51	555.51	555.51	555.51
130.00	555.51	555.51	555.51	555.51	555.51
135.00	555.51	555.51	555.51	555.51	555.50
140.00	555.50	555.50	555.50	555.50	555.50
145.00	555.50	555.50	555.50	555.50	555.50
150.00	555.50	555.50	555.50	555.50	555.50
155.00	555.50	555.50	555.50	555.50	555.50
160.00	555.50	555.50	555.50	555.50	555.50
165.00	555.50	555.50	555.50	555.50	555.50
170.00	555.50	555.50	555.50	555.50	555.50
175.00	555.50	555.50	555.50	555.50	555.50
180.00	555.50	555.50	555.50	555.50	555.50
185.00	555.50	555.50	555.50	555.50	555.50
190.00	555.50	555.50	555.50	555.50	555.50
195.00	555.50	555.50	555.50	555.50	555.50
200.00	555.50	555.50	555.50	555.50	555.50
205.00	555.50	555.50	555.50	555.50	555.50
210.00	555.50	555.50	555.50	555.50	555.50
215.00	555.50	555.50	555.50	555.50	555.50
220.00	555.50	555.50	555.50	555.50	555.50

TIME vs. ELEVATION (ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min			
225.00	555.50	555.50	555.50

TIME vs. ELEVATION (ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	555.50	555.51	555.52	555.54	555.55
5.00	555.56	555.58	555.59	555.60	555.61
10.00	555.62	555.63	555.64	555.65	555.66
15.00	555.67	555.68	555.69	555.70	555.71
20.00	555.71	555.72	555.73	555.73	555.74
25.00	555.75	555.75	555.76	555.77	555.77
30.00	555.78	555.77	555.76	555.75	555.74
35.00	555.73	555.72	555.71	555.71	555.70
40.00	555.69	555.69	555.68	555.67	555.67
45.00	555.66	555.66	555.65	555.65	555.64
50.00	555.64	555.63	555.63	555.62	555.62
55.00	555.61	555.61	555.61	555.60	555.60
60.00	555.60	555.59	555.59	555.59	555.58
65.00	555.58	555.58	555.57	555.57	555.57
70.00	555.57	555.56	555.56	555.56	555.56
75.00	555.56	555.55	555.55	555.55	555.55
80.00	555.55	555.55	555.54	555.54	555.54
85.00	555.54	555.54	555.54	555.54	555.53
90.00	555.53	555.53	555.53	555.53	555.53
95.00	555.53	555.53	555.53	555.53	555.52
100.00	555.52	555.52	555.52	555.52	555.52
105.00	555.52	555.52	555.52	555.52	555.52
110.00	555.52	555.52	555.52	555.51	555.51
115.00	555.51	555.51	555.51	555.51	555.51
120.00	555.51	555.51	555.51	555.51	555.51
125.00	555.51	555.51	555.51	555.51	555.51
130.00	555.51	555.51	555.51	555.51	555.51
135.00	555.51	555.51	555.51	555.51	555.51
140.00	555.51	555.51	555.51	555.51	555.50
145.00	555.50	555.50	555.50	555.50	555.50
150.00	555.50	555.50	555.50	555.50	555.50
155.00	555.50	555.50	555.50	555.50	555.50
160.00	555.50	555.50	555.50	555.50	555.50
165.00	555.50	555.50	555.50	555.50	555.50
170.00	555.50	555.50	555.50	555.50	555.50
175.00	555.50	555.50	555.50	555.50	555.50
180.00	555.50	555.50	555.50	555.50	555.50
185.00	555.50	555.50	555.50	555.50	555.50
190.00	555.50	555.50	555.50	555.50	555.50
195.00	555.50	555.50	555.50	555.50	555.50
200.00	555.50	555.50	555.50	555.50	555.50
205.00	555.50	555.50	555.50	555.50	555.50
210.00	555.50	555.50	555.50	555.50	555.50
215.00	555.50	555.50	555.50	555.50	555.50
220.00	555.50	555.50	555.50	555.50	555.50

TIME vs. ELEVATION (ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
225.00	555.50	555.50	555.50	555.50	555.50
230.00	555.50	555.50	555.50	555.50	

TIME vs. ELEVATION (ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	555.50	555.51	555.53	555.55	555.56
5.00	555.58	555.60	555.61	555.63	555.64
10.00	555.66	555.67	555.68	555.70	555.71
15.00	555.72	555.73	555.74	555.75	555.76
20.00	555.77	555.78	555.79	555.80	555.80
25.00	555.81	555.82	555.82	555.83	555.83
30.00	555.84	555.82	555.81	555.80	555.79
35.00	555.78	555.77	555.76	555.75	555.74
40.00	555.73	555.72	555.72	555.71	555.70
45.00	555.69	555.69	555.68	555.68	555.67
50.00	555.66	555.66	555.65	555.65	555.64
55.00	555.64	555.63	555.63	555.62	555.62
60.00	555.61	555.61	555.61	555.60	555.60
65.00	555.60	555.59	555.59	555.59	555.58
70.00	555.58	555.58	555.58	555.57	555.57
75.00	555.57	555.57	555.56	555.56	555.56
80.00	555.56	555.55	555.55	555.55	555.55
85.00	555.55	555.55	555.54	555.54	555.54
90.00	555.54	555.54	555.54	555.54	555.53
95.00	555.53	555.53	555.53	555.53	555.53
100.00	555.53	555.53	555.53	555.53	555.52
105.00	555.52	555.52	555.52	555.52	555.52
110.00	555.52	555.52	555.52	555.52	555.52
115.00	555.52	555.52	555.52	555.51	555.51
120.00	555.51	555.51	555.51	555.51	555.51
125.00	555.51	555.51	555.51	555.51	555.51
130.00	555.51	555.51	555.51	555.51	555.51
135.00	555.51	555.51	555.51	555.51	555.51
140.00	555.51	555.51	555.51	555.51	555.51
145.00	555.51	555.51	555.51	555.51	555.51
150.00	555.50	555.50	555.50	555.50	555.50
155.00	555.50	555.50	555.50	555.50	555.50
160.00	555.50	555.50	555.50	555.50	555.50
165.00	555.50	555.50	555.50	555.50	555.50
170.00	555.50	555.50	555.50	555.50	555.50
175.00	555.50	555.50	555.50	555.50	555.50
180.00	555.50	555.50	555.50	555.50	555.50
185.00	555.50	555.50	555.50	555.50	555.50
190.00	555.50	555.50	555.50	555.50	555.50
195.00	555.50	555.50	555.50	555.50	555.50
200.00	555.50	555.50	555.50	555.50	555.50
205.00	555.50	555.50	555.50	555.50	555.50
210.00	555.50	555.50	555.50	555.50	555.50
215.00	555.50	555.50	555.50	555.50	555.50
220.00	555.50	555.50	555.50	555.50	555.50

TIME vs. ELEVATION (ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
225.00	555.50	555.50	555.50	555.50	555.50
230.00	555.50	555.50	555.50	555.50	555.50
235.00	555.50	555.50	555.50	555.50	

TIME vs. VOLUME (cu.ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	0	0	1304	2011	2688
5.00	3338	3961	4557	5129	5678
10.00	6203	6705	7186	7641	8052
15.00	8444	8818	9175	9515	9839
20.00	10149	10443	10724	10993	11248
25.00	11492	11724	11946	12157	12359
30.00	12550	12036	10862	9768	8744
35.00	7788	6847	5948	5104	4311
40.00	3567	2866	2207	1586	438
45.00	1	0	0	0	0
50.00	0	0	0	0	0
55.00	0	0	0	0	0
60.00	0	0	0	0	0
65.00	0	0	0	0	0
70.00	0	0	0	0	0
75.00	0	0	0	0	0
80.00	0	0	0	0	0
85.00	0	0	0	0	0
90.00	0	0	0	0	0
95.00	0	0	0	0	0
100.00	0	0	0	0	0
105.00	0	0	0	0	0
110.00	0	0	0	0	0
115.00	0	0	0	0	0
120.00	0	0	0	0	0
125.00	0	0	0	0	0
130.00	0	0	0	0	0
135.00	0	0	0	0	0
140.00	0	0	0	0	0
145.00	0	0	0	0	0
150.00	0	0	0	0	0
155.00	0	0	0	0	0
160.00	0	0	0	0	0
165.00	0	0	0	0	0
170.00	0	0	0	0	0
175.00	0	0	0	0	0
180.00	0	0	0	0	0
185.00	0	0	0	0	0
190.00	0	0	0	0	0
195.00	0	0	0	0	0
200.00	0	0	0	0	0
205.00	0	0	0	0	0
210.00	0	0	0	0	0

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	0	93	2292	3677	5014
5.00	6303	7544	8660	9729	10753
10.00	11733	12671	13568	14417	15184
15.00	15916	16612	17276	17909	18511
20.00	19084	19630	20150	20644	21116
25.00	21560	21960	22340	22702	23046
30.00	23372	22649	20920	19246	17690
35.00	16243	14896	13598	12349	11182
40.00	10092	9073	8118	7202	6305
45.00	5461	4669	3922	3220	2558
50.00	1934	1346	105	0	0
55.00	0	0	0	0	0
60.00	0	0	0	0	0
65.00	0	0	0	0	0
70.00	0	0	0	0	0
75.00	0	0	0	0	0
80.00	0	0	0	0	0
85.00	0	0	0	0	0
90.00	0	0	0	0	0
95.00	0	0	0	0	0
100.00	0	0	0	0	0
105.00	0	0	0	0	0
110.00	0	0	0	0	0
115.00	0	0	0	0	0
120.00	0	0	0	0	0
125.00	0	0	0	0	0
130.00	0	0	0	0	0
135.00	0	0	0	0	0
140.00	0	0	0	0	0
145.00	0	0	0	0	0
150.00	0	0	0	0	0
155.00	0	0	0	0	0
160.00	0	0	0	0	0
165.00	0	0	0	0	0
170.00	0	0	0	0	0
175.00	0	0	0	0	0
180.00	0	0	0	0	0
185.00	0	0	0	0	0
190.00	0	0	0	0	0
195.00	0	0	0	0	0
200.00	0	0	0	0	0
205.00	0	0	0	0	0
210.00	0	0	0	0	0
215.00	0	0	0	0	0
220.00	0	0	0	0	0

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min

Time min	Time on left represents time for first value in each row.			
225.00	0	0	0	0

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	0	469	2964	4818	6615
5.00	8300	9866	11371	12819	14208
10.00	15461	16654	17795	18884	19925
15.00	20918	21842	22690	23496	24264
20.00	24994	25689	26350	26978	27576
25.00	28144	28687	29203	29680	30136
30.00	30572	29687	27514	25479	23593
35.00	21844	20138	18531	17039	15648
40.00	14353	13069	11866	10741	9689
45.00	8704	7782	6874	6005	5187
50.00	4419	3693	3011	2368	1762
55.00	1047	24	0	0	0
60.00	0	0	0	0	0
65.00	0	0	0	0	0
70.00	0	0	0	0	0
75.00	0	0	0	0	0
80.00	0	0	0	0	0
85.00	0	0	0	0	0
90.00	0	0	0	0	0
95.00	0	0	0	0	0
100.00	0	0	0	0	0
105.00	0	0	0	0	0
110.00	0	0	0	0	0
115.00	0	0	0	0	0
120.00	0	0	0	0	0
125.00	0	0	0	0	0
130.00	0	0	0	0	0
135.00	0	0	0	0	0
140.00	0	0	0	0	0
145.00	0	0	0	0	0
150.00	0	0	0	0	0
155.00	0	0	0	0	0
160.00	0	0	0	0	0
165.00	0	0	0	0	0
170.00	0	0	0	0	0
175.00	0	0	0	0	0
180.00	0	0	0	0	0
185.00	0	0	0	0	0
190.00	0	0	0	0	0
195.00	0	0	0	0	0
200.00	0	0	0	0	0
205.00	0	0	0	0	0
210.00	0	0	0	0	0
215.00	0	0	0	0	0
220.00	0	0	0	0	0

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min

Time min	Time on left represents time for first value in each row.				
225.00	0	0	0	0	0
230.00	0	0	0	0	0

TIME vs. VOLUME (cu.ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	0	1367	3991	6554	8953
5.00	11217	13407	15444	17351	19183
10.00	20942	22560	24074	25523	26906
15.00	28227	29475	30630	31714	32692
20.00	33582	34387	35117	35781	36382
25.00	36929	37415	37825	38173	38471
30.00	38726	37405	34593	32124	29872
35.00	27725	25703	23822	22074	20379
40.00	18769	17271	15877	14578	13304
45.00	12096	10966	9910	8920	7994
50.00	7096	6222	5400	4626	3897
55.00	3210	2563	1951	1375	145
60.00	0	0	0	0	0
65.00	0	0	0	0	0
70.00	0	0	0	0	0
75.00	0	0	0	0	0
80.00	0	0	0	0	0
85.00	0	0	0	0	0
90.00	0	0	0	0	0
95.00	0	0	0	0	0
100.00	0	0	0	0	0
105.00	0	0	0	0	0
110.00	0	0	0	0	0
115.00	0	0	0	0	0
120.00	0	0	0	0	0
125.00	0	0	0	0	0
130.00	0	0	0	0	0
135.00	0	0	0	0	0
140.00	0	0	0	0	0
145.00	0	0	0	0	0
150.00	0	0	0	0	0
155.00	0	0	0	0	0
160.00	0	0	0	0	0
165.00	0	0	0	0	0
170.00	0	0	0	0	0
175.00	0	0	0	0	0
180.00	0	0	0	0	0
185.00	0	0	0	0	0
190.00	0	0	0	0	0
195.00	0	0	0	0	0
200.00	0	0	0	0	0
205.00	0	0	0	0	0
210.00	0	0	0	0	0
215.00	0	0	0	0	0
220.00	0	0	0	0	0

TIME vs. VOLUME (cu.ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
225.00	0	0	0	0	0
230.00	0	0	0	0	0
235.00	0	0	0	0	0

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	0	81	364	970	1995
5.00	2357	2735	3147	3595	4080
10.00	4603	5163	5753	6341	6928
15.00	7511	7716	7543	7371	7200
20.00	7031	6864	6697	6532	6369
25.00	6207	6046	5888	5729	5572
30.00	5417	5263	5113	4967	4824
35.00	4685	4550	4419	4290	4166
40.00	4045	3927	3812	3701	3591
45.00	3486	3383	3283	3185	3091
50.00	2999	2909	2822	2737	2654
55.00	2574	2496	2420	2346	2275
60.00	2205	2137	2071	1968	1738
65.00	1533	1348	1183	1035	903
70.00	786	682	590	508	436
75.00	372	317	268	226	189
80.00	157	130	106	86	69
85.00	55	43	33	0	0

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min

Time min	Time on left represents time for first value in each row.				
.00	0	149	1019	2289	2964
5.00	3752	4663	5694	6750	7807
10.00	8863	9895	10773	11650	12525
15.00	13398	13739	13548	13358	13170
20.00	12984	12798	12615	12433	12252
25.00	12073	11895	11719	11544	11371
30.00	11199	11027	10858	10690	10524
35.00	10358	10194	10032	9870	9697
40.00	9507	9317	9130	8946	8761
45.00	8579	8398	8219	8040	7865
50.00	7690	7517	7345	7174	7006
55.00	6839	6672	6507	6344	6183
60.00	6022	5863	5706	5549	5394
65.00	5241	5090	4944	4803	4664
70.00	4530	4399	4272	4148	4027
75.00	3910	3795	3684	3576	3471
80.00	3368	3268	3171	3077	2985
85.00	2896	2809	2724	2642	2562
90.00	2484	2409	2336	2264	2195
95.00	2127	2061	1932	1706	1504
100.00	1322	1159	1014	885	770
105.00	667	577	496	426	364
110.00	309	261	220	184	152
115.00	126	103	83	67	53
120.00	42	32	0	0	

TIME vs. VOLUME (cu.ft)

Time min	Output Time increment = 1.00 min Time on left represents time for first value in each row.				
.00	0	205	1659	2707	3671
5.00	4829	6155	7498	8843	10121
10.00	11243	12365	13487	14609	15730
15.00	16852	17302	17081	16862	16645
20.00	16430	16217	16005	15795	15588
25.00	15381	15176	14973	14772	14572
30.00	14375	14178	13983	13789	13598
35.00	13408	13220	13032	12847	12663
40.00	12480	12299	12120	11942	11765
45.00	11589	11415	11243	11072	10903
50.00	10734	10567	10402	10238	10074
55.00	9912	9746	9556	9367	9180
60.00	8993	8809	8626	8445	8266
65.00	8087	7910	7736	7562	7389
70.00	7219	7049	6882	6715	6551
75.00	6387	6225	6064	5905	5746
80.00	5589	5435	5280	5129	4982
85.00	4840	4700	4565	4433	4304
90.00	4180	4058	3940	3824	3713
95.00	3604	3497	3394	3294	3196
100.00	3101	3009	2919	2831	2746
105.00	2663	2583	2505	2429	2354
110.00	2282	2213	2144	2078	1995
115.00	1762	1554	1367	1200	1051
120.00	917	798	693	599	516
125.00	443	379	322	273	230
130.00	193	160	132	108	88
135.00	71	56	44	34	0
140.00	0				

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	0	311	2255	3419	4915
5.00	6667	8435	10139	11624	13110
10.00	14601	16093	17589	19087	20534
15.00	21983	22552	22283	22027	21776
20.00	21526	21277	21031	20788	20546
25.00	20306	20069	19834	19601	19369
30.00	19140	18905	18672	18440	18210
35.00	17981	17755	17531	17309	17088
40.00	16869	16652	16437	16223	16012
45.00	15802	15594	15388	15182	14979
50.00	14778	14578	14380	14184	13989
55.00	13795	13604	13414	13225	13038
60.00	12852	12669	12486	12305	12125
65.00	11947	11770	11595	11421	11248
70.00	11077	10907	10739	10573	10406
75.00	10242	10079	9918	9753	9562
80.00	9373	9185	8999	8815	8632
85.00	8451	8271	8093	7916	7741
90.00	7567	7395	7224	7055	6888
95.00	6721	6556	6392	6230	6069
100.00	5909	5751	5595	5439	5284
105.00	5134	4986	4844	4705	4569
110.00	4437	4309	4183	4062	3944
115.00	3828	3716	3607	3501	3398
120.00	3297	3199	3104	3011	2922
125.00	2834	2749	2666	2585	2507
130.00	2431	2357	2285	2214	2146
135.00	2080	2002	1769	1560	1373
140.00	1205	1055	921	802	696
145.00	602	519	445	381	324
150.00	274	231	194	161	133
155.00	109	89	71	57	45
160.00	35	1	0		

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	132740	132825	132990	133151	133307
5.00	133457	133602	133742	133877	134008
10.00	134135	134257	134374	134489	134599
15.00	134705	134808	134907	135003	135095
20.00	135184	135270	135354	135434	135512
25.00	135587	135660	135729	135797	135862
30.00	135925	135814	135708	135604	135504
35.00	135407	135315	135226	135140	135056
40.00	134976	134898	134823	134750	134681
45.00	134613	134548	134484	134425	134366
50.00	134310	134255	134202	134152	134103
55.00	134056	134010	133966	133924	133882
60.00	133842	133804	133768	133731	133697
65.00	133664	133633	133602	133571	133543
70.00	133515	133488	133461	133438	133412
75.00	133390	133367	133345	133324	133304
80.00	133285	133265	133247	133230	133213
85.00	133196	133181	133165	133150	133136
90.00	133123	133109	133097	133084	133073
95.00	133060	133049	133039	133028	133018
100.00	133008	133000	132990	132982	132973
105.00	132965	132958	132950	132943	132936
110.00	132929	132923	132916	132910	132905
115.00	132898	132894	132888	132882	132878
120.00	132873	132868	132864	132860	132856
125.00	132852	132847	132843	132840	132836
130.00	132833	132831	132826	132824	132821
135.00	132818	132815	132812	132811	132808
140.00	132805	132803	132801	132798	132797
145.00	132794	132793	132791	132790	132787
150.00	132786	132784	132783	132782	132780
155.00	132779	132777	132776	132775	132773
160.00	132772	132770	132770	132769	132768
165.00	132768	132766	132765	132765	132763
170.00	132762	132762	132761	132761	132759
175.00	132759	132758	132758	132756	132756
180.00	132756	132755	132755	132754	132754
185.00	132754	132752	132752	132752	132751
190.00	132751	132751	132751	132749	132749
195.00	132749	132749	132748	132748	132748
200.00	132748	132747	132747	132747	132747
205.00	132747	132747	132745	132745	132745
210.00	132745	132745	132745	132745	

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	132740	132878	133149	133411	133665
5.00	133910	134146	134376	134597	134810
10.00	135017	135218	135410	135596	135776
15.00	135950	136118	136280	136438	136589
20.00	136736	136877	137014	137146	137273
25.00	137396	137515	137631	137741	137848
30.00	137953	137769	137593	137425	137260
35.00	137103	136951	136804	136661	136525
40.00	136392	136266	136142	136024	135909
45.00	135799	135692	135590	135491	135395
50.00	135303	135213	135127	135045	134964
55.00	134887	134812	134740	134671	134604
60.00	134539	134476	134417	134357	134303
65.00	134248	134195	134145	134095	134049
70.00	134004	133960	133918	133876	133837
75.00	133799	133762	133727	133693	133659
80.00	133629	133598	133567	133539	133511
85.00	133484	133459	133433	133409	133386
90.00	133365	133342	133321	133301	133282
95.00	133264	133245	133227	133210	133195
100.00	133178	133164	133149	133135	133121
105.00	133108	133095	133083	133070	133059
110.00	133048	133038	133027	133017	133007
115.00	132999	132989	132980	132972	132965
120.00	132957	132950	132941	132934	132929
125.00	132922	132915	132909	132903	132898
130.00	132892	132887	132882	132877	132873
135.00	132867	132863	132859	132854	132850
140.00	132847	132843	132839	132836	132833
145.00	132829	132826	132824	132821	132818
150.00	132815	132812	132810	132808	132805
155.00	132803	132801	132798	132797	132794
160.00	132793	132791	132789	132787	132786
165.00	132784	132783	132782	132780	132779
170.00	132777	132776	132775	132773	132772
175.00	132770	132770	132769	132768	132766
180.00	132766	132765	132763	132763	132762
185.00	132762	132761	132761	132759	132759
190.00	132758	132758	132756	132756	132755
195.00	132755	132755	132754	132754	132754
200.00	132752	132752	132752	132751	132751
205.00	132751	132751	132749	132749	132749
210.00	132749	132748	132748	132748	132748
215.00	132747	132747	132747	132747	132747
220.00	132747	132745	132745	132745	132745

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min			
225.00	132745	132745	132745

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	132740	132910	133245	133570	133882
5.00	134186	134477	134761	135034	135298
10.00	135555	135801	136040	136270	136493
15.00	136708	136917	137118	137313	137501
20.00	137682	137857	138027	138191	138348
25.00	138502	138644	138779	138906	139024
30.00	139136	138905	138687	138481	138280
35.00	138085	137898	137718	137543	137376
40.00	137213	137058	136907	136761	136622
45.00	136486	136355	136229	136107	135990
50.00	135877	135767	135662	135560	135463
55.00	135368	135276	135188	135103	135021
60.00	134942	134864	134791	134720	134651
65.00	134585	134521	134459	134398	134342
70.00	134286	134232	134180	134131	134083
75.00	134035	133990	133948	133905	133865
80.00	133825	133789	133752	133717	133683
85.00	133650	133619	133588	133558	133530
90.00	133504	133477	133452	133426	133402
95.00	133380	133358	133336	133315	133296
100.00	133276	133258	133240	133223	133206
105.00	133189	133174	133158	133144	133130
110.00	133116	133104	133091	133078	133067
115.00	133056	133045	133035	133024	133014
120.00	133004	132996	132987	132978	132971
125.00	132962	132954	132947	132940	132933
130.00	132926	132920	132913	132908	132902
135.00	132896	132891	132885	132881	132875
140.00	132871	132866	132861	132857	132853
145.00	132850	132846	132842	132839	132835
150.00	132832	132829	132825	132822	132819
155.00	132817	132814	132812	132810	132807
160.00	132804	132803	132800	132798	132796
165.00	132794	132793	132790	132789	132787
170.00	132786	132783	132782	132780	132779
175.00	132777	132776	132775	132775	132773
180.00	132772	132770	132769	132769	132768
185.00	132766	132766	132765	132763	132763
190.00	132762	132762	132761	132761	132759
195.00	132759	132758	132758	132756	132756
200.00	132755	132755	132755	132754	132754
205.00	132754	132752	132752	132752	132751
210.00	132751	132751	132749	132749	132749
215.00	132749	132748	132748	132748	132748
220.00	132748	132747	132747	132747	132747

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min

Time min	Time on left represents time for first value in each row.				
225.00	132747	132747	132745	132745	132745
230.00	132745	132745	132745	132745	

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	132740	132958	133386	133800	134201
5.00	134589	134964	135327	135678	136017
10.00	136344	136661	136968	137265	137551
15.00	137828	138095	138354	138601	138833
20.00	139050	139253	139445	139625	139795
25.00	139954	140103	140243	140377	140501
30.00	140617	140294	139990	139706	139439
35.00	139188	138952	138732	138524	138321
40.00	138126	137938	137757	137581	137412
45.00	137248	137091	136939	136793	136651
50.00	136515	136382	136256	136134	136014
55.00	135901	135791	135685	135582	135484
60.00	135387	135295	135206	135121	135038
65.00	134959	134881	134806	134734	134665
70.00	134599	134534	134472	134411	134353
75.00	134298	134243	134191	134141	134093
80.00	134045	134000	133956	133914	133873
85.00	133834	133796	133759	133724	133690
90.00	133657	133626	133595	133565	133536
95.00	133509	133482	133456	133432	133408
100.00	133384	133362	133341	133320	133300
105.00	133280	133262	133244	133226	133209
110.00	133193	133177	133163	133147	133133
115.00	133119	133107	133094	133081	133070
120.00	133059	133048	133036	133027	133017
125.00	133007	132997	132989	132980	132972
130.00	132964	132957	132948	132941	132934
135.00	132927	132922	132915	132909	132903
140.00	132898	132892	132887	132881	132877
145.00	132871	132867	132863	132859	132854
150.00	132850	132846	132843	132839	132836
155.00	132832	132829	132826	132824	132821
160.00	132818	132815	132812	132810	132807
165.00	132805	132803	132801	132798	132797
170.00	132794	132793	132791	132789	132787
175.00	132786	132784	132783	132782	132780
180.00	132779	132777	132776	132775	132773
185.00	132772	132770	132770	132769	132768
190.00	132766	132766	132765	132763	132763
195.00	132762	132762	132761	132761	132759
200.00	132759	132758	132758	132756	132756
205.00	132755	132755	132755	132754	132754
210.00	132754	132752	132752	132752	132751
215.00	132751	132751	132751	132749	132749
220.00	132749	132749	132748	132748	132748

TIME vs. VOLUME (cu.ft)

Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
225.00	132748	132747	132747	132747	132747
230.00	132747	132747	132745	132745	132745
235.00	132745	132745	132745	132745	

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
540.50	-----	0	0	0	0
541.70	-----	1	1	0	0
542.00	-----	12195	12306	1231	1231
544.00	-----	15816	41899	27933	29164
546.00	-----	19719	53195	35463	64627
548.00	-----	23726	65075	43383	108010

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
546.25	-----	0	0	0	0
547.10	-----	1	1	0	0
548.00	-----	17590	17724	5317	5318
550.00	-----	21867	59069	39380	44697
552.00	-----	26488	72422	48281	92978
554.00	-----	31141	86349	57566	150545

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

Elevation (ft)	Planimeter (sq.in)	Area (sq.ft)	A1+A2+sqr(A1*A2) (sq.ft)	Volume (cu.ft)	Volume Sum (cu.ft)
544.00	-----	2212	0	0	0
546.00	-----	5239	10855	7237	7237
548.00	-----	8180	19965	13310	20547
550.00	-----	11320	29123	19415	39962
552.00	-----	15222	39669	26446	66408
554.00	-----	19450	51879	34586	100994
556.00	-----	24147	65269	43512	144506
557.00	-----	26595	76083	25361	169867

POND VOLUME EQUATIONS

* Incremental volume computed by the Conic Method for Reservoir Volumes.

Volume = (1/3) * (EL2-EL1) * (Area1 + Area2 + sq.rt.(Area1*Area2))

where: EL1, EL2 = Lower and upper elevations of the increment
Area1,Area2 = Areas computed for EL1, EL2, respectively
Volume = Incremental volume between EL1 and EL2

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 540.50 ft
Increment = .50 ft
Max. Elev.= 548.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Weir-Rectangular	4	--->	TW	544.140	548.000
Weir-Rectangular	2	--->	TW	540.500	548.000

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID = 4
Structure Type = Weir-Rectangular

# of Openings	=	1
Crest Elev.	=	544.14 ft
Weir Length	=	8.50 ft

Weir Table File: BRDWEIR.WCT
Weir Table ID: 6inBRDCRESTWEIR
WEIR COEFFICIENT TABLE

Depth, ft	Weir C
.20	2.8000
.40	2.9200
.60	3.0800
.80	3.3000
1.00	3.3200
1.20	3.3200
1.40	3.3200
1.60	3.3200
1.80	3.3200
2.00	3.3200
2.50	3.3200
3.00	3.3200
3.50	3.3200
4.00	3.3200
4.50	3.3200
5.00	3.3200
5.50	3.3200

Weir TW effects (Use adjustment equation)

OUTLET STRUCTURE INPUT DATA

Structure ID = 2
Structure Type = Weir-Rectangular

# of Openings = 1
Crest Elev. = 540.50 ft
Weir Length = 1.83 ft

Weir Table File: BRDWEIR.WCT
Weir Table ID: 6inBRDCRESTWEIR
WEIR COEFFICIENT TABLE

Depth, ft	Weir C
.20	2.8000
.40	2.9200
.60	3.0800
.80	3.3000
1.00	3.3200
1.20	3.3200
1.40	3.3200
1.60	3.3200
1.80	3.3200
2.00	3.3200
2.50	3.3200
3.00	3.3200
3.50	3.3200
4.00	3.3200
4.50	3.3200
5.00	3.3200
5.50	3.3200

Weir TW effects (Use adjustment equation)

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 30
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .10 cfs
Max. Q tolerance = .10 cfs

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = 4 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev,Device Q		Tail Water		Notes
WS Elev. ft	Q cfs	TW Elev Converge ft	+/-ft	Computation Messages
540.50	.00	Free Outfall		HW & TW below Inv.El.=544.140
541.00	.00	Free Outfall		HW & TW below Inv.El.=544.140
541.50	.00	Free Outfall		HW & TW below Inv.El.=544.140
542.00	.00	Free Outfall		HW & TW below Inv.El.=544.140
542.50	.00	Free Outfall		HW & TW below Inv.El.=544.140
543.00	.00	Free Outfall		HW & TW below Inv.El.=544.140
543.50	.00	Free Outfall		HW & TW below Inv.El.=544.140
544.00	.00	Free Outfall		HW & TW below Inv.El.=544.140
544.14	.00	Free Outfall		C=2.800; H=.00; Htw=.00; Qfree=.00;
544.50	5.32	Free Outfall		C=2.896; H=.36; Htw=.00; Qfree=5.32;
545.00	22.41	Free Outfall		C=3.306; H=.86; Htw=.00; Qfree=22.41;
545.50	44.76	Free Outfall		C=3.320; H=1.36; Htw=.00; Qfree=44.76;
546.00	71.58	Free Outfall		C=3.320; H=1.86; Htw=.00; Qfree=71.58;
546.50	102.31	Free Outfall		C=3.320; H=2.36; Htw=.00; Qfree=102.31;
547.00	136.49	Free Outfall		C=3.320; H=2.86; Htw=.00; Qfree=136.49;
547.50	173.81	Free Outfall		C=3.320; H=3.36; Htw=.00; Qfree=173.81;
548.00	214.01	Free Outfall		C=3.320; H=3.86; Htw=.00; Qfree=214.01;

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = 2 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev,Device Q		Tail Water		Notes
WS Elev. ft	Q cfs	TW Elev ft	Converge +/-ft	Computation Messages
540.50	.00	Free Outfall		C=2.800; H=.00; Htw=.00; Qfree=.00;
541.00	1.94	Free Outfall		C=3.000; H=.50; Htw=.00; Qfree=1.94;
541.50	6.09	Free Outfall		C=3.320; H=1.00; Htw=.00; Qfree=6.09;
542.00	11.18	Free Outfall		C=3.320; H=1.50; Htw=.00; Qfree=11.18;
542.50	17.21	Free Outfall		C=3.320; H=2.00; Htw=.00; Qfree=17.21;
543.00	24.06	Free Outfall		C=3.320; H=2.50; Htw=.00; Qfree=24.06;
543.50	31.62	Free Outfall		C=3.320; H=3.00; Htw=.00; Qfree=31.62;
544.00	39.85	Free Outfall		C=3.320; H=3.50; Htw=.00; Qfree=39.85;
544.14	42.26	Free Outfall		C=3.320; H=3.64; Htw=.00; Qfree=42.26;
544.50	48.68	Free Outfall		C=3.320; H=4.00; Htw=.00; Qfree=48.68;
545.00	58.09	Free Outfall		C=3.320; H=4.50; Htw=.00; Qfree=58.09;
545.50	68.04	Free Outfall		C=3.320; H=5.00; Htw=.00; Qfree=68.04;
546.00	78.50	Free Outfall		C=3.320; H=5.50; Htw=.00; Qfree=78.50;
546.50	89.44	Free Outfall		C=3.320; H=6.00; Htw=.00; Qfree=89.44;
547.00	100.85	Free Outfall		C=3.320; H=6.50; Htw=.00; Qfree=100.85;
547.50	112.71	Free Outfall		C=3.320; H=7.00; Htw=.00; Qfree=112.71;
548.00	124.99	Free Outfall		C=3.320; H=7.50; Htw=.00; Qfree=124.99;

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
540.50	.00	Free Outfall	2	
541.00	1.94	Free Outfall	2	
541.50	6.09	Free Outfall	2	
542.00	11.18	Free Outfall	2	
542.50	17.21	Free Outfall	2	
543.00	24.06	Free Outfall	2	
543.50	31.62	Free Outfall	2	
544.00	39.85	Free Outfall	2	
544.14	42.26	Free Outfall	4	+2
544.50	54.00	Free Outfall	4	+2
545.00	80.50	Free Outfall	4	+2
545.50	112.80	Free Outfall	4	+2
546.00	150.08	Free Outfall	4	+2
546.50	191.75	Free Outfall	4	+2
547.00	237.34	Free Outfall	4	+2
547.50	286.51	Free Outfall	4	+2
548.00	339.01	Free Outfall	4	+2

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 546.25 ft
Increment = .50 ft
Max. Elev.= 554.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Weir-Rectangular	5	--->	TW	548.900	554.000
Weir-Rectangular	3	--->	TW	546.250	554.000

TW SETUP, DS Channel

OUTLET STRUCTURE INPUT DATA

Structure ID = 5
Structure Type = Weir-Rectangular

# of Openings	=	1
Crest Elev.	=	548.90 ft
Weir Length	=	8.50 ft

Weir Table File: BRDWEIR.WCT
Weir Table ID: 6inBRDCRESTWEIR
WEIR COEFFICIENT TABLE

Depth, ft	Weir C
.20	2.8000
.40	2.9200
.60	3.0800
.80	3.3000
1.00	3.3200
1.20	3.3200
1.40	3.3200
1.60	3.3200
1.80	3.3200
2.00	3.3200
2.50	3.3200
3.00	3.3200
3.50	3.3200
4.00	3.3200
4.50	3.3200
5.00	3.3200
5.50	3.3200

Weir TW effects (Use adjustment equation)

OUTLET STRUCTURE INPUT DATA

Structure ID = 3
Structure Type = Weir-Rectangular

# of Openings = 1
Crest Elev. = 546.25 ft
Weir Length = .29 ft

Weir Table File: BRDWEIR.WCT
Weir Table ID: 6inBRDCRESTWEIR
WEIR COEFFICIENT TABLE

Depth, ft	Weir C
.20	2.8000
.40	2.9200
.60	3.0800
.80	3.3000
1.00	3.3200
1.20	3.3200
1.40	3.3200
1.60	3.3200
1.80	3.3200
2.00	3.3200
2.50	3.3200
3.00	3.3200
3.50	3.3200
4.00	3.3200
4.50	3.3200
5.00	3.3200
5.50	3.3200

Weir TW effects (Use adjustment equation)

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...
Maximum Iterations= 30
Min. TW tolerance = .01 ft
Max. TW tolerance = .01 ft
Min. HW tolerance = .01 ft
Max. HW tolerance = .01 ft
Min. Q tolerance = .10 cfs
Max. Q tolerance = .10 cfs

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = 5 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev,Device Q		Tail Water		Notes
WS Elev. ft	Q cfs	TW Elev Converge ft	+/-ft	Computation Messages
546.25	.00	Free Outfall		HW & TW below Inv.El.=548.900
546.75	.00	Free Outfall		HW & TW below Inv.El.=548.900
547.25	.00	Free Outfall		HW & TW below Inv.El.=548.900
547.75	.00	Free Outfall		HW & TW below Inv.El.=548.900
548.25	.00	Free Outfall		HW & TW below Inv.El.=548.900
548.75	.00	Free Outfall		HW & TW below Inv.El.=548.900
548.90	.00	Free Outfall		C=2.800; H=.00; Htw=.00; Qfree=.00;
549.25	5.09	Free Outfall		C=2.890; H=.35; Htw=.00; Qfree=5.09;
549.75	22.01	Free Outfall		C=3.305; H=.85; Htw=.00; Qfree=22.01;
550.25	44.26	Free Outfall		C=3.320; H=1.35; Htw=.00; Qfree=44.26;
550.75	71.01	Free Outfall		C=3.320; H=1.85; Htw=.00; Qfree=71.01;
551.25	101.66	Free Outfall		C=3.320; H=2.35; Htw=.00; Qfree=101.66;
551.75	135.77	Free Outfall		C=3.320; H=2.85; Htw=.00; Qfree=135.77;
552.25	173.03	Free Outfall		C=3.320; H=3.35; Htw=.00; Qfree=173.03;
552.75	213.18	Free Outfall		C=3.320; H=3.85; Htw=.00; Qfree=213.18;
553.25	256.03	Free Outfall		C=3.320; H=4.35; Htw=.00; Qfree=256.03;
553.75	301.42	Free Outfall		C=3.320; H=4.85; Htw=.00; Qfree=301.42;
554.00	325.02	Free Outfall		C=3.320; H=5.10; Htw=.00; Qfree=325.02;

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = 3 (Weir-Rectangular)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev, Device Q		Tail Water		Notes
WS Elev. ft	Q cfs	TW Elev ft	Converge +/-ft	Computation Messages
546.25	.00	Free Outfall		C=2.800; H=.00; Htw=.00; Qfree=.00;
546.75	.31	Free Outfall		C=3.000; H=.50; Htw=.00; Qfree=.31;
547.25	.97	Free Outfall		C=3.320; H=1.00; Htw=.00; Qfree=.97;
547.75	1.78	Free Outfall		C=3.320; H=1.50; Htw=.00; Qfree=1.78;
548.25	2.74	Free Outfall		C=3.320; H=2.00; Htw=.00; Qfree=2.74;
548.75	3.83	Free Outfall		C=3.320; H=2.50; Htw=.00; Qfree=3.83;
548.90	4.18	Free Outfall		C=3.320; H=2.65; Htw=.00; Qfree=4.18;
549.25	5.04	Free Outfall		C=3.320; H=3.00; Htw=.00; Qfree=5.04;
549.75	6.35	Free Outfall		C=3.320; H=3.50; Htw=.00; Qfree=6.35;
550.25	7.76	Free Outfall		C=3.320; H=4.00; Htw=.00; Qfree=7.76;
550.75	9.25	Free Outfall		C=3.320; H=4.50; Htw=.00; Qfree=9.25;
551.25	10.84	Free Outfall		C=3.320; H=5.00; Htw=.00; Qfree=10.84;
551.75	12.50	Free Outfall		C=3.320; H=5.50; Htw=.00; Qfree=12.50;
552.25	14.25	Free Outfall		C=3.320; H=6.00; Htw=.00; Qfree=14.25;
552.75	16.07	Free Outfall		C=3.320; H=6.50; Htw=.00; Qfree=16.07;
553.25	17.95	Free Outfall		C=3.320; H=7.00; Htw=.00; Qfree=17.95;
553.75	19.91	Free Outfall		C=3.320; H=7.50; Htw=.00; Qfree=19.91;
554.00	20.92	Free Outfall		C=3.320; H=7.75; Htw=.00; Qfree=20.92;

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
546.25	.00	Free Outfall	3	
546.75	.31	Free Outfall	3	
547.25	.97	Free Outfall	3	
547.75	1.78	Free Outfall	3	
548.25	2.74	Free Outfall	3	
548.75	3.83	Free Outfall	3	
548.90	4.18	Free Outfall	5	+3
549.25	10.12	Free Outfall	5	+3
549.75	28.36	Free Outfall	5	+3
550.25	52.02	Free Outfall	5	+3
550.75	80.26	Free Outfall	5	+3
551.25	112.50	Free Outfall	5	+3
551.75	148.28	Free Outfall	5	+3
552.25	187.28	Free Outfall	5	+3
552.75	229.24	Free Outfall	5	+3
553.25	273.98	Free Outfall	5	+3
553.75	321.33	Free Outfall	5	+3
554.00	345.94	Free Outfall	5	+3

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 544.00 ft
Increment = .25 ft
Max. Elev.= 557.00 ft

****
OUTLET CONNECTIVITY
****

---> Forward Flow Only (UpStream to DnStream)
<--- Reverse Flow Only (DnStream to UpStream)
<---> Forward and Reverse Both Allowed

Structure	No.		Outfall	E1, ft	E2, ft
Inlet Box	1	--->	TW	555.500	557.000
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

Structure ID = 1
Structure Type = Inlet Box

# of Openings	=	1
Invert Elev.	=	555.50 ft
Orifice Area	=	5.1600 sq.ft
Orifice Coeff.	=	.600
Weir Length	=	9.08 ft
Weir Coeff.	=	3.000
K, Submerged	=	.000
K, Reverse	=	1.000
Kb,Barrel	=	.000000 (per ft of full flow)
Barrel Length	=	.00 ft
Mannings n	=	.0000

Structure ID = TW
Structure Type = TW SETUP, DS Channel

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

Maximum Iterations	=	30
Min. TW tolerance	=	.01 ft
Max. TW tolerance	=	.01 ft
Min. HW tolerance	=	.01 ft
Max. HW tolerance	=	.01 ft
Min. Q tolerance	=	.10 cfs
Max. Q tolerance	=	.10 cfs

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = 1 (Inlet Box)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev,Device Q | Tail Water | Notes

WS Elev. ft	Q cfs	TW Elev ft	Converge +/-ft	Computation Messages
544.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
544.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
544.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
544.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
545.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
545.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
545.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
545.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
546.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
546.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
546.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
546.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
547.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
547.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
547.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
547.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
548.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
548.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
548.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
548.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
549.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
549.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
549.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
549.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
550.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
550.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
550.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
550.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
551.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
551.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
551.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
551.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
552.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
552.25	.00	Free Outfall		HW & TW < Inv.El.=555.500

RATING TABLE FOR ONE OUTLET TYPE

Structure ID = 1 (Inlet Box)

Upstream ID = (Pond Water Surface)
DNstream ID = TW (Pond Outfall)

WS Elev,Device Q		Tail Water		Notes
WS Elev. ft	Q cfs	TW Elev ft	Converge +/-ft	Computation Messages
552.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
552.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
553.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
553.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
553.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
553.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
554.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
554.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
554.50	.00	Free Outfall		HW & TW < Inv.El.=555.500
554.75	.00	Free Outfall		HW & TW < Inv.El.=555.500
555.00	.00	Free Outfall		HW & TW < Inv.El.=555.500
555.25	.00	Free Outfall		HW & TW < Inv.El.=555.500
555.50	.00	Free Outfall		Weir: H =.00
555.75	3.41	Free Outfall		Weir: H =.25
556.00	9.63	Free Outfall		Weir: H =.50
556.25	17.70	Free Outfall		Weir: H =.75
556.50	24.84	Free Outfall		
	Orifice: H =1.00			
556.75	27.77	Free Outfall		
	Orifice: H =1.25			
557.00	30.42	Free Outfall		
	Orifice: H =1.50			

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
544.00	.00	Free Outfall		None contributing
544.25	.00	Free Outfall		None contributing
544.50	.00	Free Outfall		None contributing
544.75	.00	Free Outfall		None contributing
545.00	.00	Free Outfall		None contributing
545.25	.00	Free Outfall		None contributing
545.50	.00	Free Outfall		None contributing
545.75	.00	Free Outfall		None contributing
546.00	.00	Free Outfall		None contributing
546.25	.00	Free Outfall		None contributing
546.50	.00	Free Outfall		None contributing
546.75	.00	Free Outfall		None contributing
547.00	.00	Free Outfall		None contributing
547.25	.00	Free Outfall		None contributing
547.50	.00	Free Outfall		None contributing
547.75	.00	Free Outfall		None contributing
548.00	.00	Free Outfall		None contributing
548.25	.00	Free Outfall		None contributing
548.50	.00	Free Outfall		None contributing
548.75	.00	Free Outfall		None contributing
549.00	.00	Free Outfall		None contributing
549.25	.00	Free Outfall		None contributing
549.50	.00	Free Outfall		None contributing
549.75	.00	Free Outfall		None contributing
550.00	.00	Free Outfall		None contributing
550.25	.00	Free Outfall		None contributing
550.50	.00	Free Outfall		None contributing
550.75	.00	Free Outfall		None contributing
551.00	.00	Free Outfall		None contributing
551.25	.00	Free Outfall		None contributing
551.50	.00	Free Outfall		None contributing
551.75	.00	Free Outfall		None contributing
552.00	.00	Free Outfall		None contributing
552.25	.00	Free Outfall		None contributing
552.50	.00	Free Outfall		None contributing
552.75	.00	Free Outfall		None contributing
553.00	.00	Free Outfall		None contributing
553.25	.00	Free Outfall		None contributing

***** COMPOSITE OUTFLOW SUMMARY ****

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
553.50	.00	Free Outfall		None contributing
553.75	.00	Free Outfall		None contributing
554.00	.00	Free Outfall		None contributing
554.25	.00	Free Outfall		None contributing
554.50	.00	Free Outfall		None contributing
554.75	.00	Free Outfall		None contributing
555.00	.00	Free Outfall		None contributing
555.25	.00	Free Outfall		None contributing
555.50	.00	Free Outfall		1
555.75	3.41	Free Outfall		1
556.00	9.63	Free Outfall		1
556.25	17.70	Free Outfall		1
556.50	24.84	Free Outfall		1
556.75	27.77	Free Outfall		1
557.00	30.42	Free Outfall		1

Type.... Pond E-V-Q Table
Name.... SOUTH BASIN
File.... G:\00XXX\00228-10\DETEN\PROPOSED2.PPW

LEVEL POOL ROUTING DATA

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SOUTH BASIN IN 002
Outflow HYG file = NONE STORED - SOUTH BASIN OUT 002

Pond Node Data = SOUTH BASIN
Pond Volume Data = SOUTH BASIN-SED
Pond Outlet Data = SOUTH BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	540.50 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
540.50	.00	0	0	.00	.00	.00
541.00	1.94	0	0	.00	1.94	1.95
541.50	6.09	0	1	.00	6.09	6.09
542.00	11.18	1231	12195	.00	11.18	52.21
542.50	17.21	7543	13056	.00	17.21	268.63
543.00	24.06	14292	13947	.00	24.06	500.46
543.50	31.62	21494	14867	.00	31.62	748.09
544.00	39.85	29164	15816	.00	39.85	1011.97
544.14	42.26	31396	16075	.00	42.26	1088.80
544.50	54.00	37304	16751	.00	54.00	1297.48
545.00	80.50	45920	17714	.00	80.50	1611.15
545.50	112.80	55023	18703	.00	112.80	1946.88
546.00	150.08	64627	19719	.00	150.08	2304.31
546.50	191.75	74727	20686	.00	191.75	2682.65
547.00	237.34	85317	21676	.00	237.34	3081.23
547.50	286.51	96407	22690	.00	286.51	3500.08
548.00	339.01	108010	23726	.00	339.01	3939.34

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SOUTH BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
WET BASIN OUTFLW	WET BASIN IN		WET BASIN OUTFLW	002
SOUTH BASIN INFL	SOUTH BASIN INFL		002 YEAR	002

INFLOWS TO: SOUTH BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	WET BASIN OUTFLW	002	5146	30.00	1.88
	002 YEAR	002	41648	1.00	23.53

TOTAL FLOW INTO: SOUTH BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SOUTH BASIN IN	002	47500	30.00	25.41

TOTAL NODE INFLOW...
HYG file =
HYG ID = SOUTH BASIN IN
HYG Tag = 002

Peak Discharge =	25.41 cfs
Time to Peak =	30.00 min
HYG Volume =	47500 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	23.58	23.68	23.77	23.87
5.00	23.96	24.04	24.12	24.20	24.28
10.00	24.36	24.43	24.50	24.57	24.63
15.00	24.69	24.75	24.81	24.87	24.92
20.00	24.97	25.03	25.07	25.12	25.17
25.00	25.21	25.25	25.29	25.33	25.37
30.00	25.41	1.81	1.75	1.69	1.63
35.00	1.58	1.52	1.47	1.42	1.37
40.00	1.32	1.28	1.23	1.19	1.15
45.00	1.11	1.07	1.03	1.00	.96
50.00	.93	.90	.87	.84	.81
55.00	.78	.75	.73	.70	.68
60.00	.65	.63	.61	.59	.57
65.00	.55	.53	.51	.49	.48
70.00	.46	.44	.43	.41	.40
75.00	.39	.37	.36	.35	.34
80.00	.32	.31	.30	.29	.28
85.00	.27	.26	.25	.24	.24
90.00	.23	.22	.21	.20	.20
95.00	.19	.18	.18	.17	.17
100.00	.16	.15	.15	.14	.14
105.00	.13	.13	.13	.12	.12
110.00	.11	.11	.10	.10	.10
115.00	.09	.09	.09	.08	.08
120.00	.08	.08	.07	.07	.07
125.00	.07	.06	.06	.06	.06
130.00	.06	.05	.05	.05	.05
135.00	.05	.05	.04	.04	.04
140.00	.04	.04	.04	.04	.03
145.00	.03	.03	.03	.03	.03
150.00	.03	.03	.03	.02	.02
155.00	.02	.02	.02	.02	.02
160.00	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.02	.02	.02	.01	.01
170.00	.01	.01	.01	.01	.01
175.00	.01	.01	.01	.01	.01
180.00	.01	.01	.01	.01	.01
185.00	.01	.01	.01	.01	.01
190.00	.01	.01	.01	.01	.01
195.00	.01	.01	.01	.01	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SOUTH BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
WET BASIN OUTFLW	WET BASIN IN		WET BASIN OUTFLW	015
SOUTH BASIN INFL	SOUTH BASIN INFL		015 YEAR	015

INFLOWS TO: SOUTH BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	WET BASIN OUTFLW	015	8385	30.00	3.06
	015 YEAR	015	63738	1.00	36.01

TOTAL FLOW INTO: SOUTH BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SOUTH BASIN IN	015	73203	30.00	39.07

TOTAL NODE INFLOW...
HYG file =
HYG ID = SOUTH BASIN IN
HYG Tag = 015

Peak Discharge =	39.07 cfs
Time to Peak =	30.00 min
HYG Volume =	73203 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	36.09	36.25	36.41	36.56
5.00	36.70	36.84	36.98	37.11	37.24
10.00	37.36	37.47	37.59	37.70	37.80
15.00	37.90	38.00	38.10	38.19	38.28
20.00	38.36	38.45	38.53	38.60	38.68
25.00	38.75	38.82	38.88	38.95	39.01
30.00	39.07	2.96	2.85	2.75	2.66
35.00	2.57	2.48	2.39	2.31	2.23
40.00	2.15	2.08	2.01	1.94	1.87
45.00	1.81	1.74	1.68	1.62	1.57
50.00	1.51	1.46	1.41	1.36	1.32
55.00	1.27	1.23	1.18	1.14	1.10
60.00	1.07	1.03	.99	.96	.93
65.00	.89	.86	.83	.80	.78
70.00	.75	.72	.70	.67	.65
75.00	.63	.61	.59	.57	.55
80.00	.53	.51	.49	.47	.46
85.00	.44	.43	.41	.40	.38
90.00	.37	.36	.35	.33	.32
95.00	.31	.30	.29	.28	.27
100.00	.26	.25	.24	.23	.23
105.00	.22	.21	.20	.20	.19
110.00	.18	.18	.17	.16	.16
115.00	.15	.15	.14	.14	.13
120.00	.13	.12	.12	.12	.11
125.00	.11	.10	.10	.10	.09
130.00	.09	.09	.08	.08	.08
135.00	.08	.07	.07	.07	.07
140.00	.06	.06	.06	.06	.06
145.00	.05	.05	.05	.05	.05
150.00	.04	.04	.04	.04	.04
155.00	.04	.04	.04	.03	.03
160.00	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.03	.03	.02	.02	.02
170.00	.02	.02	.02	.02	.02
175.00	.02	.02	.02	.02	.02
180.00	.02	.02	.01	.01	.01
185.00	.01	.01	.01	.01	.01
190.00	.01	.01	.01	.01	.01
195.00	.01	.01	.01	.01	.01
200.00	.01	.01	.01	.01	.01
205.00	.01	.01	.01	.01	.01
210.00	.01	.01	.01	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00		

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SOUTH BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
WET BASIN OUTFLW	WET BASIN IN		WET BASIN OUTFLW	025
SOUTH BASIN INFL	SOUTH BASIN INFL		025 YEAR	025

INFLOWS TO: SOUTH BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	WET BASIN OUTFLW	025	10350	30.00	4.03
	025 YEAR	025	78641	1.00	44.43

TOTAL FLOW INTO: SOUTH BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SOUTH BASIN IN	025	90324	30.00	48.46

TOTAL NODE INFLOW...
HYG file =
HYG ID = SOUTH BASIN IN
HYG Tag = 025

Peak Discharge =	48.46 cfs
Time to Peak =	30.00 min
HYG Volume =	90324 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	44.53	44.73	44.92	45.11
5.00	45.29	45.46	45.63	45.79	45.94
10.00	46.09	46.24	46.38	46.51	46.64
15.00	46.77	46.89	47.01	47.12	47.23
20.00	47.33	47.44	47.53	47.63	47.72
25.00	47.81	47.94	48.08	48.22	48.34
30.00	48.46	3.78	3.55	3.37	3.25
35.00	3.14	3.03	2.93	2.82	2.73
40.00	2.63	2.54	2.45	2.37	2.29
45.00	2.21	2.13	2.06	1.99	1.92
50.00	1.85	1.79	1.73	1.67	1.61
55.00	1.55	1.50	1.45	1.40	1.35
60.00	1.30	1.26	1.21	1.17	1.13
65.00	1.09	1.05	1.02	.98	.95
70.00	.92	.88	.85	.82	.80
75.00	.77	.74	.72	.69	.67
80.00	.64	.62	.60	.58	.56
85.00	.54	.52	.50	.49	.47
90.00	.45	.44	.42	.41	.39
95.00	.38	.37	.35	.34	.33
100.00	.32	.31	.30	.29	.28
105.00	.27	.26	.25	.24	.23
110.00	.22	.22	.21	.20	.19
115.00	.19	.18	.18	.17	.16
120.00	.16	.15	.15	.14	.14
125.00	.13	.13	.12	.12	.11
130.00	.11	.11	.10	.10	.10
135.00	.09	.09	.09	.08	.08
140.00	.08	.08	.07	.07	.07
145.00	.07	.06	.06	.06	.06
150.00	.05	.05	.05	.05	.05
155.00	.05	.04	.04	.04	.04
160.00	.04	.04	.04	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.03	.03	.03	.03	.03
170.00	.03	.03	.03	.02	.02
175.00	.02	.02	.02	.02	.02
180.00	.02	.02	.02	.02	.02
185.00	.02	.02	.01	.01	.01
190.00	.01	.01	.01	.01	.01
195.00	.01	.01	.01	.01	.01
200.00	.01	.01	.01	.01	.01
205.00	.01	.01	.01	.01	.01
210.00	.01	.01	.01	.01	.01
215.00	.01	.01	.01	.01	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SOUTH BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
WET BASIN OUTFLW	WET BASIN IN		WET BASIN OUTFLW	100
SOUTH BASIN INFL	SOUTH BASIN INFL		100 YEAR	100

INFLOWS TO: SOUTH BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	WET BASIN OUTFLW	100	13235	30.00	5.59
	100 YEAR	100	100678	1.00	56.88

TOTAL FLOW INTO: SOUTH BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SOUTH BASIN IN	100	115619	30.00	62.47

TOTAL NODE INFLOW...
HYG file =
HYG ID = SOUTH BASIN IN
HYG Tag = 100

Peak Discharge =	62.47 cfs
Time to Peak =	30.00 min
HYG Volume =	115619 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	57.01	57.26	57.51	57.75
5.00	57.97	58.20	58.41	58.61	58.81
10.00	59.01	59.19	59.37	59.54	59.71
15.00	59.87	60.02	60.17	60.34	60.59
20.00	60.82	61.03	61.24	61.43	61.60
25.00	61.77	61.93	62.08	62.22	62.35
30.00	62.47	5.25	4.93	4.63	4.35
35.00	4.08	3.84	3.60	3.39	3.28
40.00	3.16	3.05	2.95	2.85	2.75
45.00	2.65	2.56	2.47	2.39	2.30
50.00	2.22	2.15	2.07	2.00	1.93
55.00	1.87	1.80	1.74	1.68	1.62
60.00	1.56	1.51	1.46	1.41	1.36
65.00	1.31	1.27	1.22	1.18	1.14
70.00	1.10	1.06	1.03	.99	.96
75.00	.92	.89	.86	.83	.80
80.00	.77	.75	.72	.70	.67
85.00	.65	.63	.60	.58	.56
90.00	.54	.53	.51	.49	.47
95.00	.46	.44	.43	.41	.40
100.00	.38	.37	.36	.34	.33
105.00	.32	.31	.30	.29	.28
110.00	.27	.26	.25	.24	.23
115.00	.23	.22	.21	.20	.20
120.00	.19	.18	.18	.17	.16
125.00	.16	.15	.15	.14	.14
130.00	.13	.13	.12	.12	.12
135.00	.11	.11	.10	.10	.10
140.00	.09	.09	.09	.08	.08
145.00	.08	.08	.07	.07	.07
150.00	.07	.06	.06	.06	.06
155.00	.06	.05	.05	.05	.05
160.00	.05	.04	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.04	.04	.04	.03	.03
170.00	.03	.03	.03	.03	.03
175.00	.03	.03	.03	.02	.02
180.00	.02	.02	.02	.02	.02
185.00	.02	.02	.02	.02	.02
190.00	.02	.02	.02	.01	.01
195.00	.01	.01	.01	.01	.01
200.00	.01	.01	.01	.01	.01
205.00	.01	.01	.01	.01	.01
210.00	.01	.01	.01	.01	.01
215.00	.01	.01	.01	.01	.01
220.00	.01	.01	.01	.01	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SOUTH BASIN IN 002
Outflow HYG file = NONE STORED - SOUTH BASIN OUT 002

Pond Node Data = SOUTH BASIN
Pond Volume Data = SOUTH BASIN-SED
Pond Outlet Data = SOUTH BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	540.50 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	25.41 cfs	at	30.00 min
Peak Outflow	=	22.33 cfs	at	30.00 min
Peak Elevation	=	542.87 ft		
Peak Storage	=	12550 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	47500
- Infiltration	=	0
- HYG Vol OUT	=	47500
- Retained Vol	=	0
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SOUTH BASIN IN 015
Outflow HYG file = NONE STORED - SOUTH BASIN OUT 015

Pond Node Data = SOUTH BASIN
Pond Volume Data = SOUTH BASIN-SED
Pond Outlet Data = SOUTH BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	540.50 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	39.07 cfs	at	30.00 min
Peak Outflow	=	33.68 cfs	at	30.00 min
Peak Elevation	=	543.63 ft		
Peak Storage	=	23372 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	73203
- Infiltration	=	0
- HYG Vol OUT	=	73203
- Retained Vol	=	0
Unrouted Vol	= -	cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SOUTH BASIN IN 025
Outflow HYG file = NONE STORED - SOUTH BASIN OUT 025

Pond Node Data = SOUTH BASIN
Pond Volume Data = SOUTH BASIN-SED
Pond Outlet Data = SOUTH BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	540.50 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	48.46 cfs	at	30.00 min
Peak Outflow	=	41.38 cfs	at	30.00 min
Peak Elevation	=	544.09 ft		
Peak Storage	=	30572 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	90324
- Infiltration	=	0
- HYG Vol OUT	=	90324
- Retained Vol	=	0
Unrouted Vol	=	0 cu.ft (.000% of Outflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SOUTH BASIN IN 100
Outflow HYG file = NONE STORED - SOUTH BASIN OUT 100

Pond Node Data = SOUTH BASIN
Pond Volume Data = SOUTH BASIN-SED
Pond Outlet Data = SOUTH BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	540.50 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	62.47 cfs	at	30.00 min
Peak Outflow	=	58.48 cfs	at	30.00 min
Peak Elevation	=	544.58 ft		
Peak Storage	=	38726 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	115619
- Infiltration	=	0
- HYG Vol OUT	=	115619
- Retained Vol	=	0
Unrouted Vol	= -	cu.ft (.000% of Inflow Volume)

Type.... Pond E-V-Q Table
Name.... SW BASIN
File.... G:\00XXX\00228-10\DETEN\PROPOSED2.PPW

LEVEL POOL ROUTING DATA

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SW BASIN IN 002
Outflow HYG file = NONE STORED - SW BASIN OUT 002

Pond Node Data = SW BASIN
Pond Volume Data = SW BASIN-SED
Pond Outlet Data = SW BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	546.25 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
546.25	.00	0	0	.00	.00	.00
546.75	.31	0	0	.00	.31	.31
547.25	.97	28	526	.00	.97	1.90
547.75	1.78	2021	9229	.00	1.78	69.14
548.25	2.74	9779	18099	.00	2.74	328.69
548.75	3.83	19087	19139	.00	3.83	640.06
548.90	4.18	21982	19457	.00	4.18	736.92
549.25	10.12	28923	20209	.00	10.12	974.21
549.75	28.36	39300	21307	.00	28.36	1338.37
550.25	52.02	50233	22420	.00	52.02	1726.44
550.75	80.26	61724	23548	.00	80.26	2137.72
551.25	112.50	73785	24703	.00	112.50	2572.01
551.75	148.28	86432	25886	.00	148.28	3029.33
552.25	187.28	99670	27049	.00	187.28	3509.61
552.75	229.24	113479	28189	.00	229.24	4011.86
553.25	273.98	127863	29352	.00	273.98	4536.07
553.75	321.33	142835	30539	.00	321.33	5082.48
554.00	345.94	150545	31141	.00	345.94	5364.08

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SW BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
SW BASIN INFLOW	SW BASIN INFLOW		002 YEAR	002

INFLOWS TO: SW BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	002 YEAR	002	9855	1.00	10.95

TOTAL FLOW INTO: SW BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SW BASIN IN	002	9855	1.00	10.95

TOTAL NODE INFLOW...
HYG file =
HYG ID = SW BASIN IN
HYG Tag = 002

Peak Discharge =	10.95 cfs
Time to Peak =	1.00 min
HYG Volume =	9855 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	10.95	10.95	10.95	10.95
5.00	10.95	10.95	10.95	10.95	10.95
10.00	10.95	10.95	10.95	10.95	10.95
15.00	10.95	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SW BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
SW BASIN INFLOW	SW BASIN INFLOW		015 YEAR	015

INFLOWS TO: SW BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	015 YEAR	015	16029	1.00	17.81

TOTAL FLOW INTO: SW BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SW BASIN IN	015	16029	1.00	17.81

TOTAL NODE INFLOW...
HYG file =
HYG ID = SW BASIN IN
HYG Tag = 015

Peak Discharge =	17.81 cfs
Time to Peak =	1.00 min
HYG Volume =	16029 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	17.81	17.81	17.81	17.81
5.00	17.81	17.81	17.81	17.81	17.81
10.00	17.81	17.81	17.81	17.81	17.81
15.00	17.81	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SW BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
SW BASIN INFLOW	SW BASIN INFLOW		025 YEAR	025

INFLOWS TO: SW BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	025 YEAR	025	19782	1.00	21.98

TOTAL FLOW INTO: SW BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SW BASIN IN	025	19782	1.00	21.98

TOTAL NODE INFLOW...
HYG file =
HYG ID = SW BASIN IN
HYG Tag = 025

Peak Discharge =	21.98 cfs
Time to Peak =	1.00 min
HYG Volume =	19782 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	21.98	21.98	21.98	21.98
5.00	21.98	21.98	21.98	21.98	21.98
10.00	21.98	21.98	21.98	21.98	21.98
15.00	21.98	.00			

SUMMARY FOR HYDROGRAPH ADDITION
at Node: SW BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
SW BASIN INFLOW	SW BASIN INFLOW		100 YEAR	100

INFLOWS TO: SW BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	100 YEAR	100	25326	1.00	28.14

TOTAL FLOW INTO: SW BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	SW BASIN IN	100	25326	1.00	28.14

TOTAL NODE INFLOW...
HYG file =
HYG ID = SW BASIN IN
HYG Tag = 100

Peak Discharge =	28.14 cfs
Time to Peak =	1.00 min
HYG Volume =	25326 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	28.14	28.14	28.14	28.14
5.00	28.14	28.14	28.14	28.14	28.14
10.00	28.14	28.14	28.14	28.14	28.14
15.00	28.14	.00			

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SW BASIN IN 002
Outflow HYG file = NONE STORED - SW BASIN OUT 002

Pond Node Data = SW BASIN
Pond Volume Data = SW BASIN-SED
Pond Outlet Data = SW BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	546.25 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	10.95 cfs	at	1.00 min
Peak Outflow	=	2.52 cfs	at	16.00 min
Peak Elevation	=	548.14 ft		
Peak Storage	=	7716 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	9855
- Infiltration	=	0
- HYG Vol OUT	=	9855
- Retained Vol	=	0
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SW BASIN IN 015
Outflow HYG file = NONE STORED - SW BASIN OUT 015

Pond Node Data = SW BASIN
Pond Volume Data = SW BASIN-SED
Pond Outlet Data = SW BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	546.25 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	17.81 cfs	at	1.00 min
Peak Outflow	=	3.21 cfs	at	16.00 min
Peak Elevation	=	548.47 ft		
Peak Storage	=	13739 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	16029
- Infiltration	=	0
- HYG Vol OUT	=	16029
- Retained Vol	=	0
Unrouted Vol	= -	cu.ft (.000% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SW BASIN IN 025
Outflow HYG file = NONE STORED - SW BASIN OUT 025

Pond Node Data = SW BASIN
Pond Volume Data = SW BASIN-SED
Pond Outlet Data = SW BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	546.25 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	21.98 cfs	at	1.00 min
Peak Outflow	=	3.63 cfs	at	16.00 min
Peak Elevation	=	548.66 ft		
Peak Storage	=	17302 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	19782
- Infiltration	=	0
- HYG Vol OUT	=	19782
- Retained Vol	=	0
Unrouted Vol	=	0 cu.ft (.000% of Outflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - SW BASIN IN 100
Outflow HYG file = NONE STORED - SW BASIN OUT 100

Pond Node Data = SW BASIN
Pond Volume Data = SW BASIN-SED
Pond Outlet Data = SW BASIN OUT

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	546.25 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	28.14 cfs	at	1.00 min
Peak Outflow	=	4.68 cfs	at	16.00 min
Peak Elevation	=	548.93 ft		
Peak Storage	=	22552 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	25326
- Infiltration	=	0
- HYG Vol OUT	=	25326
- Retained Vol	=	0
Unrouted Vol	=	0 cu.ft (.000% of Outflow Volume)

LEVEL POOL ROUTING DATA

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - WET BASIN IN 002
Outflow HYG file = NONE STORED - WET BASIN OUT 002

Pond Node Data = WET BASIN
Pond Volume Data = WET BASIN
Pond Outlet Data = WET BASIN OUTFLW

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	555.50 ft
Starting Volume	=	132740 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
544.00	.00	0	2212	.00	.00	.00
544.25	.00	591	2520	.00	.00	19.70
544.50	.00	1262	2848	.00	.00	42.06
544.75	.00	2017	3197	.00	.00	67.23
545.00	.00	2862	3565	.00	.00	95.39
545.25	.00	3801	3953	.00	.00	126.70
545.50	.00	4840	4362	.00	.00	161.33
545.75	.00	5984	4790	.00	.00	199.45
546.00	.00	7237	5239	.00	.00	241.23
546.25	.00	8588	5571	.00	.00	286.26
546.50	.00	10023	5913	.00	.00	334.10
546.75	.00	11545	6265	.00	.00	384.84
547.00	.00	13157	6628	.00	.00	438.56
547.25	.00	14860	7001	.00	.00	495.33
547.50	.00	16658	7384	.00	.00	555.26
547.75	.00	18553	7777	.00	.00	618.42
548.00	.00	20547	8180	.00	.00	684.90
548.25	.00	22637	8545	.00	.00	754.58
548.50	.00	24820	8917	.00	.00	827.33
548.75	.00	27097	9298	.00	.00	903.22
549.00	.00	29470	9686	.00	.00	982.32
549.25	.00	31941	10083	.00	.00	1064.69
549.50	.00	34512	10487	.00	.00	1150.39

LEVEL POOL ROUTING DATA

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - WET BASIN IN 002
Outflow HYG file = NONE STORED - WET BASIN OUT 002

Pond Node Data = WET BASIN
Pond Volume Data = WET BASIN
Pond Outlet Data = WET BASIN OUTFLW

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	555.50 ft
Starting Volume	=	132740 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
549.75	.00	37185	10900	.00	.00	1239.50
550.00	.00	39962	11320	.00	.00	1332.07
550.25	.00	42849	11776	.00	.00	1428.30
550.50	.00	45851	12241	.00	.00	1528.37
550.75	.00	48971	12716	.00	.00	1632.35
551.00	.00	52210	13199	.00	.00	1740.32
551.25	.00	55571	13691	.00	.00	1852.35
551.50	.00	59056	14192	.00	.00	1968.53
551.75	.00	62668	14703	.00	.00	2088.92
552.00	.00	66408	15222	.00	.00	2213.60
552.25	.00	70276	15722	.00	.00	2342.53
552.50	.00	74270	16230	.00	.00	2475.66
552.75	.00	78392	16747	.00	.00	2613.06
553.00	.00	82644	17271	.00	.00	2754.79
553.25	.00	87028	17804	.00	.00	2900.93
553.50	.00	91547	18344	.00	.00	3051.55
553.75	.00	96201	18893	.00	.00	3206.70
554.00	.00	100994	19450	.00	.00	3366.46
554.25	.00	105926	20009	.00	.00	3530.86
554.50	.00	110999	20577	.00	.00	3699.97
554.75	.00	116215	21152	.00	.00	3873.83
555.00	.00	121576	21735	.00	.00	4052.52
555.25	.00	127083	22326	.00	.00	4236.10

LEVEL POOL ROUTING DATA

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - WET BASIN IN 002
Outflow HYG file = NONE STORED - WET BASIN OUT 002

Pond Node Data = WET BASIN
Pond Volume Data = WET BASIN
Pond Outlet Data = WET BASIN OUTFLW

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 555.50 ft
Starting Volume = 132740 cu.ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = 1.00 min

Elevation ft	Outflow cfs	Storage cu.ft	Area sq.ft	Infilt. cfs	Q Total cfs	2S/t + O cfs
555.50	.00	132740	22925	.00	.00	4424.64
555.75	3.41	138547	23532	.00	3.41	4621.62
556.00	9.63	144506	24147	.00	9.63	4826.50
556.25	17.70	150618	24748	.00	17.70	5038.29
556.50	24.84	156881	25356	.00	24.84	5254.19
556.75	27.77	163297	25972	.00	27.77	5470.98
557.00	30.42	169867	26595	.00	30.42	5692.65

SUMMARY FOR HYDROGRAPH ADDITION
at Node: WET BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
WET BASIN INFLOW	WET BASIN INFLOW		002 YEAR	002

INFLOWS TO: WET BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	002 YEAR	002	5151	1.00	2.91

TOTAL FLOW INTO: WET BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	WET BASIN IN	002	5151	1.00	2.91

TOTAL NODE INFLOW...
HYG file =
HYG ID = WET BASIN IN
HYG Tag = 002

Peak Discharge =	2.91 cfs
Time to Peak =	1.00 min
HYG Volume =	5151 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	2.91	2.91	2.91	2.91
5.00	2.91	2.91	2.91	2.91	2.91
10.00	2.91	2.91	2.91	2.91	2.91
15.00	2.91	2.91	2.91	2.91	2.91
20.00	2.91	2.91	2.91	2.91	2.91
25.00	2.91	2.91	2.91	2.91	2.91
30.00	2.91				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: WET BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
WET BASIN INFLOW	WET BASIN INFLOW		015 YEAR	015

INFLOWS TO: WET BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	015 YEAR	015	8390	1.00	4.74

TOTAL FLOW INTO: WET BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	WET BASIN IN	015	8390	1.00	4.74

TOTAL NODE INFLOW...
HYG file =
HYG ID = WET BASIN IN
HYG Tag = 015

Peak Discharge =	4.74 cfs
Time to Peak =	1.00 min
HYG Volume =	8390 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	4.74	4.74	4.74	4.74
5.00	4.74	4.74	4.74	4.74	4.74
10.00	4.74	4.74	4.74	4.74	4.74
15.00	4.74	4.74	4.74	4.74	4.74
20.00	4.74	4.74	4.74	4.74	4.74
25.00	4.74	4.74	4.74	4.74	4.74
30.00	4.74				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: WET BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
WET BASIN INFLOW	WET BASIN INFLOW		025 YEAR	025

INFLOWS TO: WET BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	025 YEAR	025	10355	1.00	5.85

TOTAL FLOW INTO: WET BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	WET BASIN IN	025	10355	1.00	5.85

TOTAL NODE INFLOW...
HYG file =
HYG ID = WET BASIN IN
HYG Tag = 025

Peak Discharge =	5.85 cfs
Time to Peak =	1.00 min
HYG Volume =	10355 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	5.85	5.85	5.85	5.85
5.00	5.85	5.85	5.85	5.85	5.85
10.00	5.85	5.85	5.85	5.85	5.85
15.00	5.85	5.85	5.85	5.85	5.85
20.00	5.85	5.85	5.85	5.85	5.85
25.00	5.85	5.85	5.85	5.85	5.85
30.00	5.85				

SUMMARY FOR HYDROGRAPH ADDITION
at Node: WET BASIN IN

HYG Directory: G:\00XXX\00228-10\DETEN\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
WET BASIN INFLOW	WET BASIN INFLOW		100 YEAR	100

INFLOWS TO: WET BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	100 YEAR	100	13240	1.00	7.48

TOTAL FLOW INTO: WET BASIN IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	WET BASIN IN	100	13240	1.00	7.48

TOTAL NODE INFLOW...
HYG file =
HYG ID = WET BASIN IN
HYG Tag = 100

Peak Discharge =	7.48 cfs
Time to Peak =	1.00 min
HYG Volume =	13240 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	7.48	7.48	7.48	7.48
5.00	7.48	7.48	7.48	7.48	7.48
10.00	7.48	7.48	7.48	7.48	7.48
15.00	7.48	7.48	7.48	7.48	7.48
20.00	7.48	7.48	7.48	7.48	7.48
25.00	7.48	7.48	7.48	7.48	7.48
30.00	7.48				

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - WET BASIN IN 002
Outflow HYG file = NONE STORED - WET BASIN OUT 002

Pond Node Data = WET BASIN
Pond Volume Data = WET BASIN
Pond Outlet Data = WET BASIN OUTFLW

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	555.50 ft
Starting Volume	=	132740 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	2.91 cfs	at	1.00 min
Peak Outflow	=	1.88 cfs	at	30.00 min
Peak Elevation	=	555.64 ft		
Peak Storage	=	135925 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	132740
+ HYG Vol IN	=	5151
- Infiltration	=	0
- HYG Vol OUT	=	5146
- Retained Vol	=	132745
Unrouted Vol	=	0 cu.ft (.009% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - WET BASIN IN 015
Outflow HYG file = NONE STORED - WET BASIN OUT 015

Pond Node Data = WET BASIN
Pond Volume Data = WET BASIN
Pond Outlet Data = WET BASIN OUTFLW

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	555.50 ft
Starting Volume	=	132740 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	4.74 cfs	at	1.00 min
Peak Outflow	=	3.06 cfs	at	30.00 min
Peak Elevation	=	555.72 ft		
Peak Storage	=	137953 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	132740
+ HYG Vol IN	=	8390
- Infiltration	=	0
- HYG Vol OUT	=	8385
- Retained Vol	=	132745
Unrouted Vol	=	0 cu.ft (.006% of Inflow Volume)

Type.... Pond Routing Summary
Name.... WET BASIN OUT Tag: 025
File.... G:\00XXX\00228-10\DETEN\PROPOSED2.PPW
Storm... 025 Tag: 025

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - WET BASIN IN 025
Outflow HYG file = NONE STORED - WET BASIN OUT 025

Pond Node Data = WET BASIN
Pond Volume Data = WET BASIN
Pond Outlet Data = WET BASIN OUTFLW

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	555.50 ft
Starting Volume	=	132740 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	5.85 cfs	at	1.00 min
Peak Outflow	=	4.03 cfs	at	30.00 min
Peak Elevation	=	555.78 ft		
Peak Storage	=	139136 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	132740
+ HYG Vol IN	=	10355
- Infiltration	=	0
- HYG Vol OUT	=	10350
- Retained Vol	=	132745
Unrouted Vol	=	1 cu.ft (.007% of Inflow Volume)

LEVEL POOL ROUTING SUMMARY

HYG Dir = G:\00XXX\00228-10\DETEN\
Inflow HYG file = NONE STORED - WET BASIN IN 100
Outflow HYG file = NONE STORED - WET BASIN OUT 100

Pond Node Data = WET BASIN
Pond Volume Data = WET BASIN
Pond Outlet Data = WET BASIN OUTFLW

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	555.50 ft
Starting Volume	=	132740 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	7.48 cfs	at	1.00 min
Peak Outflow	=	5.59 cfs	at	30.00 min
Peak Elevation	=	555.84 ft		
Peak Storage	=	140617 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	132740
+ HYG Vol IN	=	13240
- Infiltration	=	0
- HYG Vol OUT	=	13235
- Retained Vol	=	132745
Unrouted Vol	=	1 cu.ft (.004% of Inflow Volume)

Index of Starting Page Numbers for ID Names

EMERGENCY OVERFLOW STRUCTURE

LOW FLOW OUTLET BLOCKED

100 - Year Storm Calculation

THE CLAYTON ENGINEERING CO.

Project No. 00228.10 Project Name Delmar Gardens - O'Fallon

Computation for Delmar Gardens

By MJV Date 28Jan07 Checked _____ Date _____ Sheet _____ of _____

Low Flow Structures Assumed Blocked

South Basin

$Q = 58.41$ cfs

$C = 3.32$

$L = 8.5'$ or Weir (Standard MSD Area Inlet open 3 sides)

$$h = \left(\frac{Q}{CL}\right)^{2/3} = \left(\frac{58.41}{3.32(8.5)}\right)^{2/3} = 1.62 \text{ ft}$$

100-yr: sill + h + Freeboard = min. top of dam

544.14 + 1.62 + 1 = 546.76

proposed top of dam = 548± okay

Southwest Basin

$Q = 28.14$ cfs

$C = 3.32$

$L = 8.5$ ft

$$h = \left(\frac{28.14}{3.32(8.5)}\right)^{2/3} = 1.0 \text{ ft}$$

100yr: 548.9 + 1.0 + 1.0 = 550.9

Proposed Top of Dam = 554.0 okay