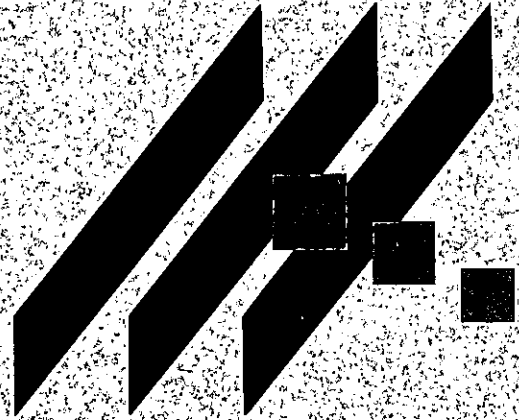


M K E C ENGINEERING CONSULTANTS, INC.



DRAINAGE REPORT

FOR

WOODLAND LAKES ESTATES THIRD ADDITION

SEPTEMBER 2002

Drainage Report for Woodland Lakes Estates Third Addition Wichita, Kansas

Location

The site is located in Sedgwick County, Kansas, West of 127th Street between Kellogg Avenue and Harry Street. It lies in the Southeast and Northeast Quarters, Section 27, Township 27 South, Range 2 East. The total site area is approximately 85.4 acres. The site is shown in the Andover, Kansas Quadrangle located in Appendix A.

Soils

According to the NRCS (SCS) Sedgwick County Soil Survey found in Appendix B, the site is in the Rosehill Series (Rd: Rosehill silty clay, 1 to 3 percent slopes) and the Clime Series (Ce: Clime silty clay, 3 to 6 percent slopes). The Hydrological Soil Group (HSG) for the site is both "C" and "D". The coefficients for the two soil groups were averaged for calculations.

Pre-developed Conditions

Current Development

The site is undeveloped. Residential houses surround the site on all sides.

Current Landform and Slope

Watershed slopes vary from 1.0% to 6.0%. Elevations range from 1350 in the west to 1324 in the east.

Current Drainage Conditions

The site is not in the regulatory floodplain. The nearest mapped flood zone is adjacent to the site. South of the site are Zone B and Zone A3 (FIRM Panel 225, Sedgwick County, Kansas, June 3, 1986) (shown in Appendix C).

Upstream of Site

Runoff from approximately 160 acres north and west of the site flows to the existing 12'x4' reinforced concrete box (RCB) at Lincoln Street. This is referred to as the Main Channel. This runoff flows through two existing ponds on the south side of Lincoln. These ponds were constructed for borrow, and limited detention storage is provided. This channel continues southeast through proposed Reserve B. An additional 19 acres drains into the east pond through a 48" pipe under Lincoln Street. An additional 139 acres flows from the north into proposed Reserve C. This is referred to as the East Tributary. Prior to reaching the site, the East Tributary passes through three existing detention facilities in Woodland Lakes Estates Addition. Detention storage in these ponds is included in the hydrology calculations included in this report. The East Tributary and the Main Channel meet just west of the east property line of the site. An additional natural drainage way flows from the middle of the proposed development to the housing development south of the site. This drains approximately 26.3 acres of the site.

Current Runoff Characteristics

Runoff for the areas north and west of the site were calculated using an SCS 24-hour storm. The TR-20 software model was used to estimate peak flows. Runoff curve numbers ranged from 84 to 98 based on existing land uses. Times of concentration were calculated using the FAA method, and ranged from 15 to 53 minutes. A summary of flows is shown in Table 1 below.

Table 1. Existing Conditions

Location	2-Year (cfs)	5-Year (cfs)	10-Year (cfs)	100-Year (cfs)
East Tributary				
North Prop. Line	131	190	228	365
East Prop. Line	122	186	227	375
Main Channel				
D/S of West Pond	206	290	337	478
D/S of East Pond	213	302	355	507
East Prop. Line	240	339	396	572
Total Exiting Site	351	482	567	881

Post-Developed Condition

Proposed Development

The site will develop as approximately 164 residential lots with an average size of 1/3 acre.

Proposed Landform and Slope

The ground surrounding houses will slope away from the houses at a minimum of 2.0%. Streets will have a minimum slope of 0.5%

Proposed Runoff Characteristics

The site was divided into sub-watersheds as indicated on the Drainage and Utility plan shown in Appendix D. The SCS method was once again used in the TR-20 software model to determine runoff under developed conditions. Runoff curve numbers ranged from 84 to 98, and times of concentration ranged from 15 to 50 minutes. Areas, runoff curve numbers and times of concentration were adjusted to reflect developed conditions. The results of this model are shown below in Table 2.

Table 2. Proposed Conditions

Location	2-Year (cfs)	5-Year (cfs)	10-Year (cfs)	100-Year (cfs)
East Tributary				
North Prop. Line	131	190	228	365
East Prop. Line	113	170	207	337
Main Channel				
D/S of West Pond	202	286	334	476
D/S of East Pond	209	297	351	504
East Prop. Line	241	344	407	592
Total Exiting Site	334	485	574	891

The rational method was used to determine time of concentrations for the sub-watersheds on site. The time of concentrations varied from 15 to 37 minutes, and the runoff coefficients ranged from 0.39 to 0.84, which correspond to 1/3 acre residential lots. Appendix E is a spreadsheet displaying the area, runoff coefficient (c), and time of concentration (t_c) in the 2, 5, 10, and 100-year events. The time of concentration values were used in the Hydraflow Hydrographs Software by Intelisolve. Hydrographs were created for each sub-watershed and hydrographs were routed together to calculate flows for pipes and exiting the site.

Runoff from the southwestern area of the site drains to the south into an existing residential development. A proposed detention facility in Reserve E will reduce developed flows to slightly less than existing flows. A comparison of undeveloped and developed flows calculated in Hydraflow Hydrographs by Intelisolve is shown in Table 3. Hydraflow Hydrographs output is found in Appendix G. The outflow structure of the pond will be a rectangular concrete weir with a crest length of 7'.

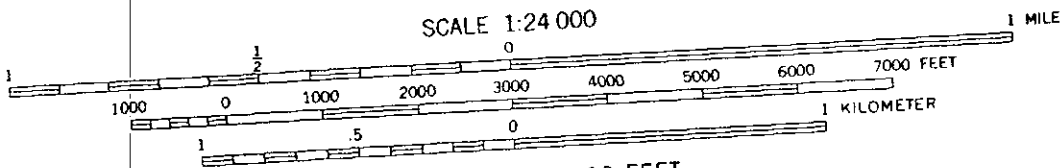
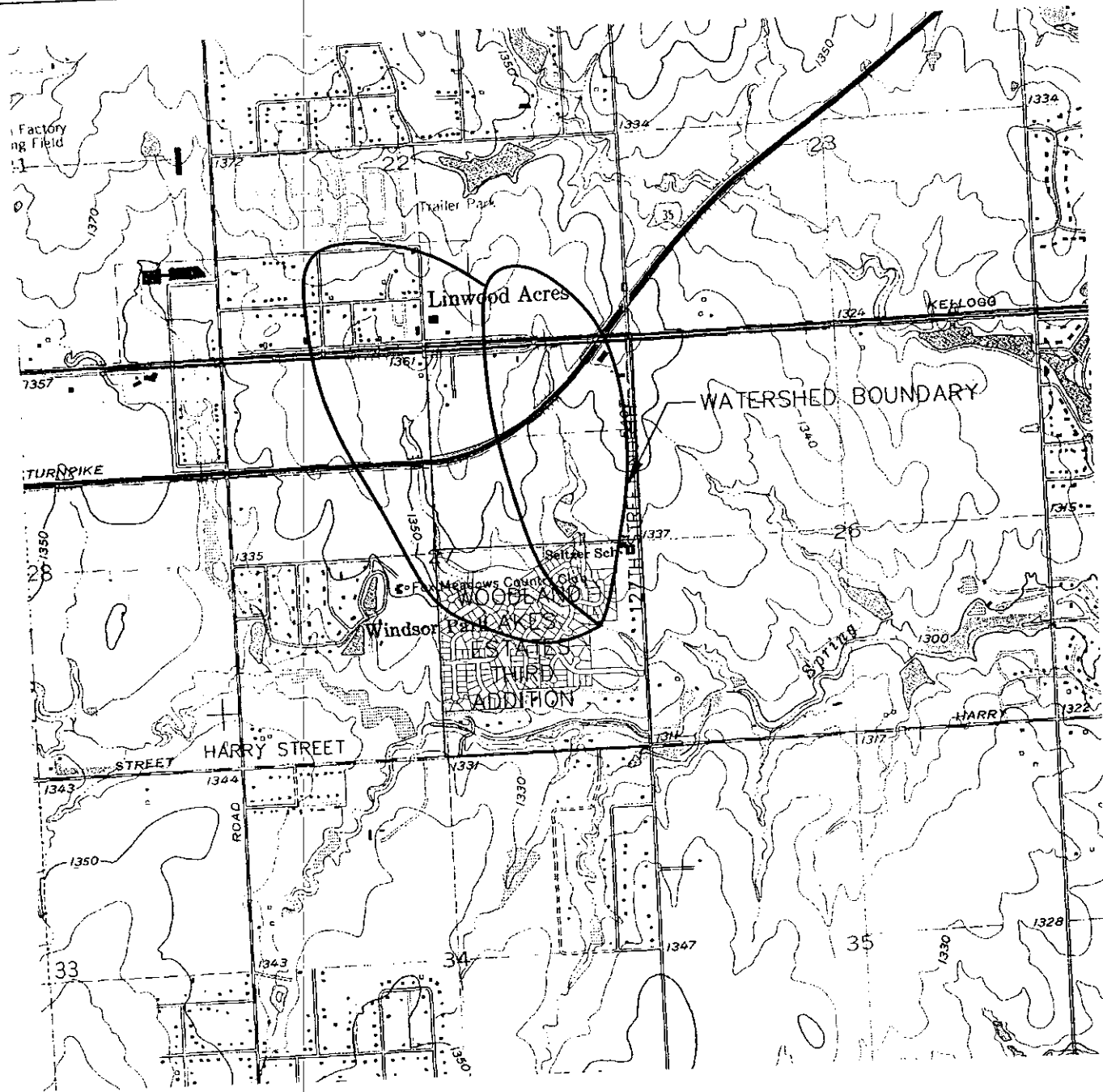
Table 3. Runoff to the south.

Sub-Watershed	2-Year (cfs)	5-Year (cfs)	10-Year (cfs)	100-Year (cfs)
Undeveloped	27.8	42.9	53.3	91.9
Developed	24.7	39.4	49.8	89.8

Summary

Woodland Lakes Third Addition is an 85.4-acre residential development in southeast Wichita. The site is currently undeveloped agricultural land. Two major drainage ways pass through the site, and were analyzed using the SCS 24-hour storm in the TR-20 software model. Flows leaving the site will be increased by 10 cfs, or 1.1%. This increase will have minimal impact on properties downstream. A proposed detention facility located in Reserve E will reduce developed flows to the south to less than existing conditions. The on site stormwater sewer system has been sized based on the Rational Method for each sub-watershed. Prior to completion of the platting process, a hydraulic modeling will be performed on the site to determine minimum pad elevations on all lots adjacent to drainage reserves.

Appendix A: Quadrangle Map



CONTOUR INTERVAL 10 FEET
 NATIONAL GEODETIC VERTICAL DATUM OF 1929

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 GEOLOGICAL SURVEY



MKEC
 ENGINEERING
 CONSULTANTS
 411 N. WEBB ROAD
 WICHITA, KS. 67206
 316 - 984 - 9800

**WOODLAND LAKES ESTATES
 THIRD ADDITION**
 PROJECT NAME

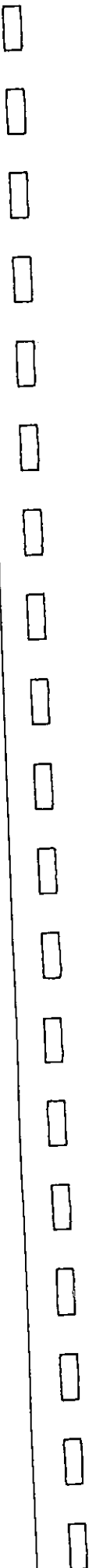
ANDOVER QUADRANGLE, KANSAS
 SHEET TITLE

DESIGN BY: KLA DRAWN BY: GJA CHECKED BY:

DATE: SEPTEMBER 2002 JOB NO. 02172 SHEET NO. 1 / 1

C:\4\195658\02172\DWG\PROP\URKNC\021720W.DWG

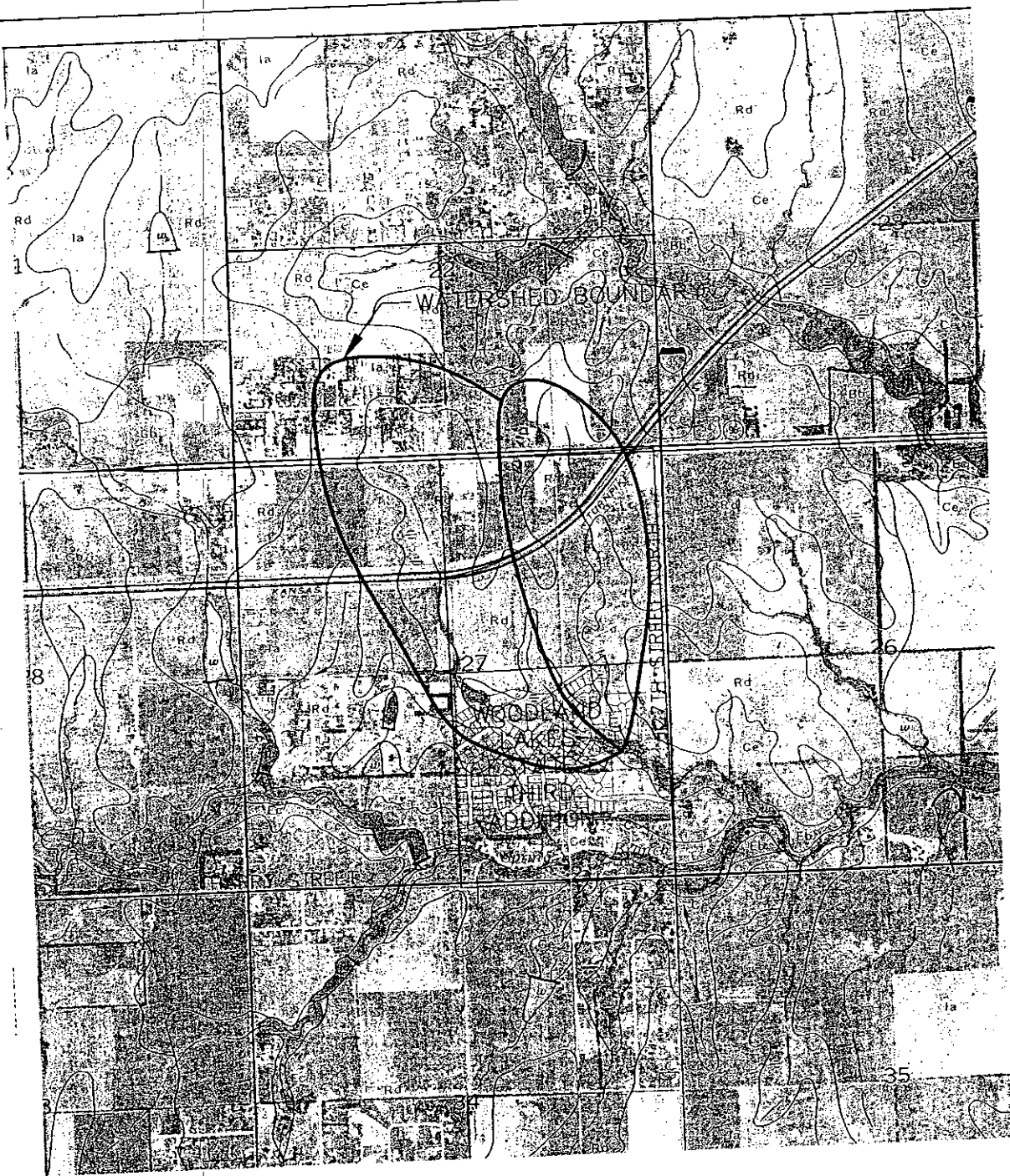
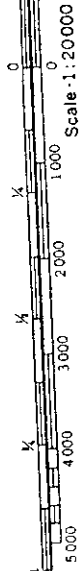
Appendix B: Soils Survey



14



1 Mile
5000 Feet



UNITED STATES DEPARTMENT OF
AGRICULTURE SOIL CONSERVATION
SERVICE IN COOPERATION WITH KANSAS
AGRICULTURAL EXPERIMENT STATION



MKEC
ENGINEERING
CONSULTANTS
417 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

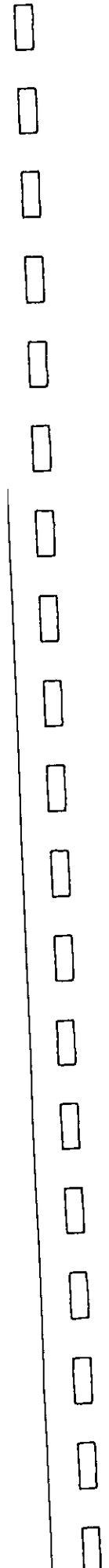
**WOODLAND LAKES ESTATES
THIRD ADDITION**

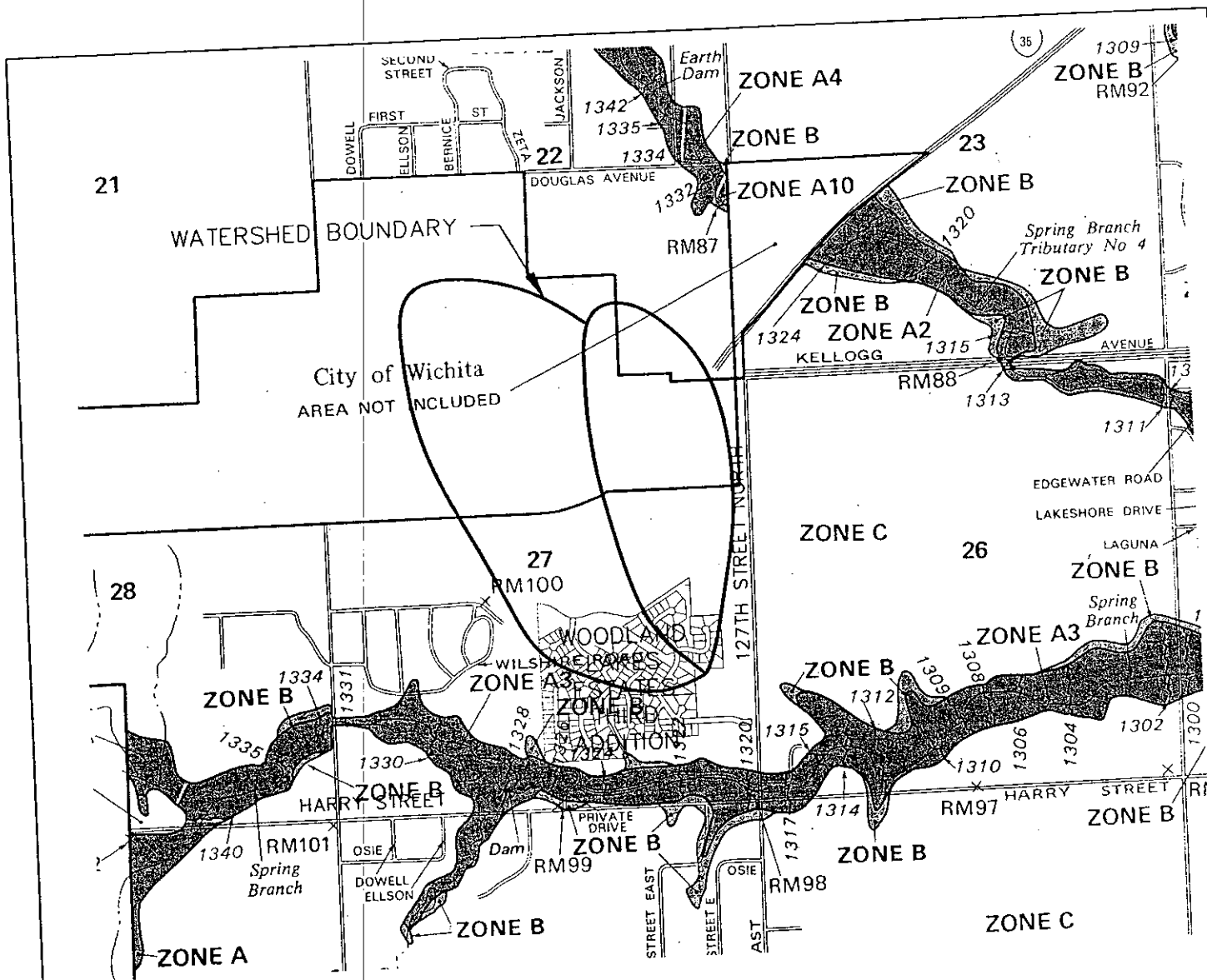
PROJECT NAME
**SOIL SURVEY
SEDGWICK COUNTY, KANSAS**

SHEET TITLE
KLA DESIGN BY: KLA DRAWN BY: CJA CHECKED BY:
SEPTEMBER 2002 DATE: 02172 JOB NO.: 1 / 1 SHEET/OF

H:\CIVIL\95055\02172.DWG\PROF\ORIC\0217254.DWG

Appendix C: Flood Insurance Rate Map





NATIONAL FLOOD INSURANCE PROGRAM


FIRM
FLOOD INSURANCE RATE MAP

SEDGWICK COUNTY,
KANSAS
(UNINCORPORATED AREAS)

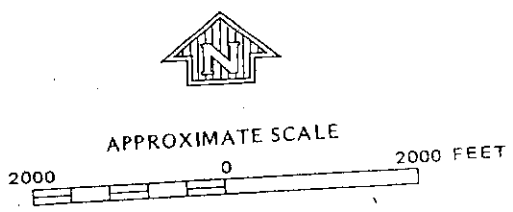

PANEL 225 OF 300

COMMUNITY-PANEL NUMBER
200321 0225 A

EFFECTIVE DATE:
JUNE 3, 1986



Federal Emergency Management Agency

MKEC
ENGINEERING
CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316-684-9600

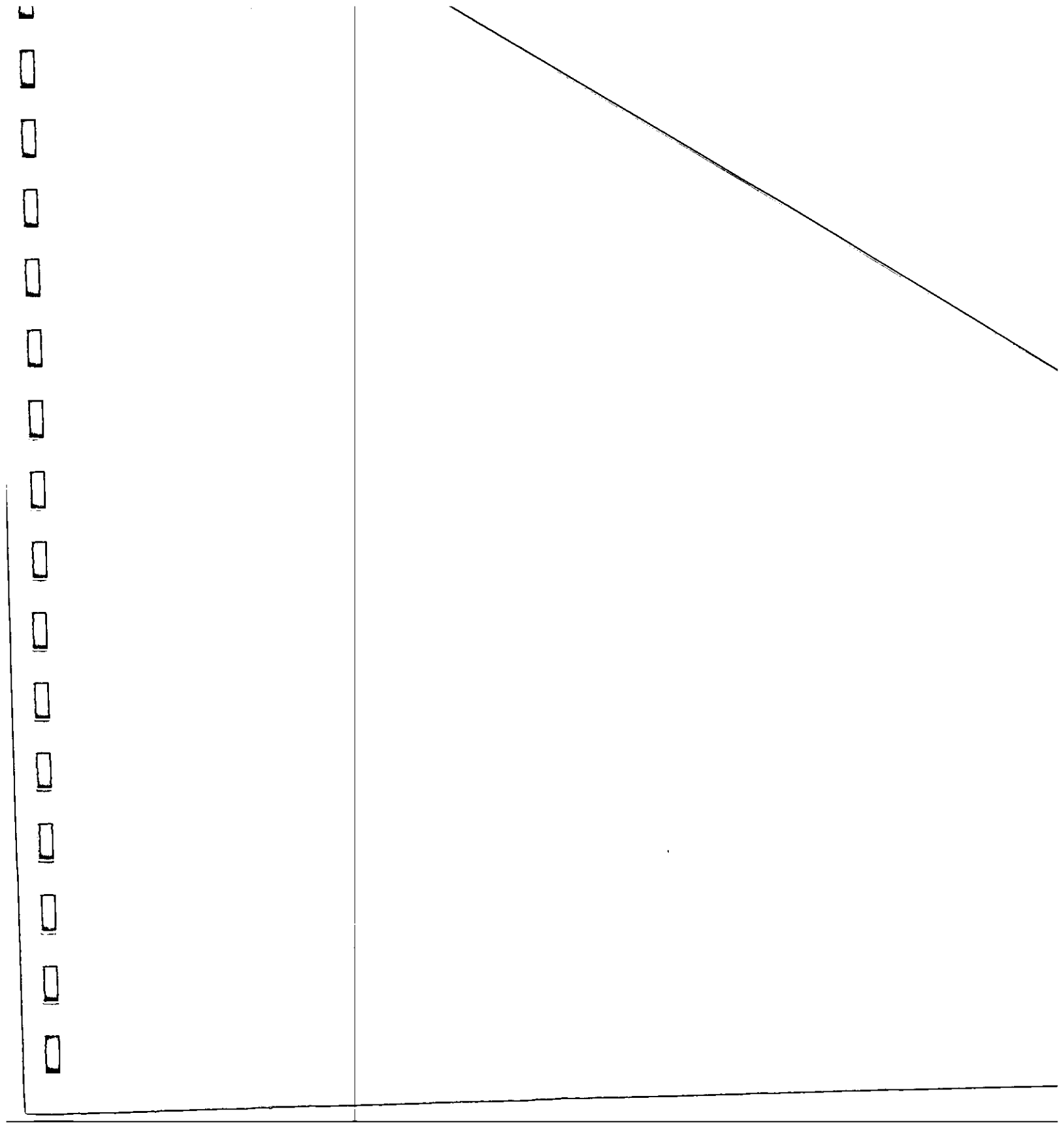
**WOODLAND LAKES ESTATES
THIRD ADDITION**
PROJECT NAME

**FIRM PANEL 225
SEDGWICK COUNTY, KANSAS**
SHEET TITLE

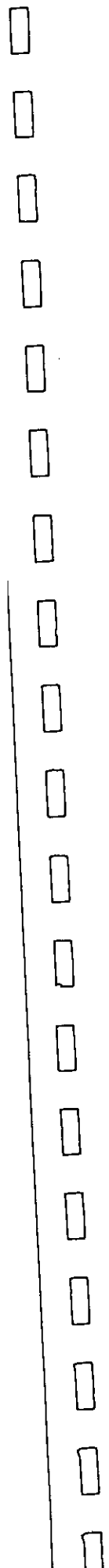
KLA DESIGN BY:	KLA DRAWN BY:	GJA CHECKED BY:
SEPTEMBER 2002 DATE	02172 JOB NO.	1 / 1 SHEET/OF

H:\proj\1986\0225\0225\FIRM\0225\FIRM.DWG

Appendix D: Drainage & Utility Plan



Appendix E: Drainage Analysis



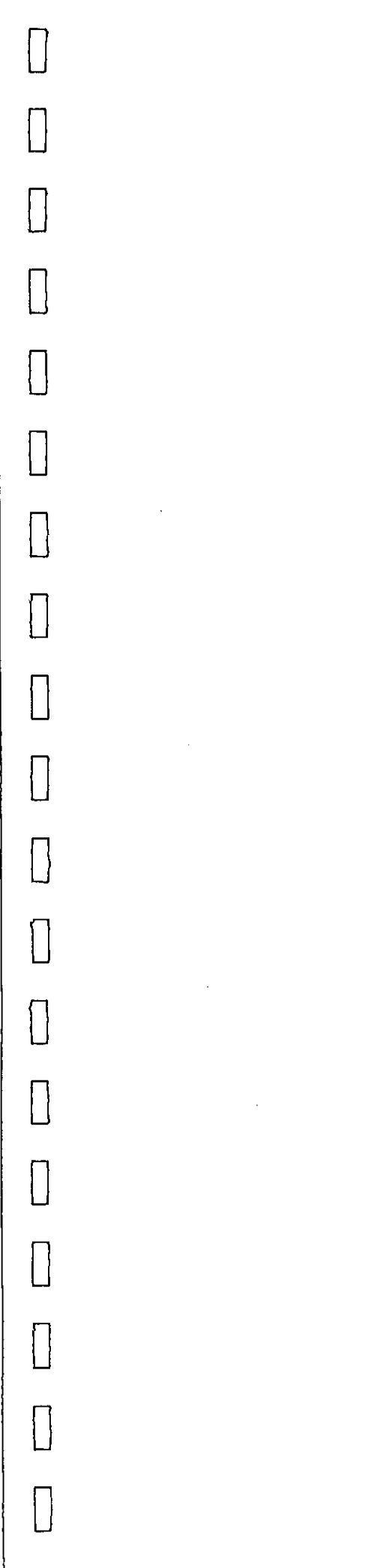
9/12/02

DRAINAGE CALCULATIONS
WOODLAND LAKES ESTATES 3RD ADDITION

Soil Group B

Area ID	Area ac	Accum. Area ac	C2	C5	C10	C100	Elev. Min.	Elev. Max.	Flow Length	Tc2 min	Tc5 min	Tc10 min	Tc100 min	I2 in/hr	I5 in/hr	I10 in/hr	I100 in/hr	O2 cfs	O5 cfs	Q10 cfs	Q100 cfs
DEVELOPED																					
A	3.7	0.49	0.53	0.60	0.72	1350.0	1336.0	750	24	23	20	15	3.03	3.81	4.60	7.37	5.51	7.48	10.24	19.69	
B	0.6	0.74	0.76	0.79	0.84	1342.0	1336.0	500	15	15	15	15	3.83	4.56	5.22	7.37	1.59	1.94	2.31	3.47	
A+B	4.3	0.52	0.56	0.62	0.74	1350.0	1336.0	750	24	23	20	15	3.03	3.81	4.60	7.37	6.76	9.11	12.27	23.15	
C	2.1	0.39	0.43	0.51	0.66	1338.0	1338.0	750	30	28	25	19	2.72	3.37	4.22	6.84	2.21	3.01	4.48	9.39	
D	3.4	0.39	0.43	0.51	0.66	1352.0	1336.0	600	23	21	19	15	3.17	3.90	4.83	7.37	4.14	5.62	8.25	16.30	
E	3.4	0.49	0.53	0.60	0.72	1346.0	1334.0	1100	35	33	29	22	2.44	3.05	3.90	6.26	4.10	5.54	8.03	15.46	
F	1.2	0.74	0.76	0.79	0.84	1338.0	1334.0	800	23	22	20	17	3.10	3.90	4.71	7.18	2.75	3.56	4.47	7.24	
G	2.1	0.39	0.43	0.51	0.66	1344.0	1336.0	500	24	23	20	15	3.03	3.73	4.60	7.37	2.47	3.35	4.90	10.17	
E+G	5.5	0.47	0.49	0.54	0.63	1344.0	1334.0	800	24	23	20	17	3.03	3.73	4.60	7.18	7.78	10.18	13.83	24.97	
E+F+G	6.7	0.50	0.54	0.61	0.72	1346.0	1334.0	1100	35	33	29	22	2.44	3.05	3.90	6.26	8.26	11.07	15.88	30.40	
H1	1.4	0.49	0.53	0.60	0.72	1342.0	1342.0	550	36	34	30	22	2.39	3.05	3.83	6.26	1.64	2.26	3.22	6.31	
H2	1.4	0.49	0.53	0.60	0.72	1342.0	1338.0	400	22	21	18	15	3.25	4.00	4.83	7.37	2.23	2.97	4.06	7.43	
I	1.2	0.74	0.76	0.79	0.84	1342.0	1338.0	500	16	15	15	15	3.83	4.56	5.22	7.37	3.43	4.19	4.99	7.49	
H+I	2.6	0.61	0.64	0.69	0.78	1342.0	1338.0	500	22	21	18	15	3.25	4.00	4.83	7.37	5.14	6.65	8.67	14.92	
J	1.4	0.49	0.53	0.60	0.72	1342.0	1338.0	300	17	16	15	15	3.61	4.43	5.22	7.37	2.42	3.22	4.29	7.27	
K	2.3	0.49	0.53	0.60	0.72	1342.0	1330.0	480	18	17	15	15	3.61	4.43	5.22	7.37	4.02	5.33	7.11	12.05	
L	2.1	0.49	0.53	0.60	0.72	1342.0	1336.0	800	34	32	28	21	2.48	3.19	3.90	6.39	2.58	3.58	4.96	9.75	
M	1.9	0.49	0.53	0.60	0.72	1342.0	1332.0	860	31	29	25	19	2.67	3.37	4.13	6.68	2.46	3.36	4.66	9.04	
N	0.8	0.39	0.43	0.51	0.66	1334.0	1332.0	500	39	37	32	24	2.32	2.93	3.63	6.01	0.71	0.98	1.44	3.09	
O	1.9	0.49	0.53	0.60	0.72	1340.0	1332.0	360	16	15	15	15	3.83	4.56	5.22	7.37	3.57	4.59	5.95	10.08	
P	1.6	0.39	0.43	0.51	0.66	1342.0	1330.0	570	24	22	20	15	3.10	3.81	4.71	7.37	1.98	2.69	3.94	7.88	
Q	2.3	0.49	0.53	0.60	0.72	1340.0	1332.0	450	19	18	16	15	3.42	4.31	5.22	7.37	3.92	5.35	7.33	12.42	
R	3.6	0.49	0.53	0.60	0.72	1336.0	1334.0	440	30	28	25	19	2.72	3.43	4.22	6.84	4.76	6.49	9.04	17.58	
S	3.8	0.39	0.43	0.51	0.66	1338.0	1328.0	900	37	35	31	23	2.35	3.01	3.76	6.26	3.50	4.94	7.33	15.78	
T	2.2	0.49	0.53	0.60	0.72	1336.0	1330.0	450	21	20	17	15	3.25	4.10	4.95	7.37	3.54	4.82	6.59	11.76	
S+T	6.0	0.43	0.47	0.54	0.68	1338.0	1328.0	900	37	35	31	23	2.35	3.01	3.76	6.26	6.06	8.49	12.33	25.79	
U	2.6	0.49	0.53	0.60	0.72	1340.0	1326.0	850	27	25	22	17	2.84	3.57	4.40	7.18	3.62	4.92	6.86	13.44	
V	3.2	0.49	0.53	0.60	0.72	1340.0	1326.0	850	27	25	22	17	2.84	3.57	4.40	7.18	4.49	6.11	8.53	16.70	
W	1.6	0.49	0.53	0.60	0.72	1336.0	1326.0	600	23	21	19	15	3.17	3.90	4.83	7.37	2.41	3.20	4.49	8.22	
X	1.5	0.49	0.53	0.60	0.72	1334.0	1326.0	570	23	22	19	15	3.10	3.90	4.71	7.37	2.23	3.04	4.15	7.80	
Y	1.9	0.49	0.53	0.60	0.72	1338.0	1330.0	350	16	15	15	15	3.83	4.56	5.22	7.37	3.58	4.62	5.98	10.14	
Z	1.5	0.39	0.43	0.51	0.66	1340.0	1330.0	380	18	17	15	15	3.51	4.31	5.22	7.37	2.05	2.78	3.99	7.30	
1	0.9	0.49	0.53	0.60	0.72	1346.0	1344.0	500	33	31	27	21	2.52	3.19	3.98	6.53	1.15	1.57	2.22	4.37	
2	5.0	0.39	0.43	0.51	0.66	1338.0	1326.0	800	32	30	26	20	2.62	3.30	4.05	6.68	5.09	7.07	10.28	21.98	
E+F+G+H+I+Q+R+2	20.2	0.48	0.52	0.59	0.71	1346.0	1326.0	1100	35	33	29	22	2.44	3.05	3.90	6.26	23.92	32.22	46.62	90.29	
C+E+F+G+H+I+O+P+Q+R+S+T+2	31.9	0.47	0.51	0.58	0.71	1346.0	1326.0	1100	35	33	29	22	2.44	3.05	3.90	6.26	36.55	48.48	72.29	142.00	
UNDEVELOPED																					
To the South																					
	26.3	0.28	0.32	0.41	0.59	1350.0	1326.0	1500	49	46	41	30	2.00	2.54	3.17	5.40	14.73	21.38	34.18	83.79	

Appendix F: TR-20 Models



Existing Conditions

*****80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****

JOB TR-20		SUMMARY			
TITLE WOODLAND LAKES BRD - EXIST. CONDITIONS					
TITLE MKEC ENGG CONSULTANTS 9/10/02 WLESCOME.T20					
4	DIMHYD	0.02			484
8		.000	.030	.100	.310
8		.470	.660	.820	.990
8		1.000	.990	.930	.780
8		.680	.560	.460	.330
8		.280	.241	.207	.147
8		.126	.107	.091	.066
8		.055	.047	.040	.029
8		.025	.021	.018	.013
8		.011	.009	.008	.006
8		.005	.004	.003	.002
8		.000	.000	.000	.000
9	ENDTBL				
5	RAINFL 7	0.08333			6-HR M&L
8		0.0000	0.0033	0.0066	0.0099
8		0.0166	0.0198	0.0248	0.0296
8		0.0404	0.0463	0.0522	0.0590
8		0.0727	0.0796	0.0864	0.0933
8		0.1340	0.1572	0.1832	0.2124
8		0.2850	0.3400	0.4464	0.6034
8		0.7220	0.7409	0.7598	0.7758
8		0.8072	0.8224	0.8310	0.8396
8		0.8540	0.8628	0.8714	0.8773
8		0.8890	0.8939	0.8988	0.9038
8		0.9136	0.9184	0.9233	0.9282
8		0.9380	0.9429	0.9478	0.9527
8		0.9626	0.9664	0.9704	0.9742
8		0.9821	0.9860	0.9884	0.9906
8		0.9954	0.9976	1.0000	1.0000
9	ENDTBL				
5	RAINFL 8	0.5			24-HRSCS
8		.000	.002	.005	.013
8		.018	.023	.029	.042
8		.050	.059	.068	.089
8		.101	.114	.128	.162
8		.183	.208	.244	.339
8		.773	.802	.825	.844
8		.876	.890	.903	.924
8		.934	.943	.951	.959
8		.972	.977	.982	.986
8		.993	.996	.998	1.000
9	ENDTBL				
3	STRUCT	01	1345.0	0.0	0.0
1					I-135

*****80-80 LIST OF INPUT DATA (CONTINUED)*****

8		1347.0	52.0	2.0	
8		1349.0	140.0	4.5	
8		1351.0	223.0	12.0	
8		1353.0	286.0	21.0	
8		1355.0	336.0	34.0	
8		1357.0	378.0	52.0	
8		1359.0	414.0	76.0	
8		1361.0	447.0	106.5	
8		1363.0	475.0	144.0	
9	ENDTBL				
3	STRUCT	09	1338.0	0.0	0.0
8		1339.0	93.4	0.43	N PON
8		1340.0	265.3	0.92	
8		1341.0	496.5	1.46	
8		1342.0	781.2	2.06	
8		1343.0	1201.3	2.72	
9	ENDTBL				
3	STRUCT	13	1335.0	0.0	0.0
8		1336.0	40.1	1.1	M PON
8		1337.0	113.7	2.36	

8		1338.0	212.8	3.72		
8		1339.0	334.8	5.19		
8		1340.0	483.0	6.75		
8		1341.0	731.9	8.43		
9	ENDTBL					
3	STRUCT	21			S PON	
8		1334.0	0.0	0.0		
8		1335.0	40.1	2.16		
8		1336.0	113.7	4.48		
8		1337.0	212.8	6.94		
8		1338.0	334.8	9.56		
8		1339.0	483.0	12.32		
8		1340.0	731.9	15.22		
9	ENDTBL					
3	STRUCT	25			I-135	
8		1346.0	0.0	0.0		
8		1348.0	52.0	0.90		
8		1350.0	187.0	3.59		
8		1352.0	297.0	9.60		
8		1354.0	378.0	22.41		
8		1356.0	444.0	44.4		
8		1358.0	500.0	77.13		
8		1360.0	549.0	127.1		
9	ENDTBL					
6	RUNOFF	1 001	6 0.0867	89.0	0.667	1 U/S I-

*****80-80 LIST OF INPUT DATA (CONTINUED)*****

6	RESVOR	2 01 6	7 1345.0			1 I-35
6	RUNOFF	1 002	6 0.032	98.0	0.567	1 U/S WL
6	ADDHYD	4 003	6 7 5			1 SU/S W
6	RUNOFF	1 004	6 0.0128	84.0	0.733	1 'A'
6	ADDHYD	4 005	5 6 7			1 S@'A'
6	RUNOFF	1 006	6 0.0028	84.0	0.400	1 'B'
6	ADDHYD	4 007	7 6 5			1 S @ 'B
6	RUNOFF	1 008	6 0.0026	88.8	0.25	1 N POND
6	ADDHYD	4 009	5 6 7			1 S - NP
6	RESVOR	2 09 7	5 1338.0			1 R-NP
6	RUNOFF	1 010	6 0.0019	84.0	0.300	1 'C'
6	ADDHYD	4 011	5 6 7			1 S @ 'C
6	RUNOFF	1 012	6 0.0090	87.5	0.25	1 M POND
6	ADDHYD	4 013	7 6 5			1 S - M
6	RESVOR	2 13 5	7 1335.0			1 R - M
6	RUNOFF	1 014	6 0.0167	85.0	0.650	1 'D E F
6	ADDHYD	4 015	7 6 5			1
6	RUNOFF	1 016	6 0.0052	84.0	0.417	1 'J'
6	ADDHYD	4 017	5 6 7			1
6	RUNOFF	1 018	6 0.0091	85.0	0.567	1 H1 H2
6	ADDHYD	4 019	7 6 5			1
6	RUNOFF	1 020	6 0.0107	92.7	0.250	1 S POND
6	ADDHYD	4 021	5 6 7			1 S - S
6	RESVOR	2 21 7	5 1334.0			1 R - S
6	RUNOFF	1 022	6 0.0298	89.0	0.708	1 W/LMDS
6	ADDHYD	4 023	5 6 4			1 E TRIB
6	RUNOFF	1 024	6 0.216	90.0	0.842	1 U/S I-
6	RESVOR	2 25 6	7 1346.0			1 I-35
6	RUNOFF	1 026	6 0.0307	87.0	0.320	1 RES A
6	ADDHYD	4 027	6 7 5			1 LINCOL
6	RUNOFF	1 028	6 0.0297	87.0	0.408	1 E TRIB
6	ADDHYD	4 029	5 6 7			1 TO 48"
6	RUNOFF	1 030	6 0.0159	89.0	0.320	1 W. PON
6	ADDHYD	4 031	7 6 5			1 W.POND
6	RUNOFF	1 032	6 0.0090	89.0	0.25	1 E POND
6	ADDHYD	4 033	5 6 7			1 E POND
6	RUNOFF	1 034	6 0.0326	89.0	0.880	1 E PL
6	ADDHYD	4 035	7 6 5			1 E PL W
6	ADDHYD	4 036	4 5 6			1 E PL T
	ENDATA					
7	INCREM	6	0.0833			
7	COMPUT	7 001 036	0.0	2.52	1.0	7 2 11 01 2-YR 6
	ENDCMP	1				
7	COMPUT	7 001 036	0.0	3.42	1.0	7 2 12 02 5-YR 6
	ENDCMP	1				
7	COMPUT	7 001 036	0.0	4.02	1.0	7 2 13 03 10-YR

*****80-80 LIST OF INPUT DATA (CONTINUED)*****

```

ENDCMP 1
7 COMPUT 7 001 036 0.0 5.20 1.0 7 2 14 04 50-YR
ENDCMP 1
7 COMPUT 7 001 036 0.0 5.94 1.0 7 2 15 05 100-YR
ENDCMP 1
7 COMPUT 7 001 036 0.0 3.48 1.0 8 2 21 01 2-YR Z
ENDCMP 1
7 COMPUT 7 001 036 0.0 4.55 1.0 8 2 22 02 5-YR Z
ENDCMP 1
7 COMPUT 7 001 036 0.0 5.25 1.0 8 2 23 03 10-YR
ENDCMP 1
7 COMPUT 7 001 036 0.0 6.98 1.0 8 2 24 04 50-YR
ENDCMP 1
7 COMPUT 7 001 036 0.0 7.80 1.0 8 2 25 05 100-YR
ENDCMP 1
ENDJOB 2
    
```

*****END OF 80-80 LIST*****

```

1
TR20
09/11/** WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
15:30:50 MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
PASS 1 PAGE 1
    
```

COMPUTED PEAK RATE FACTOR = 484.00

```

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .08 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 2-YR 6
STARTING TIME = .00 RAIN DEPTH = 2.52 RAIN DURATION= 1.00
AMT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=11 STORM NO. = 1 RAIN TABLE NO.= 7
    
```

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET) ***
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME.

*** WARNING - XSECTION 6, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(20. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 8, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(13. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(26. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 16, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(11. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET) ***
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 1

```

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 5-YR 6
STARTING TIME = .00 RAIN DEPTH = 3.42 RAIN DURATION= 1.00
AMT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=12 STORM NO. = 2 RAIN TABLE NO.= 7
    
```

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET) ***
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME.

```

1
TR20
09/11/** WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
15:30:50 MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
PASS 2 PAGE 2
    
```

*** WARNING - XSECTION 6, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(13. % OF MAX. HYDROGRAPH COORDINATE)

```

MAIN TIME INCREMENT TOO SMALL. ***
*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
( 15. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***
*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION ( 1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 10-YR
STARTING TIME = .00 RAIN DEPTH = 4.02 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=13 STORM NO.= 3 RAIN TABLE NO.= 7

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION ( 1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
( 12. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION ( 1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 50-YR
STARTING TIME = .00 RAIN DEPTH = 5.20 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=14 STORM NO.= 4 RAIN TABLE NO.= 7

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION ( 1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** MESSAGE - STRUCTURE 9, USER ENTERED STARTING ELEVATION ( 1338.0 FEET)
WILL DECREASE OUTFLOW HYDROGRAPH VOLUME. ***

1
TR20 -----
09/11/** WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
15:30:50 MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
PASS 4 PAGE 3

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION ( 1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 4

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 100-YR
STARTING TIME = .00 RAIN DEPTH = 5.94 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=15 STORM NO.= 5 RAIN TABLE NO.= 7

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION ( 1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** MESSAGE - STRUCTURE 9, USER ENTERED STARTING ELEVATION ( 1338.0 FEET)
WILL DECREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION ( 1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 5

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 2-YR Z
STARTING TIME = .00 RAIN DEPTH = 3.48 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=21 STORM NO.= 1 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION ( 1345.0 FEET)

```

WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** WARNING - XSECTION 6, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (17. % OF MAX. HYDROGRAPH COORDINATE)
 MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 8, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (12. % OF MAX. HYDROGRAPH COORDINATE)
 MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (21. % OF MAX. HYDROGRAPH COORDINATE)
 MAIN TIME INCREMENT TOO SMALL. ***

1
 TR20 -----
 09/11/** WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 15:30:50 MKEC ENGG CONSULTANTS 9/10/02 WLE3C0ME.T20 10/01/90
 PASS 6 PAGE 4

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
 WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 6

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 5-YR Z
 STARTING TIME = .00 RAIN DEPTH = 4.55 RAIN DURATION= 1.00
 ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
 ALTERNATE NO.=22 STORM NO. = 2 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
 WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** WARNING - XSECTION 6, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (11. % OF MAX. HYDROGRAPH COORDINATE)
 MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (14. % OF MAX. HYDROGRAPH COORDINATE)
 MAIN TIME INCREMENT TOO SMALL. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
 WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 7

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 10-YR
 STARTING TIME = .00 RAIN DEPTH = 5.25 RAIN DURATION= 1.00
 ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
 ALTERNATE NO.=23 STORM NO. = 3 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
 WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (12. % OF MAX. HYDROGRAPH COORDINATE)
 MAIN TIME INCREMENT TOO SMALL. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
 WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

1
 TR20 -----
 09/11/** WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 15:30:50 MKEC ENGG CONSULTANTS 9/10/02 WLE3C0ME.T20 10/01/90
 PASS 9 PAGE 5

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 8

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 50-YR
 STARTING TIME = .00 RAIN DEPTH = 6.98 RAIN DURATION= 1.00
 ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
 ALTERNATE NO.=24 STORM NO. = 4 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET) ***
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME.

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET) ***
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 9

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 100-YR
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=25 STORM NO.= 5 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET) ***
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME.

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET) ***
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 10

1
TR20 -----
09/11/** WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
15:30:50 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMR.T20 10/01/90
PAGE 6

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES.
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	ELEVATION (FT)	PEAK DISCHARGE		
					TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 2.52 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 7, AMC 2							
MAIN TIME INCREMENT .08 HOURS							
ALTERNATE 11 STORM 1							
XSECTION 1	RUNOFF	.09	1.47	---	2.73	71	788.9
STRUCTURE 1	RESVOR	.09	1.79	1347.00	1.00	52	577.8
XSECTION 2	RUNOFF	.03	2.29	---	2.63	43	1433.3
XSECTION 3	ADDDHYD	.12	1.95	---	2.78	83	691.7
XSECTION 4	RUNOFF	.01	1.13	---	2.79	7	700.0
XSECTION 5	ADDDHYD	.13	1.87	---	2.78	90	692.3
XSECTION 6	RUNOFF	.00	1.13	---	2.57T	2T*****	
XSECTION 7	ADDDHYD	.13	1.86	---	2.77	92	707.7
XSECTION 8	RUNOFF	.00	1.46	---	2.46T	4T*****	
XSECTION 9	ADDDHYD	.14	1.85	---	2.77	93	664.3
STRUCTURE 9	RESVOR	.14	1.85	1338.98	2.83	92	657.1
XSECTION 10	RUNOFF	.00	1.13	---	2.50T	2T*****	
XSECTION 11	ADDDHYD	.14	1.84	---	2.83	92	657.1
XSECTION 12	RUNOFF	.01	1.36	---	2.46	11	1100.0
XSECTION 13	ADDDHYD	.15	1.81	---	2.81	96	640.0
STRUCTURE 13	RESVOR	.15	1.81	1336.63	3.04	86	573.3
XSECTION 14	RUNOFF	.02	1.19	---	2.73	11	550.0
XSECTION 15	ADDDHYD	.16	1.75	---	3.00	94	587.5
XSECTION 16	RUNOFF	.01	1.13	---	2.58T	4T	400.0
XSECTION 17	ADDDHYD	.17	1.73	---	2.99	96	564.7
XSECTION 18	RUNOFF	.01	1.19	---	2.67	7	700.0
XSECTION 19	ADDDHYD	.18	1.70	---	2.96	100	555.6
XSECTION 20	RUNOFF	.01	1.77	---	2.45	18	1800.0
XSECTION 21	ADDDHYD	.19	1.71	---	2.95	103	542.1
STRUCTURE 21	RESVOR	.19	1.70	1335.61	3.33	85	447.4
XSECTION 22	RUNOFF	.03	1.47	---	2.75	24	800.0
XSECTION 23	ADDDHYD	.22	1.67	---	3.23	96	436.4
XSECTION 24	RUNOFF	.22	1.55	---	2.83	164	745.5

1

SUMMARY TABLE 1

 SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 11 STORM 1							
STRUCTURE 25	RESVOR	.22	1.64	1349.30	3.05	140	636.4
XSECTION 26	RUNOFF	.03	1.33	---	2.51	34	1133.3
XSECTION 27	ADDHYD	.25	1.60	---	3.03	148	592.0
XSECTION 28	RUNOFF	.03	1.33	---	2.57	29	966.7
XSECTION 29	ADDHYD	.28	1.57	---	3.00	158	564.3
XSECTION 30	RUNOFF	.02	1.47	---	2.51	20	1000.0
XSECTION 31	ADDHYD	.29	1.56	---	2.99	163	562.1
XSECTION 32	RUNOFF	.01	1.47	---	2.46	12	1200.0
XSECTION 33	ADDHYD	.30	1.56	---	2.99	166	553.3
XSECTION 34	RUNOFF	.03	1.47	---	2.86	23	766.7
XSECTION 35	ADDHYD	.33	1.55	---	2.96	188	569.7
XSECTION 36	ADDHYD	.55	1.61	---	3.02	279	507.3

RAINFALL OF 3.42 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 12 STORM 2							
XSECTION 1	RUNOFF	.09	2.28	---	2.71	111	1233.3
STRUCTURE 1	RESVOR	.09	2.60	1347.69	2.97	82	911.1
XSECTION 2	RUNOFF	.03	3.19	---	2.63	60	2000.0
XSECTION 3	ADDHYD	.12	2.78	---	2.78	124	1033.3
XSECTION 4	RUNOFF	.01	1.87	---	2.77	13	1300.0
XSECTION 5	ADDHYD	.13	2.69	---	2.78	137	1053.8
XSECTION 6	RUNOFF	.00	1.86	---	2.56T	4T*****	
XSECTION 7	ADDHYD	.13	2.67	---	2.77	139	1069.2
XSECTION 8	RUNOFF	.00	2.27	---	2.45	6	*****
XSECTION 9	ADDHYD	.14	2.66	---	2.77	141	1007.1
STRUCTURE 9	RESVOR	.14	2.67	1339.27	2.81	140	1000.0
XSECTION 10	RUNOFF	.00	1.87	---	2.50T	3T*****	
XSECTION 11	ADDHYD	.14	2.66	---	2.80	141	1007.1
XSECTION 12	RUNOFF	.01	2.15	---	2.45	18	1800.0

1

SUMMARY TABLE 1

 SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 12 STORM 2							
XSECTION 13	ADDHYD	.15	2.63	---	2.78	147	980.0

STRUCTURE 13	RESVOR	.15	2.63	1337.21	2.99	134	893.3
XSECTION 14	RUNOFF	.02	1.94	---	2.72	18	900.0
XSECTION 15	ADDHYD	.16	2.56	---	2.95	148	925.0
XSECTION 16	RUNOFF	.01	1.87	---	2.57	7	700.0
XSECTION 17	ADDHYD	.17	2.54	---	2.94	151	888.2
XSECTION 18	RUNOFF	.01	1.94	---	2.66	11	1100.0
XSECTION 19	ADDHYD	.18	2.51	---	2.91	159	883.3
XSECTION 20	RUNOFF	.01	2.61	---	2.45	26	2600.0
XSECTION 21	ADDHYD	.19	2.51	---	2.90	164	863.2
STRUCTURE 21	RESVOR	.19	2.51	1336.24	3.23	138	726.3
XSECTION 22	RUNOFF	.03	2.28	---	2.74	37	1233.3
XSECTION 23	ADDHYD	.22	2.48	---	3.15	157	713.6
XSECTION 24	RUNOFF	.22	2.37	---	2.82	253	1150.0
STRUCTURE 25	RESVOR	.22	2.46	1350.27	3.08	202	918.2
XSECTION 26	RUNOFF	.03	2.11	---	2.50	55	1833.3
XSECTION 27	ADDHYD	.25	2.42	---	3.04	214	856.0
XSECTION 28	RUNOFF	.03	2.11	---	2.55	47	1566.7
XSECTION 29	ADDHYD	.28	2.38	---	2.86	233	832.1
XSECTION 30	RUNOFF	.02	2.28	---	2.50	31	1550.0
XSECTION 31	ADDHYD	.29	2.38	---	2.84	243	837.9
XSECTION 32	RUNOFF	.01	2.28	---	2.45	19	1900.0
XSECTION 33	ADDHYD	.30	2.37	---	2.83	248	826.7
XSECTION 34	RUNOFF	.03	2.28	---	2.85	36	1200.0
XSECTION 35	ADDHYD	.33	2.36	---	2.83	283	857.6
XSECTION 36	ADDHYD	.55	2.41	---	3.00	425	772.7

1

TR20

09/11/**
15:30:50WOODLAND LAKES 3RD - EXIST. CONDITIONS
MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20VERSION
10/01/90
PAGE 9

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 4.02 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE	13	STORM	3				
XSECTION 1	RUNOFF	.09	2.84	---	2.70	139	1544.4
STRUCTURE 1	RESVOR	.09	3.16	1348.15	2.96	103	1144.4
XSECTION 2	RUNOFF	.03	3.79	---	2.63	71	2366.7
XSECTION 3	ADDHYD	.12	3.36	---	2.78	153	1275.0
XSECTION 4	RUNOFF	.01	2.39	---	2.77	16	1600.0
XSECTION 5	ADDHYD	.13	3.26	---	2.78	169	1300.0
XSECTION 6	RUNOFF	.00	2.38	---	2.55	5	*****
XSECTION 7	ADDHYD	.13	3.24	---	2.77	172	1323.1
XSECTION 8	RUNOFF	.00	2.82	---	2.45	7	*****
XSECTION 9	ADDHYD	.14	3.23	---	2.77	174	1242.9
STRUCTURE 9	RESVOR	.14	3.23	1339.46	2.80	173	1235.7
XSECTION 10	RUNOFF	.00	2.39	---	2.49T	4T*****	
XSECTION 11	ADDHYD	.14	3.22	---	2.80	174	1242.9
XSECTION 12	RUNOFF	.01	2.70	---	2.45	23	2300.0
XSECTION 13	ADDHYD	.15	3.19	---	2.78	181	1206.7
STRUCTURE 13	RESVOR	.15	3.19	1337.54	2.97	168	1120.0
XSECTION 14	RUNOFF	.02	2.47	---	2.71	23	1150.0
XSECTION 15	ADDHYD	.16	3.12	---	2.93	186	1162.5
XSECTION 16	RUNOFF	.01	2.39	---	2.56	9	900.0
XSECTION 17	ADDHYD	.17	3.10	---	2.91	189	1111.8
XSECTION 18	RUNOFF	.01	2.47	---	2.66	14	1400.0
XSECTION 19	ADDHYD	.18	3.06	---	2.89	199	1105.6
XSECTION 20	RUNOFF	.01	3.19	---	2.44	32	3200.0

XSECTION 21 ADDHYD .19 3.07 --- 2.87 206 1084.2
 1 TR20 -----
 WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
 15:30:50 PAGE 10

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 13 STORM 3							
STRUCTURE 21	RESVOR	.19	3.06	1336.62	3.20	175	921.1
XSECTION 22	RUNOFF	.03	2.84	---	2.74	46	1533.3
XSECTION 23	ADDHYD	.22	3.03	---	3.10	201	913.6
XSECTION 24	RUNOFF	.22	2.93	---	2.81	313	1422.7
STRUCTURE 25	RESVOR	.22	3.02	1350.84	3.12	233	1059.1
XSECTION 26	RUNOFF	.03	2.65	---	2.50	69	2300.0
XSECTION 27	ADDHYD	.25	2.98	---	3.08	247	988.0
XSECTION 28	RUNOFF	.03	2.65	---	2.55	59	1966.7
XSECTION 29	ADDHYD	.28	2.94	---	2.71	268	957.1
XSECTION 30	RUNOFF	.02	2.84	---	2.50	38	1900.0
XSECTION 31	ADDHYD	.29	2.94	---	2.67	292	1006.9
XSECTION 32	RUNOFF	.01	2.84	---	2.45	24	2400.0
XSECTION 33	ADDHYD	.30	2.93	---	2.64	304	1013.3
XSECTION 34	RUNOFF	.03	2.84	---	2.84	44	1466.7
XSECTION 35	ADDHYD	.33	2.92	---	2.67	342	1036.4
XSECTION 36	ADDHYD	.55	2.97	---	3.00	517	940.0
RAINFALL OF 5.20 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							

ALTERNATE 14 STORM 4							
XSECTION 1	RUNOFF	.09	3.95	---	2.70	192	2133.3
STRUCTURE 1	RESVOR	.09	4.27	1349.03	2.96	141	1566.7
XSECTION 2	RUNOFF	.03	4.97	---	2.62	92	3066.7
XSECTION 3	ADDHYD	.12	4.46	---	2.79	208	1733.3
XSECTION 4	RUNOFF	.01	3.45	---	2.76	24	2400.0
XSECTION 5	ADDHYD	.13	4.36	---	2.78	232	1784.6
XSECTION 6	RUNOFF	.00	3.45	---	2.55	7	*****
XSECTION 7	ADDHYD	.13	4.34	---	2.78	236	1815.4
XSECTION 8	RUNOFF	.00	3.89	---	2.45	10	*****
XSECTION 9	ADDHYD	.14	4.33	---	2.77	239	1707.1

1 TR20 -----
 WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
 15:30:50 PAGE 11

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 14 STORM 4							

STRUCTURE	9	RESVOR	.14	4.34	1339.84	2.80	238	1700.0
XSECTION	10	RUNOFF	.00	3.45	---	2.49	6	*****
XSECTION	11	ADDHYD	.14	4.33	---	2.80	240	1714.3
XSECTION	12	RUNOFF	.01	3.76	---	2.45	32	3200.0
XSECTION	13	ADDHYD	.15	4.29	---	2.77	249	1660.0
STRUCTURE	13	RESVOR	.15	4.29	1338.16	2.94	233	1553.3
XSECTION	14	RUNOFF	.02	3.55	---	2.70	34	1700.0
XSECTION	15	ADDHYD	.16	4.21	---	2.91	259	1618.8
XSECTION	16	RUNOFF	.01	3.45	---	2.56	13	1300.0
XSECTION	17	ADDHYD	.17	4.19	---	2.89	265	1558.8
XSECTION	18	RUNOFF	.01	3.55	---	2.65	20	2000.0
XSECTION	19	ADDHYD	.18	4.16	---	2.87	280	1555.6
XSECTION	20	RUNOFF	.01	4.35	---	2.44	42	4200.0
XSECTION	21	ADDHYD	.19	4.17	---	2.85	289	1521.1
STRUCTURE	21	RESVOR	.19	4.16	1337.30	3.15	249	1310.5
XSECTION	22	RUNOFF	.03	3.96	---	2.73	64	2133.3
XSECTION	23	ADDHYD	.22	4.13	---	3.06	287	1304.5
XSECTION	24	RUNOFF	.22	4.06	---	2.81	433	1968.2
STRUCTURE	25	RESVOR	.22	4.15	1352.04	3.16	299	1359.1
XSECTION	26	RUNOFF	.03	3.72	---	2.50	97	3233.3
XSECTION	27	ADDHYD	.25	4.10	---	3.09	317	1268.0
XSECTION	28	RUNOFF	.03	3.74	---	2.55	83	2766.7
XSECTION	29	ADDHYD	.28	4.06	---	2.60	358	1278.6
XSECTION	30	RUNOFF	.02	3.94	---	2.49	53	2650.0
XSECTION	31	ADDHYD	.29	4.06	---	2.58	402	1386.2
XSECTION	32	RUNOFF	.01	3.92	---	2.45	33	3300.0
XSECTION	33	ADDHYD	.30	4.05	---	2.57	426	1420.0
XSECTION	34	RUNOFF	.03	3.96	---	2.83	62	2066.7
XSECTION	35	ADDHYD	.33	4.04	---	2.59	472	1430.3
XSECTION	36	ADDHYD	.55	4.08	---	3.00	700	1272.7

1
TR20 -----
WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
15:30:50 PAGE 12

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
RAINFALL OF 5.94 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.								
ALTERNATE	15	STORM	5					
XSECTION	1	RUNOFF	.09	4.67	---	2.70	226	2511.1
STRUCTURE	1	RESVOR	.09	4.98	1349.30	3.00	152	1688.9
XSECTION	2	RUNOFF	.03	5.71	---	2.62	106	3533.3
XSECTION	3	ADDHYD	.12	5.18	---	2.74	237	1975.0
XSECTION	4	RUNOFF	.01	4.14	---	2.75	28	2800.0
XSECTION	5	ADDHYD	.13	5.08	---	2.74	265	2038.5
XSECTION	6	RUNOFF	.00	4.14	---	2.55	9	*****
XSECTION	7	ADDHYD	.13	5.06	---	2.73	271	2084.6
XSECTION	8	RUNOFF	.00	4.62	---	2.44	11	*****
XSECTION	9	ADDHYD	.14	5.05	---	2.73	275	1964.3
STRUCTURE	9	RESVOR	.14	5.06	1340.04	2.76	275	1964.3
XSECTION	10	RUNOFF	.00	4.14	---	2.49	7	*****
XSECTION	11	ADDHYD	.14	5.05	---	2.76	277	1978.6
XSECTION	12	RUNOFF	.01	4.46	---	2.45	38	3800.0
XSECTION	13	ADDHYD	.15	5.01	---	2.74	289	1926.7
STRUCTURE	13	RESVOR	.15	5.00	1338.45	2.90	267	1780.0
XSECTION	14	RUNOFF	.02	4.24	---	2.70	40	2000.0
XSECTION	15	ADDHYD	.16	4.93	---	2.86	302	1887.5
XSECTION	16	RUNOFF	.01	4.14	---	2.56	16	1600.0

XSECTION	17	ADDHYD	.17	4.90	---	2.85	310	1823.5
XSECTION	18	RUNOFF	.01	4.25	---	2.65	24	2400.0
XSECTION	19	ADDHYD	.18	4.87	---	2.83	328	1822.2
XSECTION	20	RUNOFF	.01	5.08	---	2.44	49	4900.0
XSECTION	21	ADDHYD	.19	4.88	---	2.81	340	1789.5

1

TR20 -----
 WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
 15:30:50 PAGE 13

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 15 STORM 5							
STRUCTURE 21	RESVOR	.19	4.87	1337.65	3.10	292	1536.8
XSECTION 22	RUNOFF	.03	4.67	---	2.73	76	2533.3
XSECTION 23	ADDHYD	.22	4.84	---	3.00	342	1554.5
XSECTION 24	RUNOFF	.22	4.78	---	2.80	508	2309.1
STRUCTURE 25	RESVOR	.22	4.87	1352.51	3.21	318	1445.5
XSECTION 26	RUNOFF	.03	4.44	---	2.49	114	3800.0
XSECTION 27	ADDHYD	.25	4.82	---	3.09	338	1352.0
XSECTION 28	RUNOFF	.03	4.45	---	2.54	98	3266.7
XSECTION 29	ADDHYD	.28	4.78	---	2.58	402	1435.7
XSECTION 30	RUNOFF	.02	4.66	---	2.49	62	3100.0
XSECTION 31	ADDHYD	.29	4.77	---	2.55	457	1575.9
XSECTION 32	RUNOFF	.01	4.65	---	2.44	39	3900.0
XSECTION 33	ADDHYD	.30	4.77	---	2.54	494	1646.7
XSECTION 34	RUNOFF	.03	4.67	---	2.83	73	2433.3
XSECTION 35	ADDHYD	.33	4.76	---	2.56	539	1633.3
XSECTION 36	ADDHYD	.55	4.79	---	2.89	804	1461.8
RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 8, AMC 2							

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 21 STORM 1							
XSECTION 1	RUNOFF	.09	2.34	---	12.19	88	977.8
STRUCTURE 1	RESVOR	.09	2.65	1347.35	12.43	68	755.6
XSECTION 2	RUNOFF	.03	3.25	---	12.13	44	1466.7
XSECTION 3	ADDHYD	.12	2.83	---	12.27	101	841.7
XSECTION 4	RUNOFF	.01	1.92	---	12.23	10	1000.0
XSECTION 5	ADDHYD	.13	2.74	---	12.26	112	861.5
XSECTION 6	RUNOFF	.00	1.92	---	12.05T		3T*****
XSECTION 7	ADDHYD	.13	2.73	---	12.25	114	876.9
XSECTION 8	RUNOFF	.00	2.32	---	11.97T		4T*****

1

TR20 -----
 WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
 15:30:50 PAGE 14

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 21 STORM 1

XSECTION	9	ADDHYD	.14	2.72	---	12.24	115	821.4
STRUCTURE	9	RESVOR	.14	2.73	1339.12	12.28	115	821.4
XSECTION	10	RUNOFF	.00	1.91	---	12.00T	2T*****	
XSECTION	11	ADDHYD	.14	2.72	---	12.27	116	828.6
XSECTION	12	RUNOFF	.01	2.20	---	11.97	12	1200.0
XSECTION	13	ADDHYD	.15	2.68	---	12.23	120	800.0
STRUCTURE	13	RESVOR	.15	2.68	1336.92	12.46	108	720.0
XSECTION	14	RUNOFF	.02	2.00	---	12.18	15	750.0
XSECTION	15	ADDHYD	.16	2.62	---	12.41	119	743.8
XSECTION	16	RUNOFF	.01	1.92	---	12.06	5	500.0
XSECTION	17	ADDHYD	.17	2.59	---	12.40	121	711.8
XSECTION	18	RUNOFF	.01	2.00	---	12.13	9	900.0
XSECTION	19	ADDHYD	.18	2.56	---	12.37	127	705.6
XSECTION	20	RUNOFF	.01	2.68	---	11.97	16	1600.0
XSECTION	21	ADDHYD	.19	2.57	---	12.34	131	689.5
STRUCTURE	21	RESVOR	.19	2.57	1335.92	12.72	108	568.4
XSECTION	22	RUNOFF	.03	2.34	---	12.21	30	1000.0
XSECTION	23	ADDHYD	.22	2.54	---	12.58	122	554.5
XSECTION	24	RUNOFF	.22	2.43	---	12.29	204	927.3
STRUCTURE	25	RESVOR	.22	2.52	1349.84	12.49	176	800.0
XSECTION	26	RUNOFF	.03	2.16	---	12.01	37	1233.3
XSECTION	27	ADDHYD	.25	2.47	---	12.46	185	740.0
XSECTION	28	RUNOFF	.03	2.16	---	12.05	34	1133.3
XSECTION	29	ADDHYD	.28	2.44	---	12.39	197	703.6
XSECTION	30	RUNOFF	.02	2.34	---	12.01	21	1050.0
XSECTION	31	ADDHYD	.29	2.43	---	12.20	206	710.3
XSECTION	32	RUNOFF	.01	2.34	---	11.97	12	1200.0
XSECTION	33	ADDHYD	.30	2.43	---	12.17	213	710.0
XSECTION	34	RUNOFF	.03	2.34	---	12.31	29	966.7
XSECTION	35	ADDHYD	.33	2.42	---	12.19	240	727.3

1

TR20

WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
 09/11/** PAGE 15
 15:30:50

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 21 STORM 1

XSECTION	36	ADDHYD	.55	2.47	---	12.41	351	638.2
----------	----	--------	-----	------	-----	-------	-----	-------

RAINFALL OF 4.55 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 22 STORM 2

XSECTION	1	RUNOFF	.09	3.34	---	12.18	124	1377.8
STRUCTURE	1	RESVOR	.09	3.65	1347.99	12.42	96	1066.7
XSECTION	2	RUNOFF	.03	4.31	---	12.13	58	1933.3
XSECTION	3	ADDHYD	.12	3.85	---	12.27	140	1166.7
XSECTION	4	RUNOFF	.01	2.86	---	12.23	15	1500.0
XSECTION	5	ADDHYD	.13	3.75	---	12.27	155	1192.3
XSECTION	6	RUNOFF	.00	2.86	---	12.05T	4T*****	
XSECTION	7	ADDHYD	.13	3.73	---	12.26	158	1215.4
XSECTION	8	RUNOFF	.00	3.32	---	11.97	5	*****
XSECTION	9	ADDHYD	.14	3.73	---	12.25	160	1142.9

STRUCTURE 9	RESVOR	.14	3.73	1339.38	12.28	159	1135.7
XSECTION 10	RUNOFF	.00	2.86	---	12.00T	3T*****	
XSECTION 11	ADDHYD	.14	3.72	---	12.28	161	1150.0
XSECTION 12	RUNOFF	.01	3.19	---	11.97	17	1700.0
XSECTION 13	ADDHYD	.15	3.69	---	12.24	166	1106.7
STRUCTURE 13	RESVOR	.15	3.69	1337.41	12.43	154	1026.7
XSECTION 14	RUNOFF	.02	2.95	---	12.18	22	1100.0
XSECTION 15	ADDHYD	.16	3.62	---	12.38	171	1068.8
XSECTION 16	RUNOFF	.01	2.86	---	12.06	8	800.0
XSECTION 17	ADDHYD	.17	3.59	---	12.36	175	1029.4
XSECTION 18	RUNOFF	.01	2.95	---	12.13	13	1300.0
XSECTION 19	ADDHYD	.18	3.56	---	12.34	184	1022.2
XSECTION 20	RUNOFF	.01	3.72	---	11.97	22	2200.0
XSECTION 21	ADDHYD	.19	3.57	---	12.31	190	1000.0
STRUCTURE 21	RESVOR	.19	3.57	1336.48	12.63	161	847.4

1

TR20 -----
WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
15:30:50 PAGE 16

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 22 STORM 2							
XSECTION 22	RUNOFF	.03	3.34	---	12.21	42	1400.0
XSECTION 23	ADDHYD	.22	3.54	---	12.52	186	845.5
XSECTION 24	RUNOFF	.22	3.44	---	12.28	285	1295.5
STRUCTURE 25	RESVOR	.22	3.53	1350.60	12.56	220	1000.0
XSECTION 26	RUNOFF	.03	3.14	---	12.01	54	1800.0
XSECTION 27	ADDHYD	.25	3.48	---	12.51	230	920.0
XSECTION 28	RUNOFF	.03	3.14	---	12.05	49	1633.3
XSECTION 29	ADDHYD	.28	3.44	---	12.18	268	957.1
XSECTION 30	RUNOFF	.02	3.34	---	12.01	29	1450.0
XSECTION 31	ADDHYD	.29	3.44	---	12.16	290	1000.0
XSECTION 32	RUNOFF	.01	3.34	---	11.97	17	1700.0
XSECTION 33	ADDHYD	.30	3.44	---	12.14	302	1006.7
XSECTION 34	RUNOFF	.03	3.34	---	12.31	41	1366.7
XSECTION 35	ADDHYD	.33	3.43	---	12.15	339	1027.3
XSECTION 36	ADDHYD	.55	3.47	---	12.25	482	876.4

RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 23 STORM 3							
XSECTION 1	RUNOFF	.09	4.01	---	12.18	148	1644.4
STRUCTURE 1	RESVOR	.09	4.33	1348.41	12.42	114	1266.7
XSECTION 2	RUNOFF	.03	5.00	---	12.13	66	2200.0
XSECTION 3	ADDHYD	.12	4.53	---	12.28	165	1375.0
XSECTION 4	RUNOFF	.01	3.50	---	12.22	19	1900.0
XSECTION 5	ADDHYD	.13	4.43	---	12.27	184	1415.4
XSECTION 6	RUNOFF	.00	3.50	---	12.05	5	*****
XSECTION 7	ADDHYD	.13	4.41	---	12.26	188	1446.2
XSECTION 8	RUNOFF	.00	3.99	---	11.97	6	*****
XSECTION 9	ADDHYD	.14	4.40	---	12.25	190	1357.1
STRUCTURE 9	RESVOR	.14	4.41	1339.56	12.28	189	1350.0

1

TR20 -----
WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
15:30:50 PAGE 17

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 23 STORM 3							
XSECTION 10	RUNOFF	.00	3.50	---	12.00T	4T*****	
XSECTION 11	ADDHYD	.14	4.40	---	12.28	190	1357.1
XSECTION 12	RUNOFF	.01	3.85	---	11.97	20	2000.0
XSECTION 13	ADDHYD	.15	4.37	---	12.23	197	1313.3
STRUCTURE 13	RESVOR	.15	4.37	1337.71	12.42	184	1226.7
XSECTION 14	RUNOFF	.02	3.60	---	12.17	27	1350.0
XSECTION 15	ADDHYD	.16	4.29	---	12.37	205	1281.3
XSECTION 16	RUNOFF	.01	3.50	---	12.06	10	1000.0
XSECTION 17	ADDHYD	.17	4.26	---	12.35	210	1235.3
XSECTION 18	RUNOFF	.01	3.60	---	12.13	15	1500.0
XSECTION 19	ADDHYD	.18	4.23	---	12.33	221	1227.8
XSECTION 20	RUNOFF	.01	4.41	---	11.97	26	2600.0
XSECTION 21	ADDHYD	.19	4.24	---	12.29	228	1200.0
STRUCTURE 21	RESVOR	.19	4.24	1336.83	12.61	196	1031.6
XSECTION 22	RUNOFF	.03	4.01	---	12.21	50	1666.7
XSECTION 23	ADDHYD	.22	4.21	---	12.50	227	1031.8
XSECTION 24	RUNOFF	.22	4.11	---	12.28	338	1536.4
STRUCTURE 25	RESVOR	.22	4.20	1351.13	12.58	249	1131.8
XSECTION 26	RUNOFF	.03	3.80	---	12.01	64	2133.3
XSECTION 27	ADDHYD	.25	4.15	---	12.55	261	1044.0
XSECTION 28	RUNOFF	.03	3.80	---	12.05	59	1966.7
XSECTION 29	ADDHYD	.28	4.11	---	12.13	303	1082.1
XSECTION 30	RUNOFF	.02	4.01	---	12.01	35	1750.0
XSECTION 31	ADDHYD	.29	4.11	---	12.11	337	1162.1
XSECTION 32	RUNOFF	.01	4.01	---	11.97	20	2000.0
XSECTION 33	ADDHYD	.30	4.11	---	12.10	355	1183.3
XSECTION 34	RUNOFF	.03	4.01	---	12.30	49	1633.3
XSECTION 35	ADDHYD	.33	4.10	---	12.11	396	1200.0
XSECTION 36	ADDHYD	.55	4.14	---	12.24	567	1030.9

1 TR20 -----
 WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
 15:30:50 PAGE 18

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 6.98 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 24 STORM 4							
XSECTION 1	RUNOFF	.09	5.68	---	12.18	207	2300.0
STRUCTURE 1	RESVOR	.09	6.00	1349.19	12.45	148	1644.4
XSECTION 2	RUNOFF	.03	6.73	---	12.13	89	2966.7
XSECTION 3	ADDHYD	.12	6.22	---	12.24	223	1858.3
XSECTION 4	RUNOFF	.01	5.11	---	12.22	27	2700.0
XSECTION 5	ADDHYD	.13	6.11	---	12.24	250	1923.1

XSECTION	6	RUNOFF	.00	5.11	---	12.05	8	*****
XSECTION	7	ADDHYD	.13	6.09	---	12.23	256	1969.2
XSECTION	8	RUNOFF	.00	5.66	---	11.97	8	*****
XSECTION	9	ADDHYD	.14	6.08	---	12.22	259	1850.0
STRUCTURE	9	RESVOR	.14	6.09	1339.96	12.25	258	1842.9
XSECTION	10	RUNOFF	.00	5.12	---	12.00	5	*****
XSECTION	11	ADDHYD	.14	6.08	---	12.25	261	1864.3
XSECTION	12	RUNOFF	.01	5.51	---	11.97	28	2800.0
XSECTION	13	ADDHYD	.15	6.04	---	12.21	272	1813.3
STRUCTURE	13	RESVOR	.15	6.04	1338.34	12.37	254	1693.3
XSECTION	14	RUNOFF	.02	5.23	---	12.17	38	1900.0
XSECTION	15	ADDHYD	.16	5.96	---	12.34	286	1787.5
XSECTION	16	RUNOFF	.01	5.12	---	12.05	14	1400.0
XSECTION	17	ADDHYD	.17	5.93	---	12.32	294	1729.4
XSECTION	18	RUNOFF	.01	5.23	---	12.13	22	2200.0
XSECTION	19	ADDHYD	.18	5.90	---	12.30	312	1733.3
XSECTION	20	RUNOFF	.01	6.11	---	11.97	35	3500.0
XSECTION	21	ADDHYD	.19	5.91	---	12.26	323	1700.0

1

TR20 -----
 WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 09/11/** MKBC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
 15:30:50 PAGE 19

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 24 STORM 4								
STRUCTURE	21	RESVOR	.19	5.91	1337.55	12.54	280	1473.7
XSECTION	22	RUNOFF	.03	5.68	---	12.21	69	2300.0
XSECTION	23	ADDHYD	.22	5.88	---	12.44	330	1500.0
XSECTION	24	RUNOFF	.22	5.80	---	12.28	468	2127.3
STRUCTURE	25	RESVOR	.22	5.88	1352.29	12.64	309	1404.5
XSECTION	26	RUNOFF	.03	5.45	---	12.01	90	3000.0
XSECTION	27	ADDHYD	.25	5.83	---	12.48	324	1296.0
XSECTION	28	RUNOFF	.03	5.45	---	12.05	83	2766.7
XSECTION	29	ADDHYD	.28	5.79	---	12.13	387	1382.1
XSECTION	30	RUNOFF	.02	5.68	---	12.00	48	2400.0
XSECTION	31	ADDHYD	.29	5.78	---	12.10	432	1489.7
XSECTION	32	RUNOFF	.01	5.68	---	11.97	28	2800.0
XSECTION	33	ADDHYD	.30	5.78	---	12.08	458	1526.7
XSECTION	34	RUNOFF	.03	5.68	---	12.30	68	2266.7
XSECTION	35	ADDHYD	.33	5.77	---	12.10	514	1557.6
XSECTION	36	ADDHYD	.55	5.82	---	12.27	777	1412.7

RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 25 STORM 5								
XSECTION	1	RUNOFF	.09	6.48	---	12.18	233	2588.9
STRUCTURE	1	RESVOR	.09	6.80	1349.43	12.48	158	1755.6
XSECTION	2	RUNOFF	.03	7.55	---	12.13	99	3300.0
XSECTION	3	ADDHYD	.12	7.02	---	12.20	243	2025.0
XSECTION	4	RUNOFF	.01	5.90	---	12.22	31	3100.0
XSECTION	5	ADDHYD	.13	6.91	---	12.20	274	2107.7
XSECTION	6	RUNOFF	.00	5.90	---	12.05	9	*****
XSECTION	7	ADDHYD	.13	6.89	---	12.20	281	2161.5
XSECTION	8	RUNOFF	.00	6.46	---	11.97	9	*****
XSECTION	9	ADDHYD	.14	6.88	---	12.19	286	2042.9

1

TR20 -----

09/11/**
15:30:50

WOODLAND LAKES 3RD - EXIST. CONDITIONS
MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20

VERSION
10/01/90
PAGE 20

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	ELEVATION (FT)	PEAK DISCHARGE		
					TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE	25	STORM	5				
STRUCTURE 9	RESVOR	.14	6.89	1340.08	12.22	283	2021.4
XSECTION 10	RUNOFF	.00	5.89	---	11.99	6	*****
XSECTION 11	ADDHYD	.14	6.88	---	12.21	287	2050.0
XSECTION 12	RUNOFF	.01	6.31	---	11.97	32	3200.0
XSECTION 13	ADDHYD	.15	6.84	---	12.18	305	2033.3
STRUCTURE 13	RESVOR	.15	6.84	1338.56	12.34	281	1873.3
XSECTION 14	RUNOFF	.02	6.01	---	12.17	43	2150.0
XSECTION 15	ADDHYD	.16	6.76	---	12.31	319	1993.8
XSECTION 16	RUNOFF	.01	5.90	---	12.05	16	1600.0
XSECTION 17	ADDHYD	.17	6.73	---	12.29	329	1935.3
XSECTION 18	RUNOFF	.01	6.01	---	12.13	25	2500.0
XSECTION 19	ADDHYD	.18	6.69	---	12.27	352	1955.6
XSECTION 20	RUNOFF	.01	6.92	---	11.97	40	4000.0
XSECTION 21	ADDHYD	.19	6.71	---	12.24	365	1921.1
STRUCTURE 21	RESVOR	.19	6.70	1337.84	12.51	316	1663.2
XSECTION 22	RUNOFF	.03	6.49	---	12.20	79	2633.3
XSECTION 23	ADDHYD	.22	6.68	---	12.42	375	1704.5
XSECTION 24	RUNOFF	.22	6.61	---	12.28	533	2422.7
STRUCTURE 25	RESVOR	.22	6.70	1352.71	12.68	326	1481.8
XSECTION 26	RUNOFF	.03	6.25	---	12.01	103	3433.3
XSECTION 27	ADDHYD	.25	6.64	---	12.25	346	1384.0
XSECTION 28	RUNOFF	.03	6.25	---	12.05	95	3166.7
XSECTION 29	ADDHYD	.28	6.60	---	12.13	428	1528.6
XSECTION 30	RUNOFF	.02	6.49	---	12.01	55	2750.0
XSECTION 31	ADDHYD	.29	6.59	---	12.10	478	1648.3
XSECTION 32	RUNOFF	.01	6.48	---	11.97	32	3200.0
XSECTION 33	ADDHYD	.30	6.59	---	12.08	507	1690.0
XSECTION 34	RUNOFF	.03	6.49	---	12.30	77	2566.7
XSECTION 35	ADDHYD	.33	6.58	---	12.10	572	1733.3
XSECTION 36	ADDHYD	.55	6.62	---	12.22	881	1601.8

1

TR20
WOODLAND LAKES 3RD - EXIST. CONDITIONS
MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20
VERSION
10/01/90
PAGE 21

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
STRUCTURE 25	.22					
ALTERNATE 11		140	*****	*****	*****	*****
ALTERNATE 12		*****	202	*****	*****	*****
ALTERNATE 13		*****	*****	233	*****	*****
ALTERNATE 14		*****	*****	*****	299	*****
ALTERNATE 15		*****	*****	*****	*****	318
ALTERNATE 21		176	*****	*****	*****	*****

ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

***** 220 *****
 ***** 249 *****
 ***** 309 *****
 ***** 326 *****

STRUCTURE 21 .19

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15

85 *****
 ***** 138 *****
 ***** 175 *****
 ***** 249 *****
 ***** 292 *****

ALTERNATE 21
 ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

108 *****
 ***** 161 *****
 ***** 196 *****
 ***** 280 *****
 ***** 316 *****

STRUCTURE 13 .15

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15

86 *****
 ***** 134 *****
 ***** 168 *****
 ***** 233 *****
 ***** 267 *****

ALTERNATE 21
 ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

108 *****
 ***** 154 *****
 ***** 184 *****
 ***** 254 *****
 ***** 281 *****

STRUCTURE 9 .14

ALTERNATE 11

92 *****

1

TR20

09/11/**
 15:30:50

WOODLAND LAKES 3RD - EXIST. CONDITIONS
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20

VERSION
 10/01/90
 PAGE 22

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5

STRUCTURE 9 .14

ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15
 ALTERNATE 21

***** 140 *****
 ***** 173 *****
 ***** 238 *****
 ***** 275 *****
 115 *****

ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

***** 159 *****
 ***** 189 *****
 ***** 258 *****
 ***** 283 *****

STRUCTURE 1 .09

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15

52 *****
 ***** 82 *****
 ***** 103 *****
 ***** 141 *****
 ***** 152 *****

ALTERNATE 21
 ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

68 *****
 ***** 96 *****
 ***** 114 *****
 ***** 148 *****
 ***** 158 *****

XSECTION 1 .09

```

-----
ALTERNATE 11          71 *****
ALTERNATE 12          ***** 111 *****
ALTERNATE 13          ***** 139 *****
ALTERNATE 14          ***** 192 *****
ALTERNATE 15          ***** 226 *****

ALTERNATE 21          88 *****
ALTERNATE 22          ***** 124 *****
ALTERNATE 23          ***** 148 *****
ALTERNATE 24          ***** 207 *****
ALTERNATE 25          ***** 233 *****

```

XSECTION 2 .03

```

-----
ALTERNATE 11          43 *****
ALTERNATE 12          ***** 60 *****
ALTERNATE 13          ***** 71 *****

```

1

TR20

```

WOODLAND LAKES 3RD - EXIST. CONDITIONS          VERSION
09/11/**          MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
15:30:50          PAGE 23

```

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5

XSECTION 2	.03					
ALTERNATE 14		*****	*****	*****	92	*****
ALTERNATE 15		*****	*****	*****	*****	106
ALTERNATE 21		44	*****	*****	*****	*****
ALTERNATE 22		*****	58	*****	*****	*****
ALTERNATE 23		*****	*****	66	*****	*****
ALTERNATE 24		*****	*****	*****	89	*****
ALTERNATE 25		*****	*****	*****	*****	99

XSECTION 3	.12					
ALTERNATE 11		83	*****	*****	*****	*****
ALTERNATE 12		*****	124	*****	*****	*****
ALTERNATE 13		*****	*****	153	*****	*****
ALTERNATE 14		*****	*****	*****	208	*****
ALTERNATE 15		*****	*****	*****	*****	237
ALTERNATE 21		101	*****	*****	*****	*****
ALTERNATE 22		*****	140	*****	*****	*****
ALTERNATE 23		*****	*****	165	*****	*****
ALTERNATE 24		*****	*****	*****	223	*****
ALTERNATE 25		*****	*****	*****	*****	243

XSECTION 4	.01					
ALTERNATE 11		7	*****	*****	*****	*****
ALTERNATE 12		*****	13	*****	*****	*****
ALTERNATE 13		*****	*****	16	*****	*****
ALTERNATE 14		*****	*****	*****	24	*****
ALTERNATE 15		*****	*****	*****	*****	28
ALTERNATE 21		10	*****	*****	*****	*****
ALTERNATE 22		*****	15	*****	*****	*****
ALTERNATE 23		*****	*****	19	*****	*****
ALTERNATE 24		*****	*****	*****	27	*****
ALTERNATE 25		*****	*****	*****	*****	31

XSECTION 5	.13					
ALTERNATE 11		90	*****	*****	*****	*****
ALTERNATE 12		*****	137	*****	*****	*****
ALTERNATE 13		*****	*****	169	*****	*****
ALTERNATE 14		*****	*****	*****	232	*****
ALTERNATE 15		*****	*****	*****	*****	265

1

TR20

09/11/**	WOODLAND LAKES 3RD - EXIST. CONDITIONS	VERSION
15:30:50	MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20	10/01/90
		PAGE 24

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 5	.13					
ALTERNATE 21		112	*****	*****	*****	*****
ALTERNATE 22		*****	155	*****	*****	*****
ALTERNATE 23		*****	*****	184	*****	*****
ALTERNATE 24		*****	*****	*****	250	*****
ALTERNATE 25		*****	*****	*****	*****	274
XSECTION 6	.00					
ALTERNATE 11		2	*****	*****	*****	*****
ALTERNATE 12		*****	4	*****	*****	*****
ALTERNATE 13		*****	*****	5	*****	*****
ALTERNATE 14		*****	*****	*****	7	*****
ALTERNATE 15		*****	*****	*****	*****	9
ALTERNATE 21		3	*****	*****	*****	*****
ALTERNATE 22		*****	4	*****	*****	*****
ALTERNATE 23		*****	*****	5	*****	*****
ALTERNATE 24		*****	*****	*****	8	*****
ALTERNATE 25		*****	*****	*****	*****	9
XSECTION 7	.13					
ALTERNATE 11		92	*****	*****	*****	*****
ALTERNATE 12		*****	139	*****	*****	*****
ALTERNATE 13		*****	*****	172	*****	*****
ALTERNATE 14		*****	*****	*****	236	*****
ALTERNATE 15		*****	*****	*****	*****	271
ALTERNATE 21		114	*****	*****	*****	*****
ALTERNATE 22		*****	158	*****	*****	*****
ALTERNATE 23		*****	*****	188	*****	*****
ALTERNATE 24		*****	*****	*****	256	*****
ALTERNATE 25		*****	*****	*****	*****	281
XSECTION 8	.00					
ALTERNATE 11		4	*****	*****	*****	*****
ALTERNATE 12		*****	6	*****	*****	*****
ALTERNATE 13		*****	*****	7	*****	*****
ALTERNATE 14		*****	*****	*****	10	*****
ALTERNATE 15		*****	*****	*****	*****	11
ALTERNATE 21		4	*****	*****	*****	*****
ALTERNATE 22		*****	5	*****	*****	*****

1

TR20

09/11/**	WOODLAND LAKES 3RD - EXIST. CONDITIONS	VERSION
15:30:50	MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20	10/01/90
		PAGE 25

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 8	.00					

ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

 ***** 6 *****
 ***** 8 *****
 ***** 9

XSECTION 9 .14

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15

93 *****
 ***** 141 *****
 ***** 174 *****
 ***** 239 *****
 ***** 275

ALTERNATE 21
 ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

115 *****
 ***** 160 *****
 ***** 190 *****
 ***** 259 *****
 ***** 286

XSECTION 10 .00

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15

2 *****
 ***** 3 *****
 ***** 4 *****
 ***** 6 *****
 ***** 7

ALTERNATE 21
 ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

2 *****
 ***** 3 *****
 ***** 4 *****
 ***** 5 *****
 ***** 6

XSECTION 11 .14

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15

92 *****
 ***** 141 *****
 ***** 174 *****
 ***** 240 *****
 ***** 277

ALTERNATE 21
 ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24

116 *****
 ***** 161 *****
 ***** 190 *****
 ***** 261 *****

1

TR20

09/11/**
 15:30:50

WOODLAND LAKES 3RD - EXIST. CONDITIONS
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20

VERSION
 10/01/90
 PAGE 26

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 11 .14						
ALTERNATE 25		*****	*****	*****	*****	287
XSECTION 12 .01						
ALTERNATE 11		11 *****	*****	*****	*****	*****
ALTERNATE 12		***** 18 *****	*****	*****	*****	*****
ALTERNATE 13		***** ***** 23 *****	*****	*****	*****	*****
ALTERNATE 14		***** ***** ***** 32 *****	*****	*****	*****	*****
ALTERNATE 15		***** ***** ***** ***** 38	*****	*****	*****	*****
ALTERNATE 21		12 *****	*****	*****	*****	*****
ALTERNATE 22		***** 17 *****	*****	*****	*****	*****
ALTERNATE 23		***** ***** 20 *****	*****	*****	*****	*****
ALTERNATE 24		***** ***** ***** 28 *****	*****	*****	*****	*****
ALTERNATE 25		***** ***** ***** ***** 32	*****	*****	*****	*****
XSECTION 13 .15						

ALTERNATE 24
ALTERNATE 25

***** 294 *****
***** 329

XSECTION 18 .01

1

TR20

WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
09/11/** PAGE 28
15:30:50

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 18 .01						
ALTERNATE 11		7	*****	*****	*****	*****
ALTERNATE 12		*****	11	*****	*****	*****
ALTERNATE 13		*****	*****	14	*****	*****
ALTERNATE 14		*****	*****	*****	20	*****
ALTERNATE 15		*****	*****	*****	*****	24
ALTERNATE 21		9	*****	*****	*****	*****
ALTERNATE 22		*****	13	*****	*****	*****
ALTERNATE 23		*****	*****	15	*****	*****
ALTERNATE 24		*****	*****	*****	22	*****
ALTERNATE 25		*****	*****	*****	*****	25

XSECTION 19 .18

ALTERNATE 11		100	*****	*****	*****	*****
ALTERNATE 12		*****	159	*****	*****	*****
ALTERNATE 13		*****	*****	199	*****	*****
ALTERNATE 14		*****	*****	*****	280	*****
ALTERNATE 15		*****	*****	*****	*****	328
ALTERNATE 21		127	*****	*****	*****	*****
ALTERNATE 22		*****	184	*****	*****	*****
ALTERNATE 23		*****	*****	221	*****	*****
ALTERNATE 24		*****	*****	*****	312	*****
ALTERNATE 25		*****	*****	*****	*****	352

XSECTION 20 .01

ALTERNATE 11		18	*****	*****	*****	*****
ALTERNATE 12		*****	26	*****	*****	*****
ALTERNATE 13		*****	*****	32	*****	*****
ALTERNATE 14		*****	*****	*****	42	*****
ALTERNATE 15		*****	*****	*****	*****	49
ALTERNATE 21		16	*****	*****	*****	*****
ALTERNATE 22		*****	22	*****	*****	*****
ALTERNATE 23		*****	*****	26	*****	*****
ALTERNATE 24		*****	*****	*****	35	*****
ALTERNATE 25		*****	*****	*****	*****	40

XSECTION 21 .19

ALTERNATE 11		103	*****	*****	*****	*****
ALTERNATE 12		*****	164	*****	*****	*****

1

TR20

WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
09/11/** PAGE 29
15:30:50

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE	DRAINAGE AREA	STORM NUMBERS.....				
		1	2	3	4	5

ID	(SQ MI)	1	2	3	4	5
XSECTION 21 .19						
ALTERNATE 13		*****	*****	206	*****	*****
ALTERNATE 14		*****	*****	*****	289	*****
ALTERNATE 15		*****	*****	*****	*****	340
ALTERNATE 21		131	*****	*****	*****	*****
ALTERNATE 22		*****	190	*****	*****	*****
ALTERNATE 23		*****	*****	228	*****	*****
ALTERNATE 24		*****	*****	*****	323	*****
ALTERNATE 25		*****	*****	*****	*****	365
XSECTION 22 .03						
ALTERNATE 11		24	*****	*****	*****	*****
ALTERNATE 12		*****	37	*****	*****	*****
ALTERNATE 13		*****	*****	46	*****	*****
ALTERNATE 14		*****	*****	*****	64	*****
ALTERNATE 15		*****	*****	*****	*****	76
ALTERNATE 21		30	*****	*****	*****	*****
ALTERNATE 22		*****	42	*****	*****	*****
ALTERNATE 23		*****	*****	50	*****	*****
ALTERNATE 24		*****	*****	*****	69	*****
ALTERNATE 25		*****	*****	*****	*****	79
XSECTION 23 .22						
ALTERNATE 11		96	*****	*****	*****	*****
ALTERNATE 12		*****	157	*****	*****	*****
ALTERNATE 13		*****	*****	201	*****	*****
ALTERNATE 14		*****	*****	*****	287	*****
ALTERNATE 15		*****	*****	*****	*****	342
ALTERNATE 21		122	*****	*****	*****	*****
ALTERNATE 22		*****	186	*****	*****	*****
ALTERNATE 23		*****	*****	227	*****	*****
ALTERNATE 24		*****	*****	*****	330	*****
ALTERNATE 25		*****	*****	*****	*****	375
XSECTION 24 .22						
ALTERNATE 11		164	*****	*****	*****	*****
ALTERNATE 12		*****	253	*****	*****	*****
ALTERNATE 13		*****	*****	313	*****	*****
ALTERNATE 14		*****	*****	*****	433	*****

1
TR20 -----
WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
15:30:50 PAGE 30

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 24 .22						
ALTERNATE 15		*****	*****	*****	*****	508
ALTERNATE 21		204	*****	*****	*****	*****
ALTERNATE 22		*****	285	*****	*****	*****
ALTERNATE 23		*****	*****	338	*****	*****
ALTERNATE 24		*****	*****	*****	468	*****
ALTERNATE 25		*****	*****	*****	*****	533
XSECTION 26 .03						
ALTERNATE 11		34	*****	*****	*****	*****
ALTERNATE 12		*****	55	*****	*****	*****
ALTERNATE 13		*****	*****	69	*****	*****

ALTERNATE	14	*****	*****	*****	97	*****
ALTERNATE	15	*****	*****	*****	*****	114
ALTERNATE	21	37	*****	*****	*****	*****
ALTERNATE	22	*****	54	*****	*****	*****
ALTERNATE	23	*****	*****	64	*****	*****
ALTERNATE	24	*****	*****	*****	90	*****
ALTERNATE	25	*****	*****	*****	*****	103

XSECTION 27 .25

ALTERNATE	11	148	*****	*****	*****	*****
ALTERNATE	12	*****	214	*****	*****	*****
ALTERNATE	13	*****	*****	247	*****	*****
ALTERNATE	14	*****	*****	*****	317	*****
ALTERNATE	15	*****	*****	*****	*****	338
ALTERNATE	21	185	*****	*****	*****	*****
ALTERNATE	22	*****	230	*****	*****	*****
ALTERNATE	23	*****	*****	261	*****	*****
ALTERNATE	24	*****	*****	*****	324	*****
ALTERNATE	25	*****	*****	*****	*****	346

XSECTION 28 .03

ALTERNATE	11	29	*****	*****	*****	*****
ALTERNATE	12	*****	47	*****	*****	*****
ALTERNATE	13	*****	*****	59	*****	*****
ALTERNATE	14	*****	*****	*****	83	*****
ALTERNATE	15	*****	*****	*****	*****	98

1

TR20 -----
 09/11/** WOODLAND LAKES 3RD - EXIST. CONDITIONS VERSION
 15:30:50 MKEC ENGG CONSULTANTS 9/10/02 WLE3COME.T20 10/01/90
 PAGE 31

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 28 .03						
ALTERNATE 21		34	*****	*****	*****	*****
ALTERNATE 22		*****	49	*****	*****	*****
ALTERNATE 23		*****	*****	59	*****	*****
ALTERNATE 24		*****	*****	*****	83	*****
ALTERNATE 25		*****	*****	*****	*****	95
XSECTION 29 .28						
ALTERNATE 11		158	*****	*****	*****	*****
ALTERNATE 12		*****	233	*****	*****	*****
ALTERNATE 13		*****	*****	268	*****	*****
ALTERNATE 14		*****	*****	*****	358	*****
ALTERNATE 15		*****	*****	*****	*****	402
ALTERNATE 21		197	*****	*****	*****	*****
ALTERNATE 22		*****	268	*****	*****	*****
ALTERNATE 23		*****	*****	303	*****	*****
ALTERNATE 24		*****	*****	*****	387	*****
ALTERNATE 25		*****	*****	*****	*****	428
XSECTION 30 .02						
ALTERNATE 11		20	*****	*****	*****	*****
ALTERNATE 12		*****	31	*****	*****	*****
ALTERNATE 13		*****	*****	38	*****	*****
ALTERNATE 14		*****	*****	*****	53	*****
ALTERNATE 15		*****	*****	*****	*****	62
ALTERNATE 21		21	*****	*****	*****	*****
ALTERNATE 22		*****	29	*****	*****	*****
ALTERNATE 23		*****	*****	35	*****	*****
ALTERNATE 24		*****	*****	*****	48	*****

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 34	.03					
ALTERNATE 25		*****	*****	*****	*****	77
XSECTION 35	.33					
ALTERNATE 11		188 *****	*****	*****	*****	*****
ALTERNATE 12		***** 283	*****	*****	*****	*****
ALTERNATE 13		***** *****	342 *****	*****	*****	*****
ALTERNATE 14		***** *****	*****	472 *****	*****	*****
ALTERNATE 15		***** *****	*****	*****	*****	539
ALTERNATE 21		240 *****	*****	*****	*****	*****
ALTERNATE 22		***** 339	*****	*****	*****	*****
ALTERNATE 23		***** *****	396 *****	*****	*****	*****
ALTERNATE 24		***** *****	*****	514 *****	*****	*****
ALTERNATE 25		***** *****	*****	*****	*****	572
XSECTION 36	.55					
ALTERNATE 11		279 *****	*****	*****	*****	*****
ALTERNATE 12		***** 425	*****	*****	*****	*****
ALTERNATE 13		***** *****	517 *****	*****	*****	*****
ALTERNATE 14		***** *****	*****	700 *****	*****	*****
ALTERNATE 15		***** *****	*****	*****	*****	804
ALTERNATE 21		351 *****	*****	*****	*****	*****
ALTERNATE 22		***** 482	*****	*****	*****	*****
ALTERNATE 23		***** *****	567 *****	*****	*****	*****
ALTERNATE 24		***** *****	*****	777 *****	*****	*****
ALTERNATE 25		***** *****	*****	*****	*****	881

END OF 1 JOBS IN THIS RUN
1

SCS TR-20, VERSION 10/01/90
FILES

INPUT = WLE3COME.T20
OUTPUT = WLE3COME.OUT

, DATED 09/11/**, 15:30:50

FILES GENERATED - DATED 09/11/**, 15:30:50

NONE!

*** TR-20 RUN COMPLETED ***

Proposed Conditions



1

*****80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****

JOB TR-20		SUMMARY				
TITLE		WOODLAND LAKES 3RD - PROP. CONDITIONS				
TITLE		MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20				
4	DIMHYD	0.02				484
8		.000	.030	.100	.190	.310
8		.470	.660	.820	.930	.990
8		1.000	.990	.930	.860	.780
8		.680	.560	.460	.390	.330
8		.280	.241	.207	.174	.147
8		.126	.107	.091	.077	.066
8		.055	.047	.040	.034	.029
8		.025	.021	.018	.015	.013
8		.011	.009	.008	.007	.006
8		.005	.004	.003	.002	.001
8		.000	.000	.000	.000	.000
9	ENDTBL					
5	RAINFL 7	0.08333				6-HR M&L
8		0.0000	0.0033	0.0066	0.0099	0.0132
8		0.0166	0.0198	0.0248	0.0296	0.0346
8		0.0404	0.0463	0.0522	0.0590	0.0658
8		0.0727	0.0796	0.0864	0.0933	0.1136
8		0.1340	0.1572	0.1832	0.2124	0.2473
8		0.2850	0.3400	0.4464	0.6034	0.6752
8		0.7220	0.7409	0.7598	0.7758	0.7919
8		0.8072	0.8224	0.8310	0.8396	0.8468
8		0.8540	0.8628	0.8714	0.8773	0.8832
8		0.8890	0.8939	0.8988	0.9038	0.9086
8		0.9136	0.9184	0.9233	0.9282	0.9332
8		0.9380	0.9429	0.9478	0.9527	0.9576
8		0.9626	0.9664	0.9704	0.9742	0.9782
8		0.9821	0.9860	0.9884	0.9906	0.9930
8		0.9954	0.9976	1.0000	1.0000	1.0000
9	ENDTBL					
5	RAINFL 8	0.5				24-HRSCS ZONE 5
8		.000	.002	.005	.009	.013
8		.018	.023	.029	.035	.042
8		.050	.059	.068	.078	.089
8		.101	.114	.128	.144	.162
8		.183	.208	.244	.339	.723
8		.773	.802	.825	.844	.861
8		.876	.890	.903	.914	.924
8		.934	.943	.951	.959	.966
8		.972	.977	.982	.986	.990
8		.993	.996	.998	1.000	1.000
9	ENDTBL					
3	STRUCT 01	1345.0	0.0	0.0		I-135

1

*****80-80 LIST OF INPUT DATA (CONTINUED)*****

8		1347.0	52.0	2.0	
8		1349.0	140.0	4.5	
8		1351.0	223.0	12.0	
8		1353.0	286.0	21.0	
8		1355.0	336.0	34.0	
8		1357.0	378.0	52.0	
8		1359.0	414.0	76.0	
8		1361.0	447.0	106.5	
8		1363.0	475.0	144.0	
9	ENDTBL				
3	STRUCT 09				N PON
8		1338.0	0.0	0.0	
8		1339.0	93.4	0.43	
8		1340.0	265.3	0.92	
8		1341.0	496.5	1.46	
8		1342.0	781.2	2.06	
8		1343.0	1201.3	2.72	
9	ENDTBL				

3	STRUCT	13							M PON
8			1335.0	0.0	0.0				
8			1336.0	40.1	1.1				
8			1337.0	113.7	2.36				
8			1338.0	212.8	3.72				
8			1339.0	334.8	5.19				
8			1340.0	483.0	6.75				
8			1341.0	731.9	8.43				
9	ENDTBL								
3	STRUCT	21							S PON
8			1334.0	0.0	0.0				
8			1335.0	40.1	2.16				
8			1336.0	113.7	4.48				
8			1337.0	212.8	6.94				
8			1338.0	334.8	9.56				
8			1339.0	483.0	12.32				
8			1340.0	731.9	15.22				
9	ENDTBL								
3	STRUCT	25							I-135
8			1346.0	0.0	0.0				
8			1348.0	52.0	0.90				
8			1350.0	187.0	3.59				
8			1352.0	297.0	9.60				
8			1354.0	378.0	22.41				
8			1356.0	444.0	44.4				
8			1358.0	500.0	77.13				
8			1360.0	549.0	127.1				
9	ENDTBL								
6	RUNOFF	1 001	6 0.0867	89.0	0.667				1 U/S I-

*****80-80 LIST OF INPUT DATA (CONTINUED)*****

6	RESVOR	2 01 6 7	1345.0						1 I-35
6	RUNOFF	1 002	6 0.032	98.0	0.567				1 U/S WL
6	ADDHYD	4 003 6 7 5							1 SU/S W
6	RUNOFF	1 004	6 0.0128	84.0	0.733				1 'A'
6	ADDHYD	4 005 5 6 7							1 S@'A'
6	RUNOFF	1 006	6 0.0028	84.0	0.400				1 'B'
6	ADDHYD	4 007 7 6 5							1 S @ 'B
6	RUNOFF	1 008	6 0.0026	88.8	0.25				1 N POND
6	ADDHYD	4 009 5 6 7							1 S - NP
6	RESVOR	2 09 7 5	1338.0						1 R-NP
6	RUNOFF	1 010	6 0.0019	84.0	0.300				1 'C'
6	ADDHYD	4 011 5 6 7							1 S @ 'C
6	RUNOFF	1 012	6 0.0090	87.5	0.25				1 M POND
6	ADDHYD	4 013 7 6 5							1 S - M
6	RESVOR	2 13 5 7	1335.0						1 R - M
6	RUNOFF	1 014	6 0.0167	85.0	0.650				1 'D E F
6	ADDHYD	4 015 7 6 5							1
6	RUNOFF	1 016	6 0.0052	84.0	0.417				1 'J'
6	ADDHYD	4 017 5 6 7							1
6	RUNOFF	1 018	6 0.0091	85.0	0.567				1 H1 H2
6	ADDHYD	4 019 7 6 5							1
6	RUNOFF	1 020	6 0.0107	92.7	0.250				1 S POND
6	ADDHYD	4 021 5 6 7							1 S - S
6	RESVOR	2 21 7 5	1334.0						1 R - S
6	RUNOFF	1 022	6 0.0298	87.0	0.333				1 WDLND3
6	ADDHYD	4 023 5 6 4							1 TOTAL
6	RUNOFF	1 024	6 0.216	90.0	0.842				1 U/S I-
6	RESVOR	2 25 6 7	1346.0						1 I-35
6	RUNOFF	1 026	6 0.0307	87.0	0.320				1 RES A
6	ADDHYD	4 027 6 7 5							1 LINCOL
6	RUNOFF	1 028	6 0.0297	87.0	0.408				1 E TRIB
6	ADDHYD	4 029 5 6 7							1 TO 48"
6	RUNOFF	1 030	6 0.0159	87.0	0.250				1 W. PON
6	ADDHYD	4 031 7 6 5							1 W.POND
6	RUNOFF	1 032	6 0.0090	87.0	0.25				1 E POND
6	ADDHYD	4 033 5 6 7							1 E POND
6	RUNOFF	1 034	6 0.0326	87.0	0.597				1 E PL
6	ADDHYD	4 035 7 6 5							1 E TRIB
6	ADDHYD	4 036 4 5 6							1 E PL T
	ENDATA								
7	INCREM	6	0.0833						
7	COMPUT	7 001 036	0.0	2.52	1.0		7 2 11 01		2-YR 6

ENDCMP 1
 7 COMPUT 7 001 036 0.0 3.42 1.0 7 2 12 02 5-YR 6
 ENDCMP 1
 7 COMPUT 7 001 036 0.0 4.02 1.0 7 2 13 03 10-YR
 1

*****80-80 LIST OF INPUT DATA (CONTINUED)*****

ENDCMP 1
 7 COMPUT 7 001 036 0.0 5.20 1.0 7 2 14 04 50-YR
 ENDCMP 1
 7 COMPUT 7 001 036 0.0 5.94 1.0 7 2 15 05 100-YR
 ENDCMP 1
 7 COMPUT 7 001 036 0.0 3.48 1.0 8 2 21 01 2-YR Z
 ENDCMP 1
 7 COMPUT 7 001 036 0.0 4.55 1.0 8 2 22 02 5-YR Z
 ENDCMP 1
 7 COMPUT 7 001 036 0.0 5.25 1.0 8 2 23 03 10-YR
 ENDCMP 1
 7 COMPUT 7 001 036 0.0 6.98 1.0 8 2 24 04 50-YR
 ENDCMP 1
 7 COMPUT 7 001 036 0.0 7.80 1.0 8 2 25 05 100-YR
 ENDCMP 1
 ENDJOB 2

*****END OF 80-80 LIST*****

1

TR20 -----
 WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 15:31:12 PASS 1 PAGE 1

COMPUTED PEAK RATE FACTOR = 484.00

EXECUTIVE CONTROL INCREM MAIN TIME INCREMENT = .08 HOURS

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 2-YR 6
 STARTING TIME = .00 RAIN DEPTH = 2.52 RAIN DURATION= 1.00
 ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
 ALTERNATE NO.=11 STORM NO.= 1 RAIN TABLE NO.= 7

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET) ***
 WILL INCREASE OUTFLOW HYDROGRAPH VOLUME.

*** WARNING - XSECTION 6, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (20. % OF MAX. HYDROGRAPH COORDINATE) ***
 MAIN TIME INCREMENT TOO SMALL.

*** WARNING - XSECTION 8, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (13. % OF MAX. HYDROGRAPH COORDINATE) ***
 MAIN TIME INCREMENT TOO SMALL.

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (26. % OF MAX. HYDROGRAPH COORDINATE) ***
 MAIN TIME INCREMENT TOO SMALL.

*** WARNING - XSECTION 16, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
 (11. % OF MAX. HYDROGRAPH COORDINATE) ***
 MAIN TIME INCREMENT TOO SMALL.

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET) ***
 WILL INCREASE OUTFLOW HYDROGRAPH VOLUME.

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 5-YR 6
 STARTING TIME = .00 RAIN DEPTH = 3.42 RAIN DURATION= 1.00
 ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
 ALTERNATE NO.=12 STORM NO.= 2 RAIN TABLE NO.= 7

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

1

TR20 -----
WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
15:31:12 PASS 2 PAGE 2

*** WARNING - XSECTION 6, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(13. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(15. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 10-YR
STARTING TIME = .00 RAIN DEPTH = 4.02 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=13 STORM NO.= 3 RAIN TABLE NO.= 7

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(12. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 50-YR
STARTING TIME = .00 RAIN DEPTH = 5.20 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=14 STORM NO.= 4 RAIN TABLE NO.= 7

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** MESSAGE - STRUCTURE 9, USER ENTERED STARTING ELEVATION (1338.0 FEET)
WILL DECREASE OUTFLOW HYDROGRAPH VOLUME. ***

1

TR20 -----
WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
15:31:12 PASS 4 PAGE 3

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 4

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 100-YR
STARTING TIME = .00 RAIN DEPTH = 5.94 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=15 STORM NO.= 5 RAIN TABLE NO.= 7

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** MESSAGE - STRUCTURE 9, USER ENTERED STARTING ELEVATION (1338.0 FEET)
WILL DECREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 5

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 2-YR Z
STARTING TIME = .00 RAIN DEPTH = 3.48 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=21 STORM NO.= 1 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** WARNING - XSECTION 6, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(17. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 8, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(12. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(21. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

1

TR20 -----
WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
15:31:12 PASS 6 PAGE 4

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 6

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 5-YR Z
STARTING TIME = .00 RAIN DEPTH = 4.55 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=22 STORM NO.= 2 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** WARNING - XSECTION 6, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(11. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(14. % OF MAX. HYDROGRAPH COORDINATE)
MAIN TIME INCREMENT TOO SMALL. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 7

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 10-YR
STARTING TIME = .00 RAIN DEPTH = 5.25 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=23 STORM NO.= 3 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** WARNING - XSECTION 10, HYDROGRAPH VOLUME TRUNCATED AT 0 CFS
(12. % OF MAX. HYDROGRAPH COORDINATE)

MAIN TIME INCREMENT TOO SMALL. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

1
TR20 -----
WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
15:31:12 PASS 9 PAGE 5

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 8

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 50-YR
STARTING TIME = .00 RAIN DEPTH = 6.98 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=24 STORM NO.= 4 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 9

EXECUTIVE CONTROL COMPUT FROM XSECTION 1 TO XSECTION 36 100-YR
STARTING TIME = .00 RAIN DEPTH = 7.80 RAIN DURATION= 1.00
ANT. MOIST. COND. = 2 MAIN TIME INCREMENT = .08 HOURS
ALTERNATE NO.=25 STORM NO.= 5 RAIN TABLE NO.= 8

*** MESSAGE - STRUCTURE 1, USER ENTERED STARTING ELEVATION (1345.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

*** MESSAGE - STRUCTURE 25, USER ENTERED STARTING ELEVATION (1346.0 FEET)
WILL INCREASE OUTFLOW HYDROGRAPH VOLUME. ***

EXECUTIVE CONTROL ENDCMP COMPUTATIONS COMPLETED FOR PASS 10

1
TR20 -----
WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
15:31:12 PAGE 6

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 2.52 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
RAINTABLE NUMBER 7, AMC 2							
MAIN TIME INCREMENT .08 HOURS							
ALTERNATE 11 STORM 1							
XSECTION	1	RUNOFF	.09	1.47	---	2.73	71 788.9
STRUCTURE	1	RESVOR	.09	1.79	1347.00	1.00	52 577.8
XSECTION	2	RUNOFF	.03	2.29	---	2.63	43 1433.3
XSECTION	3	ADDHYD	.12	1.95	---	2.78	83 691.7
XSECTION	4	RUNOFF	.01	1.13	---	2.79	7 700.0
XSECTION	5	ADDHYD	.13	1.87	---	2.78	90 692.3
XSECTION	6	RUNOFF	.00	1.13	---	2.57T	2T*****
XSECTION	7	ADDHYD	.13	1.86	---	2.77	92 707.7

XSECTION	8	RUNOFF	.00	1.46	---	2.46T	4T*****	
XSECTION	9	ADDHYD	.14	1.85	---	2.77	93	664.3
STRUCTURE	9	RESVOR	.14	1.85	1338.98	2.83	92	657.1
XSECTION	10	RUNOFF	.00	1.13	---	2.50T	2T*****	
XSECTION	11	ADDHYD	.14	1.84	---	2.83	92	657.1
XSECTION	12	RUNOFF	.01	1.36	---	2.46	11	1100.0
XSECTION	13	ADDHYD	.15	1.81	---	2.81	96	640.0
STRUCTURE	13	RESVOR	.15	1.81	1336.63	3.04	86	573.3
XSECTION	14	RUNOFF	.02	1.19	---	2.73	11	550.0
XSECTION	15	ADDHYD	.16	1.75	---	3.00	94	587.5
XSECTION	16	RUNOFF	.01	1.13	---	2.58T	4T	400.0
XSECTION	17	ADDHYD	.17	1.73	---	2.99	96	564.7
XSECTION	18	RUNOFF	.01	1.19	---	2.67	7	700.0
XSECTION	19	ADDHYD	.18	1.70	---	2.96	100	555.6
XSECTION	20	RUNOFF	.01	1.77	---	2.45	18	1800.0
XSECTION	21	ADDHYD	.19	1.71	---	2.95	103	542.1
STRUCTURE	21	RESVOR	.19	1.70	1335.61	3.33	85	447.4
XSECTION	22	RUNOFF	.03	1.33	---	2.52	33	1100.0
XSECTION	23	ADDHYD	.22	1.65	---	3.27	90	409.1
XSECTION	24	RUNOFF	.22	1.55	---	2.83	164	745.5

1 TR20 -----
WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
15:31:12 PAGE 7

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 11 STORM 1								
STRUCTURE	25	RESVOR	.22	1.64	1349.30	3.05	140	636.4
XSECTION	26	RUNOFF	.03	1.33	---	2.51	34	1133.3
XSECTION	27	ADDHYD	.25	1.60	---	3.03	148	592.0
XSECTION	28	RUNOFF	.03	1.33	---	2.57	29	966.7
XSECTION	29	ADDHYD	.28	1.57	---	3.00	158	564.3
XSECTION	30	RUNOFF	.02	1.33	---	2.46	20	1000.0
XSECTION	31	ADDHYD	.29	1.56	---	3.00	162	558.6
XSECTION	32	RUNOFF	.01	1.33	---	2.46	11	1100.0
XSECTION	33	ADDHYD	.30	1.55	---	2.99	165	550.0
XSECTION	34	RUNOFF	.03	1.33	---	2.69	26	866.7
XSECTION	35	ADDHYD	.33	1.53	---	2.93	182	551.5
XSECTION	36	ADDHYD	.55	1.58	---	3.03	263	478.2

RAINFALL OF 3.42 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 12 STORM 2								
XSECTION	1	RUNOFF	.09	2.28	---	2.71	111	1233.3
STRUCTURE	1	RESVOR	.09	2.60	1347.69	2.97	82	911.1
XSECTION	2	RUNOFF	.03	3.19	---	2.63	60	2000.0
XSECTION	3	ADDHYD	.12	2.78	---	2.78	124	1033.3
XSECTION	4	RUNOFF	.01	1.87	---	2.77	13	1300.0
XSECTION	5	ADDHYD	.13	2.69	---	2.78	137	1053.8
XSECTION	6	RUNOFF	.00	1.86	---	2.56T	4T*****	
XSECTION	7	ADDHYD	.13	2.67	---	2.77	139	1069.2
XSECTION	8	RUNOFF	.00	2.27	---	2.45	6	*****
XSECTION	9	ADDHYD	.14	2.66	---	2.77	141	1007.1

STRUCTURE	9	RESVOR	.14	2.67	1339.27	2.81	140	1000.0
XSECTION	10	RUNOFF	.00	1.87	---	2.50T	3T*****	
XSECTION	11	ADDHYD	.14	2.66	---	2.80	141	1007.1
XSECTION	12	RUNOFF	.01	2.15	---	2.45	18	1800.0

1

TR20 -----
 09/11/** WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 15:31:12 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 PAGE 8

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	ELEVATION (FT)	PEAK DISCHARGE			
					TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 12 STORM 2								
XSECTION	13	ADDHYD	.15	2.63	---	2.78	147	980.0
STRUCTURE	13	RESVOR	.15	2.63	1337.21	2.99	134	893.3
XSECTION	14	RUNOFF	.02	1.94	---	2.72	18	900.0
XSECTION	15	ADDHYD	.16	2.56	---	2.95	148	925.0
XSECTION	16	RUNOFF	.01	1.87	---	2.57	7	700.0
XSECTION	17	ADDHYD	.17	2.54	---	2.94	151	888.2
XSECTION	18	RUNOFF	.01	1.94	---	2.66	11	1100.0
XSECTION	19	ADDHYD	.18	2.51	---	2.91	159	883.3
XSECTION	20	RUNOFF	.01	2.61	---	2.45	26	2600.0
XSECTION	21	ADDHYD	.19	2.51	---	2.90	164	863.2
STRUCTURE	21	RESVOR	.19	2.51	1336.24	3.23	138	726.3
XSECTION	22	RUNOFF	.03	2.11	---	2.51	52	1733.3
XSECTION	23	ADDHYD	.22	2.45	---	3.19	147	668.2
XSECTION	24	RUNOFF	.22	2.37	---	2.82	253	1150.0
STRUCTURE	25	RESVOR	.22	2.46	1350.27	3.08	202	918.2
XSECTION	26	RUNOFF	.03	2.11	---	2.50	55	1833.3
XSECTION	27	ADDHYD	.25	2.42	---	3.04	214	856.0
XSECTION	28	RUNOFF	.03	2.11	---	2.55	47	1566.7
XSECTION	29	ADDHYD	.28	2.38	---	2.86	233	832.1
XSECTION	30	RUNOFF	.02	2.11	---	2.45	32	1600.0
XSECTION	31	ADDHYD	.29	2.37	---	2.85	240	827.6
XSECTION	32	RUNOFF	.01	2.11	---	2.45	18	1800.0
XSECTION	33	ADDHYD	.30	2.36	---	2.84	245	816.7
XSECTION	34	RUNOFF	.03	2.11	---	2.68	41	1366.7
XSECTION	35	ADDHYD	.33	2.34	---	2.80	281	851.5
XSECTION	36	ADDHYD	.55	2.39	---	3.02	402	730.9

1

TR20 -----
 09/11/** WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 15:31:12 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 PAGE 9

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	ELEVATION (FT)	PEAK DISCHARGE		
					TIME (HR)	RATE (CFS)	RATE (CSM)

RAINFALL OF 4.02 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 13 STORM 3

XSECTION	1	RUNOFF	.09	2.84	---	2.70	139	1544.4
STRUCTURE	1	RESVOR	.09	3.16	1348.15	2.96	103	1144.4
XSECTION	2	RUNOFF	.03	3.79	---	2.63	71	2366.7
XSECTION	3	ADDHYD	.12	3.36	---	2.78	153	1275.0
XSECTION	4	RUNOFF	.01	2.39	---	2.77	16	1600.0
XSECTION	5	ADDHYD	.13	3.26	---	2.78	169	1300.0
XSECTION	6	RUNOFF	.00	2.38	---	2.55	5	*****
XSECTION	7	ADDHYD	.13	3.24	---	2.77	172	1323.1
XSECTION	8	RUNOFF	.00	2.82	---	2.45	7	*****
XSECTION	9	ADDHYD	.14	3.23	---	2.77	174	1242.9
STRUCTURE	9	RESVOR	.14	3.23	1339.46	2.80	173	1235.7
XSECTION	10	RUNOFF	.00	2.39	---	2.49T	4T	*****
XSECTION	11	ADDHYD	.14	3.22	---	2.80	174	1242.9
XSECTION	12	RUNOFF	.01	2.70	---	2.45	23	2300.0
XSECTION	13	ADDHYD	.15	3.19	---	2.78	181	1206.7
STRUCTURE	13	RESVOR	.15	3.19	1337.54	2.97	168	1120.0
XSECTION	14	RUNOFF	.02	2.47	---	2.71	23	1150.0
XSECTION	15	ADDHYD	.16	3.12	---	2.93	186	1162.5
XSECTION	16	RUNOFF	.01	2.39	---	2.56	9	900.0
XSECTION	17	ADDHYD	.17	3.10	---	2.91	189	1111.8
XSECTION	18	RUNOFF	.01	2.47	---	2.66	14	1400.0
XSECTION	19	ADDHYD	.18	3.06	---	2.89	199	1105.6
XSECTION	20	RUNOFF	.01	3.19	---	2.44	32	3200.0
XSECTION	21	ADDHYD	.19	3.07	---	2.87	206	1084.2

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 15:31:12 PAGE 10

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 13 STORM 3							
STRUCTURE 21	RESVOR	.19	3.06	1336.62	3.20	175	921.1
XSECTION 22	RUNOFF	.03	2.65	---	2.51	66	2200.0
XSECTION 23	ADDHYD	.22	3.01	---	3.15	187	850.0
XSECTION 24	RUNOFF	.22	2.93	---	2.81	313	1422.7
STRUCTURE 25	RESVOR	.22	3.02	1350.84	3.12	233	1059.1
XSECTION 26	RUNOFF	.03	2.65	---	2.50	69	2300.0
XSECTION 27	ADDHYD	.25	2.98	---	3.08	247	988.0
XSECTION 28	RUNOFF	.03	2.65	---	2.55	59	1966.7
XSECTION 29	ADDHYD	.28	2.94	---	2.71	268	957.1
XSECTION 30	RUNOFF	.02	2.65	---	2.45	40	2000.0
XSECTION 31	ADDHYD	.29	2.93	---	2.67	286	986.2
XSECTION 32	RUNOFF	.01	2.65	---	2.45	23	2300.0
XSECTION 33	ADDHYD	.30	2.92	---	2.64	298	993.3
XSECTION 34	RUNOFF	.03	2.65	---	2.67	52	1733.3
XSECTION 35	ADDHYD	.33	2.89	---	2.65	349	1057.6
XSECTION 36	ADDHYD	.55	2.94	---	2.68	489	889.1

RAINFALL OF 5.20 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 14 STORM 4

XSECTION	1	RUNOFF	.09	3.95	---	2.70	192	2133.3
STRUCTURE	1	RESVOR	.09	4.27	1349.03	2.96	141	1566.7
XSECTION	2	RUNOFF	.03	4.97	---	2.62	92	3066.7
XSECTION	3	ADDHYD	.12	4.46	---	2.79	208	1733.3
XSECTION	4	RUNOFF	.01	3.45	---	2.76	24	2400.0
XSECTION	5	ADDHYD	.13	4.36	---	2.78	232	1784.6
XSECTION	6	RUNOFF	.00	3.45	---	2.55	7	*****
XSECTION	7	ADDHYD	.13	4.34	---	2.78	236	1815.4
XSECTION	8	RUNOFF	.00	3.89	---	2.45	10	*****
XSECTION	9	ADDHYD	.14	4.33	---	2.77	239	1707.1

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 09/11/** PAGE 11
 15:31:12

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 14 STORM 4

STRUCTURE	9	RESVOR	.14	4.34	1339.84	2.80	238	1700.0
XSECTION	10	RUNOFF	.00	3.45	---	2.49	6	*****
XSECTION	11	ADDHYD	.14	4.33	---	2.80	240	1714.3
XSECTION	12	RUNOFF	.01	3.76	---	2.45	32	3200.0
XSECTION	13	ADDHYD	.15	4.29	---	2.77	249	1660.0
STRUCTURE	13	RESVOR	.15	4.29	1338.16	2.94	233	1553.3
XSECTION	14	RUNOFF	.02	3.55	---	2.70	34	1700.0
XSECTION	15	ADDHYD	.16	4.21	---	2.91	259	1618.8
XSECTION	16	RUNOFF	.01	3.45	---	2.56	13	1300.0
XSECTION	17	ADDHYD	.17	4.19	---	2.89	265	1558.8
XSECTION	18	RUNOFF	.01	3.55	---	2.65	20	2000.0
XSECTION	19	ADDHYD	.18	4.16	---	2.87	280	1555.6
XSECTION	20	RUNOFF	.01	4.35	---	2.44	42	4200.0
XSECTION	21	ADDHYD	.19	4.17	---	2.85	289	1521.1
STRUCTURE	21	RESVOR	.19	4.16	1337.30	3.15	249	1310.5
XSECTION	22	RUNOFF	.03	3.74	---	2.50	92	3066.7
XSECTION	23	ADDHYD	.22	4.10	---	3.11	267	1213.6
XSECTION	24	RUNOFF	.22	4.06	---	2.81	433	1968.2
STRUCTURE	25	RESVOR	.22	4.15	1352.04	3.16	299	1359.1
XSECTION	26	RUNOFF	.03	3.72	---	2.50	97	3233.3
XSECTION	27	ADDHYD	.25	4.10	---	3.09	317	1268.0
XSECTION	28	RUNOFF	.03	3.74	---	2.55	83	2766.7
XSECTION	29	ADDHYD	.28	4.06	---	2.60	358	1278.6
XSECTION	30	RUNOFF	.02	3.71	---	2.45	56	2800.0
XSECTION	31	ADDHYD	.29	4.04	---	2.58	396	1365.5
XSECTION	32	RUNOFF	.01	3.71	---	2.45	32	3200.0
XSECTION	33	ADDHYD	.30	4.03	---	2.56	419	1396.7
XSECTION	34	RUNOFF	.03	3.76	---	2.66	74	2466.7
XSECTION	35	ADDHYD	.33	4.01	---	2.58	488	1478.8
XSECTION	36	ADDHYD	.55	4.04	---	2.60	679	1234.5

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 09/11/** PAGE 12
 15:31:12

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	ELEVATION (FT)	PEAK DISCHARGE		
					TIME (HR)	RATE (CFS)	RATE (CSM)
RAINFALL OF 5.94 inches AND 6.00 hr DURATION, BEGINS AT .0 hrs.							
ALTERNATE 15 STORM 5							
XSECTION 1	RUNOFF	.09	4.67	---	2.70	226	2511.1
STRUCTURE 1	RESVOR	.09	4.98	1349.30	3.00	152	1688.9
XSECTION 2	RUNOFF	.03	5.71	---	2.62	106	3533.3
XSECTION 3	ADDHYD	.12	5.18	---	2.74	237	1975.0
XSECTION 4	RUNOFF	.01	4.14	---	2.75	28	2800.0
XSECTION 5	ADDHYD	.13	5.08	---	2.74	265	2038.5
XSECTION 6	RUNOFF	.00	4.14	---	2.55	9	*****
XSECTION 7	ADDHYD	.13	5.06	---	2.73	271	2084.6
XSECTION 8	RUNOFF	.00	4.62	---	2.44	11	*****
XSECTION 9	ADDHYD	.14	5.05	---	2.73	275	1964.3
STRUCTURE 9	RESVOR	.14	5.06	1340.04	2.76	275	1964.3
XSECTION 10	RUNOFF	.00	4.14	---	2.49	7	*****
XSECTION 11	ADDHYD	.14	5.05	---	2.76	277	1978.6
XSECTION 12	RUNOFF	.01	4.46	---	2.45	38	3800.0
XSECTION 13	ADDHYD	.15	5.01	---	2.74	289	1926.7
STRUCTURE 13	RESVOR	.15	5.00	1338.45	2.90	267	1780.0
XSECTION 14	RUNOFF	.02	4.24	---	2.70	40	2000.0
XSECTION 15	ADDHYD	.16	4.93	---	2.86	302	1887.5
XSECTION 16	RUNOFF	.01	4.14	---	2.56	16	1600.0
XSECTION 17	ADDHYD	.17	4.90	---	2.85	310	1823.5
XSECTION 18	RUNOFF	.01	4.25	---	2.65	24	2400.0
XSECTION 19	ADDHYD	.18	4.87	---	2.83	328	1822.2
XSECTION 20	RUNOFF	.01	5.08	---	2.44	49	4900.0
XSECTION 21	ADDHYD	.19	4.88	---	2.81	340	1789.5

1

TR20

09/11/**
15:31:12

WOODLAND LAKES 3RD - PROP. CONDITIONS
MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20

VERSION
10/01/90
PAGE 13

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	ELEVATION (FT)	PEAK DISCHARGE		
					TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 15 STORM 5							
STRUCTURE 21	RESVOR	.19	4.87	1337.65	3.10	292	1536.8
XSECTION 22	RUNOFF	.03	4.44	---	2.50	109	3633.3
XSECTION 23	ADDHYD	.22	4.81	---	3.06	315	1431.8
XSECTION 24	RUNOFF	.22	4.78	---	2.80	508	2309.1
STRUCTURE 25	RESVOR	.22	4.87	1352.51	3.21	318	1445.5
XSECTION 26	RUNOFF	.03	4.44	---	2.49	114	3800.0
XSECTION 27	ADDHYD	.25	4.82	---	3.09	338	1352.0

XSECTION	28	RUNOFF	.03	4.45	---	2.54	98	3266.7
XSECTION	29	ADDHYD	.28	4.78	---	2.58	402	1435.7
XSECTION	30	RUNOFF	.02	4.40	---	2.45	66	3300.0
XSECTION	31	ADDHYD	.29	4.76	---	2.54	458	1579.3
XSECTION	32	RUNOFF	.01	4.40	---	2.45	37	3700.0
XSECTION	33	ADDHYD	.30	4.75	---	2.53	490	1633.3
XSECTION	34	RUNOFF	.03	4.46	---	2.66	88	2933.3
XSECTION	35	ADDHYD	.33	4.72	---	2.54	561	1700.0
XSECTION	36	ADDHYD	.55	4.76	---	2.60	794	1443.6

RAINFALL OF 3.48 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.
 RAINFALL NUMBER 8, AMC 2

ALTERNATE 21 STORM 1

XSECTION	1	RUNOFF	.09	2.34	---	12.19	88	977.8
STRUCTURE	1	RESVOR	.09	2.65	1347.35	12.43	68	755.6
XSECTION	2	RUNOFF	.03	3.25	---	12.13	44	1466.7
XSECTION	3	ADDHYD	.12	2.83	---	12.27	101	841.7
XSECTION	4	RUNOFF	.01	1.92	---	12.23	10	1000.0
XSECTION	5	ADDHYD	.13	2.74	---	12.26	112	861.5
XSECTION	6	RUNOFF	.00	1.92	---	12.05T	3T*****	
XSECTION	7	ADDHYD	.13	2.73	---	12.25	114	876.9
XSECTION	8	RUNOFF	.00	2.32	---	11.97T	4T*****	

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 09/11/** PAGE 14
 15:31:12

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE	21	STORM	1					
XSECTION	9	ADDHYD	.14	2.72	---	12.24	115	821.4
STRUCTURE	9	RESVOR	.14	2.73	1339.12	12.28	115	821.4
XSECTION	10	RUNOFF	.00	1.91	---	12.00T	2T*****	
XSECTION	11	ADDHYD	.14	2.72	---	12.27	116	828.6
XSECTION	12	RUNOFF	.01	2.20	---	11.97	12	1200.0
XSECTION	13	ADDHYD	.15	2.68	---	12.23	120	800.0
STRUCTURE	13	RESVOR	.15	2.68	1336.92	12.46	108	720.0
XSECTION	14	RUNOFF	.02	2.00	---	12.18	15	750.0
XSECTION	15	ADDHYD	.16	2.62	---	12.41	119	743.8
XSECTION	16	RUNOFF	.01	1.92	---	12.06	5	500.0
XSECTION	17	ADDHYD	.17	2.59	---	12.40	121	711.8
XSECTION	18	RUNOFF	.01	2.00	---	12.13	9	900.0
XSECTION	19	ADDHYD	.18	2.56	---	12.37	127	705.6
XSECTION	20	RUNOFF	.01	2.68	---	11.97	16	1600.0
XSECTION	21	ADDHYD	.19	2.57	---	12.34	131	689.5
STRUCTURE	21	RESVOR	.19	2.57	1335.92	12.72	108	568.4
XSECTION	22	RUNOFF	.03	2.16	---	12.02	36	1200.0
XSECTION	23	ADDHYD	.22	2.51	---	12.67	113	513.6
XSECTION	24	RUNOFF	.22	2.43	---	12.29	204	927.3
STRUCTURE	25	RESVOR	.22	2.52	1349.84	12.49	176	800.0
XSECTION	26	RUNOFF	.03	2.16	---	12.01	37	1233.3
XSECTION	27	ADDHYD	.25	2.47	---	12.46	185	740.0
XSECTION	28	RUNOFF	.03	2.16	---	12.05	34	1133.3

XSECTION	29	ADDHYD	.28	2.44	---	12.39	197	703.6
XSECTION	30	RUNOFF	.02	2.16	---	11.97	20	1000.0
XSECTION	31	ADDHYD	.29	2.42	---	12.20	202	696.6
XSECTION	32	RUNOFF	.01	2.16	---	11.97	11	1100.0
XSECTION	33	ADDHYD	.30	2.42	---	12.16	209	696.7
XSECTION	34	RUNOFF	.03	2.16	---	12.15	33	1100.0
XSECTION	35	ADDHYD	.33	2.39	---	12.16	241	730.3

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20
 09/11/**
 15:31:12

VERSION
 10/01/90
 PAGE 15

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 21 STORM		1						
XSECTION	36	ADDHYD	.55	2.44	---	12.20	334	607.3
RAINFALL OF		4.55 inches	AND 24.00 hr DURATION, BEGINS AT		.0 hrs.			
ALTERNATE 22 STORM		2						
XSECTION	1	RUNOFF	.09	3.34	---	12.18	124	1377.8
STRUCTURE	1	RESVOR	.09	3.65	1347.99	12.42	96	1066.7
XSECTION	2	RUNOFF	.03	4.31	---	12.13	58	1933.3
XSECTION	3	ADDHYD	.12	3.85	---	12.27	140	1166.7
XSECTION	4	RUNOFF	.01	2.86	---	12.23	15	1500.0
XSECTION	5	ADDHYD	.13	3.75	---	12.27	155	1192.3
XSECTION	6	RUNOFF	.00	2.86	---	12.05T	4T*****	
XSECTION	7	ADDHYD	.13	3.73	---	12.26	158	1215.4
XSECTION	8	RUNOFF	.00	3.32	---	11.97	5 *****	
XSECTION	9	ADDHYD	.14	3.73	---	12.25	160	1142.9
STRUCTURE	9	RESVOR	.14	3.73	1339.38	12.28	159	1135.7
XSECTION	10	RUNOFF	.00	2.86	---	12.00T	3T*****	
XSECTION	11	ADDHYD	.14	3.72	---	12.28	161	1150.0
XSECTION	12	RUNOFF	.01	3.19	---	11.97	17	1700.0
XSECTION	13	ADDHYD	.15	3.69	---	12.24	166	1106.7
STRUCTURE	13	RESVOR	.15	3.69	1337.41	12.43	154	1026.7
XSECTION	14	RUNOFF	.02	2.95	---	12.18	22	1100.0
XSECTION	15	ADDHYD	.16	3.62	---	12.38	171	1068.8
XSECTION	16	RUNOFF	.01	2.86	---	12.06	8	800.0
XSECTION	17	ADDHYD	.17	3.59	---	12.36	175	1029.4
XSECTION	18	RUNOFF	.01	2.95	---	12.13	13	1300.0
XSECTION	19	ADDHYD	.18	3.56	---	12.34	184	1022.2
XSECTION	20	RUNOFF	.01	3.72	---	11.97	22	2200.0
XSECTION	21	ADDHYD	.19	3.57	---	12.31	190	1000.0
STRUCTURE	21	RESVOR	.19	3.57	1336.48	12.63	161	847.4

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20
 09/11/**
 15:31:12

VERSION
 10/01/90
 PAGE 16

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:

F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 22 STORM 2

XSECTION 22	RUNOFF	.03	3.14	---	12.02	52	1733.3
XSECTION 23	ADDHYD	.22	3.51	---	12.59	170	772.7
XSECTION 24	RUNOFF	.22	3.44	---	12.28	285	1295.5
STRUCTURE 25	RESVOR	.22	3.53	1350.60	12.56	220	1000.0
XSECTION 26	RUNOFF	.03	3.14	---	12.01	54	1800.0
XSECTION 27	ADDHYD	.25	3.48	---	12.51	230	920.0
XSECTION 28	RUNOFF	.03	3.14	---	12.05	49	1633.3
XSECTION 29	ADDHYD	.28	3.44	---	12.18	268	957.1
XSECTION 30	RUNOFF	.02	3.14	---	11.97	29	1450.0
XSECTION 31	ADDHYD	.29	3.43	---	12.15	286	986.2
XSECTION 32	RUNOFF	.01	3.14	---	11.97	16	1600.0
XSECTION 33	ADDHYD	.30	3.42	---	12.13	297	990.0
XSECTION 34	RUNOFF	.03	3.14	---	12.15	47	1566.7
XSECTION 35	ADDHYD	.33	3.39	---	12.14	344	1042.4
XSECTION 36	ADDHYD	.55	3.44	---	12.16	485	881.8

RAINFALL OF 5.25 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 23 STORM 3

XSECTION 1	RUNOFF	.09	4.01	---	12.18	148	1644.4
STRUCTURE 1	RESVOR	.09	4.33	1348.41	12.42	114	1266.7
XSECTION 2	RUNOFF	.03	5.00	---	12.13	66	2200.0
XSECTION 3	ADDHYD	.12	4.53	---	12.28	165	1375.0
XSECTION 4	RUNOFF	.01	3.50	---	12.22	19	1900.0
XSECTION 5	ADDHYD	.13	4.43	---	12.27	184	1415.4
XSECTION 6	RUNOFF	.00	3.50	---	12.05	5	*****
XSECTION 7	ADDHYD	.13	4.41	---	12.26	188	1446.2
XSECTION 8	RUNOFF	.00	3.99	---	11.97	6	*****
XSECTION 9	ADDHYD	.14	4.40	---	12.25	190	1357.1
STRUCTURE 9	RESVOR	.14	4.41	1339.56	12.28	189	1350.0

1

TR20 -----
 WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 15:31:12 PAGE 17

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 23 STORM 3

XSECTION 10	RUNOFF	.00	3.50	---	12.00T	4T*****	
XSECTION 11	ADDHYD	.14	4.40	---	12.28	190	1357.1
XSECTION 12	RUNOFF	.01	3.85	---	11.97	20	2000.0
XSECTION 13	ADDHYD	.15	4.37	---	12.23	197	1313.3
STRUCTURE 13	RESVOR	.15	4.37	1337.71	12.42	184	1226.7
XSECTION 14	RUNOFF	.02	3.60	---	12.17	27	1350.0
XSECTION 15	ADDHYD	.16	4.29	---	12.37	205	1281.3

XSECTION	16	RUNOFF	.01	3.50	---	12.06	10	1000.0
XSECTION	17	ADDHYD	.17	4.26	---	12.35	210	1235.3
XSECTION	18	RUNOFF	.01	3.60	---	12.13	15	1500.0
XSECTION	19	ADDHYD	.18	4.23	---	12.33	221	1227.8
XSECTION	20	RUNOFF	.01	4.41	---	11.97	26	2600.0
XSECTION	21	ADDHYD	.19	4.24	---	12.29	228	1200.0
STRUCTURE	21	RESVOR	.19	4.24	1336.83	12.61	196	1031.6
XSECTION	22	RUNOFF	.03	3.80	---	12.01	62	2066.7
XSECTION	23	ADDHYD	.22	4.18	---	12.57	207	940.9
XSECTION	24	RUNOFF	.22	4.11	---	12.28	338	1536.4
STRUCTURE	25	RESVOR	.22	4.20	1351.13	12.58	249	1131.8
XSECTION	26	RUNOFF	.03	3.80	---	12.01	64	2133.3
XSECTION	27	ADDHYD	.25	4.15	---	12.55	261	1044.0
XSECTION	28	RUNOFF	.03	3.80	---	12.05	59	1966.7
XSECTION	29	ADDHYD	.28	4.11	---	12.13	303	1082.1
XSECTION	30	RUNOFF	.02	3.80	---	11.97	35	1750.0
XSECTION	31	ADDHYD	.29	4.10	---	12.10	334	1151.7
XSECTION	32	RUNOFF	.01	3.80	---	11.97	20	2000.0
XSECTION	33	ADDHYD	.30	4.09	---	12.09	351	1170.0
XSECTION	34	RUNOFF	.03	3.80	---	12.15	57	1900.0
XSECTION	35	ADDHYD	.33	4.06	---	12.10	407	1233.3
XSECTION	36	ADDHYD	.55	4.11	---	12.13	574	1043.6

1

TR20 -----
 09/11/** WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 15:31:12 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 PAGE 18

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
RAINFALL OF 6.98 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.								
ALTERNATE	24	STORM	4					
XSECTION	1	RUNOFF	.09	5.68	---	12.18	207	2300.0
STRUCTURE	1	RESVOR	.09	6.00	1349.19	12.45	148	1644.4
XSECTION	2	RUNOFF	.03	6.73	---	12.13	89	2966.7
XSECTION	3	ADDHYD	.12	6.22	---	12.24	223	1858.3
XSECTION	4	RUNOFF	.01	5.11	---	12.22	27	2700.0
XSECTION	5	ADDHYD	.13	6.11	---	12.24	250	1923.1
XSECTION	6	RUNOFF	.00	5.11	---	12.05	8	*****
XSECTION	7	ADDHYD	.13	6.09	---	12.23	256	1969.2
XSECTION	8	RUNOFF	.00	5.66	---	11.97	8	*****
XSECTION	9	ADDHYD	.14	6.08	---	12.22	259	1850.0
STRUCTURE	9	RESVOR	.14	6.09	1339.96	12.25	258	1842.9
XSECTION	10	RUNOFF	.00	5.12	---	12.00	5	*****
XSECTION	11	ADDHYD	.14	6.08	---	12.25	261	1864.3
XSECTION	12	RUNOFF	.01	5.51	---	11.97	28	2800.0
XSECTION	13	ADDHYD	.15	6.04	---	12.21	272	1813.3
STRUCTURE	13	RESVOR	.15	6.04	1338.34	12.37	254	1693.3
XSECTION	14	RUNOFF	.02	5.23	---	12.17	38	1900.0
XSECTION	15	ADDHYD	.16	5.96	---	12.34	286	1787.5
XSECTION	16	RUNOFF	.01	5.12	---	12.05	14	1400.0
XSECTION	17	ADDHYD	.17	5.93	---	12.32	294	1729.4
XSECTION	18	RUNOFF	.01	5.23	---	12.13	22	2200.0
XSECTION	19	ADDHYD	.18	5.90	---	12.30	312	1733.3
XSECTION	20	RUNOFF	.01	6.11	---	11.97	35	3500.0

XSECTION 21 ADDHYD .19 5.91 --- 12.26 323 1700.0

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 09/11/** PAGE 19
 15:31:12

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 24 STORM 4							
STRUCTURE 21	RESVOR	.19	5.91	1337.55	12.54	280	1473.7
XSECTION 22	RUNOFF	.03	5.46	---	12.01	87	2900.0
XSECTION 23	ADDHYD	.22	5.85	---	12.49	298	1354.5
XSECTION 24	RUNOFF	.22	5.80	---	12.28	468	2127.3
STRUCTURE 25	RESVOR	.22	5.88	1352.29	12.64	309	1404.5
XSECTION 26	RUNOFF	.03	5.45	---	12.01	90	3000.0
XSECTION 27	ADDHYD	.25	5.83	---	12.48	324	1296.0
XSECTION 28	RUNOFF	.03	5.45	---	12.05	83	2766.7
XSECTION 29	ADDHYD	.28	5.79	---	12.13	387	1382.1
XSECTION 30	RUNOFF	.02	5.46	---	11.97	49	2450.0
XSECTION 31	ADDHYD	.29	5.77	---	12.08	430	1482.8
XSECTION 32	RUNOFF	.01	5.46	---	11.97	28	2800.0
XSECTION 33	ADDHYD	.30	5.76	---	12.07	455	1516.7
XSECTION 34	RUNOFF	.03	5.45	---	12.14	80	2666.7
XSECTION 35	ADDHYD	.33	5.73	---	12.08	533	1615.2
XSECTION 36	ADDHYD	.55	5.78	---	12.12	792	1440.0

RAINFALL OF 7.80 inches AND 24.00 hr DURATION, BEGINS AT .0 hrs.

ALTERNATE 25 STORM 5

XSECTION 1	RUNOFF	.09	6.48	---	12.18	233	2588.9
STRUCTURE 1	RESVOR	.09	6.80	1349.43	12.48	158	1755.6
XSECTION 2	RUNOFF	.03	7.55	---	12.13	99	3300.0
XSECTION 3	ADDHYD	.12	7.02	---	12.20	243	2025.0
XSECTION 4	RUNOFF	.01	5.90	---	12.22	31	3100.0
XSECTION 5	ADDHYD	.13	6.91	---	12.20	274	2107.7
XSECTION 6	RUNOFF	.00	5.90	---	12.05	9	*****
XSECTION 7	ADDHYD	.13	6.89	---	12.20	281	2161.5
XSECTION 8	RUNOFF	.00	6.46	---	11.97	9	*****
XSECTION 9	ADDHYD	.14	6.88	---	12.19	286	2042.9

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 09/11/** PAGE 20
 15:31:12

SUMMARY TABLE 1

SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL IN ORDER PERFORMED.
 A CHARACTER FOLLOWING THE PEAK DISCHARGE TIME AND RATE (CFS) INDICATES:
 F-FLAT TOP HYDROGRAPH T-TRUNCATED HYDROGRAPH R-RISING TRUNCATED HYDROGRAPH

XSECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
				ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)

ALTERNATE 25 STORM 5

STRUCTURE 9	RESVOR	.14	6.89	1340.08	12.22	283	2021.4
XSECTION 10	RUNOFF	.00	5.89	---	11.99	6	*****
XSECTION 11	ADDHYD	.14	6.88	---	12.21	287	2050.0
XSECTION 12	RUNOFF	.01	6.31	---	11.97	32	3200.0
XSECTION 13	ADDHYD	.15	6.84	---	12.18	305	2033.3
STRUCTURE 13	RESVOR	.15	6.84	1338.56	12.34	281	1873.3
XSECTION 14	RUNOFF	.02	6.01	---	12.17	43	2150.0
XSECTION 15	ADDHYD	.16	6.76	---	12.31	319	1993.8
XSECTION 16	RUNOFF	.01	5.90	---	12.05	16	1600.0
XSECTION 17	ADDHYD	.17	6.73	---	12.29	329	1935.3
XSECTION 18	RUNOFF	.01	6.01	---	12.13	25	2500.0
XSECTION 19	ADDHYD	.18	6.69	---	12.27	352	1955.6
XSECTION 20	RUNOFF	.01	6.92	---	11.97	40	4000.0
XSECTION 21	ADDHYD	.19	6.71	---	12.24	365	1921.1
STRUCTURE 21	RESVOR	.19	6.70	1337.84	12.51	316	1663.2
XSECTION 22	RUNOFF	.03	6.25	---	12.02	99	3300.0
XSECTION 23	ADDHYD	.22	6.64	---	12.44	337	1531.8
XSECTION 24	RUNOFF	.22	6.61	---	12.28	533	2422.7
STRUCTURE 25	RESVOR	.22	6.70	1352.71	12.68	326	1481.8
XSECTION 26	RUNOFF	.03	6.25	---	12.01	103	3433.3
XSECTION 27	ADDHYD	.25	6.64	---	12.25	346	1384.0
XSECTION 28	RUNOFF	.03	6.25	---	12.05	95	3166.7
XSECTION 29	ADDHYD	.28	6.60	---	12.13	428	1528.6
XSECTION 30	RUNOFF	.02	6.25	---	11.97	55	2750.0
XSECTION 31	ADDHYD	.29	6.58	---	12.09	476	1641.4
XSECTION 32	RUNOFF	.01	6.25	---	11.97	31	3100.0
XSECTION 33	ADDHYD	.30	6.57	---	12.07	504	1680.0
XSECTION 34	RUNOFF	.03	6.24	---	12.14	90	3000.0
XSECTION 35	ADDHYD	.33	6.54	---	12.08	592	1793.9
XSECTION 36	ADDHYD	.55	6.58	---	12.13	891	1620.0

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 15:31:12 PAGE 21

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
STRUCTURE 25	.22					
ALTERNATE 11		140	*****	*****	*****	*****
ALTERNATE 12		*****	202	*****	*****	*****
ALTERNATE 13		*****	*****	233	*****	*****
ALTERNATE 14		*****	*****	*****	299	*****
ALTERNATE 15		*****	*****	*****	*****	318
ALTERNATE 21		176	*****	*****	*****	*****
ALTERNATE 22		*****	220	*****	*****	*****
ALTERNATE 23		*****	*****	249	*****	*****
ALTERNATE 24		*****	*****	*****	309	*****
ALTERNATE 25		*****	*****	*****	*****	326
STRUCTURE 21	.19					
ALTERNATE 11		85	*****	*****	*****	*****
ALTERNATE 12		*****	138	*****	*****	*****
ALTERNATE 13		*****	*****	175	*****	*****
ALTERNATE 14		*****	*****	*****	249	*****
ALTERNATE 15		*****	*****	*****	*****	292

ALTERNATE	21	108	*****	*****	*****	*****
ALTERNATE	22	*****	161	*****	*****	*****
ALTERNATE	23	*****	*****	196	*****	*****
ALTERNATE	24	*****	*****	*****	280	*****
ALTERNATE	25	*****	*****	*****	*****	316

STRUCTURE 13 .15

ALTERNATE	11	86	*****	*****	*****	*****
ALTERNATE	12	*****	134	*****	*****	*****
ALTERNATE	13	*****	*****	168	*****	*****
ALTERNATE	14	*****	*****	*****	233	*****
ALTERNATE	15	*****	*****	*****	*****	267

ALTERNATE	21	108	*****	*****	*****	*****
ALTERNATE	22	*****	154	*****	*****	*****
ALTERNATE	23	*****	*****	184	*****	*****
ALTERNATE	24	*****	*****	*****	254	*****
ALTERNATE	25	*****	*****	*****	*****	281

STRUCTURE 9 .14

ALTERNATE	11	92	*****	*****	*****	*****
-----------	----	----	-------	-------	-------	-------

1

TR20

09/11/**	WOODLAND LAKES 3RD - PROP. CONDITIONS	VERSION
15:31:12	MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20	10/01/90
		PAGE 22

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5

STRUCTURE 9 .14

ALTERNATE	12	*****	140	*****	*****	*****
ALTERNATE	13	*****	*****	173	*****	*****
ALTERNATE	14	*****	*****	*****	238	*****
ALTERNATE	15	*****	*****	*****	*****	275
ALTERNATE	21	115	*****	*****	*****	*****

ALTERNATE	22	*****	159	*****	*****	*****
ALTERNATE	23	*****	*****	189	*****	*****
ALTERNATE	24	*****	*****	*****	258	*****
ALTERNATE	25	*****	*****	*****	*****	283

STRUCTURE 1 .09

ALTERNATE	11	52	*****	*****	*****	*****
ALTERNATE	12	*****	82	*****	*****	*****
ALTERNATE	13	*****	*****	103	*****	*****
ALTERNATE	14	*****	*****	*****	141	*****
ALTERNATE	15	*****	*****	*****	*****	152

ALTERNATE	21	68	*****	*****	*****	*****
ALTERNATE	22	*****	96	*****	*****	*****
ALTERNATE	23	*****	*****	114	*****	*****
ALTERNATE	24	*****	*****	*****	148	*****
ALTERNATE	25	*****	*****	*****	*****	158

XSECTION 1 .09

ALTERNATE	11	71	*****	*****	*****	*****
ALTERNATE	12	*****	111	*****	*****	*****
ALTERNATE	13	*****	*****	139	*****	*****
ALTERNATE	14	*****	*****	*****	192	*****
ALTERNATE	15	*****	*****	*****	*****	226

ALTERNATE	21	88	*****	*****	*****	*****
-----------	----	----	-------	-------	-------	-------

ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

***** 124 *****
 ***** ***** 148 *****
 ***** ***** ***** 207 *****
 ***** ***** ***** ***** 233

XSECTION 2 .03

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13

***** 43 *****
 ***** 60 *****
 ***** ***** 71 *****

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 09/11/** 15:31:12 PAGE 23

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 2 .03						
ALTERNATE 14		*****	*****	*****	92	*****
ALTERNATE 15		*****	*****	*****	*****	106
ALTERNATE 21		44	*****	*****	*****	*****
ALTERNATE 22		*****	58	*****	*****	*****
ALTERNATE 23		*****	*****	66	*****	*****
ALTERNATE 24		*****	*****	*****	89	*****
ALTERNATE 25		*****	*****	*****	*****	99
XSECTION 3 .12						
ALTERNATE 11		83	*****	*****	*****	*****
ALTERNATE 12		*****	124	*****	*****	*****
ALTERNATE 13		*****	*****	153	*****	*****
ALTERNATE 14		*****	*****	*****	208	*****
ALTERNATE 15		*****	*****	*****	*****	237
ALTERNATE 21		101	*****	*****	*****	*****
ALTERNATE 22		*****	140	*****	*****	*****
ALTERNATE 23		*****	*****	165	*****	*****
ALTERNATE 24		*****	*****	*****	223	*****
ALTERNATE 25		*****	*****	*****	*****	243
XSECTION 4 .01						
ALTERNATE 11		7	*****	*****	*****	*****
ALTERNATE 12		*****	13	*****	*****	*****
ALTERNATE 13		*****	*****	16	*****	*****
ALTERNATE 14		*****	*****	*****	24	*****
ALTERNATE 15		*****	*****	*****	*****	28
ALTERNATE 21		10	*****	*****	*****	*****
ALTERNATE 22		*****	15	*****	*****	*****
ALTERNATE 23		*****	*****	19	*****	*****
ALTERNATE 24		*****	*****	*****	27	*****
ALTERNATE 25		*****	*****	*****	*****	31
XSECTION 5 .13						
ALTERNATE 11		90	*****	*****	*****	*****
ALTERNATE 12		*****	137	*****	*****	*****
ALTERNATE 13		*****	*****	169	*****	*****
ALTERNATE 14		*****	*****	*****	232	*****
ALTERNATE 15		*****	*****	*****	*****	265

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 09/11/**

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 5 .13						
ALTERNATE 21		112	*****	*****	*****	*****
ALTERNATE 22		*****	155	*****	*****	*****
ALTERNATE 23		*****	*****	184	*****	*****
ALTERNATE 24		*****	*****	*****	250	*****
ALTERNATE 25		*****	*****	*****	*****	274
XSECTION 6 .00						
ALTERNATE 11		2	*****	*****	*****	*****
ALTERNATE 12		*****	4	*****	*****	*****
ALTERNATE 13		*****	*****	5	*****	*****
ALTERNATE 14		*****	*****	*****	7	*****
ALTERNATE 15		*****	*****	*****	*****	9
ALTERNATE 21		3	*****	*****	*****	*****
ALTERNATE 22		*****	4	*****	*****	*****
ALTERNATE 23		*****	*****	5	*****	*****
ALTERNATE 24		*****	*****	*****	8	*****
ALTERNATE 25		*****	*****	*****	*****	9
XSECTION 7 .13						
ALTERNATE 11		92	*****	*****	*****	*****
ALTERNATE 12		*****	139	*****	*****	*****
ALTERNATE 13		*****	*****	172	*****	*****
ALTERNATE 14		*****	*****	*****	236	*****
ALTERNATE 15		*****	*****	*****	*****	271
ALTERNATE 21		114	*****	*****	*****	*****
ALTERNATE 22		*****	158	*****	*****	*****
ALTERNATE 23		*****	*****	188	*****	*****
ALTERNATE 24		*****	*****	*****	256	*****
ALTERNATE 25		*****	*****	*****	*****	281
XSECTION 8 .00						
ALTERNATE 11		4	*****	*****	*****	*****
ALTERNATE 12		*****	6	*****	*****	*****
ALTERNATE 13		*****	*****	7	*****	*****
ALTERNATE 14		*****	*****	*****	10	*****
ALTERNATE 15		*****	*****	*****	*****	11
ALTERNATE 21		4	*****	*****	*****	*****
ALTERNATE 22		*****	5	*****	*****	*****

1 TR20

09/11/**
15:31:12

WOODLAND LAKES 3RD - PROP. CONDITIONS
MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20

VERSION
10/01/90
PAGE 25

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 8 .00						

ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

***** 6 *****
 ***** 8 *****
 ***** 9 *****

XSECTION 9 .14

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15

93 *****
 ***** 141 *****
 ***** 174 *****
 ***** 239 *****
 ***** 275 *****

ALTERNATE 21
 ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

115 *****
 ***** 160 *****
 ***** 190 *****
 ***** 259 *****
 ***** 286 *****

XSECTION 10 .00

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15

2 *****
 ***** 3 *****
 ***** 4 *****
 ***** 6 *****
 ***** 7 *****

ALTERNATE 21
 ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24
 ALTERNATE 25

2 *****
 ***** 3 *****
 ***** 4 *****
 ***** 5 *****
 ***** 6 *****

XSECTION 11 .14

ALTERNATE 11
 ALTERNATE 12
 ALTERNATE 13
 ALTERNATE 14
 ALTERNATE 15

92 *****
 ***** 141 *****
 ***** 174 *****
 ***** 240 *****
 ***** 277 *****

ALTERNATE 21
 ALTERNATE 22
 ALTERNATE 23
 ALTERNATE 24

116 *****
 ***** 161 *****
 ***** 190 *****
 ***** 261 *****

1 TR20 -----
 09/11/** WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 15:31:12 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 PAGE 26

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 11 .14						
ALTERNATE 25		*****	*****	*****	*****	287
XSECTION 12 .01						
ALTERNATE 11		11 *****	*****	*****	*****	*****
ALTERNATE 12		***** 18 *****	*****	*****	*****	*****
ALTERNATE 13		***** ***** 23 *****	*****	*****	*****	*****
ALTERNATE 14		***** ***** ***** 32 *****	*****	*****	*****	*****
ALTERNATE 15		***** ***** ***** ***** 38 *****	*****	*****	*****	*****
ALTERNATE 21		12 *****	*****	*****	*****	*****
ALTERNATE 22		***** 17 *****	*****	*****	*****	*****
ALTERNATE 23		***** ***** 20 *****	*****	*****	*****	*****
ALTERNATE 24		***** ***** ***** 28 *****	*****	*****	*****	*****

ALTERNATE	25	*****	*****	*****	*****	*****	32
XSECTION 13		.15					
ALTERNATE	11	96	*****	*****	*****	*****	*****
ALTERNATE	12	*****	147	*****	*****	*****	*****
ALTERNATE	13	*****	*****	181	*****	*****	*****
ALTERNATE	14	*****	*****	*****	249	*****	*****
ALTERNATE	15	*****	*****	*****	*****	*****	289
ALTERNATE	21	120	*****	*****	*****	*****	*****
ALTERNATE	22	*****	166	*****	*****	*****	*****
ALTERNATE	23	*****	*****	197	*****	*****	*****
ALTERNATE	24	*****	*****	*****	272	*****	*****
ALTERNATE	25	*****	*****	*****	*****	*****	305
XSECTION 14		.02					
ALTERNATE	11	11	*****	*****	*****	*****	*****
ALTERNATE	12	*****	18	*****	*****	*****	*****
ALTERNATE	13	*****	*****	23	*****	*****	*****
ALTERNATE	14	*****	*****	*****	34	*****	*****
ALTERNATE	15	*****	*****	*****	*****	*****	40
ALTERNATE	21	15	*****	*****	*****	*****	*****
ALTERNATE	22	*****	22	*****	*****	*****	*****
ALTERNATE	23	*****	*****	27	*****	*****	*****
ALTERNATE	24	*****	*****	*****	38	*****	*****
ALTERNATE	25	*****	*****	*****	*****	*****	43

1
 TR20 -----
 WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 09/11/** 15:31:12 PAGE 27

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 15		.16				
ALTERNATE	11	94	*****	*****	*****	*****
ALTERNATE	12	*****	148	*****	*****	*****
ALTERNATE	13	*****	*****	186	*****	*****
ALTERNATE	14	*****	*****	*****	259	*****
ALTERNATE	15	*****	*****	*****	*****	302
ALTERNATE	21	119	*****	*****	*****	*****
ALTERNATE	22	*****	171	*****	*****	*****
ALTERNATE	23	*****	*****	205	*****	*****
ALTERNATE	24	*****	*****	*****	286	*****
ALTERNATE	25	*****	*****	*****	*****	319
XSECTION 16		.01				
ALTERNATE	11	4	*****	*****	*****	*****
ALTERNATE	12	*****	7	*****	*****	*****
ALTERNATE	13	*****	*****	9	*****	*****
ALTERNATE	14	*****	*****	*****	13	*****
ALTERNATE	15	*****	*****	*****	*****	16
ALTERNATE	21	5	*****	*****	*****	*****
ALTERNATE	22	*****	8	*****	*****	*****
ALTERNATE	23	*****	*****	10	*****	*****
ALTERNATE	24	*****	*****	*****	14	*****
ALTERNATE	25	*****	*****	*****	*****	16
XSECTION 17		.17				
ALTERNATE	11	96	*****	*****	*****	*****

ALTERNATE	12	*****	151	*****	*****	*****
ALTERNATE	13	*****	*****	189	*****	*****
ALTERNATE	14	*****	*****	*****	265	*****
ALTERNATE	15	*****	*****	*****	*****	310
ALTERNATE	21	*****	121	*****	*****	*****
ALTERNATE	22	*****	*****	175	*****	*****
ALTERNATE	23	*****	*****	*****	210	*****
ALTERNATE	24	*****	*****	*****	*****	294
ALTERNATE	25	*****	*****	*****	*****	329

XSECTION 18 .01

1

TR20

09/11/**	WOODLAND LAKES 3RD - PROP. CONDITIONS	VERSION
15:31:12	MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20	10/01/90
		PAGE 28

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 18	.01					
ALTERNATE 11		7	*****	*****	*****	*****
ALTERNATE 12		*****	11	*****	*****	*****
ALTERNATE 13		*****	*****	14	*****	*****
ALTERNATE 14		*****	*****	*****	20	*****
ALTERNATE 15		*****	*****	*****	*****	24
ALTERNATE 21		9	*****	*****	*****	*****
ALTERNATE 22		*****	13	*****	*****	*****
ALTERNATE 23		*****	*****	15	*****	*****
ALTERNATE 24		*****	*****	*****	22	*****
ALTERNATE 25		*****	*****	*****	*****	25

XSECTION 19 .18

ALTERNATE 11		100	*****	*****	*****	*****
ALTERNATE 12		*****	159	*****	*****	*****
ALTERNATE 13		*****	*****	199	*****	*****
ALTERNATE 14		*****	*****	*****	280	*****
ALTERNATE 15		*****	*****	*****	*****	328
ALTERNATE 21		127	*****	*****	*****	*****
ALTERNATE 22		*****	184	*****	*****	*****
ALTERNATE 23		*****	*****	221	*****	*****
ALTERNATE 24		*****	*****	*****	312	*****
ALTERNATE 25		*****	*****	*****	*****	352

XSECTION 20 .01

ALTERNATE 11		18	*****	*****	*****	*****
ALTERNATE 12		*****	26	*****	*****	*****
ALTERNATE 13		*****	*****	32	*****	*****
ALTERNATE 14		*****	*****	*****	42	*****
ALTERNATE 15		*****	*****	*****	*****	49
ALTERNATE 21		16	*****	*****	*****	*****
ALTERNATE 22		*****	22	*****	*****	*****
ALTERNATE 23		*****	*****	26	*****	*****
ALTERNATE 24		*****	*****	*****	35	*****
ALTERNATE 25		*****	*****	*****	*****	40

XSECTION 21 .19

ALTERNATE 11		103	*****	*****	*****	*****
ALTERNATE 12		*****	164	*****	*****	*****

1

TR20
09/11/**
15:31:12

WOODLAND LAKES 3RD - PROP. CONDITIONS
MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20

VERSION
10/01/90
PAGE 29

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 21 .19						
ALTERNATE 13		*****	*****	206	*****	*****
ALTERNATE 14		*****	*****	*****	289	*****
ALTERNATE 15		*****	*****	*****	*****	340
ALTERNATE 21		131	*****	*****	*****	*****
ALTERNATE 22		*****	190	*****	*****	*****
ALTERNATE 23		*****	*****	228	*****	*****
ALTERNATE 24		*****	*****	*****	323	*****
ALTERNATE 25		*****	*****	*****	*****	365
XSECTION 22 .03						
ALTERNATE 11		33	*****	*****	*****	*****
ALTERNATE 12		*****	52	*****	*****	*****
ALTERNATE 13		*****	*****	66	*****	*****
ALTERNATE 14		*****	*****	*****	92	*****
ALTERNATE 15		*****	*****	*****	*****	109
ALTERNATE 21		36	*****	*****	*****	*****
ALTERNATE 22		*****	52	*****	*****	*****
ALTERNATE 23		*****	*****	62	*****	*****
ALTERNATE 24		*****	*****	*****	87	*****
ALTERNATE 25		*****	*****	*****	*****	99
XSECTION 23 .22						
ALTERNATE 11		90	*****	*****	*****	*****
ALTERNATE 12		*****	147	*****	*****	*****
ALTERNATE 13		*****	*****	187	*****	*****
ALTERNATE 14		*****	*****	*****	267	*****
ALTERNATE 15		*****	*****	*****	*****	315
ALTERNATE 21		113	*****	*****	*****	*****
ALTERNATE 22		*****	170	*****	*****	*****
ALTERNATE 23		*****	*****	207	*****	*****
ALTERNATE 24		*****	*****	*****	298	*****
ALTERNATE 25		*****	*****	*****	*****	337
XSECTION 24 .22						
ALTERNATE 11		164	*****	*****	*****	*****
ALTERNATE 12		*****	253	*****	*****	*****
ALTERNATE 13		*****	*****	313	*****	*****
ALTERNATE 14		*****	*****	*****	433	*****

1
TR20
09/11/**
15:31:12

WOODLAND LAKES 3RD - PROP. CONDITIONS
MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20

VERSION
10/01/90
PAGE 30

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5

XSECTION 24 .22

ALTERNATE 15	*****	*****	*****	*****	508
ALTERNATE 21	204	*****	*****	*****	*****
ALTERNATE 22	*****	285	*****	*****	*****
ALTERNATE 23	*****	*****	338	*****	*****
ALTERNATE 24	*****	*****	*****	468	*****
ALTERNATE 25	*****	*****	*****	*****	533

XSECTION 26 .03

ALTERNATE 11	34	*****	*****	*****	*****
ALTERNATE 12	*****	55	*****	*****	*****
ALTERNATE 13	*****	*****	69	*****	*****
ALTERNATE 14	*****	*****	*****	97	*****
ALTERNATE 15	*****	*****	*****	*****	114
ALTERNATE 21	37	*****	*****	*****	*****
ALTERNATE 22	*****	54	*****	*****	*****
ALTERNATE 23	*****	*****	64	*****	*****
ALTERNATE 24	*****	*****	*****	90	*****
ALTERNATE 25	*****	*****	*****	*****	103

XSECTION 27 .25

ALTERNATE 11	148	*****	*****	*****	*****
ALTERNATE 12	*****	214	*****	*****	*****
ALTERNATE 13	*****	*****	247	*****	*****
ALTERNATE 14	*****	*****	*****	317	*****
ALTERNATE 15	*****	*****	*****	*****	338
ALTERNATE 21	185	*****	*****	*****	*****
ALTERNATE 22	*****	230	*****	*****	*****
ALTERNATE 23	*****	*****	261	*****	*****
ALTERNATE 24	*****	*****	*****	324	*****
ALTERNATE 25	*****	*****	*****	*****	346

XSECTION 28 .03

ALTERNATE 11	29	*****	*****	*****	*****
ALTERNATE 12	*****	47	*****	*****	*****
ALTERNATE 13	*****	*****	59	*****	*****
ALTERNATE 14	*****	*****	*****	83	*****
ALTERNATE 15	*****	*****	*****	*****	98

1

TR20 -----
 WOODLAND LAKES 3RD - PROP. CONDITIONS VERSION
 09/11/** MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20 10/01/90
 15:31:12 PAGE 31

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5

XSECTION 28	.03					
ALTERNATE 21		34	*****	*****	*****	*****
ALTERNATE 22		*****	49	*****	*****	*****
ALTERNATE 23		*****	*****	59	*****	*****
ALTERNATE 24		*****	*****	*****	83	*****
ALTERNATE 25		*****	*****	*****	*****	95

XSECTION 29	.28					
ALTERNATE 11		158	*****	*****	*****	*****
ALTERNATE 12		*****	233	*****	*****	*****
ALTERNATE 13		*****	*****	268	*****	*****
ALTERNATE 14		*****	*****	*****	358	*****

ALTERNATE	15	*****	*****	*****	*****	*****	402
ALTERNATE	21	197	*****	*****	*****	*****	*****
ALTERNATE	22	*****	268	*****	*****	*****	*****
ALTERNATE	23	*****	*****	303	*****	*****	*****
ALTERNATE	24	*****	*****	*****	387	*****	*****
ALTERNATE	25	*****	*****	*****	*****	*****	428

XSECTION 30 .02

ALTERNATE	11	20	*****	*****	*****	*****	*****
ALTERNATE	12	*****	32	*****	*****	*****	*****
ALTERNATE	13	*****	*****	40	*****	*****	*****
ALTERNATE	14	*****	*****	*****	56	*****	*****
ALTERNATE	15	*****	*****	*****	*****	*****	66
ALTERNATE	21	20	*****	*****	*****	*****	*****
ALTERNATE	22	*****	29	*****	*****	*****	*****
ALTERNATE	23	*****	*****	35	*****	*****	*****
ALTERNATE	24	*****	*****	*****	49	*****	*****
ALTERNATE	25	*****	*****	*****	*****	*****	55

XSECTION 31 .29

ALTERNATE	11	162	*****	*****	*****	*****	*****
ALTERNATE	12	*****	240	*****	*****	*****	*****
ALTERNATE	13	*****	*****	286	*****	*****	*****
ALTERNATE	14	*****	*****	*****	396	*****	*****
ALTERNATE	15	*****	*****	*****	*****	*****	458
ALTERNATE	21	202	*****	*****	*****	*****	*****
ALTERNATE	22	*****	286	*****	*****	*****	*****

1

TR20

09/11/**	WOODLAND LAKES 3RD - PROP. CONDITIONS	VERSION
15:31:12	MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20	10/01/90
		PAGE 32

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 31 .29						
ALTERNATE 23		*****	*****	334	*****	*****
ALTERNATE 24		*****	*****	*****	430	*****
ALTERNATE 25		*****	*****	*****	*****	476
XSECTION 32 .01						
ALTERNATE 11		11	*****	*****	*****	*****
ALTERNATE 12		*****	18	*****	*****	*****
ALTERNATE 13		*****	*****	23	*****	*****
ALTERNATE 14		*****	*****	*****	32	*****
ALTERNATE 15		*****	*****	*****	*****	37
ALTERNATE 21		11	*****	*****	*****	*****
ALTERNATE 22		*****	16	*****	*****	*****
ALTERNATE 23		*****	*****	20	*****	*****
ALTERNATE 24		*****	*****	*****	28	*****
ALTERNATE 25		*****	*****	*****	*****	31
XSECTION 33 .30						
ALTERNATE 11		165	*****	*****	*****	*****
ALTERNATE 12		*****	245	*****	*****	*****
ALTERNATE 13		*****	*****	298	*****	*****
ALTERNATE 14		*****	*****	*****	419	*****
ALTERNATE 15		*****	*****	*****	*****	490

ALTERNATE	21	209	*****	*****	*****	*****	*****
ALTERNATE	22	*****	297	*****	*****	*****	*****
ALTERNATE	23	*****	*****	351	*****	*****	*****
ALTERNATE	24	*****	*****	*****	455	*****	*****
ALTERNATE	25	*****	*****	*****	*****	*****	504

XSECTION 34 .03

ALTERNATE	11	26	*****	*****	*****	*****	*****
ALTERNATE	12	*****	41	*****	*****	*****	*****
ALTERNATE	13	*****	*****	52	*****	*****	*****
ALTERNATE	14	*****	*****	*****	74	*****	*****
ALTERNATE	15	*****	*****	*****	*****	*****	88

ALTERNATE	21	33	*****	*****	*****	*****	*****
ALTERNATE	22	*****	47	*****	*****	*****	*****
ALTERNATE	23	*****	*****	57	*****	*****	*****
ALTERNATE	24	*****	*****	*****	80	*****	*****

1

TR20

WOODLAND LAKES 3RD - PROP. CONDITIONS			VERSION
09/11/**	MKEC ENGG CONSULTANTS 9/10/02 WLE3COMB.T20		10/01/90
15:31:12			PAGE 33

SUMMARY TABLE 3

STORM DISCHARGES (CFS) AT XSECTIONS AND STRUCTURES FOR ALL ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....				
		1	2	3	4	5
XSECTION 34 .03						
ALTERNATE 25		*****	*****	*****	*****	90
XSECTION 35 .33						
ALTERNATE 11		182	*****	*****	*****	*****
ALTERNATE 12		*****	281	*****	*****	*****
ALTERNATE 13		*****	*****	349	*****	*****
ALTERNATE 14		*****	*****	*****	488	*****
ALTERNATE 15		*****	*****	*****	*****	561
ALTERNATE 21		241	*****	*****	*****	*****
ALTERNATE 22		*****	344	*****	*****	*****
ALTERNATE 23		*****	*****	407	*****	*****
ALTERNATE 24		*****	*****	*****	533	*****
ALTERNATE 25		*****	*****	*****	*****	592
XSECTION 36 .55						
ALTERNATE 11		263	*****	*****	*****	*****
ALTERNATE 12		*****	402	*****	*****	*****
ALTERNATE 13		*****	*****	489	*****	*****
ALTERNATE 14		*****	*****	*****	679	*****
ALTERNATE 15		*****	*****	*****	*****	794
ALTERNATE 21		334	*****	*****	*****	*****
ALTERNATE 22		*****	485	*****	*****	*****
ALTERNATE 23		*****	*****	574	*****	*****
ALTERNATE 24		*****	*****	*****	792	*****
ALTERNATE 25		*****	*****	*****	*****	891

END OF 1 JOBS IN THIS RUN

1

SCS TR-20, VERSION 10/01/90
FILES

INPUT = WLE3COMB.T20
OUTPUT = WLE3COMB.OUT

, DATED 09/11/**,15:31:12

FILES GENERATED - DATED 09/11/**,15:31:12

NONE!

*** TR-20 RUN COMPLETED ***

Appendix G: Hydraflow Hydragraph Output



Hydrograph Return Period Recap

Hyd. No.	Hydrograph type (origin)	Inflow Hyd(s)	Peak Outflow (cfs)								Hydrograph description
			1-Yr	2-Yr	3-Yr	5-Yr	10-Yr	25-Yr	50-Yr	100-Yr	
1	SCS Runoff	----	----	3.28	----	5.03	6.21	----	----	10.59	C
2	SCS Runoff	----	----	5.82	----	8.71	10.65	----	----	17.75	E
3	SCS Runoff	----	----	2.78	----	3.83	4.51	----	----	6.98	F
4	SCS Runoff	----	----	3.28	----	5.03	6.21	----	----	10.59	G
5	Combine	2, 4	----	9.10	----	13.75	16.86	----	----	28.34	E+G
6	Combine	3, 5	----	11.88	----	17.58	21.37	----	----	35.31	E+F+G
7	SCS Runoff	----	----	2.97	----	4.44	5.41	----	----	8.99	H2
8	SCS Runoff	----	----	3.42	----	4.70	5.54	----	----	8.54	I
9	Combine	7, 8	----	6.39	----	9.14	10.95	----	----	17.53	H2+I
10	SCS Runoff	----	----	4.03	----	6.02	7.35	----	----	12.20	O
11	SCS Runoff	----	----	2.50	----	3.84	4.73	----	----	8.07	P
12	SCS Runoff	----	----	4.88	----	7.29	8.89	----	----	14.77	Q
13	SCS Runoff	----	----	6.16	----	9.23	11.27	----	----	18.79	R
14	SCS Runoff	----	----	7.81	----	11.99	14.79	----	----	25.21	2
15	SCS Runoff	----	----	27.83	----	42.90	53.25	----	----	91.93	Drains to South
16	Combine	6, 9, 12, 13, 14,	----	36.29	----	53.81	65.47	----	----	108.31	E+F+G+H+I+Q+R+2
17	Reservoir	16	----	19.19	----	30.54	38.63	----	----	69.75	Pond
18	Combine	1, 10, 11, 17	----	24.65	----	39.35	49.77	----	----	89.81	C+E+F+G+H2+I+O+P+Q+R+2

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Hyd. No. 17

Pond

Hydrograph type = Reservoir
 Storm frequency = 10 yrs
 Inflow hyd. No. = 16
 Max. Elevation = 1330.55 ft

Peak discharge = 38.63 cfs
 Time interval = 6 min
 Reservoir name = Proposed
 Max. Storage = 1.607 acft

Storage Indication method used.

Outflow hydrograph volume = 5.848 acft

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
9.00	0.93	1329.06	----	----	----	----	0.40	----	----	----	----	0.40
9.10	0.99	1329.07	----	----	----	----	0.43	----	----	----	----	0.43
9.20	1.04	1329.07	----	----	----	----	0.46	----	----	----	----	0.46
9.30	1.09	1329.08	----	----	----	----	0.49	----	----	----	----	0.49
9.40	1.13	1329.08	----	----	----	----	0.52	----	----	----	----	0.52
9.50	1.17	1329.09	----	----	----	----	0.55	----	----	----	----	0.55
9.60	1.21	1329.09	----	----	----	----	0.59	----	----	----	----	0.59
9.70	1.25	1329.10	----	----	----	----	0.62	----	----	----	----	0.62
9.80	1.31	1329.10	----	----	----	----	0.67	----	----	----	----	0.67
9.90	1.39	1329.11	----	----	----	----	0.73	----	----	----	----	0.73
10.00	1.48	1329.11	----	----	----	----	0.79	----	----	----	----	0.79
10.10	1.58	1329.12	----	----	----	----	0.86	----	----	----	----	0.86
10.20	1.70	1329.13	----	----	----	----	0.93	----	----	----	----	0.93
10.30	1.82	1329.13	----	----	----	----	1.01	----	----	----	----	1.01
10.40	1.97	1329.14	----	----	----	----	1.09	----	----	----	----	1.09
10.50	2.12	1329.15	----	----	----	----	1.17	----	----	----	----	1.17
10.60	2.28	1329.16	----	----	----	----	1.27	----	----	----	----	1.27
10.70	2.47	1329.16	----	----	----	----	1.37	----	----	----	----	1.37
10.80	2.69	1329.17	----	----	----	----	1.48	----	----	----	----	1.48
10.90	2.94	1329.18	----	----	----	----	1.60	----	----	----	----	1.60
11.00	3.20	1329.20	----	----	----	----	1.73	----	----	----	----	1.73
11.10	3.44	1329.21	----	----	----	----	1.90	----	----	----	----	1.90
11.20	3.75	1329.22	----	----	----	----	2.10	----	----	----	----	2.10
11.30	4.21	1329.24	----	----	----	----	2.31	----	----	----	----	2.31
11.40	4.81	1329.25	----	----	----	----	2.57	----	----	----	----	2.57
11.50	5.49	1329.27	----	----	----	----	2.87	----	----	----	----	2.87
11.60	7.14	1329.30	----	----	----	----	3.27	----	----	----	----	3.27
11.70	11.57	1329.35	----	----	----	----	4.09	----	----	----	----	4.09
11.80	20.74	1329.44	----	----	----	----	5.81	----	----	----	----	5.81
11.90	38.60	1329.62	----	----	----	----	9.71	----	----	----	----	9.71
12.00	58.20	1329.91	----	----	----	----	17.19	----	----	----	----	17.19
12.10	65.47 <<	1330.21	----	----	----	----	26.75	----	----	----	----	26.75
12.20	57.54	1330.45	----	----	----	----	34.82	----	----	----	----	34.82
12.30	43.31	1330.55	----	----	----	----	38.63	----	----	----	----	38.63 <<
12.40	31.64	1330.54	----	----	----	----	38.35	----	----	----	----	38.35
12.50	22.32	1330.47	----	----	----	----	35.56	----	----	----	----	35.56
12.60	14.38	1330.35	----	----	----	----	31.47	----	----	----	----	31.47
12.70	10.21	1330.22	----	----	----	----	27.08	----	----	----	----	27.08

Continues on next page...

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
12.80	8.89	1330.11	----	----	----	----	23.23	----	----	----	----	23.24
12.90	7.91	1330.01	----	----	----	----	20.13	----	----	----	----	20.13
13.00	7.17	1329.91	----	----	----	----	17.44	----	----	----	----	17.43
13.10	6.59	1329.84	----	----	----	----	15.27	----	----	----	----	15.26
13.20	6.14	1329.77	----	----	----	----	13.50	----	----	----	----	13.50
13.30	5.77	1329.71	----	----	----	----	12.05	----	----	----	----	12.05
13.40	5.44	1329.67	----	----	----	----	10.86	----	----	----	----	10.86
13.50	5.15	1329.62	----	----	----	----	9.86	----	----	----	----	9.86
13.60	4.88	1329.59	----	----	----	----	9.01	----	----	----	----	9.01
13.70	4.64	1329.56	----	----	----	----	8.30	----	----	----	----	8.30
13.80	4.42	1329.53	----	----	----	----	7.67	----	----	----	----	7.67
13.90	4.21	1329.50	----	----	----	----	7.11	----	----	----	----	7.11
14.00	4.01	1329.48	----	----	----	----	6.65	----	----	----	----	6.65
14.10	3.83	1329.46	----	----	----	----	6.23	----	----	----	----	6.23
14.20	3.67	1329.44	----	----	----	----	5.85	----	----	----	----	5.85
14.30	3.54	1329.42	----	----	----	----	5.51	----	----	----	----	5.51
14.40	3.44	1329.41	----	----	----	----	5.20	----	----	----	----	5.20
14.50	3.36	1329.39	----	----	----	----	4.94	----	----	----	----	4.94
14.60	3.28	1329.38	----	----	----	----	4.72	----	----	----	----	4.72
14.70	3.22	1329.37	----	----	----	----	4.52	----	----	----	----	4.52
14.80	3.15	1329.36	----	----	----	----	4.34	----	----	----	----	4.34
14.90	3.09	1329.35	----	----	----	----	4.18	----	----	----	----	4.18
15.00	3.03	1329.34	----	----	----	----	4.02	----	----	----	----	4.02
15.10	2.96	1329.33	----	----	----	----	3.89	----	----	----	----	3.88
15.20	2.90	1329.33	----	----	----	----	3.76	----	----	----	----	3.76
15.30	2.83	1329.32	----	----	----	----	3.63	----	----	----	----	3.63
15.40	2.77	1329.31	----	----	----	----	3.52	----	----	----	----	3.52
15.50	2.70	1329.31	----	----	----	----	3.41	----	----	----	----	3.41
15.60	2.64	1329.30	----	----	----	----	3.31	----	----	----	----	3.31
15.70	2.57	1329.30	----	----	----	----	3.23	----	----	----	----	3.23
15.80	2.51	1329.29	----	----	----	----	3.15	----	----	----	----	3.15
15.90	2.44	1329.29	----	----	----	----	3.07	----	----	----	----	3.07
16.00	2.38	1329.28	----	----	----	----	2.99	----	----	----	----	2.99
16.10	2.31	1329.28	----	----	----	----	2.92	----	----	----	----	2.92
16.20	2.26	1329.27	----	----	----	----	2.84	----	----	----	----	2.84
16.30	2.21	1329.27	----	----	----	----	2.77	----	----	----	----	2.77
16.40	2.17	1329.26	----	----	----	----	2.71	----	----	----	----	2.71
16.50	2.14	1329.26	----	----	----	----	2.64	----	----	----	----	2.64
16.60	2.12	1329.25	----	----	----	----	2.59	----	----	----	----	2.58
16.70	2.09	1329.25	----	----	----	----	2.53	----	----	----	----	2.53
16.80	2.07	1329.25	----	----	----	----	2.48	----	----	----	----	2.48
16.90	2.05	1329.24	----	----	----	----	2.43	----	----	----	----	2.43
17.00	2.03	1329.24	----	----	----	----	2.38	----	----	----	----	2.38
17.10	2.00	1329.24	----	----	----	----	2.34	----	----	----	----	2.34
17.20	1.98	1329.23	----	----	----	----	2.30	----	----	----	----	2.30
17.30	1.96	1329.23	----	----	----	----	2.26	----	----	----	----	2.26
17.40	1.93	1329.23	----	----	----	----	2.22	----	----	----	----	2.22
17.50	1.91	1329.23	----	----	----	----	2.19	----	----	----	----	2.19
17.60	1.89	1329.23	----	----	----	----	2.16	----	----	----	----	2.16
17.70	1.86	1329.22	----	----	----	----	2.12	----	----	----	----	2.12
17.80	1.84	1329.22	----	----	----	----	2.09	----	----	----	----	2.09

Continues on next page...

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
17.90	1.82	1329.22	----	----	----	----	2.06	----	----	----	----	2.06
18.00	1.79	1329.22	----	----	----	----	2.03	----	----	----	----	2.03
18.10	1.77	1329.21	----	----	----	----	2.00	----	----	----	----	2.00
18.20	1.75	1329.21	----	----	----	----	1.97	----	----	----	----	1.97
18.30	1.72	1329.21	----	----	----	----	1.95	----	----	----	----	1.95
18.40	1.70	1329.21	----	----	----	----	1.92	----	----	----	----	1.92
18.50	1.68	1329.21	----	----	----	----	1.89	----	----	----	----	1.89
18.60	1.65	1329.21	----	----	----	----	1.86	----	----	----	----	1.87
18.70	1.63	1329.20	----	----	----	----	1.84	----	----	----	----	1.84
18.80	1.60	1329.20	----	----	----	----	1.81	----	----	----	----	1.81
18.90	1.58	1329.20	----	----	----	----	1.79	----	----	----	----	1.79
19.00	1.56	1329.20	----	----	----	----	1.77	----	----	----	----	1.77
19.10	1.53	1329.20	----	----	----	----	1.75	----	----	----	----	1.75
19.20	1.51	1329.20	----	----	----	----	1.73	----	----	----	----	1.73
19.30	1.49	1329.19	----	----	----	----	1.71	----	----	----	----	1.71
19.40	1.46	1329.19	----	----	----	----	1.68	----	----	----	----	1.69
19.50	1.44	1329.19	----	----	----	----	1.66	----	----	----	----	1.66
19.60	1.42	1329.19	----	----	----	----	1.64	----	----	----	----	1.64
19.70	1.39	1329.19	----	----	----	----	1.62	----	----	----	----	1.62
19.80	1.37	1329.18	----	----	----	----	1.60	----	----	----	----	1.60
19.90	1.34	1329.18	----	----	----	----	1.58	----	----	----	----	1.58
20.00	1.32	1329.18	----	----	----	----	1.56	----	----	----	----	1.56
20.10	1.30	1329.18	----	----	----	----	1.53	----	----	----	----	1.53
20.20	1.28	1329.18	----	----	----	----	1.51	----	----	----	----	1.51
20.30	1.26	1329.17	----	----	----	----	1.49	----	----	----	----	1.49
20.40	1.25	1329.17	----	----	----	----	1.47	----	----	----	----	1.47
20.50	1.24	1329.17	----	----	----	----	1.45	----	----	----	----	1.45
20.60	1.24	1329.17	----	----	----	----	1.43	----	----	----	----	1.43
20.70	1.23	1329.17	----	----	----	----	1.41	----	----	----	----	1.41
20.80	1.23	1329.17	----	----	----	----	1.40	----	----	----	----	1.40
20.90	1.22	1329.17	----	----	----	----	1.38	----	----	----	----	1.38
21.00	1.22	1329.16	----	----	----	----	1.37	----	----	----	----	1.37
21.10	1.21	1329.16	----	----	----	----	1.35	----	----	----	----	1.35
21.20	1.21	1329.16	----	----	----	----	1.34	----	----	----	----	1.34
21.30	1.21	1329.16	----	----	----	----	1.33	----	----	----	----	1.33
21.40	1.20	1329.16	----	----	----	----	1.32	----	----	----	----	1.32
21.50	1.20	1329.16	----	----	----	----	1.31	----	----	----	----	1.31
21.60	1.19	1329.16	----	----	----	----	1.30	----	----	----	----	1.30
21.70	1.19	1329.16	----	----	----	----	1.29	----	----	----	----	1.29
21.80	1.18	1329.16	----	----	----	----	1.28	----	----	----	----	1.28
21.90	1.18	1329.16	----	----	----	----	1.27	----	----	----	----	1.27
22.00	1.17	1329.15	----	----	----	----	1.26	----	----	----	----	1.26
22.10	1.17	1329.15	----	----	----	----	1.25	----	----	----	----	1.25
22.20	1.16	1329.15	----	----	----	----	1.24	----	----	----	----	1.24
22.30	1.16	1329.15	----	----	----	----	1.24	----	----	----	----	1.24
22.40	1.15	1329.15	----	----	----	----	1.23	----	----	----	----	1.23
22.50	1.15	1329.15	----	----	----	----	1.22	----	----	----	----	1.22
22.60	1.15	1329.15	----	----	----	----	1.22	----	----	----	----	1.22
22.70	1.14	1329.15	----	----	----	----	1.21	----	----	----	----	1.21
22.80	1.14	1329.15	----	----	----	----	1.20	----	----	----	----	1.20
22.90	1.13	1329.15	----	----	----	----	1.20	----	----	----	----	1.20

Continues on next page...

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
23.00	1.13	1329.15	----	----	----	----	1.19	----	----	----	----	1.19
23.10	1.12	1329.15	----	----	----	----	1.18	----	----	----	----	1.18
23.20	1.12	1329.15	----	----	----	----	1.18	----	----	----	----	1.18
23.30	1.11	1329.15	----	----	----	----	1.17	----	----	----	----	1.17
23.40	1.11	1329.15	----	----	----	----	1.17	----	----	----	----	1.17
23.50	1.10	1329.15	----	----	----	----	1.16	----	----	----	----	1.16
23.60	1.10	1329.15	----	----	----	----	1.16	----	----	----	----	1.16
23.70	1.09	1329.15	----	----	----	----	1.15	----	----	----	----	1.15
23.80	1.09	1329.14	----	----	----	----	1.14	----	----	----	----	1.15
23.90	1.08	1329.14	----	----	----	----	1.14	----	----	----	----	1.14
24.00	1.08	1329.14	----	----	----	----	1.13	----	----	----	----	1.13
24.10	0.96	1329.14	----	----	----	----	1.13	----	----	----	----	1.12
24.20	0.72	1329.14	----	----	----	----	1.10	----	----	----	----	1.10
24.30	0.44	1329.14	----	----	----	----	1.05	----	----	----	----	1.05
24.40	0.25	1329.13	----	----	----	----	0.99	----	----	----	----	0.99
24.50	0.12	1329.13	----	----	----	----	0.92	----	----	----	----	0.91
24.60	0.04	1329.12	----	----	----	----	0.84	----	----	----	----	0.84
24.70	0.00	1329.11	----	----	----	----	0.77	----	----	----	----	0.77
24.80	0.00	1329.11	----	----	----	----	0.70	----	----	----	----	0.70
24.90	0.00	1329.10	----	----	----	----	0.63	----	----	----	----	0.63
25.00	0.00	1329.10	----	----	----	----	0.60	----	----	----	----	0.60
25.10	0.00	1329.09	----	----	----	----	0.57	----	----	----	----	0.57
25.20	0.00	1329.09	----	----	----	----	0.54	----	----	----	----	0.54
25.30	0.00	1329.08	----	----	----	----	0.51	----	----	----	----	0.51
25.40	0.00	1329.08	----	----	----	----	0.49	----	----	----	----	0.49
25.50	0.00	1329.07	----	----	----	----	0.46	----	----	----	----	0.46
25.60	0.00	1329.07	----	----	----	----	0.44	----	----	----	----	0.44
25.70	0.00	1329.07	----	----	----	----	0.42	----	----	----	----	0.42
25.80	0.00	1329.06	----	----	----	----	0.40	----	----	----	----	0.40

...End

Reservoir Report

Reservoir No. 2 - Proposed Pond Data

Hydraflow Hydrographs by Intelisolve

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (acft)	Total storage (acft)
0.00	1329.00	42,071	0.000	0.000
1.00	1330.00	45,589	1.006	1.006
2.00	1331.00	49,236	1.088	2.095
3.00	1332.00	53,011	1.174	3.268

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise in	= 0.0	0.0	0.0	0.0
Span in	= 0.0	0.0	0.0	0.0
No. Barrels	= 0	0	0	0
Invert El. ft	= 0.00	0.00	0.00	0.00
Length ft	= 0.0	0.0	0.0	0.0
Slope %	= 0.00	0.00	0.00	0.00
N-Value	= .000	.000	.000	.000
Orif. Coeff.	= 0.00	0.00	0.00	0.00
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len ft	= 6.00	0.00	0.00	0.00
Crest El. ft	= 1329.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfiltration Rate = 0.00 in/hr/sqft Tailwater Elev. = 0.00 ft

Note: All outflows have been analyzed under inlet and outlet control.

Stage / Storage / Discharge Table

Stage ft	Storage acft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Total cfs
0.00	0.000	1329.00	---	---	---	---	0.00	---	---	---	---	0.00
0.10	0.101	1329.10	---	---	---	---	0.63	---	---	---	---	0.63
0.20	0.201	1329.20	---	---	---	---	1.79	---	---	---	---	1.79
0.30	0.302	1329.30	---	---	---	---	3.28	---	---	---	---	3.28
0.40	0.402	1329.40	---	---	---	---	5.05	---	---	---	---	5.05
0.50	0.503	1329.50	---	---	---	---	7.06	---	---	---	---	7.06
0.60	0.604	1329.60	---	---	---	---	9.28	---	---	---	---	9.28
0.70	0.704	1329.70	---	---	---	---	11.70	---	---	---	---	11.70
0.80	0.805	1329.80	---	---	---	---	14.29	---	---	---	---	14.29
0.90	0.906	1329.90	---	---	---	---	17.05	---	---	---	---	17.05
1.00	1.006	1330.00	---	---	---	---	19.98	---	---	---	---	19.98
1.10	1.115	1330.10	---	---	---	---	23.05	---	---	---	---	23.05
1.20	1.224	1330.20	---	---	---	---	26.26	---	---	---	---	26.26
1.30	1.333	1330.30	---	---	---	---	29.61	---	---	---	---	29.61
1.40	1.442	1330.40	---	---	---	---	33.09	---	---	---	---	33.09
1.50	1.550	1330.50	---	---	---	---	36.70	---	---	---	---	36.70
1.60	1.659	1330.60	---	---	---	---	40.43	---	---	---	---	40.43
1.70	1.768	1330.70	---	---	---	---	44.28	---	---	---	---	44.28
1.80	1.877	1330.80	---	---	---	---	48.24	---	---	---	---	48.24
1.90	1.986	1330.90	---	---	---	---	52.32	---	---	---	---	52.32
2.00	2.095	1331.00	---	---	---	---	56.51	---	---	---	---	56.51
2.10	2.212	1331.10	---	---	---	---	60.80	---	---	---	---	60.80
2.20	2.329	1331.20	---	---	---	---	65.20	---	---	---	---	65.20
2.30	2.447	1331.30	---	---	---	---	69.69	---	---	---	---	69.69
2.40	2.564	1331.40	---	---	---	---	74.28	---	---	---	---	74.28
2.50	2.681	1331.50	---	---	---	---	78.97	---	---	---	---	78.97
2.60	2.799	1331.60	---	---	---	---	83.76	---	---	---	---	83.76
2.70	2.916	1331.70	---	---	---	---	88.63	---	---	---	---	88.63
2.80	3.034	1331.80	---	---	---	---	93.60	---	---	---	---	93.60
2.90	3.151	1331.90	---	---	---	---	98.66	---	---	---	---	98.66
3.00	3.268	1332.00	---	---	---	---	103.82	---	---	---	---	103.82

Hydrograph Report

Hydraflow Hydrographs by Intelisolve

Hyd. No. 17

Pond

Hydrograph type = Reservoir
 Storm frequency = 100 yrs
 Inflow hyd. No. = 16
 Max. Elevation = 1331.30 ft

Peak discharge = 69.75 cfs
 Time interval = 6 min
 Reservoir name = Proposed
 Max. Storage = 2.448 acft

Storage Indication method used.

Outflow hydrograph volume = 9.831 acft

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
7.90	1.27	1329.11	----	----	----	----	0.71	----	----	----	----	0.72
8.00	1.31	1329.11	----	----	----	----	0.77	----	----	----	----	0.77
8.10	1.35	1329.12	----	----	----	----	0.82	----	----	----	----	0.82
8.20	1.41	1329.12	----	----	----	----	0.87	----	----	----	----	0.87
8.30	1.47	1329.13	----	----	----	----	0.92	----	----	----	----	0.92
8.40	1.55	1329.13	----	----	----	----	0.97	----	----	----	----	0.97
8.50	1.64	1329.14	----	----	----	----	1.03	----	----	----	----	1.03
8.60	1.74	1329.14	----	----	----	----	1.09	----	----	----	----	1.09
8.70	1.84	1329.15	----	----	----	----	1.15	----	----	----	----	1.15
8.80	1.95	1329.15	----	----	----	----	1.22	----	----	----	----	1.22
8.90	2.06	1329.16	----	----	----	----	1.29	----	----	----	----	1.29
9.00	2.18	1329.16	----	----	----	----	1.37	----	----	----	----	1.37
9.10	2.29	1329.17	----	----	----	----	1.45	----	----	----	----	1.45
9.20	2.39	1329.18	----	----	----	----	1.53	----	----	----	----	1.53
9.30	2.48	1329.19	----	----	----	----	1.61	----	----	----	----	1.61
9.40	2.54	1329.19	----	----	----	----	1.69	----	----	----	----	1.69
9.50	2.60	1329.20	----	----	----	----	1.77	----	----	----	----	1.77
9.60	2.66	1329.21	----	----	----	----	1.86	----	----	----	----	1.87
9.70	2.73	1329.21	----	----	----	----	1.96	----	----	----	----	1.96
9.80	2.84	1329.22	----	----	----	----	2.06	----	----	----	----	2.06
9.90	2.98	1329.23	----	----	----	----	2.15	----	----	----	----	2.16
10.00	3.14	1329.23	----	----	----	----	2.26	----	----	----	----	2.26
10.10	3.33	1329.24	----	----	----	----	2.37	----	----	----	----	2.37
10.20	3.53	1329.25	----	----	----	----	2.49	----	----	----	----	2.49
10.30	3.77	1329.26	----	----	----	----	2.63	----	----	----	----	2.63
10.40	4.03	1329.27	----	----	----	----	2.77	----	----	----	----	2.78
10.50	4.30	1329.28	----	----	----	----	2.94	----	----	----	----	2.94
10.60	4.60	1329.29	----	----	----	----	3.11	----	----	----	----	3.11
10.70	4.94	1329.30	----	----	----	----	3.31	----	----	----	----	3.31
10.80	5.33	1329.32	----	----	----	----	3.56	----	----	----	----	3.56
10.90	5.76	1329.33	----	----	----	----	3.83	----	----	----	----	3.83
11.00	6.24	1329.35	----	----	----	----	4.12	----	----	----	----	4.12
11.10	6.65	1329.37	----	----	----	----	4.43	----	----	----	----	4.44
11.20	7.18	1329.38	----	----	----	----	4.77	----	----	----	----	4.77
11.30	7.98	1329.41	----	----	----	----	5.17	----	----	----	----	5.16
11.40	9.04	1329.43	----	----	----	----	5.68	----	----	----	----	5.67
11.50	10.23	1329.46	----	----	----	----	6.28	----	----	----	----	6.28
11.60	13.12	1329.50	----	----	----	----	7.10	----	----	----	----	7.10

Continues on next page...

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
11.70	20.81	1329.58	----	----	----	----	8.75	----	----	----	----	8.75
11.80	36.43	1329.73	----	----	----	----	12.34	----	----	----	----	12.34
11.90	65.89	1330.01	----	----	----	----	20.29	----	----	----	----	20.29
12.00	97.34	1330.42	----	----	----	----	33.95	----	----	----	----	33.95
12.10	108.31 <<	1330.88	----	----	----	----	51.51	----	----	----	----	51.51
12.20	94.55	1331.19	----	----	----	----	64.90	----	----	----	----	64.90
12.30	70.80	1331.30	----	----	----	----	69.75	----	----	----	----	69.75 <<
12.40	51.37	1331.25	----	----	----	----	67.38	----	----	----	----	67.38
12.50	35.89	1331.10	----	----	----	----	60.97	----	----	----	----	60.98
12.60	22.89	1330.90	----	----	----	----	52.50	----	----	----	----	52.50
12.70	16.17	1330.69	----	----	----	----	43.79	----	----	----	----	43.79
12.80	14.06	1330.50	----	----	----	----	36.59	----	----	----	----	36.59
12.90	12.50	1330.34	----	----	----	----	31.04	----	----	----	----	31.04
13.00	11.32	1330.21	----	----	----	----	26.68	----	----	----	----	26.67
13.10	10.39	1330.11	----	----	----	----	23.22	----	----	----	----	23.22
13.20	9.67	1330.02	----	----	----	----	20.46	----	----	----	----	20.46
13.30	9.08	1329.94	----	----	----	----	18.09	----	----	----	----	18.09
13.40	8.56	1329.87	----	----	----	----	16.15	----	----	----	----	16.15
13.50	8.10	1329.81	----	----	----	----	14.56	----	----	----	----	14.56
13.60	7.67	1329.76	----	----	----	----	13.26	----	----	----	----	13.26
13.70	7.29	1329.72	----	----	----	----	12.15	----	----	----	----	12.15
13.80	6.93	1329.68	----	----	----	----	11.21	----	----	----	----	11.21
13.90	6.61	1329.65	----	----	----	----	10.41	----	----	----	----	10.41
14.00	6.30	1329.62	----	----	----	----	9.70	----	----	----	----	9.70
14.10	6.01	1329.59	----	----	----	----	9.07	----	----	----	----	9.07
14.20	5.76	1329.57	----	----	----	----	8.54	----	----	----	----	8.54
14.30	5.55	1329.55	----	----	----	----	8.06	----	----	----	----	8.06
14.40	5.39	1329.53	----	----	----	----	7.62	----	----	----	----	7.62
14.50	5.25	1329.51	----	----	----	----	7.24	----	----	----	----	7.24
14.60	5.14	1329.49	----	----	----	----	6.91	----	----	----	----	6.91
14.70	5.03	1329.48	----	----	----	----	6.63	----	----	----	----	6.63
14.80	4.93	1329.47	----	----	----	----	6.38	----	----	----	----	6.38
14.90	4.83	1329.46	----	----	----	----	6.15	----	----	----	----	6.15
15.00	4.73	1329.44	----	----	----	----	5.94	----	----	----	----	5.94
15.10	4.63	1329.44	----	----	----	----	5.75	----	----	----	----	5.75
15.20	4.53	1329.43	----	----	----	----	5.57	----	----	----	----	5.57
15.30	4.42	1329.42	----	----	----	----	5.41	----	----	----	----	5.40
15.40	4.32	1329.41	----	----	----	----	5.25	----	----	----	----	5.25
15.50	4.22	1329.40	----	----	----	----	5.10	----	----	----	----	5.10
15.60	4.12	1329.40	----	----	----	----	4.97	----	----	----	----	4.97
15.70	4.01	1329.39	----	----	----	----	4.85	----	----	----	----	4.84
15.80	3.91	1329.38	----	----	----	----	4.73	----	----	----	----	4.73
15.90	3.81	1329.38	----	----	----	----	4.61	----	----	----	----	4.61
16.00	3.71	1329.37	----	----	----	----	4.49	----	----	----	----	4.49
16.10	3.61	1329.36	----	----	----	----	4.38	----	----	----	----	4.38
16.20	3.52	1329.36	----	----	----	----	4.27	----	----	----	----	4.27
16.30	3.45	1329.35	----	----	----	----	4.16	----	----	----	----	4.16
16.40	3.39	1329.34	----	----	----	----	4.06	----	----	----	----	4.06
16.50	3.34	1329.34	----	----	----	----	3.97	----	----	----	----	3.97
16.60	3.30	1329.33	----	----	----	----	3.88	----	----	----	----	3.88
16.70	3.26	1329.33	----	----	----	----	3.80	----	----	----	----	3.80

Continues on next page...

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
16.80	3.22	1329.33	----	----	----	----	3.72	----	----	----	----	3.72
16.90	3.19	1329.32	----	----	----	----	3.65	----	----	----	----	3.65
17.00	3.15	1329.32	----	----	----	----	3.59	----	----	----	----	3.59
17.10	3.12	1329.31	----	----	----	----	3.53	----	----	----	----	3.53
17.20	3.08	1329.31	----	----	----	----	3.47	----	----	----	----	3.47
17.30	3.04	1329.31	----	----	----	----	3.41	----	----	----	----	3.41
17.40	3.01	1329.30	----	----	----	----	3.36	----	----	----	----	3.36
17.50	2.97	1329.30	----	----	----	----	3.31	----	----	----	----	3.31
17.60	2.93	1329.30	----	----	----	----	3.26	----	----	----	----	3.26
17.70	2.90	1329.30	----	----	----	----	3.22	----	----	----	----	3.22
17.80	2.86	1329.29	----	----	----	----	3.18	----	----	----	----	3.18
17.90	2.82	1329.29	----	----	----	----	3.14	----	----	----	----	3.14
18.00	2.79	1329.29	----	----	----	----	3.10	----	----	----	----	3.10
18.10	2.75	1329.29	----	----	----	----	3.06	----	----	----	----	3.07
18.20	2.71	1329.28	----	----	----	----	3.03	----	----	----	----	3.03
18.30	2.68	1329.28	----	----	----	----	2.99	----	----	----	----	2.99
18.40	2.64	1329.28	----	----	----	----	2.95	----	----	----	----	2.95
18.50	2.60	1329.28	----	----	----	----	2.91	----	----	----	----	2.91
18.60	2.56	1329.27	----	----	----	----	2.87	----	----	----	----	2.87
18.70	2.53	1329.27	----	----	----	----	2.84	----	----	----	----	2.84
18.80	2.49	1329.27	----	----	----	----	2.80	----	----	----	----	2.80
18.90	2.45	1329.27	----	----	----	----	2.76	----	----	----	----	2.76
19.00	2.42	1329.26	----	----	----	----	2.72	----	----	----	----	2.72
19.10	2.38	1329.26	----	----	----	----	2.69	----	----	----	----	2.69
19.20	2.34	1329.26	----	----	----	----	2.65	----	----	----	----	2.65
19.30	2.31	1329.26	----	----	----	----	2.61	----	----	----	----	2.61
19.40	2.27	1329.25	----	----	----	----	2.57	----	----	----	----	2.57
19.50	2.23	1329.25	----	----	----	----	2.54	----	----	----	----	2.54
19.60	2.20	1329.25	----	----	----	----	2.50	----	----	----	----	2.50
19.70	2.16	1329.25	----	----	----	----	2.46	----	----	----	----	2.46
19.80	2.12	1329.24	----	----	----	----	2.42	----	----	----	----	2.42
19.90	2.08	1329.24	----	----	----	----	2.39	----	----	----	----	2.39
20.00	2.05	1329.24	----	----	----	----	2.35	----	----	----	----	2.35
20.10	2.01	1329.24	----	----	----	----	2.31	----	----	----	----	2.31
20.20	1.98	1329.23	----	----	----	----	2.28	----	----	----	----	2.28
20.30	1.96	1329.23	----	----	----	----	2.24	----	----	----	----	2.24
20.40	1.94	1329.23	----	----	----	----	2.21	----	----	----	----	2.21
20.50	1.93	1329.23	----	----	----	----	2.17	----	----	----	----	2.18
20.60	1.92	1329.22	----	----	----	----	2.15	----	----	----	----	2.15
20.70	1.91	1329.22	----	----	----	----	2.12	----	----	----	----	2.12
20.80	1.90	1329.22	----	----	----	----	2.09	----	----	----	----	2.10
20.90	1.90	1329.22	----	----	----	----	2.07	----	----	----	----	2.07
21.00	1.89	1329.22	----	----	----	----	2.05	----	----	----	----	2.05
21.10	1.88	1329.22	----	----	----	----	2.03	----	----	----	----	2.03
21.20	1.87	1329.22	----	----	----	----	2.01	----	----	----	----	2.01
21.30	1.87	1329.21	----	----	----	----	2.00	----	----	----	----	2.00
21.40	1.86	1329.21	----	----	----	----	1.98	----	----	----	----	1.98
21.50	1.85	1329.21	----	----	----	----	1.97	----	----	----	----	1.97
21.60	1.85	1329.21	----	----	----	----	1.95	----	----	----	----	1.95
21.70	1.84	1329.21	----	----	----	----	1.94	----	----	----	----	1.94
21.80	1.83	1329.21	----	----	----	----	1.93	----	----	----	----	1.93

Continues on next page...

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
21.90	1.82	1329.21	----	----	----	----	1.92	----	----	----	----	1.92
22.00	1.82	1329.21	----	----	----	----	1.91	----	----	----	----	1.91
22.10	1.81	1329.21	----	----	----	----	1.90	----	----	----	----	1.90
22.20	1.80	1329.21	----	----	----	----	1.88	----	----	----	----	1.88
22.30	1.79	1329.21	----	----	----	----	1.87	----	----	----	----	1.87
22.40	1.79	1329.21	----	----	----	----	1.86	----	----	----	----	1.87
22.50	1.78	1329.21	----	----	----	----	1.86	----	----	----	----	1.86
22.60	1.77	1329.20	----	----	----	----	1.85	----	----	----	----	1.85
22.70	1.77	1329.20	----	----	----	----	1.84	----	----	----	----	1.84
22.80	1.76	1329.20	----	----	----	----	1.83	----	----	----	----	1.83
22.90	1.75	1329.20	----	----	----	----	1.82	----	----	----	----	1.82
23.00	1.74	1329.20	----	----	----	----	1.81	----	----	----	----	1.81
23.10	1.74	1329.20	----	----	----	----	1.80	----	----	----	----	1.80
23.20	1.73	1329.20	----	----	----	----	1.80	----	----	----	----	1.80
23.30	1.72	1329.20	----	----	----	----	1.79	----	----	----	----	1.79
23.40	1.71	1329.20	----	----	----	----	1.78	----	----	----	----	1.78
23.50	1.71	1329.20	----	----	----	----	1.77	----	----	----	----	1.77
23.60	1.70	1329.20	----	----	----	----	1.77	----	----	----	----	1.77
23.70	1.69	1329.20	----	----	----	----	1.76	----	----	----	----	1.76
23.80	1.68	1329.20	----	----	----	----	1.75	----	----	----	----	1.75
23.90	1.68	1329.20	----	----	----	----	1.75	----	----	----	----	1.75
24.00	1.67	1329.20	----	----	----	----	1.74	----	----	----	----	1.74
24.10	1.48	1329.20	----	----	----	----	1.73	----	----	----	----	1.73
24.20	1.11	1329.19	----	----	----	----	1.69	----	----	----	----	1.69
24.30	0.69	1329.19	----	----	----	----	1.62	----	----	----	----	1.62
24.40	0.38	1329.18	----	----	----	----	1.52	----	----	----	----	1.52
24.50	0.19	1329.17	----	----	----	----	1.41	----	----	----	----	1.41
24.60	0.06	1329.16	----	----	----	----	1.29	----	----	----	----	1.29
24.70	0.00	1329.15	----	----	----	----	1.18	----	----	----	----	1.18
24.80	0.00	1329.14	----	----	----	----	1.07	----	----	----	----	1.07
24.90	0.00	1329.13	----	----	----	----	0.97	----	----	----	----	0.97
25.00	0.00	1329.12	----	----	----	----	0.89	----	----	----	----	0.88
25.10	0.00	1329.12	----	----	----	----	0.81	----	----	----	----	0.80
25.20	0.00	1329.11	----	----	----	----	0.73	----	----	----	----	0.73

...End

Reservoir Report

Reservoir No. 2 - Proposed

Hydraflow Hydrographs by Intelisolve

Pond Data

Pond storage is based on known contour areas. Average end area method used.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (acft)	Total storage (acft)
0.00	1329.00	42,071	0.000	0.000
1.00	1330.00	45,589	1.006	1.006
2.00	1331.00	49,236	1.088	2.095
3.00	1332.00	53,011	1.174	3.268

Culvert / Orifice Structures

	[A]	[B]	[C]	[D]
Rise in	= 0.0	0.0	0.0	0.0
Span in	= 0.0	0.0	0.0	0.0
No. Barrels	= 0	0	0	0
Invert El. ft	= 0.00	0.00	0.00	0.00
Length ft	= 0.0	0.0	0.0	0.0
Slope %	= 0.00	0.00	0.00	0.00
N-Value	= .000	.000	.000	.000
Orif. Coeff.	= 0.00	0.00	0.00	0.00
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len ft	= 6.00	0.00	0.00	0.00
Crest El. ft	= 1329.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	0.00	0.00	0.00
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfiltration Rate = 0.00 in/hr/sqft Tailwater Elev. = 0.00 ft

Note: All outflows have been analyzed under inlet and outlet control.

Stage / Storage / Discharge Table

Stage ft	Storage acft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	Clv D cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Total cfs
0.00	0.000	1329.00	---	---	---	---	0.00	---	---	---	---	0.00
0.10	0.101	1329.10	---	---	---	---	0.63	---	---	---	---	0.63
0.20	0.201	1329.20	---	---	---	---	1.79	---	---	---	---	1.79
0.30	0.302	1329.30	---	---	---	---	3.28	---	---	---	---	3.28
0.40	0.402	1329.40	---	---	---	---	5.05	---	---	---	---	5.05
0.50	0.503	1329.50	---	---	---	---	7.06	---	---	---	---	7.06
0.60	0.604	1329.60	---	---	---	---	9.28	---	---	---	---	9.28
0.70	0.704	1329.70	---	---	---	---	11.70	---	---	---	---	11.70
0.80	0.805	1329.80	---	---	---	---	14.29	---	---	---	---	14.29
0.90	0.906	1329.90	---	---	---	---	17.05	---	---	---	---	17.05
1.00	1.006	1330.00	---	---	---	---	19.98	---	---	---	---	19.98
1.10	1.115	1330.10	---	---	---	---	23.05	---	---	---	---	23.05
1.20	1.224	1330.20	---	---	---	---	26.26	---	---	---	---	26.26
1.30	1.333	1330.30	---	---	---	---	29.61	---	---	---	---	29.61
1.40	1.442	1330.40	---	---	---	---	33.09	---	---	---	---	33.09
1.50	1.550	1330.50	---	---	---	---	36.70	---	---	---	---	36.70
1.60	1.659	1330.60	---	---	---	---	40.43	---	---	---	---	40.43
1.70	1.768	1330.70	---	---	---	---	44.28	---	---	---	---	44.28
1.80	1.877	1330.80	---	---	---	---	48.24	---	---	---	---	48.24
1.90	1.986	1330.90	---	---	---	---	52.32	---	---	---	---	52.32
2.00	2.095	1331.00	---	---	---	---	56.51	---	---	---	---	56.51
2.10	2.212	1331.10	---	---	---	---	60.80	---	---	---	---	60.80
2.20	2.329	1331.20	---	---	---	---	65.20	---	---	---	---	65.20
2.30	2.447	1331.30	---	---	---	---	69.69	---	---	---	---	69.69
2.40	2.564	1331.40	---	---	---	---	74.28	---	---	---	---	74.28
2.50	2.681	1331.50	---	---	---	---	78.97	---	---	---	---	78.97
2.60	2.799	1331.60	---	---	---	---	83.76	---	---	---	---	83.76
2.70	2.916	1331.70	---	---	---	---	88.63	---	---	---	---	88.63
2.80	3.034	1331.80	---	---	---	---	93.60	---	---	---	---	93.60
2.90	3.151	1331.90	---	---	---	---	98.66	---	---	---	---	98.66
3.00	3.268	1332.00	---	---	---	---	103.82	---	---	---	---	103.82