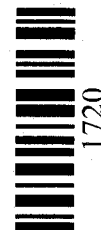


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Bound Reports

1720

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4-069-0276 AM

RECORDS
ORLANDO

Revised Drainage Calculations

GREATER PINES PHASES 2 & 3

SJRWMD Permit Modification

RAI Response

SJRWMD #4-069-0276AM

Submitted June 14, 1994

CPH Job No. G6765.04

Paul
6/14/94

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ENCLOSURES

- A. Pre-development Basin Map (Revised), Phases 2 and 3
- B. Offsite Drainage Basin Map (Revised), Phase 1
- C. Post-development Basin Map (Revised), Phases 2 and 3

ATTACHED SEPARATELY

Revised Final Engineering Plans, Sheets 1-15/15.

SECTION 1

June 14, 1994

Ms. Margie Cook, P.E.
St. Johns River Water Management District
618 E. South Street, Suite 200
Orlando, Florida 32801

Re: Greater Pines, Phases 2 and 3
St. Johns River Water Management District Application No. 4-069-0276AM
CPH Job No. G6765.04

Dear Ms. Cook:

In response to the Water Management District's request for additional information on the permit application, attached please find three sets of revised Engineering Plans, drainage plans, and calculations. These revised plans and calculations, together with the following specific responses address the questions of your request letter.

The following specific responses are provided:

- 1A. We have reviewed on the USGS topographic maps those areas north of Phase 2 and west of Phase 1 and concur that there may be some additional area tributary to the proposed drainage systems. We have revised our calculations and drainage mapping to include the additional area north of Phase 2 and west of Phase 1 (Basins D-off and 203, respectively for the pre- and post-development cases) that may contribute runoff to the project's site. We have revised both the pre-development and the post-development mapping and calculations to address this additional data.
- 1B. The hydrograph parameters used for Phase 1 in these calculations were taken from the exhibits and calculations submitted to the District for approval on Phase 1. Two of the Phase 1 basins shown were Basin 100 (which became Basin K of this submittal) and Basin 200 (which became Basin J in this submittal.) For these two, the areas and TC's were as shown on the Phase 1 post-development drainage map. The CN's were broken down into the % DCIA and the CN of the pervious and NDCIA for this submittal. Basin 300 of the Phase 1 submittal was further broken down into Basins A, H, and I, for this submittal. The hydrograph generating data used appears consistent with the Phase 1 submittals.
- 1C. We have reviewed the topographic survey and the USGS topo off-site regarding pre-development Basin B depressional storage. Please be advised that the specific site topography was calculated out to the east edge of Hancock Road and not beyond. The methods of preparing the topography (the shooting of spot elevation shots input in to a computer digital terrain modeling program and generation of a site topo), resulted in showing - erroneously - that the contours immediately east of Hancock Road at that location, in fact, close. Please review the USGS topography supplied and you will see that this basin continues to fall to the east, and that there is not a closed depression of any magnitude at that location. Thus, we feel that the volumes used for Basin B, in our pre-development calculations, and the overflow elevation for Basin B at 161 - being the low place in the road - appear reasonable. We have revised both the pre-development and post-development topography to delete that portion of the topo which is erroneous.

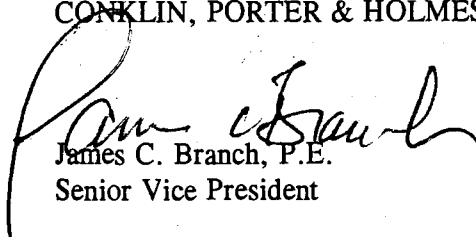
Ms. Margie Cook, P.E.
June 14, 1994
Page 2

- 1D. The post-development impervious areas were calculated using house areas, driveway areas, sidewalk areas, etc. A portion of the house, the entire driveway and sidewalk, as well as the total of the roadway, was used as impervious directly-connected area. The remainder of the house, roof, does not flow to the road, but instead onto pervious area. This remainder was used to calculate a weighted NDCIA curve number. A sketch showing how the DCIA, NDCIA, pervious areas, and curve numbers were determined is attached.
- 1E. Post-development Basin 106 was inadvertently left out of the analysis; the revised calculations attached include Basin 106.
- 1F. We have revised the retention ponds within the site to include deepening and widening Pond No. 2. The revised plans and stage storage calculations reflect this revised volume.
2. Modret calculations, indicating that the ponds will recover their storage capacity within 14 days, as well as percolate the revised pollution abatement volumes, are attached. Also attached is a copy of soils borings information used for determination of the Modret parameters.
- 3A. We have revised the Engineering Plans and calculations to show a temporary pond (Pond 4) to be constructed, to capture the runoff from Basins 314 and 315. Revised plans and calculations are attached.
- 3B. Please note that the limits of Phase 2 have been appreciably changed on this set of revised plans. There are two very small areas which would flow out of Phase 2 into a future Phase 3 area. This runoff will flow downhill through Phase 3 area into Pond 2.
4. Attached is a copy of the preliminary plat submitted to, and approved by, Lake County for the overall Greater Pines development. We have added an easement on the Engineering Plans for the collection system between Lots 30 and 31.
5. It is proposed that the operation entity will be Lake County and a specific Letter of Acceptance of the drainage system from Lake County will be provided prior to the operations portion of the permit.

Please review the attached information and if you have any other questions, please call.

Sincerely,

CONKLIN, PORTER & HOLMES-ENGINEERS, INC.



James C. Branch, P.E.
Senior Vice President

Enclosures

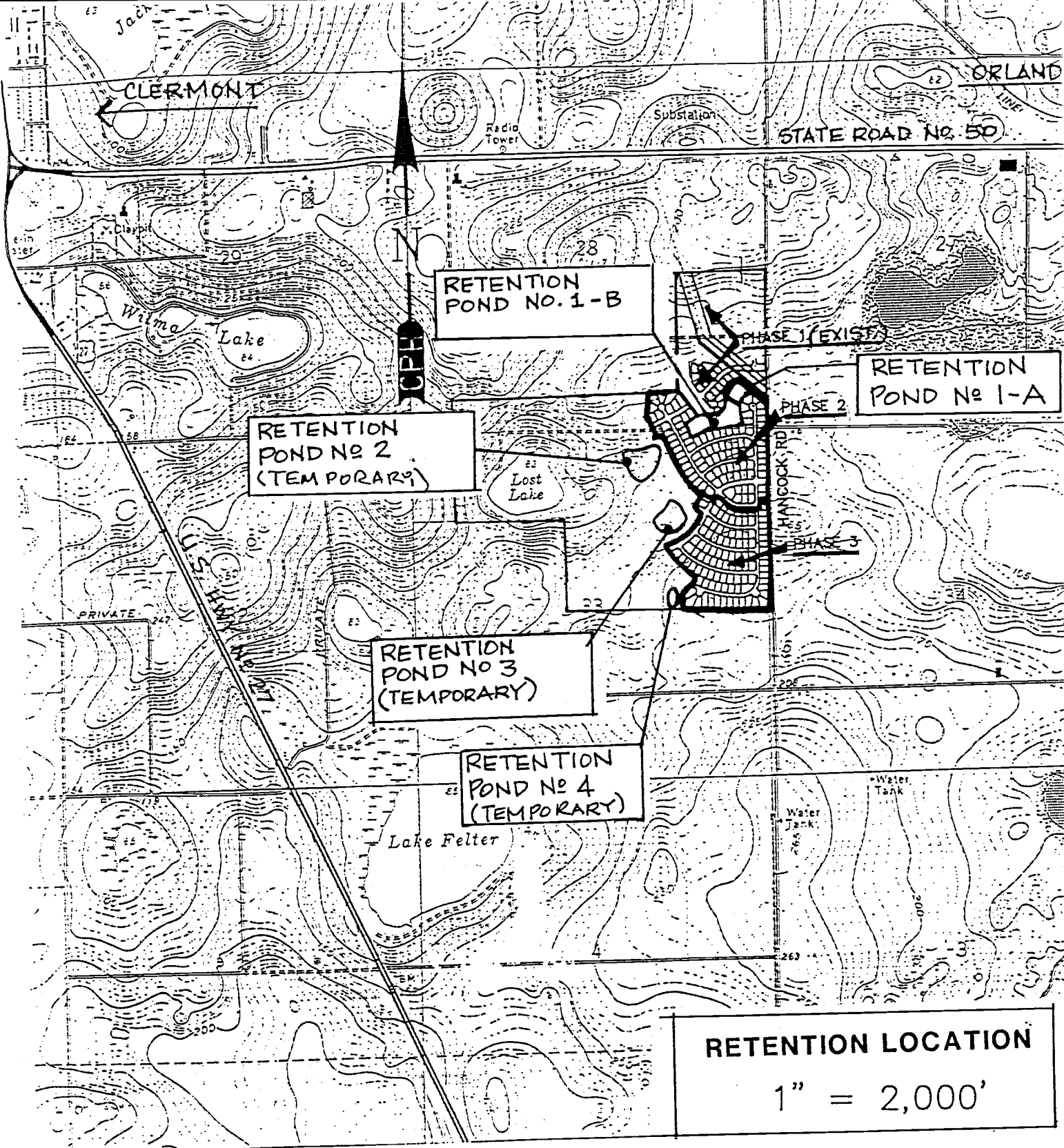
SECTION 2

TABLE 1.1

**REVISED SUMMARY OF RESULTS
JUNE 14, 1994**

**GREATER PINES PHASES 2 & 3
CPH Job No. G6765.04**

ITEM	PRE-DEVELOPED CONDITION	POST-DEVELOPED CONDITION
I) 25-Year Frequency/24-Hour Duration Event		
A) Runoff rate offsite to the East (OFFEAST)	18.8 CFS	0.0 CFS
B) Runoff rate offsite to the West (OFFWEST)	68.0 CFS	2.2 CFS
II) 25-Year Frequency/96-Hour Duration Event		
A) Runoff volume offsite to the East (OFFEAST)	8.1 ACFT	0.0 ACFT
B) Runoff volume offsite to the West (OFFWEST)	32.5 ACFT	24.1 ACFT



RETENTION LOCATION
 1" = 2,000'

ROAD CLASSIFICATION

Heavy-duty	—————	Light-duty	—————
Medium-duty	—————	Unimproved dirt
U. S. Route	□	State Route	○



CLERMONT EAST, FLA.
 N2930—W8137.5/7.5

1962
 PHOTOREVISED 1980
 DMA 4641 II SW—SERIES V847

SECTION 3

TIME OF CONCENTRATION
PRE-DEVELOPED CONDITION

G6765.04

12/23/1993 - REVISED 6/9/1994

BASIN No.	PATH L (ft)	FIRST 300' OF PATH						REMAINING PATH				TIME Tt (min)
		L1-G (ft)	S1-G (ft/ft)	T1-G (min)	L1-C (ft)	S1-C (ft/ft)	T1-C (min)	L2-G (ft)	T2-G (min)	L2-C (ft)	T2-C (min)	
A	1250.0	300.0	0.012	23.9	0.0	0.000	0.0	950.0	31.7	0.0	0.0	55.6
B	1475.0	300.0	0.014	22.1	0.0	0.000	0.0	1175.0	39.2	0.0	0.0	61.2
C	1020.0	300.0	0.029	16.6	0.0	0.000	0.0	720.0	24.0	0.0	0.0	40.6
D - ON	1775.0	300.0	0.028	16.9	0.0	0.000	0.0	1475.0	49.2	0.0	0.0	66.0
D - OFF	1750.0	300.0	0.030	16.4	0.0	0.000	0.0	1450.0	48.3	0.0	0.0	64.7
E	1600.0	0.0	0.000	0.0	300.0	0.014	2.8	0.0	0.0	1300.0	10.8	13.6
F	1225.0	0.0	0.000	0.0	300.0	0.011	3.0	0.0	0.0	925.0	7.7	10.7
G	600.0	300.0	0.011	24.5	0.0	0.000	0.0	300.0	10.0	0.0	0.0	34.5
H	1150.0	150.0	0.026	10.0	150.0	0.041	1.0	0.0	0.0	850.0	7.1	18.1
I	2500.0	0.0	0.000	0.0	300.0	0.050	1.7	1000.0	33.3	1200.0	10.0	45.0
J	600.0	300.0	0.022	18.6	0.0	0.000	0.0	150.0	5.0	150.0	1.3	24.8
K	1350.0	300.0	0.017	20.7	0.0	0.000	0.0	1050.0	35.0	0.0	0.0	55.7

NOTES:

- a) L1-G, S1-G & T1-G ARE LENGTH, SLOPE AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER GRASS IN 1ST 300 FT, USING SHEET FLOW FORMULAE FROM SCS TR55.
- b) L1-C, S1-C & T1-C ARE LENGTH, SLOPE AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER PAVED IN 1ST 300 FT, USING SHEET FLOW FORMULAE FROM SCS TR55.
- c) L2-G & T2-G ARE LENGTH AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER GRASS IN REMAINING PATH LENGTH @ 30 FPM.
- d) L2-C & T2-C ARE LENGTH AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER PAVED IN REMAINING PATH LENGTH @ 120 FPM.
- e) TRAVEL TIME (Tt) IS THE SUM OF TIME FOR FIRST 300 FT PLUS TIME FOR REMAINING PATH OR 10 MINUTE MINIMUM PER FDOT.

$$T1-C \& G = \{0.007(nL)^{0.8} / \{(P)^{0.5}(s)^{0.4}\}$$

Where:

- T = Time (hrs)
- L = Length (ft)
- s = slope (ft/ft)
- P = 2yr - 24hr Rainfall (in)
- n = Manning's roughness coefficient

Assumptions:

- n = 0.011 for concrete
- n = 0.15 for grass
- P = 4.8 in.

TIME OF CONCENTRATION

G6765.04

POST-DEVELOPED CONDITION

12/19/1993 - REVISED 6/9/1994

PAGE 1

BASIN No	PATH L (ft)	FIRST 300' OF PATH						REMAINING PATH				TIME Tt (min)
		L1-G (ft)	S1-G (ft/ft)	T1-G (min)	L1-C (ft)	S1-C (ft/ft)	T1-C (min)	L2-G (ft)	T2-G (min)	L2-C (ft)	T2-C (min)	
100A	100	100	0.050	5.6	0	0.000	0.0	0	0.0	0	0.0	10.0
100B	115	115	0.052	6.1	0	0.000	0.0	0	0.0	0	0.0	10.0
101A	420	300	0.013	22.9	0	0.000	0.0	120	4.0	0	0.0	26.9
101B	140	140	0.013	12.5	0	0.000	0.0	0	0.0	0	0.0	12.5
102	100	20	0.005	3.8	80	0.008	1.2	0	0.0	0	0.0	10.0
103	360	250	0.024	15.5	50	0.008	0.8	0	0.0	60	0.5	16.8
104	680	250	0.020	16.7	50	0.005	1.0	0	0.0	380	3.2	20.8
105	110	50	0.006	7.4	60	0.005	1.1	0	0.0	0	0.0	10.0
106	550	65	0.007	8.6	235	0.014	2.3	0	0.0	250	2.1	13.0
107	595	70	0.005	10.5	230	0.013	2.3	0	0.0	295	2.5	15.2
108	275	140	0.007	16.0	135	0.013	1.5	0	0.0	0	0.0	17.5
109	690	70	0.010	7.9	230	0.011	2.5	0	0.0	390	3.3	13.6
110	360	225	0.025	14.0	75	0.011	1.0	0	0.0	60	0.5	15.5
111	680	125	0.020	9.6	175	0.026	1.4	0	0.0	380	3.2	14.1
112	610	90	0.012	9.0	210	0.018	1.9	0	0.0	310	2.6	13.5
113	360	180	0.023	12.1	110	0.033	0.9	0	0.0	70	0.6	13.6
114	575	155	0.021	11.2	145	0.018	1.4	0	0.0	275	2.3	14.8
115	555	155	0.025	10.4	145	0.033	1.1	0	0.0	255	2.1	13.6
116	630	175	0.008	18.1	125	0.013	1.4	0	0.0	330	2.8	22.2
117	445	75	0.007	9.7	225	0.022	1.8	0	0.0	145	1.2	12.7
118	620	130	0.007	15.0	170	0.025	1.4	0	0.0	320	2.7	19.1
119	460	150	0.026	10.0	150	0.025	1.3	0	0.0	160	1.3	12.6
120	1500	80	0.005	11.7	220	0.022	1.8	0	0.0	1200	10.0	23.5
121	470	120	0.005	16.1	180	0.020	1.6	0	0.0	170	1.4	19.1
122	325	75	0.013	7.6	225	0.042	1.4	0	0.0	25	0.2	10.0
123	310	190	0.010	17.7	110	0.079	0.6	0	0.0	10	0.1	18.4
124	560	150	0.020	11.1	150	0.014	1.6	0	0.0	260	2.2	14.8
125	500	155	0.025	10.4	145	0.040	1.0	0	0.0	200	1.7	13.1
126	580	140	0.005	18.3	160	0.021	1.4	0	0.0	280	2.3	22.0
127	860	150	0.026	10.0	150	0.014	1.6	0	0.0	560	4.7	16.2
128	80	80	0.030	5.7	0	0.000	0.0	0	0.0	0	0.0	10.0
129	1220	300	0.010	25.5	0	0.000	0.0	0	0.0	920	7.7	33.1
130	620	150	0.030	9.4	150	0.005	2.4	0	0.0	320	2.7	14.5
131	770	155	0.006	18.4	145	0.005	2.3	0	0.0	470	3.9	24.7
132	450	140	0.006	17.0	160	0.008	2.1	0	0.0	150	1.3	20.3
133	500	160	0.010	15.4	140	0.008	1.9	0	0.0	200	1.7	18.9
134	700	140	0.005	18.3	160	0.005	2.5	0	0.0	400	3.3	24.1
135	680	40	0.005	6.7	260	0.005	3.7	0	0.0	380	3.2	13.6

TABLE 4.2
6/9/94

TIME OF CONCENTRATION

POST-DEVELOPED CONDITION

G6765.04

12/19/1993 - REVISED 6/9/1994

BASIN No	PATH L (ft)	FIRST 300' OF PATH						REMAINING PATH				TIME Tt (min)
		L1-G (ft)	S1-G (ft/ft)	T1-G (min)	L1-C (ft)	S1-C (ft/ft)	T1-C (min)	L2-G (ft)	T2-G (min)	L2-C (ft)	T2-C (min)	
200	220	220	0.113	7.5	0	0.000	0.0	0	0.0	0	0.0	10.0
201	90	90	0.020	7.4	0	0.000	0.0	0	0.0	0	0.0	10.0
202	460	300	0.020	19.3	0	0.000	0.0	0	0.0	160	1.3	20.6
203	1750	300	0.030	16.4	0	0.000	0.0	1450	48.3	0	0.0	64.7
300	150	150	0.070	6.7	0	0.000	0.0	0	0.0	0	0.0	10.0
301	550	30	0.006	5.0	270	0.018	2.3	0	0.0	250	2.1	10.0
302	420	150	0.033	9.1	150	0.061	0.9	0	0.0	120	1.0	10.9
303	1000	70	0.005	10.5	230	0.060	1.2	0	0.0	700	5.8	17.6
304	680	150	0.046	7.9	150	0.061	0.9	0	0.0	380	3.2	12.0
305	660	150	0.020	11.1	150	0.061	0.9	0	0.0	360	3.0	15.0
306	330	130	0.030	8.4	170	0.018	1.6	0	0.0	30	0.3	10.2
307	620	150	0.013	13.2	150	0.051	0.9	0	0.0	320	2.7	16.8
308	735	145	0.005	18.8	155	0.051	1.0	0	0.0	435	3.6	23.4
309	165	25	0.005	4.6	140	0.020	1.3	0	0.0	0	0.0	10.0
310	680	150	0.026	10.0	150	0.058	0.9	0	0.0	380	3.2	14.0
311	600	150	0.005	19.3	150	0.058	0.9	0	0.0	300	2.5	22.7
312	580	100	0.010	10.6	200	0.018	1.8	0	0.0	280	2.3	14.7
313	160	160	0.025	10.7	0	0.000	0.0	0	0.0	0	0.0	10.7
314	220	40	0.005	6.7	180	0.010	2.1	0	0.0	0	0.0	10.0
315	560	300	0.020	19.3	0	0.000	0.0	260	8.7	0	0.0	28.0
H	1150	150	0.026	10.0	150	0.041	1.0	0	0.0	850	7.1	18.1
I	2500	0	0.000	0.0	300	0.050	1.7	1000	33.3	1200	10.0	45.0
J	600	300	0.022	18.6	0	0.000	0.0	150	5.0	150	1.3	24.8
K	1350	300	0.017	20.6	0	0.000	0.0	1050	35.0	0	0.0	55.6

NOTE:

- a) L1-G, S1-G & T1-G ARE LENGTH, SLOPE AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER GRASS IN 1ST 300 FT, USING SHEET FLOW FORMULAE FROM SCS TR55.
- b) L1-C, S1-C & T1-C ARE LENGTH, SLOPE AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER PAVED IN 1ST 300 FT, USING SHEET FLOW FORMULAE FROM SCS TR55.
- c) L2-G & T2-G ARE LENGTH AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER GRASS IN REMAINING PATH LENGTH @ 30 FPM.
- d) L2-C & T2-C ARE LENGTH AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER PAVED IN REMAINING PATH LENGTH @ 120 FPM.
- e) TRAVEL TIME (Tt) IS THE SUM OF TIME FOR FIRST 300 FT PLUS TIME FOR REMAINING PATH OR 10 MINUTE MINIMUM PER FDOT.

TABLE 4.2
6/9/94

AREA AND SCS METHOD "CN"
 GREATER PINES PHASES 2 & 3 PREDEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993 - REVISED 6/9/1994

IMPERVIOUS CN =	95	PERVIOUS CN =	48
-----------------	----	---------------	----

BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	PERCENT DCIA (AS A %)	"CN" FOR NDCIA AND PERVIOUS AREA
A	31.35	0.00	0.00	0.00	31.35	0.00	48
B	20.06	0.00	0.00	0.00	20.06	0.00	48
C	28.56	0.00	0.00	0.00	28.56	0.00	48
D - ON	42.39	0.00	0.00	0.00	42.39	0.00	48
D - OFF	12.80	0.00	0.00	0.00	12.80	0.00	48
E	1.48	0.66	0.00	0.66	0.82	44.59	48
F	1.51	0.51	0.00	0.51	1.00	33.77	48
G	4.22	0.00	0.00	0.00	4.22	0.00	48
H	11.04	2.32	0.98	3.30	7.74	21.01	45
I	11.80	1.65	0.48	2.13	9.67	13.98	42
J	21.10	2.07	0.88	2.95	18.15	9.81	42
K	24.60	0.91	0.39	1.30	23.31	3.70	40

NOTES:

1. DCIA = DIRECTLY CONNECTED IMPERVIOUS AREA, i.e. IMPERVIOUS AREA DIRECTLY CONNECTED TO THE STORM DRAINAGE SYSTEM WITHOUT FLOW OVER ANY PERVIOUS AREA.
2. NDCIA = IMPERVIOUS AREA NOT DIRECTLY CONNECTED TO THE STORM SYSTEM, BUT WHICH DISCHARGES OVER A PERVIOUS AREA PRIOR TO ENTRY INTO THE STORM DRAINAGE SYSTEM.
3. AREA OF IMPERVIOUS = DCIA + NDCIA.
4. PERCENT DCIA COMPUTED BY DIVIDING AREA DCIA BY THE TOTAL BASIN AREA.
5. SCS "CN" FOR PERVIOUS AND NDCIA COMPUTED BY DIVIDING THE SUM OF THE PRODUCTS OF THE PERVIOUS AREA TIMES ITS CN AND THE NDCIA AREA TIMES ITS CN, BY THE SUM OF THE SAME TWO AREAS.
6. PERVIOUS AREA CN FOR BASINS H.I.J. & K USED WAS 39, NOT 48 AS USED FOR THE WHOLELY UNDEVELOPED BASINS.

TABLE 5.1
6/9/94

AREA AND SCS METHOD "CN"
 GREATER PINES PHASES 2 & 3
 POST-DEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993 - REVISED 6/9/1994

PAGE 1

BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	PERCENT DCIA (AS A %)	"CN" FOR NDCIA AND PERVIOUS AREA
100A	2.16	0.00	0.00	0.00	2.16	0.00	39
100B	7.44	0.00	0.00	0.00	7.44	0.00	39
101A	1.15	0.00	0.19	0.19	0.96	0.00	48
101B	4.18	0.00	0.69	0.69	3.49	0.00	48
102	0.07	0.03	0.00	0.03	0.04	42.86	39
103	0.62	0.08	0.04	0.12	0.50	12.90	43
104	2.60	0.58	0.18	0.76	1.84	22.31	44
105	0.26	0.10	0.00	0.10	0.16	38.46	39
106	2.82	0.58	0.04	0.62	2.20	20.57	40
107	1.62	0.83	0.00	0.83	0.79	51.23	39
108	0.60	0.12	0.05	0.17	0.43	20.00	45
109	1.95	0.62	0.07	0.69	1.26	31.79	42
110	1.82	0.25	0.19	0.44	1.38	13.74	46
111	2.40	0.33	0.28	0.61	1.79	13.75	47
112	1.28	0.50	0.00	0.50	0.78	39.06	39
113	0.94	0.25	0.07	0.32	0.62	26.60	45
114	2.34	0.72	0.14	0.86	1.48	30.77	44
115	1.65	0.33	0.19	0.52	1.13	20.00	47
116	2.17	0.94	0.05	0.99	1.18	43.32	41
117	0.94	0.50	0.00	0.50	0.44	53.19	39
118	3.70	0.54	0.44	0.98	2.72	14.59	47
119	1.28	0.29	0.12	0.41	0.87	22.66	46
120	1.65	0.66	0.00	0.66	0.99	40.00	39
121	1.25	0.25	0.11	0.36	0.89	20.00	45
122	1.67	0.25	0.11	0.36	1.31	14.97	43
123	1.12	0.17	0.09	0.26	0.86	15.18	44
124	0.96	0.17	0.09	0.26	0.70	17.71	45
125	1.98	0.21	0.09	0.30	1.68	10.61	42
126	1.85	0.42	0.18	0.60	1.25	22.70	46
127	2.08	0.66	0.11	0.77	1.31	31.73	43
128	1.49	0.00	0.32	0.32	1.17	0.00	51
129	1.75	0.69	0.00	0.69	1.06	39.43	39
130	3.51	0.85	0.28	1.13	2.38	24.22	45
131	1.80	0.33	0.11	0.44	1.36	18.33	43
132	1.32	0.33	0.14	0.47	0.85	25.00	47
133	1.42	0.33	0.14	0.47	0.95	23.24	46
134	2.08	0.50	0.21	0.71	1.37	24.04	46
135	1.60	0.58	0.07	0.65	0.95	36.25	43

TOTALS 71.52 13.99 4.79 18.78 52.74

TABLE 5.2
6/19/94

AREA AND SCS METHOD "CN"
 GREATER PINES PHASES 2 & 3
 POST-DEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993 - REVISED 6/9/1994

PAGE 2

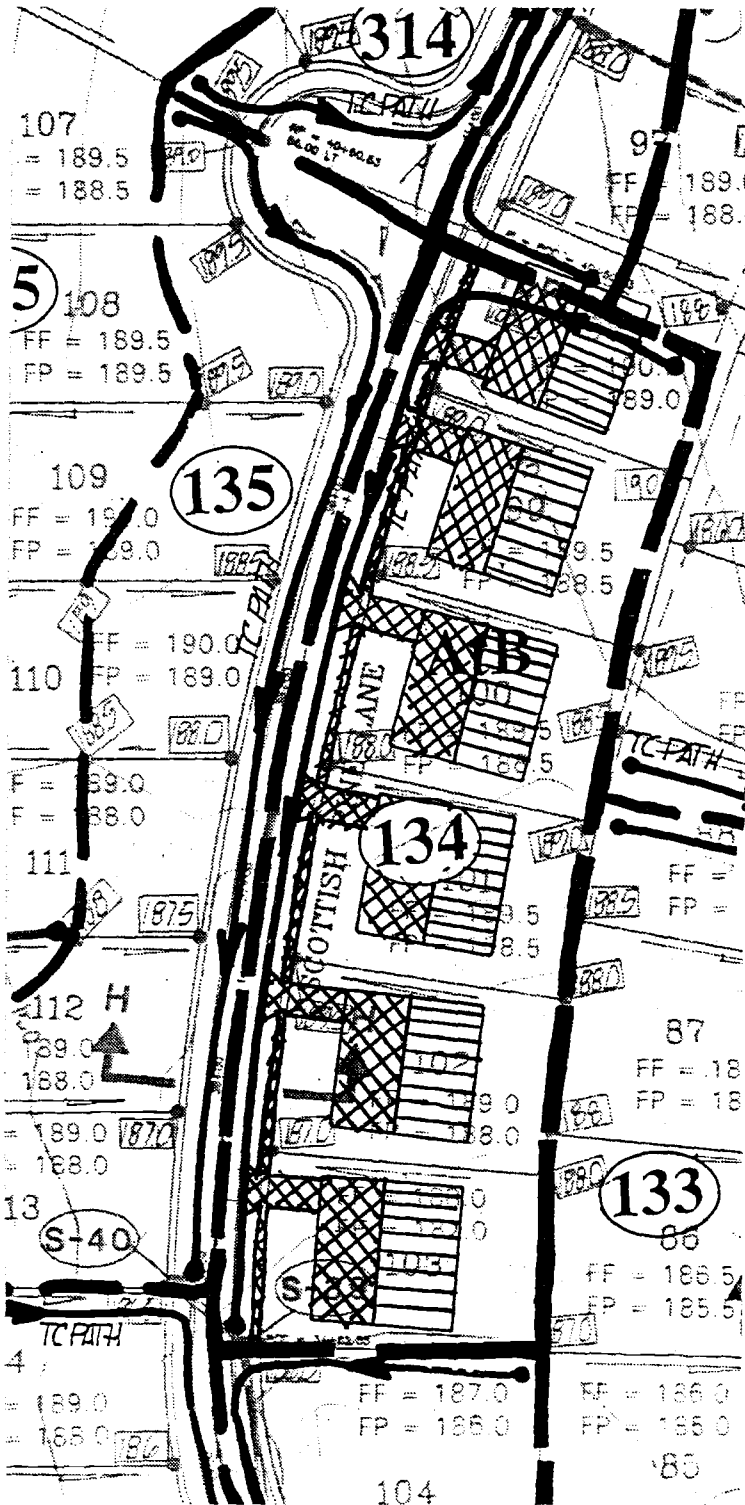
BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	PERCENT DCIA (AS A %)	"CN" FOR NDCIA AND PERVIOUS AREA
200	22.35	0.00	0.00	0.00	22.35	0.00	39
201	2.45	0.16	0.44	0.60	1.85	6.53	50
202	0.75	0.12	0.05	0.17	0.58	16.00	43
203	12.80	0.00	0.00	0.00	12.80	0.00	39
300	8.23	0.00	0.00	0.00	8.23	0.00	39
301	1.00	0.29	0.00	0.29	0.71	29.00	39
302	2.00	0.29	0.14	0.43	1.57	14.50	44
303	1.97	0.00	0.00	0.00	1.97	0.00	39
304	3.37	0.50	0.35	0.85	2.52	14.84	46
305	1.90	0.42	0.18	0.60	1.30	22.11	46
306	1.33	0.25	0.11	0.36	0.97	18.80	45
307	2.10	0.46	0.19	0.65	1.45	21.90	45
308	1.95	0.50	0.21	0.71	1.24	25.64	47
309	0.14	0.05	0.00	0.05	0.09	35.71	39
310	2.10	0.46	0.19	0.65	1.45	21.90	45
311	2.10	0.37	0.16	0.53	1.57	17.62	44
312	0.71	0.21	0.00	0.21	0.50	29.58	39
313	0.50	0.00	0.07	0.07	0.43	0.00	47
314	0.41	0.15	0.04	0.19	0.22	36.59	48
315	2.28	0.00	0.26	0.26	2.02	0.00	45
H	11.04	2.32	0.98	3.30	7.74	21.01	45
I	11.80	1.65	0.48	2.13	9.67	13.98	42
J	21.10	2.07	0.88	2.95	18.15	9.81	42
K	24.60	0.91	0.39	1.30	23.30	3.70	40
TOTALS	138.98	11.18	5.12	16.30	122.68		

NOTES:

1. DCIA = DIRECTLY CONNECTED IMPERVIOUS AREA, i.e. IMPERVIOUS AREA DIRECTLY CONNECTED TO THE STORM DRAINAGE SYSTEM WITHOUT FLOW OVER ANY PERVIOUS AREA.
2. NDCIA = IMPERVIOUS AREA NOT DIRECTLY CONNECTED TO THE STORM SYSTEM, BUT WHICH DISCHARGES OVER A PERVIOUS AREA PRIOR TO ENTRY INTO THE STORM DRAINAGE SYSTEM.
3. AREA OF IMPERVIOUS = DCIA + NDCIA.
4. PERCENT DCIA COMPUTED BY DIVIDING AREA DCIA BY THE TOTAL BASIN AREA.
5. SCS "CN" FOR PERVIOUS AND NDCIA COMPUTED BY DIVIDING THE SUM OF THE PRODUCTS OF THE PERVIOUS AREA TIMES A CN OF 39 AND THE NDCIA AREA TIMES A CN OF 95, BY THE SUM OF THE SAME TWO AREAS.

TABLE 5.2
6/9/94

EXAMPLE OF CN & DCIA GENERATION



BASIN No 134
 TOTAL AREA = 2.08 AC.
 AREA DCIA = AREA:
 ROADWAY PAV. 12'x575' = 6900 SF
 SIDEWALK PAV. 4'x575 = 2300 SF
 6ea. Home sites ea with
 16'x36' DRIVE, & 1500 SF
 OF DCIA ROOF
 $6(16 \times 36 + 1500) = 12,546$ SF
 TOTAL DCIA (SF) = 21656
 TOTAL DCIA (AC) = 0.50
 TOTAL DCIA (%) = 24.04

NDCIA = AREA:
 6 Home sites @ 1500 SF
 OF ROOF = 9000 SF
 ≈ 0.21 AC

CN OVERALL BASIN 134 =

$$\frac{(98 \times .7) + 39 \times 1.37}{2.08} = 59;$$

CF: Lots are 92'x140
 ≈ 1/3 AC.

PER TR 55 1/3 AC LOTS
 ON "A" SOILS,
 CN = 57

SECTION 4

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
 6-9-1994

BASIN NAME	A	B	C	D-ON	D-OFF
NODE NAME	POND_A	POND_B	POND_C	OFFWEST	OFFWEST
UNIT HYDROGRAPH	UH484	UH484	UH484	UH484	UH484
PEAKING FACTOR	484.	484.	484.	484.	484.
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	31.35	20.06	28.56	42.39	12.80
CURVE NUMBER	48.00	48.00	48.00	48.00	48.00
DCIA (%)	.00	.00	.00	.00	.00
TC (mins)	55.60	61.20	40.60	66.00	64.70
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
A	30.37	12.73	2.21	
B	18.30	12.78	2.21	
C	33.58	12.54	2.21	
D-ON	36.42	12.76	2.21	
D-OFF	11.26	12.80	2.21	

BASIN NAME	E	F	G
NODE NAME	POND_A	POND_B	OFFWEST
UNIT HYDROGRAPH	UH484	UH484	UH484
PEAKING FACTOR	484.	484.	484.
RAINFALL FILE	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00
AREA (ac)	1.48	1.51	4.22
CURVE NUMBER	48.00	48.00	48.00
DCIA (%)	44.60	33.80	.00
TC (mins)	13.60	10.70	34.50
LAG TIME (hrs)	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
E	5.18	12.27	4.88	
F	4.80	12.25	4.23	
G	5.40	12.50	2.21	

TABLE 6.1
 6/9/94

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
 6-9-1994

BASIN NAME	H	I	J	K
NODE NAME	POND_A	POND_A	POND_J	POND_K
TIME INCREMENT (min)	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00
AREA (ac)	11.04	11.80	21.14	24.60
CURVE NUMBER	45.00	42.00	42.00	40.00
DCIA (%)	21.00	14.00	9.81	3.70
TC (mins)	18.10	45.00	24.80	55.70
LAG TIME (hrs)	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
H	19.78	12.17	3.22	
I	9.84	12.25	2.51	
J	21.70	12.25	2.23	
K	10.24	12.25	1.63	

TABLE 6.1
 6/9/94

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 PREDEV. 25YR 96HR EVENT
 6-9-1994

BASIN NAME	A	B	C	D-ON	D-OFF
NODE NAME	POND_A	POND_B	POND_C	OFFWEST	OFFWEST
UNIT HYDROGRAPH	UH484	UH484	UH484	UH484	UH484
PEAKING FACTOR	484.	484.	484.	484.	484.
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	31.35	20.06	28.56	42.39	12.80
CURVE NUMBER	48.00	48.00	48.00	48.00	48.00
DCIA (%)	.00	.00	.00	.00	.00
TC (mins)	55.60	61.20	40.60	66.00	64.70
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
A	56.87	60.42	4.60	
B	33.91	60.52	4.60	
C	62.63	60.27	4.60	
D-ON	68.39	60.57	4.60	
D-OFF	21.06	60.53	4.60	

BASIN NAME	E	F	G
NODE NAME	POND_A	POND_B	OFFWEST
UNIT HYDROGRAPH	UH484	UH484	UH484
PEAKING FACTOR	484.	484.	484.
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00
AREA (ac)	1.48	1.51	4.22
CURVE NUMBER	48.00	48.00	48.00
DCIA (%)	44.60	33.80	.00
TC (mins)	13.60	10.70	34.50
LAG TIME (hrs)	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
E	6.76	60.02	7.80	
F	6.53	60.01	7.03	
G	10.09	60.18	4.60	

TABLE 6.2
 6/9/94

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 96HR EVENT
 6-9-1994

BASIN NAME	H	I	J	K
NODE NAME	POND_A	POND_A	POND_J	POND_K
TIME INCREMENT (min)	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00
AREA (ac)	11.04	11.80	21.14	24.60
CURVE NUMBER	45.00	42.00	42.00	40.00
DCIA (%)	21.00	14.00	9.81	3.70
TC (mins)	18.10	45.00	24.80	55.70
LAG TIME (hrs)	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES	
H	31.00	59.92	5.73	
I	17.39	60.00	4.78	
J	40.36	60.00	4.44	
K	24.25	60.00	3.63	

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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

BASIN NAME	100A	100B	101A	101B	102
NODE NAME	POND_1A	POND_1B	POND_1A	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	2.16	7.44	1.15	4.18	.07
CURVE NUMBER	39.00	39.00	48.00	48.00	39.00
DCIA (%)	.00	.00	.00	.00	42.90
TC (mins)	10.00	10.00	26.90	12.50	10.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
100A	1.74	12.17	1.28	
100B	6.00	12.17	1.28	
101A	1.25	12.25	2.21	
101B	6.46	12.17	2.21	
102	.19	12.17	4.25	

BASIN NAME	103	104	105	106	107
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	.62	2.60	.26	2.82	1.62
CURVE NUMBER	43.00	44.00	39.00	40.00	39.00
DCIA (%)	12.90	22.30	38.50	20.60	51.20
TC (mins)	16.80	20.80	10.00	13.00	15.20
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
103	.88	12.17	2.52	
104	4.33	12.17	3.22	
105	.65	12.17	3.94	
106	4.68	12.17	2.78	
107	4.49	12.17	4.82	

TABLE 6.3
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Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

BASIN NAME	108	109	110	111	112
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	.60	1.95	1.82	2.40	1.28
CURVE NUMBER	45.00	42.00	46.00	47.00	39.00
DCIA (%)	20.00	31.80	13.70	13.80	39.10
TC (mins)	17.50	13.60	15.50	14.10	13.50
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
108	1.07	12.17	3.15	
109	4.33	12.17	3.68	
110	3.13	12.17	2.85	
111	4.48	12.17	2.95	
112	3.02	12.17	3.99	

BASIN NAME	113	114	115	116	117
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1A	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	.94	2.34	1.65	2.17	.94
CURVE NUMBER	45.00	44.00	47.00	41.00	39.00
DCIA (%)	26.60	30.80	20.00	43.30	53.20
TC (mins)	13.60	14.80	13.60	22.20	12.70
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
113	2.08	12.17	3.57	
114	5.24	12.17	3.76	
115	3.48	12.17	3.32	
116	4.75	12.17	4.39	
117	2.82	12.17	4.96	

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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

BASIN NAME	118	119	120	121	122
NODE NAME	POND_1B	POND_1B	POND_1A	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	3.70	1.28	1.65	1.25	1.67
CURVE NUMBER	47.00	46.00	39.00	45.00	43.00
DCIA (%)	14.60	22.70	40.00	20.00	15.00
TC (mins)	19.10	12.60	23.50	19.10	10.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
118	6.17	12.17	2.99	
119	2.80	12.17	3.41	
120	3.20	12.17	4.05	
121	2.14	12.17	3.15	
122	3.00	12.17	2.66	

BASIN NAME	123	124	125	126	127
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	1.12	.96	1.98	1.85	2.08
CURVE NUMBER	44.00	45.00	42.00	46.00	43.00
DCIA (%)	15.20	17.70	10.60	22.70	31.70
TC (mins)	18.40	14.80	13.10	22.00	16.20
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
123	1.69	12.17	2.76	
124	1.75	12.17	3.01	
125	2.76	12.17	2.28	
126	3.24	12.17	3.41	
127	4.46	12.17	3.75	

TABLE 6.3
 6/9/94

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

BASIN NAME	128	129	130	131	132
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	1.49	1.75	3.51	1.80	1.32
CURVE NUMBER	51.00	39.00	45.00	43.00	47.00
DCIA (%)	.00	39.40	24.20	18.30	25.00
TC (mins)	10.00	33.10	14.50	24.70	20.30
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
128	2.92	12.17	2.54	
129	2.85	12.25	4.01	
130	7.28	12.17	3.42	
131	2.43	12.25	2.88	
132	2.58	12.17	3.63	

BASIN NAME	133	134	135	200	201
NODE NAME	POND_1B	POND_1B	POND_1B	POND_2	POND_2
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	1.42	2.08	1.60	22.35	2.45
CURVE NUMBER	46.00	46.00	43.00	39.00	50.00
DCIA (%)	23.20	24.04	36.30	.00	6.50
TC (mins)	18.90	24.10	13.60	10.00	10.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
133	2.69	12.17	3.44	
134	3.57	12.17	3.49	
135	3.93	12.17	4.05	
200	18.02	12.17	1.28	
201	5.10	12.17	2.81	

TABLE 6.3
 6/9/94

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

BASIN NAME	202	203	300	301	302
NODE NAME	POND_2	POND_2	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	.75	12.80	8.23	1.00	2.00
CURVE NUMBER	43.00	39.00	39.00	39.00	44.00
DCIA (%)	16.00	.00	.00	29.00	14.50
TC (mins)	20.60	64.70	10.00	10.00	10.90
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
202	1.04	12.17	2.73	
203	3.46	12.50	1.28	
300	6.63	12.17	1.28	
301	2.09	12.17	3.29	
302	3.63	12.17	2.72	

BASIN NAME	303	304	305	306	307
NODE NAME	POND_3	POND_3	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	1.97	3.37	1.90	1.33	2.10
CURVE NUMBER	39.00	46.00	46.00	45.00	45.00
DCIA (%)	.00	14.80	22.10	18.80	21.90
TC (mins)	17.60	12.00	15.00	10.20	16.80
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
303	1.25	12.25	1.28	
304	6.50	12.17	2.92	
305	3.88	12.17	3.37	
306	2.79	12.17	3.08	
307	3.95	12.17	3.27	

TABLE 6.3
 6/9/94

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

BASIN NAME	308	309	310	311	312
NODE NAME	POND_3	POND_3	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	1.95	.14	2.10	2.10	.71
CURVE NUMBER	47.00	39.00	45.00	44.00	39.00
DCIA (%)	25.60	35.70	21.90	17.62	29.60
TC (mins)	23.40	10.00	14.00	22.70	14.70
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
308	3.60	12.17	3.66	
309	.33	12.17	3.75	
310	4.23	12.17	3.27	
311	3.03	12.17	2.92	
312	1.35	12.17	3.33	

BASIN NAME	313	314	315	H	I
NODE NAME	POND_3	POND_4	POND_4	POND_1B	POND_1A
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	.50	.41	2.28	11.04	11.80
CURVE NUMBER	47.00	48.00	45.00	45.00	42.00
DCIA (%)	.00	36.60	.00	21.00	14.00
TC (mins)	10.70	10.00	28.00	18.10	45.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
313	.77	12.17	2.11	
314	1.22	12.17	4.40	
315	1.96	12.25	1.89	
H	19.78	12.17	3.22	
I	9.84	12.25	2.51	

TABLE 6.3
 6/9/94

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

BASIN NAME	J	K
NODE NAME	POND_J	POND_K
TIME INCREMENT (min)	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30
STORM DURATION (hrs)	24.00	24.00
AREA (ac)	21.10	24.60
CURVE NUMBER	42.00	40.00
DCIA (%)	9.80	3.70
TC (mins)	24.80	55.60
LAG TIME (hrs)	.00	.00
BASIN STATUS	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
J	21.66	12.25	2.23	
K	10.25	12.25	1.63	

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 6-9-1994

BASIN NAME	100A	100B	101A	101B	102
NODE NAME	POND_1A	POND_1B	POND_1A	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	2.16	7.44	1.15	4.18	.07
CURVE NUMBER	39.00	39.00	48.00	48.00	39.00
DCIA (%)	.00	.00	.00	.00	42.90
TC (mins)	10.00	10.00	26.90	12.50	10.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
100A	4.36	59.92	3.15	
100B	15.01	59.92	3.15	
101A	2.34	60.00	4.60	
101B	11.84	59.92	4.60	
102	.26	59.92	6.86	

BASIN NAME	103	104	105	106	107
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	.62	2.60	.26	2.82	1.62
CURVE NUMBER	43.00	44.00	39.00	40.00	39.00
DCIA (%)	12.90	22.30	38.50	20.60	51.20
TC (mins)	16.80	20.80	10.00	13.00	15.20
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
103	1.54	59.92	4.83	
104	6.78	59.92	5.71	
105	.93	59.92	6.48	
106	7.70	59.92	5.06	
107	5.90	59.92	7.58	

TABLE 6.4
 6/9/94

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 6-9-1994

BASIN NAME	108	109	110	111	112
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	.60	1.95	1.82	2.40	1.28
CURVE NUMBER	45.00	42.00	46.00	47.00	39.00
DCIA (%)	20.00	31.80	13.70	13.80	39.10
TC (mins)	17.50	13.60	15.50	14.10	13.50
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
108	1.69	59.92	5.66	
109	6.34	59.92	6.23	
110	5.18	59.92	5.31	
111	7.27	59.92	5.46	
112	4.25	59.92	6.53	

BASIN NAME	113	114	115	116	117
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1A	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	.94	2.34	1.65	2.17	.94
CURVE NUMBER	45.00	44.00	47.00	41.00	39.00
DCIA (%)	26.60	30.80	20.00	43.30	53.20
TC (mins)	13.60	14.80	13.60	22.20	12.70
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
113	3.10	59.92	6.16	
114	7.65	59.92	6.37	
115	5.36	59.92	5.91	
116	6.45	59.92	7.08	
117	3.69	59.92	7.75	

TABLE 6.4
 6/9/94

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 6-9-1994

BASIN NAME	118	119	120	121	122
NODE NAME	POND_1B	POND_1B	POND_1A	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	3.70	1.28	1.65	1.25	1.67
CURVE NUMBER	47.00	46.00	39.00	45.00	43.00
DCIA (%)	14.60	22.70	40.00	20.00	15.00
TC (mins)	19.10	12.60	23.50	19.10	10.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
118	10.04	59.92	5.52	
119	4.26	59.92	5.99	
120	4.43	59.92	6.61	
121	3.39	59.92	5.66	
122	5.02	59.92	5.00	

BASIN NAME	123	124	125	126	127
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	1.12	.96	1.98	1.85	2.08
CURVE NUMBER	44.00	45.00	42.00	46.00	43.00
DCIA (%)	15.20	17.70	10.60	22.70	31.70
TC (mins)	18.40	14.80	13.10	22.00	16.20
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
123	2.84	59.92	5.15	
124	2.81	59.92	5.48	
125	5.04	59.92	4.50	
126	4.97	59.92	5.99	
127	6.50	59.92	6.33	

TABLE C.4
 6/9/94

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 6-9-1994

BASIN NAME	128	129	130	131	132
NODE NAME	POND_1B	POND_1B	POND_1B	POND_1B	POND_1B
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	1.49	1.75	3.51	1.80	1.32
CURVE NUMBER	51.00	39.00	45.00	43.00	47.00
DCIA (%)	.00	39.40	24.20	18.30	25.00
TC (mins)	10.00	33.10	14.50	24.70	20.30
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
128	4.94	59.92	5.08	
129	3.93	60.00	6.56	
130	11.08	59.92	5.98	
131	4.00	59.92	5.26	
132	3.85	59.92	6.28	

BASIN NAME	133	134	135	200	201
NODE NAME	POND_1B	POND_1B	POND_1B	POND_2	POND_2
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	1.42	2.08	1.60	22.35	2.45
CURVE NUMBER	46.00	46.00	43.00	39.00	50.00
DCIA (%)	23.20	24.04	36.30	.00	6.50
TC (mins)	18.90	24.10	13.60	10.00	10.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
133	4.10	59.92	6.03	
134	5.41	59.92	6.09	
135	5.56	59.92	6.70	
200	45.09	59.92	3.15	
201	8.33	59.92	5.37	

TABLE 6.4
 6/9/94

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 6-9-1994

BASIN NAME	202	203	300	301	302
NODE NAME	POND_2	POND_2	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	.75	12.80	8.23	1.00	2.00
CURVE NUMBER	43.00	39.00	39.00	39.00	44.00
DCIA (%)	16.00	.00	.00	29.00	14.50
TC (mins)	20.60	64.70	10.00	10.00	10.90
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
202	1.77	59.92	5.08
203	9.84	60.00	3.15
300	16.60	59.92	3.15
301	3.18	59.92	5.66
302	6.03	59.92	5.10

BASIN NAME	303	304	305	306	307
NODE NAME	POND_3	POND_3	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	1.97	3.37	1.90	1.33	2.10
CURVE NUMBER	39.00	46.00	46.00	45.00	45.00
DCIA (%)	.00	14.80	22.10	18.80	21.90
TC (mins)	17.60	12.00	15.00	10.20	16.80
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
303	3.22	59.92	3.15
304	10.54	59.92	5.39
305	5.95	59.92	5.94
306	4.39	59.92	5.56
307	6.13	59.92	5.80

TABLE 6.4
 6/9/94

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 6-9-1994

BASIN NAME	308	309	310	311	312
NODE NAME	POND_3	POND_3	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	1.95	.14	2.10	2.10	.71
CURVE NUMBER	47.00	39.00	45.00	44.00	39.00
DCIA (%)	25.60	35.70	21.90	17.62	29.60
TC (mins)	23.40	10.00	14.00	22.70	14.70
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
308	5.35	59.92	6.33	
309	.48	59.92	6.24	
310	6.55	59.92	5.80	
311	4.98	59.92	5.34	
312	2.04	59.92	5.71	

BASIN NAME	313	314	315	H	I
NODE NAME	POND_3	POND_4	POND_4	POND_1B	POND_1A
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	.50	.41	2.28	11.04	11.80
CURVE NUMBER	47.00	48.00	45.00	45.00	42.00
DCIA (%)	.00	36.60	.00	21.00	14.00
TC (mins)	10.70	10.00	28.00	18.10	45.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
313	1.43	59.92	4.44	
314	1.69	59.92	7.24	
315	4.06	60.00	4.12	
H	31.00	59.92	5.73	
I	17.39	60.00	4.78	

TABLE 6.4
 6/9/94

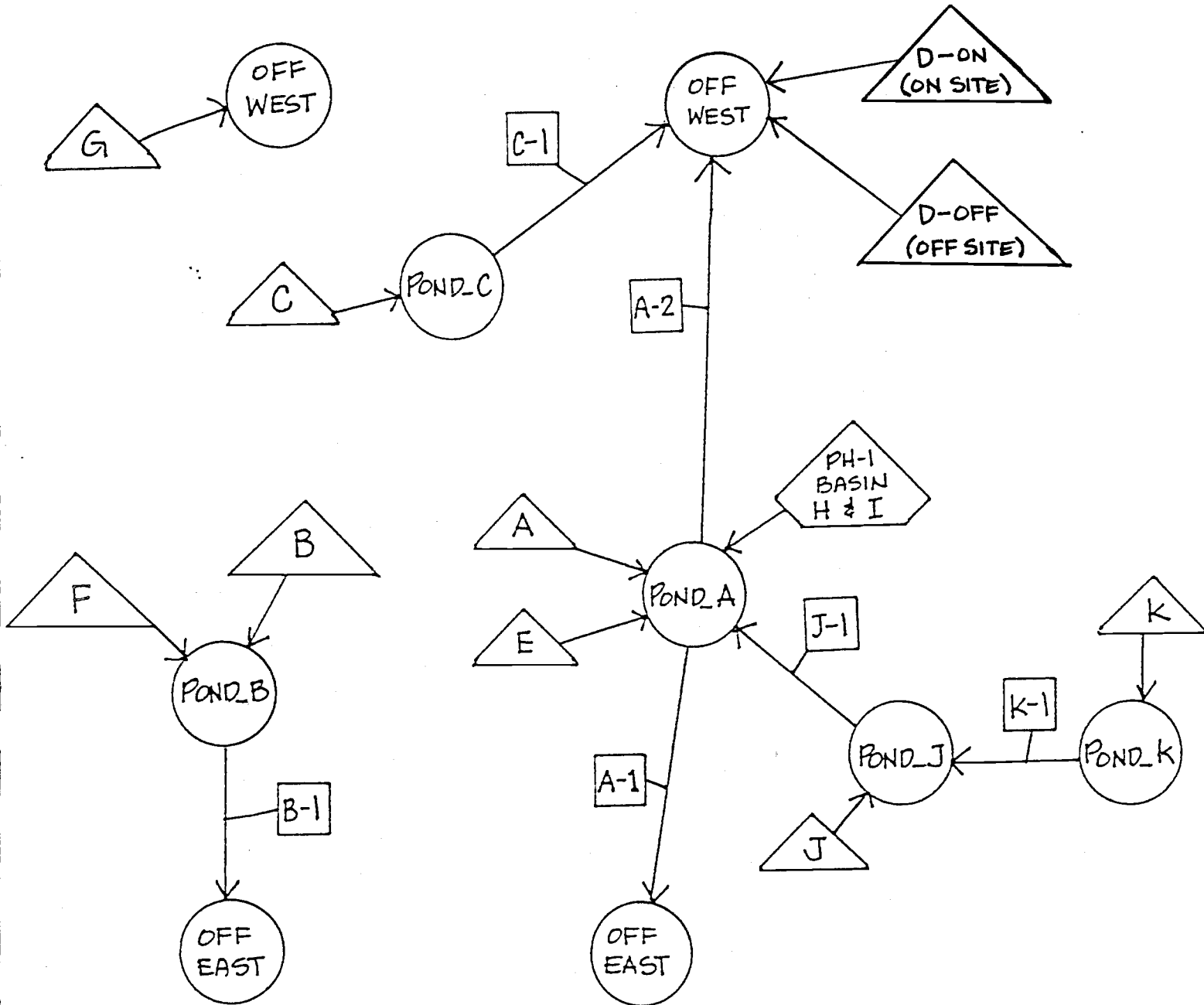
GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
6-9-1994

BASIN NAME	J	K
NODE NAME	POND_J	POND_K
TIME INCREMENT (min)	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90
STORM DURATION (hrs)	96.00	96.00
AREA (ac)	21.10	24.60
CURVE NUMBER	42.00	40.00
DCIA (%)	9.80	3.70
TC (mins)	24.80	55.60
LAG TIME (hrs)	.00	.00
BASIN STATUS	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in) NOTES
J	40.28	60.00 4.44
K	24.28	60.00 3.63

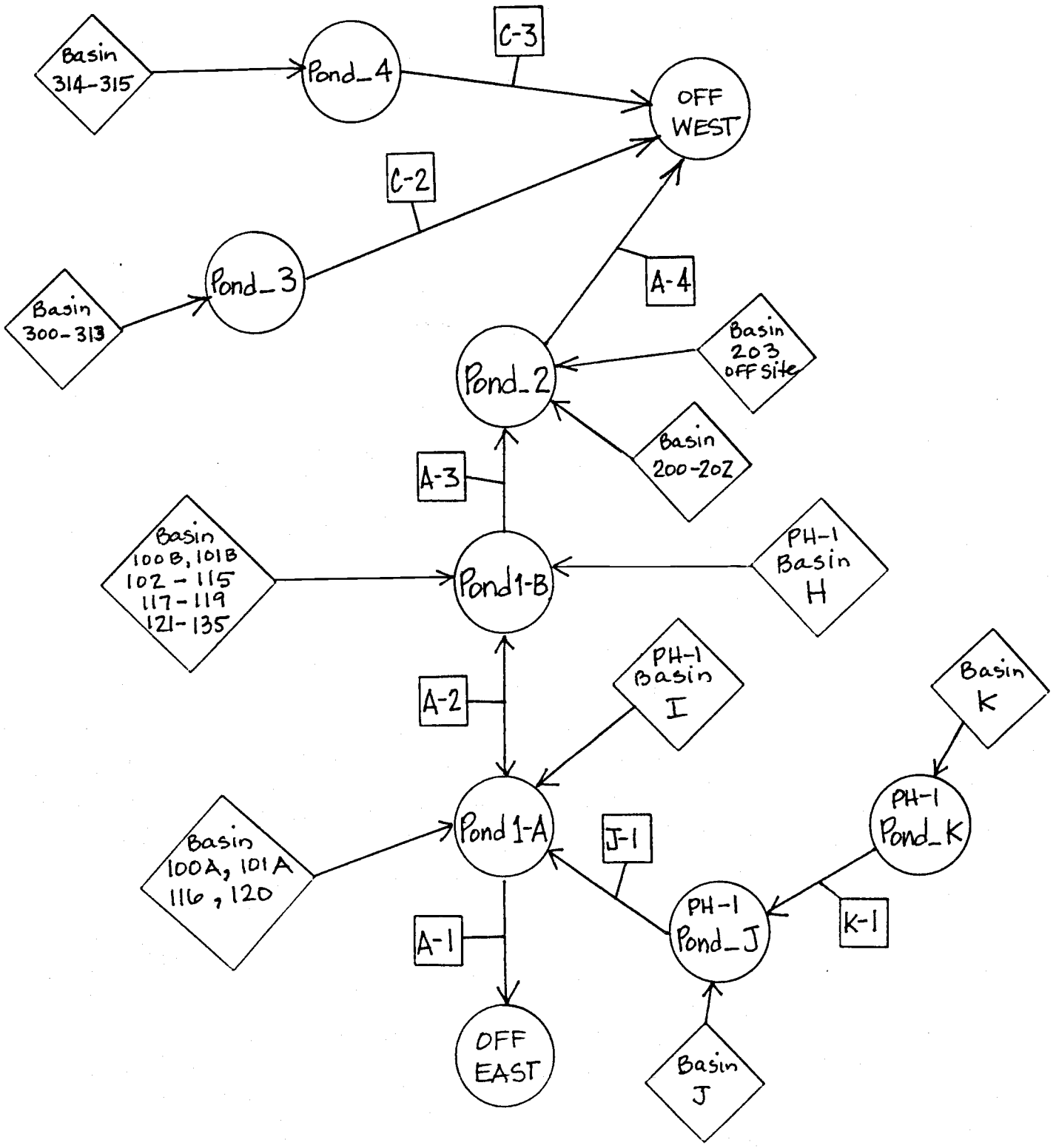
TABLE
6/9/94

SECTION 5

PRE DEVELOPED CONDITION



POST DEVELOPED CONDITION



GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
6-9-1994

CONTROL PARAMETERS

=====

START TIME: .00
END TIME: 24.00

TO TIME (hours)	SIMULATION INC (secs)	PRINT INC (mins)
----- 24.00	----- 30.00	----- 15.00

RUNOFF HYDROGRAPH FILE: DEFAULT
OFFSITE HYDROGRAPH FILE: DEFAULT
BOUNDARY DATABASE FILE: NONE

NOTE:

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
 6-9-1994

NODE NAME	NODE TYPE	INI STAGE (ft)	X-COOR (ft)	Y-COOR (ft)	LENGTH (ft)	STAGE (ft)	AR/TM/STR (ac/hr/af)						
POND_A	AREA	132.000	.000	.000	.000	132.000	2.080						
						133.000	3.170						
						134.000	5.680						
						135.000	7.310						
						136.000	8.380						
						137.000	9.450						
POND_B	AREA	159.500	.000	.000	.000	159.500	.010						
						160.000	.170						
						161.000	.520						
						POND_C	AREA	137.500	.000	.000	.000	137.500	.010
												138.000	.990
												138.500	2.120
POND_J	STRG	138.000	.000	.000	.000	138.000	.000						
						142.000	1.300						
						143.000	1.830						
						144.000	2.460						
POND_K	STRG	164.000	.000	.000	.000	164.000	.000						
						165.000	.240						
						166.000	.550						
						167.000	.940						
						168.000	1.410						
OFFWEST	TIME	110.000	.000	.000	.000	110.000	.000						
						110.000	12.000						
						110.000	24.000						
OFFEAST	TIME	136.000	.000	.000	.000	136.000	.000						
						136.000	12.000						
						136.000	24.000						

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
6-9-1994

>>REACH NAME : A-1
FROM NODE : POND_A
TO NODE : OFFEAST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 138.500 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : A-2
FROM NODE : POND_A
TO NODE : OFFWEST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 144.000 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : B-1
FROM NODE : POND_B
TO NODE : OFFEAST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 161.000 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : C-1
FROM NODE : POND_C
TO NODE : OFFWEST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 138.500 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : K-1
FROM NODE : POND_K
TO NODE : POND_J
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 168.000 TOPWIDTH (ft): 30.000 CORRS DPTH (ft): 1.000
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

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GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
6-9-1994

>>REACH NAME : J-1
FROM NODE : POND_J
TO NODE : POND_A
REACH TYPE : DROP STRUCTURE w/ CIRC. CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 48.000 RISE (in): 48.000 LENGTH (ft): 220.000
U/S INVERT (ft): 134.200 D/S INVERT (ft): 132.000 MANNING N: .013
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 142.500 CREST LN. (ft): 19.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : NOT USED

NOTE:

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
6-9-1994

REACH SUMMARY

=====

INDEX	RCHNAME	FRMNODE	TONODE	REACH TYPE
1	A-1	POND_A	OFFEAST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
2	A-2	POND_A	OFFWEST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
3	B-1	POND_B	OFFEAST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
4	C-1	POND_C	OFFWEST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
5	K-1	POND_K	POND_J	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
6	J-1	POND_J	POND_A	DROP STRUCTURE w/ CIRC. CULVERT

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
6-9-1994

CONTROL PARAMETERS

=====

START TIME: .00
END TIME: 30.00

TO TIME (hours)	SIMULATION INC (secs)	PRINT INC (mins)
----- 30.00	----- 30.00	----- 30.00

RUNOFF HYDROGRAPH FILE: DEFAULT
OFFSITE HYDROGRAPH FILE: DEFAULT
BOUNDARY DATABASE FILE: NONE

NOTE:

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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

NODE NAME	NODE TYPE	INI STAGE (ft)	X-COOR (ft)	Y-COOR (ft)	LENGTH (ft)	STAGE (ft)	AR/TM/STR (ac/hr/af)						
POND_1A	AREA	132.000	.000	.000	.000	132.000	1.010						
						133.000	1.080						
						134.000	1.150						
						135.000	1.260						
						136.000	1.370						
						137.000	1.610						
POND_1B	AREA	132.000	.000	.000	.000	132.000	1.930						
						133.000	2.250						
						134.000	3.670						
						135.000	4.700						
						136.000	5.400						
						137.000	5.740						
POND_2	AREA	109.000	.000	.000	.000	109.000	.170						
						110.000	1.600						
						111.000	1.780						
						112.000	1.960						
						114.000	2.140						
						115.000	2.500						
POND_3	AREA	138.000	.000	.000	.000	138.000	1.100						
						139.000	2.520						
						140.000	3.120						
						141.000	3.440						
						POND_4	AREA	181.000	.000	.000	.000	181.000	.086
												184.000	.443
185.000	.600												
POND_J	STRG	138.000	.000	.000	.000	138.000	.000						
						142.000	1.300						
						143.000	1.830						
						144.000	2.460						

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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

NODE NAME	NODE TYPE	INI STAGE (ft)	X-COOR (ft)	Y-COOR (ft)	LENGTH (ft)	STAGE (ft)	AR/TM/STR (ac/hr/af)
POND_K	STRG	164.000	.000	.000	.000	164.000	.000
						165.000	.240
						166.000	.550
						167.000	.940
						168.000	1.410
OFFWEST	TIME	110.000	.000	.000	.000	110.000	.000
						110.000	12.000
						110.000	24.000
OFFEAST	TIME	136.000	.000	.000	.000	136.000	.000
						136.000	12.000
						136.000	24.000

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
6-9-1994

>>REACH NAME : K-1
FROM NODE : POND_K
TO NODE : POND_J
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 168.000 TOPWIDTH (ft): 30.000 CORRS DPTH (ft): 1.000
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : A-4
FROM NODE : POND_2
TO NODE : OFFWEST
REACH TYPE : RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 119.000 CREST LN. (ft): 20.000 OPENING (ft): 999.000
WEIR COEF.: 3.000 GATE COEF.: .600 NUMBER OF ELEM.: 1.000
NOTE:

>>REACH NAME : C-2
FROM NODE : POND_3
TO NODE : OFFWEST
REACH TYPE : RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 140.000 CREST LN. (ft): 20.000 OPENING (ft): 999.000
WEIR COEF.: 3.000 GATE COEF.: .600 NUMBER OF ELEM.: 1.000
NOTE:

>>REACH NAME : A-1
FROM NODE : POND_1A
TO NODE : OFFEAST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 138.500 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : C-3
FROM NODE : POND_4
TO NODE : OFFWEST
REACH TYPE : RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 183.500 CREST LN. (ft): 20.000 OPENING (ft): 999.000
WEIR COEF.: 3.000 GATE COEF.: .600 NUMBER OF ELEM.: 1.000
NOTE:

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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
6-9-1994

>>REACH NAME : A-2
FROM NODE : POND_1A
TO NODE : POND_1B
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 134.000 TOPWIDTH (ft): 30.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
6-9-1994

>>REACH NAME : A-3
FROM NODE : POND_1B
TO NODE : POND_2
REACH TYPE : DROP STRUCTURE w/ CIRC. CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 36.000 RISE (in): 36.000 LENGTH (ft): 540.000
U/S INVERT (ft): 132.000 D/S INVERT (ft): 115.000 MANNING N: .013
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 137.000 CREST LN. (ft): 19.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : NOT USED

NOTE: MAIN OUTFALL, POND 1_B

>>REACH NAME : J-1
FROM NODE : POND_J
TO NODE : POND_1A
REACH TYPE : DROP STRUCTURE w/ CIRC. CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 48.000 RISE (in): 48.000 LENGTH (ft): 220.000
U/S INVERT (ft): 134.200 D/S INVERT (ft): 132.000 MANNING N: .013
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 142.500 CREST LN. (ft): 19.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : NOT USED

NOTE:

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
6-9-1994

REACH SUMMARY

=====

INDEX	RCHNAME	FRMNODE	TONODE	REACH TYPE
1	K-1	POND_K	POND_J	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
2	A-4	POND_2	OFFWEST	RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ
3	C-2	POND_3	OFFWEST	RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ
4	A-1	POND_1A	OFFEAST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
5	C-3	POND_4	OFFWEST	RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ
6	A-2	POND_1A	POND_1B	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
7	A-3	POND_1B	POND_2	DROP STRUCTURE w/ CIRC. CULVERT
8	J-1	POND_J	POND_1A	DROP STRUCTURE w/ CIRC. CULVERT

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
6-9-1994

CONTROL PARAMETERS
=====

START TIME: .00
END TIME: 120.00

TO TIME (hours)	SIMULATION INC (secs)	PRINT INC (mins)
----- 120.00	----- 30.00	----- 30.00

RUNOFF HYDROGRAPH FILE: DEFAULT
OFFSITE HYDROGRAPH FILE: DEFAULT
BOUNDARY DATABASE FILE: NONE

NOTE:

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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 6-9-1994

NODE NAME	NODE TYPE	INI STAGE (ft)	X-COOR (ft)	Y-COOR (ft)	LENGTH (ft)	STAGE (ft)	AR/TM/STR (ac/hr/af)						
POND_1A	AREA	132.000	.000	.000	.000	132.000	1.010						
						133.000	1.080						
						134.000	1.150						
						135.000	1.260						
						136.000	1.370						
						137.000	1.610						
POND_1B	AREA	132.000	.000	.000	.000	132.000	1.930						
						133.000	2.250						
						134.000	3.670						
						135.000	4.700						
						136.000	5.400						
						137.000	5.740						
POND_2	AREA	109.000	.000	.000	.000	109.000	.170						
						110.000	1.600						
						111.000	1.780						
						112.000	1.960						
						114.000	2.140						
						115.000	2.500						
POND_3	AREA	138.000	.000	.000	.000	138.000	1.100						
						139.000	2.520						
						140.000	3.120						
						141.000	3.440						
						POND_4	AREA	181.000	.000	.000	.000	181.000	.086
												184.000	.443
185.000	.600												
POND_J	STRG	138.000	.000	.000	.000	138.000	.000						
						142.000	1.300						
						143.000	1.830						
						144.000	2.460						

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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 6-9-1994

NODE NAME	NODE TYPE	INI STAGE (ft)	X-COOR (ft)	Y-COOR (ft)	LENGTH (ft)	STAGE (ft)	AR/TM/STR (ac/hr/af)
POND_K	STRG	164.000	.000	.000	.000	164.000	.000
						165.000	.240
						166.000	.550
						167.000	.940
						168.000	1.410
OFFWEST	TIME	110.000	.000	.000	.000	110.000	.000
						110.000	12.000
						110.000	24.000
OFFEAST	TIME	136.000	.000	.000	.000	136.000	.000
						136.000	12.000
						136.000	24.000

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
6-9-1994

>>REACH NAME : K-1
FROM NODE : POND_K
TO NODE : POND_J
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 168.000 TOPWIDTH (ft): 30.000 CORRS DPTH (ft): 1.000
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : A-4
FROM NODE : POND_2
TO NODE : OFFWEST
REACH TYPE : RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 119.000 CREST LN. (ft): 20.000 OPENING (ft): 999.000
WEIR COEF.: 3.000 GATE COEF.: .600 NUMBER OF ELEM.: 1.000
NOTE:

>>REACH NAME : C-2
FROM NODE : POND_3
TO NODE : OFFWEST
REACH TYPE : RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 140.000 CREST LN. (ft): 20.000 OPENING (ft): 999.000
WEIR COEF.: 3.000 GATE COEF.: .600 NUMBER OF ELEM.: 1.000
NOTE:

>>REACH NAME : A-1
FROM NODE : POND_1A
TO NODE : OFFEAST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 138.500 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : C-3
FROM NODE : POND_4
TO NODE : OFFWEST
REACH TYPE : RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 183.500 CREST LN. (ft): 20.000 OPENING (ft): 999.000
WEIR COEF.: 3.000 GATE COEF.: .600 NUMBER OF ELEM.: 1.000
NOTE:

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
6-9-1994

>> REACH NAME : A-2
FROM NODE : POND_1A
TO NODE : POND_1B
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 134.000 TOPWIDTH (ft): 30.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
6-9-1994

>>REACH NAME : A-3
FROM NODE : POND_1B
TO NODE : POND_2
REACH TYPE : DROP STRUCTURE w/ CIRC. CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 36.000 RISE (in): 36.000 LENGTH (ft): 540.000
U/S INVERT (ft): 132.000 D/S INVERT (ft): 115.000 MANNING N: .013
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 137.000 CREST LN. (ft): 19.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : NOT USED

NOTE: MAIN OUTFALL, POND 1_B

>>REACH NAME : J-1
FROM NODE : POND_J
TO NODE : POND_1A
REACH TYPE : DROP STRUCTURE w/ CIRC. CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 48.000 RISE (in): 48.000 LENGTH (ft): 220.000
U/S INVERT (ft): 134.200 D/S INVERT (ft): 132.000 MANNING N: .013
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 142.500 CREST LN. (ft): 19.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : NOT USED

NOTE:

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
6-9-1994

REACH SUMMARY
=====

INDEX	RCHNAME	FRMNODE	TONODE	REACH TYPE
1	K-1	POND_K	POND_J	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
2	A-4	POND_2	OFFWEST	RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ
3	C-2	POND_3	OFFWEST	RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ
4	A-1	POND_1A	OFFEAST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
5	C-3	POND_4	OFFWEST	RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ
6	A-2	POND_1A	POND_1B	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
7	A-3	POND_1B	POND_2	DROP STRUCTURE w/ CIRC. CULVERT
8	J-1	POND_J	POND_1A	DROP STRUCTURE w/ CIRC. CULVERT

SECTION 6

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
 6-9-1994

NODAL MAXIMUM CONDITIONS REPORT
 =====

NODE ID	STAGE (ft)	VOLUME (af)	INFLOW OFFSITE (cfs)	OTHER (cfs)	OUTFLOW (cfs)
POND_A	135.29	15.81	49.27	9.07	.00
POND_B	161.26	.48	19.10	.00	18.83
POND_C	138.77	1.45	33.08	.00	20.84
POND_J	142.78	1.71	21.70	4.99	9.07
POND_K	168.29	1.55	10.24	.00	4.99
OFFWEST	110.00	14.85	50.98	20.84	.00
OFFEAST	136.00	3.77	.00	18.83	.00

TABLE 8.1
 6/9/94

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 96HR EVENT
 6-9-1994

NODAL MAXIMUM CONDITIONS REPORT
 =====

NODE ID	STAGE (ft)	VOLUME (af)	INFLOW			OUTFLOW (cfs)
			RUNOFF (cfs)	OFFSITE (cfs)	OTHER (cfs)	
POND_A	137.47	35.06	84.89	.00	40.50	.00
POND_B	161.35	.51	35.23	.00	.00	35.01
POND_C	138.93	1.69	47.00	.00	.00	51.16
POND_J	143.26	2.00	40.36	.00	19.46	40.50
POND_K	168.57	1.68	24.25	.00	.00	19.46
OFFWEST	110.00	32.49	95.40	.00	51.16	.00
OFFEAST	136.00	8.14	.00	.00	35.01	.00

TABLE 8.2
 6/9/94

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 6-9-1994

NODAL MAXIMUM CONDITIONS REPORT
 =====

NODE ID	STAGE (ft)	VOLUME (af)	<----- RUNOFF (cfs)	INFLOW OFFSITE (cfs)	-----> OTHER (cfs)	OUTFLOW (cfs)
POND_1A	137.14	6.45	15.90	.00	9.02	7.69
POND_1B	137.14	20.69	96.10	.00	7.69	3.10
POND_2	112.54	5.56	15.61	.00	3.10	.00
POND_3	140.11	4.99	30.13	.00	.00	2.16
POND_4	182.92	.51	2.05	.00	.00	.00
POND_J	142.78	1.71	16.30	.00	4.99	9.02
POND_K	168.29	1.55	10.01	.00	.00	4.99
OFFWEST	110.00	1.40	.00	.00	2.16	.00
OFFEAST	136.00	.00	.00	.00	.00	.00

TABLE B.3
 6/9/94

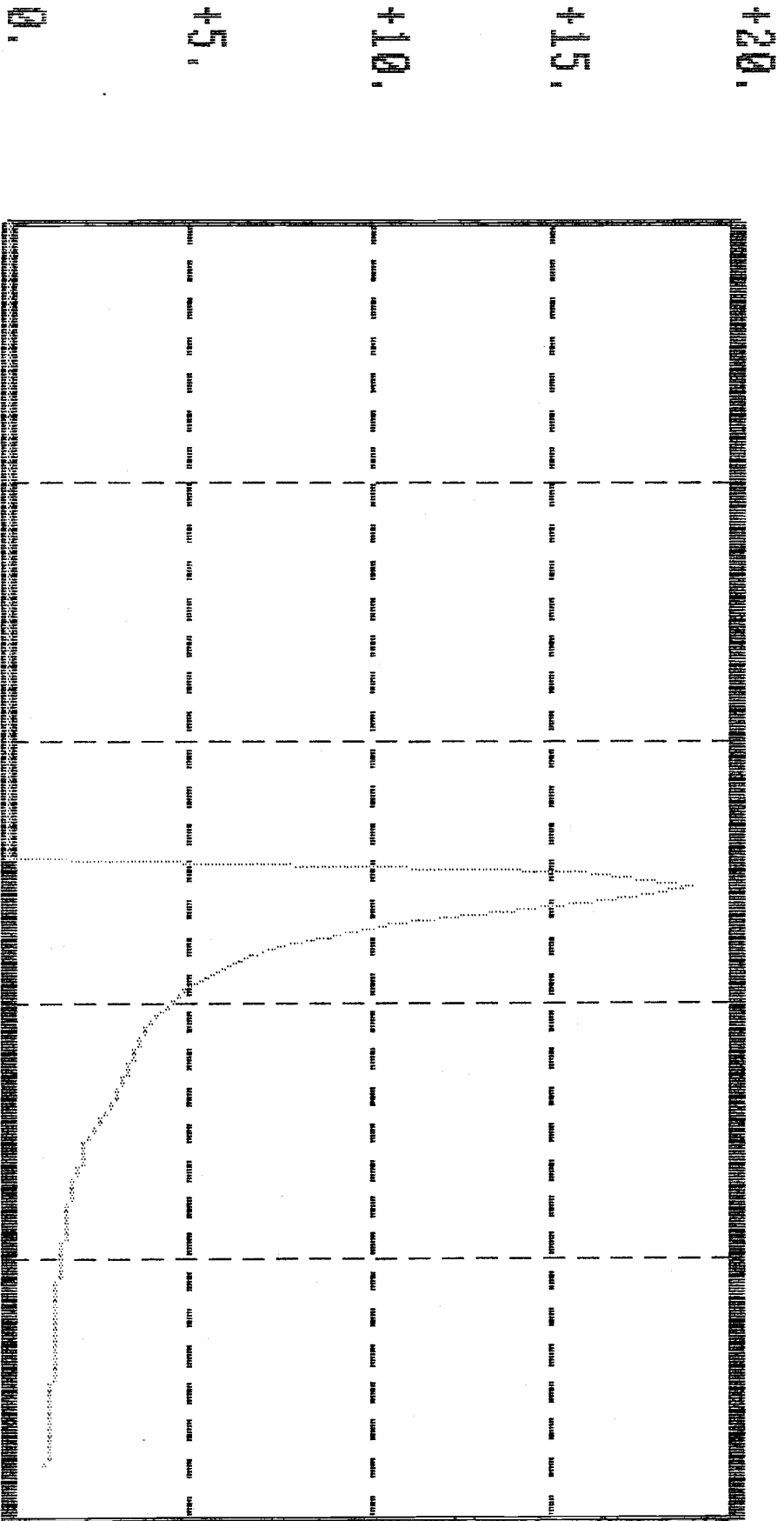
GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 6-9-1994

NODAL MAXIMUM CONDITIONS REPORT
 =====

NODE ID	STAGE (ft)	VOLUME (af)	INFLOW			OUTFLOW (cfs)
			RUNOFF (cfs)	OFFSITE (cfs)	OTHER (cfs)	
POND_1A	137.60	7.27	34.29	.00	40.49	32.22
POND_1B	137.60	23.45	199.68	.00	32.22	27.93
POND_2	119.32	23.39	59.42	.00	27.93	10.85
POND_3	140.37	5.83	70.82	.00	.00	13.24
POND_4	183.53	.67	5.52	.00	.00	.39
POND_J	143.26	2.00	40.28	.00	19.48	40.49
POND_K	168.57	1.68	24.28	.00	.00	19.48
OFFWEST	110.00	24.06	.00	.00	13.24	.00
OFFEAST	136.00	.00	.00	.00	.00	.00

TABLE 6.4
 6/9/94

NOISE PROFILE



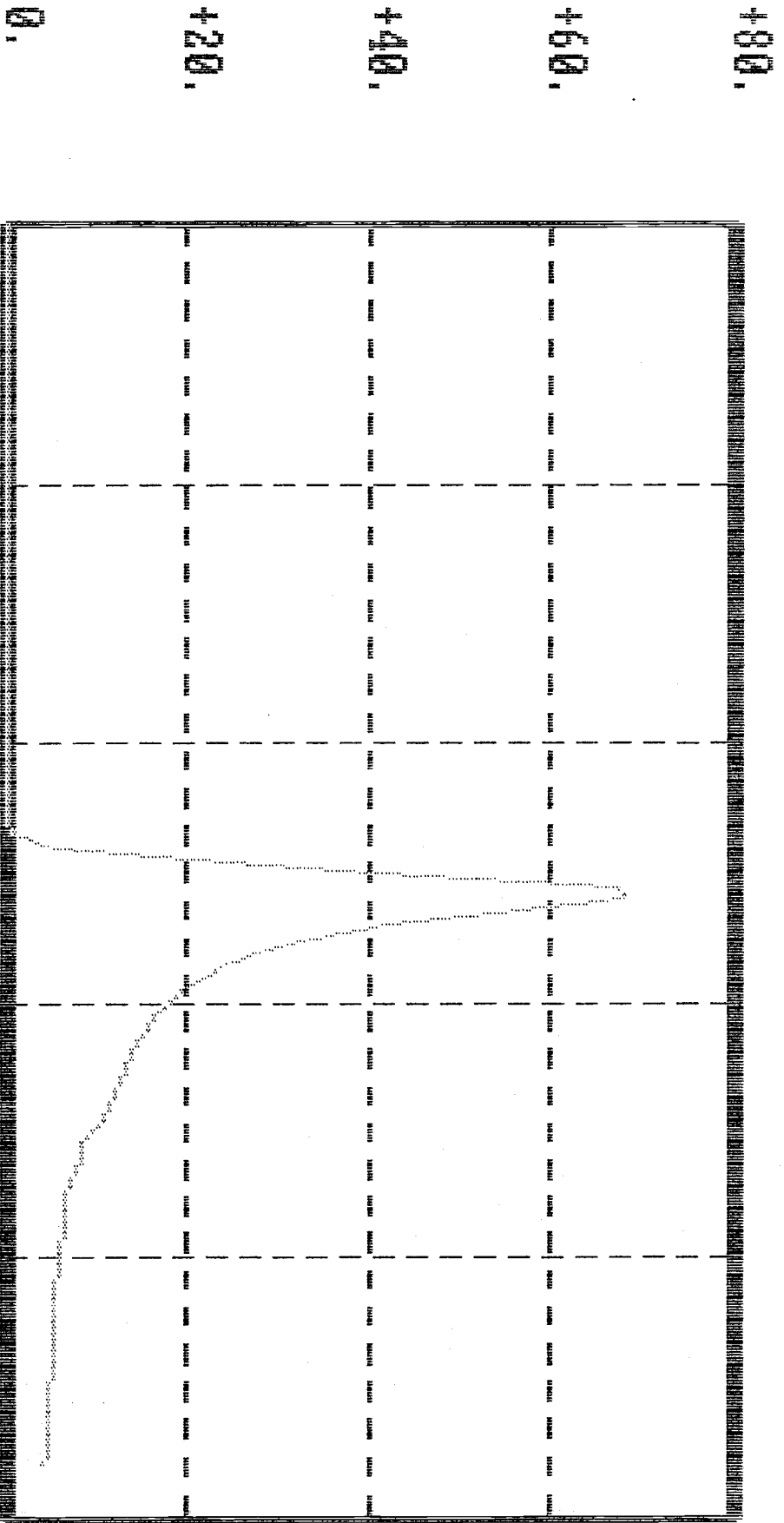
TIME in hours

0, +5, +10, +15, +20, +25.

25/24 PRE
46765.04

1/1/74

FORM: OUTPUT



TIME in hours

0, +5, +10, +15, +20, +25,

LEVEL

0, +20, +40, +60, +80,

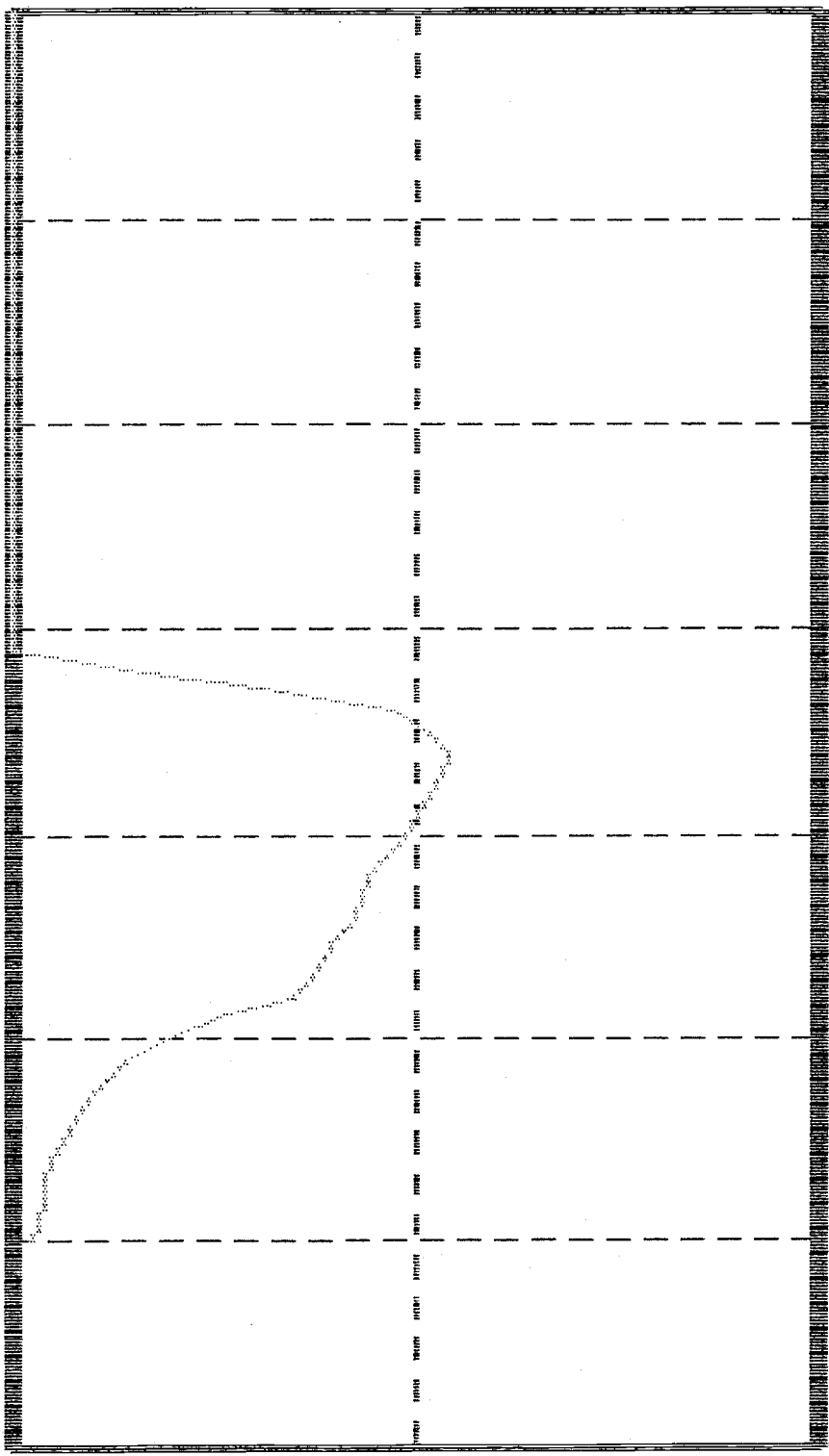
25/24 PRE
46765.04
6/11/1964

WIRE CENTER

+4

+2

0



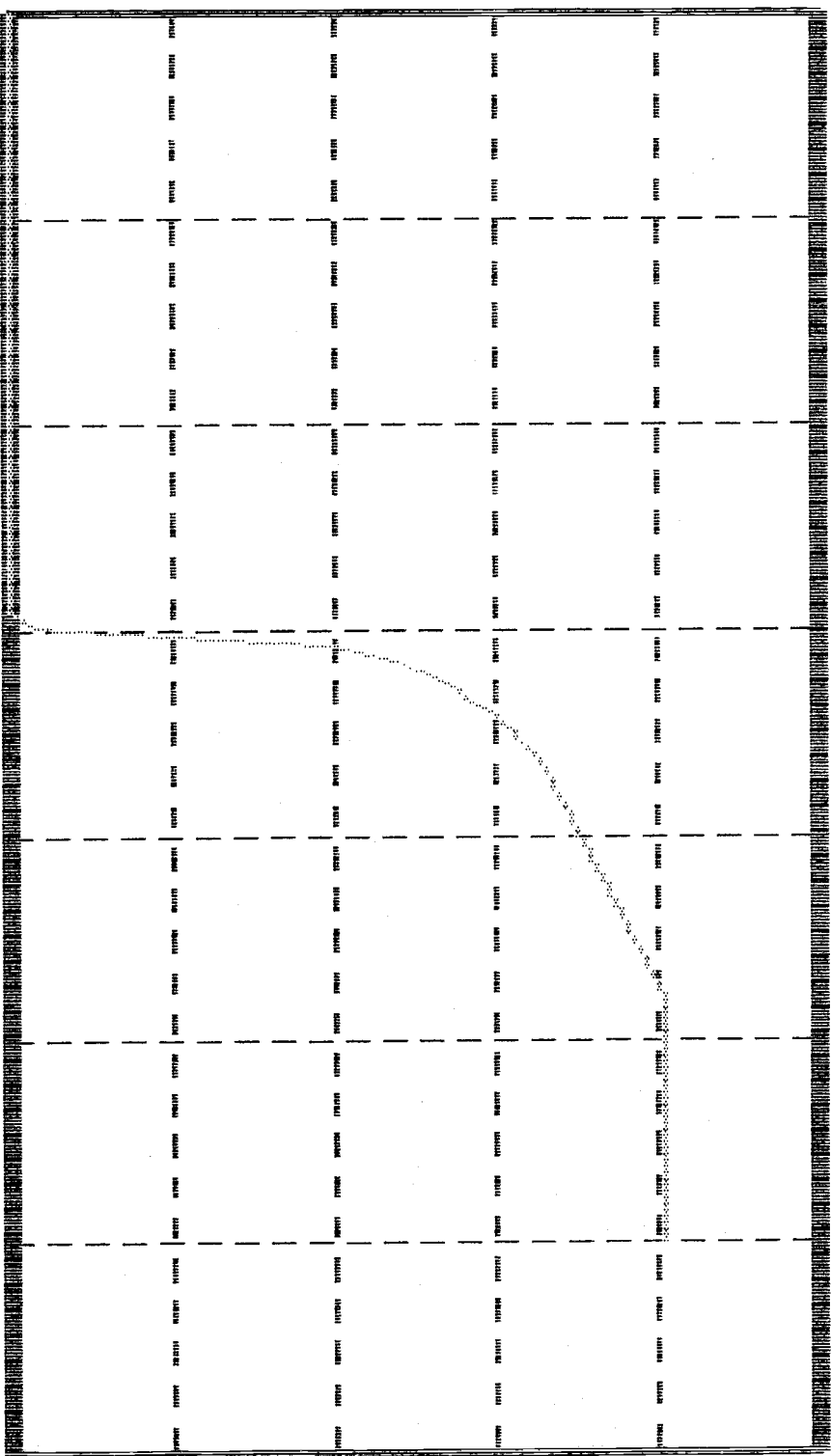
TIME IN HOURS

25/24 POST

6/14/94

NO. 01151

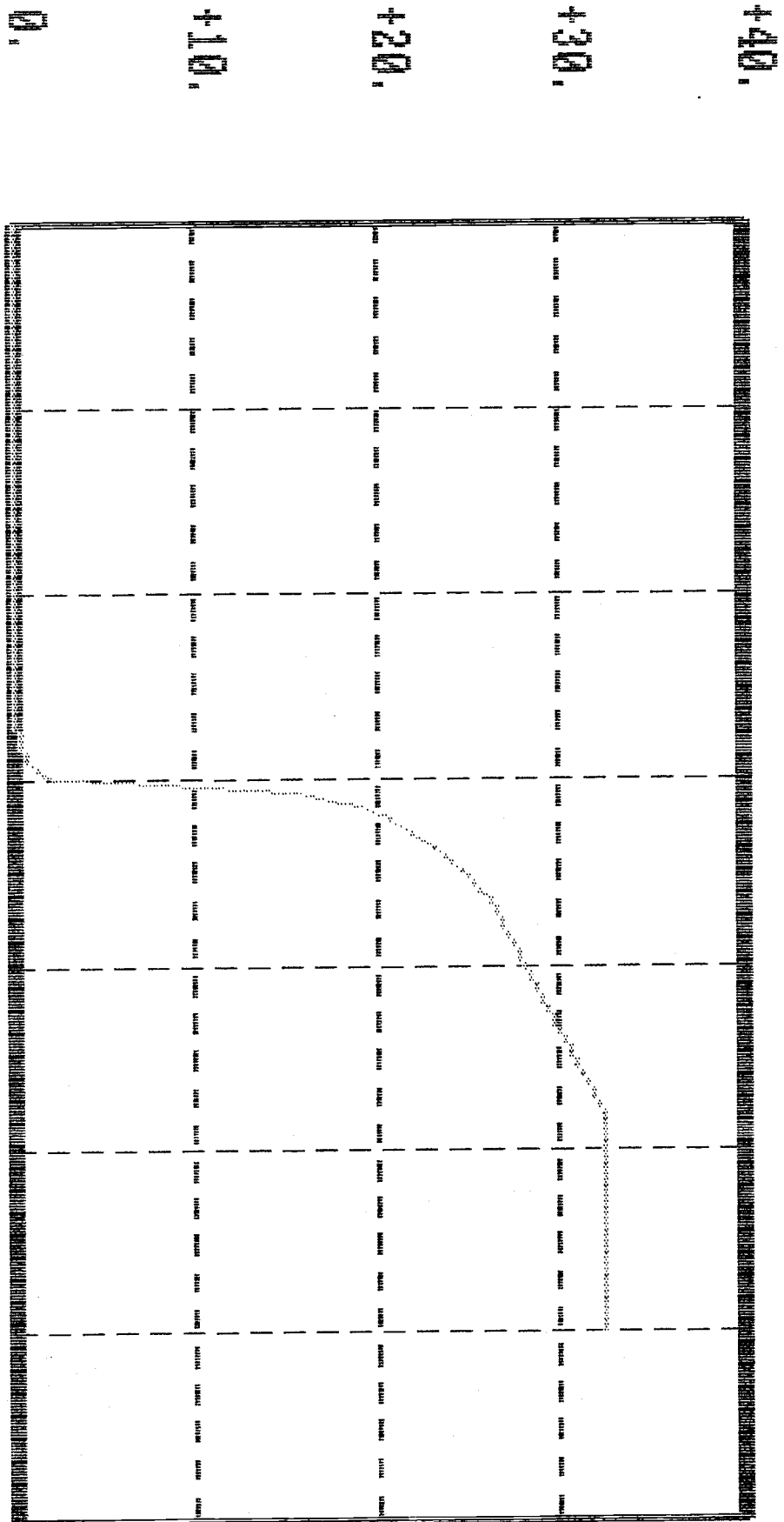
+10.
+8.
+6.
+4.
+2.
0.



TIME in hours

25/196 PRC
56765-04

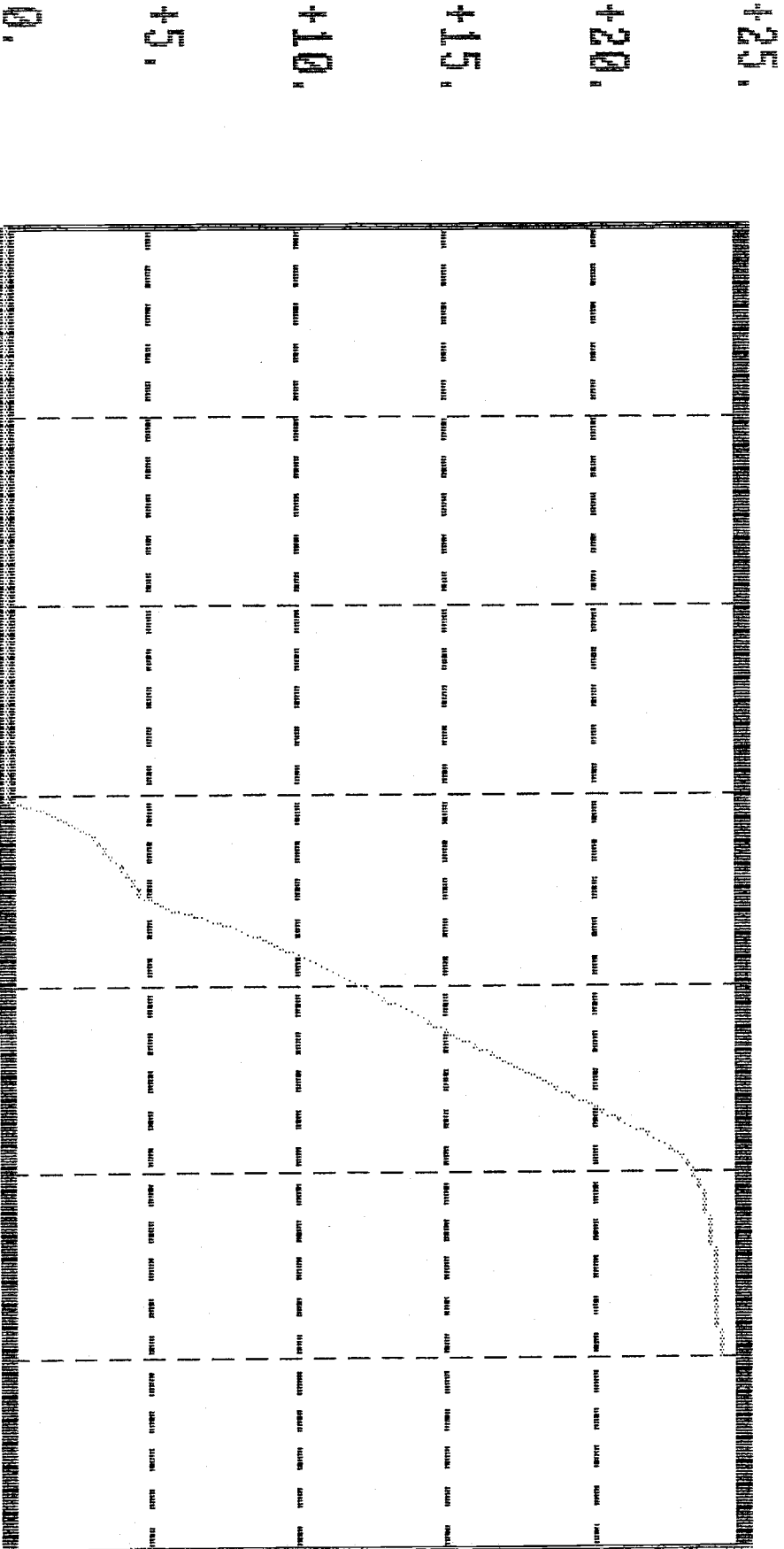
NO. 000001



TIME IN HOURS

25/96 PRE
56765.04
6/14/94

WIND CURRENT



TIME in hours

25/96 POST
 56765.04
 6/14/94

SECTION 7

POLLUTION ABATEMENT VOLUMES
 GREATER PINES PHASES 2 & 3
 POST-DEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993 - REVISED 6/9/1994

AREAS TRIBUTARY TO POND 1:

BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	POLLUTION ABATEMENT VOLUME REQUIRED (AC-FT)
100A	2.16	0.00	0.00	0.00	2.16	0.180
100B	7.44	0.00	0.00	0.00	7.44	0.620
101A	1.15	0.00	0.19	0.19	0.96	0.096
101B	4.18	0.00	0.69	0.69	3.49	0.348
102	0.07	0.03	0.00	0.03	0.04	0.006
103	0.62	0.08	0.04	0.12	0.50	0.052
104	2.60	0.58	0.18	0.76	1.84	0.217
105	0.26	0.10	0.00	0.10	0.16	0.022
106	2.82	0.58	0.04	0.62	2.20	0.235
107	1.62	0.83	0.00	0.83	0.79	0.154
108	0.60	0.12	0.05	0.17	0.43	0.050
109	1.95	0.62	0.07	0.69	1.26	0.163
110	1.82	0.25	0.19	0.44	1.38	0.152
111	2.40	0.33	0.28	0.61	1.79	0.200
112	1.28	0.50	0.00	0.50	0.78	0.107
113	0.94	0.25	0.07	0.32	0.62	0.078
114	2.34	0.72	0.14	0.86	1.48	0.195
115	1.65	0.33	0.19	0.52	1.13	0.138
116	2.17	1.00	0.05	1.05	1.12	0.200
117	0.94	0.50	0.00	0.50	0.44	0.091
118	3.70	0.54	0.44	0.98	2.72	0.308
119	1.28	0.29	0.12	0.41	0.87	0.107
120	1.65	0.66	0.00	0.66	0.99	0.138
121	1.25	0.25	0.11	0.36	0.89	0.104
122	1.67	0.25	0.11	0.36	1.31	0.139
123	1.12	0.17	0.09	0.26	0.86	0.093
124	0.96	0.17	0.09	0.26	0.70	0.080
125	1.98	0.21	0.09	0.30	1.68	0.165
126	1.85	0.42	0.18	0.60	1.25	0.154
127	2.08	0.66	0.11	0.77	1.31	0.173
128	1.49	0.00	0.32	0.32	1.17	0.124
129	1.75	0.69	0.00	0.69	1.06	0.146
130	3.51	0.85	0.28	1.13	2.38	0.293
131	1.80	0.33	0.11	0.44	1.36	0.150
132	1.32	0.33	0.14	0.47	0.85	0.110
133	1.42	0.33	0.14	0.47	0.95	0.118
134	2.08	0.50	0.21	0.71	1.37	0.173
135	1.60	0.58	0.07	0.65	0.95	0.134
TOTALS	71.52	14.05	4.79	18.84	52.68	6.012

POND 1A
 POND 1B
 POND 1A
 POND 1B

POND 1B
 POND 1A
 POND 1B
 POND 1B
 POND 1B
 POND 1A
 POND 1B

POND 1B

TABLE 9.1
 6/11/94

POLLUTION ABATEMENT VOLUMES
 GREATER DINEO PHASES 2 & 3
 POST-DEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993 - REVISED 6/9/1994

PAGE 2

AREAS TRIBUTARY TO POND 2:

BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	POLLUTION ABATEMENT VOLUME REQUIRED (AC-FT)
200	22.35	0.00	0.00	0.00	22.35	1.863
201	2.45	0.16	0.44	0.60	1.85	0.204
202	0.75	0.12	0.05	0.17	0.58	0.063
203	12.80	0.12	0.05	0.17	12.63	1.067
TOTALS	38.35	0.40	0.54	0.94	37.41	3.196

AREAS TRIBUTARY TO POND 3:

BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	POLLUTION ABATEMENT VOLUME REQUIRED (AC-FT)
300	8.23	0.00	0.00	0.00	8.23	0.686
301	1.00	0.29	0.00	0.29	0.71	0.083
302	2.00	0.29	0.14	0.43	1.57	0.167
303	1.97	0.00	0.00	0.00	1.97	0.164
304	3.37	0.50	0.35	0.85	2.52	0.281
305	1.90	0.42	0.18	0.60	1.30	0.158
306	1.33	0.25	0.11	0.36	0.97	0.111
307	2.10	0.46	0.19	0.65	1.45	0.175
308	1.95	0.50	0.21	0.71	1.24	0.163
309	0.14	0.05	0.00	0.05	0.09	0.012
310	2.10	0.46	0.19	0.65	1.45	0.175
311	2.10	0.37	0.16	0.53	1.57	0.175
312	0.71	0.21	0.00	0.21	0.50	0.059
313	0.50	0.00	0.07	0.07	0.43	0.042
314	0.41	0.15	0.04	0.19	0.22	0.037
315	2.28	0.00	0.26	0.26	2.02	0.190
TOTALS	32.09	3.95	1.90	5.85	26.24	2.68

POND 3

POND 3
 POND 4
 POND 4

NOTES:

1. AREA OF IMPERVIOUS = DCIA + NDCIA.
2. REQUIRED VOLUME FOR ON-LINE PONDS IS THE GREATER OF:
 - a) 0.5 INCH RUNOFF OVER THE ENTIRE AREA, OR
 - b) 1.25 INCHES RUNOFF OVER THE IMPERVIOUS AREA, BOTH, PLUS 0.5 INCH OVER THE ENTIRE AREA.

TABLE 9.1
6/14/94



STAGES OF PONDS FOR REQUIRED POLLUTION ABATEMENT VOLUMES :

(REFER TO STAGE/AREA/STORAGE DATA IN ROUTINGS)

POND 1A

W.Q.H. REQUIRED = 0.61 ACFT FROM EL. 137 TO 136.5

TOTAL VOL STORED = 6.17 ACFT FROM EL. 137 TO 132.0

POND AVE WIDTH = 168 FT

POND AVE LENGTH = 320 FT

POND 1B

W.Q.H. REQUIRED = 5.40 ACFT FROM EL. 137 TO 136.0

TOTAL VOL STORED = 19.9 ACFT FROM EL. 137 TO 132.0

POND AVE WIDTH = 159.3 FT

POND AVE LENGTH = 1100 FT

POND 2

W.Q.H. REQUIRED = 3.20 ACFT FROM EL. 119 TO 117.9

TOTAL VOL STORED = 17.6 ACFT FROM EL. 119 TO 109

POND AVE WIDTH = 207 FT

POND AVE LENGTH = 370 FT

POND 3

W.Q.H. REQUIRED = 2.45 ACFT FROM EL. 140 TO 139.1

TOTAL VOL STORED = 4.63 ACFT FROM EL. 140 TO 138

POND AVE WIDTH = 305.6 FT

POND AVE LENGTH = 330 FT

Conklin, Porter and Holmes

cph

ENGINEERS, INC.
500 W. FULTON STREET
POST OFFICE BOX 2808
SANFORD, FLORIDA 32772-2808
TEL 407 322-6641 TEL 407 831-5717

Temp. Sheet No. _____

Calc. by Tom Date 6/14/94

Checked by _____ Date _____

Job No. C-167125.04

SUBJECT GREAT PINES PH 2 & 3 Div. of Work _____ Sheet No. 2 of _____

POND 4

WQV, REQUIRED = 0.23 ACFT FROM EL. 183.5 TO 182.8
TOTAL VOL. STORED = 0.59 ACFT FROM EL 183.5 TO 181.0

POND AVE WIDTH = 51.4 FT

POND AVE LENGTH = 200 FT

ADDITIONAL DRAWDOWN MODELING DATA:

1. PERMEABILITY - FROM THE SEEPAGE ANALYSIS FOR GREATER PINES PHASE I (PN 92-50122) AN AVE. COEFFICIENT OF PERMEABILITY OF 28 FPD WAS REPORTED FROM SOIL BORINGS. THIS VALUE WAS ASSUMED FOR BOTH VERTICAL & HORIZONTAL PERMEABILITIES FOR THIS ANALYSIS.
2. "CONFINING LAYER" - NO CONFINING LAYER WAS ENCOUNTERED IN BORINGS. WILL ASSUME FOR MODEL THAT THE CONFINING LAYER IS 16 FT BELOW POND BOTTOM.
3. GROUNDWATER TABLE - NO GWT WAS ENCOUNTERED FROM BORINGS. WILL ASSUME FOR MODEL THAT GWT IS 2.0 FT ABOVE CONFINING LAYER ELEV.
4. EFFECTIVE SOIL STORAGE COEF. - WILL CONSERVATIVELY ESTIMATE TO BE 0.20



DETAILED SUMMARY

POND #	TIME TO EVALUATE THE W.Q.V. (HRS)	TIME TO EVACUATE ENTIRE POND (DAYS)
POND 1A	7 HRS	4.4 DAYS
POND 1B	16 HRS	8.7 DAYS
POND 2	13 HRS	14 DAYS
POND 3	31 HRS	3 DAYS
POND 4	5 HRS	0.7 DAYS

POLLUTION ABATEMENT VOLUME ANALYSIS
USING 'MODRET 4' PROGRAM

Written by: Nicolas E. Andreyev, P.E. (May, 1992)
(Sponsored by: SWPMD/PSI)

SUMMARY OF INPUT PARAMETERS

=====

POND NAME / NUMBER : POND 1A

AVERAGE WETTED POND LENGTH =====>	320.000 ft
AVERAGE WETTED POND WIDTH =====>	168.000 ft
AVERAGE ELEVATION OF BOTTOM OF AQUIFER =====>	116.000 ft
AVERAGE ELEVATION OF DESIGN GROUNDWATER TABLE --->	118.000 ft
AVERAGE ELEVATION OF POND BOTTOM =====>	132.000 ft
AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY =====>	28.000 ft/d
AVERAGE EFFECTIVE STORAGE COEFF. OF SOIL =====>	0.200
AVERAGE STORAGE COEFFICIENT OF POND AREA =====>	1.000
POLLUTION ABATEMENT VOLUME TO BE TREATED =====>	6.170 ac-ft
TIME INCREMENTS AFTER STORM EVENT =====>	24.00 hours
No. OF TIME INCREMENTS AFTER STORM EVENT =====>	14.00
NUMBER OF GROUNDWATER CONTROL FEATURES =====>	0.00

SUMMARY OF POLLUTION ABATEMENT MODEL RESULTS

POND NAME / No.: POND 1A

CUMULATIVE TIME (hrs.)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)
0.000	136.999	1.404 *	1.2005
24.000	135.070	0.997	0.7933
48.000	133.795	0.675	0.5559
72.000	132.902	0.491	0.4257
96.000	132.218	0.387	0.3487
120.000	131.657	0.321	0.2927
144.000	131.187	0.275	0.2569
168.000	130.774	0.242	0.2263
192.000	130.410	0.215	0.2043
216.000	130.082	0.195	0.1851
240.000	129.784	0.177	0.1696
264.000	129.512	0.163	0.1566
288.000	129.260	0.152	0.1472
312.000	129.023	0.141	0.1354
336.000	128.806		

* This value (with associated time) is an equivalent instantaneous infiltration rate to be used with a stormwater routing model (such as ADICPR or others). Just before this time, the infiltration is zero (prior to runoff reaching the pond).

POLLUTION ABATEMENT VOLUME ANALYSIS
USING 'MODRET 4' PROGRAM

Written by: Nicolas E. Andreyev, P.E. (May, 1992)
(Sponsored by: SWFWMD/PSI)

SUMMARY OF INPUT PARAMETERS
=====

POND NAME / NUMBER : POND 1B

AVERAGE WETTED POND LENGTH =====>	1100.000 ft
AVERAGE WETTED POND WIDTH =====>	157.300 ft
AVERAGE ELEVATION OF BOTTOM OF AQUIFER =====>	116.000 ft
AVERAGE ELEVATION OF DESIGN GROUNDWATER TABLE ===>	118.000 ft
AVERAGE ELEVATION OF POND BOTTOM =====>	132.000 ft
AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY =====>	28.000 ft/d
AVERAGE EFFECTIVE STORAGE COEFF. OF SOIL =====>	0.200
AVERAGE STORAGE COEFFICIENT OF POND AREA =====>	1.000
POLLUTION ABATEMENT VOLUME TO BE TREATED =====>	19.860 ac-ft
TIME INCREMENTS AFTER STORM EVENT =====>	24.00 hours
No. OF TIME INCREMENTS AFTER STORM EVENT =====>	14.00
NUMBER OF GROUNDWATER CONTROL FEATURES =====>	0.00

SUMMARY OF POLLUTION ABATEMENT MODEL RESULTS

POND NAME / No.: POND 1B

CUMULATIVE TIME (hrs.)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)
0.000	137.000	3.764 *	
			3.1168
24.000	135.443	2.470	
			1.8224
48.000	134.533	1.534	
			1.2450
72.000	133.912	1.095	
			0.9446
96.000	133.440	0.858	
			0.7710
120.000	133.055	0.718	
			0.6642
144.000	132.723	0.627	
			0.5908
168.000	132.428	0.562	
			0.5324
192.000	132.162	0.509	
			0.4856
216.000	131.920	0.473	
			0.4606
240.000	131.690	0.441	
			0.4206
264.000	131.480	0.412	
			0.4039
288.000	131.278	0.387	
			0.3705
312.000	131.093	0.360	
			0.3487
336.000	130.919		

* This value (with associated time) is an equivalent instantaneous infiltration rate to be used with a stormwater routing model (such as ADICPR or others). Just before this time, the infiltration is zero (prior to runoff reaching the pond).

POLLUTION ABATEMENT VOLUME ANALYSIS
USING 'MODRET 4' PROGRAM

Written by: Nicolas E. Andreyev, P.E. (May, 1992)
(Sponsered by: SWFWMD/PSI)

SUMMARY OF INPUT PARAMETERS
=====

POND NAME / NUMBER : POND 2

AVERAGE WETTED POND LENGTH =====>	370.000 ft
AVERAGE WETTED POND WIDTH =====>	207.000 ft
AVERAGE ELEVATION OF BOTTOM OF AQUIFER =====>	93.000 ft
AVERAGE ELEVATION OF DESIGN GROUNDWATER TABLE ==->	95.000 ft
AVERAGE ELEVATION OF POND BOTTOM =====>	109.000 ft
AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY =====>	28.000 ft/d
AVERAGE EFFECTIVE STORAGE COEFF. OF SOIL =====>	0.200
AVERAGE STORAGE COEFFICIENT OF POND AREA =====>	1.000
POLLUTION ABATEMENT VOLUME TO BE TREATED =====>	17.600 ac-ft
TIME INCREMENTS AFTER STORM EVENT =====>	24.00 hours
No. OF TIME INCREMENTS AFTER STORM EVENT =====>	14.00
NUMBER OF GROUNDWATER CONTROL FEATURES =====>	0.00

SUMMARY OF POLLUTION ABATEMENT MODEL RESULTS

POND NAME / No.: POND 2

CUMULATIVE TIME (hrs.)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)
0.000	119.010	2.141 *	
			1.8733
24.000	116.897	1.606	1.3385
48.000	115.387	1.145	0.9515
72.000	114.313	0.844	0.7358
96.000	113.483	0.671	0.6058
120.000	112.800	0.558	0.5112
144.000	112.223	0.480	0.4484
168.000	111.718	0.421	0.3945
192.000	111.272	0.376	0.3583
216.000	110.868	0.339	0.3199
240.000	110.508	0.308	0.2962
264.000	110.173	0.284	0.2722
288.000	109.866	0.264	0.2552
312.000	109.578	0.246	0.2364
336.000	109.312		

* This value (with associated time) is an equivalent instantaneous infiltration rate to be used with a stormwater routing model (such as ADICPR or others). Just before this time, the infiltration is zero (prior to runoff reaching the pond).

POLLUTION ABATEMENT VOLUME ANALYSIS
USING 'MODRET 4' PROGRAM

Written by: Nicolas E. Andreyev.P.E. (May, 1992)
(Sponsored by: SWFWMD/PSI)

SUMMARY OF INPUT PARAMETERS

=====

POND NAME / NUMBER : POND 3

AVERAGE WETTED POND LENGTH =====>	330.000 ft
AVERAGE WETTED POND WIDTH =====>	305.600 ft
AVERAGE ELEVATION OF BOTTOM OF AQUIFER =====>	122.000 ft
AVERAGE ELEVATION OF DESIGN GROUNDWATER TABLE ===>	124.000 ft
AVERAGE ELEVATION OF POND BOTTOM =====>	138.000 ft
AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY =====>	28.000 ft/d
AVERAGE EFFECTIVE STORAGE COEFF. OF SOIL =====>	0.200
AVERAGE STORAGE COEFFICIENT OF POND AREA =====>	1.000
POLLUTION ABATEMENT VOLUME TO BE TREATED =====>	4.630 ac-ft
TIME INCREMENTS AFTER STORM EVENT =====>	24.00 hours
No. OF TIME INCREMENTS AFTER STORM EVENT =====>	14.00
NUMBER OF GROUNDWATER CONTROL FEATURES =====>	0.00

SUMMARY OF POLLUTION ABATEMENT MODEL RESULTS

POND NAME / No.: POND 3

CUMULATIVE TIME (hrs.)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)
0.000	140.000	0.850 *	
			0.8344
24.000	139.285	0.819	
			0.8034
48.000	138.597	0.736	
			0.6692
72.000	138.023	0.609	
			0.5486
96.000	137.553	0.506	
			0.4630
120.000	137.157	0.450	
			0.3969
144.000	136.817	0.372	
			0.3463
168.000	136.520	0.330	
			0.3132
192.000	136.252	0.298	
			0.2821
216.000	136.010	0.270	
			0.2587
240.000	135.788	0.249	
			0.2393
264.000	135.583	0.231	
			0.2218
288.000	135.393	0.216	
			0.2101
312.000	135.213	0.200	
			0.1906
336.000	135.050		

* This value (with associated time) is an equivalent instantaneous infiltration rate to be used with a stormwater routing model (such as ADICPR or others). Just before this time, the infiltration is zero (prior to runoff reaching the pond).

POLLUTION ABATEMENT VOLUME ANALYSIS
USING 'MODRET 4' PROGRAM

Written by: Nicolas E. Andreyev, P.E. (May, 1992)
(Sponsored by: SWFWMD/PSI)

SUMMARY OF INPUT PARAMETERS

=====

POND NAME / NUMBER : POND 4

AVERAGE WETTED POND LENGTH =====>	200.000 ft
AVERAGE WETTED POND WIDTH =====>	51.400 ft
AVERAGE ELEVATION OF BOTTOM OF AQUIFER =====>	165.000 ft
AVERAGE ELEVATION OF DESIGN GROUNDWATER TABLE ===>	167.000 ft
AVERAGE ELEVATION OF POND BOTTOM =====>	181.000 ft
AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY =====>	28.000 ft/d
AVERAGE EFFECTIVE STORAGE COEFF. OF SOIL =====>	0.200
AVERAGE STORAGE COEFFICIENT OF POND AREA =====>	1.000
POLLUTION ABATEMENT VOLUME TO BE TREATED =====>	0.590 ac-ft
TIME INCREMENTS AFTER STORM EVENT =====>	24.00 hours
No. OF TIME INCREMENTS AFTER STORM EVENT =====>	14.00
NUMBER OF GROUNDWATER CONTROL FEATURES =====>	0.00

SUMMARY OF POLLUTION ABATEMENT MODEL RESULTS

POND NAME / No.: POND 4

CUMULATIVE TIME (hrs.)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)
0.000	183.500	0.594 *	0.4660
24.000	179.583	0.338	0.2094
48.000	177.823	0.171	0.1326
72.000	176.709	0.115	0.0968
96.000	175.896	0.086	0.0757
120.000	175.259	0.069	0.0619
144.000	174.739	0.057	0.0518
168.000	174.304	0.048	0.0442
192.000	173.932	0.041	0.0383
216.000	173.611	0.036	0.0340
240.000	173.325	0.032	0.0298
264.000	173.075	0.028	0.0272
288.000	172.847	0.026	0.0247
312.000	172.639	0.024	0.0225
336.000	172.450		

* This value (with associated time) is an equivalent instantaneous infiltration rate to be used with a stormwater routing model (such as ADICFR or others). Just before this time, the infiltration is zero (prior to runoff reaching the pond).

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Drainage Calculations

GREATER PINES PHASES 2 & 3

SJRWMD Permit Modification
Submitted 12/28/93

CPH Job No. G6765.04

Paul
12/28/93

DRAINAGE CALCULATIONS
GREATER PINES PHASES 2 AND 3
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1.0 SUMMARY

This modification consists of the addition of Phases 2 & 3 to the already permitted Phase 1 of Greater Pines subdivision. Greater Pines is a 303 acre, 572 single family unit subdivision in south Lake County, on Hancock Road, south of U.S. 50. Phase 1 was previously permitted by the SJRWMD under permit # 4-069-0276.

The attached calculations and exhibits detail the pre- and post-development stormwater drainage conditions for the 2nd and 3rd phases of the Greater Pines Development in southern Lake County. These two phases consist of approximately 119 acres at the south end of the Greater Pines Development. Figure 1.1 is a site location map shown on the USGS topographic base, showing the location of these three phases relative to the overall site, and the overall site location relative to adjacent points of interest. The development proposed under this permit consists of the construction of approximately 200 single-family homes and the roadways and storm drainage facilities to serve them. These are the second and third phases of a 6-phase project.

Two storm events were analyzed. The first was a 25-year frequency, 24-hour, 8.3 inch storm for which pre-post rate determinations have been analyzed. The second event was a 25-year, 96-hour storm event analyzed to establish the pre and post volumes of runoff arriving at the project boundaries. This was done because such an analysis was required by the District for Phase 1.

The analysis indicated two measurement points for comparison of pre and post development runoff rates and volumes. The first was offsite to the east across Hancock Road - onto properties owned by others. This drainage path is labelled "OFFEAST" in the calculations. The second was offsite to the west onto other future phases of this development, on to land owned by the applicant. This drainage path is labelled "OFFWEST" in the calculations.

Table 1.1 (attached) summarizes the results of the calculations. As can be seen from Table 1.1, runoff in the postdevelopment condition is less in rate for the 25-year, 24-hour event and in

volume for the 25-year, 96-hour event than the corresponding predevelopment runoff for each of the measurement points.

Pollution abatement volumes have been provided within the proposed retention ponds in sufficient volume to meet the Water Management District criteria for on-line retention ponds. Volume calculations and drawdown analyses (Modret) are presented.

There are no wetlands within Phases 2 & 3 of this project.

CLERMONT

ORLANDO

STATE ROAD NO. 50

N
OPEN

PHASE 1 (EXIST)

PHASE 2

PHASE 3

HANCOCK RD

Lake Felter

Wilma Lake

Lost Lake

VICINITY MAP

1" = 2,000'

ROAD CLASSIFICATION

- Heavy-duty —————
- Medium-duty —————
- Light-duty - - - - -
- Unimproved dirt
- U.S. Route (rectangle symbol)
- State Route (circle symbol)



CLERMONT EAST, FLA.
N2830—W8137.5/7.5

1962
PHOTOREVISED 1980
DMA 4641 II SW—SERIES V847

FIGURE 1.1

TABLE 1.1**SUMMARY OF RESULTS****GREATER PINES PHASES 2 & 3
CPH Job No. G6765.04**

ITEM	PREDEVELOPED CONDITION	POSTDEVELOPED CONDITION
I.) 25 Year Frequency/24-Hour Duration Event		
A) Runoff rate offsite to the East (OFFEAST)	18.8 CFS	0.0 CFS
B) Runoff rate offsite to the West (OFFWEST)	49.8 CFS	2.3 CFS
II.) 25 Year Frequency/96-Hour Duration Event		
A) Runoff volume offsite to the East (OFFEAST)	8.1 ACFT	0.0 ACFT
B) Runoff volume offsite to the West (OFFWEST)	23.7 ACFT	22.7 ACFT

2.0 SITE DATA

2.1 Site Description and Location

Phases 2 & 3 of Greater Pines consists of an approximate 119 acre area on which 200 single-family homes and the appurtenant streets, water system and stormwater system are to be built. These phases are part of an overall 303 acre, approximately 600 home development. The first phase of the development has been constructed; these are the next two proposed phases. The developed first phase of Greater Pines is tributary in both the pre and post developed conditions to a common pond area with Phase 2 & 3.

2.2 Project Description

The purpose of this analysis is to demonstrate that the amount of stormwater retention provided in the development condition is sufficient to attenuate the peak runoff rates postdevelopment for the site to equal or be less than the predevelopment case, and also to provide retention as necessary to reduce the runoff volume postdevelopment to be less than or equal to the predevelopment runoff for the 25-year, 96-hour event. Moreover, pollution abatement volume has been provided within the proposed retention ponds to meet that portion of the Water Management District criteria.

3.0 ANALYSIS METHODOLOGY

3.1 Site Topography, Soils and Cover

The site topography and soils for both the predevelopment and post development conditions may be seen on the attached enclosures labeled "A", "B" and "C". Site cover was determined from observation prior to development and consisted of vacant land where previously orange groves had been frozen out, as well as a planted pine grove. The site is now grown up with brush. Most of the orange trees are dead and are to be totally removed as part of this construction. The predeveloped and postdeveloped conditions presented herein uses Greater Pines Phase 1 in a developed state -- it's present condition.

3.2 Time of Concentration Determinations

Time of concentration for the development has been determined by breaking the site into topographic basins, determining flow paths lengths, distance of overland flow, etc. to determine, on a basin by basin basis, the time of concentration. The time of concentration for the first 300' of path length was determined by the methodology shown in the SCS TR-55 publication for sheet flow (see pages 33 and 34 of SCS TR-55), and the remainder of the path lengths was evaluated for time of concentration using flow rates of 30' per minute over grass conditions and 120' per minute over pavement.

3.3 SCS Curve Number Generation

Soils Conservation Service curve numbers were generated for each of the predevelopment and postdevelopment basins using methodology presented in SCS publication TR-55, as well as the National Engineering Handbook #4 from that same organization. The impervious areas were estimated using 1/2 of the house area, the sidewalk and 1/2 of the pavement in front of each unit as directly connected impervious (DCIA) and the remaining 1/2 of the house area as non-directly connected impervious (NDCIA); except in basins where the roadway predominated.

3.4 Predevelopment Hydrograph Generation

Predevelopment hydrographs were generated for the 25-year frequency 24-hour duration storm of approximately 8.3 inches and the 25-year frequency 96-hour duration storm of approximately

11.9 inches using SCS hydrograph methods with a peaking factor of 484 for the undeveloped basin and the Santa Barbara Urban Hydrographs method for the developed basins. Rainfall distributions used were Type III for the 25-year 24-hour event, and the rainfall distribution published by the Water Management District for the 25-year 96-hour event.

3.5 Predevelopment Retention Ponds & Routing

The predevelopment hydrographs (including hydrographs for the completed Phase 1 development) were routed through the natural depressions shown on the predevelopment basin map and, for Phase 1 basins, through the ponds created for Phase 1 to determine the predevelopment routed runoff.

3.6 Postdevelopment Retention Ponds

Three retention ponds are proposed to serve Phases 2 & 3. The first is an enlargement of the SE and SW ponds previously permitted in Phase 1 and takes the place of those ponds. The second and third ponds are proposed to be temporary ponds, to be replaced when subsequent phases of Greater Pines are permitted and built. Plans for each of these basins were used to determine their stage storage relationships; outfall parameters for each of ponds were determined to rate the outflow from each pond and be able to route the runoff through that pond.

3.7 Postdevelopment Hydrograph Generation

Hydrographs for the postdevelopment condition were generated using the Santa Barbara Urban Hydrograph Method with SCS curve numbers and times of concentration as discussed above. A Type III rainfall distribution was assumed for the 25-year 24-hour event and the St. Johns River Water Management District distribution was used for the 25-year 96-hour event.

3.8 Postdevelopment Routing

Hydrographs generated for the postdevelopment condition were routed through the proposed retention ponds and outfall systems through the use of the Advanced Interconnected Pond Routing model published by Singhofen. This routing model uses the storage indicating method as its basis, as well as evaluates the effect of tail water conditions. The discharge from Phase 1 into the enlarged retention pond, common to Phases 1, 2 & 3, was included in these calculations.

3.9 Pollution Abatement

The retention pond and rear lot swale areas were evaluated to ensure that they would capture and percolate the required pollution abatement volume required by the Water Management District for on-line pond systems. This amount calculated as required retention is the larger of ½ inch over the whole site area or 1 ¼" over the impervious area, both plus ½" over the whole site area in as much as on-line ponds are proposed. In the case of the first pond proposed (Pond 1) under this permit, it was evaluated for both the pollution abatement volume for its directing tributary area from portions of Phase 1, as well as the tributary areas from Phases 2 & 3.

4.0 SITE TIME OF CONCENTRATION DETERMINATION

4.1 Predevelopment

Predevelopment time of concentrations for each of the basins were calculated by the methodology described in Section 3.0 and are presented in Table 4.1.

4.2 Postdevelopment

Postdevelopment time of concentration for each of the postdevelopment basins calculated per Section 3.0 may be seen on Table 4.2. The notes in that table further describe the calculation parameters used for the time of concentration determinations.

TIME OF CONCENTRATION
PRE-DEVELOPED CONDITION

G6765.04
12/23/1993

BASIN No.	PATH L (ft)	FIRST 300' OF PATH						REMAINING PATH				TIME Tt (min)
		L1-G (ft)	S1-G (ft/ft)	T1-G (min)	L1-C (ft)	S1-C (ft/ft)	T1-C (min)	L2-G (ft)	T2-G (min)	L2-C (ft)	T2-C (min)	
A	1250.0	300.0	0.012	23.9	0.0	0.000	0.0	950.0	31.7	0.0	0.0	55.6
B	1475.0	300.0	0.014	22.1	0.0	0.000	0.0	1175.0	39.2	0.0	0.0	61.2
C	1020.0	300.0	0.029	16.6	0.0	0.000	0.0	720.0	24.0	0.0	0.0	40.6
D	1775.0	300.0	0.028	16.9	0.0	0.000	0.0	1475.0	49.2	0.0	0.0	66.0
E	1600.0	0.0	0.000	0.0	300.0	0.014	2.8	0.0	0.0	1300.0	10.8	13.6
F	1225.0	0.0	0.000	0.0	300.0	0.011	3.0	0.0	0.0	925.0	7.7	10.7
G	600.0	300.0	0.011	24.5	0.0	0.000	0.0	300.0	10.0	0.0	0.0	34.5
H	1150.0	150.0	0.026	10.0	150.0	0.041	1.0	0.0	0.0	850.0	7.1	18.1
I	2500.0	0.0	0.000	0.0	300.0	0.050	1.7	1000.0	33.3	1200.0	10.0	45.0
J	600.0	300.0	0.022	18.6	0.0	0.000	0.0	150.0	5.0	150.0	1.3	24.8
K	1350.0	300.0	0.017	20.7	0.0	0.000	0.0	1050.0	35.0	0.0	0.0	55.7

NOTES:

- a) L1-G, S1-G & T1-G ARE LENGTH, SLOPE AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER GRASS IN 1ST 300 FT, USING SHEET FLOW FORMULAE FROM SCS TR55.
- b) L1-C, S1-C & T1-C ARE LENGTH, SLOPE AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER PAVED IN 1ST 300 FT, USING SHEET FLOW FORMULAE FROM SCS TR55.
- c) L2-G & T2-G ARE LENGTH AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER GRASS IN REMAINING PATH LENGTH @ 30 FPM.
- d) L2-C & T2-C ARE LENGTH AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER PAVED IN REMAINING PATH LENGTH @ 120 FPM.
- e) TRAVEL TIME (Tt) IS THE SUM OF TIME FOR FIRST 300 FT PLUS TIME FOR REMAINING PATH OR 10 MINUTE MINIMUM PER FDOT.

$$T1-C\&G = \{0.007(nL)^{0.8}\} / \{(P)^{0.5}(s)^{0.4}\}$$

Where:

- T = Time (hrs)
- L = Length (ft)
- s = slope (ft/ft)
- P = 2yr - 24hr Rainfall (in)
- n = Manning's roughness coefficient

Assumptions:

- n = 0.011 for concrete
- n = 0.15 for grass

TABLE 4.1

TIME OF CONCENTRATION
POST-DEVELOPED CONDITION

G6765.04

12/19/1993

PAGE 1

BASIN No.	PATH L (ft)	FIRST 300' OF PATH						REMAINING PATH				TIME Tt (min)
		L1-G (ft)	S1-G (ft/ft)	T1-G (min)	L1-C (ft)	S1-C (ft/ft)	T1-C (min)	L2-G (ft)	T2-G (min)	L2-C (ft)	T2-C (min)	
100	115	115	0.052	6.1	0	0.000	0.0	0	0.0	0	0.0	10.0
101	620	300	0.013	22.9	0	0.000	0.0	320	10.7	0	0.0	33.6
102	100	20	0.005	3.8	80	0.008	1.2	0	0.0	0	0.0	10.0
103	360	250	0.024	15.5	50	0.008	0.8	0	0.0	60	0.5	16.8
104	680	250	0.020	16.7	50	0.005	1.0	0	0.0	380	3.2	20.8
105	110	50	0.006	7.4	60	0.005	1.1	0	0.0	0	0.0	10.0
106	550	65	0.007	8.6	235	0.014	2.3	0	0.0	250	2.1	13.0
107	595	70	0.005	10.5	230	0.013	2.3	0	0.0	295	2.5	15.2
108	275	140	0.007	16.0	135	0.013	1.5	0	0.0	0	0.0	17.5
109	690	70	0.010	7.9	230	0.011	2.5	0	0.0	390	3.3	13.6
110	360	225	0.025	14.0	75	0.011	1.0	0	0.0	60	0.5	15.5
111	680	125	0.020	9.6	175	0.026	1.4	0	0.0	380	3.2	14.1
112	610	90	0.012	9.0	210	0.018	1.9	0	0.0	310	2.6	13.5
113	360	180	0.023	12.1	110	0.033	0.9	0	0.0	70	0.6	13.6
114	575	155	0.021	11.2	145	0.018	1.4	0	0.0	275	2.3	14.8
115	555	155	0.025	10.4	145	0.033	1.1	0	0.0	255	2.1	13.6
116	645	175	0.008	18.1	125	0.013	1.4	0	0.0	345	2.9	22.4
117	445	75	0.007	9.7	225	0.022	1.8	0	0.0	145	1.2	12.7
118	620	130	0.007	15.0	170	0.025	1.4	0	0.0	320	2.7	19.1
119	460	150	0.026	10.0	150	0.025	1.3	0	0.0	160	1.3	12.6
120	1500	80	0.005	11.7	220	0.022	1.8	0	0.0	1200	10.0	23.5
121	470	120	0.005	16.1	180	0.020	1.6	0	0.0	170	1.4	19.1
122	325	75	0.013	7.6	225	0.042	1.4	0	0.0	25	0.2	10.0
123	310	190	0.010	17.7	110	0.079	0.6	0	0.0	10	0.1	18.4
124	560	150	0.020	11.1	150	0.014	1.6	0	0.0	260	2.2	14.8
125	500	155	0.025	10.4	145	0.040	1.0	0	0.0	200	1.7	13.1
126	580	140	0.005	18.3	160	0.021	1.4	0	0.0	280	2.3	22.0
127	860	150	0.026	10.0	150	0.014	1.6	0	0.0	560	4.7	16.2
128	80	80	0.030	5.7	0	0.000	0.0	0	0.0	0	0.0	10.0
129	1220	300	0.010	25.5	0	0.000	0.0	0	0.0	920	7.7	33.1
130	620	150	0.030	9.4	150	0.005	2.4	0	0.0	320	2.7	14.5
131	770	155	0.006	18.4	145	0.005	2.3	0	0.0	470	3.9	24.7
132	450	140	0.006	17.0	160	0.008	2.1	0	0.0	150	1.3	20.3
133	500	160	0.010	15.4	140	0.008	1.9	0	0.0	200	1.7	18.9
134	700	140	0.005	18.3	160	0.005	2.5	0	0.0	400	3.3	24.1
135	680	40	0.005	6.7	260	0.005	3.7	0	0.0	380	3.2	13.6

TABLE 4.2

TIME OF CONCENTRATION
POST-DEVELOPED CONDITION

G6765.04
12/19/1993

PAGE 2

BASIN No	PATH L (ft)	FIRST 300' OF PATH						REMAINING PATH				TIME Tt (min)
		L1-G (ft)	S1-G (ft/ft)	T1-G (min)	L1-C (ft)	S1-C (ft/ft)	T1-C (min)	L2-G (ft)	T2-G (min)	L2-C (ft)	T2-C (min)	
200	220	220	0.113	7.5	0	0.000	0.0	0	0.0	0	0.0	10.0
201	90	90	0.020	7.4	0	0.000	0.0	0	0.0	0	0.0	10.0
202	460	300	0.020	19.3	0	0.000	0.0	0	0.0	160	1.3	20.6
300	100	100	0.070	4.9	0	0.000	0.0	0	0.0	0	0.0	10.0
301	550	30	0.006	5.0	270	0.018	2.3	0	0.0	250	2.1	10.0
302	420	150	0.033	9.1	150	0.061	0.9	0	0.0	120	1.0	10.9
303	1000	70	0.005	10.5	230	0.060	1.2	0	0.0	700	5.8	17.6
304	680	150	0.046	7.9	150	0.061	0.9	0	0.0	380	3.2	12.0
305	660	150	0.020	11.1	150	0.061	0.9	0	0.0	360	3.0	15.0
306	330	130	0.030	8.4	170	0.018	1.6	0	0.0	30	0.3	10.2
307	620	150	0.013	13.2	150	0.051	0.9	0	0.0	320	2.7	16.8
308	735	145	0.005	18.8	155	0.051	1.0	0	0.0	435	3.6	23.4
309	165	25	0.005	4.6	140	0.020	1.3	0	0.0	0	0.0	10.0
310	680	150	0.026	10.0	150	0.058	0.9	0	0.0	380	3.2	14.0
311	600	150	0.005	19.3	150	0.058	0.9	0	0.0	300	2.5	22.7
312	580	100	0.010	10.6	200	0.018	1.8	0	0.0	280	2.3	14.7
313	160	160	0.025	10.7	0	0.000	0.0	0	0.0	0	0.0	10.7
314	220	40	0.005	6.7	180	0.010	2.1	0	0.0	0	0.0	10.0
315	560	300	0.020	19.3	0	0.000	0.0	260	8.7	0	0.0	28.0
H	1150	150	0.026	10.0	150	0.041	1.0	0	0.0	850	7.1	18.1
I	2500	0	0.000	0.0	300	0.050	1.7	1000	33.3	1200	10.0	45.0
J	600	300	0.022	18.6	0	0.000	0.0	150	5.0	150	1.3	24.8
K	1350	300	0.017	20.6	0	0.000	0.0	1050	35.0	0	0.0	55.6

NOTE:

- L1-G, S1-G & T1-G ARE LENGTH, SLOPE AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER GRASS IN 1ST 300 FT, USING SHEET FLOW FORMULAE FROM SCS TR55.
- L1-C, S1-C & T1-C ARE LENGTH, SLOPE AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER PAVED IN 1ST 300 FT, USING SHEET FLOW FORMULAE FROM SCS TR55.
- L2-G & T2-G ARE LENGTH AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER GRASS IN REMAINING PATH LENGTH @ 30 FPM.
- L2-C & T2-C ARE LENGTH AND COMPUTED TIME OF TRAVEL FOR RUNOFF OVER PAVED IN REMAINING PATH LENGTH @ 120 FPM.
- TRAVEL TIME (Tt) IS THE SUM OF TIME FOR FIRST 300 FT PLUS TIME FOR REMAINING PATH OR 10 MINUTE MINIMUM PER FDOT.

TABLE 4.2

5.0 SITE CURVE NUMBER GENERATION

5.1 Predevelopment

Predevelopment Soils Conservation Service curve numbers were determined from the site soils and observed cover and the use of Table 2-2C of SCS TR55; assuming a cover of brush in poor condition. Thus, a CN of 48 for the predevelopment condition on the undeveloped basin was used, except for that portion of Hancock Road which drains into the site. For the road, a CN of 95 was used for the 18' of asphalt. To be consistent with the postdevelopment curve number generation, a CN of 39 for the pervious portions of the developed basin in Phase 1 was used, as well as 95 for the impervious portions. Table 5.1 shows the predevelopment CN's computed.

5.2 Postdevelopment

Postdevelopment site SCS curve numbers may be evaluated from the attached Table 5.2. In both the predevelopment and postdevelopment cases, curve numbers were determined using the soils shown on the attached, postdevelopment drainage maps, as well as the TR-55 guidelines as to the curve numbers specific to the type of cover on that soil.

AREA AND SCS METHOD "CN"
 GREATER PINES PHASES 2 & 3 PREDEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993

IMPERVIOUS CN =	95	PERVIOUS CN =	48
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BASIN No	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	PERCENT DCIA (AS A %)	"CN" FOR NDCIA AND PERVIOUS AREA
A	31.35	0.00	0.00	0.00	31.35	0.00	48
B	20.06	0.00	0.00	0.00	20.06	0.00	48
C	27.68	0.00	0.00	0.00	27.68	0.00	48
D	32.89	0.00	0.00	0.00	32.89	0.00	48
E	1.48	0.66	0.00	0.66	0.82	44.59	48
F	1.51	0.51	0.00	0.51	1.00	33.77	48
G	4.22	0.00	0.00	0.00	4.22	0.00	48
H	11.04	2.32	0.98	3.30	7.74	21.01	45
I	11.80	1.65	0.48	2.13	9.67	13.98	42
J	21.10	2.07	0.88	2.95	18.15	9.81	42
K	24.60	0.91	0.39	1.30	23.31	3.70	40

NOTES:

1. DCIA = DIRECTLY CONNECTED IMPERVIOUS AREA, i.e. IMPERVIOUS AREA DIRECTLY CONNECTED TO THE STORM DRAINAGE SYSTEM WITHOUT FLOW OVER ANY PERVIOUS AREA.
2. NDCIA = IMPERVIOUS AREA NOT DIRECTLY CONNECTED TO THE STORM SYSTEM, BUT WHICH DISCHARGES OVER A PERVIOUS AREA PRIOR TO ENTRY INTO THE STORM DRAINAGE SYSTEM.
3. AREA OF IMPERVIOUS = DCIA + NDCIA.
4. PERCENT DCIA COMPUTED BY DIVIDING AREA DCIA BY THE TOTAL BASIN AREA.
5. SCS "CN" FOR PERVIOUS AND NDCIA COMPUTED BY DIVIDING THE SUM OF THE PRODUCTS OF THE PERVIOUS AREA TIMES IT'S CN AND THE NDCIA AREA TIMES IT'S CN, BY THE SUM OF THE SAME TWO AREAS.
6. PERVIOUS AREA CN FOR BASINS H.I.J. & K USED WAS 39, NOT 48 AS USED FOR THE WHOLELY UNDEVELOPED BASINS.

AREA AND SCS METHOD "CN"
 GREATER PINES PHASES 2 & 3
 POST-DEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993

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BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	PERCENT DCIA (AS A %)	"CN" FOR NDCIA AND PERVIOUS AREA
100	8.80	0.00	0.00	0.00	8.80	0.00	39
101	5.50	0.00	0.91	0.91	4.59	0.00	48
102	0.07	0.03	0.00	0.03	0.04	42.86	39
103	0.62	0.08	0.04	0.12	0.50	12.90	43
104	2.60	0.58	0.18	0.76	1.84	22.31	44
105	0.26	0.10	0.00	0.10	0.16	38.46	39
106	2.82	0.58	0.04	0.62	2.20	20.57	40
107	1.62	0.83	0.00	0.83	0.79	51.23	39
108	0.60	0.12	0.05	0.17	0.43	20.00	45
109	1.95	0.62	0.07	0.69	1.26	31.79	42
110	1.82	0.25	0.19	0.44	1.38	13.74	46
111	2.40	0.33	0.28	0.61	1.79	13.75	47
112	1.28	0.50	0.00	0.50	0.78	39.06	39
113	0.94	0.25	0.07	0.32	0.62	26.60	45
114	2.34	0.72	0.14	0.86	1.48	30.77	44
115	1.65	0.33	0.19	0.52	1.13	20.00	47
116	2.50	1.00	0.05	1.05	1.45	40.00	41
117	0.94	0.50	0.00	0.50	0.44	53.19	39
118	3.70	0.54	0.44	0.98	2.72	14.59	47
119	1.28	0.29	0.12	0.41	0.87	22.66	46
120	1.65	0.66	0.00	0.66	0.99	40.00	39
121	1.25	0.25	0.11	0.36	0.89	20.00	45
122	1.67	0.25	0.11	0.36	1.31	14.97	43
123	1.12	0.17	0.09	0.26	0.86	15.18	44
124	0.96	0.17	0.09	0.26	0.70	17.71	45
125	1.98	0.21	0.09	0.30	1.68	10.61	42
126	1.85	0.42	0.18	0.60	1.25	22.70	46
127	2.08	0.66	0.11	0.77	1.31	31.73	43
128	1.49	0.00	0.32	0.32	1.17	0.00	51
129	1.75	0.69	0.00	0.69	1.06	39.43	39
130	3.51	0.85	0.28	1.13	2.38	24.22	45
131	1.80	0.33	0.11	0.44	1.36	18.33	43
132	1.32	0.33	0.14	0.47	0.85	25.00	47
133	1.42	0.33	0.14	0.47	0.95	23.24	46
134	2.08	0.50	0.21	0.71	1.37	24.04	46
135	1.60	0.58	0.07	0.65	0.95	36.25	43

TOTALS 71.22 14.05 4.82 18.87 52.35

TABLE 5.2

AREA AND SCS METHOD "CN"
 GREATER PINES PHASES 2 & 3
 POST-DEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993

PAGE 2

BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	PERCENT DCIA (AS A %)	"CN" FOR NDCIA AND PERVIOUS AREA
200	12.84	0.00	0.00	0.00	12.84	0.00	39
201	2.45	0.16	0.44	0.60	1.85	6.53	50
202	0.75	0.12	0.05	0.17	0.58	16.00	43
300	7.35	0.00	0.00	0.00	7.35	0.00	39
301	1.00	0.29	0.00	0.29	0.71	29.00	39
302	2.00	0.29	0.14	0.43	1.57	14.50	44
303	1.97	0.00	0.00	0.00	1.97	0.00	39
304	3.37	0.50	0.35	0.85	2.52	14.84	46
305	1.90	0.42	0.18	0.60	1.30	22.11	46
306	1.33	0.25	0.11	0.36	0.97	18.80	45
307	2.10	0.46	0.19	0.65	1.45	21.90	45
308	1.95	0.50	0.21	0.71	1.24	25.64	47
309	0.14	0.05	0.00	0.05	0.09	35.71	39
310	2.10	0.46	0.19	0.65	1.45	21.90	45
311	2.10	0.37	0.16	0.53	1.57	17.62	44
312	0.71	0.21	0.00	0.21	0.50	29.58	39
313	0.50	0.00	0.07	0.07	0.43	0.00	47
314	0.41	0.15	0.04	0.19	0.22	36.59	48
315	2.28	0.00	0.26	0.26	2.02	0.00	45
H	11.04	2.32	0.98	3.30	7.74	21.01	45
I	11.80	1.65	0.48	2.13	9.67	13.98	42
J	21.10	2.07	0.88	2.95	18.15	9.81	42
K	24.60	0.91	0.39	1.30	23.30	3.70	40
TOTALS	115.79	11.18	5.12	16.30	99.49		

NOTES:

1. DCIA = DIRECTLY CONNECTED IMPERVIOUS AREA, i.e. IMPERVIOUS AREA DIRECTLY CONNECTED TO THE STORM DRAINAGE SYSTEM WITHOUT FLOW OVER ANY PERVIOUS AREA.
2. NDCIA = IMPERVIOUS AREA NOT DIRECTLY CONNECTED TO THE STORM SYSTEM, BUT WHICH DISCHARGES OVER A PERVIOUS AREA PRIOR TO ENTRY INTO THE STORM DRAINAGE SYSTEM.
3. AREA OF IMPERVIOUS = DCIA + NDCIA.
4. PERCENT DCIA COMPUTED BY DIVIDING AREA DCIA BY THE TOTAL BASIN AREA.
5. SCS "CN" FOR PERVIOUS AND NDCIA COMPUTED BY DIVIDING THE SUM OF THE PRODUCTS OF THE PERVIOUS AREA TIMES A CN OF 39 AND THE NDCIA AREA TIMES A CN OF 95, BY THE SUM OF THE SAME TWO AREAS.

TABLE 5.2

6.0 SITE HYDROGRAPH GENERATION

6.1 Predevelopment

Predevelopment hydrographs for each of the predevelopment basins were generated using the methodology indicated in Section 3.0. In addition to the pre-development runoff from Phases 2 & 3, the pre-development condition pond system has tributary to the post-development flows from the present permitted Phase 1. Tables 6.1 and 6.2 present the results of the predevelopment hydrograph generation for the 25/24 and 25/96 events, respectively.

6.2 Postdevelopment

Postdevelopment hydrographs were generated for each of the storm events as indicated under Section 3. Tables 6.3 and 6.4, attached, shows the postdevelopment unrouted runoffs for each of the postdevelopment basins for the 25/24 and 25/96 events, respectively. Note that the post-development hydrographs for the tributary portions of Phase 1 were included as input to proposed pond No. 1.

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
 12/23/1993

BASIN NAME	A	B	C	D	E
NODE NAME	POND_A	POND_B	POND_C	OFFWEST	POND_A
UNIT HYDROGRAPH	UH484	UH484	UH484	UH484	UH484
PEAKING FACTOR	484.	484.	484.	484.	484.
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	31.35	20.06	27.68	32.89	1.48
CURVE NUMBER	48.00	48.00	48.00	48.00	48.00
DCIA (%)	.00	.00	.00	.00	44.60
TC (mins)	55.60	61.20	40.60	66.00	13.60
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
A	30.37	12.73	2.21	
B	18.30	12.78	2.21	
C	32.54	12.54	2.21	
D	28.26	12.76	2.21	
E	5.18	12.27	4.88	

BASIN NAME	F	G
NODE NAME	POND_B	OFFWEST
UNIT HYDROGRAPH	UH484	UH484
PEAKING FACTOR	484.	484.
RAINFALL FILE	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30
STORM DURATION (hrs)	24.00	24.00
AREA (ac)	1.51	4.22
CURVE NUMBER	48.00	48.00
DCIA (%)	33.80	.00
TC (mins)	10.70	34.50
LAG TIME (hrs)	.00	.00
BASIN STATUS	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
F	4.80	12.25	4.23	
G	5.40	12.50	2.21	

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
 12/23/1993

BASIN NAME	H	I	J	K
NODE NAME	POND_A	POND_A	POND_J	POND_K
TIME INCREMENT (min)	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00
AREA (ac)	11.04	11.80	21.14	24.60
CURVE NUMBER	45.00	42.00	42.00	40.00
DCIA (%)	21.00	14.00	9.81	3.70
TC (mins)	18.10	45.00	24.80	55.70
LAG TIME (hrs)	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
H	19.78	12.17	3.22	
I	9.84	12.25	2.51	
J	21.70	12.25	2.23	
K	10.24	12.25	1.63	

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 96HR EVENT
 12/23/1993

BASIN NAME	A	B	C	D	E
NODE NAME	POND_A	POND_B	POND_C	OFFWEST	POND_A
UNIT HYDROGRAPH	UH484	UH484	UH484	UH484	UH484
PEAKING FACTOR	484.	484.	484.	484.	484.
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	31.35	20.06	27.68	32.89	1.48
CURVE NUMBER	48.00	48.00	48.00	48.00	48.00
DCIA (%)	.00	.00	.00	.00	44.60
TC (mins)	55.60	61.20	40.60	66.00	13.60
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES		
A	56.87	60.42	4.60		
B	33.91	60.52	4.60		
C	60.70	60.27	4.60		
D	53.07	60.57	4.60		
E	6.76	60.02	7.80		

BASIN NAME	F	G	
NODE NAME	POND_B	OFFWEST	
UNIT HYDROGRAPH	UH484	UH484	
PEAKING FACTOR	484.	484.	
RAINFALL FILE	SJRWMD96	SJRWMD96	
RAIN AMOUNT (in)	11.90	11.90	
STORM DURATION (hrs)	96.00	96.00	
AREA (ac)	1.51	4.22	
CURVE NUMBER	48.00	48.00	
DCIA (%)	33.80	.00	
TC (mins)	10.70	34.50	
LAG TIME (hrs)	.00	.00	
BASIN STATUS	ONSITE	ONSITE	
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
F	6.53	60.01	7.03
G	10.09	60.18	4.60

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 96HR EVENT
 12/23/1993

BASIN NAME	H	I	J	K
NODE NAME	POND_A	POND_A	POND_J	POND_K
TIME INCREMENT (min)	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00
AREA (ac)	11.04	11.80	21.14	24.60
CURVE NUMBER	45.00	42.00	42.00	40.00
DCIA (%)	21.00	14.00	9.81	3.70
TC (mins)	18.10	45.00	24.80	55.70
LAG TIME (hrs)	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE
BASIN	GMX (cfs)	TMX (hrs)	VOL (in)	NOTES
H	31.00	59.92	5.73	
I	17.39	60.00	4.78	
J	40.36	60.00	4.44	
K	24.25	60.00	3.63	

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

BASIN NAME	100	101	102	103	104
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	8.80	5.50	.07	.62	2.60
CURVE NUMBER	39.00	48.00	39.00	43.00	44.00
DCIA (%)	.00	.00	42.90	12.90	22.30
TC (mins)	10.00	33.60	10.00	16.80	20.80
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
100	7.09	12.17	1.28	
101	5.24	12.25	2.21	
102	.19	12.17	4.25	
103	.88	12.17	2.52	
104	4.33	12.17	3.22	

BASIN NAME	105	107	108	109	110
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	.26	1.62	.60	1.95	1.82
CURVE NUMBER	39.00	39.00	45.00	42.00	46.00
DCIA (%)	38.50	51.20	20.00	31.80	13.70
TC (mins)	10.00	15.20	17.50	13.60	15.50
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
105	.65	12.17	3.94	
107	4.49	12.17	4.82	
108	1.07	12.17	3.15	
109	4.33	12.17	3.68	
110	3.13	12.17	2.85	

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

BASIN NAME	111	112	.113	114	115
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	2.40	1.28	.94	2.34	1.65
CURVE NUMBER	47.00	39.00	45.00	44.00	47.00
DCIA (%)	13.80	39.10	26.60	30.80	20.00
TC (mins)	14.10	13.50	13.60	14.80	13.60
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES		
111	4.48	12.17	2.95		
112	3.02	12.17	3.99		
113	2.08	12.17	3.57		
114	5.24	12.17	3.76		
115	3.48	12.17	3.32		

BASIN NAME	116	117	118	119	120
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	2.50	.94	3.70	1.28	1.65
CURVE NUMBER	41.00	39.00	47.00	46.00	39.00
DCIA (%)	40.00	53.20	14.60	22.70	40.00
TC (mins)	22.40	12.70	19.10	12.60	23.50
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES		
116	5.16	12.17	4.17		
117	2.82	12.17	4.96		
118	6.17	12.17	2.99		
119	2.80	12.17	3.41		
120	3.20	12.17	4.05		

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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

BASIN NAME	121	122	123	124	125
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	1.25	1.67	1.12	.96	1.98
CURVE NUMBER	45.00	43.00	44.00	45.00	42.00
DCIA (%)	20.00	15.00	15.20	17.70	10.60
TC (mins)	19.10	10.00	18.40	14.80	13.10
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
121	2.14	12.17	3.15	
122	3.00	12.17	2.66	
123	1.69	12.17	2.76	
124	1.75	12.17	3.01	
125	2.76	12.17	2.28	

BASIN NAME	126	127	128	129	130
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	1.85	2.08	1.49	1.75	3.51
CURVE NUMBER	46.00	43.00	51.00	39.00	45.00
DCIA (%)	22.70	31.70	.00	39.40	24.20
TC (mins)	22.00	16.20	10.00	33.10	14.50
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
126	3.24	12.17	3.41	
127	4.46	12.17	3.75	
128	2.92	12.17	2.54	
129	2.85	12.25	4.01	
130	7.28	12.17	3.42	

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

BASIN NAME	131	132	133	134	135
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	1.80	1.32	1.42	2.08	1.60
CURVE NUMBER	43.00	47.00	46.00	46.00	43.00
DCIA (%)	18.30	25.00	23.20	24.04	36.30
TC (mins)	24.70	20.30	18.90	24.10	13.60
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
131	2.43	12.25	2.88	
132	2.58	12.17	3.63	
133	2.69	12.17	3.44	
134	3.57	12.17	3.49	
135	3.93	12.17	4.05	

BASIN NAME	200	201	202	300	301
NODE NAME	POND_2	POND_2	POND_2	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	12.84	2.45	.75	7.35	1.00
CURVE NUMBER	39.00	50.00	43.00	39.00	39.00
DCIA (%)	.00	6.50	16.00	.00	29.00
TC (mins)	10.00	10.00	20.60	10.00	10.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
200	10.35	12.17	1.28	
201	5.10	12.17	2.81	
202	1.04	12.17	2.73	
300	5.92	12.17	1.28	
301	2.09	12.17	3.29	

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

BASIN NAME	302	303	304	305	306
NODE NAME	POND_3	POND_3	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	2.00	1.97	3.37	1.90	1.33
CURVE NUMBER	44.00	39.00	46.00	46.00	45.00
DCIA (%)	14.50	.00	14.80	22.10	18.80
TC (mins)	10.90	17.60	12.00	15.00	10.20
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
302	3.63	12.17	2.72	
303	1.25	12.25	1.28	
304	6.50	12.17	2.92	
305	3.88	12.17	3.37	
306	2.79	12.17	3.08	

BASIN NAME	307	308	309	310	311
NODE NAME	POND_3	POND_3	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	2.10	1.95	.14	2.10	2.10
CURVE NUMBER	45.00	47.00	39.00	45.00	44.00
DCIA (%)	21.90	25.60	35.70	21.90	17.62
TC (mins)	16.80	23.40	10.00	14.00	22.70
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
307	3.95	12.17	3.27	
308	3.60	12.17	3.66	
309	.33	12.17	3.75	
310	4.23	12.17	3.27	
311	3.03	12.17	2.92	

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

BASIN NAME	312	313	314	315	H
NODE NAME	POND_3	POND_3	POND_3	OFFWEST	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00	24.00	24.00
AREA (ac)	.71	.50	.41	2.28	11.04
CURVE NUMBER	39.00	47.00	48.00	45.00	45.00
DCIA (%)	29.60	.00	36.60	.00	21.00
TC (mins)	14.70	10.70	10.00	28.00	18.10
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES		
312	1.35	12.17	3.33		
313	.77	12.17	2.11		
314	1.22	12.17	4.40		
315	1.96	12.25	1.89		
H	19.78	12.17	3.22		

BASIN NAME	I	J	K
NODE NAME	POND_1	POND_J	POND_K
TIME INCREMENT (min)	5.00	5.00	5.00
RAINFALL FILE	SCSIII	SCSIII	SCSIII
RAIN AMOUNT (in)	8.30	8.30	8.30
STORM DURATION (hrs)	24.00	24.00	24.00
AREA (ac)	11.80	21.10	24.60
CURVE NUMBER	42.00	42.00	40.00
DCIA (%)	14.00	9.80	3.70
TC (mins)	45.00	24.80	55.60
LAG TIME (hrs)	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
I	9.84	12.25	2.51
J	21.66	12.25	2.23
K	10.25	12.25	1.63

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 12/23/1993

BASIN NAME	100	101	102	103	104
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	8.80	5.50	.07	.62	2.60
CURVE NUMBER	39.00	48.00	39.00	43.00	44.00
DCIA (%)	.00	.00	42.90	12.90	22.30
TC (mins)	10.00	33.60	10.00	16.80	20.80
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
100	17.75	59.92	3.15	
101	10.02	60.00	4.60	
102	.26	59.92	6.86	
103	1.54	59.92	4.83	
104	6.78	59.92	5.71	

BASIN NAME	105	107	108	109	110
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	.26	1.62	.60	1.95	1.82
CURVE NUMBER	39.00	39.00	45.00	42.00	46.00
DCIA (%)	38.50	51.20	20.00	31.80	13.70
TC (mins)	10.00	15.20	17.50	13.60	15.50
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
105	.93	59.92	6.48	
107	5.90	59.92	7.58	
108	1.69	59.92	5.66	
109	6.34	59.92	6.23	
110	5.18	59.92	5.31	

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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 12/23/1993

BASIN NAME	111	112	113	114	115
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	2.40	1.28	.94	2.34	1.65
CURVE NUMBER	47.00	39.00	45.00	44.00	47.00
DCIA (%)	13.80	39.10	26.60	30.80	20.00
TC (mins)	14.10	13.50	13.60	14.80	13.60
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES		
111	7.27	59.92	5.46		
112	4.25	59.92	6.53		
113	3.10	59.92	6.16		
114	7.65	59.92	6.37		
115	5.36	59.92	5.91		

BASIN NAME	116	117	118	119	120
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	2.50	.94	3.70	1.28	1.65
CURVE NUMBER	41.00	39.00	47.00	46.00	39.00
DCIA (%)	40.00	53.20	14.60	22.70	40.00
TC (mins)	22.40	12.70	19.10	12.60	23.50
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES		
116	7.14	59.92	6.80		
117	3.69	59.92	7.75		
118	10.04	59.92	5.52		
119	4.26	59.92	5.99		
120	4.43	59.92	6.61		

TABLE 6.4

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 12/23/1993

BASIN NAME	121	122	123	124	125
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	1.25	1.67	1.12	.96	1.98
CURVE NUMBER	45.00	43.00	44.00	45.00	42.00
DCIA (%)	20.00	15.00	15.20	17.70	10.60
TC (mins)	19.10	10.00	18.40	14.80	13.10
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES		
121	3.39	59.92	5.66		
122	5.02	59.92	5.00		
123	2.84	59.92	5.15		
124	2.81	59.92	5.48		
125	5.04	59.92	4.50		

BASIN NAME	126	127	128	129	130
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	1.85	2.08	1.49	1.75	3.51
CURVE NUMBER	46.00	43.00	51.00	39.00	45.00
DCIA (%)	22.70	31.70	.00	39.40	24.20
TC (mins)	22.00	16.20	10.00	33.10	14.50
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE
BASIN QMX (cfs)	TMX (hrs)	VOL (in)	NOTES		
126	4.97	59.92	5.99		
127	6.50	59.92	6.33		
128	4.94	59.92	5.08		
129	3.93	60.00	6.56		
130	11.08	59.92	5.98		

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 12/23/1993

BASIN NAME	131	132	133	134	135
NODE NAME	POND_1	POND_1	POND_1	POND_1	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	1.80	1.32	1.42	2.08	1.60
CURVE NUMBER	43.00	47.00	46.00	46.00	43.00
DCIA (%)	18.30	25.00	23.20	24.04	36.30
TC (mins)	24.70	20.30	18.90	24.10	13.60
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
131	4.00	59.92	5.26	
132	3.85	59.92	6.28	
133	4.10	59.92	6.03	
134	5.41	59.92	6.09	
135	5.56	59.92	6.70	

BASIN NAME	200	201	202	300	301
NODE NAME	POND_2	POND_2	POND_2	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	12.84	2.45	.75	7.35	1.00
CURVE NUMBER	39.00	50.00	43.00	39.00	39.00
DCIA (%)	.00	6.50	16.00	.00	29.00
TC (mins)	10.00	10.00	20.60	10.00	10.00
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
200	25.90	59.92	3.15	
201	8.33	59.92	5.37	
202	1.77	59.92	5.08	
300	14.83	59.92	3.15	
301	3.18	59.92	5.66	

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 12/23/1993

BASIN NAME	302	303	304	305	306
NODE NAME	POND_3	POND_3	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	2.00	1.97	3.37	1.90	1.33
CURVE NUMBER	44.00	39.00	46.00	46.00	45.00
DCIA (%)	14.50	.00	14.80	22.10	18.80
TC (mins)	10.90	17.60	12.00	15.00	10.20
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
302	6.03	59.92	5.10	
303	3.22	59.92	3.15	
304	10.54	59.92	5.39	
305	5.95	59.92	5.94	
306	4.39	59.92	5.56	

BASIN NAME	307	308	309	310	311
NODE NAME	POND_3	POND_3	POND_3	POND_3	POND_3
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	2.10	1.95	.14	2.10	2.10
CURVE NUMBER	45.00	47.00	39.00	45.00	44.00
DCIA (%)	21.90	25.60	35.70	21.90	17.62
TC (mins)	16.80	23.40	10.00	14.00	22.70
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
307	6.13	59.92	5.80	
308	5.35	59.92	6.33	
309	.48	59.92	6.24	
310	6.55	59.92	5.80	
311	4.98	59.92	5.34	

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 12/23/1993

BASIN NAME	312	313	314	315	H
NODE NAME	POND_3	POND_3	POND_3	OFFWEST	POND_1
TIME INCREMENT (min)	5.00	5.00	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00	96.00	96.00
AREA (ac)	.71	.50	.41	2.28	11.04
CURVE NUMBER	39.00	47.00	48.00	45.00	45.00
DCIA (%)	29.60	.00	36.60	.00	21.00
TC (mins)	14.70	10.70	10.00	28.00	18.10
LAG TIME (hrs)	.00	.00	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
312	2.04	59.92	5.71	
313	1.43	59.92	4.44	
314	1.69	59.92	7.24	
315	4.06	60.00	4.12	
H	31.00	59.92	5.73	

BASIN NAME	I	J	K
NODE NAME	POND_1	POND_J	POND_K
TIME INCREMENT (min)	5.00	5.00	5.00
RAINFALL FILE	SJRWMD96	SJRWMD96	SJRWMD96
RAIN AMOUNT (in)	11.90	11.90	11.90
STORM DURATION (hrs)	96.00	96.00	96.00
AREA (ac)	11.80	21.10	24.60
CURVE NUMBER	42.00	42.00	40.00
DCIA (%)	14.00	9.80	3.70
TC (mins)	45.00	24.80	55.60
LAG TIME (hrs)	.00	.00	.00
BASIN STATUS	ONSITE	ONSITE	ONSITE

BASIN	QMX (cfs)	TMX (hrs)	VOL (in)	NOTES
I	17.39	60.00	4.78	
J	40.28	60.00	4.44	
K	24.28	60.00	3.63	

7.0 RETENTION PONDS SIZING AND DATA

7.1 Retention Pond Locations

The location of each of the retention ponds for Phases 2 & 3 may be seen on the postdevelopment basin maps, as well as on the engineering plans attached. The pre-development case had ponds as shown on the pre-development map; these are to be replaced with new proposed Pond 1.

7.2 Pond Parameters

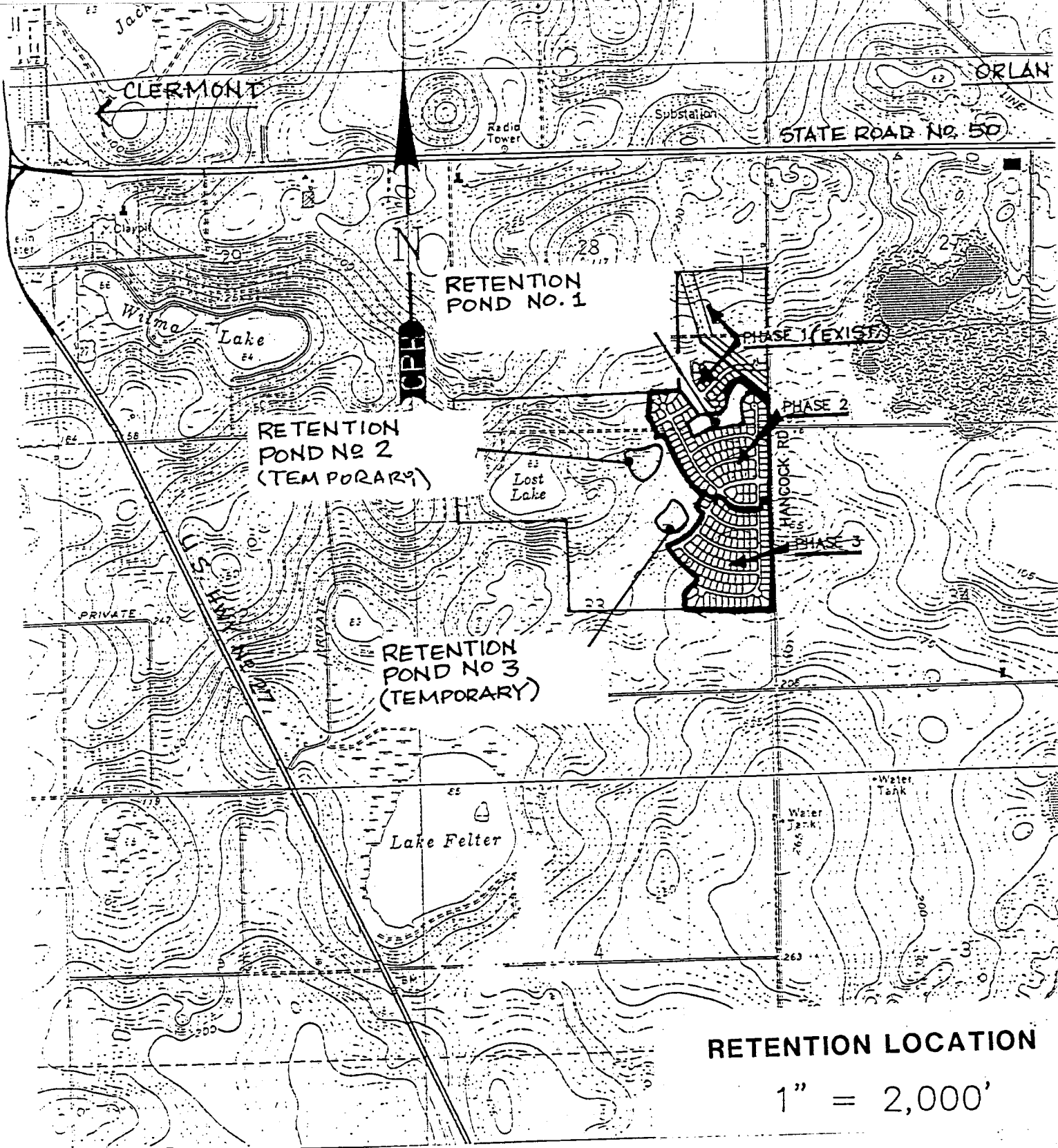
For each of the retention ponds shown on the attached drainage maps, specific calculations were made as to the area and volume of these ponds, and are attached. The pond volumes used for Phase 1 were those from the previously permitted SJRWMD application.

7.3 Outfall Parameters

For each of the retention ponds for Phases 2 & 3 the outfalls were designed and shown on the attached plans. Additionally, stage time relationships for the receiving area off-site were estimated. The receiving area consists of undeveloped upland area to the west of Phases 1, 2 & 3. This undeveloped area falls topographically to the west, eventually discharging into Lost Lake, as shown on the site location map, which shows USGS topo for the site. Stage time relationships for the existing conditions for each of these cases were determined.

7.4 Routing Scheme

Routing schematics (nodal diagrams) showing the interrelationship of the stormwater generation areas, retention basins, and outfalls are attached as Figures 7.1 and 7.2, respectively for the pre- and post-development conditions.



RETENTION LOCATION

1" = 2,000'

ROAD CLASSIFICATION

- Heavy-duty —————
- Medium-duty —————
- Light-duty —————
- Unimproved dirt - - - - -
- U.S. Route (square symbol)
- State Route (circle symbol)



CLERMONT EAST, FLA.
N2830—W8137.5/7.5

1962
PHOTOREVISED 1980
DMA 4641 II SW—SERIES 7847

PRE DEVELOPED CONDITION

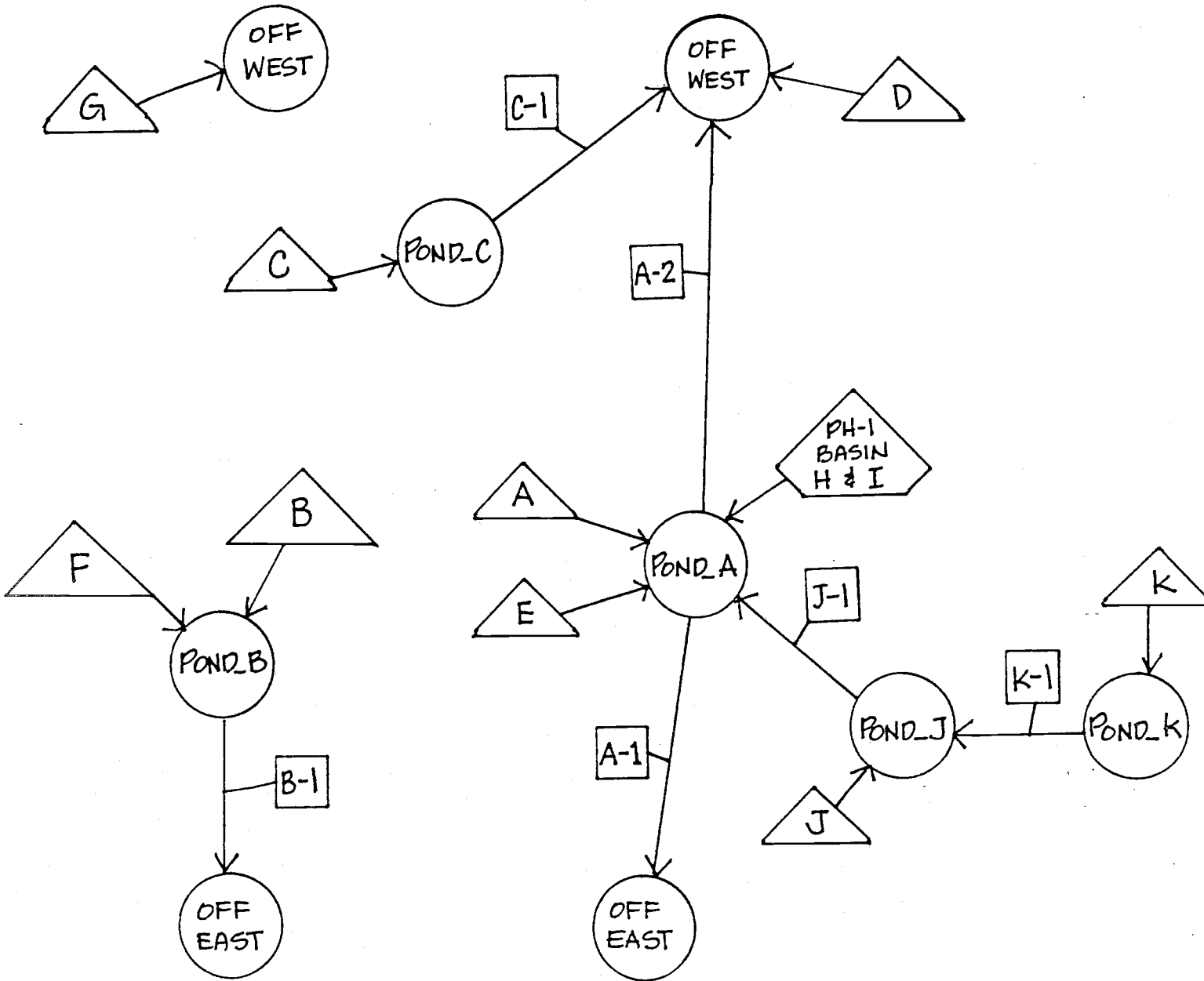


FIGURE 7.1

POST DEVELOPED CONDITION

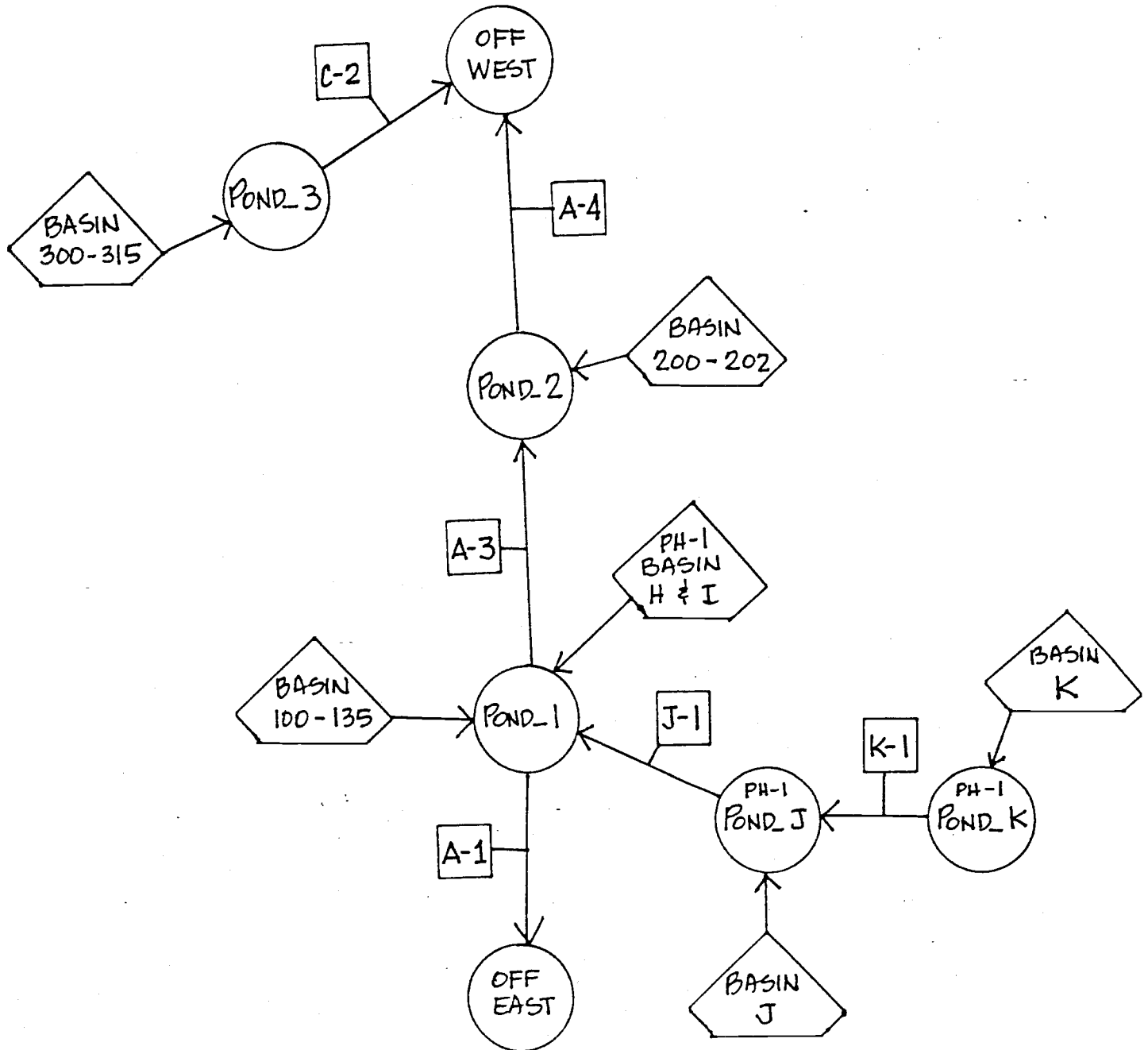


FIGURE 7.2

To _____
 From JFM
 Date 10-22-92

Job Name GREATER PINES PH 2 & 3 Job No. 66765.04
 Subject PRELIM. STAGE STORAGE CALC Sheet No. 1

BASIN A

ELEV.	AREA (AC)	E VOL (ACFT.)
132	2.08	0
133	3.17	2.62
134	5.68	7.04
135	7.31	13.53
136	8.38	21.37
137	9.45	30.22
138 (OUTFALL @ HANCOCK RD.)	10.54	40.27

BASIN B

ELEV.	AREA (AC)	E VOL (ACFT.)
160	0.17	0
161 (OUTFALL @ HANCOCK RD.)	0.52	0.34

BASIN C

ELEV.	AREA (AC)	E PREH (ACFT.)
138	0.99	0
138.5 (OUTFALL TO LOST LAKE)	2.12	0.77

BASIN D - NO STORAGE

BASIN E - NO STORAGE

BASIN F - NO STORAGE

BASIN G - NO STORAGE

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
12/23/1993

CONTROL PARAMETERS
=====

START TIME: .00
END TIME: 24.00

TO TIME (hours)	SIMULATION INC (secs)	PRINT INC (mins)
24.00	30.00	15.00

RUNOFF HYDROGRAPH FILE: DEFAULT
OFFSITE HYDROGRAPH FILE: DEFAULT
BOUNDARY DATABASE FILE: NONE

NOTE:

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
 12/23/1993

NODE NAME	NODE TYPE	INI STAGE (ft)	X-COOR (ft)	Y-COOR (ft)	LENGTH (ft)	STAGE (ft)	AR/TM/STR (ac/hr/af)
POND_A	AREA	132.000	.000	.000	.000	132.000	2.080
						133.000	3.170
						134.000	5.680
						135.000	7.310
						136.000	8.380
						137.000	9.450
POND_B	AREA	159.500	.000	.000	.000	159.500	.010
						160.000	.170
						161.000	.520
POND_C	AREA	137.500	.000	.000	.000	137.500	.010
						138.000	.990
						138.500	2.120
POND_J	STRG	138.000	.000	.000	.000	138.000	.000
						142.000	1.300
						143.000	1.830
						144.000	2.460
POND_K	STRG	164.000	.000	.000	.000	164.000	.000
						165.000	.240
						166.000	.550
						167.000	.940
						168.000	1.410
OFFWEST	TIME	110.000	.000	.000	.000	110.000	.000
						110.000	12.000
						110.000	24.000
OFFEAST	TIME	136.000	.000	.000	.000	136.000	.000
						136.000	12.000
						136.000	24.000

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
12/23/1993

>>REACH NAME : A-1
FROM NODE : POND_A
TO NODE : OFFEAST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 138.500 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : A-2
FROM NODE : POND_A
TO NODE : OFFWEST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 144.000 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : B-1
FROM NODE : POND_B
TO NODE : OFFEAST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 161.000 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : C-1
FROM NODE : POND_C
TO NODE : OFFWEST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 138.500 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : K-1
FROM NODE : POND_K
TO NODE : POND_J
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 168.000 TOPWIDTH (ft): 30.000 CORRS DPTH (ft): 1.000
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
12/23/1993

>>REACH NAME : J-1
FROM NODE : POND_J
TO NODE : POND_A
REACH TYPE : DROP STRUCTURE w/ CIRC. CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 48.000 RISE (in): 48.000 LENGTH (ft): 220.000
U/S INVERT (ft): 134.200 D/S INVERT (ft): 132.000 MANNING N: .013
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 142.500 CREST LN. (ft): 19.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : NOT USED

NOTE:

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
12/23/1993

REACH SUMMARY

=====

INDEX	RCHNAME	FRMNODE	TONODE	REACH TYPE
1	A-1	POND_A	OFFEAST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
2	A-2	POND_A	OFFWEST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
3	B-1	POND_B	OFFEAST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
4	C-1	POND_C	OFFWEST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
5	K-1	POND_K	POND_J	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
6	J-1	POND_J	POND_A	DROP STRUCTURE w/ CIRC. CULVERT

To _____
 From LEW
 Date 12-22-93

Job Name GREATER PINES PHASE 3 & 5 Job No. 66765.04
 Subject POND DET. POND VOLUME CALCULATIONS Sheet No. 10F2
BEST LEVEL OFF

RETENTION POND NO 1

ELEV.	AREA AC.	Σ VOL ACFT
132 (POND BOTTOM)	4.04	0
133	4.56	4.30
134	5.08	9.12
135	5.60	14.46
136	6.12	20.32
137 (POND OUTFALL)	6.65 ✓	26.70

RETENTION POND NO 2 (TEMPORARY)

ELEV.	AREA AC.	Σ VOL ACFT.
109 POND BOTTOM	0.14	0
110	0.50	0.32
111	0.78	0.96
112	1.07	1.88
113	1.35	3.09 ✓
114	1.64	4.58
115	1.92	6.38
116	2.21	8.44
117	2.49	10.79
118	2.78	13.42
119 (POND OUTFALL)	3.06	16.34
120 (TOP OF 35% V/L)	3.35 ✓	19.54 ✓

To _____
From _____
Date _____

Job Name _____ Job No. _____
Subject _____ Sheet No. 2052

RETENTION POND NO 3 (TEMPORARY)

<u>ELEVATION</u>	<u>AREA AC</u>	<u>S VOL ACFT</u>
<u>138 (POND BOTTOM)</u>	<u>1.10</u>	<u>0</u>
<u>139</u>	<u>2.52</u>	<u>1.81</u>
<u>140 (POND OUTFALL)</u>	<u>3.12</u>	<u>4.63</u>
<u>141 (TOP BERM)</u>	<u>3.44</u>	<u>7.91 AC FT.</u>

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
12/23/1993

CONTROL PARAMETERS

=====

START TIME: .00
END TIME: 24.00

TO TIME (hours)	SIMULATION INC (secs)	PRINT INC (mins)
----- 30.00	----- 30.00	----- 15.00

RUNOFF HYDROGRAPH FILE: DEFAULT
OFFSITE HYDROGRAPH FILE: DEFAULT
BOUNDARY DATABASE FILE: NONE

NOTE:

Advanced Interconnected Channel & Pond Routing (adICPR Ver 1.40)
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GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

NODE NAME	NODE TYPE	INI STAGE (ft)	X-COOR (ft)	Y-COOR (ft)	LENGTH (ft)	STAGE (ft)	AR/TM/STR (ac/hr/af)
POND_1	AREA	132.000	.000	.000	.000	132.000	4.040
						133.000	4.560
						134.000	5.080
						135.000	5.600
						136.000	6.120
						137.000	6.650
						138.000	9.300
POND_2	AREA	109.000	.000	.000	.000	109.000	.140
						110.000	.500
						111.000	.780
						112.000	1.070
						114.000	1.640
						116.000	2.210
						117.000	2.490
						118.000	2.780
						119.000	3.060
						120.000	3.350
POND_3	AREA	138.000	.000	.000	.000	138.000	1.100
						139.000	2.520
						140.000	3.120
						141.000	3.440
POND_J	STRG	138.000	.000	.000	.000	138.000	.000
						142.000	1.300
						143.000	1.830
						144.000	2.460
POND_K	STRG	164.000	.000	.000	.000	164.000	.000
						165.000	.240
						166.000	.550
						167.000	.940
						168.000	1.410
OFFWEST	TIME	110.000	.000	.000	.000	110.000	.000
						110.000	12.000
						110.000	24.000
OFFEAST	TIME	136.000	.000	.000	.000	136.000	.000
						136.000	12.000
						136.000	24.000

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
12/23/1993

>>REACH NAME : K-1
FROM NODE : POND_K
TO NODE : POND_J
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 168.000 TOPWIDTH (ft): 30.000 CORRS DPTH (ft): 1.000
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

>>REACH NAME : A-4
FROM NODE : POND_2
TO NODE : OFFWEST
REACH TYPE : RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 119.000 CREST LN. (ft): 20.000 OPENING (ft): 999.000
WEIR COEF.: 3.000 GATE COEF.: .600 NUMBER OF ELEM.: 1.000
NOTE:

>>REACH NAME : C-2
FROM NODE : POND_3
TO NODE : OFFWEST
REACH TYPE : RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 140.000 CREST LN. (ft): 20.000 OPENING (ft): 999.000
WEIR COEF.: 3.000 GATE COEF.: .600 NUMBER OF ELEM.: 1.000
NOTE:

>>REACH NAME : A-1
FROM NODE : POND_1
TO NODE : OFFEAST
REACH TYPE : PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
CREST EL. (ft): 138.500 TOPWIDTH (ft): 100.000 CORRS DPTH (ft): .500
OPENING (ft): 999.000 WEIR COEF.: 3.000 GATE COEF.: .600
NUMBER OF ELEM.: 1.000 RESERVED: .000
NOTE:

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
12/23/1993

>>REACH NAME : A-3
FROM NODE : POND_1
TO NODE : POND_2
REACH TYPE : DROP STRUCTURE w/ CIRC. CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 36.000 RISE (in): 36.000 LENGTH (ft): 540.000
U/S INVERT (ft): 132.000 D/S INVERT (ft): 115.000 MANNING N: .013
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 137.000 CREST LN. (ft): 19.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : NOT USED

NOTE: MAIN OUTFALL, POND 1

>>REACH NAME : J-1
FROM NODE : POND_J
TO NODE : POND_1
REACH TYPE : DROP STRUCTURE w/ CIRC. CULVERT
FLOW DIRECTION : POSITIVE AND NEGATIVE FLOWS ALLOWED
TURBO SWITCH : OFF

CULVERT DATA :
SPAN (in): 48.000 RISE (in): 48.000 LENGTH (ft): 220.000
U/S INVERT (ft): 134.200 D/S INVERT (ft): 132.000 MANNING N: .013
ENTRNC LOSS: .500 # OF CULVERTS: 1.000

POSITION A : RECTANGULAR RISER SLOT
CREST EL. (ft): 142.500 CREST LN. (ft): 19.000 OPENING (ft): 999.000
WEIR COEF.: 3.200 GATE COEF.: .600 NUMBER OF ELEM.: 1.000

POSITION B : NOT USED

NOTE:

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
12/23/1993

REACH SUMMARY
=====

INDEX	RCHNAME	FRMNODE	TONODE	REACH TYPE
1	K-1	POND_K	POND_J	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
2	A-4	POND_2	OFFWEST	RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ
3	C-2	POND_3	OFFWEST	RECTANGULAR WEIR/GATE/ORIFICE, VILLEMONTÉ EQ
4	A-1	POND_1	OFFEAST	PARABOLIC WEIR/GATE/ORIFICE, MAVIS EQ.
5	A-3	POND_1	POND_2	DROP STRUCTURE w/ CIRC. CULVERT
6	J-1	POND_J	POND_1	DROP STRUCTURE w/ CIRC. CULVERT

8.0 RUNOFF ROUTING, PRE AND POSTDEVELOPMENT

Postdevelopment unrouted runoff hydrographs were routed through the proposed retention pond system as described in Section 3 for the 25-year 24-hour, and 25-year 96-hour storm events. Tables 8.1 through 8.4 show the nodal maximums for each of these storm events. Additionally, summary table (Table 1.1) compares the results of these postdevelopment routings with the predevelopment routings for each of the pertinent offsite discharge points.

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
 12/23/1993

NODAL MAXIMUM CONDITIONS REPORT
 =====

NODE ID	STAGE (ft)	VOLUME (af)	<----- RUNOFF (cfs)	INFLOW OFFSITE (cfs)	-----> OTHER (cfs)	OUTFLOW (cfs)
POND_A	135.29	15.81	49.27	.00	9.07	.00
POND_B	161.26	.48	19.10	.00	.00	18.83
POND_C	138.77	1.44	32.06	.00	.00	19.97
POND_J	142.78	1.71	21.70	.00	4.99	9.07
POND_K	168.29	1.55	10.24	.00	.00	4.99
OFFWEST	110.00	10.65	31.80	.00	19.97	.00
OFFEAST	136.00	3.77	.00	.00	18.83	.00

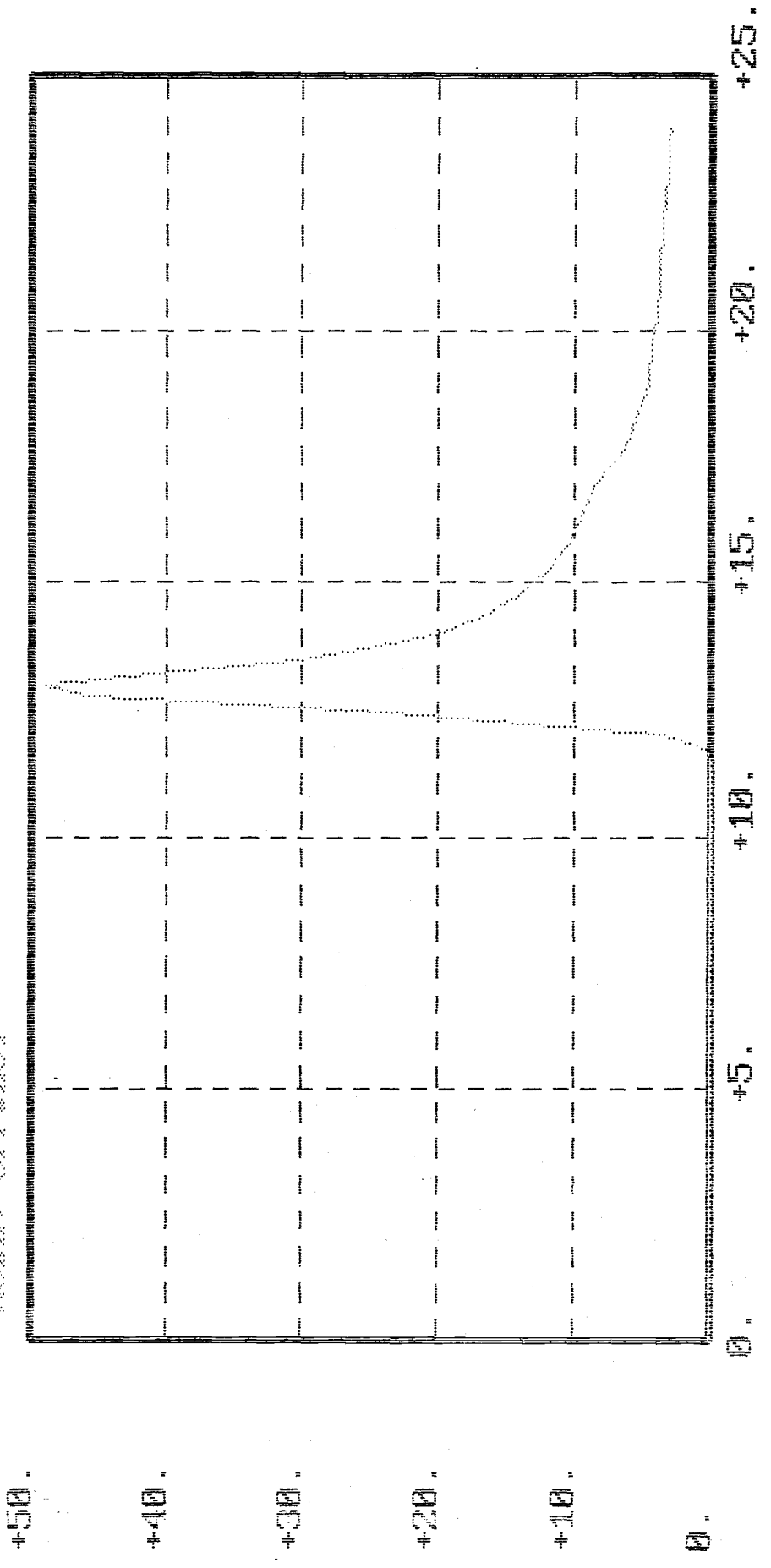
GREATER PINES PHASES 2 & 3 PREDEV. 25YR 24HR EVENT
12/23/1993

REACH MAXIMUM FLOW REPORT
=====

REACH ID	TIME (hrs)	FLOW (cfs)	FR NODE NAME	STAGE (ft)	TO NODE NAME	STAGE (ft)
A-1	.00	.00	POND_A	132.00	OFFEAST	136.00
A-2	.00	.00	POND_A	132.00	OFFWEST	110.00
B-1	12.75	18.83	POND_B	161.26	OFFEAST	136.00
C-1	13.00	19.97	POND_C	138.77	OFFWEST	110.00
K-1	14.50	4.99	POND_K	168.29	POND_J	142.78
J-1	13.00	9.07	POND_J	142.78	POND_A	133.55

G/P 2+3
46765.04

MODE: OFFPEAK



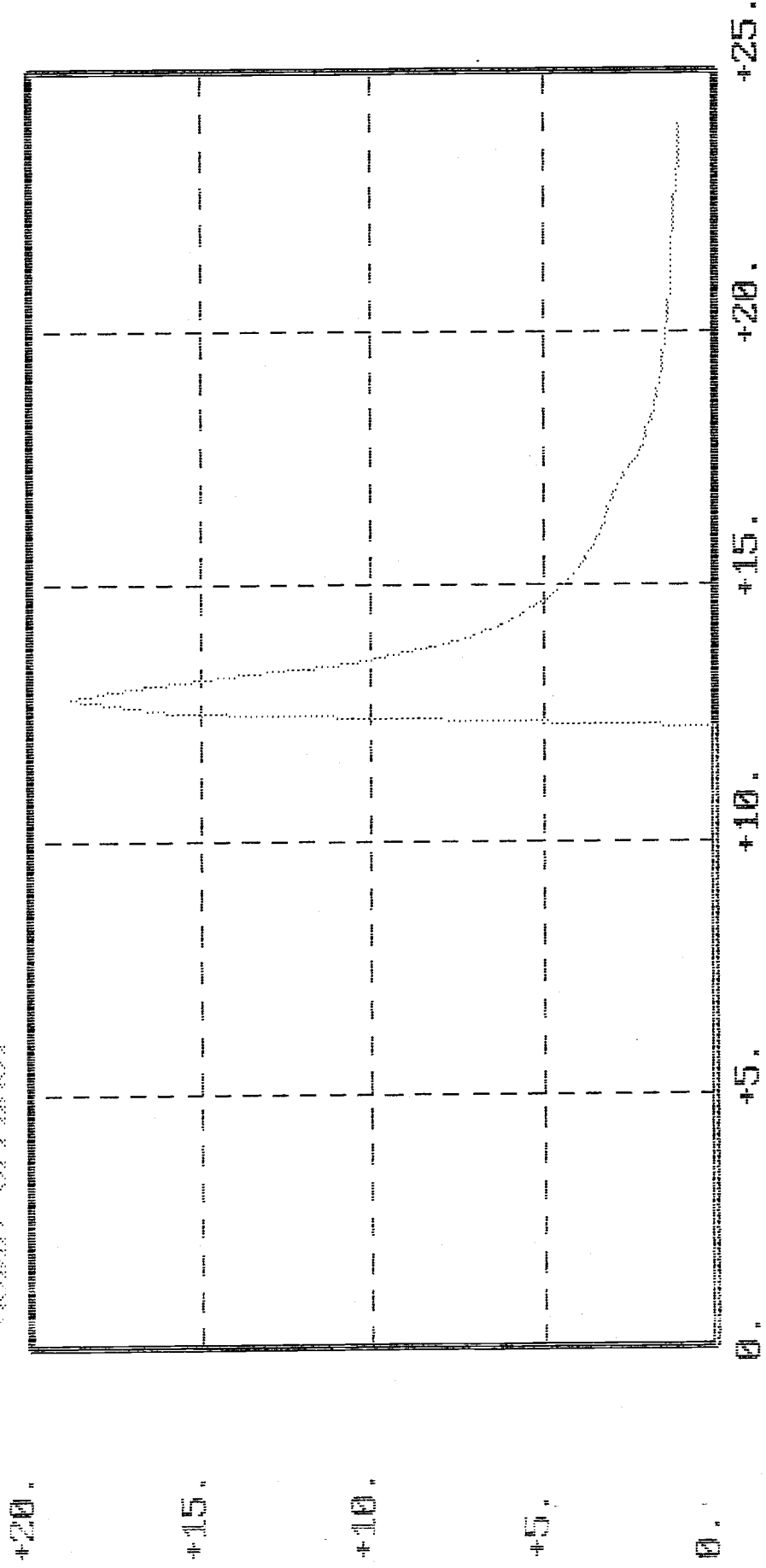
+50.
+40.
+30.
+20.
+10.
0.

0. +5. +10. +15. +20. +25.

TIME in hours

PRE 25/24

MODE: OFFBAST



GREATER PINES PHASES 2 & 3 PREDEV. 25YR 96HR EVENT
 12/23/1993

=====
 NODAL MAXIMUM CONDITIONS REPORT
 =====

NODE ID	STAGE (ft)	VOLUME (af)	!<----- RUNOFF (cfs)	INFLOW OFFSITE (cfs)	----->! OTHER (cfs)	OUTFLOW (cfs)
POND_A	137.47	35.06	84.89	.00	40.50	.00
POND_B	161.35	.51	35.23	.00	.00	35.01
POND_C	138.92	1.68	45.55	.00	.00	49.62
POND_J	143.26	2.00	40.36	.00	19.46	40.50
POND_K	168.57	1.68	24.25	.00	.00	19.46
OFFWEST	110.00	23.67	59.16	.00	49.62	.00
OFFEAST	136.00	8.14	.00	.00	35.01	.00

GREATER PINES PHASES 2 & 3 PREDEV. 25YR 96HR EVENT
12/23/1993

REACH MAXIMUM FLOW REPORT
=====

REACH ID	TIME (hrs)	FLOW (cfs)	FR NODE NAME	STAGE (ft)	TO NODE NAME	STAGE (ft)
A-1	.00	.00	POND_A	132.00	OFFEAST	136.00
A-2	.00	.00	POND_A	132.00	OFFWEST	110.00
B-1	60.50	35.01	POND_B	161.35	OFFEAST	136.00
C-1	60.50	49.62	POND_C	138.92	OFFWEST	110.00
K-1	60.50	19.46	POND_K	168.57	POND_J	143.26
J-1	60.50	40.50	POND_J	143.26	POND_A	134.50

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

NODAL MAXIMUM CONDITIONS REPORT
 =====

NODE ID	STAGE (ft)	VOLUME (af)	!<----- RUNOFF (cfs)	INFLOW OFFSITE (cfs)	----->! OTHER (cfs)	OUTFLOW (cfs)
POND_1	137.01	26.80	140.43	.00	9.02	.04
POND_2	112.17	2.12	15.62	.00	.04	.00
POND_3	140.11	5.00	41.83	.00	.00	2.27
POND_J	142.78	1.71	21.66	.00	4.99	9.02
POND_K	168.29	1.55	10.25	.00	.00	4.99
OFFWEST	110.00	1.60	1.96	.00	2.27	.00
OFFEAST	136.00	.00	.00	.00	.00	.00

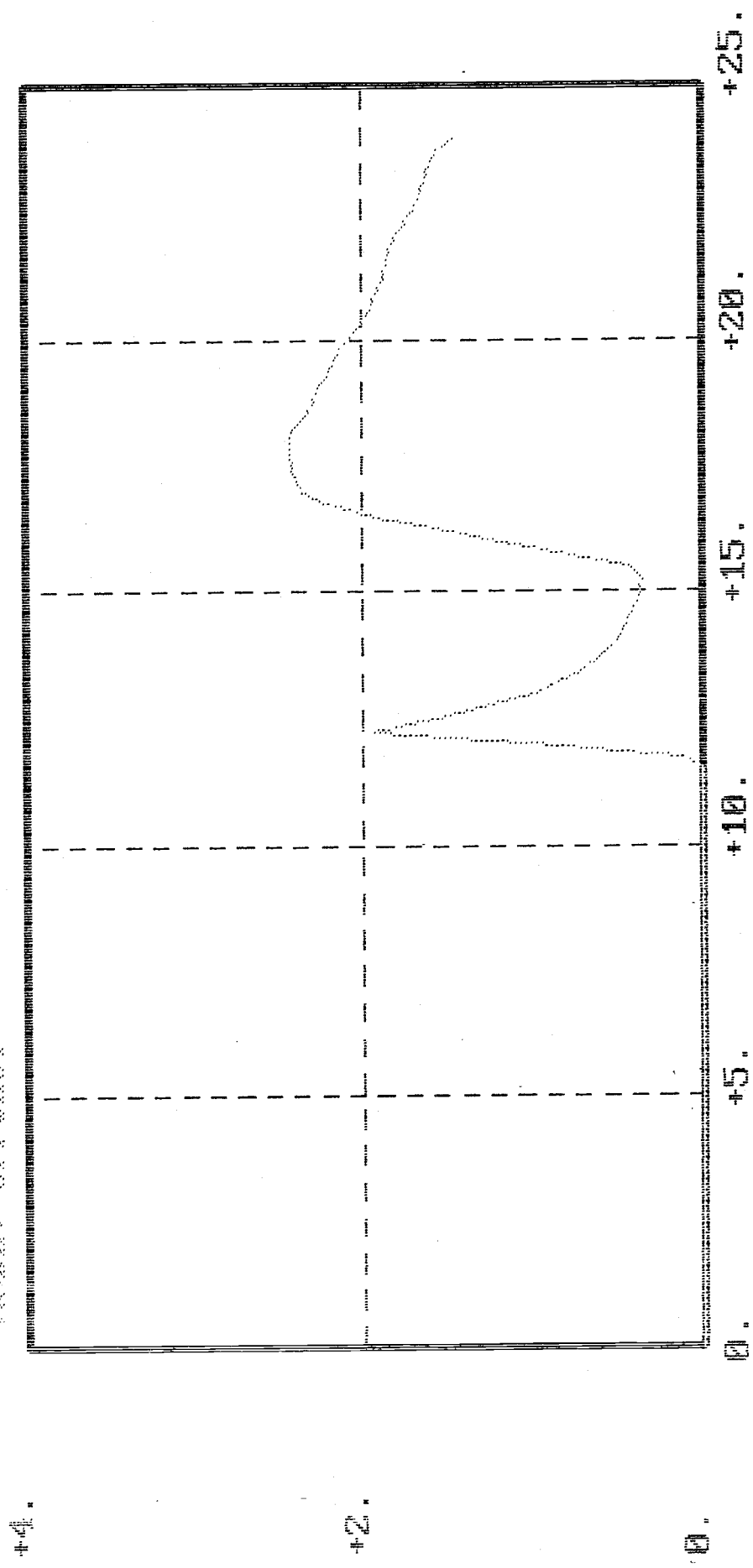
GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
12/23/1993

REACH MAXIMUM FLOW REPORT

REACH ID	TIME (hrs)	FLOW (cfs)	FR NODE NAME	STAGE (ft)	TO NODE NAME	STAGE (ft)
K-1	14.50	4.99	POND_K	168.29	POND_J	142.78
A-4	.00	.00	POND_2	109.00	OFFWEST	110.00
C-2	18.00	2.27	POND_3	140.11	OFFWEST	110.00
A-1	.00	.00	POND_1	132.00	OFFEAST	136.00
A-3	24.00	.04	POND_1	137.01	POND_2	112.17
J-1	14.50	9.02	POND_J	142.78	POND_1	135.47

4P 2+3
46765.04

NEUR: OPWUST



+4.
+2.
0.

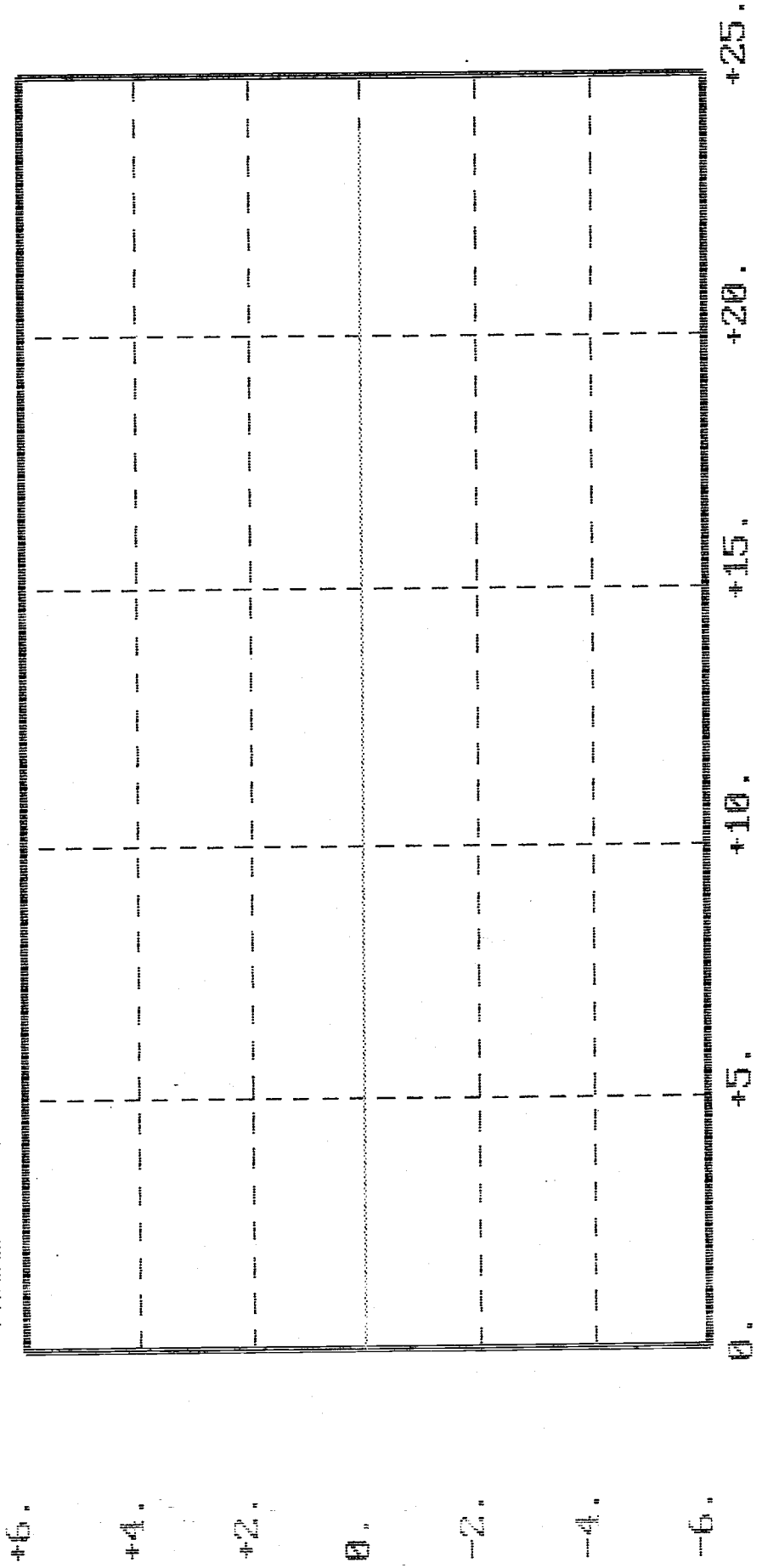
0. +5. +10. +15. +20. +25.

TIME in hours

POST 25/24

G P 2+3
G 6765.04

NUMB: ORPAST



POST 25/24

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

NODAL STAGE/VOLUME/FLOW REPORT
 =====

NODE ID: OFFWEST

TIME (hrs)	STAGE (ft)	VOLUME (af)	←----- RUNOFF (cfs)	INFLOW OFFSITE (cfs)	-----> OTHER (cfs)	OUTFLOW (cfs)
.00	110.00	.00	.00	.00	.00	.00
.25	110.00	.00	.00	.00	.00	.00
.50	110.00	.00	.00	.00	.00	.00
.75	110.00	.00	.00	.00	.00	.00
1.00	110.00	.00	.00	.00	.00	.00
1.25	110.00	.00	.00	.00	.00	.00
1.50	110.00	.00	.00	.00	.00	.00
1.75	110.00	.00	.00	.00	.00	.00
2.00	110.00	.00	.00	.00	.00	.00
2.25	110.00	.00	.00	.00	.00	.00
2.50	110.00	.00	.00	.00	.00	.00
2.75	110.00	.00	.00	.00	.00	.00
3.00	110.00	.00	.00	.00	.00	.00
3.25	110.00	.00	.00	.00	.00	.00
3.50	110.00	.00	.00	.00	.00	.00
3.75	110.00	.00	.00	.00	.00	.00
4.00	110.00	.00	.00	.00	.00	.00
4.25	110.00	.00	.00	.00	.00	.00
4.50	110.00	.00	.00	.00	.00	.00
4.75	110.00	.00	.00	.00	.00	.00
5.00	110.00	.00	.00	.00	.00	.00
5.25	110.00	.00	.00	.00	.00	.00
5.50	110.00	.00	.00	.00	.00	.00
5.75	110.00	.00	.00	.00	.00	.00
6.00	110.00	.00	.00	.00	.00	.00
6.25	110.00	.00	.00	.00	.00	.00
6.50	110.00	.00	.00	.00	.00	.00
6.75	110.00	.00	.00	.00	.00	.00
7.00	110.00	.00	.00	.00	.00	.00
7.25	110.00	.00	.00	.00	.00	.00
7.50	110.00	.00	.00	.00	.00	.00
7.75	110.00	.00	.00	.00	.00	.00
8.00	110.00	.00	.00	.00	.00	.00
8.25	110.00	.00	.00	.00	.00	.00
8.50	110.00	.00	.00	.00	.00	.00
8.75	110.00	.00	.00	.00	.00	.00
9.00	110.00	.00	.00	.00	.00	.00
9.25	110.00	.00	.00	.00	.00	.00
9.50	110.00	.00	.00	.00	.00	.00
9.75	110.00	.00	.00	.00	.00	.00
10.00	110.00	.00	.00	.00	.00	.00
10.25	110.00	.00	.00	.00	.00	.00
10.50	110.00	.00	.00	.00	.00	.00
10.75	110.00	.00	.00	.00	.00	.00

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

NODAL STAGE/VOLUME/FLOW REPORT
 =====

NODE ID: OFFWEST

TIME (hrs)	STAGE (ft)	VOLUME (af)	!<----- RUNOFF (cfs)	INFLOW OFFSITE (cfs)	----->! OTHER (cfs)	OUTFLOW (cfs)
11.00	110.00	.00	.00	.00	.00	.00
11.25	110.00	.00	.00	.00	.00	.00
11.50	110.00	.00	.00	.00	.00	.00
11.75	110.00	.00	.12	.00	.00	.00
12.00	110.00	.01	1.02	.00	.00	.00
12.25	110.00	.04	1.96	.00	.00	.00
12.50	110.00	.08	1.58	.00	.00	.00
12.75	110.00	.11	1.26	.00	.00	.00
13.00	110.00	.13	1.00	.00	.00	.00
13.25	110.00	.15	.83	.00	.00	.00
13.50	110.00	.17	.69	.00	.00	.00
13.75	110.00	.18	.60	.00	.00	.00
14.00	110.00	.19	.53	.00	.00	.00
14.25	110.00	.20	.47	.00	.00	.00
14.50	110.00	.21	.44	.00	.00	.00
14.75	110.00	.22	.40	.00	.00	.00
15.00	110.00	.23	.37	.00	.00	.00
15.25	110.00	.24	.35	.00	.00	.00
15.50	110.00	.24	.32	.00	.00	.00
15.75	110.00	.26	.32	.00	.46	.00
16.00	110.00	.28	.30	.00	.88	.00
16.25	110.00	.31	.29	.00	1.29	.00
16.50	110.00	.34	.27	.00	1.65	.00
16.75	110.00	.38	.27	.00	1.95	.00
17.00	110.00	.43	.22	.00	2.13	.00
17.25	110.00	.48	.21	.00	2.20	.00
17.50	110.00	.53	.19	.00	2.24	.00
17.75	110.00	.58	.19	.00	2.26	.00
18.00	110.00	.63	.18	.00	2.27	.00
18.25	110.00	.68	.17	.00	2.25	.00
18.50	110.00	.73	.15	.00	2.20	.00
18.75	110.00	.78	.15	.00	2.15	.00
19.00	110.00	.83	.15	.00	2.12	.00
19.25	110.00	.87	.14	.00	2.09	.00
19.50	110.00	.92	.14	.00	2.05	.00
19.75	110.00	.96	.14	.00	2.01	.00
20.00	110.00	1.01	.13	.00	1.96	.00
20.25	110.00	1.05	.12	.00	1.91	.00
20.50	110.00	1.09	.12	.00	1.86	.00
20.75	110.00	1.13	.12	.00	1.82	.00
21.00	110.00	1.17	.12	.00	1.78	.00
21.25	110.00	1.21	.12	.00	1.76	.00
21.50	110.00	1.25	.12	.00	1.74	.00
21.75	110.00	1.29	.12	.00	1.72	.00

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 24HR EVENT
 12/23/1993

=====
 NODAL STAGE/VOLUME/FLOW REPORT
 =====

NODE ID: OFFWEST

TIME (hrs)	STAGE (ft)	VOLUME (af)	!<----- RUNOFF (cfs)	INFLOW OFFSITE (cfs)	----->! OTHER (cfs)	OUTFLOW (cfs)
22.00	110.00	1.33	.12	.00	1.70	.00
22.25	110.00	1.36	.11	.00	1.65	.00
22.50	110.00	1.40	.11	.00	1.61	.00
22.75	110.00	1.43	.10	.00	1.57	.00
23.00	110.00	1.47	.11	.00	1.55	.00
23.25	110.00	1.50	.10	.00	1.52	.00
23.50	110.00	1.53	.11	.00	1.50	.00
23.75	110.00	1.57	.10	.00	1.47	.00
24.00	110.00	1.60	.07	.00	1.39	.00

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
 12/23/1993

NODAL MAXIMUM CONDITIONS REPORT
 =====

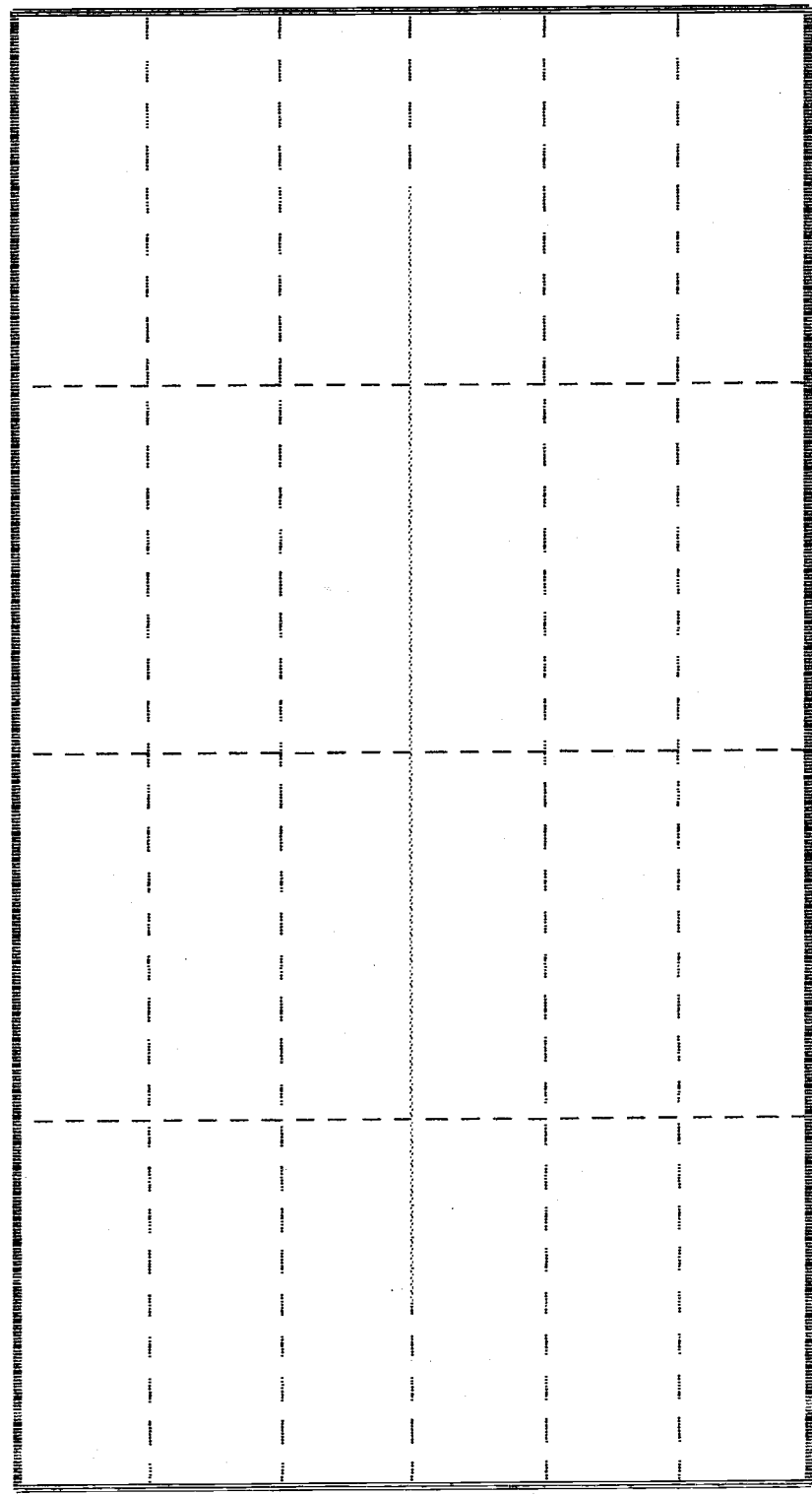
NODE ID	STAGE (ft)	VOLUME (af)	INFLOW			OUTFLOW (cfs)
			RUNOFF (cfs)	OFFSITE (cfs)	OTHER (cfs)	
POND_1	137.53	30.99	222.97	.00	40.49	23.66
POND_2	119.30	17.32	32.33	.00	23.66	9.68
POND_3	140.37	5.84	70.69	.00	.00	13.52
POND_J	143.26	2.00	40.28	.00	19.48	40.49
POND_K	168.57	1.68	24.28	.00	.00	19.48
OFFWEST	110.00	22.73	4.06	.00	13.52	.00
OFFEAST	136.00	.00	.00	.00	.00	.00

GREATER PINES PHASES 2 & 3 POSTDEV. 25YR 96HR EVENT
12/23/1993

REACH MAXIMUM FLOW REPORT
=====

REACH ID	TIME (hrs)	FLOW (cfs)	FR NODE NAME	STAGE (ft)	TO NODE NAME	STAGE (ft)
K-1	60.50	19.48	POND_K	168.57	POND_J	143.26
A-4	72.50	9.68	POND_2	119.30	OFFWEST	110.00
C-2	61.00	13.52	POND_3	140.37	OFFWEST	110.00
A-1	.00	.00	POND_1	132.00	OFFEAST	136.00
A-3	63.50	23.66	POND_1	137.53	POND_2	114.98
J-1	60.50	40.49	POND_J	143.26	POND_1	136.33

GP 2+3
66765.04



+6.
+4.
+2.
0.
-2.
-4.
-6.

+40. +60. +80. +100. +120.

TIME in hours

0 1 2 3 4 5 6 7 8 9

Post 25/96

9.0 POLLUTION ABATEMENT

A determination of the volume of pollution abatement was made using the on-line treatment pond criteria shown in St. Johns River Water Management District 40C-42. A soils report done by Michael D. Sims & Associates was used to determine the co-efficient of permeability used within each of the proposed pond areas. This co-efficient of vertical permeability was used to determine draw-down times within the proposed ponds. Table 9.1 summarizes the results of the pollution abatement volume and determinations. Draw-down vs. time calculations for Phases 2 & 3 are attached.

POLLUTION ABATEMENT VOLUMES
 GREATER PINES PHASES 2 & 3
 POST-DEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993

PAGE 1

AREAS TRIBUTARY TO POND 1:

BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	POLLUTION ABATEMENT VOLUME REQUIRED (AC-FT)
100	8.80	0.00	0.00	0.00	8.80	0.733
101	5.50	0.00	0.91	0.91	4.59	0.458
102	0.07	0.03	0.00	0.03	0.04	0.006
103	0.62	0.08	0.04	0.12	0.50	0.052
104	2.60	0.58	0.18	0.76	1.84	0.217
105	0.26	0.10	0.00	0.10	0.16	0.022
106	2.82	0.58	0.04	0.62	2.20	0.235
107	1.62	0.83	0.00	0.83	0.79	0.154
108	0.60	0.12	0.05	0.17	0.43	0.050
109	1.95	0.62	0.07	0.69	1.26	0.163
110	1.82	0.25	0.19	0.44	1.38	0.152
111	2.40	0.33	0.28	0.61	1.79	0.200
112	1.28	0.50	0.00	0.50	0.78	0.107
113	0.94	0.25	0.07	0.32	0.62	0.078
114	2.34	0.72	0.14	0.86	1.48	0.195
115	1.65	0.33	0.19	0.52	1.13	0.138
116	2.50	1.00	0.05	1.05	1.45	0.214
117	0.94	0.50	0.00	0.50	0.44	0.091
118	3.70	0.54	0.44	0.98	2.72	0.308
119	1.28	0.29	0.12	0.41	0.87	0.107
120	1.65	0.66	0.00	0.66	0.99	0.138
121	1.25	0.25	0.11	0.36	0.89	0.104
122	1.67	0.25	0.11	0.36	1.31	0.139
123	1.12	0.17	0.09	0.26	0.86	0.093
124	0.96	0.17	0.09	0.26	0.70	0.080
125	1.98	0.21	0.09	0.30	1.68	0.165
126	1.85	0.42	0.18	0.60	1.25	0.154
127	2.08	0.66	0.11	0.77	1.31	0.173
128	1.49	0.00	0.32	0.32	1.17	0.124
129	1.75	0.69	0.00	0.69	1.06	0.146
130	3.51	0.85	0.28	1.13	2.38	0.293
131	1.80	0.33	0.11	0.44	1.36	0.150
132	1.32	0.33	0.14	0.47	0.85	0.110
133	1.42	0.33	0.14	0.47	0.95	0.118
134	2.08	0.50	0.21	0.71	1.37	0.173
135	1.60	0.58	0.07	0.65	0.95	0.134
TOTALS	71.22	14.05	4.82	18.87	52.35	5.973

TABLE 9.1

POLLUTION ABATEMENT VOLUMES
 GREATER PINES PHASES 2 & 3
 POST-DEVELOPMENT CONDITION
 CPH JOB No. G6765.04 12/22/1993

PAGE 2

AREAS TRIBUTARY TO POND 2:

BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	POLLUTION ABATEMENT VOLUME REQUIRED (AC-FT)
200	12.84	0.00	0.00	0.00	12.84	1.070
201	2.45	0.16	0.44	0.60	1.85	0.204
202	0.75	0.12	0.05	0.17	0.58	0.063
TOTALS	16.04	0.28	0.49	0.77	15.27	1.337

AREAS TRIBUTARY TO POND 3:

BASIN No.	TOTAL AREA (AC)	AREA DCIA (AC)	AREA NDCIA (AC)	AREA IMPERVIOUS (AC)	AREA PERVIOUS (AC)	POLLUTION ABATEMENT VOLUME REQUIRED (AC-FT)
300	7.35	0.00	0.00	0.00	7.35	0.613
301	1.00	0.29	0.00	0.29	0.71	0.083
302	2.00	0.29	0.14	0.43	1.57	0.167
303	1.97	0.00	0.00	0.00	1.97	0.164
304	3.37	0.50	0.35	0.85	2.52	0.281
305	1.90	0.42	0.18	0.60	1.30	0.158
306	1.33	0.25	0.11	0.36	0.97	0.111
307	2.10	0.46	0.19	0.65	1.45	0.175
308	1.95	0.50	0.21	0.71	1.24	0.163
309	0.14	0.05	0.00	0.05	0.09	0.012
310	2.10	0.46	0.19	0.65	1.45	0.175
311	2.10	0.37	0.16	0.53	1.57	0.175
312	0.71	0.21	0.00	0.21	0.50	0.059
313	0.50	0.00	0.07	0.07	0.43	0.042
314	0.41	0.15	0.04	0.19	0.22	0.037
315	2.28	0.00	0.26	0.26	2.02	0.190
TOTALS	31.21	3.95	1.90	5.85	25.36	2.60

NOTES:

1. AREA OF IMPERVIOUS = DCIA + NDCIA.
2. REQUIRED VOLUME FOR ON-LINE PONDS IS THE GREATER OF:
 - a) 0.5 INCH RUNOFF OVER THE ENTIRE AREA, OR
 - b) 1.25 INCHES RUNOFF OVER THE IMPERVIOUS AREA, BOTH, PLUS 0.5 INCH OVER THE ENTIRE AREA.

TABLE 9.1

Job No. G6765.04

SUBJECT GREATER PINES PHASES 2&3 Div. of Work _____ Sheet No. 1 of 1

STAGE OF POND FOR REQUIRED POLLUTION ABATEMENT

POND No. 1

$$\frac{137 - x \text{ (FT)}}{5.973 \text{ (AL-FT)}} = \frac{137 - 136 \text{ (FT)}}{26.70 - 20.32 \text{ (AL-FT)}}$$

$$x = 136.06 \text{ FT} = 136.1 \text{ FT} \leftarrow \text{Ans.}$$

POND No. 2

$$\frac{119 - x \text{ (FT)}}{1.337 \text{ (AL-FT)}} = \frac{119 - 118 \text{ (FT)}}{16.34 - 13.42 \text{ (AL-FT)}}$$

$$x = 118.54 = 118.5 \text{ FT} \leftarrow \text{Ans.}$$

POND No. 3

$$\frac{140 - x \text{ (FT)}}{2.60 \text{ (AL-FT)}} = \frac{140 - 139 \text{ (FT)}}{4.63 - 1.81 \text{ (AL-FT)}}$$

$$x = 139.08 \text{ FT} = 139.1 \text{ FT} \leftarrow \text{Ans.}$$

A. Equivalent Pond Dimensions:

- Ponds considered as rectangles with dimensions taken @ average depth.

<u>Pond</u>	<u>Length (Ft)</u>	<u>Width (Ft)</u>
1	1454	160
2	380	188
3	378.5	290

b. From the Seepage Analysis for Greater Pines Phase I, Lake County, Florida PN 92-501.22, an averaged coefficient of permeability of 28 ft/day was determined from soil borings. This value was assumed for both vertical & horizontal directions.

c. Due to the fact no groundwater was encountered during the boring process a confining layer located 16 ft below pond bottom was assumed. Two feet of groundwater was assumed above the confining layer.

d. The effective storage coefficient of the soil was assumed to be 0.2.

Pond 1:

The pollution abatement volume required (5.977 ac-ft) corresponds to a decrease in stage from 137 ft. to 136.1 ft.

According to the MODRET output for pond #1, this volume of water is infiltrated shortly after 12 hrs. thereby being in compliance with the 72 hr. requirement.

Pond 2:

The pollution abatement volume required (1.337 ac-ft) corresponds to a decrease in stage from 119 ft. to 118.5 ft.

According to the MODRET output, this volume infiltrates within 12 hrs.

Pond 3:

The pollution abatement volume required (2.60 ac-ft) corresponds to a decrease in stage from 140 ft. to 139.1 ft.

According to MODRET, this volume is infiltrated within 36 hrs.

GP 2+3
66765.04
1/6
12/22/93

POLLUTION ABATEMENT VOLUME ANALYSIS
USING 'MODRET 4' PROGRAM

Written by: Nicolas E. Andreyev, P.E. (May, 1992)
(Sponsored by: SWFWMD/PSI)

SUMMARY OF INPUT PARAMETERS
=====

POND NAME / NUMBER : POND1

AVERAGE WETTED POND LENGTH =====>	1454.000 ft
AVERAGE WETTED POND WIDTH =====>	160.000 ft
AVERAGE ELEVATION OF BOTTOM OF AQUIFER =====>	116.000 ft
AVERAGE ELEVATION OF DESIGN GROUNDWATER TABLE ===>	118.000 ft
AVERAGE ELEVATION OF POND BOTTOM =====>	132.000 ft
AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY =====>	28.000 ft/d
AVERAGE EFFECTIVE STORAGE COEFF. OF SOIL =====>	0.200
AVERAGE STORAGE COEFFICIENT OF POND AREA =====>	1.000
POLLUTION ABATEMENT VOLUME TO BE TREATED =====>	26.700 ac-ft
TIME INCREMENTS AFTER STORM EVENT =====>	12.00 hours
No. OF TIME INCREMENTS AFTER STORM EVENT =====>	6.00
NUMBER OF GROUNDWATER CONTROL FEATURES =====>	0.00

GP 2+3
66765.04
2/6
12/22/93

SUMMARY OF POLLUTION ABATEMENT MODEL RESULTS
=====

POND NAME / No.: POND1

CUMULATIVE TIME (hrs.)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)

0.000	136.999	5.160 *	
12.000	136.130	4.203	4.6819
24.000	135.438	3.204	3.7247
36.000	134.940	2.378	2.6836
48.000	134.555	1.894	2.0733
60.000	134.237	1.593	1.7143
72.000	133.963		1.4720

* This value (with associated time) is an equivalent instantaneous infiltration rate to be used with a stormwater routing model (such as ADICPR or others). Just before this time, the infiltration is zero (prior to runoff reaching the pond).

GP 2+3
66765.04
3/6
12/22/93

POLLUTION ABATEMENT VOLUME ANALYSIS
USING 'MODRET 4' PROGRAM

Written by: Nicolas E. Andreyev, P.E. (May, 1992)
(Sponsored by: SWFWMD/PSI)

SUMMARY OF INPUT PARAMETERS

=====

POND NAME / NUMBER : POND2

AVERAGE WETTED POND LENGTH =====>	380.000 ft
AVERAGE WETTED POND WIDTH =====>	188.000 ft
AVERAGE ELEVATION OF BOTTOM OF AQUIFER =====>	93.000 ft
AVERAGE ELEVATION OF DESIGN GROUNDWATER TABLE ==>	95.000 ft
AVERAGE ELEVATION OF POND BOTTOM =====>	109.000 ft
AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY =====>	28.000 ft/d
AVERAGE EFFECTIVE STORAGE COEFF. OF SOIL =====>	0.200
AVERAGE STORAGE COEFFICIENT OF POND AREA =====>	1.000
POLLUTION ABATEMENT VOLUME TO BE TREATED =====>	16.340 ac-ft
TIME INCREMENTS AFTER STORM EVENT =====>	12.00 hours
No. OF TIME INCREMENTS AFTER STORM EVENT =====>	6.00
NUMBER OF GROUNDWATER CONTROL FEATURES =====>	0.00

SP 2+3
41765.04

4/6
12/22/93

SUMMARY OF POLLUTION ABATEMENT MODEL RESULTS
=====

POND NAME / No.: POND2

CUMULATIVE TIME (hrs.)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)
0.000	118.963	1.973 *	
12.000	117.802	1.869	1.9209
24.000	116.703	1.634	1.8163
36.000	115.825	1.316	1.4525
48.000	115.112	1.079	1.1797
60.000	114.520	0.908	0.9784
72.000	114.013		0.8379

* This value (with associated time) is an equivalent instantaneous infiltration rate to be used with a stormwater routing model (such as ADICPR or others). Just before this time, the infiltration is zero (prior to runoff reaching the pond).

4 P 2+3
66765.04
5/6
12/22/93

POLLUTION ABATEMENT VOLUME ANALYSIS
USING 'MODRET 4' PROGRAM

Written by: Nicolas E. Andreyev, P.E. (May, 1992)
(Sponsored by: SWFWMD/PSI)

SUMMARY OF INPUT PARAMETERS
=====

POND NAME / NUMBER : POND 3

AVERAGE WETTED POND LENGTH =====>	378.500 ft
AVERAGE WETTED POND WIDTH =====>	290.000 ft
AVERAGE ELEVATION OF BOTTOM OF AQUIFER =====>	122.000 ft
AVERAGE ELEVATION OF DESIGN GROUNDWATER TABLE ===>	124.000 ft
AVERAGE ELEVATION OF POND BOTTOM =====>	138.000 ft
AVERAGE HORIZONTAL HYDRAULIC CONDUCTIVITY =====>	28.000 ft/d
AVERAGE EFFECTIVE STORAGE COEFF. OF SOIL =====>	0.200
AVERAGE STORAGE COEFFICIENT OF POND AREA =====>	1.000
POLLUTION ABATEMENT VOLUME TO BE TREATED =====>	4.300 ac-ft
TIME INCREMENTS AFTER STORM EVENT =====>	12.00 hours
No. OF TIME INCREMENTS AFTER STORM EVENT =====>	6.00
NUMBER OF GROUNDWATER CONTROL FEATURES =====>	0.00

SP 2+3
66765.04
6/6
12/22/93

SUMMARY OF POLLUTION ABATEMENT MODEL RESULTS
=====

POND NAME / No.: POND 3

CUMULATIVE TIME (hrs.)	WATER ELEVATION (feet)	INSTANTANEOUS INFILTRATION RATE (cfs)	AVERAGE INFILTRATION RATE (cfs)
0.000	139.706	0.509 *	
			0.5925
12.000	139.473	0.676	
			0.7591
24.000	139.175	0.800	
			0.8417
36.000	138.843	0.842	
			0.8427
48.000	138.512	0.809	
			0.7750
60.000	138.207	0.739	
			0.7029
72.000	137.930		

* This value (with associated time) is an equivalent instantaneous infiltration rate to be used with a stormwater routing model (such as ADICPR or others). Just before this time, the infiltration is zero (prior to runoff reaching the pond).

10.0 SITE WETLANDS

There are no wetlands within Phases 2 & 3 - the area proposed for this permit modification, nor in the tributary Phase 1 development.

jcbpines.2&3