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STORMWATER DETENTION ANALYSIS
PREPARED BY: BAX ENGINEERING CO., INC.
PIEPERS GLEN - O'FALLON
BAX PROJECT NO. **97-8433A**
October 6, 1998

INTRODUCTION:

This tract of land is presently an undeveloped site located in the City of O'Fallon, Missouri. It is proposed that the 16.49 acre tract be developed into residential lots. A dry stormwater detention basin will be constructed in the northwest corner of the site. The storage volume and outflow rates shall be proportioned to insure that the peak rate of runoff leaving the tract under post-developed conditions is less than or equal to the peak rate of runoff under pre-developed conditions for the 2, 15, and 25 year-20 minute design storm. The basin was also analyzed for the 100 year frequency - 20 minute duration design storm.

GENERAL SITE DATA AND RUNOFF CALCULATIONS:

The pre-developed P.I. factors to be used for the analysis are:

2 year - 5% impervious	1.15 cfs/ac.
15 year - 5% impervious	1.87 cfs/ac.
25 year - 5% impervious	2.31 cfs/ac.
100 year - 5% impervious	2.95 cfs/ac.

The post-developed P.I. factors to be used for the analysis are:

2 year - ±50% impervious	1.76 cfs/ac.
15 year - ±50% impervious	2.90 cfs/ac.
25 year - ±50% impervious	3.58 cfs/ac.
100 year - ±50% impervious	4.58 cfs/ac.

TIME OF CONCENTRATION:

Of the inflows to the basin, the most remote point lies to the south near lot 2. Flows will travel approximately 450 feet overland to AI 27 then 970 feet via stormpipe to the detention basin. Time of concentration is estimated as follows:

T(overland): L = 450 feet
Elevation difference = 530 - 520 = 10 feet
T(overland) = 7.0 minutes: See figure 1

T(stormpipe): L = 970 feet (estimated velocity 7 feet per second)
T(stormpipe) = 2.3 minutes:

Total 9.3 min >> Use **9** min.

BASIN PEAK INFLOWS:

Inflows to the basin have been estimated from the drainage area map.

25 year-20 minute storm

14.46 Ac. x 3.58 cfs/Ac.	51.77 cfs
1.11 Ac. x 3.26 cfs/Ac.	3.62 cfs
	55.39 cfs

2 year-20 minute storm:	27.24 cfs
15 year-20 minute storm:	44.86 cfs
100 year-20 minute storm:	70.86 cfs

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STORM ROUTING CALCULATIONS AND RESULTS:

A computer program was used in routing the 2, 15, and 25 year-20 minute storm through the basin. As found in the routing calculations, the results are as follows:

20 MIN STORM	PERMITTED RELEASE RATE	CALCULATED RELEASE RATE	PEAK ELEVATION
2 YR	17.18	16.87 cfs	504.34
15 YR	27.88	27.51 cfs	505.61
25 YR	34.44	33.81 cfs	506.24

CHECK 100-YEAR OUTFLOW: (low-flow blocked)

WEIR FLOW: Q = C x L x H (3/2)

30 ft. overflow spillway

100-YEAR FLOW Q = 70.86 cfs
C = 3.0
L = 30 ft
H = 0.85 ft
Sill = 506.25
100 yr h/w = 507.10

SUMMARY

25 year-20min H.W.	506.24
100 year-20min H.W.(low flow blocked)	507.10
Lower Slot	21 ½" wide x 12" high
Lower Slot Elevation	500.00
Upper Slot	24" wide x 12" high
Upper Slot Elevation	504.40
30' Overflow Spillway Elevation	506.25
.Top Of Berm	508.10

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

Elevation (ft)	Q (cfs)	Contributing Structures
500.00	0.0	1
500.20	0.5	1
500.40	1.4	1
500.60	2.5	1
500.80	3.8	1
501.00	5.4	1
501.20	7.1	1
501.40	8.2	2
501.60	9.0	2
501.80	9.8	2
502.00	10.6	2
502.20	11.2	2
502.40	11.9	2
502.60	12.5	2
502.80	13.1	2
503.00	13.6	2
503.20	14.2	2
503.40	14.7	2
503.60	15.2	2
503.80	15.7	2
504.00	16.1	2
504.20	16.6	2
504.40	17.0	2 +3
504.60	18.0	2 +3
504.80	19.4	2 +3
505.00	21.1	2 +3
505.20	23.0	2 +3
505.40	25.1	2 +3
505.60	27.4	2 +3
505.80	29.0	2 +4
506.00	30.3	2 +4
506.20	32.7	2 +4 +5
506.40	38.5	2 +4 +5
506.60	46.2	2 +4 +5
506.80	55.4	2 +4 +5
507.00	65.8	2 +4 +5

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Outlet Structure File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .STR
Planimeter Input File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .VOL
Rating Table Output File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND

Min. Elev.(ft) = 500 Max. Elev.(ft) = 507 Incr.(ft) = .2

Additional elevations (ft) to be included in table:
* *

****
SYSTEM CONNECTIVITY
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Structure	No.	Q Table		Q Table
WEIR-VR	1		->	1
ORIFICE	2	? 1	->	A
WEIR-VR	3		->	3
ORIFICE	4	? 3	->	B
WEIR-VR	5		->	5

Outflow rating table summary was stored in file:
C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND

Outlet Structure File: 8433 .STR

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>>>>>> Structure No. 1 <<<<<<
(Input Data)

WEIR-VR
Weir - Vertical Rectangular

E1 elev.(ft)?	500
E2 elev.(ft)?	507.001
Weir coefficient?	3.00
Weir elev.(ft)?	500
Length (ft)?	1.7917
Contracted/Suppressed (C/S)?	S

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>>>>>> Structure No. 2 <<<<<<
(Input Data)

ORIFICE
Orifice - Based on Area and Datum Elevation

E1 elev.(ft)?	501.0
E2 elev.(ft)?	507.001
Orifice coeff.?	.6
Invert elev.(ft)?	500
Datum elev.(ft) ?	500.5
Orifice area (sq ft)?	1.7917

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>>>>>> Structure No. 3 <<<<<<
(Input Data)

WEIR-VR
Weir - Vertical Rectangular

E1 elev.(ft)?	504.4
E2 elev.(ft)?	507.001
Weir coefficient?	3
Weir elev.(ft)?	504.40
Length (ft)?	2.00
Contracted/Suppressed (C/S)?	S

Outlet Structure File: 8433 .STR

POND-2 Version: 5.20 S/N:
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>>>>>> Structure No. 4 <<<<<<
(Input Data)

ORIFICE
Orifice - Based on Area and Datum Elevation

E1 elev.(ft)?	505.4000
E2 elev.(ft)?	507.001
Orifice coeff.?	0.6
Invert elev.(ft)?	504.400
Datum elev.(ft) ?	504.9000
Orifice area (sq ft)?	2.00

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>>>>>> Structure No. 5 <<<<<<
(Input Data)

WEIR-VR
Weir - Vertical Rectangular

E1 elev.(ft)? 506.1
E2 elev.(ft)? 507.001
Weir coefficient? 3
Weir elev.(ft)? 506.1
Length (ft)? 11.67
Contracted/Suppressed (C/S)? S

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Outflow Rating Table for Structure #1
WEIR-VR Weir - Vertical Rectangular

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
500.00	0.0	H =0.0
500.20	0.5	H =.2
500.40	1.4	H =.4
500.60	2.5	H =.6
500.80	3.8	H =.8
501.00	5.4	H =1.0
501.20	7.1	H =1.2
501.40	8.9	H =1.4
501.60	10.9	H =1.6
501.80	13.0	H =1.8
502.00	15.2	H =2.0
502.20	17.5	H =2.2
502.40	20.0	H =2.4
502.60	22.5	H =2.6
502.80	25.2	H =2.8
503.00	27.9	H =3.0
503.20	30.8	H =3.2
503.40	33.7	H =3.4
503.60	36.7	H =3.6
503.80	39.8	H =3.8
504.00	43.0	H =4.0
504.20	46.3	H =4.2
504.40	49.6	H =4.4
504.60	53.0	H =4.6
504.80	56.5	H =4.8
505.00	60.1	H =5.0
505.20	63.7	H =5.2
505.40	67.4	H =5.4
505.60	71.2	H =5.6
505.80	75.1	H =5.8
506.00	79.0	H =6.0
506.20	83.0	H =6.2
506.40	87.0	H =6.4
506.60	91.1	H =6.6

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Outflow Rating Table for Structure #1
WEIR-VR Weir - Vertical Rectangular

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
506.80	95.3	H =6.8
507.00	99.5	H =7.0

C = 3 L (ft) = 1.7917
H (ft) = Table elev. - Invert elev. (500 ft)
Q (cfs) = C * L * (H**1.5) -- Suppressed Weir

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Outflow Rating Table for Structure #2
ORIFICE Orifice - Based on Area and Datum Elevation

Elevation (ft)	Q (cfs)	Computation Messages
500.00	0.0	E < E1=501.0
500.20	0.0	E < E1=501.0
500.40	0.0	E < E1=501.0
500.60	0.0	E < E1=501.0
500.80	0.0	E < E1=501.0
501.00	6.1	H =.5
501.20	7.2	H =.7
501.40	8.2	H =.9
501.60	9.0	H =1.1
501.80	9.8	H =1.3
502.00	10.6	H =1.5
502.20	11.2	H =1.7
502.40	11.9	H =1.9
502.60	12.5	H =2.1
502.80	13.1	H =2.3
503.00	13.6	H =2.5
503.20	14.2	H =2.7
503.40	14.7	H =2.9
503.60	15.2	H =3.1
503.80	15.7	H =3.3
504.00	16.1	H =3.5
504.20	16.6	H =3.7
504.40	17.0	H =3.9
504.60	17.5	H =4.1
504.80	17.9	H =4.3
505.00	18.3	H =4.5
505.20	18.7	H =4.7
505.40	19.1	H =4.9
505.60	19.5	H =5.1
505.80	19.9	H =5.3
506.00	20.2	H =5.5
506.20	20.6	H =5.7
506.40	21.0	H =5.9
506.60	21.3	H =6.1

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Outflow Rating Table for Structure #2
ORIFICE Orifice - Based on Area and Datum Elevation

Elevation (ft)	Q (cfs)	Computation Messages
506.80	21.7	H =6.3
507.00	22.0	H =6.5

C = .6 A = 1.7917 sq.ft.
H (ft) = Table elev. - Datum elev. (500.5 ft)
Q (cfs) = C * A * sqr(2g * H)

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Outflow Rating Table for Structure #3
WEIR-VR Weir - Vertical Rectangular

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
500.00	0.0	E < Inv.El.= 504.4
500.20	0.0	E < Inv.El.= 504.4
500.40	0.0	E < Inv.El.= 504.4
500.60	0.0	E < Inv.El.= 504.4
500.80	0.0	E < Inv.El.= 504.4
501.00	0.0	E < Inv.El.= 504.4
501.20	0.0	E < Inv.El.= 504.4
501.40	0.0	E < Inv.El.= 504.4
501.60	0.0	E < Inv.El.= 504.4
501.80	0.0	E < Inv.El.= 504.4
502.00	0.0	E < Inv.El.= 504.4
502.20	0.0	E < Inv.El.= 504.4
502.40	0.0	E < Inv.El.= 504.4
502.60	0.0	E < Inv.El.= 504.4
502.80	0.0	E < Inv.El.= 504.4
503.00	0.0	E < Inv.El.= 504.4
503.20	0.0	E < Inv.El.= 504.4
503.40	0.0	E < Inv.El.= 504.4
503.60	0.0	E < Inv.El.= 504.4
503.80	0.0	E < Inv.El.= 504.4
504.00	0.0	E < Inv.El.= 504.4
504.20	0.0	E < Inv.El.= 504.4
504.40	0.0	H =0.0
504.60	0.5	H =.2
504.80	1.5	H =.4
505.00	2.8	H =.6
505.20	4.3	H =.8
505.40	6.0	H =1.0
505.60	7.9	H =1.2
505.80	9.9	H =1.4
506.00	12.1	H =1.6
506.20	14.5	H =1.8
506.40	17.0	H =2.0
506.60	19.6	H =2.2

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Outflow Rating Table for Structure #3
WEIR-VR Weir - Vertical Rectangular

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
506.80	22.3	H =2.4
507.00	25.2	H =2.6

C = 3 L (ft) = 2
H (ft) = Table elev. - Invert elev. (504.4 ft)
Q (cfs) = C * L * (H**1.5) -- Suppressed Weir

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Outflow Rating Table for Structure #4
ORIFICE Orifice - Based on Area and Datum Elevation

Elevation (ft)	Q (cfs)	Computation Messages
500.00	0.0	E < E1=505.4000
500.20	0.0	E < E1=505.4000
500.40	0.0	E < E1=505.4000
500.60	0.0	E < E1=505.4000
500.80	0.0	E < E1=505.4000
501.00	0.0	E < E1=505.4000
501.20	0.0	E < E1=505.4000
501.40	0.0	E < E1=505.4000
501.60	0.0	E < E1=505.4000
501.80	0.0	E < E1=505.4000
502.00	0.0	E < E1=505.4000
502.20	0.0	E < E1=505.4000
502.40	0.0	E < E1=505.4000
502.60	0.0	E < E1=505.4000
502.80	0.0	E < E1=505.4000
503.00	0.0	E < E1=505.4000
503.20	0.0	E < E1=505.4000
503.40	0.0	E < E1=505.4000
503.60	0.0	E < E1=505.4000
503.80	0.0	E < E1=505.4000
504.00	0.0	E < E1=505.4000
504.20	0.0	E < E1=505.4000
504.40	0.0	E < E1=505.4000
504.60	0.0	E < E1=505.4000
504.80	0.0	E < E1=505.4000
505.00	0.0	E < E1=505.4000
505.20	0.0	E < E1=505.4000
505.40	6.8	H =.5
505.60	8.1	H =.7
505.80	9.1	H =.9
506.00	10.1	H =1.1
506.20	11.0	H =1.3
506.40	11.8	H =1.5
506.60	12.6	H =1.7

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Outflow Rating Table for Structure #4
ORIFICE Orifice - Based on Area and Datum Elevation

Elevation (ft)	Q (cfs)	Computation Messages
506.80	13.3	H =1.9
507.00	14.0	H =2.1

C = .6 A = 2 sq.ft.
H (ft) = Table elev. - Datum elev. (504.9 ft)
Q (cfs) = C * A * sqr(2g * H)

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Outflow Rating Table for Structure #5
WEIR-VR Weir - Vertical Rectangular

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
500.00	0.0	E < Inv.El.= 506.1
500.20	0.0	E < Inv.El.= 506.1
500.40	0.0	E < Inv.El.= 506.1
500.60	0.0	E < Inv.El.= 506.1
500.80	0.0	E < Inv.El.= 506.1
501.00	0.0	E < Inv.El.= 506.1
501.20	0.0	E < Inv.El.= 506.1
501.40	0.0	E < Inv.El.= 506.1
501.60	0.0	E < Inv.El.= 506.1
501.80	0.0	E < Inv.El.= 506.1
502.00	0.0	E < Inv.El.= 506.1
502.20	0.0	E < Inv.El.= 506.1
502.40	0.0	E < Inv.El.= 506.1
502.60	0.0	E < Inv.El.= 506.1
502.80	0.0	E < Inv.El.= 506.1
503.00	0.0	E < Inv.El.= 506.1
503.20	0.0	E < Inv.El.= 506.1
503.40	0.0	E < Inv.El.= 506.1
503.60	0.0	E < Inv.El.= 506.1
503.80	0.0	E < Inv.El.= 506.1
504.00	0.0	E < Inv.El.= 506.1
504.20	0.0	E < Inv.El.= 506.1
504.40	0.0	E < Inv.El.= 506.1
504.60	0.0	E < Inv.El.= 506.1
504.80	0.0	E < Inv.El.= 506.1
505.00	0.0	E < Inv.El.= 506.1
505.20	0.0	E < Inv.El.= 506.1
505.40	0.0	E < Inv.El.= 506.1
505.60	0.0	E < Inv.El.= 506.1
505.80	0.0	E < Inv.El.= 506.1
506.00	0.0	E < Inv.El.= 506.1
506.20	1.1	H =.1
506.40	5.8	H =.3
506.60	12.4	H =.5

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Outflow Rating Table for Structure #5
WEIR-VR Weir - Vertical Rectangular

***** INLET CONTROL ASSUMED *****

Elevation (ft)	Q (cfs)	Computation Messages
506.80	20.5	H =.7
507.00	29.9	H =.9

C = 3 L (ft) = 11.67
H (ft) = Table elev. - Invert elev. (506.1 ft)
Q (cfs) = C * L * (H**1.5) -- Suppressed Weir

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Outflow Rating Table A
Table A = 1 ? 2

Elevation (ft)	Q (cfs)	Contributing Structures
500.00	0.0	1
500.20	0.5	1
500.40	1.4	1
500.60	2.5	1
500.80	3.8	1
501.00	5.4	1
501.20	7.1	1
501.40	8.2	2
501.60	9.0	2
501.80	9.8	2
502.00	10.6	2
502.20	11.2	2
502.40	11.9	2
502.60	12.5	2
502.80	13.1	2
503.00	13.6	2
503.20	14.2	2
503.40	14.7	2
503.60	15.2	2
503.80	15.7	2
504.00	16.1	2
504.20	16.6	2
504.40	17.0	2
504.60	17.5	2
504.80	[illegible]	2
505.00	18.3	2
505.20	18.7	2
505.40	19.1	2
505.60	19.5	2
505.80	19.9	2
506.00	20.2	2
506.20	20.6	2
506.40	21.0	2
506.60	21.3	2
506.80	21.7	2
507.00	22.0	2

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Outflow Rating Table B
Table B = 3 ? 4

Elevation (ft)	Q (cfs)	Contributing Structures
500.00	0.0	-
500.20	0.0	-
500.40	0.0	-
500.60	0.0	-
500.80	0.0	-
501.00	0.0	-
501.20	0.0	-
501.40	0.0	-
501.60	0.0	-
501.80	0.0	-
502.00	0.0	-
502.20	0.0	-
502.40	0.0	-
502.60	0.0	-
502.80	0.0	-
503.00	0.0	-
503.20	0.0	-
503.40	0.0	-
503.60	0.0	-
503.80	0.0	-
504.00	0.0	-
504.20	0.0	-
504.40	0.0	3
504.60	0.5	3
504.80	1.5	3
505.00	2.8	3
505.20	4.3	3
505.40	6.0	3
505.60	7.9	3
505.80	9.1	4
506.00	10.1	4
506.20	11.0	4
506.40	11.8	4
506.60	12.6	4
506.80	13.3	4
507.00	14.0	4

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*
* PIEPERS GLEN
* DETENTION ANALYSIS
* PREPARED BY: BAX ENGINEERING CO., INC.
* OCTOBER 6, 1998
*
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Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-002.HYD
Rating Table file: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND

----INITIAL CONDITIONS----
Elevation = 500.00 ft
Outflow = 0.00 cfs
Storage = 0.00 ac-ft

GIVEN POND DATA			INTERMEDIATE ROUTING COMPUTATIONS	
ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (ac-ft)	2S/t (cfs)	2S/t + O (cfs)
500.00	0.0	0.000	0.0	0.0
500.20	0.5	0.000	0.0	0.5
500.40	1.4	0.000	0.1	1.5
500.60	2.5	0.000	0.3	2.8
500.80	3.8	0.000	0.6	4.4
501.00	5.4	0.001	1.2	6.6
501.20	7.1	0.001	2.1	9.2
501.40	8.2	0.002	3.3	11.5
501.60	9.0	0.003	5.0	14.0
501.80	9.8	0.005	7.1	16.9
502.00	10.6	0.007	9.7	20.3
502.20	11.2	0.010	13.8	25.0
502.40	11.9	0.014	20.7	32.6
502.60	12.5	0.021	31.2	43.7
502.80	13.1	0.032	46.0	59.1
503.00	13.6	0.045	65.8	79.4
503.20	14.2	0.063	91.4	105.6
503.40	14.7	0.085	123.6	138.3
503.60	15.2	0.112	163.0	178.2
503.80	15.7	0.145	210.4	226.1
504.00	16.1	0.184	266.6	282.7
504.20	16.6	0.226	328.4	345.0
504.40	17.0	0.270	392.1	409.1
504.60	18.0	0.315	457.8	475.8
504.80	19.4	0.362	525.5	544.9
505.00	21.1	0.410	595.2	616.3
505.20	23.0	0.459	667.0	690.0
505.40	25.1	0.510	740.9	766.0
505.60	27.4	0.563	816.9	844.3
505.80	29.0	0.616	895.0	924.0
506.00	30.3	0.672	975.4	1005.7

GIVEN POND DATA

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (ac-ft)
506.20	32.7	0.729
506.40	38.5	0.787
506.60	46.2	0.847
506.80	55.4	0.908
507.00	65.8	0.971

INTERMEDIATE ROUTING COMPUTATIONS

2S/t (cfs)	2S/t + O (cfs)
1057.8	1090.5
1142.4	1180.9
1229.2	1275.4
1318.1	1373.5
1409.2	1475.0

Time increment (t) = 1.0 min.

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-002.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330002.HYD

INFLOW HYDROGRAPH | ROUTING COMPUTATIONS

TIME (min)	INFLOW (cfs)	I1+I2 (cfs)	2S/t - O (cfs)	2S/t + O (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
0.0	0.00	-----	0.0	0.0	0.00	500.00
1.0	3.00	3.0	-2.4	3.0	2.69	500.63
2.0	6.10	9.1	-4.2	6.7	5.47	501.01
3.0	9.10	15.2	-4.9	11.0	7.94	501.35
4.0	12.10	21.2	-3.0	16.3	9.64	501.76
5.0	15.10	27.2	2.0	24.2	11.10	502.17
6.0	18.20	33.3	11.2	35.3	12.05	502.45
7.0	21.20	39.4	25.1	50.6	12.77	502.69
8.0	24.20	45.4	43.7	70.5	13.38	502.91
9.0	27.19	51.4	67.2	95.1	13.96	503.12
10.0	27.20	54.4	92.7	121.6	14.44	503.30
11.0	27.20	54.4	117.5	147.1	14.81	503.44
12.0	27.20	54.4	141.6	171.9	15.12	503.57
13.0	27.20	54.4	165.3	196.0	15.39	503.67
14.0	27.20	54.4	188.4	219.7	15.63	503.77
15.0	27.20	54.4	211.2	242.8	15.82	503.86
16.0	27.20	54.4	233.6	265.6	15.98	503.94
17.0	27.20	54.4	255.7	288.0	16.14	504.02
18.0	27.20	54.4	277.5	310.1	16.32	504.09
19.0	27.20	54.4	298.9	331.9	16.49	504.16
20.0	27.20	54.4	320.0	353.3	16.65	504.23
21.0	24.21	51.4	337.9	371.4	16.76	504.28
22.0	21.11	45.3	349.5	383.2	16.84	504.32
23.0	18.11	39.2	355.0	388.7	16.87	504.34
24.0	15.11	33.2	354.5	388.2	16.87	504.33
25.0	12.12	27.2	348.0	381.7	16.83	504.31
26.0	9.12	21.2	335.8	369.3	16.75	504.28
27.0	6.02	15.1	317.6	350.9	16.64	504.22
28.0	3.02	9.0	293.8	326.7	16.45	504.14
29.0	0.02	3.0	264.4	296.8	16.21	504.05
30.0	0.00	0.0	232.5	264.4	15.97	503.94
31.0	0.00	0.0	201.0	232.5	15.74	503.82
32.0	0.00	0.0	170.1	201.0	15.44	503.70
33.0	0.00	0.0	139.9	170.1	15.10	503.56
34.0	0.00	0.0	110.5	139.9	14.72	503.41
35.0	0.00	0.0	81.9	110.5	14.27	503.23
36.0	0.00	0.0	54.6	81.9	13.66	503.02
37.0	0.00	0.0	28.8	54.6	12.93	502.74
38.0	0.00	0.0	5.7	28.8	11.54	502.30
39.0	0.00	0.0	-3.7	5.7	4.71	500.91
40.0	0.00	0.0	-3.7	-3.7	0.00	500.00
41.0	0.00	0.0	-3.7	-3.7	0.00	500.00
42.0	0.00	0.0	-3.7	-3.7	0.00	500.00
43.0	0.00	0.0	-3.7	-3.7	0.00	500.00
44.0	0.00	0.0	-3.7	-3.7	0.00	500.00

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-002.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330002.HYD

INFLOW HYDROGRAPH | ROUTING COMPUTATIONS

TIME (min)	INFLOW (cfs)	I1+I2 (cfs)	2S/t - O (cfs)	2S/t + O (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
45.0	0.00	0.0	-3.7	-3.7	0.00	500.00
46.0	0.00	0.0	-3.7	-3.7	0.00	500.00
47.0	0.00	0.0	-3.7	-3.7	0.00	500.00
48.0	0.00	0.0	-3.7	-3.7	0.00	500.00
49.0	0.00	0.0	-3.7	-3.7	0.00	500.00
50.0	0.00	0.0	-3.7	-3.7	0.00	500.00
51.0	0.00	0.0	-3.7	-3.7	0.00	500.00
52.0	0.00	0.0	-3.7	-3.7	0.00	500.00
53.0	0.00	0.0	-3.7	-3.7	0.00	500.00
54.0	0.00	0.0	-3.7	-3.7	0.00	500.00
55.0	0.00	0.0	-3.7	-3.7	0.00	500.00
56.0	0.00	0.0	-3.7	-3.7	0.00	500.00
57.0	0.00	0.0	-3.7	-3.7	0.00	500.00
58.0	0.00	0.0	-3.7	-3.7	0.00	500.00
59.0	0.00	0.0	-3.7	-3.7	0.00	500.00
60.0	0.00	0.0	-3.7	-3.7	0.00	500.00

********** SUMMARY OF ROUTING COMPUTATIONS **********

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-002.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330002.HYD

Starting Pond W.S. Elevation = 500.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow	=	27.20 cfs
Peak Outflow	=	16.87 cfs
Peak Elevation	=	504.34 ft

***** Summary of Approximate Peak Storage *****

Initial Storage	=	0.00 ac-ft
Peak Storage From Storm	=	0.26 ac-ft
Total Storage in Pond	=	0.26 ac-ft

Return Freq: 2 years

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-002.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330002.HYD

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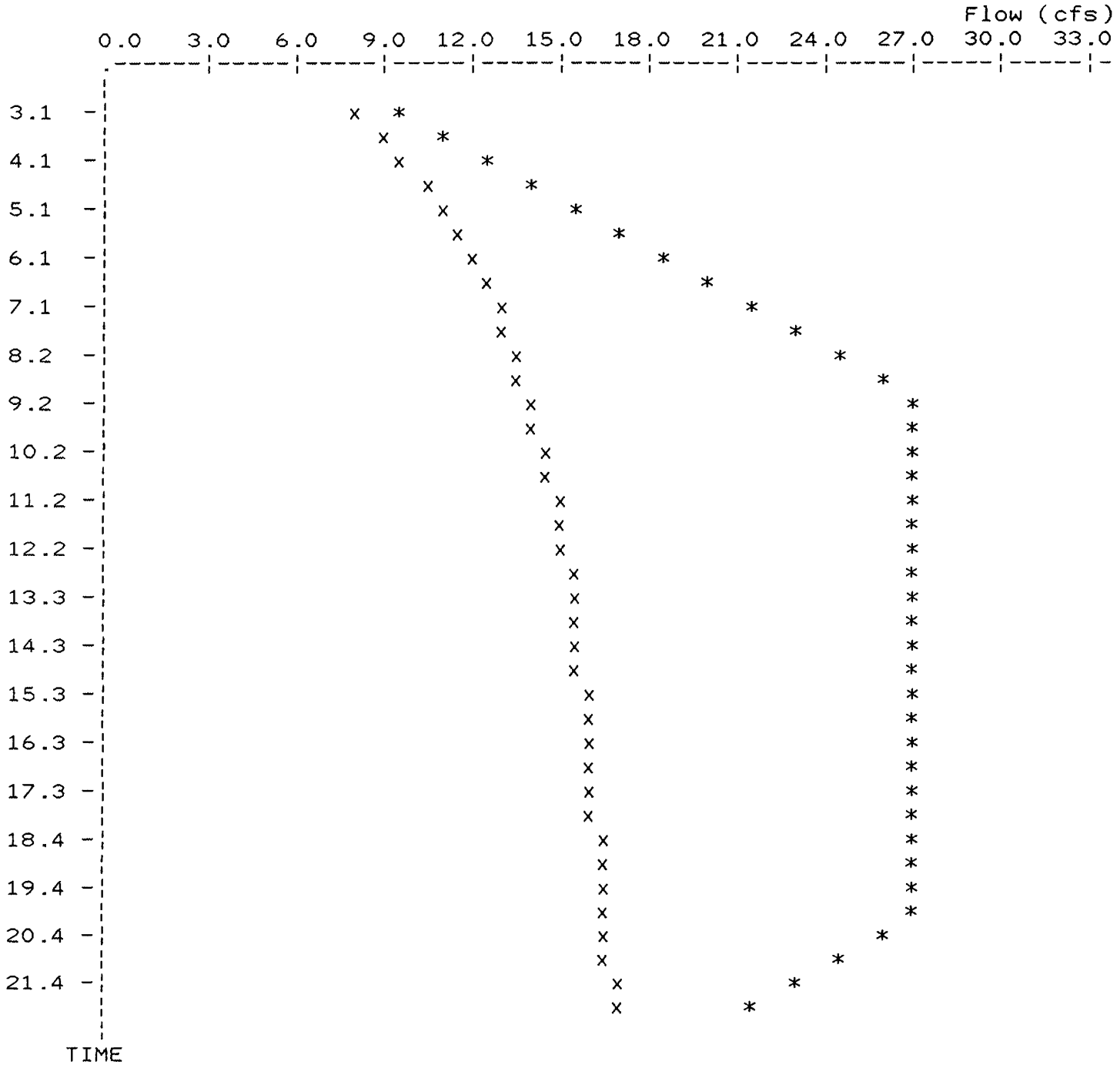
Peak Inflow = 27.20 cfs
Peak Outflow = 16.87 cfs
Peak Elevation = 504.34 ft



x File: C:\WINDOWS\DESKTOP\PONDPA~1\84330002.HYD Qmax = 16.9 cfs
* File: C:\WINDOWS\DESKTOP\PONDPA~1\8433-002.HYD Qmax = 27.2 cfs

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* PIEPERS GLEN
* DETENTION ANALYSIS
* PREPARED BY: BAX ENGINEERING CO., INC.
* OCTOBER 6, 1998
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Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-015.HYD
Rating Table file: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND

----INITIAL CONDITIONS----
Elevation = 500.00 ft
Outflow = 0.00 cfs
Storage = 0.00 ac-ft

GIVEN POND DATA			INTERMEDIATE ROUTING COMPUTATIONS	
ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (ac-ft)	2S/t (cfs)	2S/t + O (cfs)
500.00	0.0	0.000	0.0	0.0
500.20	0.5	0.000	0.0	0.5
500.40	1.4	0.000	0.1	1.5
500.60	2.5	0.000	0.3	2.8
500.80	3.8	0.000	0.6	4.4
501.00	5.4	0.001	1.2	6.6
501.20	7.1	0.001	2.1	9.2
501.40	8.2	0.002	3.3	11.5
501.60	9.0	0.003	5.0	14.0
501.80	9.8	0.005	7.1	16.9
502.00	10.6	0.007	9.7	20.3
502.20	11.2	0.010	13.8	25.0
502.40	11.9	0.014	20.7	32.6
502.60	12.5	0.021	31.2	43.7
502.80	13.1	0.032	46.0	59.1
503.00	13.6	0.045	65.8	79.4
503.20	14.2	0.063	91.4	105.6
503.40	14.7	0.085	123.6	138.3
503.60	15.2	0.112	163.0	178.2
503.80	15.7	0.145	210.4	226.1
504.00	16.1	0.184	266.6	282.7
504.20	16.6	0.226	328.4	345.0
504.40	17.0	0.270	392.1	409.1
504.60	18.0	0.315	457.8	475.8
504.80	19.4	0.362	525.5	544.9
505.00	21.1	0.410	595.2	616.3
505.20	23.0	0.459	667.0	690.0
505.40	25.1	0.510	740.9	766.0
505.60	27.4	0.563	816.9	844.3
505.80	29.0	0.616	895.0	924.0
506.00	30.3	0.672	975.4	1005.7

GIVEN POND DATA

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (ac-ft)
506.20	32.7	0.729
506.40	38.5	0.787
506.60	46.2	0.847
506.80	55.4	0.908
507.00	65.8	0.971

INTERMEDIATE ROUTING COMPUTATIONS

2S/t (cfs)	2S/t + O (cfs)
1057.8	1090.5
1142.4	1180.9
1229.2	1275.4
1318.1	1373.5
1409.2	1475.0

Time increment (t) = 1.0 min.

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-015.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330015.HYD

INFLOW HYDROGRAPH		ROUTING COMPUTATIONS				
TIME (min)	INFLOW (cfs)	I1+I2 (cfs)	2S/t - O (cfs)	2S/t + O (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
0.0	0.00	-----	0.0	0.0	0.00	500.00
1.0	5.00	5.0	-3.4	5.0	4.22	500.85
2.0	10.00	15.0	-4.9	11.6	8.21	501.40
3.0	15.00	25.0	-1.0	20.1	10.56	501.99
4.0	19.90	34.9	10.0	33.9	11.97	502.42
5.0	24.89	44.8	28.9	54.8	12.93	502.74
6.0	29.89	54.8	56.3	83.7	13.70	503.03
7.0	34.89	64.8	92.2	121.1	14.44	503.29
8.0	39.89	74.8	136.9	167.0	15.06	503.54
9.0	44.89	84.8	190.3	221.6	15.65	503.78
10.0	44.90	89.8	248.0	280.1	16.08	503.99
11.0	44.90	89.8	304.7	337.8	16.54	504.18
12.0	44.90	89.8	360.7	394.5	16.91	504.35
13.0	44.90	89.8	415.2	450.5	17.62	504.52
14.0	44.90	89.8	467.8	505.0	18.59	504.68
15.0	44.90	89.8	518.2	557.6	19.70	504.84
16.0	44.90	89.8	566.2	608.0	20.90	504.98
17.0	44.90	89.8	611.8	656.0	22.12	505.11
18.0	44.90	89.8	654.9	701.6	23.32	505.23
19.0	44.90	89.8	695.7	744.7	24.51	505.34
20.0	44.70	89.6	734.0	785.3	25.67	505.45
21.0	39.82	84.5	765.2	818.5	26.64	505.53
22.0	34.82	74.6	785.3	839.9	27.27	505.59
23.0	29.82	64.6	794.9	850.0	27.51	505.61
24.0	24.82	54.6	794.6	849.6	27.51	505.61
25.0	19.92	44.7	784.8	839.3	27.25	505.59
26.0	14.93	34.9	766.3	819.6	26.68	505.54
27.0	9.93	24.9	739.5	791.1	25.84	505.46
28.0	4.93	14.9	704.8	754.3	24.78	505.37
29.0	0.03	5.0	662.6	709.7	23.54	505.25
30.0	0.00	0.0	618.1	662.7	22.29	505.13
31.0	0.00	0.0	575.8	618.1	21.15	505.00
32.0	0.00	0.0	535.5	575.8	20.14	504.89
33.0	0.00	0.0	497.1	535.5	19.21	504.77
34.0	0.00	0.0	460.2	497.1	18.43	504.66
35.0	0.00	0.0	424.7	460.2	17.77	504.55
36.0	0.00	0.0	390.2	424.7	17.23	504.45
37.0	0.00	0.0	356.5	390.2	16.88	504.34
38.0	0.00	0.0	323.1	356.5	16.67	504.24
39.0	0.00	0.0	290.3	323.1	16.42	504.13
40.0	0.00	0.0	258.0	290.3	16.16	504.02
41.0	0.00	0.0	226.1	258.0	15.93	503.91
42.0	0.00	0.0	194.7	226.1	15.70	503.80
43.0	0.00	0.0	164.0	194.7	15.37	503.67
44.0	0.00	0.0	133.9	164.0	15.02	503.53

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-015.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330015.HYD

INFLOW HYDROGRAPH		ROUTING COMPUTATIONS				
TIME (min)	INFLOW (cfs)	I1+I2 (cfs)	2S/t - O (cfs)	2S/t + O (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
45.0	0.00	0.0	104.7	133.9	14.63	503.37
46.0	0.00	0.0	76.3	104.7	14.18	503.19
47.0	0.00	0.0	49.3	76.3	13.52	502.97
48.0	0.00	0.0	23.8	49.3	12.72	502.67
49.0	0.00	0.0	1.7	23.8	11.05	502.15
50.0	0.00	0.0	-1.5	1.7	1.62	500.44
51.0	0.00	0.0	-1.5	-1.5	0.00	500.00
52.0	0.00	0.0	-1.5	-1.5	0.00	500.00
53.0	0.00	0.0	-1.5	-1.5	0.00	500.00
54.0	0.00	0.0	-1.5	-1.5	0.00	500.00
55.0	0.00	0.0	-1.5	-1.5	0.00	500.00
56.0	0.00	0.0	-1.5	-1.5	0.00	500.00
57.0	0.00	0.0	-1.5	-1.5	0.00	500.00
58.0	0.00	0.0	-1.5	-1.5	0.00	500.00
59.0	0.00	0.0	-1.5	-1.5	0.00	500.00
60.0	0.00	0.0	-1.5	-1.5	0.00	500.00

********** SUMMARY OF ROUTING COMPUTATIONS **********

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-015.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330015.HYD

Starting Pond W.S. Elevation = 500.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow	=	44.90 cfs
Peak Outflow	=	27.51 cfs
Peak Elevation	=	505.61 ft

***** Summary of Approximate Peak Storage *****

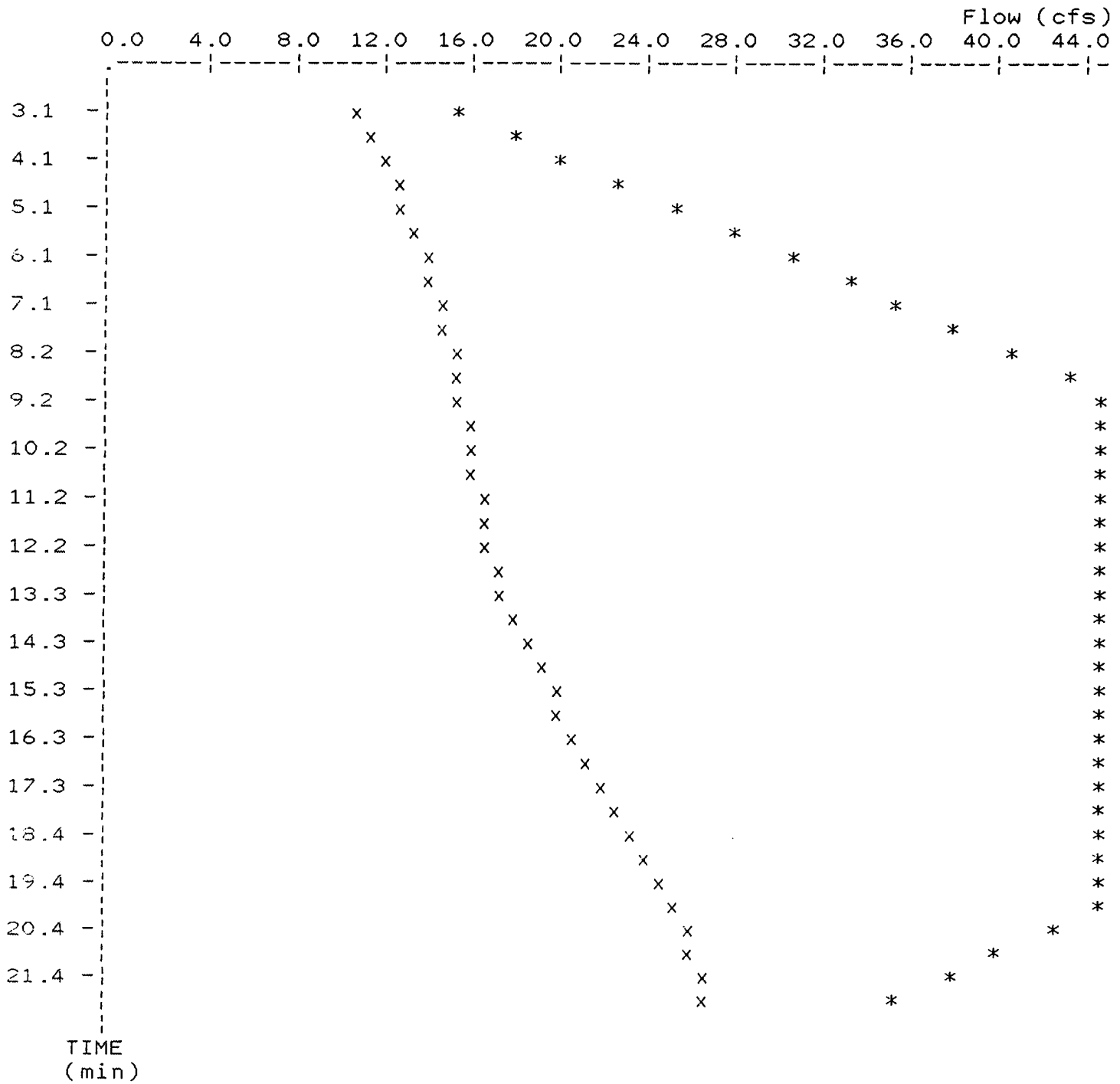
Initial Storage	=	0.00 ac-ft
Peak Storage From Storm	=	0.57 ac-ft
Total Storage in Pond	=	0.57 ac-ft

Return Freq: 15 years

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-015.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330015.HYD

EXECUTED: 10-06-1998 16:59:36

Peak Inflow = 44.90 cfs
Peak Outflow = 27.51 cfs
Peak Elevation = 505.61 ft



x File: C:\WINDOWS\DESKTOP\PONDPA~1\84330015.HYD Qmax = 27.5 cfs
* File: C:\WINDOWS\DESKTOP\PONDPA~1\8433-015.HYD Qmax = 44.9 cfs

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* PIEPERS GLEN
* DETENTION ANALYSIS
* PREPARED BY: BAX ENGINEERING CO., INC.
* OCTOBER 6, 1998
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Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-025.HYD
Rating Table file: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND

----INITIAL CONDITIONS----
Elevation = 500.00 ft
Outflow = 0.00 cfs
Storage = 0.00 ac-ft

GIVEN POND DATA			INTERMEDIATE ROUTING COMPUTATIONS	
ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (ac-ft)	2S/t (cfs)	2S/t + O (cfs)
500.00	0.0	0.000	0.0	0.0
500.20	0.5	0.000	0.0	0.5
500.40	1.4	0.000	0.1	1.5
500.60	2.5	0.000	0.3	2.8
500.80	3.8	0.000	0.6	4.4
501.00	5.4	0.001	1.2	6.6
501.20	7.1	0.001	2.1	9.2
501.40	8.2	0.002	3.3	11.5
501.60	9.0	0.003	5.0	14.0
501.80	9.8	0.005	7.1	16.9
502.00	10.6	0.007	9.7	20.3
502.20	11.2	0.010	13.8	25.0
502.40	11.9	0.014	20.7	32.6
502.60	12.5	0.021	31.2	43.7
502.80	13.1	0.032	46.0	59.1
503.00	13.6	0.045	65.8	79.4
503.20	14.2	0.063	91.4	105.6
503.40	14.7	0.085	123.6	138.3
503.60	15.2	0.112	163.0	178.2
503.80	15.7	0.145	210.4	226.1
504.00	16.1	0.184	266.6	282.7
504.20	16.6	0.226	328.4	345.0
504.40	17.0	0.270	392.1	409.1
504.60	18.0	0.315	457.8	475.8
504.80	19.4	0.362	525.5	544.9
505.00	21.1	0.410	595.2	616.3
505.20	23.0	0.459	667.0	690.0
505.40	25.1	0.510	740.9	766.0
505.60	27.4	0.563	816.9	844.3
505.80	29.0	0.616	895.0	924.0
506.00	30.3	0.672	975.4	1005.7

GIVEN POND DATA

ELEVATION (ft)	OUTFLOW (cfs)	STORAGE (ac-ft)
506.20	32.7	0.729
506.40	38.5	0.787
506.60	46.2	0.847
506.80	55.4	0.908
507.00	65.8	0.971

INTERMEDIATE ROUTING COMPUTATIONS

2S/t (cfs)	2S/t + O (cfs)
1057.8	1090.5
1142.4	1180.9
1229.2	1275.4
1318.1	1373.5
1409.2	1475.0

Time increment (t) = 1.0 min.

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-025.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330025.HYD

INFLOW HYDROGRAPH		ROUTING COMPUTATIONS				
TIME (min)	INFLOW (cfs)	I1+I2 (cfs)	2S/t - O (cfs)	2S/t + O (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
0.0	0.00	-----	0.0	0.0	0.00	500.00
1.0	6.20	6.2	-4.0	6.2	5.09	500.96
2.0	12.30	18.5	-3.8	14.5	9.15	501.64
3.0	18.50	30.8	4.3	27.0	11.38	502.25
4.0	24.60	43.1	22.1	47.4	12.64	502.65
5.0	30.79	55.4	50.4	77.5	13.55	502.98
6.0	36.89	67.7	89.3	118.0	14.39	503.28
7.0	43.09	80.0	139.1	169.2	15.09	503.56
8.0	49.19	92.3	199.9	231.3	15.74	503.82
9.0	55.39	104.6	271.9	304.4	16.27	504.07
10.0	55.40	110.8	349.0	382.7	16.84	504.32
11.0	55.40	110.8	424.3	459.8	17.76	504.55
12.0	55.40	110.8	496.7	535.1	19.20	504.77
13.0	55.40	110.8	565.7	607.5	20.89	504.98
14.0	55.40	110.8	631.2	676.5	22.65	505.16
15.0	55.40	110.8	693.1	742.0	24.44	505.34
16.0	55.40	110.8	751.5	803.9	26.21	505.50
17.0	55.40	110.8	806.8	862.3	27.76	505.65
18.0	55.40	110.8	859.8	917.6	28.87	505.78
19.0	55.40	110.8	911.2	970.6	29.74	505.91
20.0	55.40	110.8	960.4	1022.0	30.76	506.04
21.0	49.23	104.6	1001.1	1065.1	31.98	506.14
22.0	43.13	92.4	1027.7	1093.5	32.89	506.21
23.0	36.93	80.1	1040.1	1107.7	33.80	506.24
24.0	30.83	67.8	1040.3	1107.9	33.81	506.24
25.0	24.63	55.5	1029.7	1095.7	33.03	506.21
26.0	18.43	43.1	1008.3	1072.7	32.20	506.16
27.0	12.33	30.8	976.6	1039.1	31.25	506.08
28.0	6.13	18.5	934.8	995.1	30.13	505.97
29.0	0.04	6.2	882.4	941.0	29.27	505.84
30.0	0.00	0.0	826.1	882.5	28.17	505.70
31.0	0.00	0.0	772.4	826.1	26.87	505.55
32.0	0.00	0.0	721.8	772.4	25.29	505.42
33.0	0.00	0.0	674.1	721.8	23.88	505.28
34.0	0.00	0.0	628.9	674.1	22.59	505.16
35.0	0.00	0.0	586.0	628.9	21.42	505.03
36.0	0.00	0.0	545.3	586.0	20.38	504.92
37.0	0.00	0.0	506.5	545.3	19.41	504.80
38.0	0.00	0.0	469.2	506.5	18.62	504.69
39.0	0.00	0.0	433.4	469.2	17.90	504.58
40.0	0.00	0.0	398.7	433.4	17.36	504.47
41.0	0.00	0.0	364.8	398.7	16.93	504.37
42.0	0.00	0.0	331.4	364.8	16.72	504.26
43.0	0.00	0.0	298.4	331.4	16.49	504.16
44.0	0.00	0.0	265.9	298.4	16.23	504.05

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-025.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330025.HYD

INFLOW HYDROGRAPH		ROUTING COMPUTATIONS				
TIME (min)	INFLOW (cfs)	I1+I2 (cfs)	2S/t - O (cfs)	2S/t + O (cfs)	OUTFLOW (cfs)	ELEVATION (ft)
45.0	0.00	0.0	234.0	265.9	15.98	503.94
46.0	0.00	0.0	202.5	234.0	15.76	503.83
47.0	0.00	0.0	171.6	202.5	15.45	503.70
48.0	0.00	0.0	141.3	171.6	15.12	503.57
49.0	0.00	0.0	111.9	141.3	14.74	503.42
50.0	0.00	0.0	83.3	111.9	14.30	503.24
51.0	0.00	0.0	55.9	83.3	13.69	503.03
52.0	0.00	0.0	29.9	55.9	12.98	502.76
53.0	0.00	0.0	6.6	29.9	11.65	502.33
54.0	0.00	0.0	-4.2	6.6	5.41	501.00
55.0	0.00	0.0	-4.2	-4.2	0.00	500.00
56.0	0.00	0.0	-4.2	-4.2	0.00	500.00
57.0	0.00	0.0	-4.2	-4.2	0.00	500.00
58.0	0.00	0.0	-4.2	-4.2	0.00	500.00
59.0	0.00	0.0	-4.2	-4.2	0.00	500.00
60.0	0.00	0.0	-4.2	-4.2	0.00	500.00

********** SUMMARY OF ROUTING COMPUTATIONS **********

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-025.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330025.HYD

Starting Pond W.S. Elevation = 500.00 ft

***** Summary of Peak Outflow and Peak Elevation *****

Peak Inflow	=	55.40 cfs
Peak Outflow	=	33.81 cfs
Peak Elevation	=	506.24 ft

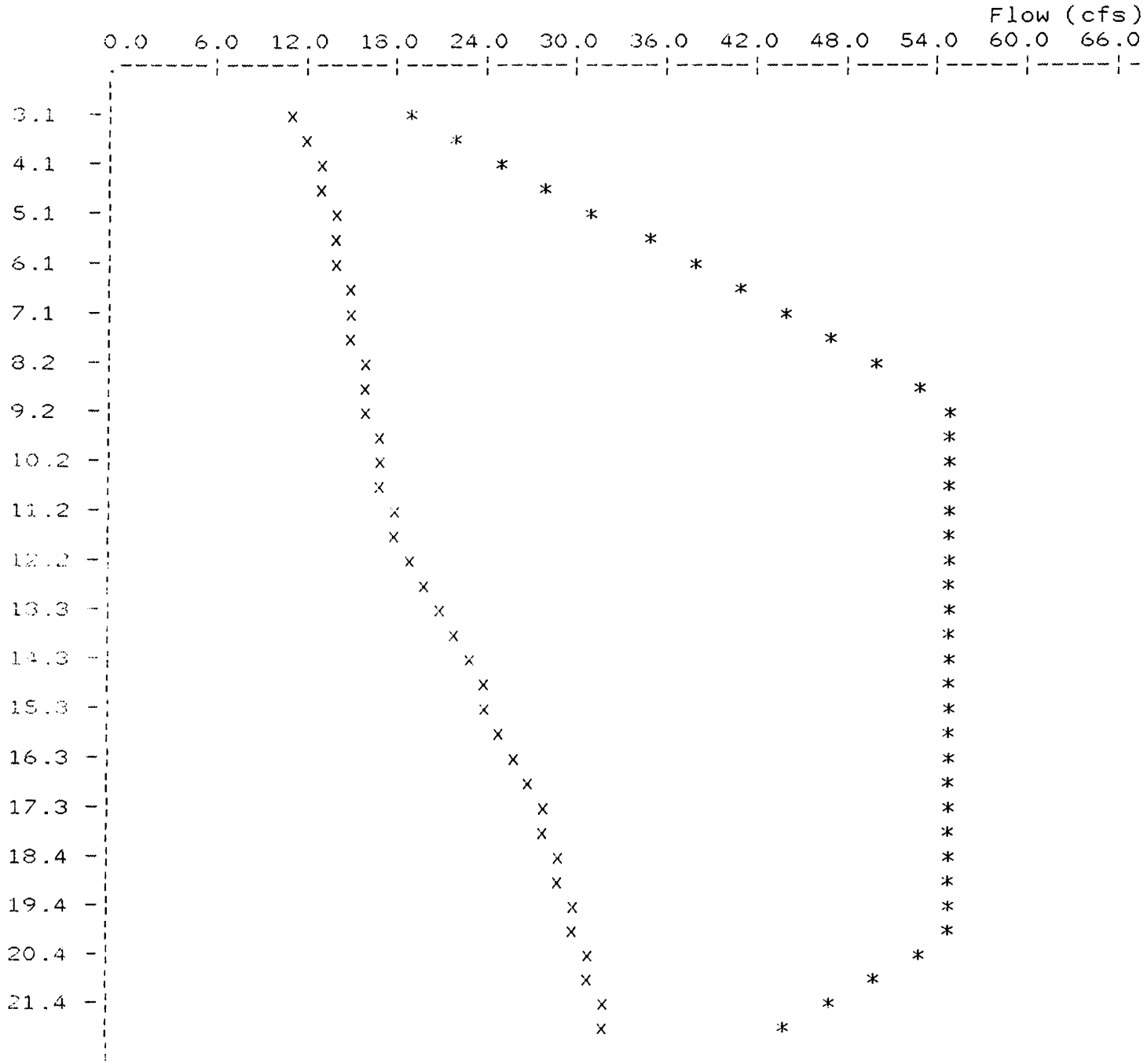
***** Summary of Approximate Peak Storage *****

Initial Storage	=	0.00 ac-ft
Peak Storage From Storm	=	0.74 ac-ft
Total Storage in Pond	=	0.74 ac-ft

Return Freq: 25 years

Pond File: C:\WINDOWS\DESKTOP\PONDPA~1\8433 .PND
Inflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\8433-025.HYD
Outflow Hydrograph: C:\WINDOWS\DESKTOP\PONDPA~1\84330025.HYD
EXECUTED: 10-06-1998 16:59:36

Peak Inflow = 55.40 cfs
Peak Outflow = 33.81 cfs
Peak Elevation = 506.24 ft



x File: C:\WINDOWS\DESKTOP\PONDPA~1\84330025.HYD Qmax = 33.8 cfs
* File: C:\WINDOWS\DESKTOP\PONDPA~1\8433-025.HYD Qmax = 55.4 cfs

ENGINEERING

PLANNING

SURVEYING

SEDIMENT STORAGE CALCULATIONS

PIEPERS GLEN
BAX PROJECT NO. **96-8433A**

REVISED
November 20, 1998

Sediment storage will be provided by over excavation of the basin floor. The following calculations are based on an attached nomograph provided by the City of O'Fallon.

Total disturbed area tributary to basin: 13 AC.

Rational Method "C" Factor: 0.40%

STATE OF MISSOURI
RICHARD L. FRANCIS
NUMBER E-25651
REGISTERED PROFESSIONAL ENGINEER

FROM FIGURE 1:

The required volume for 2 year construction period:

2 x 150 Cu.Ft./Ac. x 13.0 Ac. = 3,900 Cu.Ft.

Volume Calculation:

ELEVATION	AREA	VOLUME	TOTAL VOLUME
500.0	3,863 s.f.	0 c.f.	0 c.f.
499.0	2,742 s.f.	3,303 c.f.	3,303 c.f.
498.0	1,696 s.f.	2,219 c.f.	5,522 c.f.

Based on the above calculations the basin will be required to be over-excavated 1.3' to 498.7 (3,969 c.f.) to provide storage for the anticipated sediment and silt run-off.

BAX ENGINEERING CO., INC.
1052 South Cloverleaf Drive
St. Peters, MO 63376-6445
314-928-5552 FAX 928-1718
e-mail: baxeng@msn.com

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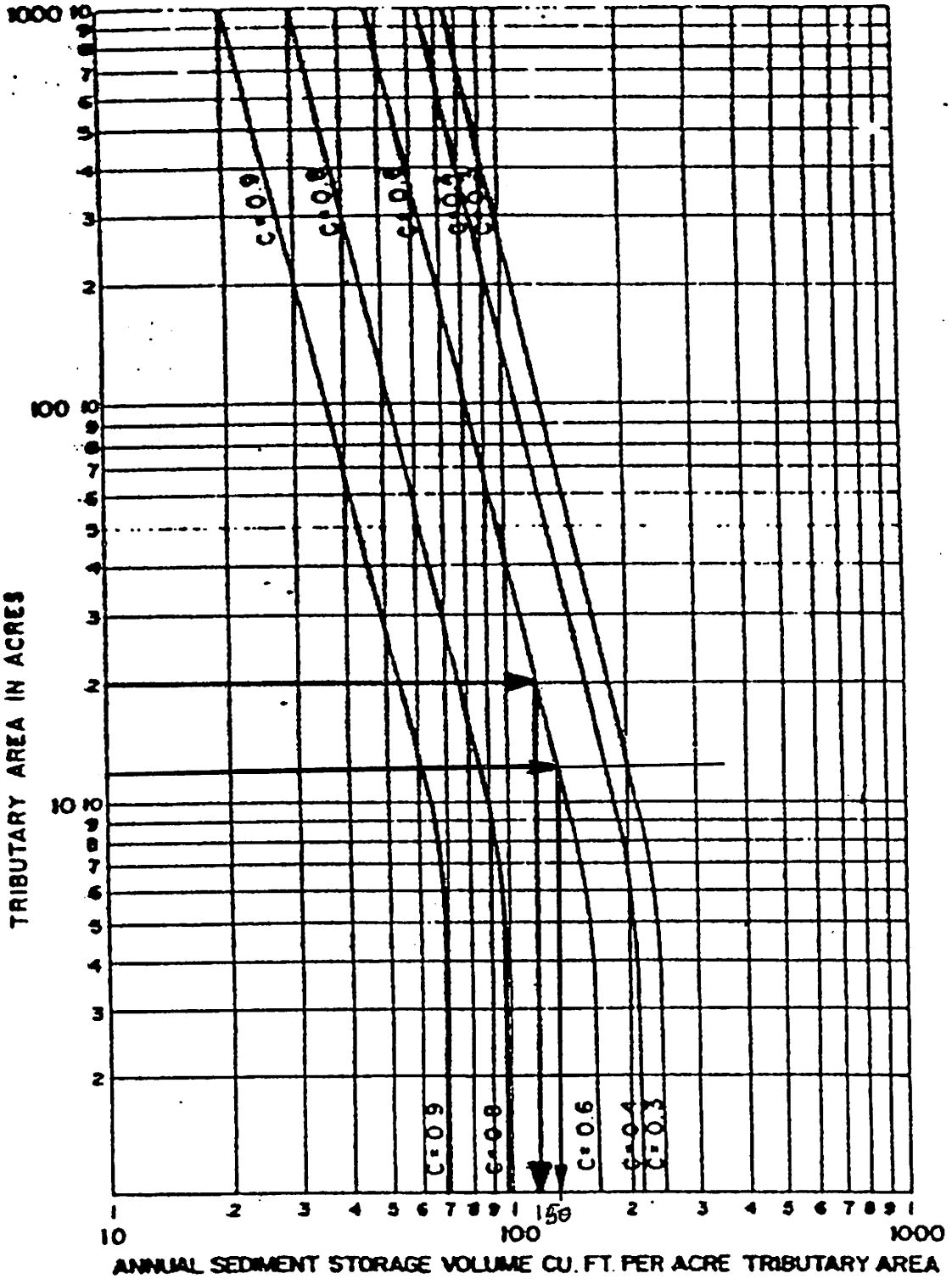
EXAMPLE:
TRIBUTARY AREA = [redacted] ACRES
RATIONAL METHOD RUNOFF COEFFICIENT "C" = 0.6
SEDIMENT STORAGE = 120 CU. FT. PER ACRE PER YEAR
TOTAL SEDIMENT STORAGE = 120 X 20 = 2400 CU. FT. PER YEAR.



ANNUAL SEDIMENT STORAGE

FIG. 6