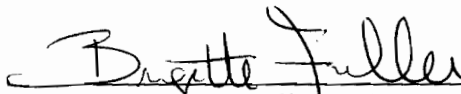


Drainage Calculations
For
Cottonwood Commons
Albuquerque, New Mexico

April, 2006

I, Brigitte M. Fuller, P.E., do hereby certify that this report was prepared by me or under my direction and that I am a duly registered Professional Engineer under the laws of the State of New Mexico.



Brigitte M. Fuller, P.E.
NMPE No. 15102

4/12/06

Date



Cottonwood Commons

X5218083

Orifice Plate Design

4/10/2006

Given

Q ₁₀₀ Required	9.24 cfs
Coef. Of Discharge	0.67
Orifice Diameter	0.9583 ft
Orifice Area	0.72 ft ²
Base Elevation	5023.50 ft
WSEL	5029.50 ft

$$9.24 \text{ cfs} / 7.7 = 1.2 \text{ cfs/ae}$$

Q ₁₀₀ Allowable	9.11
	0.13

Solution

The orifice plate will be required to have a diameter of 11.5".

$$\begin{array}{r} 2.9 \\ 81.2 \\ + 3.6 \\ \hline 7.7 \text{ ae} \end{array}$$

Cottonwood Commons

X5218083

Pond Discharge

4/10/2006

Coef. Of Discharge 0.67
Orifice Diameter 0.9583 ft
Orifice Area 0.72 ft²
Bottom of Pond 5023.50 ft
Top of Pond 5030.50 ft

WSE	Q ₁₀₀ (cfs)
5023.5	0.00
5024.5	2.80
5025.5	4.78
5026.5	6.16
5027.5	7.28
5028.5	8.25
5029.0	8.69
5029.5	9.11

*** Cottonwood Commons - Albuquerque, New Mexico***
*** PROPOSED CONDITIONS RUNOFF MODEL ***

*** DESIGN STORM IS THE 100 YEAR - 24 HOUR STORM

START TIME = 0
LOCATION ALBUQUERQUE

*** COMPUTING RAINFALL ***

RAINFALL TYPE = 2
RAIN QUARTER = 0.0 INCHES
RAIN ONE HOUR = 1.87
RAIN SIX HOUR = 2.20
RAIN DAY= 2.66
DT = 0.05 HOURS

*** COMPUTING TP FOR BASIN 101.1 ***

COMPUTE LT TP LCODE=1 NK=2 ISLOPE=0
LENGTH=215 FT SLOPE=0.007 K=2
LENGTH=215 FT SLOPE=0.02 K=2

COMPUTE NM HYD ID=1 HYD NO=101.1 DA=0.0045 SQ MI
PERCENT A=0 B=15 C=0 D=85
TP=0.0 HOURS MASSRAIN=-1

PRINT HYD ID=1 CODE=10

*** COMPUTING TP FOR BASIN 101.2 ***

COMPUTE LT TP LCODE=1 NK=2 ISLOPE=0
LENGTH=100 FT SLOPE=0.01 K=2
LENGTH=70 FT SLOPE=0.015 K=2

COMPUTE NM HYD ID=3 HYD NO=101.2 DA=0.0019 SQ MI
PERCENT A=0 B=15 C=0 D=85
TP=0.0 HOURS MASSRAIN=-1

PRINT HYD ID=3 CODE=10

*** ADDING HYDROGRAPHS FOR BASIN 101.1 AND BASIN 101.2 ***

ADD HYD ID=4 HYD NO=101.3 ID=1 ID=3

PRINT HYD ID=4 CODE=10

*** COMPUTING TP FOR BASIN 201.1 ***

COMPUTE LT TP LCODE=1 NK=1 ISLOPE=0
LENGTH=140 FT SLOPE=0.06 K=2
LENGTH=130 FT SLOPE=0.07 K=2
LENGTH=60 FT SLOPE=0.03 K=2

COMPUTE NM HYD ID=5 HYD NO=201.1 DA=0.0056 SQ MI
PERCENT A=0 B=15 C=0 D=85
TP=0.0 HOURS MASSRAIN=-1

PRINT HYD ID=5 CODE=10

*** ADDING HYDROGRAPHS FOR BASIN 101.3 AND BASIN 201.1 ***

ADD HYD ID=6 HYD NO=201.2 ID=4 ID=5

PRINT HYD ID=6 CODE=10

*** POND 2 ROUTING ***

ROUTE RESERVOIR	ID=7	HYD NO=2	INFLOW ID=6	CODE=24
OUTFLOW	STORAGE	ELEV		
(CFS)	(AC-FT)	(FT)		
0.00	0.000	5023.50		
2.80	0.057	5024.50		
4.78	0.115	5025.50		
6.16	0.172	5026.50		
7.28	0.230	5027.50		
8.25	0.287	5028.50		
8.69	0.387	5029.00		
9.11	0.682	5029.50		

PRINT HYD ID=7 CODE=10

*S
FINISH

AHYMO PROGRAM (AHYMO_97) - Version: 1997.02c
 RUN DATE (MON/DAY/YR) = 04/10/2006
 START TIME (HR:MIN:SEC) = 14:07:18
 USER NO. = AHYMO-C-9803c01UNMLIB-AH
 INPUT FILE = T:\Projects\X5218083\Eng\AHYMO\p100-24.DAT

*** Cottonwood Commons - Albuquerque, New Mexico ***
 *** PROPOSED CONDITIONS RUNOFF MODEL ***

 *S** DESIGN STORM IS THE 100 YEAR - 24 HOUR STORM

START TIME = 0
 LOCATION ALBUQUERQUE

City of Albuquerque soil infiltration values (LAND FACTORS) used for computations.

Land Treatment	Initial Abstr.(in)	Unif. Infilt.(in/hour)
A	0.65	1.67
B	0.50	1.25
C	0.35	0.83
D	0.10	0.04

 *** COMPUTING RAINFALL ***

RAINFALL TYPE = 2
 RAIN QUARTER = 0.0 INCHES
 RAIN ONE HOUR = 1.87
 RAIN SIX HOUR = 2.20
 RAIN DAY = 2.66
 DT = 0.05 HOURS

COMPUTED 24-HOUR RAINFALL DISTRIBUTION BASED ON NOAA ATLAS 2 -
 PEAK AT 1.40 HR.
 DT = .050000 HOURS
 END TIME = 24.000000 HOURS

.0000	.0025	.0050	.0076	.0103	.0131	.0160
.0190	.0222	.0254	.0289	.0324	.0362	.0401
.0443	.0487	.0534	.0584	.0637	.0695	.0758
.0837	.0924	.1176	.1773	.2798	.4384	.6668
.9790	1.2253	1.3366	1.4295	1.5109	1.5836	1.6495
1.7096	1.7648	1.8156	1.8624	1.9057	1.9458	1.9548
1.9631	1.9708	1.9780	1.9848	1.9912	1.9973	2.0031
2.0087	2.0140	2.0191	2.0240	2.0287	2.0333	2.0377
2.0420	2.0462	2.0502	2.0542	2.0580	2.0617	2.0653
2.0689	2.0724	2.0757	2.0791	2.0823	2.0855	2.0886
2.0916	2.0946	2.0976	2.1005	2.1033	2.1061	2.1088
2.1115	2.1142	2.1168	2.1193	2.1219	2.1244	2.1268
2.1293	2.1316	2.1340	2.1363	2.1386	2.1409	2.1431
2.1453	2.1475	2.1497	2.1518	2.1539	2.1560	2.1580
2.1601	2.1621	2.1641	2.1660	2.1680	2.1699	2.1718
2.1737	2.1756	2.1774	2.1793	2.1811	2.1829	2.1847
2.1864	2.1882	2.1899	2.1916	2.1933	2.1950	2.1967
2.1984	2.2000	2.2020	2.2039	2.2059	2.2078	2.2097
2.2117	2.2136	2.2155	2.2174	2.2193	2.2212	2.2231
2.2249	2.2268	2.2287	2.2305	2.2324	2.2342	2.2361
2.2379	2.2398	2.2416	2.2434	2.2452	2.2470	2.2488
2.2506	2.2524	2.2542	2.2559	2.2577	2.2595	2.2612
2.2630	2.2647	2.2665	2.2682	2.2700	2.2717	2.2734
2.2751	2.2768	2.2785	2.2802	2.2819	2.2836	2.2853
2.2870	2.2887	2.2903	2.2920	2.2937	2.2953	2.2970
2.2986	2.3002	2.3019	2.3035	2.3051	2.3068	2.3084
2.3100	2.3116	2.3132	2.3148	2.3164	2.3180	2.3196
2.3212	2.3227	2.3243	2.3259	2.3274	2.3290	2.3305
2.3321	2.3336	2.3352	2.3367	2.3383	2.3398	2.3413
2.3428	2.3444	2.3459	2.3474	2.3489	2.3504	2.3519
2.3534	2.3549	2.3563	2.3578	2.3593	2.3608	2.3622
2.3637	2.3652	2.3666	2.3681	2.3695	2.3710	2.3724
2.3739	2.3753	2.3767	2.3782	2.3796	2.3810	2.3824
2.3839	2.3853	2.3867	2.3881	2.3895	2.3909	2.3923
2.3937	2.3951	2.3965	2.3978	2.3992	2.4006	2.4020
2.4033	2.4047	2.4061	2.4074	2.4088	2.4101	2.4115
2.4128	2.4142	2.4155	2.4168	2.4182	2.4195	2.4208
2.4222	2.4235	2.4248	2.4261	2.4274	2.4287	2.4300
2.4314	2.4327	2.4340	2.4352	2.4365	2.4378	2.4391
2.4404	2.4417	2.4430	2.4442	2.4455	2.4468	2.4480
2.4493	2.4506	2.4518	2.4531	2.4543	2.4556	2.4568
2.4581	2.4593	2.4606	2.4618	2.4630	2.4643	2.4655
2.4667	2.4680	2.4692	2.4704	2.4716	2.4728	2.4740
2.4753	2.4765	2.4777	2.4789	2.4801	2.4813	2.4825
2.4837	2.4849	2.4860	2.4872	2.4884	2.4896	2.4908
2.4919	2.4931	2.4943	2.4955	2.4966	2.4978	2.4990

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2.5001	2.5013	2.5024	2.5036	2.5047	2.5059	2.5070
2.5082	2.5093	2.5105	2.5116	2.5127	2.5139	2.5150
2.5161	2.5172	2.5184	2.5195	2.5206	2.5217	2.5229
2.5240	2.5251	2.5262	2.5273	2.5284	2.5295	2.5306
2.5317	2.5328	2.5339	2.5350	2.5361	2.5372	2.5383
2.5394	2.5404	2.5415	2.5426	2.5437	2.5448	2.5458
2.5469	2.5480	2.5490	2.5501	2.5512	2.5522	2.5533
2.5544	2.5554	2.5565	2.5575	2.5586	2.5596	2.5607
2.5617	2.5628	2.5638	2.5649	2.5659	2.5669	2.5680
2.5690	2.5700	2.5711	2.5721	2.5731	2.5741	2.5752
2.5762	2.5772	2.5782	2.5792	2.5803	2.5813	2.5823
2.5833	2.5843	2.5853	2.5863	2.5873	2.5883	2.5893
2.5903	2.5913	2.5923	2.5933	2.5943	2.5953	2.5963
2.5973	2.5982	2.5992	2.6002	2.6012	2.6022	2.6031
2.6041	2.6051	2.6061	2.6070	2.6080	2.6090	2.6099
2.6109	2.6119	2.6128	2.6138	2.6148	2.6157	2.6167
2.6176	2.6186	2.6195	2.6205	2.6214	2.6224	2.6233
2.6243	2.6252	2.6261	2.6271	2.6280	2.6290	2.6299
2.6308	2.6318	2.6327	2.6336	2.6346	2.6355	2.6364
2.6373	2.6383	2.6392	2.6401	2.6410	2.6419	2.6428
2.6438	2.6447	2.6456	2.6465	2.6474	2.6483	2.6492
2.6501	2.6510	2.6519	2.6528	2.6537	2.6546	2.6555
2.6564	2.6573	2.6582	2.6591	2.6600		

 *** COMPUTING TP FOR BASIN 101.1 ***

COMPUTE LT TP LCODE=1 NK=2 ISLOPE=0
 LENGTH=215 FT SLOPE=0.007 K=2
 LENGTH=215 FT SLOPE=0.02 K=2

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	.0	.000000	.0000
SHALLOW FLOW PORTION	430.0	.013500	1.8097
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	430.0	.013500	1.8097

TIME OF CONCENTRATION (HRS)= .0568
 TIME TO PEAK (HRS)= .0379
 LAG TIME (HRS)= .0426

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.

REVISED VALUES: TIME OF CONCENTRATION (HRS)= .2000
 TIME TO PEAK (HRS)= .1333
 LAG TIME (HRS)= .1500

COMPUTE NM HYD ID=1 HYD NO=101.1 DA=0.0045 SQ MI
 PERCENT A=0 B=15 C=0 D=85
 TP=0.0 HOURS MASSRAIN=-1

TIME TO PEAK (hrs)= .1333

K = .072666HR TP = .133333HR K/TP RATIO = .545000
 N = 7.106420 UNIT PEAK = 15.098 CFS UNIT VOLUME = .9985
 B = 526.28 P60 = 1.8700 AREA = .003825 SQ MI
 IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION No. METHOD - DT = .0500

K = .131024HR TP = .133333HR K/TP RATIO = .982685
 N = 3.593454 UNIT PEAK = 1.6559 CFS UNIT VOLUME = .9935
 B = 327.09 P60 = 1.8700 AREA = .000675 SQ MI
 IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION No. METHOD - DT = .0500

PRINT HYD ID=1 CODE=10

PARTIAL HYDROGRAPH 101.10

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.0
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.0
1.000	.0	6.000	.1	11.000	.1	16.000	.1	21.000	.0
1.500	11.4	6.500	.1	11.500	.1	16.500	.1	21.500	.0
2.000	2.7	7.000	.1	12.000	.1	17.000	.1	22.000	.0
2.500	.4	7.500	.1	12.500	.1	17.500	.1	22.500	.0
3.000	.1	8.000	.1	13.000	.1	18.000	.1	23.000	.0
3.500	.1	8.500	.1	13.500	.1	18.500	.1	23.500	.0
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.0
4.500	.1	9.500	.1	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 2.16311 INCHES = 0.5191 ACRE-FEET
 PEAK DISCHARGE RATE = 11.40 CFS AT 1.500 HOURS
 BASIN AREA = 0.0045 SQ. MI.

 *** COMPUTING TP FOR BASIN 101.2 ***

COMPUTE LT TP LCODE=1 NK=2 ISLOPE=0
 LENGTH=100 FT SLOPE=0.01 K=2
 LENGTH=70 FT SLOPE=0.015 K=2

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	.0	.000000	.0000
SHALLOW FLOW PORTION	170.0	.012059	1.9701
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	170.0	.012059	1.9701

TIME OF CONCENTRATION (HRS)= .0218
 TIME TO PEAK (HRS)= .0146
 LAG TIME (HRS)= .0164

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
 REVISED VALUES: TIME OF CONCENTRATION (HRS)= .2000
 TIME TO PEAK (HRS)= .1333
 LAG TIME (HRS)= .1500

COMPUTE NM HYD ID=3 HYD NO=101.2 DA=0.0019 SQ MI
 PERCENT A=0 B=15 C=0 D=85
 TP=0.0 HOURS MASSRAIN=-1

TIME TO PEAK (hrs)= .1333

K = .072666HR TP = .133333HR K/TP RATIO = .545000
 N = 7.106420 UNIT PEAK = 6.3745 CFS UNIT VOLUME = .9975
 B = 526.28 P60 = 1.8700 AREA = .001615 SQ MI
 IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION No. METHOD - DT = .0500

K = .131024HR TP = .133333HR K/TP RATIO = .982685
 N = 3.593454 UNIT PEAK = .69915 CFS UNIT VOLUME = .9825
 B = 327.09 P60 = 1.8700 AREA = .000285 SQ MI
 IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION NUMBER METHOD - DT = .0500

PRINT HYD ID=3 CODE=10

PARTIAL HYDROGRAPH 101.20

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.0	10.000	.0	15.000	.0	20.000	.0
.500	.0	5.500	.0	10.500	.0	15.500	.0	20.500	.0
1.000	.0	6.000	.0	11.000	.0	16.000	.0	21.000	.0
1.500	4.8	6.500	.0	11.500	.0	16.500	.0	21.500	.0
2.000	1.1	7.000	.0	12.000	.0	17.000	.0	22.000	.0
2.500	.2	7.500	.0	12.500	.0	17.500	.0	22.500	.0
3.000	.0	8.000	.0	13.000	.0	18.000	.0	23.000	.0
3.500	.0	8.500	.0	13.500	.0	18.500	.0	23.500	.0
4.000	.0	9.000	.0	14.000	.0	19.000	.0	24.000	.0
4.500	.0	9.500	.0	14.500	.0	19.500	.0		

RUNOFF VOLUME = 2.16311 INCHES = 0.2192 ACRE-FEET
 PEAK DISCHARGE RATE = 4.82 CFS AT 1.500 HOURS
 BASIN AREA = 0.0019 SQ. MI.

 *** ADDING HYDROGRAPHS FOR BASIN 101.1 AND BASIN 101.2 ***

ADD HYD ID=4 HYD NO=101.3 ID=1 ID=3

PRINT HYD ID=4 CODE=10

PARTIAL HYDROGRAPH 101.30

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.1
1.000	.0	6.000	.1	11.000	.1	16.000	.1	21.000	.1
1.500	16.2	6.500	.1	11.500	.1	16.500	.1	21.500	.1
2.000	3.8	7.000	.1	12.000	.1	17.000	.1	22.000	.1
2.500	.5	7.500	.1	12.500	.1	17.500	.1	22.500	.1

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3.000	.2	8.000	.1	13.000	.1	18.000	.1	23.000	.1
3.500	.1	8.500	.1	13.500	.1	18.500	.1	23.500	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1
4.500	.1	9.500	.1	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 2.16301 INCHES = 0.7383 ACRE-FEET
 PEAK DISCHARGE RATE = 16.22 CFS AT 1.500 HOURS
 BASIN AREA = 0.0064 SQ. MI.

 *** COMPUTING TP FOR BASIN 201.1 ***

COMPUTE LT TP LCODE=1 NK=1 ISLOPE=0
 LENGTH=140 FT SLOPE=0.06 K=2
 LENGTH=130 FT SLOPE=0.07 K=2
 LENGTH=60 FT SLOPE=0.03 K=2

K FACTORS FOR ALL STEEP SLOPE SEGMENTS (>0.04 FT/FT) ADJUSTED TO K= 1.5007

Tc AND Tp COMPUTED BY UPLAND/LAG TIME PROCEDURE

SCS UPLAND METHOD FACTORS

	LENGTH (FT)	ADJUSTED SLOPE (FT/FT)	COMPOSITE K
SHEET FLOW PORTION	.0	.000000	.0000
SHALLOW FLOW PORTION	140.0	.051973	1.5007
CHANNEL FLOW PORTION	.0	.000000	.0000
TOTAL BASIN	140.0	.051973	1.5007

TIME OF CONCENTRATION (HRS)= .0114
 TIME TO PEAK (HRS)= .0076
 LAG TIME (HRS)= .0085

TIME TO PEAK COMPUTED TO BE LESS THAN 0.133333 HOUR MINIMUM VALUE.
 REVISED VALUES: TIME OF CONCENTRATION (HRS)= .2000
 TIME TO PEAK (HRS)= .1333
 LAG TIME (HRS)= .1500

COMPUTE NM HYD ID=5 HYD NO=201.1 DA=0.0056 SQ MI
 PERCENT A=0 B=15 C=0 D=85
 TP=0.0 HOURS MASSRAIN=-1

TIME TO PEAK (hrs)= .1333

K = .072666HR TP = .133333HR K/TP RATIO = .545000
 N = 7.106420 UNIT PEAK = 18.788 CFS UNIT VOLUME = .9986
 B = 526.28 P60 = 1.8700 AREA = .004760 SQ MI
 IA = .10000 INCHES INF = .04000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION No. METHOD - DT = .0500

K = .131024HR TP = .133333HR K/TP RATIO = .982685
 N = 3.593454 UNIT PEAK = 2.0607 CFS UNIT VOLUME = .9944
 B = 327.09 P60 = 1.8700 AREA = .000840 SQ MI
 IA = .50000 INCHES INF = 1.25000 INCHES PER HOUR
 RUNOFF COMPUTED BY INITIAL ABSTRACTION/INFILTRATION No. METHOD - DT = .0500

PRINT HYD ID=5 CODE=10

PARTIAL HYDROGRAPH 201.10

TIME HRS	FLOW CFS	TIME HR	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.1	10.000	.1	15.000	.1	20.000	.1
.500	.0	5.500	.1	10.500	.1	15.500	.1	20.500	.1
1.000	.0	6.000	.1	11.000	.1	16.000	.1	21.000	.1
1.500	14.2	6.500	.1	11.500	.1	16.500	.1	21.500	.1
2.000	3.4	7.000	.1	12.000	.1	17.000	.1	22.000	.1
2.500	.4	7.500	.1	12.500	.1	17.500	.1	22.500	.1
3.000	.2	8.000	.1	13.000	.1	18.000	.1	23.000	.1
3.500	.1	8.500	.1	13.500	.1	18.500	.1	23.500	.1
4.000	.1	9.000	.1	14.000	.1	19.000	.1	24.000	.1
4.500	.1	9.500	.1	14.500	.1	19.500	.1	24.500	.0

RUNOFF VOLUME = 2.16311 INCHES = 0.6460 ACRE-FEET
 PEAK DISCHARGE RATE = 14.18 CFS AT 1.500 HOURS
 BASIN AREA = 0.0056 SQ. MI.

 *** ADDING HYDROGRAPHS FOR BASIN 101.3 AND BASIN 201.1 ***

ADD HYD ID=6 HYD NO=201.2 ID=4 ID=5

PRINT HYD ID=6 CODE=10

PARTIAL HYDROGRAPH 201.20

P100-24out.txt

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.000	.2	10.000	.2	15.000	.2	20.000	.1
.500	.0	5.500	.2	10.500	.2	15.500	.2	20.500	.1
1.000	.0	6.000	.2	11.000	.2	16.000	.2	21.000	.1
1.500	30.4	6.500	.2	11.500	.2	16.500	.2	21.500	.1
2.000	7.2	7.000	.2	12.000	.2	17.000	.1	22.000	.1
2.500	1.0	7.500	.2	12.500	.2	17.500	.1	22.500	.1
3.000	.3	8.000	.2	13.000	.2	18.000	.1	23.000	.1
3.500	.2	8.500	.2	13.500	.2	18.500	.1	23.500	.1
4.000	.2	9.000	.2	14.000	.2	19.000	.1	24.000	.1
4.500	.2	9.500	.2	14.500	.2	19.500	.1	24.500	.0

RUNOFF VOLUME = 2.16303 INCHES = 1.3843 ACRE-Feet
 PEAK DISCHARGE RATE = 30.41 CFS AT 1.500 HOURS
 BASIN AREA = 0.0120 SQ. MI.

 *** POND 2 ROUTING ***

ROUTE RESERVOIR	ID=7	HYD NO=2 OUTFLOW (CFS)	INFLOW ID=6 STORAGE (AC-FT)	CODE=24 ELEV (FT)
		0.00	0.000	5023.50
		2.80	0.057	5024.50
		4.78	0.115	5025.50
		6.16	0.172	5026.50
		7.28	0.230	5027.50
		8.25	0.287	5028.50
		8.69	0.387	5029.00
		9.11	0.682	5029.50

* * * * *

TIME (HRS)	INFLOW (CFS)	ELEV (FEET)	VOLUME (AC-FT)	OUTFLOW (CFS)
.00	.00	5023.50	.000	.00
1.20	.78	5023.53	.002	.08
2.40	1.26	5028.68	.323	8.41
3.60	.19	5023.67	.010	.47
4.80	.17	5023.56	.003	.17
6.00	.22	5023.57	.004	.20
7.20	.24	5023.59	.005	.24
8.40	.22	5023.58	.005	.23
9.60	.21	5023.58	.004	.21
10.80	.20	5023.57	.004	.20
12.00	.18	5023.57	.004	.19
13.20	.17	5023.56	.004	.18
14.40	.16	5023.56	.003	.17
15.60	.15	5023.56	.003	.16
16.80	.15	5023.55	.003	.15
18.00	.14	5023.55	.003	.14
19.20	.14	5023.55	.003	.14
20.40	.13	5023.55	.003	.13
21.60	.13	5023.55	.003	.13
22.80	.12	5023.54	.003	.12
24.00	.12	5023.54	.002	.12
25.20	.00	5023.50	.000	.00

PEAK DISCHARGE = 8.862 CFS - PEAK OCCURS AT HOUR 1.90
 MAXIMUM WATER SURFACE ELEVATION = 5029.205
 MAXIMUM STORAGE = 0.5079 AC-FT
 INCREMENTAL TIME= 0.050000 HRS

PRINT HYD ID=7 CODE=10

OUTFLOW HYDROGRAPH REACH 2.00

TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS	TIME HRS	FLOW CFS
.000	.0	5.500	.2	11.000	.2	16.500	.2	22.000	.1
.500	.0	6.000	.2	11.500	.2	17.000	.1	22.500	.1
1.000	.0	6.500	.2	12.000	.2	17.500	.1	23.000	.1
1.500	7.9	7.000	.2	12.500	.2	18.000	.1	23.500	.1
2.000	8.9	7.500	.2	13.000	.2	18.500	.1	24.000	.1
2.500	7.9	8.000	.2	13.500	.2	19.000	.1	24.500	.0

P100-24out.txt									
3.000	3.0	8.500	.2	14.000	.2	19.500	.1	25.000	.0
3.500	.6	9.000	.2	14.500	.2	20.000	.1		
4.000	.2	9.500	.2	15.000	.2	20.500	.1		
4.500	.2	10.000	.2	15.500	.2	21.000	.1		
5.000	.2	10.500	.2	16.000	.2	21.500	.1		

RUNOFF VOLUME =	2.16303 INCHES = 1.3843 ACRE-FEET
PEAK DISCHARGE RATE =	8.86 CFS AT 1.900 HOURS
BASIN AREA =	0.0120 SQ. MI.

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FINISH

NORMAL PROGRAM FINISH	END TIME (HR:MIN:SEC) = 14:07:19
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