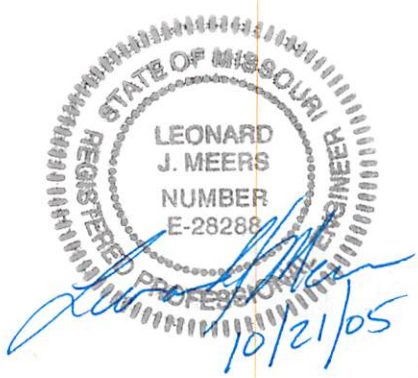
PERSIMMON POINTE P.U.D.
O'FALLON, MISSOURI

REGIONAL DETENTION ANALYSIS - 1

Prepared for:

R.G.Brinkmann Co.
16650 Chesterfield Grove Rd.
Chesterfield, MO 63005

Prepared by: L. Meers
Checked by: J. Grimes
Job No. 675B
Date: 04-09-02
Revised: August 9, 2002



MEETS CITY REQUIREMENTS 10/25/04

1 of 2

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NOT PER. REVIEW CONDITIONS

INDEX

INDEX (con't.)

INDEX (con't.)

INDEX (con't.)

INTRODUCTION

The Persimmon Pointe P.U.D. is an approximately 80 acre development located in the northwest quadrant of the intersection of Missouri State Highway "K' and Interstate 64. The development is located in the City of O'Fallon, Missouri and future uses for the development will include office buildings as well as a 200-unit apartment complex known as Southernside Apartments. The development of this area will include the construction of Persimmon Pointe Boulevard from the intersection of Weldon Springs Rd. and Crusher Rd. to the intersection of O'Fallon Corporate Centre Drive and Tee Kay Drive. Phase I of this development will include the construction of a portion of Persimmon Pointe Blvd., the Southernside Apartment development, and the detention lake on the Kellen-Beck parcel. This report will show that stormwater detention will be provided for this development in accordance with the criteria set forth by the City of O'Fallon, Missouri.

The existing site is mostly open pasture with some woods. A majority of the existing drainage for the site currently flows through two (2) lakes near the center of the site. The discharge from these lakes eventually leaves the site at the northern corner where it goes into a box culvert under Weldon Springs Rd. The existing site drainage near the Rustique Development leaves the site at a discharge point along the western boundary of the Brookhaven Subdivision, which is located northwest of this development. The discharge from the detention basin constructed for the Rustique Development discharges onto this development and is accounted for in this detention analysis. In addition, there is approximately 49 Acres of offsite drainage onto this site from the Busch Wildlife Area located to the southwest across Interstate 64 from this site. We have included all these drainage areas into our model for the existing stormwater runoff for this development. A model was developed using Haestad Pondpack version 7.5 software and the existing 2-year, 15-year and 25-year stormwater runoff conditions were created to use as the allowable discharge values for the future development.

The detention system proposed for the development will consist of one future dry detention basin located along Persimmon Pointe Blvd. near the existing Rustique development. This basin will detain the future developed stormwater runoff that will discharge at the existing drainage outlet along the western boundary of the Brookhaven Subdivision. The ultimate design of this basin will be completed when the actual development plan for the drainage area is determined. For the purposes of this report, the discharge point from this basin is considered **POINT OF INTEREST #1 (P.O.I. #1).**

POINT OF INTEREST #2 (P.O.I. #2) includes an area of the Apartment development that also discharges along the western boundary of the Brookhaven Subdivision, but is allowed to discharge without detention. The reason for allowing the detention bypass for this area is the developed discharge is actually lower than the existing discharge as will be shown within this report.

The remaining area of this development discharges at the northeast corner of the property and is known as **POINT OF INTEREST #3 (P.O.I. #3)** in this report. This area includes the discharge from the two existing lakes and the offsite area from Busch Wildlife Area. The first phase of the development of this area will require the removal (filling in) of one of the existing lakes. In order to provide the detention required by the City of O'Fallon two (2) lakes will be constructed during the first phase of construction. One lake, referred too as South-Lake in the report, will be located within the Southernside Apartment development on the North side of Persimmon Pointe Blvd. The other lake, known as K-B Lake in this report, will be located on the Kellen-Beck property. The existing lake on the 64-K property will used in place during the first phase. The Kellen-Beck lake is sized

and will be constructed to provide the detention volume required upon full development of the Kellen-Beck parcel. This includes a maximum of 80% roof and pavement coverage as allowed by the City of O'Fallon's zoning ordinance.

Using TR-55 software, and Haestad Pondpack version 7.5 software, the developed (pavement, buildings, basins, etc.) 2-year, 15-year, 25-year, and 100 year stormwater runoff conditions were calculated based on the proposed Southernside Apartment layout and an estimated 80% pavement and roof coverage for the remaining area to be developed. A network was setup within the software to model the runoff to each of lake as well as the dry detention basin. The detention routings for the 2-year, 15-year, 25-year, and 100-year design storms were then calculated for the network to show that the total discharge for each P.O.I. will be reduced after development of this property. The following information and calculations show that the system proposed for this development will provide stormwater detention in accordance with the City of O'Fallon, Missouri requirements.

STORMWATER RUNOFF SUMMARY

POINT OF INTEREST #1

2 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	23.08 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	22.06 cfs	(From Network Routing)
Difference =	1.02 cfs	

15 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	39.03 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	28.88 cfs	(From Network Routing)
Difference =	10.15 cfs	

25 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	43.87 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	31.83 cfs	(From Network Routing)
Difference =	12.04 cfs	

100 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	58.58 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	43.53 cfs	(From Network Routing)
Difference =	15.05 cfs	

Maximum Storage Elevation

Dry Basin = 546.99'

POINT OF INTEREST #2

2 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	4.48 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	3.14 cfs	(From Network Routing)
Difference =	1.34 cfs	

15 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	10.62 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	6.06 cfs	(From Network Routing)
Difference =	4.56 cfs	

25 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	12.60 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	6.95 cfs	(From Network Routing)
Difference =	5.65 cfs	

100 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	18.82 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	9.67 cfs	(From Network Routing)
Difference =	9.15 cfs	

STORMWATER RUNOFF SUMMARY

POINT OF INTEREST #3

2 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	22.32 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	21.50 cfs	(From Network Routing)
Difference =	0.82 cfs	

15 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	57.24 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	54.40 cfs	(From Network Routing)
Difference =	2.84 cfs	

25 Year 24 Hour Storm Event

Existing . Discharge Rate @ Outlet	73.09 cfs	(Allowable Discharge)
Dev. Discharge Rate @ Outlet	71.87 cfs	(From Network Routing)
Difference =	1.22 cfs	

100 Year 24 Hour Storm Event

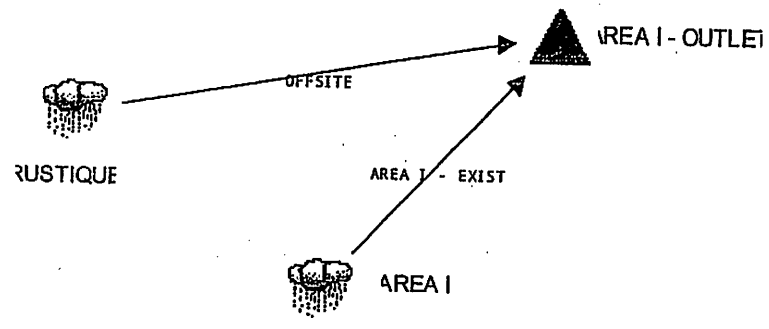
Dev. Discharge Rate @ Outlet	130.98 cfs	(From Network Routing)
(Use 48" RCP @ 1.00% capacity = 143.64cfs)		

Maximum Storage Elevation

South-Lake = 524.91'
K-B Lake = 530.98'
Ex. Lake #2 = 552.60'

P.O.I. #1

Ex.


REA I - OUTLET
OFFSITE
RUSTIQUE
AREA I - EXIST
AREA I

MASTER DESIGN STORM SUMMARY

Default Network Design Storm File, ID PERSIMON.RNQ PERSIMMON

Return Event	Total Depth in	Rainfall Type	RNF File	RNF ID
Pre..2	3.5000	Synthetic Curve	SCSTYPES	TypeII 24hr
Pre.15	5.2000	Synthetic Curve	SCSTYPES	TypeII 24hr
Pre.25	5.7000	Synthetic Curve	SCSTYPES	TypeII 24hr
Prel00	7.2000	Synthetic Curve	SCSTYPES	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

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

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
REA I	AREA	2	.547		12.1000	5.83		
AREA I	AREA	15	1.130		12.1000	12.79		
AREA I	AREA	25	1.317		12.1000	15.00		
AREA I	AREA	100	1.904		12.1000	21.86		
*AREA I - OUTLET	JCT	2	2.209		12.1000	23.08		
*AREA I - OUTLET	JCT	15	3.713		12.1000	39.03		
*AREA I - OUTLET	JCT	25	4.172		12.1000	43.87		
*AREA I - OUTLET	JCT	100	5.575		12.1000	58.58		
RUSTIQUE	AREA	2	1.663		12.1000	17.25		
RUSTIQUE	AREA	15	2.583		12.1000	26.24		
RUSTIQUE	AREA	25	2.855		12.1000	28.87		
RUSTIQUE	AREA	100	3.671		12.1000	36.73		

File.... J:\06758\PONDPACK\AREA1-EXIST.PPW
Title... AREA I - EXISTING Tc

::
TIME OF CONCENTRATION CALCULATOR
::

AREA I - EXISTING Tc

Segment #1: Tc: TR-55 Sheet
Description: SEGMENT A

Mannings n	.2400
Hydraulic Length	300.00 ft
2yr, 24hr P	3.5000 in
Slope	.050000 ft/ft
Avg.Velocity	.22 ft/sec

Segment #1 Time: .3796 hrs

Segment #2: Tc: TR-55 Shallow
Description: SEGMENT B

Hydraulic Length	305.00 ft
Slope	.055700 ft/ft
Unpaved	
Avg.Velocity	3.81 ft/sec

Segment #2 Time: .0222 hrs

==========
Total Tc: .4019 hrs
==========

S/N: 721701406A81 J R GRIMES CONSULTING
PondPack Ver: 7.5 (767) Compute Time: 11:51:40 Date: 08-07-2002

File.... J:\0675B\PONDPACK\AREA1-EXIST.PPW
Title... AREA I - RUNOFF CN

RUNOFF CURVE NUMBER DATA

AREA I - RUNOFF CN

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
PASTURE (SOIL GROUP 'C')	74	4.760			74.00
PASTURE (SOIL GROUP 'B')	69	.800			69.00
COMPOSITE AREA & WEIGHTED CN --->		5.560			73.28 (73)

File.... J:\0675B\PONDPACK\AREA1-EXIST.PPW
Title... RUSTIQUE DEVELOPED CN (FROM CALCS. PROVIDED BY ST. CHARLES COUNTY)

RUNOFF CURVE NUMBER DATA

RUSTIQUE DEVELOPED CN (FROM CALCS. PROVIDED BY ST. CHARLES COUNTY)

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
PAVEMENT/ROOF	98	6.080			98.00
GRASS	74	.470			74.00
COMPOSITE AREA & WEIGHTED CN --->		6.550			96.28 (96)

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - AREA I Pre..2
Tc = .4019 hrs
Drainage Area = 5.560 acres Runoff CN= 73

==========
Computational Time Increment = .05358 hrs
Computed Peak Time = 12.1631 hrs
Computed Peak Flow = 6.02 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 5.83 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:AREA I
CN = 73
Area = 5.560 acres
S = 3.6986 in
0.2S = .7397 in

Cumulative Runoff

1.1796 in
.547 ac-ft

HYG Volume... .547 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .40186 hrs (ID: AREA I - EX. Tc)
Computational Incr, Tm = .05358 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 15.68 cfs
Unit peak time Tp = .26791 hrs
Unit receding limb, Tr = 1.07164 hrs
Total unit time, Tb = 1.33954 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - AREA I Pre..2
Tc = .4019 hrs
Drainage Area = 5.560 acres Runoff CN= 73
Calc.Increment= .05358 hrs Out.Incr.= .1000 hrs
HYG Volume = .547 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
10.7000	.00	.00	.01	.01	.03
11.2000	.04	.07	.10	.13	.20
11.7000	.39	.88	2.06	4.16	5.83
12.2000	5.70	4.40	3.14	2.35	1.82
12.7000	1.45	1.21	1.04	.93	.84
13.2000	.77	.72	.68	.64	.61
13.7000	.58	.55	.53	.50	.48
14.2000	.46	.45	.43	.42	.42
14.7000	.41	.40	.39	.38	.38
15.2000	.37	.36	.35	.35	.34
15.7000	.33	.32	.32	.31	.30
16.2000	.29	.29	.28	.28	.28
16.7000	.27	.27	.27	.26	.26
17.2000	.26	.26	.25	.25	.25
17.7000	.24	.24	.24	.24	.23
18.2000	.23	.23	.22	.22	.22
18.7000	.22	.21	.21	.21	.20
19.2000	.20	.20	.19	.19	.19
19.7000	.19	.18	.18	.18	.17
20.2000	.17	.17	.17	.17	.17
20.7000	.17	.16	.16	.16	.16
21.2000	.16	.16	.16	.16	.16
21.7000	.16	.16	.16	.16	.16
22.2000	.16	.16	.16	.16	.15
22.7000	.15	.15	.15	.15	.15
23.2000	.15	.15	.15	.15	.15
23.7000	.15	.15	.15	.15	.14
24.2000	.11	.07	.04	.02	.01
24.7000	.01	.00	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - AREA I Pre.15
Tc = .4019 hrs
Drainage Area = 5.560 acres Runoff CN= 73

==========
Computational Time Increment = .05358 hrs
Computed Peak Time = 12.1095 hrs
Computed Peak Flow = 12.99 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 12.79 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:AREA I
CN = 73
Area = 5.560 acres
S = 3.6986 in
0.2S = .7397 in

Cumulative Runoff

2.4383 in
1.130 ac-ft

HYG Volume... 1.130 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .40186 hrs (ID: AREA I - EX. Tc)
Computational Incr, Tm = .05358 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 15.68 cfs
Unit peak time Tp = .26791 hrs
Unit receding limb, Tr = 1.07164 hrs
Total unit time, Tb = 1.33954 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - AREA I Pre.15
Tc = .4019 hrs
Drainage Area = 5.560 acres Runoff CN= 73
Calc.Increment= .05358 hrs Out.Incr.= .1000 hrs
HYG Volume = 1.130 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
9.0000	.00	.00	.01	.01	.02
9.5000	.03	.04	.04	.05	.06
10.0000	.07	.09	.10	.12	.14
10.5000	.16	.18	.21	.24	.27
11.0000	.31	.35	.41	.48	.56
11.5000	.67	.86	1.38	2.67	5.39
12.0000	9.72	12.79	12.07	9.11	6.39
12.5000	4.69	3.58	2.82	2.32	1.99
13.0000	1.76	1.58	1.44	1.34	1.26
13.5000	1.19	1.13	1.07	1.02	.97
14.0000	.93	.89	.85	.82	.80
14.5000	.78	.76	.75	.73	.72
15.0000	.70	.69	.67	.66	.64
15.5000	.63	.62	.60	.59	.57
16.0000	.56	.54	.53	.52	.51
16.5000	.50	.50	.49	.48	.48
17.0000	.47	.47	.46	.46	.45
17.5000	.45	.44	.44	.43	.43
18.0000	.42	.42	.41	.41	.40
18.5000	.40	.39	.38	.38	.37
19.0000	.37	.36	.36	.35	.35
19.5000	.34	.34	.33	.32	.32
20.0000	.31	.31	.30	.30	.30
20.5000	.30	.29	.29	.29	.29
21.0000	.29	.29	.29	.29	.29
21.5000	.28	.28	.28	.28	.28
22.0000	.28	.28	.28	.28	.27
22.5000	.27	.27	.27	.27	.27
23.0000	.27	.27	.27	.27	.26
23.5000	.26	.26	.26	.26	.26
24.0000	.26	.24	.19	.12	.07
24.5000	.04	.02	.01	.01	.00
25.0000	.00	.00			

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - AREA I Pre.25
Tc = .4019 hrs
Drainage Area = 5.560 acres Runoff CN= 73

==========
Computational Time Increment = .05358 hrs
Computed Peak Time = 12.1095 hrs
Computed Peak Flow = 15.22 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 15.00 cfs
==========

DRAINAGE AREA

ID:AREA I
CN = 73
Area = 5.560 acres
S = 3.6986 in
0.2S = .7397 in

Cumulative Runoff

2.8415 in
1.317 ac-ft

HYG Volume... 1.317 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .40186 hrs (ID: AREA I - EX. Tc)
Computational Incr, Tm = .05358 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 15.68 cfs
Unit peak time Tp = .26791 hrs
Unit receding limb, Tr = 1.07164 hrs
Total unit time, Tb = 1.33954 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - AREA I Pre.25
Tc = .4019 hrs
Drainage Area = 5.560 acres Runoff CN= 73
Calc.Increment= .05358 hrs Out.Incr.= .1000 hrs
HYG Volume = 1.317 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
8.5000	.00	.00	.00	.01	.02
9.0000	.02	.03	.04	.05	.06
9.5000	.07	.08	.09	.10	.11
10.0000	.13	.14	.16	.18	.20
10.5000	.23	.26	.29	.33	.37
11.0000	.42	.47	.54	.62	.73
11.5000	.86	1.09	1.73	3.27	6.48
12.0000	11.52	15.00	14.07	10.58	7.40
12.5000	5.41	4.12	3.24	2.66	2.27
13.0000	2.01	1.80	1.64	1.52	1.43
13.5000	1.36	1.29	1.22	1.16	1.11
14.0000	1.06	1.01	.97	.93	.91
14.5000	.88	.86	.85	.83	.81
15.0000	.80	.78	.76	.75	.73
15.5000	.71	.70	.68	.66	.65
16.0000	.63	.61	.60	.59	.58
16.5000	.57	.56	.56	.55	.54
17.0000	.54	.53	.53	.52	.51
17.5000	.51	.50	.50	.49	.48
18.0000	.48	.47	.47	.46	.45
18.5000	.45	.44	.44	.43	.42
19.0000	.42	.41	.40	.40	.39
19.5000	.39	.38	.37	.37	.36
20.0000	.35	.35	.34	.34	.34
20.5000	.33	.33	.33	.33	.33
21.0000	.33	.33	.32	.32	.32
21.5000	.32	.32	.32	.32	.32
22.0000	.32	.31	.31	.31	.31
22.5000	.31	.31	.31	.31	.30
23.0000	.30	.30	.30	.30	.30
23.5000	.30	.30	.29	.29	.29
24.0000	.29	.27	.21	.14	.07
24.5000	.04	.02	.01	.01	.00
25.0000	.00	.00			

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - AREA I Pre100
Tc = .4019 hrs
Drainage Area = 5.560 acres Runoff CN= 73

==========
Computational Time Increment = .05358 hrs
Computed Peak Time = 12.1095 hrs
Computed Peak Flow = 22.14 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 21.86 cfs
==========

DRAINAGE AREA

ID:AREA I
CN = 73
Area = 5.560 acres
S = 3.6986 in
0.2S = .7397 in

Cumulative Runoff

4.1082 in
1.903 ac-ft

HYG Volume... 1.904 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .40186 hrs (ID: AREA I - EX. Tc)
Computational Incr, Tm = .05358 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 15.68 cfs
Unit peak time Tp = .26791 hrs
Unit receding limb, Tr = 1.07164 hrs
Total unit time, Tb = 1.33954 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - AREA I Pre100
Tc = .4019 hrs
Drainage Area = 5.560 acres Runoff CN= 73
Calc.Increment= .05358 hrs Out.Incr.= .1000 hrs
HYG Volume = 1.904 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
7.3000	.00	.00	.00	.01	.01
7.8000	.02	.03	.03	.04	.05
8.3000	.06	.07	.08	.09	.10
8.8000	.11	.13	.14	.16	.18
9.3000	.19	.20	.22	.23	.25
9.8000	.26	.28	.31	.34	.37
10.3000	.40	.44	.48	.53	.58
10.8000	.64	.71	.79	.88	.98
11.3000	1.11	1.28	1.48	1.84	2.84
11.8000	5.21	9.96	17.14	21.86	20.26
12.3000	15.10	10.49	7.63	5.77	4.52
12.8000	3.69	3.14	2.77	2.48	2.26
13.3000	2.09	1.97	1.86	1.76	1.67
13.8000	1.59	1.51	1.45	1.38	1.32
14.3000	1.27	1.23	1.20	1.18	1.15
14.8000	1.13	1.11	1.08	1.06	1.04
15.3000	1.02	.99	.97	.95	.92
15.8000	.90	.88	.86	.83	.81
16.3000	.79	.78	.77	.76	.75
16.8000	.74	.73	.73	.72	.71
17.3000	.70	.69	.69	.68	.67
17.8000	.66	.65	.64	.64	.63
18.3000	.62	.61	.60	.60	.59
18.8000	.58	.57	.56	.55	.54
19.3000	.54	.53	.52	.51	.50
19.8000	.49	.49	.48	.47	.46
20.3000	.46	.45	.45	.45	.44
20.8000	.44	.44	.44	.44	.44
21.3000	.43	.43	.43	.43	.43
21.8000	.43	.42	.42	.42	.42
22.3000	.42	.42	.42	.41	.41
22.8000	.41	.41	.41	.41	.40
23.3000	.40	.40	.40	.40	.40
23.8000	.39	.39	.39	.37	.29
24.3000	.18	.10	.05	.03	.02
24.8000	.01	.00	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - RUSTIQUE Pre..2
Tc = .4300 hrs
Drainage Area = 6.550 acres Runoff CN= 96

==========
Computational Time Increment = .05733 hrs
Computed Peak Time = 12.1547 hrs
Computed Peak Flow = 17.27 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 17.25 cfs
==========

DRAINAGE AREA

ID:RUSTIQUE
CN = 96
Area = 6.550 acres
S = .4167 in
0.2S = .0833 in

Cumulative Runoff

3.0453 in
1.662 ac-ft

HYG Volume... 1.663 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .43000 hrs (ID: None Selected)
Computational Incr, Tm = .05733 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.26 cfs
Unit peak time Tp = .28667 hrs
Unit receding limb, Tr = 1.14667 hrs
Total unit time, Tb = 1.43333 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - RUSTIQUE Pre..2
Tc = .4300 hrs
Drainage Area = 6.550 acres Runoff CN= 96
Calc.Increment= .05733 hrs Out.Incr.= .1000 hrs
HYG Volume = 1.663 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
2.3000	.00	.00	.00	.01	.01
2.8000	.02	.02	.03	.03	.04
3.3000	.05	.05	.06	.06	.07
3.8000	.07	.08	.08	.09	.09
4.3000	.10	.10	.11	.12	.12
4.8000	.13	.13	.14	.15	.15
5.3000	.16	.16	.17	.18	.18
5.8000	.19	.20	.20	.21	.22
6.3000	.22	.23	.23	.24	.25
6.8000	.25	.26	.27	.27	.28
7.3000	.29	.29	.30	.31	.31
7.8000	.32	.32	.33	.34	.35
8.3000	.36	.37	.39	.41	.43
8.8000	.45	.47	.49	.51	.53
9.3000	.54	.55	.56	.57	.58
9.8000	.60	.62	.64	.68	.71
10.3000	.75	.79	.84	.89	.94
10.8000	1.01	1.08	1.16	1.24	1.35
11.3000	1.47	1.63	1.82	2.16	3.02
11.8000	5.04	8.80	13.80	17.25	16.20
12.3000	12.45	8.74	6.23	4.66	3.59
12.8000	2.36	2.37	2.05	1.82	1.63
13.3000	1.49	1.39	1.30	1.23	1.16
13.8000	1.11	1.05	1.00	.95	.91
14.3000	.88	.85	.82	.80	.79
14.8000	.77	.75	.74	.72	.70
15.3000	.69	.67	.66	.64	.63
15.8000	.61	.59	.58	.56	.55
16.3000	.54	.53	.52	.51	.50
16.8000	.50	.49	.49	.48	.48
17.3000	.47	.46	.46	.45	.45

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - RUSTIQUE Pre.15
Tc = .4300 hrs
Drainage Area = 6.550 acres Runoff CN= 96

==========
Computational Time Increment = .05733 hrs
Computed Peak Time = 12.0973 hrs
Computed Peak Flow = 26.24 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 26.24 cfs
==========

DRAINAGE AREA

ID:RUSTIQUE
CN = 96
Area = 6.550 acres
S = .4167 in
0.2S = .0833 in

Cumulative Runoff

4.7314 in
2.583 ac-ft

HYG Volume... 2.583 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .43000 hrs (ID: None Selected)
Computational Incr, Tm = .05733 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.26 cfs
Unit peak time Tp = .28667 hrs
Unit receding limb, Tr = 1.14667 hrs
Total unit time, Tb = 1.43333 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - RUSTIQUE Pre.15
Tc = .4300 hrs
Drainage Area = 6.550 acres Runoff CN= 96
Calc.Increment= .05733 hrs Out.Incr.= .1000 hrs
HYG Volume = 2.583 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.6000	.00	.00	.01	.01	.02
2.1000	.03	.04	.05	.06	.07
2.6000	.08	.09	.10	.11	.12
3.1000	.13	.14	.15	.16	.17
3.6000	.17	.18	.19	.20	.21
4.1000	.22	.22	.23	.24	.25
4.6000	.26	.27	.28	.29	.30
5.1000	.31	.32	.33	.34	.35
5.6000	.36	.37	.38	.38	.39
6.1000	.40	.41	.42	.43	.44
6.6000	.45	.46	.47	.48	.49
7.1000	.50	.51	.52	.53	.54
7.6000	.54	.55	.56	.57	.58
8.1000	.59	.60	.62	.64	.67
8.6000	.70	.73	.76	.79	.83
9.1000	.86	.89	.91	.93	.94
9.6000	.95	.96	.98	1.02	1.06
10.1000	1.11	1.16	1.22	1.29	1.36
10.6000	1.44	1.52	1.62	1.73	1.85
11.1000	1.98	2.14	2.34	2.58	2.87
11.6000	3.39	4.71	7.82	13.54	21.09
12.1000	26.24	24.57	18.84	13.21	9.41
12.6000	7.03	5.40	4.30	3.57	3.08
13.1000	2.73	2.45	2.23	2.08	1.96
13.6000	1.85	1.75	1.66	1.58	1.50
14.1000	1.43	1.37	1.31	1.27	1.24
14.6000	1.21	1.18	1.15	1.13	1.10
15.1000	1.08	1.06	1.03	1.01	.98
15.6000	.96	.94	.91	.89	.87
16.1000	.84	.82	.80	.79	.78
16.6000	.76	.76	.75	.74	.73
17.1000	.72	.71	.70	.69	.69

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - RUSTIQUE Pre.25
Tc = .4300 hrs
Drainage Area = 6.550 acres Runoff CN= 96

==========
Computational Time Increment = .05733 hrs
Computed Peak Time = 12.0973 hrs
Computed Peak Flow = 28.87 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 28.87 cfs
==========

DRAINAGE AREA

ID:RUSTIQUE
CN = 96
Area = 6.550 acres
S = .4167 in
0.2S = .0833 in

Cumulative Runoff

5.2288 in
2.854 ac-ft

HYG Volume... 2.855 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .43000 hrs (ID: None Selected)
Computational Incr, Tm = .05733 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.26 cfs
Unit peak time Tp = .28667 hrs
Unit receding limb, Tr = 1.14667 hrs
Total unit time, Tb = 1.43333 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - RUSTIQUE Pre.25
Tc = .4300 hrs
Drainage Area = 6.550 acres Runoff CN= 96
Calc.Increment= .05733 hrs Out.Incr.= .1000 hrs
HYG Volume = 2.855 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.5000	.00	.00	.01	.02	.03
2.0000	.04	.05	.06	.07	.09
2.5000	.10	.11	.12	.13	.14
3.0000	.15	.16	.17	.18	.19
3.5000	.20	.21	.22	.23	.24
4.0000	.25	.26	.27	.28	.29
4.5000	.30	.31	.32	.33	.34
5.0000	.35	.36	.37	.38	.39
5.5000	.40	.41	.42	.43	.44
6.0000	.45	.46	.47	.48	.49
6.5000	.51	.52	.53	.54	.55
7.0000	.56	.57	.58	.59	.60
7.5000	.61	.62	.63	.64	.65
8.0000	.66	.67	.68	.70	.72
8.5000	.75	.78	.82	.85	.89
9.0000	.93	.96	.99	1.02	1.04
9.5000	1.05	1.06	1.07	1.10	1.14
10.0000	1.18	1.23	1.29	1.36	1.43
10.5000	1.51	1.60	1.69	1.80	1.92
11.0000	2.06	2.20	2.37	2.59	2.86
11.5000	3.17	3.75	5.21	8.63	14.93
12.0000	23.22	28.87	27.02	20.72	14.52
12.5000	10.34	7.73	5.93	4.72	3.92
13.0000	3.39	2.99	2.69	2.45	2.28
13.5000	2.15	2.03	1.92	1.82	1.73
14.0000	1.65	1.57	1.50	1.44	1.39
14.5000	1.36	1.32	1.29	1.27	1.24
15.0000	1.21	1.19	1.16	1.13	1.11
15.5000	1.08	1.05	1.03	1.00	.98
16.0000	.95	.92	.90	.88	.86
16.5000	.85	.84	.83	.82	.81
17.0000	.80	.79	.78	.77	.76

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - RUSTIQUE Pre100
Tc = .4300 hrs
Drainage Area = 6.550 acres Runoff CN= 96

==========

Computational Time Increment	=	.05733 hrs
Computed Peak Time	=	12.0973 hrs
Computed Peak Flow	=	36.73 cfs
Time Increment for HYG File	=	.1000 hrs
Peak Time, Interpolated Output	=	12.1000 hrs
Peak Flow, Interpolated Output	=	36.73 cfs

==========

DRAINAGE AREA

ID:RUSTIQUE
CN = 96
Area = 6.550 acres
S = .4167 in
0.2S = .0833 in

Cumulative Runoff

6.7230 in
3.670 ac-ft

HYG Volume... 3.671 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .43000 hrs (ID: None Selected)
Computational Incr, Tm = .05733 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak,	qp =	17.26 cfs
Unit peak time	Tp =	.28667 hrs
Unit receding limb,	Tr =	1.14667 hrs
Total unit time,	Tb =	1.43333 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = - RUSTIQUE Pre100
Tc = .4300 hrs
Drainage Area = 6.550 acres Runoff CN= 96
Calc.Increment= .05733 hrs Out.Incr.= .1000 hrs
HYG Volume = 3.671 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.2000	.00	.00	.01	.02	.04
1.7000	.05	.07	.09	.10	.12
2.2000	.14	.15	.17	.18	.20
2.7000	.21	.23	.24	.26	.27
3.2000	.28	.30	.31	.32	.33
3.7000	.34	.36	.37	.38	.39
4.2000	.40	.41	.42	.44	.45
4.7000	.46	.48	.49	.50	.52
5.2000	.53	.54	.56	.57	.58
5.7000	.59	.61	.62	.63	.65
6.2000	.66	.67	.68	.70	.71
6.7000	.72	.73	.75	.76	.77
7.2000	.78	.80	.81	.82	.83
7.7000	.84	.86	.87	.88	.89
8.2000	.91	.93	.96	1.00	1.04
8.7000	1.09	1.13	1.18	1.22	1.27
9.2000	1.31	1.34	1.37	1.38	1.39
9.7000	1.41	1.44	1.49	1.54	1.61
10.2000	1.69	1.77	1.87	1.97	2.08
10.7000	2.20	2.33	2.49	2.66	2.84
11.2000	3.06	3.34	3.68	4.09	4.82
11.7000	6.68	11.05	19.06	29.58	36.73
12.2000	34.34	26.31	18.44	13.12	9.80
12.7000	7.53	5.99	4.97	4.29	3.79
13.2000	3.40	3.10	2.89	2.72	2.57
13.7000	2.43	2.30	2.19	2.09	1.99
14.2000	1.90	1.83	1.77	1.72	1.68
14.7000	1.64	1.60	1.57	1.53	1.50
15.2000	1.47	1.43	1.40	1.37	1.33
15.7000	1.30	1.27	1.24	1.20	1.17
16.2000	1.14	1.11	1.09	1.08	1.06
16.7000	1.05	1.04	1.02	1.01	1.00

File.... J:\0675B\PONDPACK\AREA1-EXIST.PPW Event: 2 yr
Storm... TypeII 24hr Tag: Pre..2

SUMMARY FOR HYDROGRAPH ADDITION
at Node: AREA I - OUTLET

HYG Directory: J:\0675B\PONDPACK\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
AREA I - EXIST	AREA I			
OFFSITE	RUSTIQUE		AREA I	Pre..2
			RUSTIQUE	Pre..2

INFLOWS TO: AREA I - OUTLET

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
	AREA I	Pre..2	.547	12.1000	5.83
	RUSTIQUE	Pre..2	1.663	12.1000	17.25

TOTAL FLOW INTO: AREA I - OUTLET

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
	AREA I - OUTLET	Pre..2	2.209	12.1000	23.08

S/N: 721701406A81 J R GRIMES CONSULTING
PondPack Ver: 7.5 (767) Compute Time: 11:51:40 Date: 08-07-2002

TOTAL NODE INFLOW...
HYG file =
HYG ID = AREA I - OUTLET
HYG Tag = Pre..2

Peak Discharge =	23.08 cfs
Time to Peak =	12.1000 hrs
HYG Volume =	2.209 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
2.3000	.00	.00	.00	.01	.01
2.8000	.02	.02	.03	.03	.04
3.3000	.05	.05	.06	.06	.07
3.8000	.07	.08	.08	.09	.09
4.3000	.10	.10	.11	.12	.12
4.8000	.13	.13	.14	.15	.15
5.3000	.16	.16	.17	.18	.18
5.8000	.19	.20	.20	.21	.22
6.3000	.22	.23	.23	.24	.25
6.8000	.25	.26	.27	.27	.28
7.3000	.29	.29	.30	.31	.31
7.8000	.32	.32	.33	.34	.35
8.3000	.36	.37	.39	.41	.43
8.8000	.45	.47	.49	.51	.53
9.3000	.54	.55	.56	.57	.58
9.8000	.60	.62	.64	.68	.71
10.3000	.75	.79	.84	.89	.94
10.8000	1.01	1.09	1.17	1.27	1.39
11.3000	1.54	1.73	1.95	2.36	3.40
11.8000	5.92	10.86	17.95	23.08	21.90
12.3000	16.85	11.88	8.58	6.48	5.04
12.8000	4.06	3.42	2.98	2.66	2.40
13.3000	2.20	2.06	1.95	1.84	1.74
13.8000	1.66	1.58	1.51	1.44	1.37
14.3000	1.32	1.28	1.25	1.22	1.19
14.8000	1.17	1.15	1.12	1.10	1.07
15.3000	1.05	1.03	1.00	.98	.96
15.8000	.93	.91	.89	.86	.84
16.3000	.82	.81	.80	.79	.78
16.8000	.77	.76	.75	.74	.73
17.3000	.73	.72	.71	.70	.69
17.8000	.68	.67	.67	.66	.65
18.3000	.64	.63	.62	.61	.61

SUMMARY FOR HYDROGRAPH ADDITION
at Node: AREA I - OUTLET

HYG Directory: J:\0675B\PONDPACK\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
AREA I - EXIST	AREA I		AREA I	Pre.15
OFFSITE	RUSTIQUE		RUSTIQUE	Pre.15

INFLOWS TO: AREA I - OUTLET

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
	AREA I	Pre.15	1.130	12.1000	12.79
	RUSTIQUE	Pre.15	2.583	12.1000	26.24

TOTAL FLOW INTO: AREA I - OUTLET

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
	AREA I - OUTLET	Pre.15	3.713	12.1000	39.03

TOTAL NODE INFLOW...
HYG file =
HYG ID = AREA I - OUTLET
HYG Tag = Pre.15

Peak Discharge =	39.03 cfs
Time to Peak =	12.1000 hrs
HYG Volume =	3.713 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.6000	.00	.00	.01	.01	.02
2.1000	.03	.04	.05	.06	.07
2.6000	.08	.09	.10	.11	.12
3.1000	.13	.14	.15	.16	.17
3.6000	.17	.18	.19	.20	.21
4.1000	.22	.22	.23	.24	.25
4.6000	.26	.27	.28	.29	.30
5.1000	.31	.32	.33	.34	.35
5.6000	.36	.37	.38	.38	.39
6.1000	.40	.41	.42	.43	.44
6.6000	.45	.46	.47	.48	.49
7.1000	.50	.51	.52	.53	.54
7.6000	.54	.55	.56	.57	.58
8.1000	.59	.60	.62	.64	.67
8.6000	.70	.73	.76	.79	.83
9.1000	.86	.90	.92	.95	.97
9.6000	.98	1.01	1.04	1.08	1.13
10.1000	1.19	1.26	1.34	1.42	1.52
10.6000	1.62	1.73	1.86	2.00	2.16
11.1000	2.34	2.55	2.81	3.14	3.54
11.6000	4.25	6.10	10.49	18.93	30.81
12.1000	39.03	36.64	27.95	19.60	14.10
12.6000	10.61	8.22	6.62	5.56	4.84
13.1000	4.31	3.89	3.57	3.34	3.15
13.6000	2.98	2.82	2.68	2.55	2.43
14.1000	2.32	2.22	2.13	2.07	2.01
14.6000	1.97	1.92	1.88	1.84	1.81
15.1000	1.77	1.73	1.69	1.65	1.61
15.6000	1.58	1.54	1.50	1.46	1.42
16.1000	1.38	1.35	1.32	1.30	1.28
16.6000	1.26	1.25	1.23	1.22	1.20
17.1000	1.19	1.18	1.16	1.15	1.13
17.6000	1.12	1.11	1.09	1.08	1.07

Name.... AREA I - OUTLET
File.... J:\0675B\PONDPACK\AREA1-EXIST.PPW
Storm... TypeII 24hr Tag: Pre.25
Event: 25 yr

SUMMARY FOR HYDROGRAPH ADDITION
at Node: AREA I - OUTLET

HYG Directory: J:\0675B\PONDPACK\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
AREA I - EXIST	AREA I		AREA I	Pre.25
OFFSITE	RUSTIQUE		RUSTIQUE	Pre.25

INFLOWS TO: AREA I - OUTLET

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
	AREA I	Pre.25	1.317	12.1000	15.00
	RUSTIQUE	Pre.25	2.855	12.1000	28.87

TOTAL FLOW INTO: AREA I - OUTLET

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
	AREA I - OUTLET	Pre.25	4.172	12.1000	43.87

S/N: 721701406A81 J R GRIMES CONSULTING
PondPack Ver: 7.5 (767) Compute Time: 11:51:40 Date: 08-07-2002

TOTAL NODE INFLOW...
HYG file =
HYG ID = AREA I - OUTLET
HYG Tag = Pre.25

Peak Discharge =	43.87 cfs
Time to Peak =	12.1000 hrs
HYG Volume =	4.172 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.5000	.00	.00	.01	.02	.03
2.0000	.04	.05	.06	.07	.09
2.5000	.10	.11	.12	.13	.14
3.0000	.15	.16	.17	.18	.19
3.5000	.20	.21	.22	.23	.24
4.0000	.25	.26	.27	.28	.29
4.5000	.30	.31	.32	.33	.34
5.0000	.35	.36	.37	.38	.39
5.5000	.40	.41	.42	.43	.44
6.0000	.45	.46	.47	.48	.49
6.5000	.51	.52	.53	.54	.55
7.0000	.56	.57	.58	.59	.60
7.5000	.61	.62	.63	.64	.65
8.0000	.66	.67	.68	.70	.72
8.5000	.75	.79	.82	.86	.90
9.0000	.95	.99	1.03	1.07	1.10
9.5000	1.12	1.14	1.16	1.20	1.25
10.0000	1.31	1.38	1.45	1.54	1.64
10.5000	1.74	1.86	1.98	2.13	2.29
11.0000	2.47	2.67	2.91	3.21	3.58
11.5000	4.03	4.83	6.93	11.90	21.41
12.0000	34.73	43.87	41.09	31.29	21.92
12.5000	15.75	11.85	9.18	7.38	6.19
13.0000	5.39	4.80	4.33	3.97	3.72
13.5000	3.50	3.31	3.14	2.98	2.84
14.0000	2.71	2.58	2.47	2.37	2.30
14.5000	2.24	2.19	2.14	2.10	2.05
15.0000	2.01	1.97	1.92	1.88	1.84
15.5000	1.80	1.75	1.71	1.67	1.62
16.0000	1.58	1.54	1.50	1.47	1.44
16.5000	1.42	1.40	1.38	1.37	1.35
17.0000	1.34	1.32	1.31	1.29	1.28
17.5000	1.26	1.24	1.23	1.21	1.20

SUMMARY FOR HYDROGRAPH ADDITION
at Node: AREA I - OUTLET

HYG Directory: J:\0675B\PONDPACK\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
AREA I - EXIST	AREA I		AREA I	Pre100
OFFSITE	RUSTIQUE		RUSTIQUE	Pre100

INFLOWS TO: AREA I - OUTLET

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
	AREA I	Pre100	1.904	12.1000	21.86
	RUSTIQUE	Pre100	3.671	12.1000	36.73

TOTAL FLOW INTO: AREA I - OUTLET

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
	AREA I - OUTLET	Pre100	5.575	12.1000	58.58

TOTAL NODE INFLOW...
HYG file =
HYG ID = AREA I - OUTLET
HYG Tag = Pre100

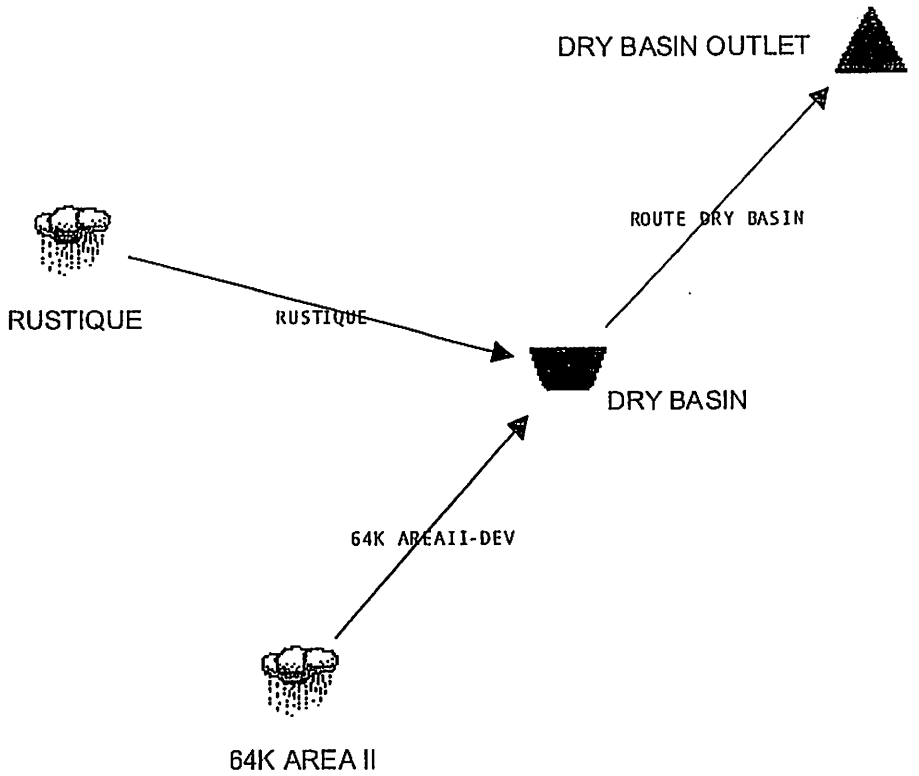
Peak Discharge =	58.58 cfs
Time to Peak =	12.1000 hrs
HYG Volume =	5.575 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.2000	.00	.00	.01	.02	.04
1.7000	.05	.07	.09	.10	.12
2.2000	.14	.15	.17	.18	.20
2.7000	.21	.23	.24	.26	.27
3.2000	.28	.30	.31	.32	.33
3.7000	.34	.36	.37	.38	.39
4.2000	.40	.41	.42	.44	.45
4.7000	.46	.48	.49	.50	.52
5.2000	.53	.54	.56	.57	.58
5.7000	.59	.61	.62	.63	.65
6.2000	.66	.67	.68	.70	.71
6.7000	.72	.73	.75	.76	.77
7.2000	.78	.80	.81	.82	.84
7.7000	.86	.88	.89	.91	.93
8.2000	.96	.99	1.03	1.08	1.13
8.7000	1.19	1.25	1.31	1.37	1.43
9.2000	1.49	1.53	1.57	1.60	1.62
9.7000	1.65	1.70	1.77	1.85	1.95
10.2000	2.05	2.17	2.30	2.45	2.61
10.7000	2.78	2.98	3.20	3.45	3.72
11.2000	4.04	4.45	4.96	5.56	6.66
11.7000	9.52	16.26	29.02	46.72	58.58
12.2000	54.60	41.41	28.93	20.75	15.57
12.7000	12.04	9.68	8.11	7.06	6.27
13.2000	5.66	5.19	4.86	4.58	4.33
13.7000	4.10	3.89	3.71	3.53	3.37
14.2000	3.22	3.10	3.00	2.92	2.85
14.7000	2.79	2.73	2.67	2.62	2.56
15.2000	2.51	2.45	2.39	2.34	2.28
15.7000	2.23	2.17	2.11	2.06	2.00
16.2000	1.95	1.91	1.87	1.85	1.82
16.7000	1.80	1.78	1.76	1.74	1.72
17.2000	1.70	1.68	1.66	1.64	1.62

P. O. I. #1

DEV.


DRY BASIN OUTLET
ROUTE DRY BASIN
RUSTIQUE
RUSTIQUE
DRY BASIN
64K AREAII-DEV
64K AREA II

MASTER DESIGN STORM SUMMARY

Default Network Design Storm File, ID PERSIMON.RNQ PERSIMMON

Return Event	Total Depth in	Rainfall Type	RNF File	RNF ID
Dev..2	3.5000	Synthetic Curve	SCSTYPES	TypeII 24hr
Dev.15	5.2000	Synthetic Curve	SCSTYPES	TypeII 24hr
Dev.25	5.7000	Synthetic Curve	SCSTYPES	TypeII 24hr
Dev100	7.2000	Synthetic Curve	SCSTYPES	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

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

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
64K AREA II	AREA	2	1.721		11.9000	30.26		
64K AREA II	AREA	15	2.765		11.9000	47.44		
64K AREA II	AREA	25	3.075		11.9000	52.45		
64K AREA II	AREA	100	4.007		11.9000	67.39		
DRY BASIN IN	POND	2	3.383		11.9000	38.96		
DRY BASIN IN	POND	15	5.347		11.9000	60.84		
DRY BASIN IN	POND	25	5.928		11.9000	67.22		
DRY BASIN IN	POND	100	7.676		11.9000	86.25		
DRY BASIN OUT	POND	2	3.383		12.2000	22.06	544.13	.582
DRY BASIN OUT	POND	15	5.347		12.2000	28.88	545.65	1.065
DRY BASIN OUT	POND	25	5.928		12.2000	31.83	546.05	1.208
DRY BASIN OUT	POND	100	7.676		12.2000	43.53	546.99	1.574
*DRY BASIN OUTLET	JCT	2	3.383		12.2000	22.06		
*DRY BASIN OUTLET	JCT	15	5.347		12.2000	28.88		
*DRY BASIN OUTLET	JCT	25	5.928		12.2000	31.83		
*DRY BASIN OUTLET	JCT	100	7.676		12.2000	43.53		
RUSTIQUE	AREA	2	1.662		12.1000	17.01		
RUSTIQUE	AREA	15	2.582		12.1000	25.87		
RUSTIQUE	AREA	25	2.853		12.1000	28.46		

Type.... Master Network Summary
Name.... Watershed
File.... J:\0675B\PONDPACK\AREA1-DEV.PPW

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

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

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
RUSTIQUE	AREA	100	3.669		12.1000	36.21		

S/N: 721701406A81 J R GRIMES CONSULTING
PondPack Ver: 7.5 (767) Compute Time: 11:22:40 Date: 08-07-2002

Type.... Runoff CN-Area
Name.... AREA II- DEV. CN

File.... J:\0675B\PONDPACK\AREA1-DEV.PPW
Title... 64K AREA II - DEVELOPED RUNOFF CN

RUNOFF CURVE NUMBER DATA

64K AREA II - DEVELOPED RUNOFF CN

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
PAVED	98	6.040			98.00
GRASS	74	1.510			74.00
COMPOSITE AREA & WEIGHTED CN --->		7.550			93.20 (93)

S/N: 721701406A81 J R GRIMES CONSULTING
PondPack Ver: 7.5 (767) Compute Time: 11:22:40 Date: 08-07-2002

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - 64K AREA II Dev..2
Tc (Min. Tc) = .0833 hrs
Drainage Area = 7.550 acres Runoff CN= 93

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 11.9175 hrs
Computed Peak Flow = 31.04 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 11.9000 hrs
Peak Flow, Interpolated Output = 30.26 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:AREA II- DEV. CN
CN = 93
Area = 7.550 acres
S = .7527 in
0.2S = .1505 in

Cumulative Runoff

2.7349 in
1.721 ac-ft

HYG Volume... 1.721 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08330 hrs (ID: None Selected)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 102.69 cfs
Unit peak time Tp = .05553 hrs
Unit receding limb, Tr = .22213 hrs
Total unit time, Tb = .27767 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - 64K AREA II Dev..2
Tc (Min. Tc) = .0833 hrs
Drainage Area = 7.550 acres Runoff CN= 93
Calc.Increment= .01111 hrs Out.Incr.= .1000 hrs
HYG Volume = 1.721 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
3.7000	.00	.00	.01	.01	.02
4.2000	.02	.03	.03	.04	.04
4.7000	.05	.05	.06	.07	.07
5.2000	.08	.08	.09	.10	.10
5.7000	.11	.11	.12	.13	.13
6.2000	.14	.15	.15	.16	.17
6.7000	.17	.18	.19	.19	.20
7.2000	.21	.21	.22	.23	.23
7.7000	.24	.25	.26	.26	.28
8.2000	.29	.31	.33	.35	.37
8.7000	.39	.41	.43	.45	.47
9.2000	.48	.48	.49	.50	.51
9.7000	.54	.58	.61	.65	.69
10.2000	.74	.79	.84	.90	.96
10.7000	1.05	1.14	1.23	1.32	1.46
11.2000	1.66	1.88	2.10	2.34	4.61
11.7000	9.51	16.31	30.26	24.75	7.71
12.2000	4.39	3.70	3.13	2.56	2.18
12.7000	2.02	1.89	1.76	1.63	1.52
13.2000	1.45	1.38	1.31	1.24	1.18
13.7000	1.12	1.07	1.02	.97	.94
14.2000	.92	.90	.88	.86	.85
14.7000	.83	.81	.79	.77	.76
15.2000	.74	.72	.70	.69	.67
15.7000	.65	.63	.62	.60	.59
16.2000	.58	.57	.57	.56	.55
16.7000	.55	.54	.54	.53	.52
17.2000	.52	.51	.50	.50	.49
17.7000	.48	.48	.47	.46	.46
18.2000	.45	.45	.44	.43	.43
18.7000	.42	.41	.41	.40	.40
19.2000	.39	.38	.38	.37	.36
19.7000	.36	.35	.34	.34	.33
20.2000	.33	.33	.33	.33	.33
20.7000	.33	.32	.32	.32	.32
21.2000	.32	.32	.32	.32	.31

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - 64K AREA II Dev.15
Tc (Min. Tc) = .0833 hrs
Drainage Area = 7.550 acres Runoff CN= 93

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 11.9175 hrs
Computed Peak Flow = 48.51 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 11.9000 hrs
Peak Flow, Interpolated Output = 47.44 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:AREA II- DEV. CN
CN = 93
Area = 7.550 acres
S = .7527 in
0.2S = .1505 in

Cumulative Runoff

4.3944 in
2.765 ac-ft

HYG Volume... 2.765 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08330 hrs (ID: None Selected)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 102.69 cfs
Unit peak time Tp = .05553 hrs
Unit receding limb, Tr = .22213 hrs
Total unit time, Tb = .27767 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - 64K AREA II Dev.15
Tc (Min. Tc) = .0833 hrs
Drainage Area = 7.550 acres Runoff CN= 93
Calc.Increment= .01111 hrs Out.Incr.= .1000 hrs
HYG Volume = 2.765 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
2.6000	.00	.01	.01	.02	.03
3.1000	.04	.05	.06	.07	.07
3.6000	.08	.09	.10	.11	.12
4.1000	.12	.13	.14	.15	.16
4.6000	.17	.18	.19	.20	.21
5.1000	.22	.23	.24	.25	.26
5.6000	.27	.28	.29	.31	.32
6.1000	.33	.34	.35	.36	.37
6.6000	.38	.39	.40	.41	.42
7.1000	.44	.45	.46	.47	.48
7.6000	.49	.50	.51	.52	.54
8.1000	.55	.58	.62	.65	.68
8.6000	.72	.75	.79	.82	.86
9.1000	.88	.89	.90	.91	.92
9.6000	.95	1.00	1.05	1.11	1.17
10.1000	1.24	1.32	1.40	1.49	1.58
10.6000	1.69	1.83	1.97	2.12	2.27
11.1000	2.50	2.82	3.17	3.52	3.90
11.6000	7.62	15.50	26.10	47.44	38.27
12.1000	11.86	6.73	5.66	4.79	3.92
12.6000	3.33	3.08	2.88	2.68	2.48
13.1000	2.32	2.21	2.10	1.99	1.88
13.6000	1.79	1.71	1.63	1.56	1.48
14.1000	1.43	1.39	1.37	1.34	1.31
14.6000	1.29	1.26	1.23	1.21	1.18
15.1000	1.15	1.12	1.10	1.07	1.05
15.6000	1.02	.99	.96	.94	.91
16.1000	.89	.88	.87	.86	.85
16.6000	.84	.83	.82	.81	.80
17.1000	.79	.78	.77	.76	.75
17.6000	.74	.73	.72	.72	.70
18.1000	.70	.69	.68	.67	.66
18.6000	.65	.64	.63	.62	.61
19.1000	.60	.59	.58	.57	.56
19.6000	.55	.54	.53	.52	.51
20.1000	.51	.50	.50	.50	.50

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - 64K AREA II Dev.25
Tc (Min. Tc) = .0833 hrs
Drainage Area = 7.550 acres Runoff CN= 93

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 11.9175 hrs
Computed Peak Flow = 53.61 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 11.9000 hrs
Peak Flow, Interpolated Output = 52.45 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:AREA II- DEV. CN
CN = 93
Area = 7.550 acres
S = .7527 in
0.2S = .1505 in

Cumulative Runoff

4.8867 in
3.075 ac-ft

HYG Volume... 3.075 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08330 hrs (ID: None Selected)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 102.69 cfs
Unit peak time Tp = .05553 hrs
Unit receding limb, Tr = .22213 hrs
Total unit time, Tb = .27767 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - 64K AREA II Dev.25
Tc (Min. Tc) = .0833 hrs
Drainage Area = 7.550 acres Runoff CN= 93
Calc.Increment= .01111 hrs Out.Incr.= .1000 hrs
HYG Volume = 3.075 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
2.4000	.00	.01	.02	.03	.04
2.9000	.05	.06	.07	.08	.09
3.4000	.10	.11	.11	.12	.13
3.9000	.14	.15	.16	.17	.18
4.4000	.19	.21	.22	.23	.24
4.9000	.25	.26	.27	.28	.30
5.4000	.31	.32	.33	.34	.35
5.9000	.37	.38	.39	.40	.41
6.4000	.43	.44	.45	.46	.47
6.9000	.49	.50	.51	.52	.53
7.4000	.55	.56	.57	.58	.60
7.9000	.61	.62	.64	.68	.71
8.4000	.75	.79	.82	.86	.90
8.9000	.94	.98	1.01	1.02	1.03
9.4000	1.04	1.05	1.08	1.14	1.20
9.9000	1.26	1.32	1.40	1.49	1.59
10.4000	1.68	1.78	1.90	2.06	2.22
10.9000	2.38	2.55	2.80	3.16	3.55
11.4000	3.94	4.36	8.50	17.25	28.96
11.9000	52.45	42.22	13.07	7.41	6.23
12.4000	5.28	4.32	3.67	3.39	3.17
12.9000	2.95	2.73	2.56	2.43	2.31
13.4000	2.19	2.07	1.97	1.88	1.80
13.9000	1.71	1.63	1.57	1.53	1.51
14.4000	1.47	1.45	1.41	1.39	1.35
14.9000	1.33	1.30	1.27	1.24	1.21
15.4000	1.18	1.15	1.12	1.09	1.06
15.9000	1.03	1.00	.98	.97	.96
16.4000	.94	.93	.92	.91	.90
16.9000	.89	.88	.87	.86	.85
17.4000	.84	.83	.82	.81	.80
17.9000	.79	.77	.77	.75	.74
18.4000	.73	.72	.71	.70	.69
18.9000	.68	.67	.66	.65	.64
19.4000	.63	.62	.60	.60	.58
19.9000	.57	.56	.56	.55	.55

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - 64K AREA II Dev100
Tc (Min. Tc) = .0833 hrs
Drainage Area = 7.550 acres Runoff CN= 93

==========
Computational Time Increment = .01111 hrs
Computed Peak Time = 11.9175 hrs
Computed Peak Flow = 68.81 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 11.9000 hrs
Peak Flow, Interpolated Output = 67.39 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:AREA II- DEV. CN
CN = 93
Area = 7.550 acres
S = .7527 in
0.2S = .1505 in

Cumulative Runoff

6.3694 in
4.007 ac-ft

HYG Volume... 4.007 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .08330 hrs (ID: None Selected)
Computational Incr, Tm = .01111 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 102.69 cfs
Unit peak time Tp = .05553 hrs
Unit receding limb, Tr = .22213 hrs
Total unit time, Tb = .27767 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - 64K AREA II Dev100
Tc (Min. Tc) = .0833 hrs
Drainage Area = 7.550 acres Runoff CN= 93
Calc.Increment= .01111 hrs Out.Incr.= .1000 hrs
HYG Volume = 4.007 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.9000	.00	.00	.02	.03	.05
2.4000	.06	.08	.09	.10	.12
2.9000	.13	.15	.16	.17	.19
3.4000	.20	.21	.22	.24	.25
3.9000	.26	.27	.29	.30	.32
4.4000	.33	.35	.36	.38	.39
4.9000	.41	.42	.44	.45	.47
5.4000	.48	.50	.51	.53	.54
5.9000	.56	.57	.59	.60	.62
6.4000	.64	.65	.67	.68	.70
6.9000	.71	.73	.74	.76	.77
7.4000	.79	.80	.82	.83	.85
7.9000	.86	.88	.91	.95	1.00
8.4000	1.05	1.10	1.15	1.20	1.25
8.9000	1.31	1.36	1.39	1.41	1.42
9.4000	1.42	1.43	1.47	1.55	1.63
9.9000	1.71	1.80	1.90	2.01	2.14
10.4000	2.26	2.39	2.55	2.75	2.96
10.9000	3.17	3.38	3.71	4.18	4.68
11.4000	5.19	5.72	11.13	22.48	37.49
11.9000	67.39	53.99	16.68	9.45	7.95
12.4000	6.72	5.50	4.68	4.32	4.04
12.9000	3.76	3.48	3.25	3.09	2.94
13.4000	2.79	2.64	2.51	2.40	2.29
13.9000	2.18	2.07	2.00	1.95	1.91
14.4000	1.87	1.84	1.80	1.76	1.72
14.9000	1.69	1.65	1.61	1.57	1.54
15.4000	1.50	1.46	1.42	1.39	1.34
15.9000	1.31	1.27	1.24	1.23	1.22
16.4000	1.20	1.19	1.17	1.16	1.15
16.9000	1.13	1.12	1.11	1.09	1.08
17.4000	1.06	1.05	1.04	1.03	1.01
17.9000	1.00	.98	.97	.96	.95
18.4000	.93	.92	.90	.89	.88
18.9000	.86	.85	.84	.82	.81
19.4000	.79	.78	.77	.76	.74
19.9000	.73	.71	.71	.70	.70

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - RUSTIQUE Dev..2
Tc = .4333 hrs
Drainage Area = 6.550 acres Runoff CN= 96

==========
Computational Time Increment = .05777 hrs
Computed Peak Time = 12.1324 hrs
Computed Peak Flow = 17.38 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 17.01 cfs
WARNING: The difference between calculated peak flow and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:RUSTIQUE
CN = 96
Area = 6.550 acres
S = .4167 in
0.2S = .0833 in

Cumulative Runoff

3.0453 in
1.662 ac-ft

HYG Volume... 1.662 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .43330 hrs (ID: DEV. AREA I)
Computational Incr, Tm = .05777 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.13 cfs
Unit peak time Tp = .28887 hrs
Unit receding limb, Tr = 1.15547 hrs
Total unit time, Tb = 1.44433 hrs

Title... RUSTIQUE DISCHARGE (FROM DATA PROVIDED BY ST. CHARLES COUNTY)
Storm... TypeII 24hr Tag: Dev..2

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - RUSTIQUE Dev..2
Tc = .4333 hrs
Drainage Area = 6.550 acres Runoff CN= 96
Calc.Increment= .05777 hrs Out.Incr.= .1000 hrs
HYG Volume = 1.662 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
2.3000	.00	.00	.00	.01	.01
2.8000	.02	.02	.03	.03	.04
3.3000	.05	.05	.06	.06	.07
3.8000	.07	.08	.08	.09	.09
4.3000	.10	.10	.11	.12	.12
4.8000	.13	.13	.14	.15	.15
5.3000	.16	.16	.17	.18	.18
5.8000	.19	.20	.20	.21	.21
6.3000	.22	.23	.23	.24	.25
6.8000	.25	.26	.27	.27	.28
7.3000	.29	.29	.30	.31	.31
7.8000	.32	.32	.33	.34	.35
8.3000	.36	.37	.39	.41	.43
8.8000	.45	.47	.49	.51	.53
9.3000	.54	.55	.56	.57	.58
9.8000	.60	.62	.64	.67	.71
10.3000	.75	.79	.84	.89	.94
10.8000	1.01	1.08	1.16	1.24	1.34
11.3000	1.47	1.63	1.81	2.13	3.03
11.8000	5.04	8.70	13.77	17.01	16.21
12.3000	12.46	8.80	6.30	4.69	3.61
12.8000	2.88	2.40	2.06	1.82	1.64
13.3000	1.49	1.39	1.31	1.23	1.17
13.8000	1.11	1.05	1.00	.96	.91
14.3000	.88	.85	.83	.81	.79
14.8000	.77	.75	.74	.72	.71
15.3000	.69	.67	.66	.64	.63
15.8000	.61	.59	.58	.56	.55
16.3000	.54	.53	.52	.51	.50
16.8000	.50	.49	.49	.48	.48

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - RUSTIQUE Dev.15
Tc = .4333 hrs
Drainage Area = 6.550 acres Runoff CN= 96

==========
Computational Time Increment = .05777 hrs
Computed Peak Time = 12.1324 hrs
Computed Peak Flow = 26.41 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 25.87 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:RUSTIQUE
CN = 96
Area = 6.550 acres
S = .4167 in
0.2S = .0833 in

Cumulative Runoff

4.7314 in
2.583 ac-ft

HYG Volume... 2.582 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .43330 hrs (ID: DEV. AREA I)
Computational Incr, Tm = .05777 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.13 cfs
Unit peak time Tp = .28887 hrs
Unit receding limb, Tr = 1.15547 hrs
Total unit time, Tb = 1.44433 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - RUSTIQUE Dev.15
Tc = .4333 hrs
Drainage Area = 6.550 acres Runoff CN= 96
Calc.Increment= .05777 hrs Out.Incr.= .1000 hrs
HYG Volume = 2.582 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.6000	.00	.00	.01	.01	.02
2.1000	.03	.04	.05	.06	.07
2.6000	.08	.09	.10	.11	.12
3.1000	.13	.14	.15	.16	.17
3.6000	.17	.18	.19	.20	.21
4.1000	.22	.22	.23	.24	.25
4.6000	.26	.27	.28	.29	.30
5.1000	.31	.32	.33	.34	.35
5.6000	.36	.37	.37	.38	.39
6.1000	.40	.41	.42	.43	.44
6.6000	.45	.46	.47	.48	.49
7.1000	.50	.51	.52	.53	.54
7.6000	.54	.55	.56	.57	.58
8.1000	.59	.60	.62	.64	.67
8.6000	.70	.73	.76	.79	.83
9.1000	.86	.89	.91	.93	.94
9.6000	.95	.96	.98	1.02	1.06
10.1000	1.11	1.16	1.22	1.29	1.36
10.6000	1.44	1.52	1.62	1.73	1.85
11.1000	1.98	2.14	2.33	2.57	2.85
11.6000	3.35	4.74	7.81	13.40	21.05
12.1000	25.87	24.59	18.87	13.31	9.52
12.6000	7.07	5.44	4.34	3.60	3.10
13.1000	2.74	2.46	2.24	2.08	1.96
13.6000	1.85	1.75	1.66	1.58	1.50
14.1000	1.43	1.37	1.31	1.27	1.24
14.6000	1.21	1.18	1.15	1.13	1.10
15.1000	1.08	1.06	1.03	1.01	.99
15.6000	.96	.94	.91	.89	.87
16.1000	.84	.82	.80	.79	.78
16.6000	.77	.76	.75	.74	.73
17.1000	.72	.71	.70	.69	.69

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - RUSTIQUE Dev.25
Tc = .4333 hrs
Drainage Area = 6.550 acres Runoff CN= 96

==========
Computational Time Increment = .05777 hrs
Computed Peak Time = 12.1324 hrs
Computed Peak Flow = 29.05 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 28.46 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:RUSTIQUE
CN = 96
Area = 6.550 acres
S = .4167 in
0.2S = .0833 in

Cumulative Runoff

5.2288 in
2.854 ac-ft

HYG Volume... 2.853 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .43330 hrs (ID: DEV. AREA I)
Computational Incr, Tm = .05777 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.13 cfs
Unit peak time Tp = .28887 hrs
Unit receding limb, Tr = 1.15547 hrs
Total unit time, Tb = 1.44433 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - RUSTIQUE Dev.25
Tc = .4333 hrs
Drainage Area = 6.550 acres Runoff CN= 96
Calc.Increment= .05777 hrs Out.Incr.= .1000 hrs
HYG Volume = 2.853 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.5000	.00	.00	.01	.02	.03
2.0000	.04	.05	.06	.07	.09
2.5000	.10	.11	.12	.13	.14
3.0000	.15	.16	.17	.18	.19
3.5000	.20	.21	.22	.23	.24
4.0000	.25	.26	.27	.28	.29
4.5000	.30	.31	.32	.33	.34
5.0000	.35	.36	.37	.38	.39
5.5000	.40	.41	.42	.43	.44
6.0000	.45	.46	.47	.48	.49
6.5000	.50	.52	.53	.54	.55
7.0000	.56	.57	.58	.59	.60
7.5000	.61	.62	.63	.64	.65
8.0000	.66	.67	.68	.70	.72
8.5000	.75	.78	.82	.85	.89
9.0000	.92	.96	.99	1.02	1.04
9.5000	1.05	1.06	1.07	1.10	1.13
10.0000	1.18	1.23	1.29	1.36	1.43
10.5000	1.51	1.60	1.69	1.80	1.92
11.0000	2.05	2.20	2.37	2.58	2.85
11.5000	3.16	3.70	5.24	8.62	14.77
12.0000	23.17	28.46	27.04	20.74	14.62
12.5000	10.46	7.77	5.97	4.76	3.96
13.0000	3.40	3.01	2.70	2.46	2.28
13.5000	2.15	2.03	1.92	1.82	1.73
14.0000	1.65	1.57	1.50	1.44	1.40
14.5000	1.36	1.32	1.29	1.27	1.24
15.0000	1.21	1.19	1.16	1.13	1.11
15.5000	1.08	1.06	1.03	1.00	.98
16.0000	.95	.92	.90	.88	.86
16.5000	.85	.84	.83	.82	.81
17.0000	.80	.79	.78	.77	.76

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - RUSTIQUE Dev100
Tc = .4333 hrs
Drainage Area = 6.550 acres Runoff CN= 96

==========
Computational Time Increment = .05777 hrs
Computed Peak Time = 12.1324 hrs
Computed Peak Flow = 36.95 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 36.21 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:RUSTIQUE
CN = 96
Area = 6.550 acres
S = .4167 in
0.2S = .0833 in

Cumulative Runoff

6.7230 in
3.670 ac-ft

HYG Volume... 3.669 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .43330 hrs (ID: DEV. AREA I)
Computational Incr, Tm = .05777 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 17.13 cfs
Unit peak time Tp = .28887 hrs
Unit receding limb, Tr = 1.15547 hrs
Total unit time, Tb = 1.44433 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\
HYG File - ID = AREA1-DE.HYG - RUSTIQUE Dev100
Tc = .4333 hrs
Drainage Area = 6.550 acres Runoff CN= 96
Calc.Increment= .05777 hrs Out.Incr.= .1000 hrs
HYG Volume = 3.669 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.2000	.00	.00	.01	.02	.04
1.7000	.05	.07	.09	.10	.12
2.2000	.14	.15	.17	.18	.20
2.7000	.21	.23	.24	.26	.27
3.2000	.28	.30	.31	.32	.33
3.7000	.34	.36	.37	.38	.39
4.2000	.40	.41	.42	.44	.45
4.7000	.46	.48	.49	.50	.52
5.2000	.53	.54	.55	.57	.58
5.7000	.59	.61	.62	.63	.65
6.2000	.66	.67	.68	.70	.71
6.7000	.72	.73	.75	.76	.77
7.2000	.78	.79	.81	.82	.83
7.7000	.84	.86	.87	.88	.89
8.2000	.91	.93	.96	1.00	1.04
8.7000	1.09	1.13	1.18	1.22	1.27
9.2000	1.31	1.34	1.36	1.38	1.39
9.7000	1.41	1.44	1.48	1.54	1.61
10.2000	1.68	1.77	1.86	1.97	2.07
10.7000	2.19	2.33	2.49	2.66	2.84
11.2000	3.06	3.33	3.67	4.06	4.76
11.7000	6.72	11.04	18.86	29.52	36.21
12.2000	34.37	26.35	18.57	13.27	9.86
12.7000	7.57	6.04	5.01	4.31	3.81
13.2000	3.42	3.12	2.89	2.72	2.57
13.7000	2.43	2.31	2.20	2.09	1.99
14.2000	1.90	1.83	1.77	1.72	1.68
14.7000	1.64	1.60	1.57	1.54	1.50
15.2000	1.47	1.44	1.40	1.37	1.34
15.7000	1.30	1.27	1.24	1.20	1.17
16.2000	1.14	1.11	1.09	1.08	1.06
16.7000	1.05	1.04	1.02	1.01	1.00

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .1000 hrs Time on left represents time for first value in each row.				
2.3000	541.00	541.00	541.00	541.01	541.01
2.8000	541.02	541.03	541.03	541.04	541.05
3.3000	541.05	541.06	541.07	541.07	541.08
3.8000	541.09	541.10	541.11	541.13	541.14
4.3000	541.15	541.16	541.18	541.19	541.20
4.8000	541.20	541.21	541.21	541.21	541.22
5.3000	541.22	541.22	541.23	541.23	541.23
5.8000	541.24	541.24	541.25	541.25	541.25
6.3000	541.26	541.26	541.27	541.27	541.28
6.8000	541.28	541.29	541.29	541.30	541.30
7.3000	541.31	541.31	541.32	541.32	541.33
7.8000	541.33	541.33	541.34	541.35	541.35
8.3000	541.36	541.37	541.38	541.40	541.40
8.8000	541.41	541.42	541.43	541.44	541.45
9.3000	541.45	541.46	541.46	541.47	541.47
9.8000	541.48	541.49	541.50	541.52	541.53
10.3000	541.55	541.57	541.59	541.61	541.62
10.8000	541.64	541.66	541.69	541.72	541.75
11.3000	541.79	541.83	541.86	541.96	542.16
11.8000	542.53	543.15	543.80	544.11	544.13
12.3000	544.03	543.82	543.54	543.22	542.91
12.8000	542.66	542.46	542.31	542.19	542.10
13.3000	542.02	541.95	541.89	541.85	541.81
13.8000	541.77	541.73	541.71	541.68	541.66
14.3000	541.65	541.64	541.63	541.62	541.61
14.8000	541.60	541.59	541.58	541.57	541.57
15.3000	541.56	541.55	541.54	541.54	541.53
15.8000	541.52	541.51	541.51	541.50	541.49
16.3000	541.49	541.48	541.48	541.47	541.47
16.8000	541.47	541.47	541.46	541.46	541.46
17.3000	541.45	541.45	541.45	541.45	541.44
17.8000	541.44	541.44	541.44	541.43	541.43
18.3000	541.43	541.42	541.42	541.42	541.42
18.8000	541.41	541.41	541.41	541.41	541.40
19.3000	541.40	541.39	541.39	541.39	541.38
19.8000	541.38	541.37	541.37	541.36	541.36
20.3000	541.36	541.36	541.36	541.35	541.35
20.8000	541.35	541.35	541.35	541.35	541.35
21.3000	541.35	541.35	541.35	541.35	541.34
21.8000	541.34	541.34	541.34	541.34	541.34
22.3000	541.34	541.34	541.34	541.34	541.34
22.8000	541.33	541.33	541.33	541.33	541.33
23.3000	541.33	541.33	541.33	541.33	541.33
23.8000	541.33	541.33	541.32	541.29	541.23
24.3000	541.20	541.13	541.08	541.04	541.02
24.8000	541.01	541.01	541.00	541.00	541.00

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .1000 hrs Time on left represents time for first value in each row.				
1.6000	541.00	541.00	541.01	541.01	541.02
2.1000	541.03	541.04	541.06	541.07	541.08
2.6000	541.10	541.11	541.13	541.16	541.18
3.1000	541.20	541.21	541.21	541.21	541.22
3.6000	541.22	541.23	541.23	541.24	541.24
4.1000	541.25	541.25	541.26	541.27	541.27
4.6000	541.28	541.29	541.29	541.30	541.31
5.1000	541.31	541.32	541.33	541.34	541.34
5.6000	541.35	541.36	541.36	541.37	541.38
6.1000	541.39	541.39	541.40	541.40	541.41
6.6000	541.41	541.42	541.42	541.43	541.43
7.1000	541.43	541.44	541.44	541.45	541.45
7.6000	541.46	541.46	541.47	541.47	541.48
8.1000	541.48	541.49	541.50	541.51	541.52
8.6000	541.53	541.54	541.56	541.57	541.59
9.1000	541.60	541.61	541.62	541.62	541.63
9.6000	541.63	541.64	541.65	541.66	541.67
10.1000	541.68	541.70	541.72	541.74	541.77
10.6000	541.79	541.81	541.84	541.86	541.89
11.1000	541.92	541.97	542.01	542.06	542.11
11.6000	542.24	542.53	543.06	543.98	544.98
12.1000	545.51	545.65	545.63	545.46	545.17
12.6000	544.80	544.40	543.99	543.58	543.20
13.1000	542.87	542.62	542.44	542.30	542.20
13.6000	542.12	542.06	542.01	541.96	541.92
14.1000	541.88	541.86	541.83	541.81	541.80
14.6000	541.78	541.76	541.75	541.74	541.73
15.1000	541.72	541.71	541.70	541.69	541.68
15.6000	541.67	541.66	541.66	541.65	541.64
16.1000	541.63	541.62	541.62	541.61	541.61
16.6000	541.60	541.60	541.59	541.58	541.58
17.1000	541.58	541.57	541.57	541.56	541.56
17.6000	541.56	541.55	541.55	541.54	541.54
18.1000	541.53	541.53	541.53	541.52	541.52
18.6000	541.51	541.51	541.51	541.50	541.50
19.1000	541.49	541.49	541.49	541.48	541.48
19.6000	541.47	541.47	541.47	541.46	541.46
20.1000	541.45	541.45	541.45	541.45	541.44
20.6000	541.44	541.44	541.44	541.44	541.44
21.1000	541.44	541.44	541.44	541.44	541.43
21.6000	541.43	541.43	541.43	541.43	541.43
22.1000	541.43	541.43	541.43	541.43	541.43
22.6000	541.43	541.42	541.42	541.42	541.42
23.1000	541.42	541.42	541.42	541.42	541.42
23.6000	541.42	541.42	541.42	541.41	541.41
24.1000	541.38	541.29	541.24	541.20	541.11
24.6000	541.06	541.04	541.02	541.01	541.01
25.1000	541.00	541.00			

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .1000 hrs Time on left represents time for first value in each row.				
1.5000	541.00	541.00	541.01	541.02	541.03
2.0000	541.04	541.06	541.07	541.08	541.10
2.5000	541.12	541.14	541.17	541.20	541.20
3.0000	541.21	541.22	541.22	541.23	541.23
3.5000	541.24	541.24	541.25	541.26	541.26
4.0000	541.27	541.28	541.28	541.29	541.30
4.5000	541.30	541.31	541.32	541.33	541.33
5.0000	541.34	541.35	541.36	541.37	541.37
5.5000	541.38	541.39	541.40	541.40	541.41
6.0000	541.41	541.42	541.42	541.43	541.43
6.5000	541.44	541.44	541.45	541.45	541.46
7.0000	541.46	541.47	541.47	541.48	541.48
7.5000	541.49	541.49	541.50	541.50	541.51
8.0000	541.51	541.52	541.52	541.53	541.54
8.5000	541.56	541.57	541.59	541.60	541.61
9.0000	541.62	541.63	541.64	541.65	541.66
9.5000	541.66	541.67	541.68	541.69	541.70
10.0000	541.71	541.73	541.75	541.77	541.79
10.5000	541.81	541.83	541.86	541.88	541.91
11.0000	541.95	541.98	542.02	542.07	542.12
11.5000	542.18	542.32	542.64	543.22	544.22
12.0000	545.31	545.89	546.05	546.03	545.86
12.5000	545.58	545.22	544.81	544.39	543.96
13.0000	543.55	543.17	542.85	542.61	542.43
13.5000	542.30	542.21	542.13	542.07	542.02
14.0000	541.98	541.94	541.90	541.88	541.86
14.5000	541.84	541.82	541.81	541.80	541.78
15.0000	541.77	541.76	541.75	541.74	541.73
15.5000	541.72	541.71	541.70	541.69	541.68
16.0000	541.67	541.66	541.65	541.64	541.64
16.5000	541.63	541.63	541.62	541.62	541.62
17.0000	541.61	541.61	541.61	541.60	541.60
17.5000	541.59	541.59	541.58	541.58	541.57
18.0000	541.57	541.56	541.56	541.56	541.55
18.5000	541.55	541.54	541.54	541.53	541.53
19.0000	541.52	541.52	541.52	541.51	541.51
19.5000	541.50	541.50	541.49	541.49	541.48
20.0000	541.48	541.48	541.47	541.47	541.47
20.5000	541.46	541.46	541.46	541.46	541.46
21.0000	541.46	541.46	541.46	541.46	541.46
21.5000	541.45	541.45	541.45	541.45	541.45
22.0000	541.45	541.45	541.45	541.45	541.45
22.5000	541.45	541.44	541.44	541.44	541.44
23.0000	541.44	541.44	541.44	541.44	541.44
23.5000	541.44	541.44	541.43	541.43	541.43
24.0000	541.43	541.41	541.31	541.25	541.21
24.5000	541.12	541.07	541.04	541.02	541.01
25.0000	541.01	541.00	541.00		

TIME vs. ELEVATION (ft)

Time hrs	Output Time increment = .1000 hrs Time on left represents time for first value in each row.				
1.2000	541.00	541.00	541.01	541.02	541.04
1.7000	541.06	541.08	541.10	541.12	541.15
2.2000	541.19	541.21	541.22	541.22	541.23
2.7000	541.24	541.25	541.26	541.27	541.28
3.2000	541.29	541.30	541.30	541.31	541.32
3.7000	541.33	541.34	541.35	541.36	541.37
4.2000	541.37	541.38	541.39	541.40	541.41
4.7000	541.41	541.42	541.42	541.43	541.44
5.2000	541.44	541.45	541.45	541.46	541.47
5.7000	541.47	541.48	541.49	541.49	541.50
6.2000	541.51	541.51	541.52	541.52	541.53
6.7000	541.54	541.54	541.55	541.56	541.56
7.2000	541.57	541.57	541.58	541.59	541.59
7.7000	541.60	541.60	541.61	541.61	541.61
8.2000	541.62	541.63	541.64	541.65	541.66
8.7000	541.68	541.69	541.71	541.72	541.74
9.2000	541.75	541.76	541.77	541.78	541.79
9.7000	541.80	541.81	541.82	541.83	541.84
10.2000	541.86	541.88	541.91	541.93	541.96
10.7000	541.99	542.02	542.06	542.09	542.13
11.2000	542.18	542.24	542.31	542.38	542.54
11.7000	542.93	543.66	544.92	546.23	546.87
12.2000	546.99	546.91	546.68	546.36	545.99
12.7000	545.61	545.19	544.77	544.33	543.91
13.2000	543.52	543.15	542.85	542.63	542.47
13.7000	542.35	542.26	542.19	542.13	542.08
14.2000	542.04	542.01	541.98	541.96	541.94
14.7000	541.92	541.90	541.89	541.88	541.87
15.2000	541.85	541.84	541.83	541.82	541.81
15.7000	541.80	541.79	541.78	541.76	541.75
16.2000	541.74	541.73	541.72	541.72	541.71
16.7000	541.70	541.70	541.69	541.69	541.69
17.2000	541.68	541.68	541.67	541.67	541.66
17.7000	541.66	541.66	541.65	541.65	541.64
18.2000	541.64	541.63	541.63	541.63	541.62
18.7000	541.62	541.61	541.61	541.60	541.60
19.2000	541.59	541.59	541.58	541.57	541.57
19.7000	541.56	541.56	541.55	541.55	541.54
20.2000	541.54	541.53	541.53	541.53	541.53
20.7000	541.52	541.52	541.52	541.52	541.52
21.2000	541.52	541.52	541.52	541.51	541.51
21.7000	541.51	541.51	541.51	541.51	541.51
22.2000	541.51	541.50	541.50	541.50	541.50
22.7000	541.50	541.50	541.50	541.50	541.50
23.2000	541.49	541.49	541.49	541.49	541.49
23.7000	541.49	541.49	541.49	541.49	541.45
24.2000	541.39	541.28	541.23	541.16	541.09
24.7000	541.05	541.03	541.02	541.01	541.00
25.2000	541.00	541.00			

File.... J:\06753\PONDPACK\AREA1-DEV.PPW
Title... DRY DETENTION BASIN

POND VOLUME CALCULATIONS

Planimeter scale: 1.00 ft/in

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume Sum (ac-ft)
541.00	.000	.0000	.0000	.000	.000
542.00	8680.000	.1993	.1993	.066	.066
544.00	12272.000	.2817	.7179	.479	.545
549.00	22280.000	.5115	1.1728	1.955	2.500

POND VOLUME EQUATIONS

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

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

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

File.... J:\0675B\PONDPACK\AREA1-DEV.PPW
Title... DRY BASIN OUTLET CONTROL STRUCTURE

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 541.00 ft
Increment = .20 ft
Max. Elev.= 549.00 ft

****
OUTLET CONNECTIVITY
****

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

Structure	No.		Outfall	E1, ft	E2, ft
Inlet Box	48	--->	TW	547.000	549.000
Weir-Rectangular	2W	--->	TW	545.700	549.000
Orifice-Circular	OR	--->	TW	541.000	549.000

TW SETUP, DS Channel

File.... J:\0675B\PONDPACK\AREA1-DEV.PPW
Title... DRY BASIN OUTLET CONTROL STRUCTURE

OUTLET STRUCTURE INPUT DATA

Structure ID	= 48	
Structure Type	= Inlet Box	
# of Openings	= 1	
Invert Elev.	= 547.00	ft
Orifice Area	= 12.5700	sq.ft
Orifice Coeff.	= .600	
Weir Length	= 10.56	ft
Weir Coeff.	= 3.330	
K, Submerged	= .000	
K, Reverse	= 1.000	
Kb,Barrel	= .000000	(per ft of full flow)
Barrel Length	= .00	ft
Mannings n	= .0000	

Structure ID	= 2W	
Structure Type	= Weir-Rectangular	
# of Openings	= 1	
Crest Elev.	= 545.70	ft
Weir Length	= 2.00	ft
Weir Coeff.	= 3.330000	

Weir TW effects (Use adjustment equation)

Structure ID	= OR	
Structure Type	= Orifice-Circular	
# of Openings	= 1	
Invert Elev.	= 541.00	ft
Diameter	= 2.0000	ft
Orifice Coeff.	= .600	

File.... J:\0675B\PONDPACK\AREA1-DEV.PPW
Title... DRY BASIN OUTLET CONTROL STRUCTURE

OUTLET STRUCTURE INPUT DATA

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

FREE OUTFALL CONDITIONS SPECIFIED

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

File.... J:\C675B\PONDPACK\AREA1-DEV.PPW
Title... DRY BASIN OUTLET CONTROL STRUCTURE

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
541.00	.00	Free Outfall		None contributing
541.20	.19	Free Outfall		OR
541.40	.75	Free Outfall		OR
541.60	1.65	Free Outfall		OR
541.80	2.85	Free Outfall		OR
542.00	4.33	Free Outfall		OR
542.20	6.04	Free Outfall		OR
542.40	7.97	Free Outfall		OR
542.60	10.07	Free Outfall		OR
542.80	12.29	Free Outfall		OR
543.00	15.12	Free Outfall		OR
543.20	16.56	Free Outfall		OR
543.40	17.89	Free Outfall		OR
543.60	19.13	Free Outfall		OR
543.80	20.29	Free Outfall		OR
544.00	21.38	Free Outfall		OR
544.20	22.43	Free Outfall		OR
544.40	23.42	Free Outfall		OR
544.60	24.38	Free Outfall		OR
544.80	25.30	Free Outfall		OR
545.00	26.19	Free Outfall		OR
545.20	27.05	Free Outfall		OR
545.40	27.88	Free Outfall		OR
545.60	28.69	Free Outfall		OR
545.70	29.09	Free Outfall		2W +OR
545.80	29.69	Free Outfall		2W +OR
546.00	31.34	Free Outfall		2W +OR
546.20	33.34	Free Outfall		2W +OR
546.40	35.62	Free Outfall		2W +OR
546.60	38.12	Free Outfall		2W +OR
546.80	40.81	Free Outfall		2W +OR
547.00	43.68	Free Outfall		48 +2W +OR
547.20	49.86	Free Outfall		48 +2W +OR
547.40	58.80	Free Outfall		48 +2W +OR
547.60	69.57	Free Outfall		48 +2W +OR
547.80	81.84	Free Outfall		48 +2W +OR
548.00	95.43	Free Outfall		48 +2W +OR
548.20	110.20	Free Outfall		48 +2W +OR
548.40	126.05	Free Outfall		48 +2W +OR
548.60	142.90	Free Outfall		48 +2W +OR
548.80	156.95	Free Outfall		48 +2W +OR
549.00	165.49	Free Outfall		48 +2W +OR

LEVEL POOL ROUTING DATA

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev..2
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev..2

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	541.00 ft
Starting Volume	=	.000 ac-ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.1000 hrs

Elevation ft	Outflow cfs	Storage ac-ft	Area acres	Infilt. cfs	Q Total cfs	2S/t + O cfs
541.00	.00	.000	.0000	.00	.00	.00
541.20	.19	.001	.0080	.00	.19	.32
541.40	.75	.004	.0319	.00	.75	1.78
541.60	1.65	.014	.0717	.00	1.65	5.12
541.80	2.85	.034	.1275	.00	2.85	11.08
542.00	4.33	.066	.1993	.00	4.33	20.40
542.20	6.04	.107	.2069	.00	6.04	31.94
542.40	7.97	.149	.2146	.00	7.97	44.08
542.60	10.07	.193	.2225	.00	10.07	56.75
542.80	12.29	.238	.2305	.00	12.29	69.93
543.00	15.12	.285	.2387	.00	15.12	84.12
543.20	16.56	.334	.2470	.00	16.56	97.32
543.40	17.89	.384	.2555	.00	17.89	110.81
543.60	19.13	.436	.2641	.00	19.13	124.61
543.80	20.29	.490	.2728	.00	20.29	138.77
544.00	21.38	.545	.2817	.00	21.38	153.28
544.20	22.43	.602	.2896	.00	22.43	168.15
544.40	23.42	.661	.2976	.00	23.42	183.36
544.60	24.38	.721	.3057	.00	24.38	198.91
544.80	25.30	.783	.3139	.00	25.30	214.83
545.00	26.19	.847	.3222	.00	26.19	231.11
545.20	27.05	.912	.3307	.00	27.05	247.77
545.40	27.88	.979	.3392	.00	27.88	264.82

LEVEL POOL ROUTING DATA

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev..2
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev..2

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev = 541.00 ft
Starting Volume = .000 ac-ft
Starting Outflow = .00 cfs
Starting Infiltr. = .00 cfs
Starting Total Qout= .00 cfs
Time Increment = .1000 hrs

Elevation ft	Outflow cfs	Storage ac-ft	Area acres	Infilt. cfs	Q Total cfs	2S/t + O cfs
545.60	28.69	1.048	.3478	.00	28.69	282.25
545.70	29.09	1.083	.3522	.00	29.09	291.12
545.80	29.69	1.118	.3566	.00	29.69	300.29
546.00	31.34	1.190	.3655	.00	31.34	319.42
546.20	33.34	1.264	.3744	.00	33.34	339.33
546.40	35.62	1.340	.3835	.00	35.62	359.95
546.60	38.12	1.418	.3927	.00	38.12	381.23
546.80	40.81	1.497	.4020	.00	40.81	403.15
547.00	43.68	1.579	.4114	.00	43.68	425.71
547.20	49.86	1.662	.4209	.00	49.86	452.03
547.40	58.80	1.747	.4306	.00	58.80	481.58
547.60	69.57	1.834	.4403	.00	69.57	513.41
547.80	81.84	1.923	.4501	.00	81.84	547.24
548.00	95.43	2.014	.4601	.00	95.43	582.86
548.20	110.20	2.107	.4701	.00	110.20	620.14
548.40	126.05	2.202	.4803	.00	126.05	658.99
548.60	142.90	2.299	.4906	.00	142.90	699.33
548.80	156.95	2.398	.5010	.00	156.95	737.38
549.00	165.49	2.500	.5115	.00	165.49	770.42

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DRY BASIN IN

HYG Directory: J:\0675B\PONDPACK\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
64K AREAII-DEV	64K AREA II	AREA1-DE.HYG	64K AREA II	Dev..2
RUSTIQUE	RUSTIQUE	AREA1-DE.HYG	RUSTIQUE	Dev..2

INFLOWS TO: DRY BASIN IN

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
AREA1-DE.HYG	64K AREA II	Dev..2	1.721	11.9000	30.26
AREA1-DE.HYG	RUSTIQUE	Dev..2	1.662	12.1000	17.01

TOTAL FLOW INTO: DRY BASIN IN

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
AREA1-DE.HYG	DRY BASIN IN	Dev..2	3.383	11.9000	38.96

TOTAL NODE INFLOW...
HYG file = J:\0675B\PONDPACK\AREA1-DE.HYG
HYG ID = DRY BASIN IN
HYG Tag = Dev..2

Peak Discharge =	38.96 cfs
Time to Peak =	11.9000 hrs
HYG Volume =	3.383 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
2.3000	.00	.00	.00	.01	.01
2.8000	.02	.02	.03	.03	.04
3.3000	.05	.05	.06	.06	.07
3.8000	.08	.09	.10	.11	.12
4.3000	.13	.14	.15	.16	.17
4.8000	.18	.19	.21	.22	.23
5.3000	.24	.25	.27	.28	.29
5.8000	.30	.32	.33	.34	.35
6.3000	.37	.38	.39	.41	.42
6.8000	.43	.45	.46	.47	.49
7.3000	.50	.51	.53	.54	.55
7.8000	.57	.58	.59	.61	.64
8.3000	.67	.70	.74	.77	.81
8.8000	.85	.89	.94	.97	1.00
9.3000	1.03	1.04	1.06	1.08	1.12
9.8000	1.17	1.23	1.29	1.36	1.45
10.3000	1.54	1.63	1.73	1.85	1.99
10.8000	2.14	2.31	2.48	2.70	3.01
11.3000	3.35	3.73	4.15	6.74	12.54
11.8000	21.35	38.96	38.52	24.72	20.60
12.3000	16.16	11.93	8.87	6.87	5.63
12.8000	4.77	4.15	3.69	3.35	3.09
13.3000	2.87	2.69	2.54	2.41	2.29
13.8000	2.18	2.08	1.98	1.89	1.83
14.3000	1.78	1.73	1.69	1.65	1.62
14.8000	1.58	1.55	1.51	1.48	1.45
15.3000	1.41	1.38	1.35	1.31	1.28
15.8000	1.24	1.21	1.18	1.15	1.13
16.3000	1.11	1.09	1.08	1.06	1.05
16.8000	1.04	1.03	1.01	1.00	.99
17.3000	.98	.97	.96	.94	.93
17.8000	.92	.91	.89	.88	.87
18.3000	.86	.85	.84	.82	.81

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DRY BASIN IN

HYG Directory: J:\0675B\PONDPACK\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
64K AREAII-DEV	64K AREA II	AREA1-DE.HYG	64K AREA II	Dev.15
RUSTIQUE	RUSTIQUE	AREA1-DE.HYG	RUSTIQUE	Dev.15

INFLOWS TO: DRY BASIN IN

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
AREA1-DE.HYG	64K AREA II	Dev.15	2.765	11.9000	47.44
AREA1-DE.HYG	RUSTIQUE	Dev.15	2.582	12.1000	25.87

TOTAL FLOW INTO: DRY BASIN IN

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
AREA1-DE.HYG	DRY BASIN IN	Dev.15	5.347	11.9000	60.84

TOTAL NODE INFLOW...
HYG file = J:\0675B\PONDPACK\AREA1-DE.HYG
HYG ID = DRY BASIN IN
HYG Tag = Dev.15

Peak Discharge =	60.84 cfs
Time to Peak =	11.9000 hrs
HYG Volume =	5.347 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.6000	.00	.00	.01	.01	.02
2.1000	.03	.04	.05	.06	.07
2.6000	.08	.10	.12	.13	.15
3.1000	.17	.19	.20	.22	.24
3.6000	.26	.27	.29	.31	.32
4.1000	.34	.36	.38	.39	.41
4.6000	.43	.45	.47	.49	.51
5.1000	.53	.55	.57	.59	.61
5.6000	.63	.65	.67	.69	.71
6.1000	.73	.75	.77	.79	.81
6.6000	.83	.85	.87	.89	.91
7.1000	.93	.95	.97	1.00	1.02
7.6000	1.04	1.06	1.08	1.10	1.12
8.1000	1.15	1.19	1.24	1.29	1.35
8.6000	1.41	1.48	1.55	1.61	1.68
9.1000	1.74	1.78	1.81	1.84	1.86
9.6000	1.90	1.96	2.04	2.13	2.23
10.1000	2.34	2.48	2.62	2.78	2.94
10.6000	3.13	3.35	3.59	3.85	4.12
11.1000	4.48	4.96	5.50	6.10	6.75
11.6000	10.96	20.24	33.92	60.84	59.32
12.1000	37.73	31.32	24.53	18.10	13.44
12.6000	10.41	8.52	7.22	6.28	5.58
13.1000	5.06	4.67	4.34	4.07	3.84
13.6000	3.64	3.46	3.29	3.14	2.98
14.1000	2.86	2.76	2.68	2.61	2.55
14.6000	2.49	2.44	2.39	2.34	2.28
15.1000	2.23	2.18	2.13	2.08	2.03
15.6000	1.98	1.93	1.88	1.83	1.77
16.1000	1.73	1.70	1.67	1.65	1.63
16.6000	1.60	1.59	1.57	1.55	1.53
17.1000	1.51	1.49	1.48	1.46	1.44
17.6000	1.42	1.40	1.38	1.37	1.35

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DRY BASIN IN

HYG Directory: J:\0675B\PONDPACK\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
64K AREAII-DEV	64K AREA II	AREA1-DE.HYG	64K AREA II	Dev.25
RUSTIQUE	RUSTIQUE	AREA1-DE.HYG	RUSTIQUE	Dev.25

INFLOWS TO: DRY BASIN IN

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
AREA1-DE.HYG	64K AREA II	Dev.25	3.075	11.9000	52.45
AREA1-DE.HYG	RUSTIQUE	Dev.25	2.853	12.1000	28.46

TOTAL FLOW INTO: DRY BASIN IN

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
AREA1-DE.HYG	DRY BASIN IN	Dev.25	5.928	11.9000	67.22

TOTAL NODE INFLOW...
HYG file = J:\0675B\PONDPACK\AREA1-DE.HYG
HYG ID = DRY BASIN IN
HYG Tag = Dev.25

Peak Discharge =	67.22 cfs
Time to Peak =	11.9000 hrs
HYG Volume =	5.928 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.5000	.00	.00	.01	.02	.03
2.0000	.04	.05	.06	.07	.09
2.5000	.10	.13	.15	.17	.19
3.0000	.21	.23	.25	.27	.29
3.5000	.31	.33	.35	.36	.38
4.0000	.40	.42	.44	.46	.48
4.5000	.50	.52	.54	.57	.59
5.0000	.61	.63	.65	.68	.70
5.5000	.72	.74	.76	.79	.81
6.0000	.83	.85	.88	.90	.92
6.5000	.94	.97	.99	1.01	1.03
7.0000	1.05	1.08	1.10	1.12	1.14
7.5000	1.17	1.19	1.21	1.23	1.25
8.0000	1.28	1.31	1.35	1.41	1.47
8.5000	1.54	1.61	1.68	1.75	1.83
9.0000	1.91	1.97	2.01	2.05	2.08
9.5000	2.10	2.14	2.21	2.30	2.40
10.0000	2.50	2.63	2.78	2.94	3.11
10.5000	3.29	3.50	3.75	4.02	4.30
11.0000	4.60	5.00	5.53	6.13	6.79
11.5000	7.51	12.20	22.49	37.59	67.22
12.0000	65.39	41.53	34.45	26.98	19.90
12.5000	14.78	11.44	9.36	7.93	6.91
13.0000	6.13	5.56	5.13	4.77	4.48
13.5000	4.23	4.00	3.80	3.62	3.45
14.0000	3.28	3.14	3.03	2.95	2.87
14.5000	2.80	2.74	2.68	2.62	2.57
15.0000	2.51	2.45	2.40	2.34	2.28
15.5000	2.23	2.17	2.12	2.06	2.01
16.0000	1.95	1.90	1.87	1.84	1.81
16.5000	1.79	1.76	1.74	1.72	1.70
17.0000	1.68	1.66	1.64	1.62	1.60
17.5000	1.58	1.56	1.54	1.52	1.50

SUMMARY FOR HYDROGRAPH ADDITION
at Node: DRY BASIN IN

HYG Directory: J:\0675B\PONDPACK\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
64K AREAII-DEV	64K AREA II	AREA1-DE.HYG	64K AREA II	Dev100
RUSTIQUE	RUSTIQUE	AREA1-DE.HYG	RUSTIQUE	Dev100

INFLOWS TO: DRY BASIN IN

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
AREA1-DE.HYG	64K AREA II	Dev100	4.007	11.9000	67.39
AREA1-DE.HYG	RUSTIQUE	Dev100	3.669	12.1000	36.21

TOTAL FLOW INTO: DRY BASIN IN

HYG file	HYG ID	HYG tag	Volume ac-ft	Peak Time hrs	Peak Flow cfs
AREA1-DE.HYG	DRY BASIN IN	Dev100	7.676	11.9000	86.25

TOTAL NODE INFLOW...
HYG file = J:\0675B\PONDPACK\AREA1-DE.HYG
HYG ID = DRY BASIN IN
HYG Tag = Dev100

Peak Discharge =	86.25 cfs
Time to Peak =	11.9000 hrs
HYG Volume =	7.676 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.2000	.00	.00	.01	.02	.04
1.7000	.05	.07	.09	.11	.14
2.2000	.17	.20	.23	.26	.29
2.7000	.32	.35	.37	.40	.43
3.2000	.45	.48	.51	.53	.56
3.7000	.58	.60	.63	.65	.68
4.2000	.70	.73	.76	.78	.81
4.7000	.84	.87	.90	.92	.95
5.2000	.98	1.01	1.04	1.07	1.09
5.7000	1.12	1.15	1.18	1.21	1.23
6.2000	1.26	1.29	1.32	1.35	1.37
6.7000	1.40	1.43	1.46	1.49	1.51
7.2000	1.54	1.57	1.59	1.62	1.65
7.7000	1.68	1.70	1.73	1.76	1.80
8.2000	1.86	1.93	2.01	2.10	2.19
8.7000	2.29	2.38	2.48	2.58	2.66
9.2000	2.72	2.76	2.79	2.81	2.86
9.7000	2.95	3.07	3.20	3.34	3.50
10.2000	3.70	3.91	4.13	4.36	4.62
10.7000	4.94	5.29	5.65	6.04	6.55
11.2000	7.24	8.02	8.86	9.79	15.89
11.7000	29.19	48.53	86.25	83.51	52.89
12.2000	43.82	34.29	25.29	18.77	14.54
12.7000	11.89	10.08	8.77	7.79	7.07
13.2000	6.51	6.06	5.68	5.36	5.08
13.7000	4.83	4.60	4.37	4.16	3.99
14.2000	3.85	3.74	3.64	3.56	3.48
14.7000	3.40	3.33	3.26	3.18	3.11
15.2000	3.04	2.97	2.90	2.83	2.76
15.7000	2.69	2.61	2.55	2.47	2.41
16.2000	2.37	2.33	2.29	2.27	2.24
16.7000	2.21	2.18	2.16	2.13	2.11
17.2000	2.08	2.06	2.03	2.01	1.98

LEVEL POOL ROUTING SUMMARY

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev..2
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev..2

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	541.00 ft
Starting Volume	=	.000 ac-ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.1000 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	38.96 cfs	at	11.9000 hrs
Peak Outflow	=	22.06 cfs	at	12.2000 hrs
Peak Elevation	=	544.13 ft		
Peak Storage	=	.582 ac-ft		

MASS BALANCE (ac-ft)

+ Initial Vol	=	.000
+ HYG Vol IN	=	3.383
- Infiltration	=	.000
- HYG Vol OUT	=	3.383
- Retained Vol	=	.000
Unrouted Vol	=	-.000 ac-ft (.000% of Inflow Volume)

DETENTION TIMES SUMMARY

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev..2
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev..2

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

APPROXIMATE DETENTION TIME

Tp, Outflow + Infilt.	=	12.2000 hrs	
Tp, Total Inflow	=	11.9000 hrs	
Peak to Peak	=	.3000 hrs	
Qout+Infilt. Centroid	=	13.2598 hrs	
Inflow Centroid	=	13.0655 hrs	
Centroid to Centroid	=	.1943 hrs	
Weighted Avg. Plug Time	=	.2018 hrs	
Max.Plug Vol. Plug Time	=	.2742 hrs	
Max.Inflow Plug Volume	=	.320 ac-ft	(From 11.9000 to 12.0000 hrs)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file = J:\0675B\PONDPACK\AREA1-DE.HYG
HYG ID = DRY BASIN OUT
HYG Tag = Dev..2

Peak Discharge =	22.06 cfs
Time to Peak =	12.2000 hrs
HYG Volume =	3.383 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
2.3000	.00	.00	.00	.01	.01
2.8000	.02	.02	.03	.03	.04
3.3000	.04	.05	.05	.06	.06
3.8000	.07	.08	.09	.10	.11
4.3000	.12	.13	.14	.15	.16
4.8000	.18	.19	.20	.21	.22
5.3000	.23	.25	.26	.27	.28
5.8000	.30	.31	.32	.33	.34
6.3000	.36	.37	.38	.40	.41
6.8000	.42	.44	.45	.46	.48
7.3000	.49	.50	.52	.53	.54
7.8000	.56	.57	.58	.60	.62
8.3000	.64	.67	.71	.74	.77
8.8000	.80	.84	.88	.92	.96
9.3000	.99	1.01	1.03	1.05	1.08
9.8000	1.12	1.16	1.21	1.27	1.34
10.3000	1.42	1.51	1.60	1.69	1.78
10.8000	1.90	2.03	2.18	2.34	2.55
11.3000	2.80	3.05	3.33	4.00	5.69
11.8000	9.30	16.18	20.30	21.96	22.06
12.3000	21.54	20.42	18.76	16.70	13.86
12.8000	10.70	8.63	7.10	5.96	5.15
13.3000	4.50	3.97	3.54	3.20	2.93
13.8000	2.67	2.45	2.28	2.14	2.03
14.3000	1.94	1.86	1.80	1.75	1.70
14.8000	1.66	1.61	1.57	1.53	1.49
15.3000	1.46	1.43	1.39	1.36	1.32
15.8000	1.29	1.26	1.22	1.19	1.16
16.3000	1.14	1.12	1.10	1.08	1.07
16.8000	1.06	1.04	1.03	1.02	1.01
17.3000	1.00	.98	.97	.96	.95
17.8000	.94	.92	.91	.90	.89
18.3000	.88	.86	.85	.84	.83

LEVEL POOL ROUTING SUMMARY

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev.15
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev.15

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	541.00 ft
Starting Volume	=	.000 ac-ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.1000 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	60.84 cfs	at	11.9000 hrs
Peak Outflow	=	28.88 cfs	at	12.2000 hrs
Peak Elevation	=	545.65 ft		
Peak Storage	=	1.065 ac-ft		

MASS BALANCE (ac-ft)

+ Initial Vol	=	.000
+ HYG Vol IN	=	5.347
- Infiltration	=	.000
- HYG Vol OUT	=	5.347
- Retained Vol	=	.000
Unrouted Vol	=	-.000 ac-ft (.000% of Inflow Volume)

DETENTION TIMES SUMMARY

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev.15
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev.15

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

APPROXIMATE DETENTION TIME

Tp, Outflow + Infilt.	=	12.2000 hrs
Tp, Total Inflow	=	11.9000 hrs
Peak to Peak	=	.3000 hrs
Qout+Infilt. Centroid	=	13.1231 hrs
Inflow Centroid	=	12.8734 hrs
Centroid to Centroid	=	.2498 hrs
Weighted Avg. Plug Time	=	.2607 hrs
Max.Plug Vol. Plug Time	=	.3596 hrs
Max.Inflow Plug Volume	=	.497 ac-ft (From 11.9000 to 12.0000 hrs)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file = J:\0675B\PONDPACK\AREA1-DE.HYG
HYG ID = DRY BASIN OUT
HYG Tag = Dev.15

Peak Discharge =	28.88 cfs
Time to Peak =	12.2000 hrs
HYG Volume =	5.347 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.6000	.00	.00	.00	.01	.02
2.1000	.03	.04	.05	.06	.07
2.6000	.08	.09	.11	.12	.14
3.1000	.16	.18	.20	.21	.23
3.6000	.25	.26	.28	.30	.31
4.1000	.33	.34	.36	.38	.40
4.6000	.42	.44	.45	.47	.49
5.1000	.51	.53	.55	.57	.59
5.6000	.61	.63	.65	.67	.69
6.1000	.71	.73	.75	.77	.79
6.6000	.81	.83	.85	.87	.89
7.1000	.91	.93	.95	.97	.99
7.6000	1.01	1.03	1.05	1.07	1.09
8.1000	1.11	1.14	1.18	1.22	1.28
8.6000	1.33	1.39	1.46	1.52	1.59
9.1000	1.65	1.70	1.74	1.77	1.80
9.6000	1.83	1.87	1.92	1.99	2.06
10.1000	2.15	2.26	2.38	2.51	2.65
10.6000	2.80	2.95	3.11	3.31	3.52
11.1000	3.77	4.07	4.43	4.84	5.31
11.6000	6.38	9.37	15.54	21.26	26.09
12.1000	28.31	28.88	28.80	28.11	26.91
12.6000	25.31	23.42	21.30	18.99	16.53
13.1000	13.22	10.26	8.35	7.02	6.04
13.6000	5.36	4.82	4.39	4.02	3.72
14.1000	3.47	3.26	3.09	2.95	2.83
14.6000	2.70	2.61	2.53	2.46	2.40
15.1000	2.34	2.29	2.23	2.18	2.13
15.6000	2.08	2.03	1.98	1.93	1.88
16.1000	1.83	1.78	1.74	1.71	1.68
16.6000	1.65	1.62	1.60	1.58	1.56
17.1000	1.54	1.52	1.50	1.48	1.46
17.6000	1.45	1.43	1.41	1.39	1.37

LEVEL POOL ROUTING SUMMARY

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev.25
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev.25

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	541.00 ft
Starting Volume	=	.000 ac-ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.1000 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	67.22 cfs	at	11.9000 hrs
Peak Outflow	=	31.83 cfs	at	12.2000 hrs
Peak Elevation	=	546.05 ft		
Peak Storage	=	1.208 ac-ft		

MASS BALANCE (ac-ft)

+ Initial Vol	=	.000
+ HYG Vol IN	=	5.928
- Infiltration	=	.000
- HYG Vol OUT	=	5.928
- Retained Vol	=	.000
Unrouted Vol	=	-.000 ac-ft (.000% of Inflow Volume)

DETENTION TIMES SUMMARY

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev.25
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev.25

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

APPROXIMATE DETENTION TIME

Tp, Outflow + Infilt.	=	12.2000 hrs	
Tp, Total Inflow	=	11.9000 hrs	
Peak to Peak	=	.3000 hrs	
Qout+Infilt. Centroid	=	13.0957 hrs	
Inflow Centroid	=	12.8325 hrs	
Centroid to Centroid	=	.2631 hrs	
Weighted Avg. Plug Time	=	.2749 hrs	
Max.Plug Vol. Plug Time	=	.3747 hrs	
Max.Inflow Plug Volume	=	.548 ac-ft	(From 11.9000 to 12.0000 hrs)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file = J:\0675B\PONDPACK\AREA1-DE.HYG
HYG ID = DRY BASIN OUT
HYG Tag = Dev.25

Peak Discharge =	31.83 cfs
Time to Peak =	12.2000 hrs
HYG Volume =	5.928 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.5000	.00	.00	.01	.01	.02
2.0000	.03	.04	.06	.07	.08
2.5000	.09	.11	.14	.16	.18
3.0000	.20	.22	.24	.26	.28
3.5000	.30	.31	.33	.35	.37
4.0000	.39	.40	.42	.44	.46
4.5000	.48	.51	.53	.55	.57
5.0000	.59	.61	.64	.66	.68
5.5000	.70	.72	.75	.76	.78
6.0000	.80	.82	.85	.87	.89
6.5000	.91	.93	.96	.98	1.00
7.0000	1.02	1.05	1.07	1.09	1.11
7.5000	1.14	1.16	1.18	1.20	1.22
8.0000	1.25	1.27	1.30	1.35	1.40
8.5000	1.45	1.52	1.59	1.65	1.71
9.0000	1.77	1.84	1.90	1.95	2.00
9.5000	2.03	2.07	2.11	2.17	2.24
10.0000	2.32	2.42	2.54	2.67	2.82
10.5000	2.95	3.09	3.26	3.46	3.68
11.0000	3.92	4.20	4.52	4.91	5.37
11.5000	5.90	7.15	10.50	16.67	22.54
12.0000	27.52	30.46	31.83	31.61	30.16
12.5000	28.59	27.12	25.35	23.36	21.17
13.0000	18.82	16.33	12.95	10.15	8.32
13.5000	7.04	6.11	5.45	4.93	4.52
14.0000	4.17	3.86	3.62	3.42	3.26
14.5000	3.12	3.01	2.92	2.83	2.73
15.0000	2.65	2.58	2.52	2.46	2.40
15.5000	2.34	2.29	2.23	2.17	2.12
16.0000	2.06	2.01	1.96	1.91	1.88
16.5000	1.85	1.82	1.79	1.77	1.74
17.0000	1.72	1.70	1.68	1.66	1.64
17.5000	1.61	1.59	1.57	1.55	1.53

LEVEL POOL ROUTING SUMMARY

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev100
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev100

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	541.00 ft
Starting Volume	=	.000 ac-ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	.1000 hrs

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	86.25 cfs	at	11.9000 hrs
Peak Outflow	=	43.53 cfs	at	12.2000 hrs
Peak Elevation	=	546.99 ft		
Peak Storage	=	1.574 ac-ft		

MASS BALANCE (ac-ft)

+ Initial Vol	=	.000
+ HYG Vol IN	=	7.676
- Infiltration	=	.000
- HYG Vol OUT	=	7.676
- Retained Vol	=	.000
Unrouted Vol	=	-.000 ac-ft (.000% of Inflow Volume)

DETENTION TIMES SUMMARY

HYG Dir = J:\0675B\PONDPACK\
Inflow HYG file = AREA1-DE.HYG - DRY BASIN IN Dev100
Outflow HYG file = AREA1-DE.HYG - DRY BASIN OUT Dev100

Pond Node Data = DRY BASIN
Pond Volume Data = DRY BASIN
Pond Outlet Data = DRY BASIN OUTLET

No Infiltration

APPROXIMATE DETENTION TIME

Tp, Outflow + Infilt.	=	12.2000 hrs
Tp, Total Inflow	=	11.9000 hrs
Peak to Peak	=	.3000 hrs
Qout+Infilt. Centroid	=	13.0162 hrs
Inflow Centroid	=	12.7352 hrs
Centroid to Centroid	=	.2810 hrs
Weighted Avg. Plug Time	=	.2934 hrs
Max.Plug Vol. Plug Time	=	.3759 hrs
Max.Inflow Plug Volume	=	.701 ac-ft (From 11.9000 to 12.0000 hrs)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file = J:\0675B\PONDPACK\AREA1-DE.HYG
HYG ID = DRY BASIN OUT
HYG Tag = Dev100

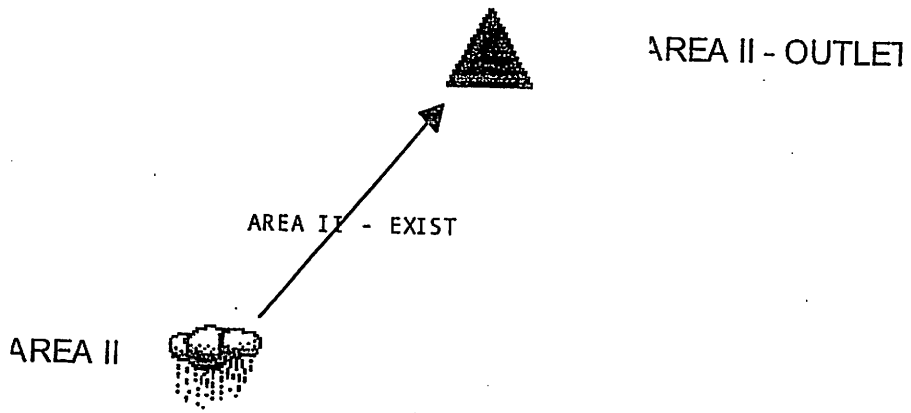
Peak Discharge =	43.53 cfs
Time to Peak =	12.2000 hrs
HYG Volume =	7.676 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
1.2000	.00	.00	.01	.02	.03
1.7000	.04	.06	.08	.10	.12
2.2000	.15	.19	.22	.25	.28
2.7000	.30	.33	.35	.38	.41
3.2000	.43	.46	.49	.51	.54
3.7000	.56	.59	.61	.63	.66
4.2000	.68	.71	.73	.76	.78
4.7000	.80	.83	.86	.89	.91
5.2000	.94	.97	1.00	1.03	1.05
5.7000	1.08	1.11	1.14	1.17	1.20
6.2000	1.22	1.25	1.28	1.31	1.34
6.7000	1.36	1.39	1.42	1.45	1.47
7.2000	1.50	1.53	1.56	1.58	1.61
7.7000	1.64	1.66	1.68	1.71	1.74
8.2000	1.77	1.82	1.88	1.95	2.03
8.7000	2.12	2.20	2.30	2.39	2.48
9.2000	2.57	2.64	2.69	2.74	2.78
9.7000	2.83	2.89	2.97	3.06	3.18
10.2000	3.31	3.47	3.64	3.83	4.04
10.7000	4.28	4.53	4.81	5.12	5.47
11.2000	5.89	6.43	7.07	7.79	9.45
11.7000	14.14	19.46	25.83	33.70	41.89
12.2000	43.53	42.39	39.24	35.18	31.29
12.7000	28.71	27.03	25.14	23.10	20.91
13.2000	18.61	16.22	12.99	10.37	8.66
13.7000	7.45	6.58	5.92	5.43	5.03
14.2000	4.70	4.43	4.20	4.01	3.86
14.7000	3.72	3.61	3.51	3.42	3.33
15.2000	3.25	3.17	3.10	3.02	2.95
15.7000	2.88	2.79	2.71	2.63	2.55
16.2000	2.49	2.43	2.38	2.34	2.30
16.7000	2.27	2.24	2.21	2.19	2.16
17.2000	2.13	2.11	2.08	2.06	2.03

P.O.I. #2

Ex.


AREA II - OUTLET
AREA II - EXIST
AREA II

MASTER DESIGN STORM SUMMARY

Default Network Design Storm File, ID PERSIMON.RNQ PERSIMMON

Return Event	Total Depth in	Rainfall Type	RNF File	RNF ID
Pre..2	3.5000	Synthetic Curve	SCSTYPES	TypeII 24hr
Pre.15	5.2000	Synthetic Curve	SCSTYPES	TypeII 24hr
Pre.25	5.7000	Synthetic Curve	SCSTYPES	TypeII 24hr
Pre100	7.2000	Synthetic Curve	SCSTYPES	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

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

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
AREA II	AREA	2	.462		12.2000	4.48		
AREA II	AREA	15	1.019		12.2000	10.62		
AREA II	AREA	25	1.201		12.2000	12.60		
AREA II	AREA	100	1.781		12.2000	18.82		
*AREA II - OUTLET JCT		2	.462		12.2000	4.48		
*AREA II - OUTLET JCT		15	1.019		12.2000	10.62		
*AREA II - OUTLET JCT		25	1.201		12.2000	12.60		
*AREA II - OUTLET JCT		100	1.781		12.2000	18.82		

File.... J:\0675B\PONDPACK\RESTORE\AREA2-EXIST.PPW
Title... AREA II - EXISTING Tc

TIME OF CONCENTRATION CALCULATOR

AREA II - EXISTING Tc

Segment #1: Tc: TR-55 Sheet
Description: SEGMENT A

Mannings n	.2400
Hydraulic Length	300.00 ft
2yr, 24hr P	3.5000 in
Slope	.036700 ft/ft
Avg.Velocity	.19 ft/sec

Segment #1 Time: .4296 hrs

Segment #2: Tc: TR-55 Shallow
Description: SEGMENT B

Hydraulic Length	339.00 ft
Slope	.076700 ft/ft
Unpaved	
Avg.Velocity	4.47 ft/sec

Segment #2 Time: .0211 hrs

Total Tc: .4507 hrs

File.... J:\0675B\PONDPACK\RESTORE\AREA2-EXIST.PPW
Title... AREA II - RUNOFF CN

RUNOFF CURVE NUMBER DATA

AREA II - RUNOFF CN

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	Impervious Adjustment %UC	Adjusted CN
PASTURE (SOIL GROUP 'B')	61	2.320			61.00
PASTURE (SOIL GROUP 'C')	74	3.490			74.00
COMPOSITE AREA & WEIGHTED CN --->		5.810			68.81 (69)

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = AREA2-EX.HYG - AREA II Pre..2
Tc = .4507 hrs
Drainage Area = 5.810 acres Runoff CN= 69

==========
Computational Time Increment = .06009 hrs
Computed Peak Time = 12.1982 hrs
Computed Peak Flow = 4.49 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 4.48 cfs
==========

DRAINAGE AREA

ID:AREA II
CN = 69
Area = 5.810 acres
S = 4.4928 in
0.2S = .8986 in

Cumulative Runoff

.9540 in
.462 ac-ft

HYG Volume... .462 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .45067 hrs (ID: AREA II - EX. Tc)
Computational Incr, Tm = .06009 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.61 cfs
Unit peak time Tp = .30045 hrs
Unit receding limb, Tr = 1.20180 hrs
Total unit time, Tb = 1.50224 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = AREA2-EX.HYG - AREA II Pre..2
Tc = .4507 hrs
Drainage Area = 5.810 acres Runoff CN= 69
Calc.Increment= .06009 hrs Out.Incr.= .1000 hrs
HYG Volume = .462 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
11.3000	.00	.00	.01	.03	.12
11.8000	.39	1.12	2.58	4.01	4.48
12.3000	3.84	2.94	2.22	1.75	1.41
12.8000	1.16	1.00	.88	.79	.72
13.3000	.67	.62	.59	.56	.53
13.8000	.51	.48	.46	.44	.43
14.3000	.41	.40	.39	.38	.37
14.8000	.37	.36	.35	.35	.34
15.3000	.33	.33	.32	.31	.30
15.8000	.30	.29	.28	.28	.27
16.3000	.26	.26	.26	.25	.25
16.8000	.25	.25	.24	.24	.24
17.3000	.24	.23	.23	.23	.23
17.8000	.22	.22	.22	.22	.21
18.3000	.21	.21	.21	.20	.20
18.8000	.20	.19	.19	.19	.19
19.3000	.18	.18	.18	.18	.17
19.8000	.17	.17	.16	.16	.16
20.3000	.16	.16	.15	.15	.15
20.8000	.15	.15	.15	.15	.15
21.3000	.15	.15	.15	.15	.15
21.8000	.15	.15	.15	.15	.15
22.3000	.15	.14	.14	.14	.14
22.8000	.14	.14	.14	.14	.14
23.3000	.14	.14	.14	.14	.14
23.8000	.14	.14	.14	.13	.11
24.3000	.08	.05	.03	.02	.01
24.8000	.01	.00	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = AREA2-EX.HYG - AREA II Pre.15
Tc = .4507 hrs
Drainage Area = 5.810 acres Runoff CN= 69

==========
Computational Time Increment = .06009 hrs
Computed Peak Time = 12.1381 hrs
Computed Peak Flow = 10.69 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 10.62 cfs
==========

DRAINAGE AREA

ID:AREA II
CN = 69
Area = 5.810 acres
S = 4.4928 in
0.2S = .8986 in

Cumulative Runoff

2.1039 in
1.019 ac-ft

HYG Volume... 1.019 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .45067 hrs (ID: AREA II - EX. Tc)
Computational Incr, Tm = .06009 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.61 cfs
Unit peak time Tp = .30045 hrs
Unit receding limb, Tr = 1.20180 hrs
Total unit time, Tb = 1.50224 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = AREA2-EX.HYG - AREA II Pre.15
Tc = .4507 hrs
Drainage Area = 5.810 acres Runoff CN= 69
Calc.Increment= .06009 hrs Out.Incr.= .1000 hrs
HYG Volume = 1.019 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
9.9000	.00	.00	.01	.01	.02
10.4000	.03	.05	.06	.08	.10
10.9000	.13	.16	.19	.23	.28
11.4000	.34	.42	.55	.90	1.81
11.9000	3.77	7.14	10.05	10.62	8.79
12.4000	6.55	4.85	3.76	2.97	2.41
12.9000	2.04	1.78	1.59	1.44	1.32
13.4000	1.23	1.16	1.10	1.04	.99
13.9000	.95	.90	.86	.83	.79
14.4000	.77	.75	.73	.72	.70
14.9000	.69	.68	.66	.65	.64
15.4000	.62	.61	.59	.58	.57
15.9000	.55	.54	.53	.51	.50
16.4000	.49	.49	.48	.47	.47
16.9000	.46	.46	.45	.45	.44
17.4000	.44	.43	.43	.42	.42
17.9000	.41	.41	.40	.40	.39
18.4000	.39	.38	.38	.37	.37
18.9000	.36	.36	.35	.35	.34
19.4000	.34	.33	.33	.32	.32
19.9000	.31	.31	.30	.30	.29
20.4000	.29	.29	.29	.28	.28
20.9000	.28	.28	.28	.28	.28
21.4000	.28	.28	.27	.27	.27
21.9000	.27	.27	.27	.27	.27
22.4000	.27	.27	.27	.26	.26
22.9000	.26	.26	.26	.26	.26
23.4000	.26	.26	.26	.25	.25
23.9000	.25	.25	.24	.20	.14
24.4000	.08	.05	.03	.02	.01
24.9000	.01	.00	.00	.00	

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = AREA2-EX.HYG - AREA II Pre.25
Tc = .4507 hrs
Drainage Area = 5.810 acres Runoff CN= 69

==========
Computational Time Increment = .06009 hrs
Computed Peak Time = 12.1381 hrs
Computed Peak Flow = 12.75 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 12.60 cfs
==========

DRAINAGE AREA

ID:AREA II
CN = 69
Area = 5.810 acres
S = 4.4928 in
0.2S = .8986 in

Cumulative Runoff

2.4805 in
1.201 ac-ft

HYG Volume... 1.201 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .45067 hrs (ID: AREA II - EX. Tc)
Computational Incr, Tm = .06009 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.61 cfs
Unit peak time Tp = .30045 hrs
Unit receding limb, Tr = 1.20180 hrs
Total unit time, Tb = 1.50224 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = AREA2-EX.HYG - AREA II Pre.25
Tc = .4507 hrs
Drainage Area = 5.810 acres Runoff CN= 69
Calc.Increment= .06009 hrs Out.Incr.= .1000 hrs
HYG Volume = 1.201 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
9.5000	.00	.00	.01	.01	.02
10.0000	.03	.04	.06	.07	.09
10.5000	.11	.13	.15	.18	.21
11.0000	.25	.29	.34	.41	.49
11.5000	.59	.75	1.19	2.30	4.68
12.0000	8.66	12.02	12.60	10.37	7.71
12.5000	5.68	4.39	3.46	2.80	2.37
13.0000	2.06	1.84	1.67	1.52	1.42
13.5000	1.33	1.26	1.20	1.14	1.09
14.0000	1.04	.99	.95	.91	.88
14.5000	.86	.84	.82	.81	.79
15.0000	.77	.76	.74	.73	.71
15.5000	.70	.68	.67	.65	.63
16.0000	.62	.60	.59	.57	.56
16.5000	.55	.55	.54	.54	.53
17.0000	.52	.52	.51	.51	.50
17.5000	.50	.49	.48	.48	.47
18.0000	.47	.46	.46	.45	.44
18.5000	.44	.43	.43	.42	.41
19.0000	.41	.40	.40	.39	.38
19.5000	.38	.37	.37	.36	.35
20.0000	.35	.34	.34	.33	.33
20.5000	.33	.32	.32	.32	.32
21.0000	.32	.32	.32	.32	.32
21.5000	.31	.31	.31	.31	.31
22.0000	.31	.31	.31	.31	.30
22.5000	.30	.30	.30	.30	.30
23.0000	.30	.30	.29	.29	.29
23.5000	.29	.29	.29	.29	.29
24.0000	.28	.27	.22	.16	.09
24.5000	.05	.03	.02	.01	.01
25.0000	.00	.00	.00		

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = AREA2-EX.HYG - AREA II Pre100
Tc = .4507 hrs
Drainage Area = 5.810 acres Runoff CN= 69

==========
Computational Time Increment = .06009 hrs
Computed Peak Time = 12.1381 hrs
Computed Peak Flow = 19.22 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.2000 hrs
Peak Flow, Interpolated Output = 18.82 cfs
WARNING: The difference between calculated peak flow
and interpolated peak flow is greater than 1.50%
==========

DRAINAGE AREA

ID:AREA II
CN = 69
Area = 5.810 acres
S = 4.4928 in
0.2S = .8986 in

Cumulative Runoff

3.6787 in
1.781 ac-ft

HYG Volume... 1.781 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .45067 hrs (ID: AREA II - EX. Tc)
Computational Incr, Tm = .06009 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 14.61 cfs
Unit peak time Tp = .30045 hrs
Unit receding limb, Tr = 1.20180 hrs
Total unit time, Tb = 1.50224 hrs

SCS UNIT HYDROGRAPH METHOD

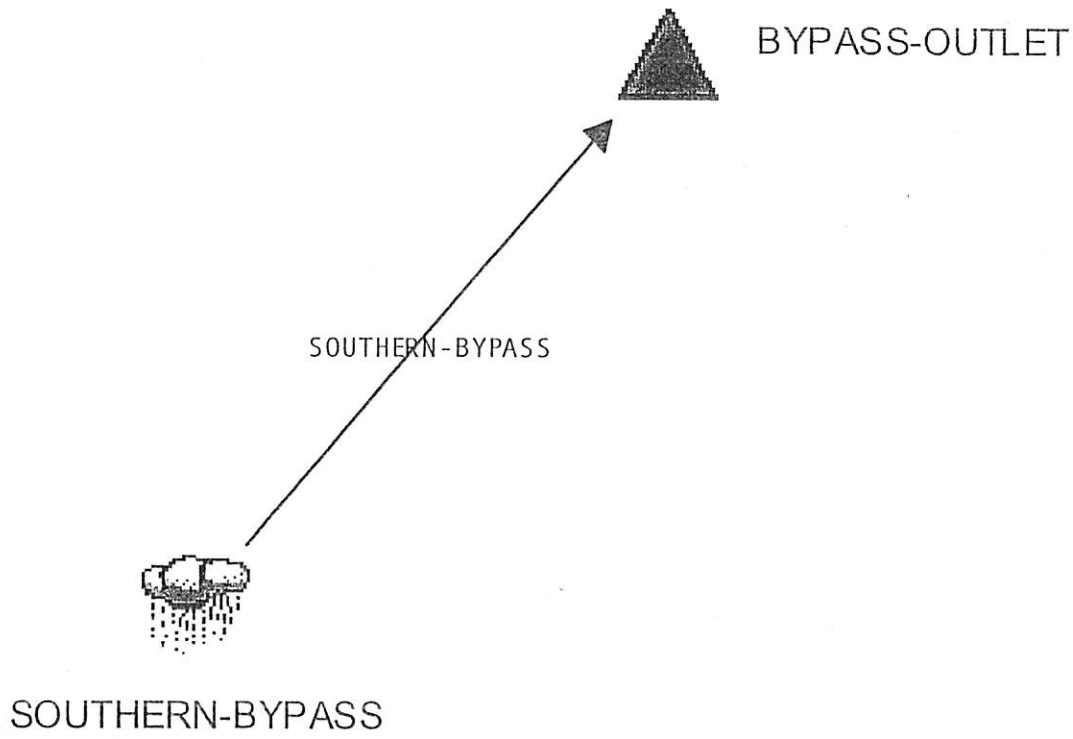
STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = AREA2-EX.HYG - AREA II Pre100
Tc = .4507 hrs
Drainage Area = 5.810 acres Runoff CN= 69
Calc.Increment= .06009 hrs Out.Incr.= .1000 hrs
HYG Volume = 1.781 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
8.4000	.00	.00	.01	.02	.02
8.9000	.03	.04	.06	.07	.08
9.4000	.10	.11	.12	.13	.15
9.9000	.17	.19	.21	.23	.26
10.4000	.29	.32	.36	.40	.45
10.9000	.51	.57	.65	.73	.84
11.4000	.97	1.14	1.41	2.14	3.94
11.9000	7.62	13.52	18.26	18.82	15.34
12.4000	11.30	8.27	6.34	4.96	4.00
12.9000	3.37	2.92	2.59	2.34	2.14
13.4000	1.98	1.87	1.77	1.67	1.59
13.9000	1.52	1.45	1.38	1.32	1.27
14.4000	1.23	1.20	1.17	1.14	1.12
14.9000	1.10	1.07	1.05	1.03	1.01
15.4000	.99	.96	.94	.92	.90
15.9000	.88	.85	.83	.81	.79
16.4000	.78	.77	.76	.75	.74
16.9000	.73	.72	.71	.71	.70
17.4000	.69	.68	.67	.67	.66
17.9000	.65	.64	.63	.63	.62
18.4000	.61	.60	.59	.58	.58
18.9000	.57	.56	.55	.54	.54
19.4000	.53	.52	.51	.50	.49
19.9000	.49	.48	.47	.46	.46
20.4000	.45	.45	.44	.44	.44
20.9000	.44	.44	.44	.43	.43
21.4000	.43	.43	.43	.43	.42
21.9000	.42	.42	.42	.42	.42
22.4000	.42	.41	.41	.41	.41
22.9000	.41	.41	.40	.40	.40
23.4000	.40	.40	.40	.39	.39
23.9000	.39	.39	.37	.31	.21
24.4000	.13	.07	.04	.02	.01
24.9000	.01	.00	.00	.00	.00

P.O.I. #2

DEV.


BYPASS-OUTLET
SOUTHERN-BYPASS
SOUTHERN-BYPASS

MASTER DESIGN STORM SUMMARY

Default Network Design Storm File, ID PERSIMON.RNQ PERSIMMON

Return Event	Total Depth in	Rainfall Type	RNF File	RNF ID
Dev..2	3.5000	Synthetic Curve	SCSTYPES	TypeII 24hr
Dev.15	5.2000	Synthetic Curve	SCSTYPES	TypeII 24hr
Dev.25	5.7000	Synthetic Curve	SCSTYPES	TypeII 24hr
Dev100	7.2000	Synthetic Curve	SCSTYPES	TypeII 24hr

MASTER NETWORK SUMMARY
SCS Unit Hydrograph Method

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

Node ID	Type	Return Event	HYG Vol ac-ft	Trun	Qpeak hrs	Qpeak cfs	Max WSEL ft	Max Pond Storage ac-ft
*BYPASS-OUTLET	JCT	2	.266		12.1000	3.14		
*BYPASS-OUTLET	JCT	15	.506		12.1000	6.06		
*BYPASS-OUTLET	JCT	25	.580		12.1000	6.95		
*BYPASS-OUTLET	JCT	100	.811		12.1000	9.67		
SOUTHERN-BYPASS	AREA	2	.266		12.1000	3.14		
SOUTHERN-BYPASS	AREA	15	.506		12.1000	6.06		
SOUTHERN-BYPASS	AREA	25	.580		12.1000	6.95		
SOUTHERN-BYPASS	AREA	100	.811		12.1000	9.67		

File.... J:\0675B\PONDPACK\RESTORE\AREA3-DEV.PPW
Title... SOUTHERN BYPASS - DEVELOPED Tc

::
TIME OF CONCENTRATION CALCULATOR
::

SOUTHERN BYPASS - DEVELOPED Tc

Segment #1: Tc: TR-55 Sheet
Description: SEGMENT 'A'

Mannings n	.2400	
Hydraulic Length	300.00	ft
2yr, 24hr P	3.5000	in
Slope	.050000	ft/ft
Avg.Velocity	.22	ft/sec

Segment #1 Time: .3796 hrs

==========
Total Tc: .3796 hrs
==========

S/N: 721701406A81 J R GRIMES CONSULTING
PondPack Ver: 7.5 (767) Compute Time: 17:17:30 Date: 08-07-2002

File.... J:\0675B\PONDPACK\RESTORE\AREA3-DEV.PPW
Title... SOUTHERN BYPASS - DEVELOPED RUNOFF CN

RUNOFF CURVE NUMBER DATA

SOUTHERN BYPASS - DEVELOPED RUNOFF CN

Soil/Surface Description	CN	Area acres	Impervious Adjustment %C	%UC	Adjusted CN
PAVEMENT/ROOFS	98	.450			98.00
GRASS (SOIL GROUP 'C')	74	1.590			74.00
COMPOSITE AREA & WEIGHTED CN --->		2.040			79.29 (79)

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = - SOUTHERN-BYPASS Dev..2
Tc = .3796 hrs
Drainage Area = 2.040 acres Runoff CN= 79

==========

Computational Time Increment	=	.05062 hrs
Computed Peak Time	=	12.0970 hrs
Computed Peak Flow	=	3.14 cfs
Time Increment for HYG File	=	.1000 hrs
Peak Time, Interpolated Output	=	12.1000 hrs
Peak Flow, Interpolated Output	=	3.14 cfs

==========

DRAINAGE AREA

ID:SOUTHERN-BYPASS
CN = 79
Area = 2.040 acres
S = 2.6582 in
0.2S = .5316 in

Cumulative Runoff

1.5660 in
.266 ac-ft

HYG Volume... .266 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .37961 hrs (ID: SOUTHERN-BYPASS)
Computational Incr, Tm = .05062 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak,	qp =	6.09 cfs
Unit peak time	Tp =	.25308 hrs
Unit receding limb,	Tr =	1.01230 hrs
Total unit time,	Tb =	1.26538 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 2 year storm
Duration = 24.0000 hrs Rain Depth = 3.5000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = - SOUTHERN-BYPASS Dev..2
Tc = .3796 hrs
Drainage Area = 2.040 acres Runoff CN= 79
Calc.Increment= .05062 hrs Out.Incr.= .1000 hrs
HYG Volume = .266 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
9.4000	.00	.00	.00	.01	.01
9.9000	.01	.01	.01	.02	.02
10.4000	.03	.03	.04	.04	.05
10.9000	.06	.07	.08	.09	.10
11.4000	.12	.15	.19	.32	.64
11.9000	1.33	2.42	3.14	2.85	2.05
12.4000	1.42	1.05	.80	.64	.53
12.9000	.46	.41	.37	.34	.32
13.4000	.30	.28	.27	.25	.24
13.9000	.23	.22	.21	.20	.20
14.4000	.19	.19	.18	.18	.17
14.9000	.17	.17	.16	.16	.16
15.4000	.15	.15	.15	.14	.14
15.9000	.14	.13	.13	.13	.12
16.4000	.12	.12	.12	.12	.12
16.9000	.12	.11	.11	.11	.11
17.4000	.11	.11	.11	.11	.10
17.9000	.10	.10	.10	.10	.10
18.4000	.10	.10	.09	.09	.09
18.9000	.09	.09	.09	.09	.08
19.4000	.08	.08	.08	.08	.08
19.9000	.08	.08	.07	.07	.07
20.4000	.07	.07	.07	.07	.07
20.9000	.07	.07	.07	.07	.07
21.4000	.07	.07	.07	.07	.07
21.9000	.07	.07	.07	.07	.07
22.4000	.07	.07	.07	.07	.07
22.9000	.07	.06	.06	.06	.06
23.4000	.06	.06	.06	.06	.06
23.9000	.06	.06	.06	.04	.03
24.4000	.01	.01	.00	.00	.00

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = - SOUTHERN-BYPASS Dev.15
Tc = .3796 hrs
Drainage Area = 2.040 acres Runoff CN= 79

==========
Computational Time Increment = .05062 hrs
Computed Peak Time = 12.0970 hrs
Computed Peak Flow = 6.07 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 6.06 cfs
==========

DRAINAGE AREA

ID:SOUTHERN-BYPASS
CN = 79
Area = 2.040 acres
S = 2.6582 in
0.2S = .5316 in

Cumulative Runoff

2.9746 in
.506 ac-ft

HYG Volume... .506 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .37961 hrs (ID: SOUTHERN-BYPASS)
Computational Incr, Tm = .05062 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 6.09 cfs
Unit peak time Tp = .25308 hrs
Unit receding limb, Tr = 1.01230 hrs
Total unit time, Tb = 1.26538 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 15 year storm
Duration = 24.0000 hrs Rain Depth = 5.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = - SOUTHERN-BYPASS Dev.15
Tc = .3796 hrs
Drainage Area = 2.040 acres Runoff CN= 79
Calc.Increment= .05062 hrs Out.Incr.= .1000 hrs
HYG Volume = .506 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
7.4000	.00	.00	.00	.00	.01
7.9000	.01	.01	.01	.01	.02
8.4000	.02	.02	.02	.03	.03
8.9000	.04	.04	.04	.05	.05
9.4000	.06	.06	.06	.07	.07
9.9000	.08	.08	.09	.10	.11
10.4000	.12	.13	.14	.16	.17
10.9000	.19	.21	.24	.27	.30
11.4000	.35	.40	.50	.79	1.47
11.9000	2.84	4.86	6.06	5.37	3.82
12.4000	2.61	1.90	1.44	1.13	.93
12.9000	.80	.71	.64	.59	.55
13.4000	.52	.49	.46	.44	.42
13.9000	.40	.38	.36	.35	.34
14.4000	.33	.32	.31	.30	.30
14.9000	.29	.29	.28	.27	.27
15.4000	.26	.26	.25	.24	.24
15.9000	.23	.23	.22	.21	.21
16.4000	.21	.20	.20	.20	.20
16.9000	.19	.19	.19	.19	.19
17.4000	.18	.18	.18	.18	.18
17.9000	.17	.17	.17	.17	.16
18.4000	.16	.16	.16	.16	.15
18.9000	.15	.15	.15	.14	.14
19.4000	.14	.14	.14	.13	.13
19.9000	.13	.13	.12	.12	.12
20.4000	.12	.12	.12	.12	.12
20.9000	.12	.12	.12	.12	.12
21.4000	.11	.11	.11	.11	.11
21.9000	.11	.11	.11	.11	.11
22.4000	.11	.11	.11	.11	.11
22.9000	.11	.11	.11	.11	.11
23.4000	.11	.11	.11	.10	.10
23.9000	.10	.10	.10	.07	.04
24.4000	.02	.01	.01	.00	.00
24.9000	.00				

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = - SOUTHERN-BYPASS Dev.25
Tc = .3796 hrs
Drainage Area = 2.040 acres Runoff CN= 79

==========
Computational Time Increment = .05062 hrs
Computed Peak Time = 12.0970 hrs
Computed Peak Flow = 6.96 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 6.95 cfs
==========

DRAINAGE AREA

ID:SOUTHERN-BYPASS
CN = 79
Area = 2.040 acres
S = 2.6582 in
0.2S = .5316 in

Cumulative Runoff

3.4130 in
.580 ac-ft

HYG Volume... .580 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .37961 hrs (ID: SOUTHERN-BYPASS)
Computational Incr, Tm = .05062 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 6.09 cfs
Unit peak time Tp = .25308 hrs
Unit receding limb, Tr = 1.01230 hrs
Total unit time, Tb = 1.26538 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 25 year storm
Duration = 24.0000 hrs Rain Depth = 5.7000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = - SOUTHERN-BYPASS Dev.25
Tc = .3796 hrs
Drainage Area = 2.040 acres Runoff CN= 79
Calc.Increment= .05062 hrs Out.Incr.= .1000 hrs
HYG Volume = .580 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
6.9000	.00	.00	.00	.00	.01
7.4000	.01	.01	.01	.01	.02
7.9000	.02	.02	.02	.03	.03
8.4000	.03	.03	.04	.04	.05
8.9000	.05	.06	.06	.07	.07
9.4000	.08	.08	.08	.09	.09
9.9000	.10	.11	.12	.13	.14
10.4000	.15	.17	.18	.20	.22
10.9000	.24	.26	.29	.33	.37
11.4000	.42	.48	.60	.94	1.73
11.9000	3.31	5.61	6.95	6.14	4.35
12.4000	2.96	2.15	1.63	1.28	1.05
12.9000	.90	.80	.72	.66	.62
13.4000	.58	.55	.52	.49	.47
13.9000	.45	.43	.41	.39	.38
14.4000	.37	.36	.35	.34	.33
14.9000	.33	.32	.31	.31	.30
15.4000	.29	.29	.28	.27	.27
15.9000	.26	.25	.25	.24	.24
16.4000	.23	.23	.23	.22	.22
16.9000	.22	.22	.21	.21	.21
17.4000	.21	.20	.20	.20	.20
17.9000	.19	.19	.19	.19	.18
18.4000	.18	.18	.18	.17	.17
18.9000	.17	.17	.16	.16	.16
19.4000	.16	.15	.15	.15	.15
19.9000	.14	.14	.14	.14	.13
20.4000	.13	.13	.13	.13	.13
20.9000	.13	.13	.13	.13	.13
21.4000	.13	.13	.13	.13	.13
21.9000	.13	.13	.12	.12	.12
22.4000	.12	.12	.12	.12	.12
22.9000	.12	.12	.12	.12	.12
23.4000	.12	.12	.12	.12	.12
23.9000	.12	.12	.11	.08	.05
24.4000	.03	.01	.01	.00	.00
24.9000	.00				

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = - SOUTHERN-BYPASS Dev100
Tc = .3796 hrs
Drainage Area = 2.040 acres Runoff CN= 79

==========
Computational Time Increment = .05062 hrs
Computed Peak Time = 12.0970 hrs
Computed Peak Flow = 9.68 cfs

Time Increment for HYG File = .1000 hrs
Peak Time, Interpolated Output = 12.1000 hrs
Peak Flow, Interpolated Output = 9.67 cfs
==========

DRAINAGE AREA

ID:SOUTHERN-BYPASS
CN = 79
Area = 2.040 acres
S = 2.6582 in
0.2S = .5316 in

Cumulative Runoff

4.7678 in
.811 ac-ft

HYG Volume... .811 ac-ft (area under HYG curve)

***** UNIT HYDROGRAPH PARAMETERS *****

Time Concentration, Tc = .37961 hrs (ID: SOUTHERN-BYPASS)
Computational Incr, Tm = .05062 hrs = 0.20000 Tp

Unit Hyd. Shape Factor = 483.432 (37.46% under rising limb)
K = 483.43/645.333, K = .7491 (also, K = 2/(1+(Tr/Tp))
Receding/Rising, Tr/Tp = 1.6698 (solved from K = .7491)

Unit peak, qp = 6.09 cfs
Unit peak time Tp = .25308 hrs
Unit receding limb, Tr = 1.01230 hrs
Total unit time, Tb = 1.26538 hrs

SCS UNIT HYDROGRAPH METHOD

STORM EVENT: 100 year storm
Duration = 24.0000 hrs Rain Depth = 7.2000 in
Rain Dir = C:\HAESTAD\PPKW\RAINFALL\
Rain File -ID = SCSTYPES.RNF - TypeII 24hr
Unit Hyd Type = Default Curvilinear
HYG Dir = J:\0675B\PONDPACK\RESTORE\
HYG File - ID = - SOUTHERN-BYPASS Dev100
Tc = .3796 hrs
Drainage Area = 2.040 acres Runoff CN= 79
Calc.Increment= .05062 hrs Out.Incr.= .1000 hrs
HYG Volume = .811 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = .1000 hrs
Time on left represents time for first value in each row.

Time hrs					
5.9000	.00	.00	.00	.01	.01
6.4000	.01	.01	.02	.02	.02
6.9000	.02	.03	.03	.03	.04
7.4000	.04	.04	.05	.05	.05
7.9000	.06	.06	.06	.07	.07
8.4000	.08	.08	.09	.09	.10
8.9000	.11	.12	.13	.13	.14
9.4000	.15	.15	.16	.16	.17
9.9000	.18	.19	.21	.22	.24
10.4000	.26	.28	.30	.33	.36
10.9000	.39	.43	.47	.52	.58
11.4000	.66	.75	.92	1.41	2.56
11.9000	4.78	7.92	9.67	8.46	5.96
12.4000	4.04	2.92	2.20	1.72	1.41
12.9000	1.21	1.07	.96	.88	.82
13.4000	.77	.73	.69	.66	.62
13.9000	.60	.57	.54	.52	.50
14.4000	.49	.47	.46	.45	.44
14.9000	.43	.43	.42	.41	.40
15.4000	.39	.38	.37	.36	.35
15.9000	.34	.33	.33	.32	.31
16.4000	.31	.30	.30	.29	.29
16.9000	.29	.28	.28	.28	.27
17.4000	.27	.27	.27	.26	.26
17.9000	.26	.25	.25	.25	.24
18.4000	.24	.24	.23	.23	.23
18.9000	.22	.22	.22	.21	.21
19.4000	.21	.20	.20	.20	.19
19.9000	.19	.19	.18	.18	.18
20.4000	.18	.17	.17	.17	.17
20.9000	.17	.17	.17	.17	.17
21.4000	.17	.17	.17	.17	.17
21.9000	.17	.16	.16	.16	.16
22.4000	.16	.16	.16	.16	.16
22.9000	.16	.16	.16	.16	.16