

SCANNED  
AUG 15 2018


PERSIMMON POINTE P.U.D. - 2  
O'FALLON, MISSOURI

REGIONAL DETENTION ANALYSIS 

Prepared for:

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

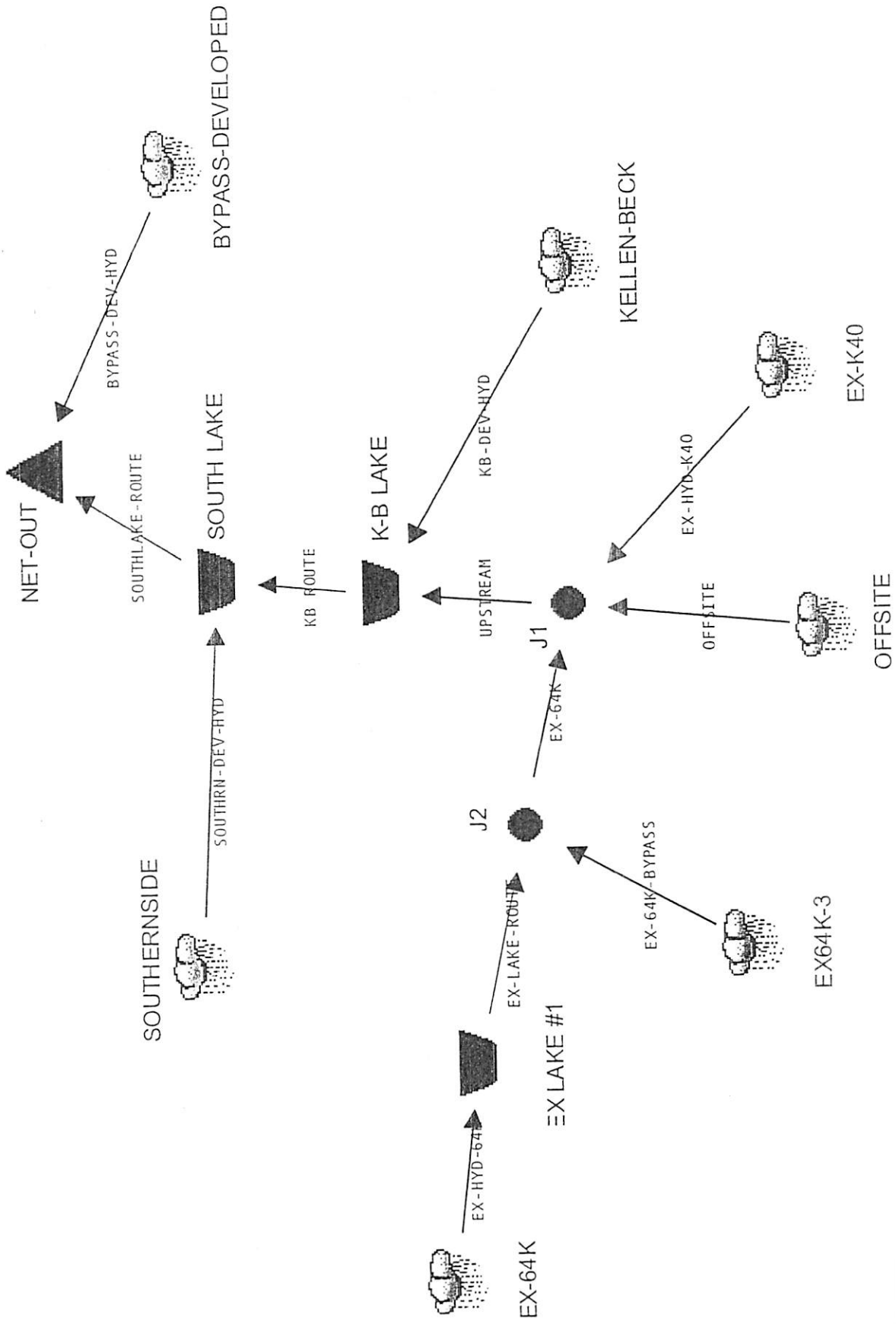
Prepared by: L. Meers  
Checked by: J. Grimes  
Job No. 675B  
Date: 04-09-02  
Revised: August 9, 2002

STATE OF MISSOURI  
LEONARD  
J. MEERS  
REGISTERED PROFESSIONAL ENGINEER  
NUMBER  
E-28286  
  
10/21/05

2 of 2

P.O.I #3

DEV.



MASTER DESIGN STORM SUMMARY

Default Network Design Storm File, ID PERSIMON.RNQ PERSIMMON

Return Event	Total Depth in	Rainfall Type	RNF File	RNF ID	
2	3.5000	Synthetic Curve	SCSTYPES	TypeII	24hr
15	5.2000	Synthetic Curve	SCSTYPES	TypeII	24hr
25	5.7000	Synthetic Curve	SCSTYPES	TypeII	24hr
100	7.2000	Synthetic Curve	SCSTYPES	TypeII	24hr

ICPM CALCULATION TOLERANCES

-----  
 Target Convergence= .100 cfs +/-  
 Max. Iterations = 35 loops  
 ICPM Time Step = .1000 hrs  
 Output Time Step = .1000 hrs  
 ICPM Ending Time = 24.0000 hrs  
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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-DEVELOPED AREA		2	.220		12.1000	2.27		
BYPASS-DEVELOPED AREA		15	.486		12.1000	5.54		
BYPASS-DEVELOPED AREA		25	.573		12.1000	6.60		
BYPASS-DEVELOPED AREA		100	.850		12.1000	9.94		
EX LAKE #1	IN POND	2	1.301		12.4000	8.80		
EX LAKE #1	IN POND	15	2.975		12.3000	22.78		
EX LAKE #1	IN POND	25	3.530		12.3000	27.46		
EX LAKE #1	IN POND	100	5.308		12.3000	42.35		
EX LAKE #1	OUT POND	2	1.301		13.2000	2.94	551.51	.366
EX LAKE #1	OUT POND	15	2.975		13.3000	5.34	552.02	1.146
EX LAKE #1	OUT POND	25	3.530		13.3000	5.95	552.15	1.426
EX LAKE #1	OUT POND	100	5.308		13.5000	7.38	552.60	2.387

S/N: 721701406A81 J R GRIMES CONSULTING  
 PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002

Name.... Watershed  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.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
EX-64K	AREA	2	1.301		12.4000	8.80		
EX-64K	AREA	15	2.975		12.3000	22.78		
EX-64K	AREA	25	3.530		12.3000	27.46		
EX-64K	AREA	100	5.308		12.3000	42.35		
EX-K40	AREA	2	.850		12.3000	6.87		
EX-K40	AREA	15	1.814		12.3000	15.61		
EX-K40	AREA	25	2.126		12.3000	18.40		
EX-K40	AREA	100	3.112		12.3000	27.14		
EX64K-3	AREA	2	.517		12.3000	3.50		
EX64K-3	AREA	15	1.254		12.3000	10.13		
EX64K-3	AREA	25	1.503		12.3000	12.37		
EX64K-3	AREA	100	2.311		12.3000	19.58		
1	JCT	2	8.461		12.9000	29.41		
J1	JCT	15	17.347		12.7000	60.10		
J1	JCT	25	20.194		12.7000	69.85		
J1	JCT	100	29.141		12.7000	99.72		
J2	JCT	2	1.817		12.4000	5.44		
J2	JCT	15	4.229		12.3000	13.51		
J2	JCT	25	5.033		12.3000	16.18		
J2	JCT	100	7.619		12.3000	24.61		
K-B LAKE	POND	2	15.823		12.4000	79.54		
K-B LAKE	POND	15	29.276		12.4000	143.10		
K-B LAKE	POND	25	33.473		12.4000	162.47		
K-B LAKE	POND	100	46.440		12.4000	221.47		
K-B LAKE	OUT POND	2	12.824		14.3000	20.21	528.55	7.246
K-B LAKE	OUT POND	15	24.970		13.7000	53.02	530.17	11.837
K-B LAKE	OUT POND	25	28.784		13.5000	71.81	530.42	12.569
K-B LAKE	OUT POND	100	40.734		13.2000	128.78	530.98	14.137

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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
KELLEN-BECK	AREA	2	7.653		12.4000	54.56		
KELLEN-BECK	AREA	15	12.437		12.4000	86.91		
KELLEN-BECK	AREA	25	13.859		12.4000	96.35		
KELLEN-BECK	AREA	100	18.148		12.4000	124.54		
*NET-OUT	JCT	2	14.303		14.4000	21.50		
*NET-OUT	JCT	15	27.933		14.0000	54.40		
*NET-OUT	JCT	25	32.157		13.8000	71.87		
*NET-OUT	JCT	100	45.619		13.4000	130.98		
OFFSITE	AREA	2	5.793		13.0000	23.01		
OFFSITE	AREA	15	11.304		13.0000	46.62		
OFFSITE	AREA	25	13.035		13.0000	53.96		
FFSITE	AREA	100	18.411		13.0000	76.55		
SOUTH LAKE	POND	2	14.433		14.1000	21.49		
SOUTH LAKE	POND	15	27.951		13.7000	55.80		
SOUTH LAKE	POND	25	32.189		13.5000	75.42		
SOUTH LAKE	POND	100	45.441		13.1000	135.90		
SOUTH LAKE	OUT POND	2	14.053		14.4000	21.31	522.91	1.411
SOUTH LAKE	OUT POND	15	27.400		14.0000	53.98	523.72	2.009
SOUTH LAKE	OUT POND	25	31.532		13.8000	71.34	524.09	2.280
SOUTH LAKE	OUT POND	100	44.703		13.4000	130.07	524.91	2.884
SOUTHERNSIDE	AREA	2	1.622		12.2000	15.17		
SOUTHERNSIDE	AREA	15	3.003		12.2000	28.42		
SOUTHERNSIDE	AREA	25	3.429		12.2000	32.44		
SOUTHERNSIDE	AREA	100	4.739		12.2000	44.63		

Type.... Tc Calcs  
Name.... 64K

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... 64K - EXISTING TIME OF CONCENTRATION

.....  
TIME OF CONCENTRATION CALCULATOR  
.....

64K - EXISTING TIME OF CONCENTRATION  
-----

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

Mannings n           .2400  
Hydraulic Length    300.00 ft  
2yr, 24hr P         3.5000 in  
Slope                .043300 ft/ft

Avg.Velocity           .21 ft/sec

Segment #1 Time:       .4021 hrs  
-----

Segment #2: Tc: SCS Lag  
Description: SEGMENT 'B'

Hydraulic Length    725.00 ft  
Runoff CN             67  
Slope                .035900 ft/ft

Avg.Velocity           .64 ft/sec

Segment #2 Time:       .3123 hrs  
-----

=====  
Total Tc:             .7144 hrs  
=====

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Type.... Tc Calcs  
Name.... 64K-3

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... 64K - EXISTING TIME OF CONCENTRATION

.....  
TIME OF CONCENTRATION CALCULATOR  
.....

64K - EXISTING TIME OF CONCENTRATION  
-----

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

Mannings n .2400  
Hydraulic Length 300.00 ft  
2yr, 24hr P 3.5000 in  
Slope .040000 ft/ft

Avg.Velocity .20 ft/sec

Segment #1 Time: .4151 hrs  
-----

Segment #2: Tc: SCS Lag  
Description: SEGMENT 'B'

Hydraulic Length 600.00 ft  
Runoff CN 64  
Slope .063300 ft/ft

Avg.Velocity .76 ft/sec

Segment #2 Time: .2186 hrs  
-----

=====  
Total Tc: .6337 hrs  
=====

S/N: 721701406A81 J R GRIMES CONSULTING  
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Type.... Tc Calcs  
Name.... AREAV-DEVELOPED

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... SOUTHERNSIDE - DEVELOPED Tc

.....  
TIME OF CONCENTRATION CALCULATOR  
.....

SOUTHERNSIDE - DEVELOPED Tc  
-----

Segment #1: Tc: TR-55 Sheet  
Description: SHEET FLOW GRASS

Mannings n                   .2400  
Hydraulic Length       300.00 ft  
2yr, 24hr P               3.5000 in  
Slope                       .020000 ft/ft

Avg.Velocity               .15 ft/sec

Segment #1 Time:           .5477 hrs  
-----

Segment #2: Tc: TR-55 Channel  
Description: STORM SEWER SYSTEM

Flow Area                 2.5900 sq.ft  
Wetted Perimeter         4.28 ft  
Hydraulic Radius         .61 ft  
Slope                     .020000 ft/ft  
Mannings n                .0130  
Hydraulic Length         245.00 ft

Avg.Velocity             11.60 ft/sec

Segment #2 Time:           .0059 hrs  
-----

=====  
Total Tc:                 .5535 hrs  
=====

Type.... Tc Calcs  
Name.... AREAVIDEVELOPED

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... AREA VI - DEVELOPED Tc

.....  
TIME OF CONCENTRATION CALCULATOR  
.....

AREA VI - DEVELOPED Tc  
-----

Segment #1: Tc: TR-55 Sheet  
Description: SHEET FLOW (GRASS)

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: GRASS

Hydraulic Length    150.00 ft  
Slope                .050000 ft/ft  
Unpaved

Avg.Velocity         3.61 ft/sec

Segment #2 Time:     .0115 hrs  
-----

=====  
Total Tc:            .3912 hrs  
=====

Type.... Tc Calcs  
Name.... K40

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... K40 - EXISTING TIME OF CONCENTRATION

.....  
TIME OF CONCENTRATION CALCULATOR  
.....

K40 - EXISTING TIME OF CONCENTRATION  
-----

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: SCS Lag  
Description: SEGMENT 'B'

Hydraulic Length    665.00 ft  
Runoff CN            71  
Slope                .045000 ft/ft

Avg.Velocity           .79 ft/sec

Segment #2 Time:       .2339 hrs  
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=====  
Total Tc:             .6135 hrs  
=====

Type.... Tc Calcs  
Name.... KB-DEVELOPED

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... KB-DEVELOPED Tc

.....  
TIME OF CONCENTRATION CALCULATOR  
.....

KB-DEVELOPED Tc  
-----

Segment #1: Tc: TR-55 Channel  
Description: SEGMENT 'C' (SEWER SYSTEM)

Flow Area            3.1400 sq.ft  
Wetted Perimeter    6.28 ft  
Hydraulic Radius    .50 ft  
Slope                .010000 ft/ft  
Mannings n           .0130  
Hydraulic Length    875.00 ft

Avg.Velocity            7.22 ft/sec

Segment #1 Time:        .0337 hrs  
-----

Segment #2: Tc: TR-55 Sheet  
Description: SEGMENT 'A' (GRASS)

Mannings n            .2400  
Hydraulic Length    300.00 ft  
2yr, 24hr P         3.5000 in  
Slope                .010000 ft/ft

Avg.Velocity            .12 ft/sec

Segment #2 Time:        .7227 hrs  
-----

Segment #3: Tc: TR-55 Shallow  
Description: SEGMENT 'B'

Hydraulic Length    500.00 ft  
Slope                .010000 ft/ft  
Paved

Avg.Velocity            2.03 ft/sec

Segment #3 Time:        .0683 hrs  
-----

Type.... Tc Calcs  
Name.... KB-DEVELOPED

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... KB-DEVELOPED Tc

=====  
Total Tc: .8246 hrs  
=====

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Type.... Tc Calcs  
Name.... OFFSITE

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... OFFSITE Tc

.....  
TIME OF CONCENTRATION CALCULATOR  
.....

OFFSITE 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 .010000 ft/ft

Avg.Velocity .12 ft/sec

Segment #1 Time: .7227 hrs  
-----

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

Hydraulic Length 750.00 ft  
Slope .005300 ft/ft  
Unpaved

Avg.Velocity 1.17 ft/sec

Segment #2 Time: .1774 hrs  
-----

Segment #3: Tc: SCS Lag  
Description: SEGMENT 'C'

Hydraulic Length 1650.00 ft  
Runoff CN 77  
Slope .010000 ft/ft

Avg.Velocity .53 ft/sec

Segment #3 Time: .8658 hrs  
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=====  
Total Tc: 1.7659 hrs  
=====

Type.... Runoff CN-Area  
Name.... 64K-EXISTING

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... 64K - EXISTING RUNOFF CN

RUNOFF CURVE NUMBER DATA

.....

64K - EXISTING RUNOFF CN

-----

Soil/Surface Description	CN	Area acres	Impervious Adjustment		Adjusted CN
			%C	%UC	
PASTURE (SOIL GROUP 'C')	74	8.250			74.00
PASTURE (SOIL GROUP 'B')	61	10.110			61.00

COMPOSITE AREA & WEIGHTED CN --->                    18.360                    66.84 (67)

.....

S/N: 721701406A81    J R GRIMES CONSULTING  
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Type.... Runoff CN-Area  
Name.... 64K-EXISTING-3

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... 64K-BYPASS AREA - EXISTING RUNOFF CN

RUNOFF CURVE NUMBER DATA

.....

64K-BYPASS AREA - EXISTING RUNOFF CN

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Soil/Surface Description	CN	Area acres	Impervious Adjustment		Adjusted CN
			%C	%UC	
PASTURE (SOIL GROUP 'C')	74	1.760			74.00
PASTURE (SOIL GROUP 'B')	61	7.040			61.00

COMPOSITE AREA & WEIGHTED CN --->                    8.800                    63.60 (64)  
 .....

S/N: 721701406A81    J R GRIMES CONSULTING  
 PondPack Ver: 7.5 (767)            Compute Time: 14:20:08    Date: 08-06-2002



Type.... Runoff CN-Area  
Name.... AREAV-DEVELOPED

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... SOUTHERNSIDE - DEVELOPED RUNOFF CN

RUNOFF CURVE NUMBER DATA

.....

SOUTHERNSIDE - DEVELOPED RUNOFF CN

-----

Soil/Surface Description	CN	Area acres	Impervious Adjustment		Adjusted CN
			%C	%UC	
PAVEMENT/ROOF	98	5.350			98.00
GRASS (SOIL TYPE 'B')	61	4.050			61.00
GRASS (SOIL TYPE 'C')	74	1.990			74.00

COMPOSITE AREA & WEIGHTED CN --->                    11.390                    80.65 (81)

.....

S/N: 721701406A81    J R GRIMES CONSULTING

PondPack Ver: 7.5 (767)

Compute Time: 14:20:08

Date: 08-06-2002

Type.... Runoff CN-Area  
Name.... AREAVIDEVELOPED

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... AREA VI - DEVELOPED RUNOFF CN

RUNOFF CURVE NUMBER DATA

.....

AREA VI - DEVELOPED RUNOFF CN

-----

Soil/Surface Description	CN	Area acres	Impervious Adjustment		Adjusted CN
			%C	%UC	
PAVEMENT/ROOF	98	.520			98.00
GRASS (SOIL GROUP 'B')	61	2.050			61.00
GRASS (SOIL GROUP 'C')	74	.200			74.00

COMPOSITE AREA & WEIGHTED CN ---->                    2.770                    68.88 (69)

.....

S/N: 721701406A81    J R GRIMES CONSULTING  
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Type.... Runoff CN-Area  
Name.... K40-EXISTING

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... K40 - EXISTING RUNOFF CN

RUNOFF CURVE NUMBER DATA

.....

K40 - EXISTING RUNOFF CN

-----

Soil/Surface Description	CN	Area acres	Impervious Adjustment		Adjusted CN
			%C	%UC	
PASTURE (SOIL GROUP 'C')	74	7.190			74.00
PASTURE (SOIL GROUP 'B')	61	2.400			61.00

COMPOSITE AREA & WEIGHTED CN ----> 9.590 70.75 (71)

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S/N: 721701406A81 J R GRIMES CONSULTING  
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Type.... Runoff CN-Area  
Name.... KB-DEVELOPED

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... KELLENBECK - DEVELOPED

RUNOFF CURVE NUMBER DATA

.....

KELLENBECK - DEVELOPED

-----

Soil/Surface Description	CN	Area acres	Impervious Adjustment		Adjusted CN
			%C	%UC	
GRASS (SOIL GROUP 'B')	61	3.480			61.00
GRASS (SOIL GROUP 'C')	74	3.480			74.00
PAVEMENT/ROOF (80% COVERAGE)	98	27.850			98.00

COMPOSITE AREA & WEIGHTED CN --->                    34.810                    91.90 (92)

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S/N: 721701406A81    J R GRIMES CONSULTING  
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Type.... Runoff CN-Area  
Name.... OFFSITE

File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... OFFSITE DRAINAGE AREA (BUSCH WILDLIFE PRESERVE)

RUNOFF CURVE NUMBER DATA

.....

OFFSITE DRAINAGE AREA (BUSCH WILDLIFE PRESERVE)

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Soil/Surface Description	CN	Area acres	Impervious Adjustment		Adjusted CN
			%C	%UC	
EXISTING WOODS(SOIL GOUP 'D')	77	48.600			77.00

COMPOSITE AREA & WEIGHTED CN --->                    48.600                    77.00 (77)

.....

S/N: 721701406A81    J R GRIMES CONSULTING  
PondPack Ver: 7.5 (767)                    Compute Time: 14:20:08                    Date: 08-06-2002

Type.... SCS Unit Hyd. Summary  
Name.... BYPASS-DEVELOPED Tag: 2  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... AREA VI - DEVELOPED RUNOFF  
Storm... TypeII 24hr Tag: 2

Page 4.01  
Event: 2 yr

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 = PERSIMMO.HYG - BYPASS-DEVELOPED 2  
Tc = .3912 hrs  
Drainage Area = 2.770 acres Runoff CN= 69

=====  
Computational Time Increment = .05216 hrs  
Computed Peak Time = 12.1521 hrs  
Computed Peak Flow = 2.36 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.1000 hrs  
Peak Flow, Interpolated Output = 2.27 cfs  
WARNING: The difference between calculated peak flow  
and interpolated peak flow is greater than 1.50%

=====  
DRAINAGE AREA

-----  
ID:AREAVIDEVELOPED  
CN = 69  
Area = 2.770 acres  
S = 4.4928 in  
0.2S = .8986 in

Cumulative Runoff

-----  
.9540 in  
.220 ac-ft

HYG Volume... .220 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .39116 hrs (ID: AREAVIDEVELOPED)  
Computational Incr, Tm = .05216 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 = 8.02 cfs  
Unit peak time Tp = .26078 hrs  
Unit receding limb, Tr = 1.04310 hrs  
Total unit time, Tb = 1.30388 hrs

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PondPack Ver: 7.5 (767)

Compute Time: 14:20:08

Date: 08-06-2002

Type.... SCS Unit Hyd. (HYG output)

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Name.... BYPASS-DEVELOPED Tag: 2 Event: 2 yr  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Title... AREA VI - DEVELOPED RUNOFF  
 Storm... TypeII 24hr Tag: 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 = PERSIMMO.HYG - BYPASS-DEVELOPED 2  
 Tc = .3912 hrs  
 Drainage Area = 2.770 acres Runoff CN= 69  
 Calc.Increment= .05216 hrs Out.Incr.= .1000 hrs  
 HYG Volume = .220 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	.02	.07
11.8000	.23	.68	1.53	2.27	2.23
12.3000	1.71	1.23	.93	.73	.59
12.8000	.49	.43	.39	.35	.32
13.3000	.30	.29	.27	.26	.25
13.8000	.24	.23	.22	.21	.20
14.3000	.19	.19	.18	.18	.18
14.8000	.17	.17	.17	.16	.16
15.3000	.16	.15	.15	.15	.14
15.8000	.14	.14	.13	.13	.13
16.3000	.12	.12	.12	.12	.12
16.8000	.12	.12	.12	.11	.11
17.3000	.11	.11	.11	.11	.11
17.8000	.11	.10	.10	.10	.10
18.3000	.10	.10	.10	.10	.09
18.8000	.09	.09	.09	.09	.09
19.3000	.09	.09	.08	.08	.08
19.8000	.08	.08	.08	.08	.08
20.3000	.07	.07	.07	.07	.07
20.8000	.07	.07	.07	.07	.07
21.3000	.07	.07	.07	.07	.07
21.8000	.07	.07	.07	.07	.07
22.3000	.07	.07	.07	.07	.07
22.8000	.07	.07	.07	.07	.07
23.3000	.07	.07	.07	.07	.07
23.8000	.07	.07	.07	.06	.05
24.3000	.03	.02	.01	.00	.00
24.8000	.00	.00			

S/N: 721701406A81 J R GRIMES CONSULTING  
 PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002

Type.... SCS Unit Hyd. Summary  
Name.... BYPASS-DEVELOPED Tag: 15  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 15

Page 4.03  
Event: 15 yr

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 = PERSIMMO.HYG - BYPASS-DEVELOPED 15  
Tc = .3912 hrs  
Drainage Area = 2.770 acres Runoff CN= 69

=====  
Computational Time Increment = .05216 hrs  
Computed Peak Time = 12.1521 hrs  
Computed Peak Flow = 5.58 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.1000 hrs  
Peak Flow, Interpolated Output = 5.54 cfs  
=====

DRAINAGE AREA

-----  
ID:AREAVIDEVELOPED  
CN = 69  
Area = 2.770 acres  
S = 4.4928 in  
0.2S = .8986 in

Cumulative Runoff

-----  
2.1039 in  
.486 ac-ft

HYG Volume... .486 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .39116 hrs (ID: AREAVIDEVELOPED)  
Computational Incr, Tm = .05216 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 = 8.02 cfs  
Unit peak time Tp = .26078 hrs  
Unit receding limb, Tr = 1.04310 hrs  
Total unit time, Tb = 1.30388 hrs

S/N: 721701406A81 J R GRIMES CONSULTING  
PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002



Type.... SCS Unit Hyd. (HYG output)  
 Name.... BYPASS-DEVELOPED Tag: 15  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 15

Page 4.04  
 Event: 15 yr

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 = PERSIMMO.HYG - BYPASS-DEVELOPED 15  
 Tc = .3912 hrs  
 Drainage Area = 2.770 acres Runoff CN= 69  
 Calc.Increment= .05216 hrs Out.Incr.= .1000 hrs  
 HYG Volume = .486 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	.00	.01	.01
10.4000	.02	.03	.03	.04	.05
10.9000	.07	.08	.10	.12	.14
11.4000	.18	.22	.29	.50	1.03
11.9000	2.20	4.12	5.54	5.18	3.85
12.4000	2.70	2.00	1.54	1.22	1.01
12.9000	.87	.77	.70	.64	.60
13.4000	.57	.54	.51	.48	.46
13.9000	.44	.42	.40	.39	.37
14.4000	.36	.35	.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	.22	.21	.21
17.4000	.21	.21	.20	.20	.20
17.9000	.20	.19	.19	.19	.19
18.4000	.18	.18	.18	.18	.17
18.9000	.17	.17	.17	.16	.16
19.4000	.16	.16	.15	.15	.15
19.9000	.15	.14	.14	.14	.14
20.4000	.14	.14	.14	.13	.13
20.9000	.13	.13	.13	.13	.13
21.4000	.13	.13	.13	.13	.13
21.9000	.13	.13	.13	.13	.13
22.4000	.13	.13	.13	.13	.13
22.9000	.12	.12	.12	.12	.12
23.4000	.12	.12	.12	.12	.12
23.9000	.12	.12	.11	.09	.05
24.4000	.03	.02	.01	.00	.00
24.9000	.00	.00			

Type.... SCS Unit Hyd. Summary  
Name.... BYPASS-DEVELOPED Tag: 25  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 25

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 = PERSIMMO.HYG - BYPASS-DEVELOPED 25  
Tc = .3912 hrs  
Drainage Area = 2.770 acres Runoff CN= 69

=====  
Computational Time Increment = .05216 hrs  
Computed Peak Time = 12.1521 hrs  
Computed Peak Flow = 6.61 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.1000 hrs  
Peak Flow, Interpolated Output = 6.60 cfs  
=====

DRAINAGE AREA

-----  
ID:AREAVIDEVELOPED  
CN = 69  
Area = 2.770 acres  
S = 4.4928 in  
0.2S = .8986 in

Cumulative Runoff

-----  
2.4805 in  
.573 ac-ft

HYG Volume... .573 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .39116 hrs (ID: AREAVIDEVELOPED)  
Computational Incr, Tm = .05216 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 = 8.02 cfs  
Unit peak time Tp = .26078 hrs  
Unit receding limb, Tr = 1.04310 hrs  
Total unit time, Tb = 1.30388 hrs

Type.... SCS Unit Hyd. (HYG output)  
 Name.... BYPASS-DEVELOPED Tag: 25  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 25

Page 4.06  
 Event: 25 yr

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 = PERSIMMO.HYG - BYPASS-DEVELOPED 25  
 Tc = .3912 hrs  
 Drainage Area = 2.770 acres Runoff CN= 69  
 Calc.Increment= .05216 hrs Out.Incr.= .1000 hrs  
 HYG Volume = .573 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Output Time increment = .1000 hrs				
	Time on left represents time for first value in each row.				
9.5000	.00	.00	.00	.01	.01
10.0000	.02	.02	.03	.04	.05
10.5000	.05	.07	.08	.09	.11
11.0000	.13	.15	.17	.21	.25
11.5000	.30	.39	.66	1.31	2.72
12.0000	4.97	6.60	6.13	4.54	3.17
12.5000	2.34	1.79	1.42	1.17	1.01
13.0000	.89	.81	.74	.69	.65
13.5000	.62	.58	.56	.53	.51
14.0000	.48	.46	.44	.43	.41
14.5000	.40	.40	.39	.38	.37
15.0000	.37	.36	.35	.34	.34
15.5000	.33	.32	.31	.31	.30
16.0000	.29	.28	.28	.27	.27
16.5000	.26	.26	.26	.25	.25
17.0000	.25	.25	.24	.24	.24
17.5000	.23	.23	.23	.23	.22
18.0000	.22	.22	.22	.21	.21
18.5000	.21	.20	.20	.20	.20
19.0000	.19	.19	.19	.18	.18
19.5000	.18	.18	.17	.17	.17
20.0000	.16	.16	.16	.16	.16
20.5000	.16	.15	.15	.15	.15
21.0000	.15	.15	.15	.15	.15
21.5000	.15	.15	.15	.15	.15
22.0000	.15	.15	.15	.15	.14
22.5000	.14	.14	.14	.14	.14
23.0000	.14	.14	.14	.14	.14
23.5000	.14	.14	.14	.14	.14
24.0000	.14	.13	.10	.06	.03
24.5000	.02	.01	.00	.00	.00
25.0000	.00				

Type.... SCS Unit Hyd. Summary  
Name.... BYPASS-DEVELOPED Tag: 100  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 100

Page 4.07  
Event: 100 yr

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 = PERSIMMO.HYG - BYPASS-DEVELOPED 100  
Tc = .3912 hrs  
Drainage Area = 2.770 acres Runoff CN= 69

=====  
Computational Time Increment = .05216 hrs  
Computed Peak Time = 12.1000 hrs  
Computed Peak Flow = 9.94 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.1000 hrs  
Peak Flow, Interpolated Output = 9.94 cfs  
=====

DRAINAGE AREA

-----  
ID:AREAVIDEVELOPED  
CN = 69  
Area = 2.770 acres  
S = 4.4928 in  
0.2S = .8986 in

Cumulative Runoff

-----  
3.6787 in  
.849 ac-ft

HYG Volume... .850 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .39116 hrs (ID: AREAVIDEVELOPED)  
Computational Incr, Tm = .05216 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 = 8.02 cfs  
Unit peak time Tp = .26078 hrs  
Unit receding limb, Tr = 1.04310 hrs  
Total unit time, Tb = 1.30388 hrs

Type.... SCS Unit Hyd. (HYG output)  
 Name.... BYPASS-DEVELOPED Tag: 100  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 100

Page 4.08  
 Event: 100 yr

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 = PERSIMMO.HYG - BYPASS-DEVELOPED 100  
 Tc = .3912 hrs  
 Drainage Area = 2.770 acres Runoff CN= 69  
 Calc.Increment= .05216 hrs Out.Incr.= .1000 hrs  
 HYG Volume = .850 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Output Time increment = .1000 hrs				
	Time on left represents time for first value in each row.				
8.4000	.00	.00	.01	.01	.01
8.9000	.02	.02	.03	.04	.04
9.4000	.05	.05	.06	.07	.07
9.9000	.08	.09	.10	.12	.13
10.4000	.14	.16	.18	.20	.23
10.9000	.26	.29	.32	.37	.42
11.4000	.49	.58	.73	1.17	2.22
11.9000	4.39	7.70	9.94	9.09	6.67
12.4000	4.62	3.38	2.57	2.03	1.66
12.9000	1.43	1.26	1.14	1.04	.97
13.4000	.91	.86	.82	.78	.74
13.9000	.71	.67	.64	.62	.59
14.4000	.58	.56	.55	.54	.53
14.9000	.52	.51	.50	.49	.48
15.4000	.47	.45	.44	.43	.42
15.9000	.41	.40	.39	.38	.37
16.4000	.37	.36	.36	.35	.35
16.9000	.35	.34	.34	.33	.33
17.4000	.33	.32	.32	.32	.31
17.9000	.31	.30	.30	.30	.29
18.4000	.29	.28	.28	.28	.27
18.9000	.27	.27	.26	.26	.25
19.4000	.25	.25	.24	.24	.23
19.9000	.23	.23	.22	.22	.22
20.4000	.21	.21	.21	.21	.21
20.9000	.21	.21	.21	.21	.21
21.4000	.21	.20	.20	.20	.20
21.9000	.20	.20	.20	.20	.20
22.4000	.20	.20	.20	.20	.19
22.9000	.19	.19	.19	.19	.19
23.4000	.19	.19	.19	.19	.19
23.9000	.19	.18	.17	.13	.08
24.4000	.04	.02	.01	.01	.00
24.9000	.00	.00			

Name.... EX-64K Tag: 2 Event: 2 yr  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... 64K PARCEL  
Storm... TypeII 24hr Tag: 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 = PERSIMMO.HYG - EX-64K 2  
Tc = .7144 hrs  
Drainage Area = 18.360 acres Runoff CN= 67

=====  
Computational Time Increment = .09526 hrs  
Computed Peak Time = 12.3836 hrs  
Computed Peak Flow = 8.89 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.4000 hrs  
Peak Flow, Interpolated Output = 8.80 cfs  
=====

DRAINAGE AREA

-----  
ID:64K-EXISTING  
CN = 67  
Area = 18.360 acres  
S = 4.9254 in  
0.2S = .9851 in

Cumulative Runoff

-----  
.8501 in  
1.301 ac-ft

HYG Volume... 1.301 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .71444 hrs (ID: 64K)  
Computational Incr, Tm = .09526 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 = 29.12 cfs  
Unit peak time Tp = .47629 hrs  
Unit receding limb, Tr = 1.90517 hrs  
Total unit time, Tb = 2.38146 hrs

Type.... SCS Unit Hyd. (HYG output)  
 Name.... EX-64K Tag: 2  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Title... 64K PARCEL  
 Storm... TypeII 24hr Tag: 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 = PERSIMMO.HYG - EX-64K 2  
 Tc = .7144 hrs  
 Drainage Area = 18.360 acres Runoff CN= 67  
 Calc.Increment= .09526 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 1.301 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	HYDROGRAPH ORDINATES (cfs)					
11.5000	.00	.01	.06	.29	1.03	
12.0000	2.64	5.02	7.35	8.64	8.80	
12.5000	8.14	7.02	5.87	4.96	4.25	
13.0000	3.67	3.21	2.85	2.56	2.32	
13.5000	2.13	1.97	1.84	1.73	1.63	
14.0000	1.54	1.46	1.38	1.32	1.27	
14.5000	1.22	1.18	1.15	1.13	1.10	
15.0000	1.08	1.06	1.03	1.01	.99	
15.5000	.97	.95	.93	.91	.89	
16.0000	.87	.85	.83	.82	.80	
16.5000	.78	.77	.76	.75	.74	
17.0000	.73	.72	.72	.71	.70	
17.5000	.69	.69	.68	.67	.66	
18.0000	.66	.65	.64	.63	.63	
18.5000	.62	.61	.60	.60	.59	
19.0000	.58	.57	.57	.56	.55	
19.5000	.54	.53	.53	.52	.51	
20.0000	.50	.49	.49	.48	.47	
20.5000	.47	.46	.46	.46	.45	
21.0000	.45	.45	.45	.45	.45	
21.5000	.44	.44	.44	.44	.44	
22.0000	.44	.44	.43	.43	.43	
22.5000	.43	.43	.43	.43	.42	
23.0000	.42	.42	.42	.42	.42	
23.5000	.42	.41	.41	.41	.41	
24.0000	.41	.40	.38	.33	.27	
24.5000	.21	.15	.11	.08	.05	
25.0000	.04	.03	.02	.01	.01	
25.5000	.01	.00	.00	.00	.00	
26.0000	.00					

Type.... SCS Unit Hyd. Summary  
Name.... EX-64K Tag: 15  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 15

Page 4.12  
Event: 15 yr

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 = PERSIMMO.HYG - EX-64K 15  
Tc = .7144 hrs  
Drainage Area = 18.360 acres Runoff CN= 67

=====  
Computational Time Increment = .09526 hrs  
Computed Peak Time = 12.2883 hrs  
Computed Peak Flow = 22.79 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 22.78 cfs  
=====

DRAINAGE AREA

-----  
ID:64K-EXISTING  
CN = 67  
Area = 18.360 acres  
S = 4.9254 in  
0.2S = .9851 in

Cumulative Runoff

-----  
1.9437 in  
2.974 ac-ft

HYG Volume... 2.975 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .71444 hrs (ID: 64K)  
Computational Incr, Tm = .09526 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 = 29.12 cfs  
Unit peak time Tp = .47629 hrs  
Unit receding limb, Tr = 1.90517 hrs  
Total unit time, Tb = 2.38146 hrs

S/N: 721701406A81 J R GRIMES CONSULTING  
PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002



Type.... SCS Unit Hyd. (HYG output)  
 Name.... EX-64K Tag: 15  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 15

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 = PERSIMMO.HYG - EX-64K 15  
 Tc = .7144 hrs  
 Drainage Area = 18.360 acres Runoff CN= 67  
 Calc.Increment= .09526 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 2.975 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	HYDROGRAPH ORDINATES (cfs)				
	Output Time increment = .1000 hrs				
	Time on left represents time for first value in each row.				
10.3000	.00	.00	.01	.02	.04
10.8000	.07	.11	.17	.23	.31
11.3000	.41	.53	.68	.91	1.38
11.8000	2.47	4.95	9.39	15.26	20.42
12.3000	22.78	22.34	20.06	16.87	13.82
12.8000	11.46	9.64	8.20	7.06	6.17
13.3000	5.47	4.92	4.47	4.10	3.80
13.8000	3.54	3.32	3.12	2.94	2.78
14.3000	2.64	2.53	2.44	2.36	2.29
14.8000	2.24	2.18	2.13	2.09	2.04
15.3000	2.00	1.96	1.92	1.88	1.84
15.8000	1.79	1.75	1.71	1.67	1.63
16.3000	1.59	1.56	1.53	1.50	1.48
16.8000	1.46	1.44	1.42	1.40	1.39
17.3000	1.37	1.36	1.34	1.33	1.31
17.8000	1.30	1.28	1.27	1.25	1.24
18.3000	1.22	1.21	1.19	1.18	1.16
18.8000	1.15	1.13	1.11	1.10	1.08
19.3000	1.07	1.05	1.04	1.02	1.01
19.8000	.99	.97	.96	.94	.93
20.3000	.91	.90	.89	.88	.87
20.8000	.87	.86	.86	.85	.85
21.3000	.85	.84	.84	.84	.84
21.8000	.83	.83	.83	.82	.82
22.3000	.82	.82	.81	.81	.81
22.8000	.80	.80	.80	.80	.79
23.3000	.79	.79	.78	.78	.78
23.8000	.77	.77	.77	.75	.71
24.3000	.62	.51	.39	.29	.20
24.8000	.14	.10	.07	.05	.04
25.3000	.02	.02	.01	.01	.01
25.8000	.00	.00	.00	.00	.00

Type.... SCS Unit Hyd. Summary  
Name.... EX-64K Tag: 25  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 25

Page 4.14  
Event: 25 yr

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 = PERSIMMO.HYG - EX-64K 25  
Tc = .7144 hrs  
Drainage Area = 18.360 acres Runoff CN= 67

=====  
Computational Time Increment = .09526 hrs  
Computed Peak Time = 12.2883 hrs  
Computed Peak Flow = 27.49 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 27.46 cfs  
=====

DRAINAGE AREA

-----  
ID:64K-EXISTING  
CN = 67  
Area = 18.360 acres  
S = 4.9254 in  
0.2S = .9851 in

Cumulative Runoff

-----  
2.3060 in  
3.528 ac-ft

HYG Volume... 3.530 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .71444 hrs (ID: 64K)  
Computational Incr, Tm = .09526 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 = 29.12 cfs  
Unit peak time Tp = .47629 hrs  
Unit receding limb, Tr = 1.90517 hrs  
Total unit time, Tb = 2.38146 hrs

Type.... SCS Unit Hyd. (HYG output)  
 Name.... EX-64K Tag: 25  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 25

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 = PERSIMMO.HYG - EX-64K 25  
 Tc = .7144 hrs  
 Drainage Area = 18.360 acres Runoff CN= 67  
 Calc.Increment= .09526 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 3.530 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	.02	.04
10.4000	.06	.09	.13	.18	.24
10.9000	.30	.38	.47	.58	.70
11.4000	.86	1.06	1.36	1.96	3.33
11.9000	6.38	11.75	18.74	24.79	27.46
12.4000	26.79	23.95	20.07	16.39	13.55
12.9000	11.37	9.64	8.28	7.22	6.39
13.4000	5.73	5.20	4.77	4.41	4.11
13.9000	3.85	3.61	3.40	3.21	3.05
14.4000	2.92	2.82	2.72	2.65	2.58
14.9000	2.52	2.46	2.41	2.36	2.31
15.4000	2.26	2.21	2.16	2.11	2.06
15.9000	2.02	1.97	1.92	1.87	1.83
16.4000	1.79	1.75	1.72	1.70	1.67
16.9000	1.65	1.63	1.61	1.59	1.57
17.4000	1.56	1.54	1.52	1.50	1.49
17.9000	1.47	1.45	1.44	1.42	1.40
18.4000	1.38	1.37	1.35	1.33	1.31
18.9000	1.29	1.28	1.26	1.24	1.22
19.4000	1.21	1.19	1.17	1.15	1.13
19.9000	1.11	1.10	1.08	1.06	1.04
20.4000	1.03	1.02	1.01	1.00	.99
20.9000	.99	.98	.98	.97	.97
21.4000	.97	.96	.96	.96	.95
21.9000	.95	.95	.94	.94	.94
22.4000	.93	.93	.93	.92	.92
22.9000	.92	.91	.91	.91	.90
23.4000	.90	.89	.89	.89	.88
23.9000	.88	.88	.86	.81	.71
24.4000	.58	.45	.33	.23	.16
24.9000	.12	.08	.06	.04	.03
25.4000	.02	.01	.01	.01	.00
25.9000	.00	.00	.00		

Name... EX-64K Tag: 100 Event: 100 yr  
File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 100

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 = PERSIMMO.HYG - EX-64K 100  
Tc = .7144 hrs  
Drainage Area = 18.360 acres Runoff CN= 67

=====  
Computational Time Increment = .09526 hrs  
Computed Peak Time = 12.2883 hrs  
Computed Peak Flow = 42.46 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 42.35 cfs  
=====

DRAINAGE AREA

-----  
ID:64K-EXISTING  
CN = 67  
Area = 18.360 acres  
S = 4.9254 in  
0.2S = .9851 in

Cumulative Runoff

-----  
3.4672 in  
5.305 ac-ft

HYG Volume... 5.308 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .71444 hrs (ID: 64K)  
Computational Incr, Tm = .09526 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 = 29.12 cfs  
Unit peak time Tp = .47629 hrs  
Unit receding limb, Tr = 1.90517 hrs  
Total unit time, Tb = 2.38146 hrs

Type... SCS Unit Hyd. (HYG output)  
 Name... EX-64K Tag: 100  
 File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 100

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 = PERSIMMO.HYG - EX-64K 100  
 Tc = .7144 hrs  
 Drainage Area = 18.360 acres Runoff CN= 67  
 Calc.Increment= .09526 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 5.308 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs					
8.8000	.00	.00	.01	.02	.04
9.3000	.06	.09	.12	.15	.18
9.8000	.22	.26	.30	.35	.41
10.3000	.47	.54	.62	.71	.80
10.8000	.92	1.04	1.19	1.35	1.54
11.3000	1.77	2.05	2.39	2.92	3.95
11.8000	6.24	11.14	19.45	29.97	38.78
12.3000	42.35	40.89	36.23	30.14	24.46
12.8000	20.10	16.77	14.14	12.08	10.48
13.3000	9.23	8.25	7.46	6.82	6.29
13.8000	5.84	5.46	5.12	4.80	4.53
14.3000	4.30	4.12	3.97	3.83	3.72
14.8000	3.62	3.54	3.45	3.38	3.30
15.3000	3.23	3.16	3.09	3.02	2.96
15.8000	2.89	2.82	2.75	2.68	2.62
16.3000	2.55	2.50	2.45	2.40	2.36
16.8000	2.33	2.30	2.27	2.24	2.22
17.3000	2.19	2.17	2.14	2.12	2.09
17.8000	2.07	2.04	2.02	1.99	1.97
18.3000	1.94	1.92	1.89	1.87	1.84
18.8000	1.82	1.80	1.77	1.74	1.72
19.3000	1.69	1.67	1.64	1.62	1.59
19.8000	1.57	1.54	1.52	1.49	1.47
20.3000	1.44	1.42	1.41	1.39	1.38
20.8000	1.37	1.36	1.36	1.35	1.35
21.3000	1.34	1.33	1.33	1.32	1.32
21.8000	1.31	1.31	1.30	1.30	1.29
22.3000	1.29	1.29	1.28	1.28	1.27
22.8000	1.27	1.26	1.26	1.25	1.25
23.3000	1.24	1.24	1.23	1.23	1.22
23.8000	1.22	1.21	1.21	1.18	1.11
24.3000	.98	.80	.62	.45	.32

Type... SCS Unit Hydro Summary  
Name... EX-K40 Tag: 2  
File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... EX. K40 SITE  
Storm... TypeII 24hr Tag: 2

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Event: 2 yr

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 = PERSIMMO.HYG - EX-K40 2  
Tc = .6135 hrs  
Drainage Area = 9.590 acres Runoff CN= 71

=====  
Computational Time Increment = .08180 hrs  
Computed Peak Time = 12.2702 hrs  
Computed Peak Flow = 6.95 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 6.87 cfs  
=====

DRAINAGE AREA

-----  
ID:K40-EXISTING  
CN = 71  
Area = 9.590 acres  
S = 4.0845 in  
0.2S = .8169 in

Cumulative Runoff

-----  
1.0637 in  
.850 ac-ft

HYG Volume... .850 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .61351 hrs (ID: K40)  
Computational Incr, Tm = .08180 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 = 17.71 cfs  
Unit peak time Tp = .40901 hrs  
Unit receding limb, Tr = 1.63603 hrs  
Total unit time, Tb = 2.04504 hrs

S/N: 721701406A31 J R GRIMES CONSULTING Date: 08-06-2002  
PondPack Ver: 7.5 (767) Compute Time: 14:20:08

Type... SCS Unit Hyd. (HYG output)  
 Name... EX-K40 Tag: 2  
 File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Title... EX. K40 SITE  
 Storm... TypeII 24hr Tag: 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 = PERSIMMO.HYG - EX-K40 2  
 Tc = .6135 hrs  
 Drainage Area = 9.590 acres Runoff CN= 71  
 Calc.Increment= .08180 hrs Out.Incr.= .1000 hrs  
 HYG Volume = .850 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Output Time increment = .1000 hrs				
	Time on left represents time for first value in each row.				
11.1000	.00	.00	.01	.03	.06
11.6000	.11	.23	.58	1.45	3.02
12.1000	5.02	6.51	6.87	6.32	5.30
12.6000	4.25	3.47	2.87	2.41	2.06
13.1000	1.79	1.59	1.44	1.31	1.21
13.6000	1.13	1.05	.99	.93	.88
14.1000	.84	.81	.77	.74	.72
14.6000	.70	.68	.67	.66	.64
15.1000	.63	.62	.61	.59	.58
15.6000	.57	.56	.54	.53	.52
16.1000	.51	.49	.48	.47	.46
16.6000	.46	.45	.45	.44	.44
17.1000	.43	.43	.42	.42	.41
17.6000	.41	.40	.40	.39	.39
18.1000	.39	.38	.38	.37	.37
18.6000	.36	.36	.35	.35	.34
19.1000	.34	.33	.33	.32	.32
19.6000	.32	.31	.31	.30	.30
20.1000	.29	.29	.28	.28	.28
20.6000	.27	.27	.27	.27	.27
21.1000	.27	.27	.26	.26	.26
21.6000	.26	.26	.26	.26	.26
22.1000	.26	.26	.26	.26	.25
22.6000	.25	.25	.25	.25	.25
23.1000	.25	.25	.25	.25	.25
23.6000	.24	.24	.24	.24	.24
24.1000	.23	.21	.18	.14	.10
24.6000	.06	.04	.03	.02	.01
25.1000	.01	.01	.00	.00	.00
25.6000	.00				

Type... SCS Unit Hyd. Summary  
Name.... EX-K40 Tag: 15  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 15

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 = PERSIMMO.HYG - EX-K40 15  
Tc = .6135 hrs  
Drainage Area = 9.590 acres Runoff CN= 71

=====  
Computational Time Increment = .08180 hrs  
Computed Peak Time = 12.2702 hrs  
Computed Peak Flow = 15.92 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 15.61 cfs  
WARNING: The difference between calculated peak flow  
and interpolated peak flow is greater than 1.50%

-----  
DRAINAGE AREA

-----  
ID:K40-EXISTING  
CN = 71  
Area = 9.590 acres  
S = 4.0845 in  
0.2S = .8169 in

Cumulative Runoff

-----  
2.2688 in  
1.813 ac-ft

HYG Volume... 1.814 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .61351 hrs (ID: K40)  
Computational Incr, Tm = .08180 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 = 17.71 cfs  
Unit peak time Tp = .40901 hrs  
Unit receding limb, Tr = 1.63603 hrs  
Total unit time, Tb = 2.04504 hrs



Name... EX-K40

Tag: 15

Event: 15 yr

File... J:\0675B\PCNDPACK\DEVELOPED2-REV-2.PPW

Storm... TypeII 24hr Tag: 15

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\PCNDPACK\

HYG File - ID = PERSIMMO.HYG - EX-K40 15

Tc = .6135 hrs

Drainage Area = 9.590 acres Runoff CN= 71

Calc.Increment= .08180 hrs Out.Incr.= .1000 hrs

HYG Volume = 1.814 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Output Time increment = .1000 hrs				
Time on left represents time for first value in each row.					
9.5000	.00	.00	.01	.01	.02
10.0000	.04	.05	.07	.09	.11
10.5000	.13	.16	.19	.23	.27
11.0000	.32	.37	.44	.52	.62
11.5000	.74	.93	1.32	2.34	4.53
12.0000	8.17	12.44	15.31	15.61	14.00
12.5000	11.50	9.08	7.30	5.96	4.93
13.0000	4.15	3.58	3.15	2.82	2.55
13.5000	2.34	2.17	2.02	1.89	1.77
14.0000	1.68	1.60	1.53	1.46	1.41
14.5000	1.36	1.32	1.29	1.26	1.23
15.0000	1.20	1.18	1.15	1.13	1.11
15.5000	1.08	1.06	1.03	1.01	.99
16.0000	.96	.94	.91	.89	.87
16.5000	.86	.84	.83	.82	.81
17.0000	.80	.79	.78	.78	.77
17.5000	.76	.75	.74	.73	.72
18.0000	.71	.71	.70	.69	.68
18.5000	.67	.66	.65	.64	.64
19.0000	.63	.62	.61	.60	.59
19.5000	.58	.57	.56	.55	.55
20.0000	.54	.53	.52	.51	.50
20.5000	.50	.50	.49	.49	.49
21.0000	.48	.48	.48	.48	.48
21.5000	.48	.47	.47	.47	.47
22.0000	.47	.47	.46	.46	.46
22.5000	.46	.46	.46	.45	.45
23.0000	.45	.45	.45	.45	.44
23.5000	.44	.44	.44	.44	.43
24.0000	.43	.42	.38	.32	.24
24.5000	.17	.12	.08	.05	.03
25.0000	.02	.02	.01	.01	.00
25.5000	.00	.00	.00		

S/N: 721701406A81 J R GRIMES CONSULTING

PondPack Ver: 7.5 (767)

Compute Time: 14:20:08

Date: 08-06-2002

Type... SCS Unit Hyd. Summary  
Name.... EX-K40 Tag: 25  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 25

Page 4.25  
Event: 25 yr

SCS UNIT HYDROGRAPH METHOD

STCRM 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 = PERSIMMO.HYG - EX-K40 25  
Tc = .6135 hrs  
Drainage Area = 9.590 acres Runoff CN= 71

=====  
Computational Time Increment = .08180 hrs  
Computed Peak Time = 12.2702 hrs  
Computed Peak Flow = 18.79 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 18.40 cfs  
WARNING: The difference between calculated peak flow  
and interpolated peak flow is greater than 1.50%

=====

DRAINAGE AREA

-----  
ID:K40-EXISTING  
CN = 71  
Area = 9.590 acres  
S = 4.0845 in  
0.2S = .8169 in

Cumulative Runoff

-----  
2.6590 in  
2.125 ac-ft

HYG Volume... 2.126 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .61351 hrs (ID: K40)  
Computational Incr, Tm = .08180 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 = 17.71 cfs  
Unit peak time Tp = .40901 hrs  
Unit receding limb, Tr = 1.63603 hrs  
Total unit time, Tb = 2.04504 hrs

S/N: 721701406A81 J R GRIMES CONSULTING

PondPack Ver: 7.5 (767)

Compute Time: 14:20:08

Date: 08-06-2002

Type.... SCS Unit Hyd. (HYG output)

Page 4.26

Name... EX-K40 Tag: 25 Event: 25 yr  
 File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 25

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 = PERSIMMO.HYG - EX-K40 25  
 Tc = .6135 hrs  
 Drainage Area = 9.590 acres Runoff CN= 71  
 Calc.Increment= .08180 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 2.126 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	.00	.01	.02
9.5000	.03	.04	.05	.07	.09
10.0000	.10	.12	.15	.17	.20
10.5000	.23	.27	.31	.36	.41
11.0000	.47	.54	.62	.72	.84
11.5000	1.00	1.23	1.71	2.95	5.58
12.0000	9.88	14.86	18.15	18.40	16.44
12.5000	13.46	10.59	8.50	6.93	5.72
13.0000	4.80	4.13	3.63	3.24	2.93
13.5000	2.69	2.49	2.32	2.16	2.03
14.0000	1.92	1.83	1.74	1.67	1.61
14.5000	1.55	1.51	1.47	1.43	1.40
15.0000	1.37	1.34	1.32	1.29	1.26
15.5000	1.23	1.21	1.18	1.15	1.12
16.0000	1.10	1.07	1.04	1.02	1.00
16.5000	.98	.96	.95	.94	.92
17.0000	.91	.90	.89	.88	.87
17.5000	.86	.85	.84	.83	.82
18.0000	.81	.80	.79	.78	.77
18.5000	.76	.75	.74	.73	.72
19.0000	.71	.70	.69	.68	.67
19.5000	.66	.65	.64	.63	.62
20.0000	.61	.60	.59	.58	.57
20.5000	.57	.56	.56	.55	.55
21.0000	.55	.55	.55	.54	.54
21.5000	.54	.54	.54	.53	.53
22.0000	.53	.53	.53	.52	.52
22.5000	.52	.52	.52	.51	.51
23.0000	.51	.51	.51	.50	.50
23.5000	.50	.50	.50	.49	.49
24.0000	.49	.47	.43	.36	.28
24.5000	.20	.13	.09	.06	.04
25.0000	.03	.02	.01	.01	.00
25.5000	.00	.00	.00	.00	.00

S/N: 721701406A81 J R GRIMES CONSULTING  
 PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002  
 Type... SCS Unit Hyd. Summary Page 4.28  
 Name... EX-K40 Tag: 100 Event: 100 yr

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 = PERSIMMO.HYG - EX-K40 100  
Tc = .6135 hrs  
Drainage Area = 9.590 acres Runoff CN= 71

=====  
Computational Time Increment = .08180 hrs  
Computed Peak Time = 12.2702 hrs  
Computed Peak Flow = 27.79 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 27.14 cfs  
WARNING: The difference between calculated peak flow  
and interpolated peak flow is greater than 1.50%

DRAINAGE AREA

-----  
ID:K40-EXISTING  
CN = 71  
Area = 9.590 acres  
S = 4.0845 in  
0.2S = .8169 in

Cumulative Runoff

-----  
3.8924 in  
3.111 ac-ft

HYG Volume... 3.112 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .61351 hrs (ID: K40)  
Computational Incr, Tm = .08180 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 = 17.71 cfs  
Unit peak time Tp = .40901 hrs  
Unit receding limb, Tr = 1.63603 hrs  
Total unit time, Tb = 2.04504 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 = PERSIMMO.HYG - EX-K40 100  
 Tc = .6135 hrs  
 Drainage Area = 9.590 acres Runoff CN= 71  
 Calc.Increment= .08180 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 3.112 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs					
7.9000	.00	.00	.01	.01	.02
8.4000	.03	.04	.06	.07	.09
8.9000	.11	.13	.15	.17	.19
9.4000	.22	.24	.26	.29	.31
9.9000	.34	.37	.40	.44	.49
10.4000	.54	.59	.66	.73	.81
10.9000	.90	1.00	1.11	1.25	1.41
11.4000	1.60	1.85	2.23	3.00	4.95
11.9000	8.95	15.33	22.52	27.05	27.14
12.4000	24.04	19.55	15.30	12.21	9.90
12.9000	8.13	6.80	5.83	5.10	4.54
13.4000	4.09	3.74	3.46	3.21	2.99
13.9000	2.80	2.65	2.52	2.41	2.30
14.4000	2.21	2.14	2.08	2.02	1.97
14.9000	1.93	1.89	1.85	1.81	1.77
15.4000	1.73	1.69	1.65	1.61	1.58
15.9000	1.54	1.50	1.46	1.42	1.39
16.4000	1.36	1.34	1.31	1.29	1.28
16.9000	1.26	1.25	1.23	1.22	1.20
17.4000	1.19	1.18	1.16	1.15	1.13
17.9000	1.12	1.11	1.09	1.08	1.07
18.4000	1.05	1.04	1.02	1.01	1.00
18.9000	.98	.97	.95	.94	.93
19.4000	.91	.90	.88	.87	.86
19.9000	.84	.83	.81	.80	.79
20.4000	.78	.77	.76	.76	.75
20.9000	.75	.75	.74	.74	.74
21.4000	.73	.73	.73	.73	.72
21.9000	.72	.72	.71	.71	.71
22.4000	.71	.70	.70	.70	.70
22.9000	.69	.69	.69	.68	.68
23.4000	.68	.68	.67	.67	.67
23.9000	.67	.66	.64	.59	.49
24.4000	.37	.26	.18	.12	.08
24.9000	.05	.04	.02	.02	.01
25.4000	.01	.00	.00	.00	.00

Type ... SCS Unit Hyd. Summary  
Name.... EX64K-3 Tag: 2  
File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Title... EX. 64K BYPASSING EX. LAKE  
Storm... TypeII 24hr Tag: 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 = PERSIMMO.HYG - EX64K-3 2  
Tc = .6337 hrs  
Drainage Area = 8.800 acres Runoff CN= 64

=====  
Computational Time Increment = .08449 hrs  
Computed Peak Time = 12.3351 hrs  
Computed Peak Flow = 3.56 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 3.50 cfs  
WARNING: The difference between calculated peak flow  
and interpolated peak flow is greater than 1.50%

DRAINAGE AREA

-----  
ID:64K-EXISTING-3  
CN = 64  
Area = 8.800 acres  
S = 5.6250 in  
0.2S = 1.1250 in

Cumulative Runoff

-----  
.7051 in  
.517 ac-ft

HYG Volume... .517 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .63365 hrs (ID: 64K-3)  
Computational Incr, Tm = .08449 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 = 15.74 cfs  
Unit peak time Tp = .42244 hrs  
Unit receding limb, Tr = 1.68975 hrs  
Total unit time, Tb = 2.11218 hrs

Type ... SCS Unit Hyd. (HYG output)  
 Name... EX64K-3 Tag: 2  
 File... J:\0675B\PCNDPACK\DEVELOPED2-REV-2.PPW  
 Title... EX. 64K BYPASSING EX. LAKE  
 Storm... TypeII 24hr Tag: 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\PCNDPACK\  
 HYG File - ID = PERSIMMO.HYG - EX64K-3 2  
 Tc = .6337 hrs  
 Drainage Area = 8.800 acres Runoff CN= 64  
 Calc.Increment= .08449 hrs Out.Incr.= .1000 hrs  
 HYG Volume = .517 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Output Time increment = .1000 hrs				
	Time on left represents time for first value in each row.				
11.6000	.00	.01	.07	.35	1.05
12.1000	2.13	3.07	3.50	3.42	3.01
12.6000	2.50	2.09	1.77	1.52	1.32
13.1000	1.17	1.05	.95	.88	.81
13.6000	.76	.72	.68	.64	.61
14.1000	.58	.56	.53	.51	.50
14.6000	.49	.47	.46	.46	.45
15.1000	.44	.43	.42	.41	.41
15.6000	.40	.39	.38	.37	.36
16.1000	.36	.35	.34	.33	.33
16.6000	.32	.32	.31	.31	.31
17.1000	.31	.30	.30	.30	.29
17.6000	.29	.29	.28	.28	.28
18.1000	.27	.27	.27	.27	.26
18.6000	.26	.26	.25	.25	.25
19.1000	.24	.24	.24	.23	.23
19.6000	.23	.22	.22	.22	.21
20.1000	.21	.21	.20	.20	.20
20.6000	.20	.20	.19	.19	.19
21.1000	.19	.19	.19	.19	.19
21.6000	.19	.19	.19	.19	.19
22.1000	.19	.19	.19	.19	.18
22.6000	.18	.18	.18	.18	.18
23.1000	.18	.18	.18	.18	.18
23.6000	.18	.18	.18	.18	.18
24.1000	.17	.16	.13	.10	.07
24.6000	.05	.03	.02	.02	.01
25.1000	.01	.00	.00	.00	.00
25.6000	.00				

Type... SCS Unit Hyd. Summary  
Name... EX64K-3 Tag: 15  
File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 15

Page 4.33  
Event: 15 yr

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 = PERSIMMO.HYG - EX64K-3 15  
Tc = .6337 hrs  
Drainage Area = 8.800 acres Runoff CN= 64

=====  
Computational Time Increment = .08449 hrs  
Computed Peak Time = 12.2507 hrs  
Computed Peak Flow = 10.18 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 10.13 cfs  
=====

DRAINAGE AREA

-----  
ID:64K-EXISTING-3  
CN = 64  
Area = 8.800 acres  
S = 5.6250 in  
0.2S = 1.1250 in

Cumulative Runoff

-----  
1.7119 in  
1.255 ac-ft

HYG Volume... 1.254 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .63365 hrs (ID: 64K-3)  
Computational Incr, Tm = .08449 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 = 15.74 cfs  
Unit peak time Tp = .42244 hrs  
Unit receding limb, Tr = 1.68975 hrs  
Total unit time, Tb = 2.11218 hrs

S/N: 721701406A81 J R GRIMES CONSULTING  
PondPack Ver: 7.5 (757) Compute Time: 14:20:08 Date: 08-06-2002



Type... SCS Unit Hyd. HYG output)  
 Name... EX64K-3 Tag: 15  
 File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 15

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 = PERSIMMO.HYG - EX64K-3 15  
 Tc = .6337 hrs  
 Drainage Area = 8.800 acres Runoff CN= 64  
 Calc.Increment= .08449 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 1.254 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs  
 Time on left represents time for first value in each row.

Time hrs					
10.8000	.00	.00	.01	.02	.04
11.3000	.07	.11	.17	.26	.48
11.8000	1.01	2.24	4.50	7.37	9.52
12.3000	10.13	9.43	7.98	6.43	5.24
12.8000	4.34	3.64	3.09	2.68	2.38
13.3000	2.14	1.94	1.78	1.66	1.55
13.8000	1.45	1.36	1.29	1.23	1.17
14.3000	1.12	1.08	1.05	1.02	.99
14.8000	.97	.95	.93	.91	.89
15.3000	.87	.85	.84	.82	.80
15.8000	.78	.76	.75	.73	.71
16.3000	.69	.68	.67	.66	.65
16.8000	.64	.63	.62	.62	.61
17.3000	.60	.60	.59	.59	.58
17.8000	.57	.57	.56	.55	.55
18.3000	.54	.53	.53	.52	.51
18.8000	.51	.50	.49	.49	.48
19.3000	.47	.46	.46	.45	.44
19.8000	.44	.43	.42	.42	.41
20.3000	.40	.40	.39	.39	.39
20.8000	.39	.38	.38	.38	.38
21.3000	.38	.38	.38	.37	.37
21.8000	.37	.37	.37	.37	.37
22.3000	.37	.36	.36	.36	.36
22.8000	.36	.36	.36	.36	.35
23.3000	.35	.35	.35	.35	.35
23.8000	.35	.34	.34	.33	.31
24.3000	.26	.20	.14	.10	.07
24.8000	.04	.03	.02	.01	.01
25.3000	.01	.00	.00	.00	.00

Type... SCS Unit Hyd. Summary  
Name... EX64K-3 Tag: 25  
File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 34hr Tag: 25

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 = PERSIMMO.HYG - EX64K-3 25  
Tc = .6337 hrs  
Drainage Area = 8.800 acres Runoff CN= 64

=====  
Computational Time Increment = .08449 hrs  
Computed Peak Time = 12.2507 hrs  
Computed Peak Flow = 12.47 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 12.37 cfs  
=====

DRAINAGE AREA

-----  
ID:64K-EXISTING-3  
CN = 64  
Area = 8.800 acres  
S = 5.6250 in  
0.2S = 1.1250 in

Cumulative Runoff

-----  
2.0520 in  
1.505 ac-ft

HYG Volume... 1.503 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .63365 hrs (ID: 64K-3)  
Computational Incr, Tm = .08449 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 = 15.74 cfs  
Unit peak time Tp = .42244 hrs  
Unit receding limb, Tr = 1.68975 hrs  
Total unit time, Tb = 2.11218 hrs

Type... SCS Unit Hyd. (HYG output)  
 Name... EX64K-3 Tag: 25  
 File... J:\0675B\PCNDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 25

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\PCNDPACK\  
 HYG File - ID = PERSIMMO.HYG - EX64K-3 25  
 Tc = .6337 hrs  
 Drainage Area = 8.800 acres Runoff CN= 64  
 Calc.Increment= .08449 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 1.503 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs  
 Time on left represents time for first value in each row.

Time hrs					
10.5000	.00	.00	.01	.02	.04
11.0000	.06	.10	.14	.19	.25
11.5000	.33	.46	.75	1.44	2.99
12.0000	5.76	9.20	11.73	12.37	11.44
12.5000	9.63	7.73	6.28	5.18	4.32
13.0000	3.67	3.17	2.80	2.51	2.28
13.5000	2.09	1.94	1.81	1.70	1.59
14.0000	1.50	1.43	1.36	1.31	1.26
14.5000	1.22	1.18	1.15	1.12	1.10
15.0000	1.08	1.06	1.03	1.01	.99
15.5000	.97	.95	.93	.91	.89
16.0000	.87	.84	.82	.80	.79
16.5000	.77	.76	.75	.74	.73
17.0000	.72	.71	.71	.70	.69
17.5000	.68	.68	.67	.66	.65
18.0000	.65	.64	.63	.62	.62
18.5000	.61	.60	.59	.58	.58
19.0000	.57	.56	.55	.54	.54
19.5000	.53	.52	.51	.50	.50
20.0000	.49	.48	.47	.46	.46
20.5000	.45	.45	.45	.44	.44
21.0000	.44	.44	.44	.44	.43
21.5000	.43	.43	.43	.43	.43
22.0000	.42	.42	.42	.42	.42
22.5000	.42	.42	.41	.41	.41
23.0000	.41	.41	.41	.41	.40
23.5000	.40	.40	.40	.40	.40
24.0000	.39	.38	.35	.30	.23
24.5000	.17	.11	.08	.05	.03
25.0000	.02	.02	.01	.01	.00
25.5000	.00	.00	.00	.00	

Type... SCS Unit Hyd. Summary  
Name... EX64K-3 Tag: 100  
File... J:\0675B\PCNDPAČK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 100

Page 4.37  
Event: 100 yr

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 = PERSIMMO.HYG - EX64K-3 100  
Tc = .6337 hrs  
Drainage Area = 8.800 acres Runoff CN= 64

=====  
Computational Time Increment = .08449 hrs  
Computed Peak Time = 12.2507 hrs  
Computed Peak Flow = 19.88 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.3000 hrs  
Peak Flow, Interpolated Output = 19.58 cfs  
WARNING: The difference between calculated peak flow  
and interpolated peak flow is greater than 1.50%

=====

DRAINAGE AREA

-----  
ID:64K-EXISTING-3  
CN = 64  
Area = 8.800 acres  
S = 5.6250 in  
0.2S = 1.1250 in

Cumulative Runoff

-----  
3.1543 in  
2.313 ac-ft

HYG Volume... 2.311 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .63365 hrs (ID: 64K-3)  
Computational Incr, Tm = .08449 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 = 15.74 cfs  
Unit peak time Tp = .42244 hrs  
Unit receding limb, Tr = 1.68975 hrs  
Total unit time, Tb = 2.11218 hrs

Type ... SCS Unit Hyd. (HYG output)  
 Name ... EX64K-3 Tag: 100  
 File ... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 100

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 = PERSIMMO.HYG - EX64K-3 100  
 Tc = .6337 hrs  
 Drainage Area = 8.800 acres Runoff CN= 64  
 Calc.Increment= .08449 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 2.311 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	.02
9.9000	.03	.05	.07	.09	.11
10.4000	.14	.17	.20	.25	.29
10.9000	.34	.40	.47	.56	.66
11.4000	.78	.93	1.17	1.70	2.92
11.9000	5.51	9.93	15.20	18.88	19.58
12.4000	17.87	14.89	11.85	9.55	7.83
12.9000	6.49	5.47	4.70	4.13	3.68
13.4000	3.33	3.05	2.81	2.62	2.45
13.9000	2.29	2.16	2.06	1.96	1.88
14.4000	1.80	1.74	1.69	1.65	1.61
14.9000	1.57	1.54	1.51	1.47	1.44
15.4000	1.41	1.38	1.35	1.32	1.29
15.9000	1.26	1.23	1.20	1.17	1.14
16.4000	1.12	1.10	1.08	1.06	1.05
16.9000	1.04	1.02	1.01	1.00	.99
17.4000	.98	.97	.96	.95	.93
17.9000	.92	.91	.90	.89	.88
18.4000	.87	.86	.85	.83	.82
18.9000	.81	.80	.79	.78	.77
19.4000	.75	.74	.73	.72	.71
19.9000	.70	.69	.67	.66	.65
20.4000	.64	.64	.63	.63	.62
20.9000	.62	.62	.62	.61	.61
21.4000	.61	.61	.60	.60	.60
21.9000	.60	.60	.59	.59	.59
22.4000	.59	.58	.58	.58	.58
22.9000	.58	.57	.57	.57	.57
23.4000	.56	.56	.56	.56	.56
23.9000	.55	.55	.54	.49	.42
24.4000	.32	.23	.16	.11	.07
24.9000	.05	.03	.02	.01	.01
25.4000	.01	.00	.00	.00	.00

Name.... KELLEN-BECK Tag: 2

Event: 2 yr

File.... J:\0675B\PONDPACK\DEVELOPED2--REV-2.PPW

Title... KELLEN-BECK DEVELOPED PARCEL (MAX. 99% COVERAGE)

Storm... TypeII 24hr Tag: 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 = PERSIMMO.HYG - KELLEN-BECK 2

Tc = .8246 hrs

Drainage Area = 34.810 acres Runoff CN= 92

=====  
Computational Time Increment = .10995 hrs  
Computed Peak Time = 12.3146 hrs  
Computed Peak Flow = 54.88 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.4000 hrs  
Peak Flow, Interpolated Output = 54.56 cfs  
=====

DRAINAGE AREA

-----  
ID:KB-DEVELOPED

CN = 92

Area = 34.810 acres

S = .8696 in

0.2S = .1739 in

Cumulative Runoff

-----  
2.6367 in

7.649 ac-ft

HYG Volume... 7.653 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .82464 hrs (ID: KB-DEVELOPED)

Computational Incr, Tm = .10995 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 = 47.83 cfs

Unit peak time Tp = .54976 hrs

Unit receding limb, Tr = 2.19904 hrs

Total unit time, Tb = 2.74880 hrs

Type... SCS Unit Hyd. (HYG output)  
 Name... KELLEN-BECK Tag: 2  
 File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Title... KELLEN-BECK DEVELOPED PARCEL (MAX. 80% COVERAGE)  
 Storm... TypeII 24hr Tag: 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 = PERSIMMO.HYG - KELLEN-BECK 2  
 Tc = .8246 hrs  
 Drainage Area = 34.810 acres Runoff CN= 92  
 Calc.Increment= .10995 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 7.653 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs  
 Time on left represents time for first value in each row.

Time hrs					
4.3000	.00	.00	.01	.01	.02
4.8000	.03	.05	.06	.08	.10
5.3000	.12	.14	.16	.19	.21
5.8000	.23	.26	.28	.31	.33
6.3000	.36	.39	.41	.44	.47
6.8000	.50	.53	.55	.58	.61
7.3000	.64	.67	.70	.73	.76
7.8000	.79	.82	.85	.89	.92
8.3000	.95	.99	1.04	1.09	1.15
8.8000	1.21	1.28	1.35	1.43	1.51
9.3000	1.59	1.66	1.73	1.80	1.86
9.8000	1.92	1.99	2.07	2.16	2.26
10.3000	2.39	2.52	2.68	2.85	3.04
10.8000	3.25	3.48	3.74	4.04	4.37
11.3000	4.76	5.22	5.80	6.68	8.31
11.8000	11.53	17.45	26.54	37.84	48.36
12.3000	54.08	54.56	51.04	44.93	37.83
12.8000	31.21	25.87	21.71	18.38	15.70
13.3000	13.60	11.93	10.58	9.49	8.59
13.8000	7.84	7.21	6.68	6.22	5.82
14.3000	5.46	5.14	4.87	4.64	4.47
14.8000	4.33	4.20	4.09	3.98	3.89
15.3000	3.79	3.71	3.62	3.53	3.45
15.8000	3.37	3.29	3.20	3.12	3.04
16.3000	2.97	2.90	2.83	2.78	2.73
16.8000	2.68	2.64	2.60	2.57	2.53
17.3000	2.50	2.47	2.44	2.41	2.38
17.8000	2.35	2.32	2.29	2.26	2.23
18.3000	2.20	2.18	2.15	2.12	2.09
18.8000	2.06	2.03	2.00	1.97	1.94
19.3000	1.92	1.89	1.86	1.83	1.80

Type... SCS Unit Hyd. Summary  
Name... KELLEN-BECK Tag: 15  
File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 15

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 = PERSIMMO.HYG - KELLEN-BECK 15  
Tc = .8246 hrs  
Drainage Area = 34.810 acres Runoff CN= 92

=====  
Computational Time Increment = .10995 hrs  
Computed Peak Time = 12.3146 hrs  
Computed Peak Flow = 87.74 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.4000 hrs  
Peak Flow, Interpolated Output = 86.91 cfs  
=====

DRAINAGE AREA

-----  
ID:KB-DEVELOPED  
CN = 92  
Area = 34.810 acres  
S = .8696 in  
0.2S = .1739 in

Cumulative Runoff  
-----  
4.2848 in  
12.429 ac-ft

HYG Volume... 12.437 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .82464 hrs (ID: KB-DEVELOPED)  
Computational Incr, Tm = .10995 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 = 47.83 cfs  
Unit peak time Tp = .54976 hrs  
Unit receding limb, Tr = 2.19904 hrs  
Total unit time, Tb = 2.74880 hrs



Type.... SCS Unit Hyd. (HYG output)  
 Name.... KELLEN-BECK Tag: 15  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 15

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 = PERSIMMO.HYG - KELLEN-BECK 15  
 Tc = .8246 hrs  
 Drainage Area = 34.810 acres Runoff CN= 92  
 Calc.Increment= .10995 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 12.437 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs					
3.0000	.00	.00	.00	.01	.02
3.5000	.04	.06	.08	.11	.14
4.0000	.17	.20	.24	.27	.31
4.5000	.34	.38	.42	.46	.50
5.0000	.54	.58	.62	.66	.70
5.5000	.75	.79	.83	.88	.92
6.0000	.97	1.02	1.06	1.11	1.16
6.5000	1.20	1.25	1.30	1.35	1.40
7.0000	1.44	1.49	1.54	1.59	1.64
7.5000	1.69	1.74	1.79	1.84	1.89
8.0000	1.94	1.99	2.05	2.11	2.17
8.5000	2.25	2.34	2.44	2.56	2.68
9.0000	2.81	2.95	3.08	3.22	3.35
9.5000	3.46	3.57	3.67	3.77	3.87
10.0000	4.00	4.15	4.32	4.53	4.76
10.5000	5.02	5.31	5.63	5.98	6.38
11.0000	6.81	7.29	7.85	8.49	9.25
11.5000	10.21	11.67	14.34	19.60	29.15
12.0000	43.65	61.49	77.86	86.53	86.91
12.5000	80.98	71.06	59.66	49.11	40.61
13.0000	34.00	28.73	24.47	21.15	18.52
13.5000	16.40	14.68	13.27	12.10	11.11
14.0000	10.28	9.57	8.94	8.38	7.89
14.5000	7.46	7.11	6.85	6.62	6.43
15.0000	6.26	6.10	5.95	5.80	5.67
15.5000	5.53	5.40	5.28	5.15	5.02
16.0000	4.90	4.77	4.65	4.53	4.42
16.5000	4.33	4.24	4.16	4.09	4.03
17.0000	3.97	3.92	3.86	3.81	3.77
17.5000	3.72	3.67	3.63	3.58	3.54
18.0000	3.49	3.45	3.40	3.36	3.31
18.5000	3.27	3.23	3.18	3.14	3.09

Type... SCS Unit Hyd. Summary  
Name... KELLEN-BECK Tag: 25  
File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 25

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 = PERSIMMO.HYG - KELLEN-BECK 25  
Tc = .8246 hrs  
Drainage Area = 34.810 acres Runoff CN= 92

=====  
Computational Time Increment = .10995 hrs  
Computed Peak Time = 12.3146 hrs  
Computed Peak Flow = 97.34 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.4000 hrs  
Peak Flow, Interpolated Output = 96.35 cfs  
=====

DRAINAGE AREA

-----  
ID:KB-DEVELOPED  
CN = 92  
Area = 34.810 acres  
S = .8696 in  
0.2S = .1739 in

Cumulative Runoff

-----  
4.7747 in  
13.851 ac-ft

HYG Volume... 13.859 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .82464 hrs (ID: KB-DEVELOPED)  
Computational Incr, Tm = .10995 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 = 47.83 cfs  
Unit peak time Tp = .54976 hrs  
Unit receding limb, Tr = 2.19904 hrs  
Total unit time, Tb = 2.74880 hrs

Type . . . SCS Unit Hyd (HYG output)  
 Name . . . KELLEN-BECK Tag: 25  
 File . . . J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm . . . TypeII 24hr Tag: 25

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 = PERSIMMO.HYG - KELLEN-BECK 25  
 Tc = .8246 hrs  
 Drainage Area = 34.810 acres Runoff CN= 92  
 Calc.Increment= .10995 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 13.859 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Time on left represents time for first value in each row.				
2.8000	.00	.00	.01	.02	.03
3.3000	.05	.07	.10	.13	.17
3.8000	.21	.24	.28	.32	.36
4.3000	.40	.44	.49	.53	.57
4.8000	.62	.66	.71	.76	.81
5.3000	.85	.90	.95	1.00	1.05
5.8000	1.10	1.15	1.20	1.26	1.31
6.3000	1.36	1.41	1.47	1.52	1.57
6.8000	1.63	1.68	1.74	1.79	1.85
7.3000	1.90	1.96	2.01	2.07	2.12
7.8000	2.18	2.23	2.29	2.34	2.40
8.3000	2.47	2.55	2.63	2.74	2.85
8.8000	2.98	3.12	3.26	3.42	3.57
9.3000	3.72	3.87	4.00	4.12	4.22
9.8000	4.33	4.45	4.59	4.75	4.95
10.3000	5.13	5.44	5.73	6.06	6.41
10.8000	6.81	7.24	7.73	8.27	8.89
11.3000	9.61	10.45	11.52	13.15	16.13
11.8000	21.98	32.58	48.67	68.42	86.49
12.3000	96.02	96.35	89.73	78.69	66.03
12.8000	54.33	44.91	37.59	31.75	27.04
13.3000	23.36	20.45	18.10	16.20	14.64
13.8000	13.34	12.25	11.33	10.54	9.85
14.3000	9.24	8.69	8.22	7.84	7.54
14.8000	7.30	7.08	6.89	6.71	6.55
15.3000	6.39	6.24	6.09	5.95	5.81
15.8000	5.67	5.53	5.39	5.25	5.12
16.3000	4.99	4.87	4.76	4.67	4.58
16.8000	4.50	4.43	4.37	4.31	4.25
17.3000	4.20	4.15	4.09	4.04	3.99
17.8000	3.94	3.89	3.84	3.79	3.75
18.3000	3.70	3.65	3.60	3.55	3.50

Type . SCS Unit Hydro Summary  
Name . KELLEN-BECK Tag: 100  
File . J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm . TypeII 24hr Tag: 100

Page 4.49  
Event: 100 yr

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 = PERSIMMO.HYG - KELLEN-BECK 100  
Tc = .8246 hrs  
Drainage Area = 34.810 acres Runoff CN= 92

=====  
Computational Time Increment = .10995 hrs  
Computed Peak Time = 12.3146 hrs  
Computed Peak Flow = 125.99 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.4000 hrs  
Peak Flow, Interpolated Output = 124.54 cfs  
=====

DRAINAGE AREA

-----  
ID:KB-DEVELOPED  
CN = 92  
Area = 34.810 acres  
S = .8696 in  
0.2S = .1739 in

Cumulative Runoff

-----  
6.2523 in  
18.137 ac-ft

HYG Volume... 18.148 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .82464 hrs (ID: KB-DEVELOPED)  
Computational Incr, Tm = .10995 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 = 47.83 cfs  
Unit peak time Tp = .54976 hrs  
Unit receding limb, Tr = 2.19904 hrs  
Total unit time, Tb = 2.74880 hrs

Type... SCS Unit Hyd. HYG output)  
 Name... KELLEN-BECK Tag: 100  
 File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 100

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 = PERSIMMO.HYG - KELLEN-BECK 100  
 Tc = .8246 hrs  
 Drainage Area = 34.810 acres Runoff CN= 92  
 Calc.Increment= .10995 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 18.148 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

Time  
 hrs

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

2.3000	.00	.00	.01	.02	.05
2.8000	.07	.11	.15	.20	.25
3.3000	.30	.36	.41	.47	.53
3.8000	.59	.64	.70	.76	.81
4.3000	.87	.93	.99	1.05	1.11
4.8000	1.17	1.23	1.30	1.36	1.43
5.3000	1.49	1.56	1.63	1.69	1.76
5.8000	1.83	1.90	1.97	2.04	2.11
6.3000	2.18	2.25	2.31	2.38	2.45
6.8000	2.52	2.60	2.67	2.74	2.81
7.3000	2.88	2.95	3.02	3.09	3.16
7.8000	3.23	3.30	3.37	3.44	3.52
8.3000	3.60	3.70	3.82	3.95	4.11
8.8000	4.28	4.46	4.66	4.87	5.07
9.3000	5.27	5.46	5.63	5.78	5.92
9.8000	6.06	6.20	6.38	6.60	6.86
10.3000	7.16	7.50	7.88	8.31	8.78
10.8000	9.29	9.87	10.50	11.21	12.02
11.3000	12.96	14.07	15.46	17.59	21.48
11.8000	29.11	42.86	63.65	89.08	112.24
12.3000	124.31	124.54	115.81	101.44	85.04
12.8000	69.92	57.75	48.29	40.75	34.68
13.3000	29.94	26.19	23.17	20.72	18.72
13.8000	17.05	15.65	14.47	13.46	12.57
14.3000	11.78	11.08	10.47	9.99	9.61
14.8000	9.30	9.03	8.78	8.55	8.34
15.3000	8.14	7.95	7.76	7.58	7.40
15.8000	7.22	7.04	6.86	6.69	6.52
16.3000	6.36	6.20	6.06	5.94	5.83
16.8000	5.73	5.65	5.56	5.49	5.42
17.3000	5.35	5.28	5.21	5.15	5.08
17.8000	5.02	4.96	4.89	4.83	4.77

S/N: 721701406A81 J R GRIMES CONSULTING

PondPack Ver: 7.5 (767)

Compute Time: 14:20:08

Date: 08-06-2002

Type ... SCS Unit Hyd. Summary  
Name ... OFFSITE Tag: 2  
File ... J:\0675B\PCNDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 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\PCNDPACK\  
HYG File - ID = PERSIMMO.HYG - OFFSITE 2  
Tc = 1.7659 hrs  
Drainage Area = 48.600 acres Runoff CN= 77

=====  
Computational Time Increment = .23545 hrs  
Computed Peak Time = 12.9497 hrs  
Computed Peak Flow = 23.08 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 13.0000 hrs  
Peak Flow, Interpolated Output = 23.01 cfs  
=====

DRAINAGE AREA

-----  
ID:OFFSITE  
CN = 77  
Area = 48.600 acres  
S = 2.9870 in  
0.2S = .5974 in

Cumulative Runoff

-----  
1.4305 in  
5.794 ac-ft

HYG Volume... 5.793 ac-ft (area under HYG curve)

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

Time Concentration, Tc = 1.76586 hrs (ID: OFFSITE)  
Computational Incr, Tm = .23545 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 = 31.18 cfs  
Unit peak time Tp = 1.17724 hrs  
Unit receding limb, Tr = 4.70897 hrs  
Total unit time, Tb = 5.88621 hrs

Type: SCS Unit Hyc (HYG output)  
 Name: OFFSITE Tag: 2  
 File: J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm: TypeII 24hr Tag: 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 = PERSIMMO.HYG - OFFSITE 2  
 Tc = 1.7659 hrs  
 Drainage Area = 48.600 acres Runoff CN= 77  
 Calc.Increment= .23545 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 5.793 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	.00	.01	.01
10.4000	.02	.04	.05	.08	.10
10.9000	.14	.19	.24	.31	.38
11.4000	.50	.61	.85	1.17	1.69
11.9000	2.79	3.89	5.85	7.88	10.37
12.4000	13.22	15.95	18.23	20.51	21.65
12.9000	22.60	23.01	22.87	22.62	21.69
13.4000	20.77	19.42	17.97	16.60	15.32
13.9000	14.08	13.11	12.14	11.34	10.59
14.4000	9.89	9.26	8.63	8.14	7.65
14.9000	7.23	6.83	6.47	6.16	5.84
15.4000	5.60	5.35	5.14	4.94	4.75
15.9000	4.58	4.42	4.28	4.13	4.00
16.4000	3.88	3.77	3.66	3.56	3.46
16.9000	3.37	3.29	3.21	3.13	3.06
17.4000	2.99	2.92	2.86	2.81	2.76
17.9000	2.72	2.68	2.64	2.61	2.57
18.4000	2.53	2.50	2.47	2.44	2.40
18.9000	2.37	2.34	2.31	2.28	2.25
19.4000	2.22	2.19	2.16	2.13	2.10
19.9000	2.07	2.04	2.01	1.98	1.95
20.4000	1.92	1.89	1.87	1.84	1.82
20.9000	1.79	1.77	1.75	1.73	1.71
21.4000	1.70	1.68	1.67	1.65	1.64
21.9000	1.63	1.62	1.61	1.60	1.59
22.4000	1.59	1.58	1.57	1.56	1.56
22.9000	1.55	1.54	1.54	1.53	1.52
23.4000	1.52	1.51	1.51	1.50	1.49
23.9000	1.49	1.48	1.47	1.45	1.42
24.4000	1.39	1.35	1.28	1.22	1.14
24.9000	1.05	.96	.87	.77	.69
25.4000	.50	.53	.46	.40	.35

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 = PERSIMMO.HYG - OFFSITE 15  
Tc = 1.7659 hrs  
Drainage Area = 48.600 acres Runoff CN= 77

=====  
Computational Time Increment = .23545 hrs  
Computed Peak Time = 12.9497 hrs  
Computed Peak Flow = 46.92 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 13.0000 hrs  
Peak Flow, Interpolated Output = 46.62 cfs  
=====

DRAINAGE AREA

-----  
ID:OFFSITE  
CN = 77  
Area = 48.600 acres  
S = 2.9870 in  
0.2S = .5974 in

Cumulative Runoff

-----  
2.7912 in  
11.304 ac-ft

HYG Volume... 11.304 ac-ft (area under HYG curve)

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

Time Concentration, Tc = 1.76586 hrs (ID: OFFSITE)  
Computational Incr, Tm = .23545 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 = 31.18 cfs  
Unit peak time Tp = 1.17724 hrs  
Unit receding limb, Tr = 4.70897 hrs  
Total unit time, Tb = 5.88621 hrs



Type... SCS Unit H/m (HYG output)  
 Name... OFFSITE Tag: 15  
 File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 15

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 = PERSIMMO.HYG - OFFSITE 15  
 Tc = 1.7659 hrs  
 Drainage Area = 48.600 acres Runoff CN= 77  
 Calc.Increment= .23545 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 11.304 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs  
 Time on left represents time for first value in each row.

Time hrs					
8.0000	.00	.00	.00	.01	.01
8.5000	.02	.03	.04	.06	.08
9.0000	.11	.14	.17	.21	.26
9.5000	.31	.36	.41	.48	.54
10.0000	.61	.68	.76	.85	.94
10.5000	1.04	1.15	1.28	1.41	1.56
11.0000	1.73	1.91	2.14	2.36	2.67
11.5000	2.99	3.59	4.35	5.54	7.86
12.0000	10.18	14.18	18.33	23.28	28.86
12.5000	34.15	38.40	42.66	44.59	46.15
13.0000	46.62	46.01	45.18	43.06	40.95
13.5000	38.09	35.03	32.17	29.55	26.99
14.0000	25.04	23.08	21.45	19.95	18.54
14.5000	17.28	16.03	15.07	14.11	13.27
15.0000	12.50	11.78	11.18	10.57	10.09
15.5000	9.62	9.21	8.83	8.46	8.15
16.0000	7.84	7.57	7.30	7.06	6.83
16.5000	6.61	6.42	6.23	6.06	5.89
17.0000	5.73	5.59	5.44	5.31	5.18
17.5000	5.06	4.95	4.85	4.77	4.69
18.0000	4.62	4.55	4.49	4.43	4.36
18.5000	4.30	4.24	4.19	4.13	4.07
19.0000	4.02	3.97	3.91	3.86	3.80
19.5000	3.75	3.70	3.65	3.59	3.54
20.0000	3.49	3.44	3.39	3.34	3.29
20.5000	3.24	3.19	3.14	3.10	3.06
21.0000	3.02	2.98	2.95	2.92	2.89
21.5000	2.86	2.84	2.82	2.80	2.78
22.0000	2.76	2.74	2.73	2.71	2.70
22.5000	2.68	2.67	2.66	2.64	2.63
23.0000	2.62	2.61	2.60	2.59	2.58
23.5000	2.56	2.55	2.54	2.53	2.52

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 = PERSIMMO.HYG - OFFSITE 25  
Tc = 1.7659 hrs  
Drainage Area = 48.600 acres Runoff CN= 77

=====  
Computational Time Increment = .23545 hrs  
Computed Peak Time = 12.9497 hrs  
Computed Peak Flow = 54.34 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 13.0000 hrs  
Peak Flow, Interpolated Output = 53.96 cfs  
=====

DRAINAGE AREA

-----  
ID:OFFSITE  
CN = 77  
Area = 48.600 acres  
S = 2.9870 in  
0.2S = .5974 in

Cumulative Runoff

-----  
3.2185 in  
13.035 ac-ft

HYG Volume... 13.035 ac-ft (area under HYG curve)

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

Time Concentration, Tc = 1.76586 hrs (ID: OFFSITE)  
Computational Incr, Tm = .23545 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 = 31.18 cfs  
Unit peak time Tp = 1.17724 hrs  
Unit receding limb, Tr = 4.70897 hrs  
Total unit time, Tb = 5.88621 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 = PERSIMMO.HYG - OFFSITE 25  
 Tc = 1.7659 hrs  
 Drainage Area = 48.600 acres Runoff CN= 77  
 Calc.Increment= .23545 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 13.035 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Output Time increment = .1000 hrs				
Time on left represents time for first value in each row.					
7.5000	.00	.00	.00	.01	.01
8.0000	.02	.03	.04	.06	.08
8.5000	.10	.12	.15	.19	.23
9.0000	.27	.32	.38	.44	.50
9.5000	.57	.64	.71	.79	.87
10.0000	.96	1.05	1.15	1.26	1.37
10.5000	1.49	1.62	1.78	1.94	2.13
11.0000	2.33	2.55	2.82	3.09	3.47
11.5000	3.85	4.56	5.46	6.86	9.57
12.0000	12.27	16.91	21.71	27.42	33.83
12.5000	39.90	44.75	49.60	51.77	53.49
13.0000	53.96	53.19	52.17	49.67	47.18
13.5000	43.83	40.28	36.95	33.91	30.95
14.0000	28.68	26.42	24.53	22.79	21.16
14.5000	19.72	18.28	17.17	16.06	15.10
15.0000	14.21	13.38	12.69	11.99	11.44
15.5000	10.90	10.43	9.99	9.58	9.22
16.0000	8.86	8.55	8.25	7.97	7.71
16.5000	7.46	7.24	7.02	6.83	6.64
17.0000	6.46	6.29	6.13	5.98	5.83
17.5000	5.70	5.57	5.46	5.37	5.28
18.0000	5.20	5.12	5.05	4.97	4.90
18.5000	4.84	4.77	4.71	4.64	4.58
19.0000	4.52	4.45	4.39	4.33	4.27
19.5000	4.21	4.15	4.10	4.04	3.98
20.0000	3.92	3.86	3.80	3.75	3.69
20.5000	3.63	3.58	3.53	3.48	3.43
21.0000	3.39	3.35	3.31	3.28	3.24
21.5000	3.21	3.19	3.16	3.14	3.11
22.0000	3.10	3.08	3.06	3.04	3.02
22.5000	3.01	2.99	2.98	2.97	2.95
23.0000	2.94	2.92	2.91	2.90	2.89

Name... OFFSITE Tag: 100 Event: 100 yr  
File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 100

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 = PERSIMMO.HYG - OFFSITE 100  
Tc = 1.7659 hrs  
Drainage Area = 48.600 acres Runoff CN= 77

=====  
Computational Time Increment = .23545 hrs  
Computed Peak Time = 12.9497 hrs  
Computed Peak Flow = 77.20 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 13.0000 hrs  
Peak Flow, Interpolated Output = 76.55 cfs  
=====

DRAINAGE AREA

-----  
ID:OFFSITE  
CN = 77  
Area = 48.600 acres  
S = 2.9870 in  
0.2S = .5974 in

Cumulative Runoff

-----  
4.5460 in  
18.411 ac-ft

HYG Volume... 18.411 ac-ft (area under HYG curve)

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

Time Concentration, Tc = 1.76586 hrs (ID: OFFSITE)  
Computational Incr, Tm = .23545 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 = 31.18 cfs  
Unit peak time Tp = 1.17724 hrs  
Unit receding limb, Tr = 4.70897 hrs  
Total unit time, Tb = 5.88621 hrs

S/N: 721701406A81 J R GRIMES CONSULTING  
PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002

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:\0675E\PONDPACK\  
 HYG File - ID = PERSIMMO.HYG - OFFSITE 100  
 Tc = 1.7659 hrs  
 Drainage Area = 48.600 acres Runoff CN= 77  
 Calc.Increment= .23545 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 18.411 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs  
 Time on left represents time for first value in each row.

Time hrs					
6.3000	.00	.00	.00	.01	.01
6.8000	.02	.03	.04	.05	.08
7.3000	.10	.13	.16	.19	.23
7.8000	.28	.32	.37	.42	.48
8.3000	.54	.60	.66	.73	.80
8.8000	.88	.96	1.04	1.14	1.24
9.3000	1.35	1.46	1.58	1.70	1.82
9.8000	1.96	2.09	2.23	2.38	2.53
10.3000	2.70	2.87	3.07	3.27	3.52
10.8000	3.76	4.05	4.37	4.71	5.13
11.3000	5.54	6.12	6.70	7.76	9.11
11.8000	11.16	15.05	18.94	25.52	32.33
12.3000	40.36	49.31	57.78	64.42	71.06
12.8000	73.90	76.10	76.55	75.27	73.63
13.3000	69.93	66.24	61.42	56.31	51.55
13.8000	47.23	43.00	39.79	36.58	33.91
14.3000	31.45	29.15	27.11	25.08	23.52
14.8000	21.97	20.62	19.38	18.22	17.25
15.3000	16.28	15.52	14.76	14.10	13.50
15.8000	12.92	12.42	11.93	11.50	11.08
16.3000	10.70	10.35	10.01	9.70	9.40
16.8000	9.14	8.88	8.63	8.40	8.18
17.3000	7.97	7.77	7.59	7.42	7.27
17.8000	7.15	7.03	6.92	6.81	6.71
18.3000	6.62	6.52	6.43	6.34	6.25
18.8000	6.17	6.08	6.00	5.92	5.84
19.3000	5.75	5.67	5.59	5.52	5.44
19.8000	5.36	5.28	5.20	5.12	5.04
20.3000	4.97	4.89	4.82	4.75	4.68
20.8000	4.61	4.55	4.49	4.44	4.38
21.3000	4.34	4.30	4.26	4.22	4.19
21.8000	4.16	4.12	4.10	4.07	4.05

Type ... SCS UNIT Hydro Summary Page 1 of 1  
Name ... SOUTHERNSIDE Tag: 2 Event: 2 yr  
File ... J:\0675B\PONDPACK\DEVELOPED2-REV-1.PPW  
Title ... APARTMENTS - DEVELOPED RUNOFF  
Storm ... TypeII 24hr Tag: 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 = PERSIMMO.HYG - SOUTHERNSIDE 2  
Tc = .5535 hrs  
Drainage Area = 11.390 acres Runoff CN= 81

=====  
Computational Time Increment = .07381 hrs  
Computed Peak Time = 12.2516 hrs  
Computed Peak Flow = 15.26 cfs

Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.2000 hrs  
Peak Flow, Interpolated Output = 15.17 cfs  
=====

DRAINAGE AREA

-----  
ID:AREAV-DEVELOPED  
CN = 81  
Area = 11.390 acres  
S = 2.3457 in  
0.2S = .4691 in

Cumulative Runoff

-----  
1.7086 in  
1.622 ac-ft

HYG Volume... 1.622 ac-ft (area under HYG curve)

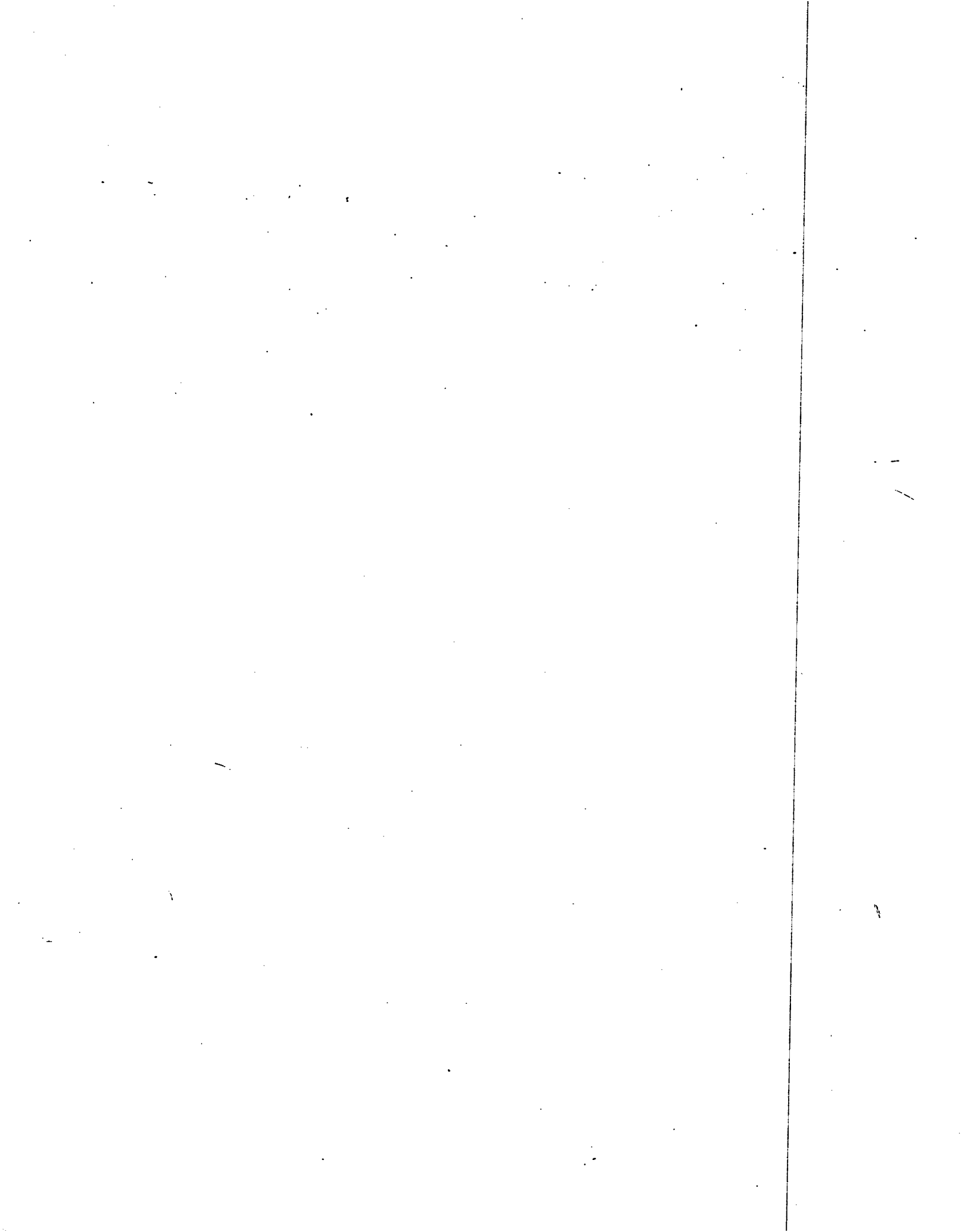
\*\*\*\*\* UNIT HYDROGRAPH PARAMETERS \*\*\*\*\*

Time Concentration, Tc = .55354 hrs (ID: AREAV-DEVELOPED)  
Computational Incr, Tm = .07381 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 = 23.31 cfs  
Unit peak time Tp = .36903 hrs  
Unit receding limb, Tr = 1.47610 hrs  
Total unit time, Tb = 1.84513 hrs

S/N: 721701406A81 J R GRIMES CONSULTING  
PondPack Ver: 7.5 (757) Compute Time: 14:20:08 Date: 08-06-2002



Type... SCS Unit Hyd (HYG output)  
 Name... SOUTHERNSIDE Tag: 2  
 File... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Title... APARTMENTS - DEVELOPED RUNOFF  
 Storm... TypeII 24hr Tag: 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 = PERSIMMO.HYG - SOUTHERNSIDE 2  
 Tc = .5535 hrs  
 Drainage Area = 11.390 acres Runoff CN= 81  
 Calc.Increment= .07381 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 1.622 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs  
 Time on left represents time for first value in each row.

Time hrs					
8.7000	.00	.00	.00	.01	.02
9.2000	.02	.03	.05	.06	.07
9.7000	.08	.09	.10	.12	.14
10.2000	.16	.18	.20	.23	.26
10.7000	.30	.33	.38	.43	.49
11.2000	.56	.64	.74	.87	1.07
11.7000	1.56	2.64	5.08	8.99	13.19
12.2000	15.17	14.49	12.13	9.43	7.30
12.7000	5.76	4.67	3.84	3.25	2.82
13.2000	2.50	2.25	2.06	1.90	1.76
13.7000	1.64	1.55	1.47	1.40	1.33
14.2000	1.28	1.22	1.18	1.14	1.11
14.7000	1.08	1.06	1.04	1.02	1.00
15.2000	.97	.95	.93	.91	.89
15.7000	.87	.85	.83	.81	.79
16.2000	.77	.75	.74	.72	.71
16.7000	.70	.69	.69	.68	.67
17.2000	.66	.66	.65	.64	.63
17.7000	.63	.62	.61	.60	.60
18.2000	.59	.58	.57	.57	.56
18.7000	.55	.54	.54	.53	.52
19.2000	.51	.50	.50	.49	.48
19.7000	.47	.47	.46	.45	.44
20.2000	.44	.43	.42	.42	.42
20.7000	.41	.41	.41	.41	.41
21.2000	.41	.40	.40	.40	.40
21.7000	.40	.40	.40	.39	.39
22.2000	.39	.39	.39	.39	.39
22.7000	.38	.38	.38	.38	.38
23.2000	.38	.38	.37	.37	.37
23.7000	.37	.37	.37	.36	.35



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 = PERSIMMO.HYG - SOUTHERNSIDE 15  
Tc = .5535 hrs  
Drainage Area = 11.390 acres Runoff CN= 81

=====  
Computational Time Increment = .07381 hrs  
Computed Peak Time = 12.1778 hrs  
Computed Peak Flow = 28.46 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.2000 hrs  
Peak Flow, Interpolated Output = 28.42 cfs  
=====

DRAINAGE AREA

-----  
ID:AREAV-DEVELOPED  
CN = 81  
Area = 11.390 acres  
S = 2.3457 in  
0.2S = .4691 in

Cumulative Runoff

-----  
3.1627 in  
3.002 ac-ft

HYG Volume... 3.003 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .55354 hrs (ID: AREAV-DEVELOPED)  
Computational Incr, Tm = .07381 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 = 23.31 cfs  
Unit peak time Tp = .36903 hrs  
Unit receding limb, Tr = 1.47610 hrs  
Total unit time, Tb = 1.84513 hrs

Type: SCS Unit HYG (HYG output) Page 4.63  
 Name: SOUTHERNSIDE Tag: 15 Event: 15 yr  
 File: J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm: TypeII 24hr Tag: 15

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 = PERSIMMO.HYG - SOUTHERNSIDE 15  
 Tc = .5535 hrs  
 Drainage Area = 11.390 acres Runoff CN= 81  
 Calc.Increment= .07381 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 3.003 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Output Time increment = .1000 hrs				
	Time on left represents time for first value in each row.				
6.7000	.00	.00	.00	.01	.02
7.2000	.02	.03	.04	.05	.06
7.7000	.07	.08	.10	.11	.12
8.2000	.13	.14	.16	.18	.19
8.7000	.21	.24	.26	.28	.31
9.2000	.33	.36	.38	.41	.43
9.7000	.45	.48	.51	.54	.58
10.2000	.63	.68	.73	.80	.87
10.7000	.94	1.03	1.13	1.24	1.37
11.2000	1.52	1.70	1.92	2.18	2.61
11.7000	3.62	5.85	10.58	17.83	25.28
12.2000	28.42	26.73	22.10	17.03	13.07
12.7000	10.24	8.22	6.72	5.64	4.88
13.2000	4.30	3.85	3.51	3.22	2.98
13.7000	2.78	2.62	2.48	2.36	2.25
14.2000	2.15	2.06	1.98	1.92	1.86
14.7000	1.82	1.78	1.74	1.70	1.66
15.2000	1.63	1.59	1.56	1.52	1.49
15.7000	1.45	1.42	1.38	1.35	1.31
16.2000	1.28	1.25	1.22	1.20	1.18
16.7000	1.17	1.15	1.14	1.12	1.11
17.2000	1.10	1.09	1.07	1.06	1.05
17.7000	1.04	1.02	1.01	1.00	.98
18.2000	.97	.96	.95	.93	.92
18.7000	.91	.90	.88	.87	.86
19.2000	.84	.83	.82	.81	.79
19.7000	.78	.77	.75	.74	.73
20.2000	.72	.71	.70	.69	.69
20.7000	.68	.68	.67	.67	.67
21.2000	.67	.66	.66	.66	.66
21.7000	.65	.65	.65	.65	.64
22.2000	.64	.64	.64	.63	.63

Name ... SOUTHERNSIDE Tag: 25 Event: 25 yr  
File ... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm... TypeII 24hr Tag: 25

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 = PERSIMMO.HYG - SOUTHERNSIDE 25  
Tc = .5535 hrs  
Drainage Area = 11.390 acres Runoff CN= 81

=====  
Computational Time Increment = .07381 hrs  
Computed Peak Time = 12.1778 hrs  
Computed Peak Flow = 32.51 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.2000 hrs  
Peak Flow, Interpolated Output = 32.44 cfs  
=====

DRAINAGE AREA

-----  
ID:AREAV-DEVELOPED  
CN = 81  
Area = 11.390 acres  
S = 2.3457 in  
0.2S = .4691 in

Cumulative Runoff

-----  
3.6114 in  
3.428 ac-ft

HYG Volume... 3.429 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .55354 hrs (ID: AREAV-DEVELOPED)  
Computational Incr, Tm = .07381 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 = 23.31 cfs  
Unit peak time Tp = .36903 hrs  
Unit receding limb, Tr = 1.47610 hrs  
Total unit time, Tb = 1.84513 hrs

S/N: 721701406A81 J R GRIMES CONSULTING  
PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002

Type.... SCS Unit Hyd: HYG output)  
 Name.... SOUTHERNSIDE Tag: 25  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 25

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 = PERSIMMO.HYG - SOUTHERNSIDE 25  
 Tc = .5535 hrs  
 Drainage Area = 11.390 acres Runoff CN= 81  
 Calc.Increment= .07381 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 3.429 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs					
6.3000	.00	.00	.01	.01	.02
6.8000	.03	.04	.05	.06	.07
7.3000	.08	.10	.11	.12	.13
7.8000	.15	.16	.17	.19	.20
8.3000	.22	.23	.25	.28	.30
8.8000	.33	.36	.39	.42	.45
9.3000	.48	.51	.53	.56	.58
9.8000	.61	.65	.69	.73	.79
10.3000	.85	.92	.99	1.07	1.16
10.8000	1.27	1.39	1.52	1.67	1.84
11.3000	2.05	2.30	2.61	3.11	4.29
11.8000	6.86	12.30	20.55	28.97	32.44
12.3000	30.42	25.10	19.31	14.80	11.57
12.8000	9.28	7.57	6.36	5.49	4.83
13.3000	4.33	3.94	3.61	3.34	3.12
13.8000	2.93	2.78	2.64	2.52	2.40
14.3000	2.30	2.22	2.15	2.09	2.03
14.8000	1.99	1.94	1.90	1.86	1.82
15.3000	1.78	1.74	1.70	1.66	1.62
15.8000	1.58	1.55	1.51	1.47	1.43
16.3000	1.39	1.37	1.34	1.32	1.30
16.8000	1.29	1.27	1.26	1.24	1.23
17.3000	1.21	1.20	1.18	1.17	1.16
17.8000	1.14	1.13	1.11	1.10	1.08
18.3000	1.07	1.06	1.04	1.03	1.01
18.8000	1.00	.98	.97	.96	.94
19.3000	.93	.91	.90	.88	.87
19.8000	.86	.84	.83	.81	.80
20.3000	.79	.78	.77	.76	.76
20.8000	.76	.75	.75	.75	.74
21.3000	.74	.74	.73	.73	.73
21.8000	.73	.72	.72	.72	.71

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 = PERSIMMO.HYG - SOUTHERNSIDE 100  
Tc = .5535 hrs  
Drainage Area = 11.390 acres Runoff CN= 81

=====  
Computational Time Increment = .07381 hrs  
Computed Peak Time = 12.1778 hrs  
Computed Peak Flow = 44.79 cfs  
  
Time Increment for HYG File = .1000 hrs  
Peak Time, Interpolated Output = 12.2000 hrs  
Peak Flow, Interpolated Output = 44.63 cfs  
=====

DRAINAGE AREA

-----  
ID:AREAV-DEVELOPED  
CN = 81  
Area = 11.390 acres  
S = 2.3457 in  
0.2S = .4691 in

Cumulative Runoff

-----  
4.9914 in  
4.738 ac-ft

HYG Volume... 4.739 ac-ft (area under HYG curve)

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

Time Concentration, Tc = .55354 hrs (ID: AREAV-DEVELOPED)  
Computational Incr, Tm = .07381 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 = 23.31 cfs  
Unit peak time Tp = .36903 hrs  
Unit receding limb, Tr = 1.47610 hrs  
Total unit time, Tb = 1.84513 hrs

Type.... SCS Unit Hyd. (HYG output) Page 4.74  
 Name.... SOUTHERNSIDE Tag: 100 Event: 100 yr  
 File.... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
 Storm... TypeII 24hr Tag: 100

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 = PERSIMMO.HYG - SOUTHERNSIDE 100  
 Tc = .5535 hrs  
 Drainage Area = 11.390 acres Runoff CN= 81  
 Calc.Increment= .07381 hrs Out.Incr.= .1000 hrs  
 HYG Volume = 4.739 ac-ft

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	HYDROGRAPH ORDINATES (cfs)				
	Output Time increment = .1000 hrs				
	Time on left represents time for first value in each row.				
5.3000	.00	.00	.01	.02	.02
5.8000	.04	.05	.06	.08	.09
6.3000	.11	.12	.14	.15	.17
6.8000	.19	.20	.22	.24	.25
7.3000	.27	.29	.31	.33	.34
7.8000	.36	.38	.40	.42	.44
8.3000	.47	.49	.53	.56	.60
8.8000	.64	.69	.73	.78	.83
9.3000	.87	.92	.95	.99	1.02
9.8000	1.06	1.11	1.17	1.24	1.32
10.3000	1.41	1.51	1.62	1.74	1.88
10.8000	2.03	2.20	2.39	2.61	2.85
11.3000	3.15	3.52	3.97	4.69	6.37
11.8000	10.03	17.60	28.89	40.21	44.63
12.3000	41.60	34.16	26.18	20.00	15.59
12.8000	12.47	10.14	8.49	7.32	6.42
13.3000	5.74	5.22	4.78	4.42	4.12
13.8000	3.87	3.67	3.49	3.32	3.17
14.3000	3.03	2.92	2.83	2.75	2.68
14.8000	2.62	2.56	2.50	2.45	2.39
15.3000	2.34	2.29	2.24	2.19	2.13
15.8000	2.08	2.03	1.98	1.92	1.88
16.3000	1.83	1.79	1.76	1.73	1.71
16.8000	1.69	1.67	1.65	1.63	1.61
17.3000	1.59	1.57	1.55	1.53	1.51
17.8000	1.49	1.48	1.46	1.44	1.42
18.3000	1.40	1.38	1.36	1.35	1.33
18.8000	1.31	1.29	1.27	1.25	1.23
19.3000	1.21	1.19	1.18	1.16	1.14
19.8000	1.12	1.10	1.08	1.06	1.04
20.3000	1.03	1.02	1.01	1.00	.99
20.8000	.99	.98	.98	.97	.97

Name: NET-OUT  
File: J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW  
Storm: TypeII 24hr Tag: 2

SUMMARY FOR HYDROGRAPH ADDITION  
at Node: NET-OUT

HYG Directory: J:\0675B\PONDPACK\

```

=====
Upstream Link ID  Upstream Node ID  HYG file      HYG ID        HYG tag
-----
LAKE3-ROUTE      SOUTH LAKE        PERSIMMO.HYG  LAKE3-ROUTE   2
BYPASS-DEV-HYD   BYPASS-DEVELOPED PERSIMMO.HYG  BYPASS-DEVELOPED2
=====

```

INFLOWS TO: NET-OUT

```

----- Volume      Peak Time      Peak Flow
HYG file      HYG ID         HYG tag        ac-ft         hrs           cfs
-----
PERSIMMO.HYG LAKE3-ROUTE      2              14.053        14.4000      21.31
PERSIMMO.HYG BYPASS-DEVELOPED  2              .220          12.1000      2.27

```

TOTAL FLOW INTO: NET-OUT

```

----- Volume      Peak Time      Peak Flow
HYG file      HYG ID         HYG tag        ac-ft         hrs           cfs
-----
PERSIMMO.HYG NET-OUT          2              14.303        14.4000      21.50

```

S/N: 721701406A81 J R GRIMES CONSULTING  
PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002

TOTAL NODE INFLOW...  
 HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = NET-OUT  
 HYG Tag = 2

-----  
 Peak Discharge = 21.50 cfs  
 Time to Peak = 14.4000 hrs  
 HYG Volume = 14.303 ac-ft  
 -----

Time hrs	HYDROGRAPH ORDINATES (cfs)				
	Output Time increment = .1000 hrs Time on left represents time for first value in each row.				
8.0000	.00	.02	.02	.02	.04
8.5000	.04	.04	.07	.07	.09
9.0000	.09	.11	.13	.15	.17
9.5000	.20	.22	.24	.26	.28
10.0000	.30	.33	.35	.37	.39
10.5000	.41	.43	.46	.50	.54
11.0000	.58	.63	.67	.73	.80
11.5000	.89	1.01	1.21	1.58	2.43
12.0000	4.18	6.78	9.09	11.23	12.89
12.5000	14.25	15.13	15.77	16.31	16.82
13.0000	17.30	17.75	18.24	18.70	19.16
13.5000	19.56	19.97	20.32	20.62	20.87
14.0000	21.07	21.21	21.36	21.45	21.50
14.5000	21.50	21.49	21.43	21.36	21.26
15.0000	21.13	21.00	20.87	20.74	20.55
15.5000	20.36	20.17	19.98	19.79	19.60
16.0000	19.41	19.22	19.03	18.79	18.57
16.5000	18.32	18.11	17.87	17.65	17.44
17.0000	17.22	17.01	16.80	16.58	16.37
17.5000	16.16	15.95	15.75	15.54	15.33
18.0000	15.13	14.92	14.72	14.51	14.31
18.5000	14.11	13.91	13.71	13.51	13.31
19.0000	13.11	12.96	12.76	12.57	12.42
19.5000	12.23	12.08	11.94	11.74	11.60
20.0000	11.42	11.30	11.14	10.98	10.82
20.5000	10.70	10.54	10.42	10.26	10.14
21.0000	10.03	9.91	9.79	9.68	9.52
21.5000	9.41	9.29	9.18	9.06	8.95
22.0000	8.84	8.72	8.61	8.50	8.38
22.5000	8.27	8.19	8.12	8.01	7.93
23.0000	7.86	7.78	7.67	7.60	7.53
23.5000	7.45	7.38	7.31	7.24	7.16
24.0000	7.09	.06	.05	.03	.02



Name ... NET-OUT  
File ... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PFW  
Storm... TypeII 24hr Tag: 15

Event: 15 yr

SUMMARY FOR HYDROGRAPH ADDITION  
at Node: NET-OUT

HYG Directory: J:\0675B\PONDPACK\

```
=====
Upstream Link ID  Upstream Node ID  HYG file      HYG ID        HYG tag
-----
LAKE3-ROUTE      SOUTH LAKE      PERSIMMO.HYG  LAKE3-ROUTE   15
BYPASS-DEV-HYD   BYPASS-DEVELOPED  PERSIMMO.HYG  BYPASS-DEVELOPED15
=====
```

INFLOWS TO: NET-OUT

```
----- Volume      Peak Time      Peak Flow
HYG file      HYG ID        HYG tag        ac-ft         hrs           cfs
-----
PERSIMMO.HYG LAKE3-ROUTE    15             27.400        14.0000       53.98
PERSIMMO.HYG BYPASS-DEVELOPED 15             .486          12.1000       5.54
```

TOTAL FLOW INTO: NET-OUT

```
----- Volume      Peak Time      Peak Flow
HYG file      HYG ID        HYG tag        ac-ft         hrs           cfs
-----
PERSIMMO.HYG NET-OUT          15             27.933        14.0000       54.40
```

J/N: 721701406A81 J R GRIMES CONSULTING  
PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002

TOTAL NODE INFLOW...  
 HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = NET-OUT  
 HYG Tag = 15

-----  
 Peak Discharge = 54.40 cfs  
 Time to Peak = 14.0000 hrs  
 HYG Volume = 27.933 ac-ft  
 -----

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Time on left represents time for first value in each row.				
6.1000	.00	.02	.02	.02	.04
6.6000	.04	.07	.07	.09	.09
7.1000	.11	.13	.15	.17	.20
7.6000	.22	.24	.26	.28	.30
8.1000	.33	.35	.37	.39	.41
8.6000	.43	.46	.48	.50	.52
9.1000	.54	.56	.61	.65	.69
9.6000	.74	.78	.82	.86	.91
10.1000	.97	1.04	1.11	1.20	1.29
10.6000	1.38	1.48	1.59	1.71	1.85
11.1000	2.01	2.18	2.38	2.71	3.08
11.6000	3.53	4.22	5.52	8.03	12.66
12.1000	18.05	22.79	26.57	29.49	31.52
12.6000	32.98	34.36	35.94	37.67	39.36
13.1000	41.30	43.18	45.05	47.05	49.17
13.6000	50.94	52.53	53.63	54.22	54.40
14.1000	54.14	53.52	52.68	51.60	50.36
14.6000	49.19	48.18	47.20	46.28	45.43
15.1000	44.52	43.68	42.79	41.91	41.09
15.6000	40.22	39.40	38.60	37.80	36.97
16.1000	36.19	35.41	34.64	33.88	33.17
16.6000	32.47	31.79	31.15	30.51	29.88
17.1000	29.25	28.63	28.05	27.51	26.97
17.6000	26.44	25.92	25.43	24.98	24.54
18.1000	24.13	23.74	23.34	22.94	22.58
18.6000	22.26	21.93	21.61	21.35	21.09
19.1000	20.34	20.58	20.33	20.08	19.83
19.6000	19.57	19.32	19.08	18.83	18.58
20.1000	18.33	18.09	17.85	17.60	17.39
20.6000	17.18	16.97	16.76	16.54	16.33
21.1000	16.12	15.92	15.71	15.50	15.35
21.6000	15.14	14.94	14.79	14.59	14.43
22.1000	14.28	14.08	13.88	13.73	13.58

Name: ... NET-OUT

Event: 25 yr

File: ... J:\0675B\PONDPACK\DEVELOPED2-REV-2.PPW

Storm: ... TypeII 24hr Tag: 25

SUMMARY FOR HYDROGRAPH ADDITION
at Node: NET-OUT

HYG Directory: J:\0675B\PONDPACK\

Table with 5 columns: Upstream Link ID, Upstream Node ID, HYG file, HYG ID, HYG tag. Rows include LAKE3-ROUTE and BYPASS-DEV-HYD.

INFLOWS TO: NET-OUT

Table with 6 columns: HYG file, HYG ID, HYG tag, Volume ac-ft, Peak Time hrs, Peak Flow cfs. Rows show inflow data for LAKE3-ROUTE and BYPASS-DEVELOPED.

TOTAL FLOW INTO: NET-OUT

Table with 6 columns: HYG file, HYG ID, HYG tag, Volume ac-ft, Peak Time hrs, Peak Flow cfs. Shows total flow data for NET-OUT.

Type: Node: Addition Summary  
 Name: NET-OUT  
 File: J:\0675B\PONDPACK\DEVELOPED2-REV-2.9PW  
 Storm: TypeII 24hr Tag: 25

TOTAL NODE INFLOW...  
 HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = NET-OUT  
 HYG Tag = 25

-----  
 Peak Discharge = 71.87 cfs  
 Time to Peak = 13.8000 hrs  
 HYG Volume = 32.157 ac-ft  
 -----

Time hrs	HYDROGRAPH ORDINATES (cfs)				
	Output Time increment = .1000 hrs				
Time on left represents time for first value in each row.					
5.8000	.00	.02	.02	.04	.04
6.3000	.07	.07	.09	.09	.11
6.8000	.13	.15	.17	.20	.22
7.3000	.24	.26	.28	.30	.33
7.8000	.35	.37	.39	.41	.43
8.3000	.46	.48	.50	.52	.54
8.8000	.56	.61	.65	.69	.74
9.3000	.78	.82	.86	.93	1.00
9.8000	1.06	1.13	1.20	1.29	1.38
10.3000	1.47	1.56	1.68	1.79	1.93
10.8000	2.07	2.23	2.43	2.72	3.04
11.3000	3.37	3.74	4.16	4.66	5.47
11.8000	6.98	10.16	15.60	22.01	27.57
12.3000	31.84	35.06	37.47	39.38	41.25
12.8000	43.39	45.57	48.32	52.03	56.34
13.3000	60.75	64.67	67.88	70.15	71.52
13.8000	71.87	71.32	70.19	68.48	66.60
14.3000	64.45	62.20	60.05	57.75	55.58
14.8000	53.51	51.59	49.94	48.55	47.35
15.3000	46.28	45.26	44.31	43.36	42.47
15.8000	41.59	40.72	39.87	39.06	38.26
16.3000	37.47	36.69	35.92	35.19	34.47
16.8000	33.76	33.05	32.35	31.72	31.08
17.3000	30.48	29.89	29.34	28.79	28.25
17.8000	27.71	27.17	26.68	26.23	25.78
18.3000	25.33	24.89	24.45	24.08	23.72
18.8000	23.35	23.02	22.69	22.37	22.04
19.3000	21.75	21.49	21.23	20.98	20.72
19.8000	20.46	20.21	19.96	19.70	19.45
20.3000	19.24	19.02	18.77	18.56	18.35
20.8000	18.14	17.92	17.71	17.49	17.30
21.3000	17.09	16.90	16.69	16.51	16.33
21.8000	16.12	15.96	15.76	15.60	15.44

Name... NET-OUT

Event: 100 yr

File... J:\0675B\PONDPACK\DEVELOPED2-REV-1.PPW

Storm... TypeII 24hr Tag: 100

SUMMARY FOR HYDROGRAPH ADDITION  
at Node: NET-OUT

HYG Directory: J:\0675B\PONDPACK\

```

=====
Upstream Link ID  Upstream Node ID  HYG file      HYG ID        HYG tag
-----
LAKE3-ROUTE      SOUTH LAKE          PERSIMMO.HYG  LAKE3-ROUTE   100
BYPASS-DEV-HYD   BYPASS-DEVELOPED   PERSIMMO.HYG  BYPASS-DEVELOPED100
=====

```

INFLOWS TO: NET-OUT

```

-----
HYG file      HYG ID      HYG tag      Volume      Peak Time    Peak Flow
ac-ft         hrs         cfs
-----
PERSIMMO.HYG LAKE3-ROUTE      100          44.703      13.4000     130.07
PERSIMMO.HYG BYPASS-DEVELOPED 100           .850        12.1000      9.94

```

TOTAL FLOW INTO: NET-OUT

```

-----
HYG file      HYG ID      HYG tag      Volume      Peak Time    Peak Flow
ac-ft         hrs         cfs
-----
PERSIMMO.HYG NET-OUT          100          45.619      13.4000     130.98

```

S/N: 721701406A81 J R GRIMES CONSULTING

PondPack Ver: 7.5 (767)

Compute Time: 14:20:08

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TOTAL NODE INFLOW...  
 HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = NET-OUT  
 HYG Tag = 100

-----  
 Peak Discharge = 130.98 cfs  
 Time to Peak = 13.4000 hrs  
 HYG Volume = 45.519 ac-ft  
 -----

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs  
 Time on left represents time for first value in each row.

Time hrs					
4.9000	.00	.02	.02	.04	.04
5.4000	.07	.09	.09	.11	.13
5.9000	.15	.17	.20	.22	.24
6.4000	.26	.28	.30	.33	.35
6.9000	.37	.39	.41	.43	.46
7.4000	.50	.54	.58	.63	.67
7.9000	.71	.76	.80	.84	.88
8.4000	.93	.97	1.04	1.10	1.17
8.9000	1.24	1.33	1.42	1.51	1.60
9.4000	1.69	1.80	1.91	2.02	2.13
9.9000	2.27	2.47	2.67	2.87	3.07
10.4000	3.30	3.54	3.78	4.06	4.38
10.9000	4.70	5.06	5.46	5.86	6.35
11.4000	6.92	7.63	8.51	9.89	12.40
11.9000	17.16	25.14	34.67	42.67	48.77
12.4000	53.91	58.44	64.12	73.21	84.93
12.9000	97.54	111.05	120.95	127.72	130.68
13.4000	130.98	129.24	126.03	121.68	116.72
13.9000	111.53	106.00	100.47	95.53	90.96
14.4000	86.31	82.66	78.61	74.76	71.12
14.9000	67.53	64.56	61.76	59.22	56.97
15.4000	54.59	52.63	50.85	49.44	48.25
15.9000	47.21	46.24	45.38	44.53	43.68
16.4000	42.90	42.12	41.35	40.63	39.94
16.9000	39.27	38.62	37.97	37.32	36.67
17.4000	36.03	35.39	34.76	34.13	33.55
17.9000	33.02	32.50	31.98	31.50	31.01
18.4000	30.53	30.06	29.59	29.11	28.64
18.9000	28.18	27.76	27.37	26.99	26.61
19.4000	26.23	25.85	25.48	25.11	24.73
19.9000	24.41	24.11	23.78	23.48	23.18
20.4000	22.38	22.62	22.36	22.10	21.84
20.9000	21.59	21.39	21.20	21.01	20.82

ICPM HYDROGRAPH...  
 HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = K-B LAKE IN  
 HYG Tag = 2

-----  
 Peak Discharge = 79.54 cfs  
 Time to Peak = 12.4000 hrs  
 HYG Volume = 15.323 ac-ft  
 -----

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs					
.0000	.00	.00	.00	.00	.00
.5000	.00	.00	.00	.00	.00
1.0000	.00	.00	.00	.00	.00
1.5000	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00
3.0000	.00	.00	.00	.00	.00
3.5000	.00	.00	.00	.00	.00
4.0000	.00	.00	.00	.00	.00
4.5000	.01	.01	.02	.03	.05
5.0000	.06	.08	.10	.12	.14
5.5000	.16	.19	.21	.23	.26
6.0000	.28	.31	.33	.36	.39
6.5000	.41	.44	.47	.50	.53
7.0000	.55	.58	.61	.64	.67
7.5000	.70	.73	.76	.79	.82
8.0000	.85	.89	.92	.95	.99
8.5000	1.04	1.09	1.15	1.21	1.28
9.0000	1.35	1.43	1.51	1.59	1.66
9.5000	1.73	1.80	1.86	1.92	1.99
10.0000	2.07	2.16	2.27	2.40	2.55
10.5000	2.71	2.90	3.12	3.35	3.63
11.0000	3.93	4.28	4.68	5.15	5.74
11.5000	6.47	7.65	9.72	13.95	22.23
12.0000	34.97	51.64	67.05	76.49	79.54
12.5000	77.64	72.47	66.60	60.32	55.28
13.0000	51.00	47.14	43.89	40.60	37.79
13.5000	34.91	32.20	29.78	27.61	25.60
14.0000	23.98	22.44	21.13	19.92	18.80
14.5000	17.81	16.87	16.12	15.40	14.77
15.0000	14.18	13.64	13.15	12.68	12.27
15.5000	11.87	11.51	11.16	10.82	10.51
16.0000	10.20	9.91	9.62	9.34	9.08

Name: K-B LAKE IN Tag: 15

Event: 15 yr

File: J:\0675B\PONDPACK\PERSIMMO.HYG

Storm: TypeII 24hr Tag: 15

## ICPM HYDROGRAPH...

HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG

HYG ID = K-B LAKE IN

HYG Tag = 15

```

-----
Peak Discharge =      143.10 cfs
Time to Peak   =      12.4000 hrs
HYG Volume     =      29.276 ac-ft
-----

```

## HYDROGRAPH ORDINATES (cfs)

Time hrs | Output Time increment = .1000 hrs

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

Time hrs	0.00	0.10	0.20	0.30	0.40	0.50
.0000	.00	.00	.00	.00	.00	.00
.5000	.00	.00	.00	.00	.00	.00
1.0000	.00	.00	.00	.00	.00	.00
1.5000	.00	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00	.00
3.0000	.00	.00	.00	.00	.01	.02
3.5000	.04	.06	.08	.11	.14	.17
4.0000	.17	.20	.24	.27	.31	.34
4.5000	.34	.38	.42	.46	.50	.54
5.0000	.54	.58	.62	.66	.70	.75
5.5000	.75	.79	.83	.88	.92	.97
6.0000	.97	1.02	1.06	1.11	1.16	1.20
6.5000	1.20	1.25	1.30	1.35	1.40	1.44
7.0000	1.44	1.49	1.54	1.59	1.64	1.69
7.5000	1.69	1.74	1.79	1.84	1.89	1.94
8.0000	1.94	1.99	2.05	2.11	2.19	2.27
8.5000	2.27	2.37	2.49	2.62	2.76	2.92
9.0000	2.92	3.08	3.26	3.43	3.60	3.77
9.5000	3.77	3.93	4.09	4.26	4.43	4.64
10.0000	4.64	4.88	5.15	5.46	5.81	6.20
10.5000	6.20	6.63	7.12	7.65	8.26	8.95
11.0000	8.95	9.72	10.61	11.62	12.88	14.40
11.5000	14.40	16.83	20.97	29.12	44.71	67.88
12.0000	67.88	97.43	123.72	138.93	143.10	138.99
12.5000	138.99	129.64	119.76	109.08	100.52	93.13
13.0000	93.13	86.31	80.51	74.51	69.30	63.94
13.5000	63.94	58.84	54.29	50.24	46.46	43.46
14.0000	43.46	40.60	38.17	35.94	33.88	32.07
14.5000	32.07	30.35	29.01	27.72	26.58	25.54
15.0000	25.54	24.56	23.71	22.86	22.16	21.46
15.5000	21.46	20.82	20.21	19.61	19.06	18.51
16.0000	18.51	18.01	17.51	17.05	16.62	

S/N: 721701406A81 J R GRIMES CONSULTING

PondPack Ver: 7.5 (757)

Compute Time: 14:20:08

Date: 08-06-2002



ICPM HYDROGRAPH...  
 HYG file = J:\0675B\PONDPACK\PERSONAL.HYG  
 HYG ID = K-B LAKE IN  
 HYG Tag = 25

-----  
 Peak Discharge = 162.47 cfs  
 Time to Peak = 12.4000 hrs  
 HYG Volume = 33.473 ac-ft  
 -----

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs					
.0000	.00	.00	.00	.00	.00
.5000	.00	.00	.00	.00	.00
1.0000	.00	.00	.00	.00	.00
1.5000	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00
3.0000	.01	.02	.03	.05	.07
3.5000	.10	.13	.17	.21	.24
4.0000	.28	.32	.36	.40	.44
4.5000	.49	.53	.57	.62	.66
5.0000	.71	.76	.81	.85	.90
5.5000	.95	1.00	1.05	1.10	1.15
6.0000	1.20	1.26	1.31	1.36	1.41
6.5000	1.47	1.52	1.57	1.63	1.68
7.0000	1.74	1.79	1.85	1.90	1.96
7.5000	2.01	2.07	2.13	2.18	2.24
8.0000	2.31	2.37	2.44	2.53	2.62
8.5000	2.73	2.86	3.00	3.17	3.35
9.0000	3.54	3.74	3.95	4.17	4.38
9.5000	4.59	4.79	4.99	5.19	5.41
10.0000	5.65	5.93	6.26	6.62	7.04
10.5000	7.51	8.02	8.61	9.25	9.97
11.0000	10.78	11.69	12.74	13.94	15.42
11.5000	17.18	19.95	24.71	34.10	51.89
12.0000	73.27	111.75	141.18	158.01	162.47
12.5000	157.59	146.99	135.87	123.85	114.20
13.0000	105.86	98.15	91.58	84.74	78.79
13.5000	72.66	66.83	61.61	56.98	52.66
14.0000	49.24	45.98	43.21	40.68	38.34
14.5000	36.27	34.32	32.80	31.33	30.05
15.0000	28.87	27.76	26.79	25.83	25.02
15.5000	24.22	23.49	22.81	22.14	21.54
16.0000	20.93	20.38	19.83	19.33	18.85

S/N: 721701406A81 J R GRIMES CONSULTING

PondPack Ver: 7.5 (767)

Compute Time: 14:20:08

Date: 08-06-2002

ICPM HYDROGRAPH...

HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = K-B LAKE IN  
 HYG Tag = 100

-----  
 Peak Discharge = 221.47 cfs  
 Time to Peak = 12.4000 hrs  
 HYG Volume = 46.440 ac-ft  
 -----

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs					
.0000	.00	.00	.00	.00	.00
.5000	.00	.00	.00	.00	.00
1.0000	.00	.00	.00	.00	.00
1.5000	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00
2.5000	.01	.02	.05	.07	.11
3.0000	.15	.20	.25	.30	.36
3.5000	.41	.47	.53	.59	.64
4.0000	.70	.76	.81	.87	.93
4.5000	.99	1.05	1.11	1.17	1.23
5.0000	1.30	1.36	1.43	1.49	1.56
5.5000	1.63	1.69	1.76	1.83	1.90
6.0000	1.97	2.04	2.11	2.18	2.25
6.5000	2.32	2.39	2.47	2.54	2.62
7.0000	2.70	2.79	2.88	2.97	3.08
7.5000	3.18	3.28	3.39	3.51	3.62
8.0000	3.74	3.87	4.01	4.16	4.33
8.5000	4.52	4.74	4.98	5.24	5.53
9.0000	5.84	6.16	6.50	6.84	7.18
9.5000	7.52	7.84	8.16	8.47	8.81
10.0000	9.20	9.64	10.15	10.72	11.35
10.5000	12.07	12.84	13.72	14.65	15.71
11.0000	16.88	18.18	19.70	21.40	23.51
11.5000	25.98	29.91	36.60	49.70	74.32
12.0000	110.41	155.70	194.74	216.41	221.47
12.5000	214.30	199.63	184.75	168.59	155.63
13.0000	144.35	133.84	124.87	115.46	107.23
13.5000	98.76	90.68	83.46	77.07	71.09
14.0000	66.39	61.91	58.12	54.65	51.45
14.5000	48.64	45.98	43.92	41.93	40.19
15.0000	38.59	37.10	35.81	34.53	33.47
15.5000	32.41	31.45	30.55	29.67	28.88
16.0000	28.09	27.37	26.66	26.00	25.39

Type... Hydrograph  
 Name... K-B LAKE OUT Tag: 2  
 File... J:\0675B\PONDPACK\PERSIMMO.HYG  
 Storm... TypeII 24hr Tag: 2  
 Page 6.09  
 Event: 2 yr

ICPM HYDROGRAPH...  
 HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = K-B LAKE OUT  
 HYG Tag = 2

-----  
 Peak Discharge = 20.21 cfs  
 Time to Peak = 14.3000 hrs  
 HYG Volume = 12.824 ac-ft  
 -----

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs  
 Time on left represents time for first value in each row.

Time hrs					
.0000	.00	.00	.00	.00	.00
.5000	.00	.00	.00	.00	.00
1.0000	.00	.00	.00	.00	.00
1.5000	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00
3.0000	.00	.00	.00	.00	.00
3.5000	.00	.00	.00	.00	.00
4.0000	.00	.00	.00	.00	.00
4.5000	.00	.00	.00	.00	.00
5.0000	.00	.00	.00	.00	.00
5.5000	.00	.01	.01	.01	.01
6.0000	.01	.02	.02	.02	.02
6.5000	.03	.03	.03	.04	.04
7.0000	.05	.05	.06	.06	.06
7.5000	.07	.07	.08	.09	.09
8.0000	.10	.11	.11	.12	.13
8.5000	.13	.14	.15	.16	.17
9.0000	.18	.19	.20	.21	.22
9.5000	.23	.25	.26	.27	.29
10.0000	.30	.32	.33	.35	.37
10.5000	.39	.41	.43	.45	.48
11.0000	.51	.54	.57	.63	.70
11.5000	.78	.87	.99	1.15	1.40
12.0000	1.85	2.61	3.75	5.24	6.95
12.5000	8.71	10.40	11.94	13.29	14.47
13.0000	15.49	16.38	17.15	17.81	18.37
13.5000	18.85	19.23	19.53	19.77	19.95
14.0000	20.07	20.16	20.20	20.21	20.18
14.5000	20.13	20.06	19.97	19.86	19.73
15.0000	19.60	19.45	19.29	19.12	18.95
15.5000	18.77	18.58	18.39	18.20	18.00
16.0000	17.80	17.60	17.39	17.18	16.98

S/N: 721701406A81 J R GRIMES CONSULTING  
 PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002

Type.... Hydrograph  
 Name.... K-B LAKE OUT Tag: 2  
 File.... J:\0675B\PCNDPACK\PERSIMMO.HYG  
 Storm... TypeII 24hr Tag: 2

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs  
 Time on left represents time for first value in each row.

Time hrs					
16.5000	16.76	16.55	16.34	16.13	15.92
17.0000	15.70	15.50	15.29	15.09	14.88
17.5000	14.68	14.48	14.28	14.08	13.89
18.0000	13.69	13.50	13.32	13.13	12.95
18.5000	12.77	12.60	12.42	12.25	12.08
19.0000	11.91	11.74	11.58	11.42	11.25
19.5000	11.10	10.95	10.80	10.65	10.50
20.0000	10.35	10.21	10.07	9.93	9.79
20.5000	9.66	9.52	9.40	9.27	9.14
21.0000	9.02	8.90	8.78	8.67	8.55
21.5000	8.44	8.33	8.22	8.11	8.01
22.0000	7.91	7.81	7.71	7.62	7.53
22.5000	7.44	7.35	7.27	7.19	7.10
23.0000	7.02	6.94	6.87	6.80	6.72
23.5000	6.65	6.58	6.51	6.44	6.37
24.0000	6.31				

S/N: 721701406A81 J R GRIMES CONSULTING  
 PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002

Type ... Hydrograph  
 Name ... K-B LAKE OUT Tag: 15  
 File ... J:\0675B\PONDPACK\PERSIMMO.HYG  
 Storm ... Type II 24hr Tag: 15  
 Page 6.11  
 Event: 15 YR

ICPM HYDROGRAPH...  
 HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = K-B LAKE OUT  
 HYG Tag = 15

-----  
 Peak Discharge = 53.02 cfs  
 Time to Peak = 13.7000 hrs  
 HYG Volume = 24.970 ac-ft  
 -----

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs	Output Time increment = .1000 hrs				
.0000	.00	.00	.00	.00	.00
.5000	.00	.00	.00	.00	.00
1.0000	.00	.00	.00	.00	.00
1.5000	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00
3.0000	.00	.00	.00	.00	.00
3.5000	.00	.00	.00	.00	.00
4.0000	.00	.00	.01	.01	.01
4.5000	.01	.01	.02	.02	.03
5.0000	.03	.04	.04	.04	.05
5.5000	.06	.06	.07	.07	.08
6.0000	.09	.10	.10	.11	.12
6.5000	.13	.14	.15	.16	.17
7.0000	.18	.19	.20	.21	.22
7.5000	.24	.25	.26	.28	.29
8.0000	.30	.32	.33	.35	.36
8.5000	.38	.39	.41	.43	.45
9.0000	.47	.49	.51	.53	.56
9.5000	.59	.64	.69	.74	.79
10.0000	.85	.91	.97	1.03	1.10
10.5000	1.17	1.25	1.33	1.42	1.52
11.0000	1.63	1.77	1.92	2.09	2.28
11.5000	2.49	2.73	3.04	3.50	4.20
12.0000	5.37	7.19	9.78	12.94	16.33
12.5000	19.60	23.55	28.04	32.17	35.77
13.0000	38.85	41.45	43.60	46.04	49.19
13.5000	51.31	52.53	53.02	52.92	52.37
14.0000	51.47	50.32	48.98	47.52	45.98
14.5000	44.64	43.96	43.22	42.46	41.67
15.0000	40.87	40.07	39.26	38.45	37.63
15.5000	36.83	36.05	35.27	34.50	33.74
16.0000	33.01	32.29	31.58	30.87	30.19

S/N: 721701406A81 J R GRIMES CONSULTING  
 PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002

Type.... Hydrograph  
Name.... K-B LAKE OUT Tag: 15  
File.... J:\0675B\PONDPACK\PERSIMMO.HYG  
Storm... TypeII 24hr Tag: 15

Page 6.12  
Event: 15 yr

Time hrs	HYDROGRAPH ORDINATES (cfs)				
	Output Time increment = .1000 hrs Time on left represents time for first value in each row.				
16.5000	29.54	28.91	28.29	27.68	27.09
17.0000	26.52	26.00	25.48	24.98	24.48
17.5000	24.00	23.53	23.12	22.72	22.34
18.0000	21.96	21.58	21.22	20.86	20.55
18.5000	20.27	20.02	19.79	19.56	19.33
19.0000	19.10	18.87	18.64	18.41	18.19
19.5000	17.96	17.74	17.52	17.31	17.09
20.0000	16.87	16.66	16.44	16.23	16.02
20.5000	15.81	15.61	15.41	15.21	15.01
21.0000	14.81	14.62	14.42	14.23	14.05
21.5000	13.87	13.69	13.51	13.34	13.17
22.0000	13.00	12.84	12.68	12.53	12.37
22.5000	12.22	12.08	11.93	11.79	11.65
23.0000	11.51	11.38	11.25	11.12	11.00
23.5000	10.88	10.76	10.64	10.52	10.41
24.0000	10.30				

S/N: 721701406A81 J R GRIMES CONSULTING

PondPack Ver: 7.5 (767)

Compute Time: 14:20:08

Date: 08-06-2002

Type: Hydrograph  
 Name: K-B LAKE OUT Tag: 25  
 File: J:\0675B\PONDPACK\PERSIMMO.HYG  
 Storm: TypeII 24hr Tag: 25

ICPM HYDROGRAPH...  
 HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = K-B LAKE OUT  
 HYG Tag = 25

-----  
 Peak Discharge = 71.81 cfs  
 Time to Peak = 13.5000 hrs  
 HYG Volume = 28.784 ac-ft  
 -----

Time hrs	HYDROGRAPH ORDINATES (cfs)					
	Output Time increment = .1000 hrs Time on left represents time for first value in each row.					
.0000	.00	.00	.00	.00	.00	.00
.5000	.00	.00	.00	.00	.00	.00
1.0000	.00	.00	.00	.00	.00	.00
1.5000	.00	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00	.00
3.0000	.00	.00	.00	.00	.00	.00
3.5000	.00	.00	.00	.00	.00	.01
4.0000	.01	.01	.01	.02	.02	.02
4.5000	.02	.03	.03	.04	.04	.04
5.0000	.05	.05	.06	.07	.07	.07
5.5000	.08	.09	.09	.10	.11	.11
6.0000	.12	.13	.14	.15	.16	.16
6.5000	.17	.18	.19	.20	.22	.22
7.0000	.23	.24	.25	.27	.28	.28
7.5000	.30	.31	.33	.34	.36	.36
8.0000	.37	.39	.41	.42	.44	.44
8.5000	.46	.48	.50	.52	.55	.55
9.0000	.57	.60	.65	.70	.76	.76
9.5000	.81	.87	.93	.99	1.06	1.06
10.0000	1.12	1.19	1.26	1.34	1.42	1.42
10.5000	1.51	1.60	1.72	1.85	1.99	1.99
11.0000	2.15	2.32	2.50	2.70	2.92	2.92
11.5000	3.20	3.52	3.91	4.45	5.32	5.32
12.0000	6.73	8.90	11.93	15.57	19.37	19.37
12.5000	24.29	30.10	35.59	40.37	44.39	44.39
13.0000	51.56	58.58	64.51	68.37	70.82	70.82
13.5000	71.81	71.41	69.99	68.12	65.84	65.84
14.0000	63.30	60.63	57.90	55.19	53.15	53.15
14.5000	51.21	49.27	47.37	45.51	44.35	44.35
15.0000	43.59	42.81	42.01	41.21	40.41	40.41
15.5000	39.60	38.80	38.00	37.22	36.44	36.44
16.0000	35.67	34.92	34.18	33.45	32.75	32.75

Type.... Hydrograph  
 Name.... K-B LAKE      OUT      Tag: 25  
 File.... J:\0675B\PONDPACK\PERSIMMO.HYG  
 Storm... TypeII 24hr      Tag: 25

Time hrs	HYDROGRAPH ORDINATES (cfs)				
	Output Time increment = .1000 hrs Time on left represents time for first value in each row.				
16.5000	32.07	31.39	30.73	30.08	29.47
17.0000	28.87	28.29	27.73	27.16	26.62
17.5000	26.13	25.65	25.17	24.70	24.25
18.0000	23.81	23.39	23.02	22.66	22.31
18.5000	21.95	21.61	21.27	20.94	20.63
19.0000	20.37	20.12	19.91	19.69	19.47
19.5000	19.25	19.04	18.83	18.61	18.40
20.0000	18.18	17.97	17.76	17.54	17.33
20.5000	17.12	16.92	16.71	16.50	16.30
21.0000	16.10	15.90	15.70	15.51	15.32
21.5000	15.14	14.95	14.77	14.59	14.41
22.0000	14.24	14.07	13.90	13.74	13.58
22.5000	13.42	13.26	13.11	12.96	12.81
23.0000	12.67	12.53	12.39	12.25	12.12
23.5000	11.99	11.86	11.73	11.60	11.49
24.0000	11.37				

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Type: HYDROGRAPH  
 Name: K-B LAKE CUT Tag: 100  
 File: J:\0675B\PONDPACK\PERSIMMO.HYG  
 Storm: TypeII 24hr Tag: 100

ICPM HYDROGRAPH...  
 HYG file = J:\0675B\PONDPACK\PERSIMMO.HYG  
 HYG ID = K-B LAKE CUT  
 HYG Tag = 100

-----  
 Peak Discharge = 128.78 cfs  
 Time to Peak = 13.2000 hrs  
 HYG Volume = 40.734 ac-ft  
 -----

HYDROGRAPH ORDINATES (cfs)

Output Time increment = .1000 hrs

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

Time hrs					
.0000	.00	.00	.00	.00	.00
.5000	.00	.00	.00	.00	.00
1.0000	.00	.00	.00	.00	.00
1.5000	.00	.00	.00	.00	.00
2.0000	.00	.00	.00	.00	.00
2.5000	.00	.00	.00	.00	.00
3.0000	.00	.00	.01	.01	.01
3.5000	.01	.02	.02	.03	.03
4.0000	.04	.04	.05	.05	.05
4.5000	.07	.08	.09	.09	.10
5.0000	.11	.12	.13	.14	.16
5.5000	.17	.18	.19	.21	.22
6.0000	.24	.25	.27	.28	.30
6.5000	.31	.33	.35	.37	.39
7.0000	.41	.43	.45	.47	.49
7.5000	.51	.53	.56	.58	.62
8.0000	.67	.71	.76	.81	.86
8.5000	.92	.97	1.03	1.09	1.15
9.0000	1.22	1.29	1.37	1.45	1.53
9.5000	1.61	1.72	1.84	1.96	2.08
10.0000	2.21	2.34	2.48	2.63	2.78
10.5000	2.95	3.15	3.36	3.59	3.83
11.0000	4.09	4.38	4.71	5.07	5.46
11.5000	5.90	6.43	7.08	7.96	9.31
12.0000	11.45	14.66	18.89	25.49	34.67
12.5000	43.98	64.91	88.20	106.48	118.64
13.0000	125.57	128.58	128.78	126.76	123.35
13.5000	118.36	113.52	107.71	102.05	96.29
14.0000	90.59	85.37	80.60	76.03	71.71
14.5000	57.73	64.26	60.95	57.86	55.00
15.0000	53.02	51.16	49.37	47.64	45.97
15.5000	44.64	43.99	43.32	42.65	41.96
16.0000	41.28	40.59	39.90	39.21	38.51

Type: Hydrograph  
 Name: K-B LAKE OUT Tag: 100  
 File: J:\0675B\PONDPACK\PERSIMMO.HYG  
 Storm: TypeII 24hr Tag: 100

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

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Time hrs					
16.5000	37.83	37.15	36.50	35.85	35.21
17.0000	34.58	33.96	33.37	32.79	32.22
17.5000	31.66	31.11	30.58	30.06	29.57
18.0000	29.09	28.62	28.16	27.71	27.27
18.5000	26.84	26.44	26.05	25.67	25.30
19.0000	24.93	24.57	24.22	23.87	23.52
19.5000	23.22	22.93	22.64	22.35	22.06
20.0000	21.78	21.49	21.21	20.93	20.67
20.5000	20.45	20.22	20.03	19.84	19.66
21.0000	19.47	19.29	19.10	18.92	18.74
21.5000	18.56	18.39	18.21	18.03	17.86
22.0000	17.69	17.51	17.34	17.18	17.01
22.5000	16.85	16.69	16.53	16.37	16.21
23.0000	16.05	15.90	15.75	15.60	15.45
23.5000	15.31	15.16	15.02	14.88	14.75
24.0000	14.61				

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 PondPack Ver: 7.5 (767) Compute Time: 14:20:08 Date: 08-06-2002