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STORMWATER DETENTION ANALYSIS
PREPARED BY: BAX ENGINEERING CO., INC.
HOMEFIELD VILLAGE Q - O'FALLON, MO
BAX PROJECT NO. 98-10001Q

June 22, 1999  Revised August 9, 1999

INTRODUCTION:

This tract of land is presently an undeveloped site located in the City of O'Fallon, Missouri. It is proposed that the 21.41 acre tract will be developed into 59 residential lots. A dry stormwater detention basin will be constructed at the northern portion of the site. The storage volume and outflow rates shall be designed 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 - 40% impervious | 1.61 cfs/ac. |
| 15 year - 40% impervious | 2.64 cfs/ac. |
| 25 year - 40% impervious | 3.26 cfs/ac. |
| 100 year - 40% impervious | 4.17 cfs/ac. |

TIME OF CONCENTRATION:

Of the inflows to the basin, the most remote point lies to the south at the high point on Homefield Estates Dr. at 6+51.71. Flows will travel approximately 960 feet to the detention basin. Time of concentration is estimated as follows:

T(stormpipe): L = 960 feet (estimated velocity 7 feet per second)
T(stormpipe) = 2.3 minutes: Use 2 min.

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BASIN PEAK INFLOWS:

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

2 year-20 minute storm: 11.08 cfs
15 year-20 minute storm: 18.17 cfs
25 year-20 minute storm: 22.44 cfs
100 year-20 minute storm: 28.70 cfs

CALCULATE ALLOWABLE RELEASE RATES:

| STORM | UNDEV PI | UNDEV Q | DEV PI | DEV Q | DIFF. RUNOFF | BASIN INFLOW | MAX. OUT |
|---|---|---|---|---|---|---|---|
| 2 yr | 1.15 | 24.62 cfs | 1.61 | 34.47 cfs | 9.85 cfs | 11.08 cfs | 1.23 cfs |
| 15 yr | 1.87 | 40.04 cfs | 2.64 | 56.52 cfs | 16.48 cfs | 18.17 cfs | 1.69 cfs |
| 25 yr | 2.31 | 49.46 cfs | 3.26 | 69.80 cfs | 20.34 cfs | 22.44 cfs | 2.10 cfs |

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 | 1.23 cfs | 1.14 cfs | 460.28 |
| 15 YR | 1.69 cfs | 1.30 cfs | 460.97 |
| 25 YR | 2.10 cfs | 1.40 cfs | 461.36 |

CHECK 100-YEAR OUTFLOW: (low-flow blocked)
WEIR FLOW: $Q = C \times L \times H(3/2)$

Use Single Area Inlet for Overflow Structure
100-YEAR FLOW Q = 28.70 cfs
C = 3.0
L = 11.67 ft
H = 0.88 ft
Sill = 461.36
100 yr h/w = 462.24

SUMMARY:

| | |
|---|---|
| 25 year-20min H.W. | 461.36 |
| 100 year-20min H.W.(low flow blocked) | 462.24 |
| Lowflow Opening | 3 1/2" X 7" slot |
| Lowflow Elevation | 458.00 |
| Sill Elevation | 461.36 |
| Top Of Berm | 464.00 |
| 100 year freeboard | 1.76 ft |

POND-2 Version: 5.20
S/N:

HOMEFIELD VILLAGE Q
DETENTION BASIN DESIGN
PREPARED BY BAX ENGINEERING

CALCULATED 06-22-1999 16:23:45
DISK FILE: C:\PONDPACK\10001Q\10001Q .VOL

Planimeter scale: 1 inch = 1 ft.

| Elevation (ft) | Planimeter (sq.in.) | Area (sq.ft) | A1+A2+sqr(A1*A2) (sq.ft) | * Volume (cubic-ft) | Volume Sum (cubic-ft) |
|---|---|---|---|---|---|
| 458.00 | 0.00 | 0 | 0 | 0 | 0 |
| 459.00 | 4,179.00 | 4,179 | 4,179 | 1,393 | 1,393 |
| 460.00 | 11,306.00 | 11,306 | 22,359 | 7,453 | 8,846 |
| 462.00 | 14,168.00 | 14,168 | 38,130 | 25,420 | 34,266 |
| 464.00 | 17,525.00 | 17,525 | 47,450 | 31,634 | 65,900 |

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

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

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

Outlet Structure File: 10001Q .STR

POND-2 Version: 5.20 S/N:
Date Executed: Time Executed:

**********
HOMEFIELD VILLAGE Q
DETENTION BASIN ANALYSIS
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**********

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

WEIR-VR
Weir - Vertical Rectangular

| | |
|---|---|
| E1 elev.(ft)? | 458 |
| E2 elev.(ft)? | 464.001 |
| Weir coefficient? | 3 |
| Weir elev.(ft)? | 458.00 |
| Length (ft)? | .2917 |
| Contracted/Suppressed (C/S)? | S |

Outlet Structure File: 10001Q .STR

POND-2 Version: 5.20 S/N:
Date Executed: Time Executed:

**********
HOMEFIELD VILLAGE Q
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**********

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

ORIFICE
Orifice - Based on Area and Datum Elevation

| | |
|---|---|
| E1 elev.(ft)? | 458.583 |
| E2 elev.(ft)? | 464.001 |
| Orifice coeff.? | .6 |
| Invert elev.(ft)? | 458.00 |
| Datum elev.(ft) ? | 458.2917 |
| Orifice area (sq ft)? | 0.1701 |

Outlet Structure File: 10001Q .STR

POND-2 Version: 5.20 S/N:
Date Executed: Time Executed:

**********
HOMEFIELD VILLAGE Q
DETENTION BASIN ANALYSIS
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**********

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

WEIR-VR
Weir - Vertical Rectangular

| | |
|---|---|
| E1 elev.(ft)? | 463.00 |
| E2 elev.(ft)? | 464.00 |
| Weir coefficient? | 3.32 |
| Weir elev.(ft)? | 463.00 |
| Length (ft)? | 11.670 |
| Contracted/Suppressed (C/S)? | S |

Outlet Structure File: 10001Q .STR

POND-2 Version: 5.20 S/N:
Date Executed: Time Executed:

**********
HOMEFIELD VILLAGE Q
DETENTION BASIN ANALYSIS
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Outlet Structure File: C:\PONDPACK\10001Q\10001Q .STR
Planimeter Input File: C:\PONDPACK\10001Q\10001Q .VOL
Rating Table Output File: C:\PONDPACK\10001Q\10001Q .PND

Min. Elev.(ft) = 458 Max. Elev.(ft) = 464 Incr.(ft) = .2

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

**********
SYSTEM CONNECTIVITY
**********

| Structure | No. | Q Table | | Q Table |
|---|---|---|---|---|
| WEIR-VR | 1 | | -> | 1 |
| ORIFICE | 2 | ? 1 | -> | A |
| WEIR-VR | 3 | | -> | 3 |

Outflow rating table summary was stored in file:
C:\PONDPACK\10001Q\10001Q .PND

Outlet Structure File: 10001Q .STR

POND-2 Version: 5.20 S/N:
Date Executed: Time Executed:

**********
HOMEFIELD VILLAGE Q
DETENTION BASIN ANALYSIS
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Outflow Rating Table for Structure #1
WEIR-VR Weir - Vertical Rectangular

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

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 458.00 | 0.0 | H =0.0 |
| 458.20 | 0.1 | H =.2 |
| 458.40 | 0.2 | H =.4 |
| 458.60 | 0.4 | H =.6 |
| 458.80 | 0.6 | H =.8 |
| 459.00 | 0.9 | H =1.0 |
| 459.20 | 1.2 | H =1.2 |
| 459.40 | 1.4 | H =1.4 |
| 459.60 | 1.8 | H =1.6 |
| 459.80 | 2.1 | H =1.8 |
| 460.00 | 2.5 | H =2.0 |
| 460.20 | 2.9 | H =2.2 |
| 460.40 | 3.3 | H =2.4 |
| 460.60 | 3.7 | H =2.6 |
| 460.80 | 4.1 | H =2.8 |
| 461.00 | 4.5 | H =3.0 |
| 461.20 | 5.0 | H =3.2 |
| 461.40 | 5.5 | H =3.4 |
| 461.60 | 6.0 | H =3.6 |
| 461.80 | 6.5 | H =3.8 |
| 462.00 | 7.0 | H =4.0 |
| 462.20 | 7.5 | H =4.2 |
| 462.40 | 8.1 | H =4.4 |
| 462.60 | 8.6 | H =4.6 |
| 462.80 | 9.2 | H =4.8 |
| 463.00 | 9.8 | H =5.0 |
| 463.20 | 10.4 | H =5.2 |
| 463.40 | 11.0 | H =5.4 |
| 463.60 | 11.6 | H =5.6 |
| 463.80 | 12.2 | H =5.8 |
| 464.00 | 12.9 | H =6.0 |

C = 3 L (ft) = .2917
H (ft) = Table elev. - Invert elev. ( 458 ft )
Q (cfs) = C * L * (H**1.5) -- Suppressed Weir

Outlet Structure File: 10001Q .STR

POND-2 Version: 5.20 S/N:
Date Executed: Time Executed:

**********
HOMEFIELD VILLAGE Q
DETENTION BASIN ANALYSIS
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**********

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

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 458.00 | 0.0 | E < E1=458.583 |
| 458.20 | 0.0 | E < E1=458.583 |
| 458.40 | 0.0 | E < E1=458.583 |
| 458.60 | 0.5 | H =.308 |
| 458.80 | 0.6 | H =.508 |
| 459.00 | 0.7 | H =.708 |
| 459.20 | 0.8 | H =.908 |
| 459.40 | 0.9 | H =1.108 |
| 459.60 | 0.9 | H =1.308 |
| 459.80 | 1.0 | H =1.508 |
| 460.00 | 1.1 | H =1.708 |
| 460.20 | 1.1 | H =1.908 |
| 460.40 | 1.2 | H =2.108 |
| 460.60 | 1.2 | H =2.308 |
| 460.80 | 1.3 | H =2.508 |
| 461.00 | 1.3 | H =2.708 |
| 461.20 | 1.4 | H =2.908 |
| 461.40 | 1.4 | H =3.108 |
| 461.60 | 1.5 | H =3.308 |
| 461.80 | 1.5 | H =3.508 |
| 462.00 | 1.6 | H =3.708 |
| 462.20 | 1.6 | H =3.908 |
| 462.40 | 1.7 | H =4.108 |
| 462.60 | 1.7 | H =4.308 |
| 462.80 | 1.7 | H =4.508 |
| 463.00 | 1.8 | H =4.708 |
| 463.20 | 1.8 | H =4.908 |
| 463.40 | 1.9 | H =5.108 |
| 463.60 | 1.9 | H =5.308 |
| 463.80 | 1.9 | H =5.508 |
| 464.00 | 2.0 | H =5.708 |

C = .6 A = .1701 sq.ft.
H (ft) = Table elev. - Datum elev. ( 458.2917 ft )
Q (cfs) = C * A * sqr(2g * H)

Outlet Structure File: 10001Q .STR

POND-2 Version: 5.20 S/N:
Date Executed: Time Executed:

**********
HOMEFIELD VILLAGE Q
DETENTION BASIN ANALYSIS
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Outflow Rating Table for Structure #3
WEIR-VR Weir - Vertical Rectangular

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

| Elevation (ft) | Q (cfs) | Computation Messages |
|---|---|---|
| 458.00 | 0.0 | E < Inv.El.= 463 |
| 458.20 | 0.0 | E < Inv.El.= 463 |
| 458.40 | 0.0 | E < Inv.El.= 463 |
| 458.60 | 0.0 | E < Inv.El.= 463 |
| 458.80 | 0.0 | E < Inv.El.= 463 |
| 459.00 | 0.0 | E < Inv.El.= 463 |
| 459.20 | 0.0 | E < Inv.El.= 463 |
| 459.40 | 0.0 | E < Inv.El.= 463 |
| 459.60 | 0.0 | E < Inv.El.= 463 |
| 459.80 | 0.0 | E < Inv.El.= 463 |
| 460.00 | 0.0 | E < Inv.El.= 463 |
| 460.20 | 0.0 | E < Inv.El.= 463 |
| 460.40 | 0.0 | E < Inv.El.= 463 |
| 460.60 | 0.0 | E < Inv.El.= 463 |
| 460.80 | 0.0 | E < Inv.El.= 463 |
| 461.00 | 0.0 | E < Inv.El.= 463 |
| 461.20 | 0.0 | E < Inv.El.= 463 |
| 461.40 | 0.0 | E < Inv.El.= 463 |
| 461.60 | 0.0 | E < Inv.El.= 463 |
| 461.80 | 0.0 | E < Inv.El.= 463 |
| 462.00 | 0.0 | E < Inv.El.= 463 |
| 462.20 | 0.0 | E < Inv.El.= 463 |
| 462.40 | 0.0 | E < Inv.El.= 463 |
| 462.60 | 0.0 | E < Inv.El.= 463 |
| 462.80 | 0.0 | E < Inv.El.= 463 |
| 463.00 | 0.0 | H =0.0 |
| 463.20 | 3.5 | H =.2 |
| 463.40 | 9.8 | H =.4 |
| 463.60 | 18.0 | H =.6 |
| 463.80 | 27.7 | H =.8 |
| 464.00 | 0.0 | E = or > E2=464.00 |

C = 3.32 L (ft) = 11.67
H (ft) = Table elev. - Invert elev. ( 463 ft )
Q (cfs) = C * L * (H**1.5) -- Suppressed Weir

Outlet Structure File: 10001Q .STR

POND-2 Version: 5.20 S/N:
Date Executed: Time Executed:

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HOMEFIELD VILLAGE Q
DETENTION BASIN ANALYSIS
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Outflow Rating Table A
Table A = 1 ? 2

| Elevation (ft) | Q (cfs) | Contributing Structures |
|---|---|---|
| 458.00 | 0.0 | 1 |
| 458.20 | 0.1 | 1 |
| 458.40 | 0.2 | 1 |
| 458.60 | 0.4 | 1 |
| 458.80 | 0.6 | 2 |
| 459.00 | 0.7 | 2 |
| 459.20 | 0.8 | 2 |
| 459.40 | 0.9 | 2 |
| 459.60 | 0.9 | 2 |
| 459.80 | 1.0 | 2 |
| 460.00 | 1.1 | 2 |
| 460.20 | 1.1 | 2 |
| 460.40 | 1.2 | 2 |
| 460.60 | 1.2 | 2 |
| 460.80 | 1.3 | 2 |
| 461.00 | 1.3 | 2 |
| 461.20 | 1.4 | 2 |
| 461.40 | 1.4 | 2 |
| 461.60 | 1.5 | 2 |
| 461.80 | 1.5 | 2 |
| 462.00 | 1.6 | 2 |
| 462.20 | 1.6 | 2 |
| 462.40 | 1.7 | 2 |
| 462.60 | 1.7 | 2 |
| 462.80 | 1.7 | 2 |
| 463.00 | 1.8 | 2 |
| 463.20 | 1.8 | 2 |
| 463.40 | 1.9 | 2 |
| 463.60 | 1.9 | 2 |
| 463.80 | 1.9 | 2 |
| 464.00 | 2.0 | 2 |

Outlet Structure File: 10001Q .STR

POND-2 Version: 5.20 S/N:
Date Executed: Time Executed:

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HOMEFIELD VILLAGE Q
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***** COMPOSITE OUTFLOW SUMMARY ****

| Elevation (ft) | Q (cfs) | Contributing Structures |
|---|---|---|
| 458.00 | 0.0 | 1 |
| 458.20 | 0.1 | 1 |
| 458.40 | 0.2 | 1 |
| 458.60 | 0.4 | 1 |
| 458.80 | 0.6 | 2 |
| 459.00 | 0.7 | 2 |
| 459.20 | 0.8 | 2 |
| 459.40 | 0.9 | 2 |
| 459.60 | 0.9 | 2 |
| 459.80 | 1.0 | 2 |
| 460.00 | 1.1 | 2 |
| 460.20 | 1.1 | 2 |
| 460.40 | 1.2 | 2 |
| 460.60 | 1.2 | 2 |
| 460.80 | 1.3 | 2 |
| 461.00 | 1.3 | 2 |
| 461.20 | 1.4 | 2 |
| 461.40 | 1.4 | 2 |
| 461.60 | 1.5 | 2 |
| 461.80 | 1.5 | 2 |
| 462.00 | 1.6 | 2 |
| 462.20 | 1.6 | 2 |
| 462.40 | 1.7 | 2 |
| 462.60 | 1.7 | 2 |
| 462.80 | 1.7 | 2 |
| 463.00 | 1.8 | 2 +3 |
| 463.20 | 5.3 | 2 +3 |
| 463.40 | 11.7 | 2 +3 |
| 463.60 | 19.9 | 2 +3 |
| 463.80 | 29.6 | 2 +3 |
| 464.00 | 2.0 | 2 |

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*
* HOMEFIELD VILLAGE Q *
* DETENTION BASIN DESIGN *
* PREPARED BY BAX ENGINEERING *
* REVISED 08-09-99 *
*
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Inflow Hydrograph: C:\PONDPACK\10001Q\Q-2YR .HYD
Rating Table file: C:\PONDPACK\10001Q\10001Q .PND

----INITIAL CONDITIONS----
Elevation = 458.00 ft
Outflow = 0.00 cfs
Storage = 0 cu-ft

| GIVEN POND DATA | | | INTERMEDIATE ROUTING COMPUTATIONS | |
|---|---|---|---|---|
| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (cu-ft) | 2S/t (cfs) | 2S/t + O (cfs) |
| 458.00 | 0.0 | 0 | 0.0 | 0.0 |
| 458.20 | 0.1 | 11 | 0.4 | 0.5 |
| 458.40 | 0.2 | 89 | 3.0 | 3.2 |
| 458.60 | 0.4 | 301 | 10.0 | 10.4 |
| 458.80 | 0.6 | 713 | 23.8 | 24.4 |
| 459.00 | 0.7 | 1,393 | 46.4 | 47.1 |
| 459.20 | 0.8 | 2,341 | 78.0 | 78.8 |
| 459.40 | 0.9 | 3,533 | 117.8 | 118.7 |
| 459.60 | 0.9 | 4,995 | 166.5 | 167.4 |
| 459.80 | 1.0 | 6,757 | 225.2 | 226.2 |
| 460.00 | 1.1 | 8,846 | 294.9 | 296.0 |
| 460.20 | 1.1 | 11,134 | 371.1 | 372.2 |
| 460.40 | 1.2 | 13,477 | 449.2 | 450.4 |
| 460.60 | 1.2 | 15,875 | 529.2 | 530.4 |
| 460.80 | 1.3 | 18,330 | 611.0 | 612.3 |
| 461.00 | 1.3 | 20,840 | 694.7 | 696.0 |
| 461.20 | 1.4 | 23,409 | 780.3 | 781.7 |
| 461.40 | 1.4 | 26,035 | 867.8 | 869.2 |
| 461.60 | 1.5 | 28,719 | 957.3 | 958.8 |
| 461.80 | 1.5 | 31,463 | 1048.7 | 1050.2 |
| 462.00 | 1.6 | 34,266 | 1142.2 | 1143.8 |
| 462.20 | 1.6 | 37,132 | 1237.7 | 1239.3 |
| 462.40 | 1.7 | 40,061 | 1335.4 | 1337.1 |
| 462.60 | 1.7 | 43,056 | 1435.2 | 1436.9 |
| 462.80 | 1.7 | 46,117 | 1537.2 | 1538.9 |
| 463.00 | 1.8 | 49,244 | 1641.5 | 1643.3 |
| 463.20 | 5.3 | 52,438 | 1747.9 | 1753.2 |
| 463.40 | 11.7 | 55,700 | 1856.7 | 1868.4 |
| 463.60 | 19.9 | 59,030 | 1967.7 | 1987.6 |
| 463.80 | 29.6 | 62,430 | 2081.0 | 2110.6 |
| 464.00 | 2.0 | 65,900 | 2196.7 | 2198.7 |

Time increment (t) = 1.0 min.

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-2YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q2OUT .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 | 458.00 |
| 1.0 | 5.54 | 5.5 | 5.0 | 5.5 | 0.27 | 458.47 |
| 2.0 | 11.08 | 16.6 | 20.5 | 21.6 | 0.56 | 458.76 |
| 3.0 | 11.08 | 22.2 | 41.3 | 42.7 | 0.68 | 458.96 |
| 4.0 | 11.08 | 22.2 | 62.0 | 63.5 | 0.75 | 459.10 |
| 5.0 | 11.08 | 22.2 | 82.5 | 84.1 | 0.81 | 459.23 |
| 6.0 | 11.08 | 22.2 | 102.9 | 104.7 | 0.86 | 459.33 |
| 7.0 | 11.08 | 22.2 | 123.3 | 125.1 | 0.90 | 459.43 |
| 8.0 | 11.08 | 22.2 | 143.6 | 145.4 | 0.90 | 459.51 |
| 9.0 | 11.08 | 22.2 | 164.0 | 165.8 | 0.90 | 459.59 |
| 10.0 | 11.08 | 22.2 | 184.3 | 186.2 | 0.93 | 459.66 |
| 11.0 | 11.08 | 22.2 | 204.5 | 206.5 | 0.97 | 459.73 |
| 12.0 | 11.08 | 22.2 | 224.7 | 226.7 | 1.00 | 459.80 |
| 13.0 | 11.08 | 22.2 | 244.8 | 246.9 | 1.03 | 459.86 |
| 14.0 | 11.08 | 22.2 | 264.8 | 267.0 | 1.06 | 459.92 |
| 15.0 | 11.08 | 22.2 | 284.8 | 287.0 | 1.09 | 459.97 |
| 16.0 | 11.08 | 22.2 | 304.8 | 307.0 | 1.10 | 460.03 |
| 17.0 | 11.08 | 22.2 | 324.7 | 326.9 | 1.10 | 460.08 |
| 18.0 | 11.08 | 22.2 | 344.7 | 346.9 | 1.10 | 460.13 |
| 19.0 | 11.08 | 22.2 | 364.7 | 366.9 | 1.10 | 460.19 |
| 20.0 | 11.08 | 22.2 | 384.6 | 386.8 | 1.12 | 460.24 |
| 21.0 | 5.54 | 16.6 | 398.9 | 401.2 | 1.14 | 460.27 |
| 22.0 | 0.00 | 5.5 | 402.2 | 404.5 | 1.14 | 460.28 |
| 23.0 | 0.00 | 0.0 | 399.9 | 402.2 | 1.14 | 460.28 |
| 24.0 | 0.00 | 0.0 | 397.6 | 399.9 | 1.14 | 460.27 |
| 25.0 | 0.00 | 0.0 | 395.4 | 397.6 | 1.13 | 460.26 |
| 26.0 | 0.00 | 0.0 | 393.1 | 395.4 | 1.13 | 460.26 |
| 27.0 | 0.00 | 0.0 | 390.9 | 393.1 | 1.13 | 460.25 |
| 28.0 | 0.00 | 0.0 | 388.6 | 390.9 | 1.12 | 460.25 |
| 29.0 | 0.00 | 0.0 | 386.4 | 388.6 | 1.12 | 460.24 |
| 30.0 | 0.00 | 0.0 | 384.1 | 386.4 | 1.12 | 460.24 |
| 31.0 | 0.00 | 0.0 | 381.9 | 384.1 | 1.12 | 460.23 |
| 32.0 | 0.00 | 0.0 | 379.7 | 381.9 | 1.11 | 460.22 |
| 33.0 | 0.00 | 0.0 | 377.5 | 379.7 | 1.11 | 460.22 |
| 34.0 | 0.00 | 0.0 | 375.2 | 377.5 | 1.11 | 460.21 |
| 35.0 | 0.00 | 0.0 | 373.0 | 375.2 | 1.10 | 460.21 |
| 36.0 | 0.00 | 0.0 | 370.8 | 373.0 | 1.10 | 460.20 |
| 37.0 | 0.00 | 0.0 | 368.6 | 370.8 | 1.10 | 460.20 |
| 38.0 | 0.00 | 0.0 | 366.4 | 368.6 | 1.10 | 460.19 |
| 39.0 | 0.00 | 0.0 | 364.2 | 366.4 | 1.10 | 460.18 |
| 40.0 | 0.00 | 0.0 | 362.0 | 364.2 | 1.10 | 460.18 |
| 41.0 | 0.00 | 0.0 | 359.8 | 362.0 | 1.10 | 460.17 |
| 42.0 | 0.00 | 0.0 | 357.6 | 359.8 | 1.10 | 460.17 |
| 43.0 | 0.00 | 0.0 | 355.4 | 357.6 | 1.10 | 460.16 |
| 44.0 | 0.00 | 0.0 | 353.2 | 355.4 | 1.10 | 460.16 |

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-2YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q2OUT .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 | 351.0 | 353.2 | 1.10 | 460.15 |
| 46.0 | 0.00 | 0.0 | 348.8 | 351.0 | 1.10 | 460.14 |
| 47.0 | 0.00 | 0.0 | 346.6 | 348.8 | 1.10 | 460.14 |
| 48.0 | 0.00 | 0.0 | 344.4 | 346.6 | 1.10 | 460.13 |
| 49.0 | 0.00 | 0.0 | 342.2 | 344.4 | 1.10 | 460.13 |
| 50.0 | 0.00 | 0.0 | 340.0 | 342.2 | 1.10 | 460.12 |
| 51.0 | 0.00 | 0.0 | 337.8 | 340.0 | 1.10 | 460.12 |
| 52.0 | 0.00 | 0.0 | 335.6 | 337.8 | 1.10 | 460.11 |
| 53.0 | 0.00 | 0.0 | 333.4 | 335.6 | 1.10 | 460.10 |
| 54.0 | 0.00 | 0.0 | 331.2 | 333.4 | 1.10 | 460.10 |
| 55.0 | 0.00 | 0.0 | 329.0 | 331.2 | 1.10 | 460.09 |
| 56.0 | 0.00 | 0.0 | 326.8 | 329.0 | 1.10 | 460.09 |
| 57.0 | 0.00 | 0.0 | 324.6 | 326.8 | 1.10 | 460.08 |
| 58.0 | 0.00 | 0.0 | 322.4 | 324.6 | 1.10 | 460.08 |
| 59.0 | 0.00 | 0.0 | 320.2 | 322.4 | 1.10 | 460.07 |
| 60.0 | 0.00 | 0.0 | 318.0 | 320.2 | 1.10 | 460.06 |

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

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-2YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q2OUT .HYD

Starting Pond W.S. Elevation = 458.00 ft

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

| | | |
|---|---|---|
| Peak Inflow | = | 11.08 cfs |
| Peak Outflow | = | 1.14 cfs |
| Peak Elevation | = | 460.28 ft |

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

| | | |
|---|---|---|
| Initial Storage | = | 0 cu-ft |
| Peak Storage From Storm | = | 12,100 cu-ft |
| Total Storage in Pond | = | 12,100 cu-ft |

Return Freq: 2 years

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-2YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q2OUT .HYD

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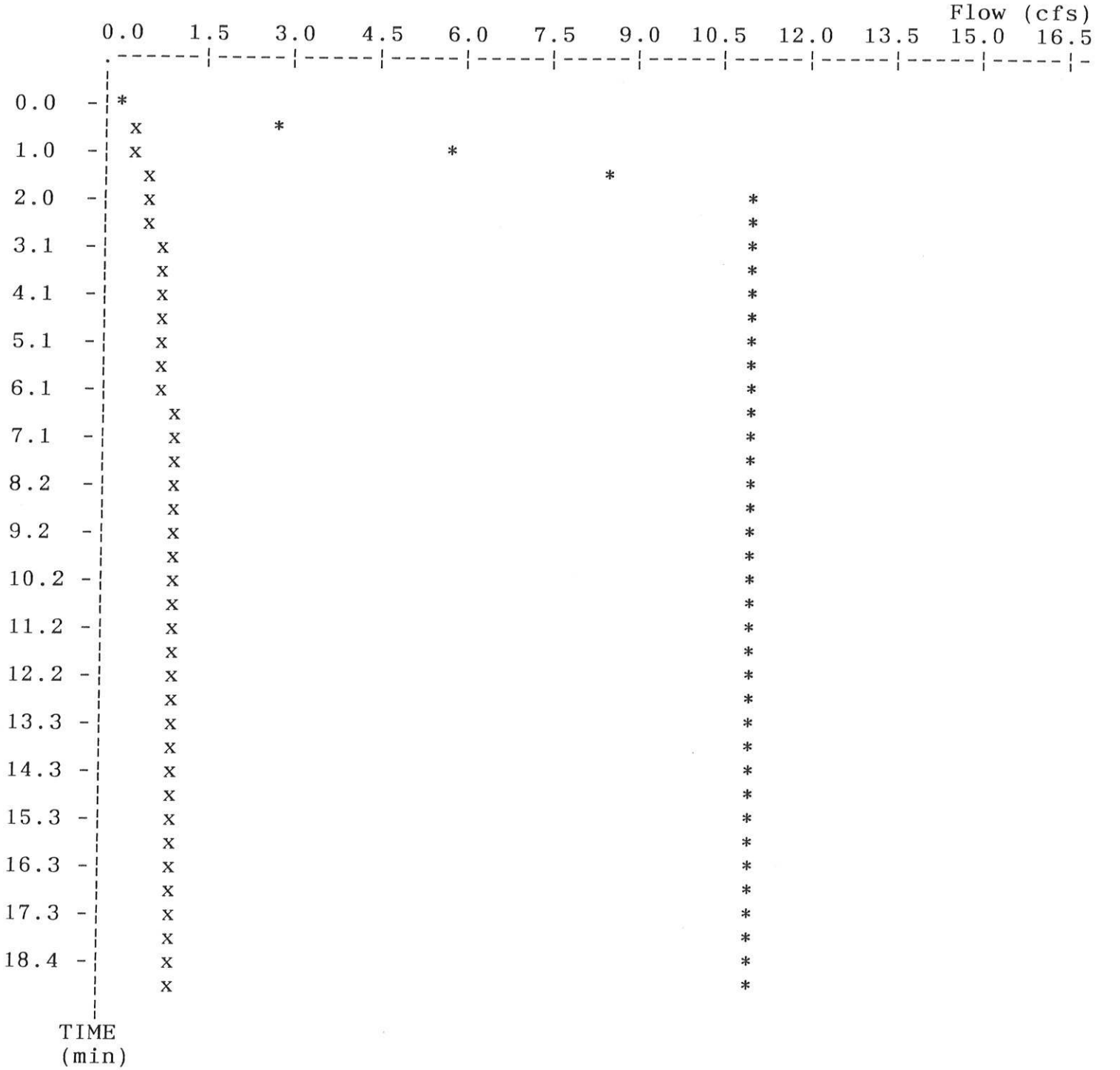
Peak Inflow = 11.08 cfs
Peak Outflow = 1.14 cfs
Peak Elevation = 460.28 ft




x File: C:\PONDPACK\10001Q\Q2OUT .HYD Qmax = 1.1 cfs
* File: C:\PONDPACK\10001Q\Q-2YR .HYD Qmax = 11.1 cfs

**********
*
* HOMEFIELD VILLAGE Q
* DETENTION BASIN DESIGN
* PREPARED BY BAX ENGINEERING
* REVISED 08-09-99
*
**********

Inflow Hydrograph: C:\PONDPACK\10001Q\Q-15YR .HYD
Rating Table file: C:\PONDPACK\10001Q\10001Q .PND

----INITIAL CONDITIONS----
Elevation = 458.00 ft
Outflow = 0.00 cfs
Storage = 0 cu-ft

| GIVEN POND DATA | | | INTERMEDIATE ROUTING COMPUTATIONS | |
|---|---|---|---|---|
| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (cu-ft) | 2S/t (cfs) | 2S/t + O (cfs) |
| 458.00 | 0.0 | 0 | 0.0 | 0.0 |
| 458.20 | 0.1 | 11 | 0.4 | 0.5 |
| 458.40 | 0.2 | 89 | 3.0 | 3.2 |
| 458.60 | 0.4 | 301 | 10.0 | 10.4 |
| 458.80 | 0.6 | 713 | 23.8 | 24.4 |
| 459.00 | 0.7 | 1,393 | 46.4 | 47.1 |
| 459.20 | 0.8 | 2,341 | 78.0 | 78.8 |
| 459.40 | 0.9 | 3,533 | 117.8 | 118.7 |
| 459.60 | 0.9 | 4,995 | 166.5 | 167.4 |
| 459.80 | 1.0 | 6,757 | 225.2 | 226.2 |
| 460.00 | 1.1 | 8,846 | 294.9 | 296.0 |
| 460.20 | 1.1 | 11,134 | 371.1 | 372.2 |
| 460.40 | 1.2 | 13,477 | 449.2 | 450.4 |
| 460.60 | 1.2 | 15,875 | 529.2 | 530.4 |
| 460.80 | 1.3 | 18,330 | 611.0 | 612.3 |
| 461.00 | 1.3 | 20,840 | 694.7 | 696.0 |
| 461.20 | 1.4 | 23,409 | 780.3 | 781.7 |
| 461.40 | 1.4 | 26,035 | 867.8 | 869.2 |
| 461.60 | 1.5 | 28,719 | 957.3 | 958.8 |
| 461.80 | 1.5 | 31,463 | 1048.7 | 1050.2 |
| 462.00 | 1.6 | 34,266 | 1142.2 | 1143.8 |
| 462.20 | 1.6 | 37,132 | 1237.7 | 1239.3 |
| 462.40 | 1.7 | 40,061 | 1335.4 | 1337.1 |
| 462.60 | 1.7 | 43,056 | 1435.2 | 1436.9 |
| 462.80 | 1.7 | 46,117 | 1537.2 | 1538.9 |
| 463.00 | 1.8 | 49,244 | 1641.5 | 1643.3 |
| 463.20 | 5.3 | 52,438 | 1747.9 | 1753.2 |
| 463.40 | 11.7 | 55,700 | 1856.7 | 1868.4 |
| 463.60 | 19.9 | 59,030 | 1967.7 | 1987.6 |
| 463.80 | 29.6 | 62,430 | 2081.0 | 2110.6 |
| 464.00 | 2.0 | 65,900 | 2196.7 | 2198.7 |

Time increment (t) = 1.0 min.

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-15YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q15OUT .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 | 458.00 |
| 1.0 | 9.09 | 9.1 | 8.4 | 9.1 | 0.36 | 458.56 |
| 2.0 | 18.17 | 27.3 | 34.3 | 35.6 | 0.65 | 458.90 |
| 3.0 | 18.17 | 36.3 | 69.1 | 70.7 | 0.77 | 459.15 |
| 4.0 | 18.17 | 36.3 | 103.7 | 105.5 | 0.87 | 459.33 |
| 5.0 | 18.17 | 36.3 | 138.3 | 140.1 | 0.90 | 459.49 |
| 6.0 | 18.17 | 36.3 | 172.8 | 174.6 | 0.91 | 459.62 |
| 7.0 | 18.17 | 36.3 | 207.2 | 209.1 | 0.97 | 459.74 |
| 8.0 | 18.17 | 36.3 | 241.5 | 243.5 | 1.02 | 459.85 |
| 9.0 | 18.17 | 36.3 | 275.7 | 277.8 | 1.07 | 459.95 |
| 10.0 | 18.17 | 36.3 | 309.8 | 312.0 | 1.10 | 460.04 |
| 11.0 | 18.17 | 36.3 | 343.9 | 346.1 | 1.10 | 460.13 |
| 12.0 | 18.17 | 36.3 | 378.1 | 380.3 | 1.11 | 460.22 |
| 13.0 | 18.17 | 36.3 | 412.1 | 414.4 | 1.15 | 460.31 |
| 14.0 | 18.17 | 36.3 | 446.0 | 448.4 | 1.20 | 460.39 |
| 15.0 | 18.17 | 36.3 | 480.0 | 482.4 | 1.20 | 460.48 |
| 16.0 | 18.17 | 36.3 | 513.9 | 516.3 | 1.20 | 460.56 |
| 17.0 | 18.17 | 36.3 | 547.8 | 550.3 | 1.22 | 460.65 |
| 18.0 | 18.17 | 36.3 | 581.6 | 584.1 | 1.27 | 460.73 |
| 19.0 | 18.17 | 36.3 | 615.4 | 618.0 | 1.30 | 460.81 |
| 20.0 | 18.17 | 36.3 | 649.1 | 651.7 | 1.30 | 460.89 |
| 21.0 | 9.09 | 27.3 | 673.8 | 676.4 | 1.30 | 460.95 |
| 22.0 | 0.00 | 9.1 | 680.2 | 682.8 | 1.30 | 460.97 |
| 23.0 | 0.00 | 0.0 | 677.6 | 680.2 | 1.30 | 460.96 |
| 24.0 | 0.00 | 0.0 | 675.0 | 677.6 | 1.30 | 460.96 |
| 25.0 | 0.00 | 0.0 | 672.4 | 675.0 | 1.30 | 460.95 |
| 26.0 | 0.00 | 0.0 | 669.8 | 672.4 | 1.30 | 460.94 |
| 27.0 | 0.00 | 0.0 | 667.2 | 669.8 | 1.30 | 460.94 |
| 28.0 | 0.00 | 0.0 | 664.6 | 667.2 | 1.30 | 460.93 |
| 29.0 | 0.00 | 0.0 | 662.0 | 664.6 | 1.30 | 460.93 |
| 30.0 | 0.00 | 0.0 | 659.4 | 662.0 | 1.30 | 460.92 |
| 31.0 | 0.00 | 0.0 | 656.8 | 659.4 | 1.30 | 460.91 |
| 32.0 | 0.00 | 0.0 | 654.2 | 656.8 | 1.30 | 460.91 |
| 33.0 | 0.00 | 0.0 | 651.6 | 654.2 | 1.30 | 460.90 |
| 34.0 | 0.00 | 0.0 | 649.0 | 651.6 | 1.30 | 460.89 |
| 35.0 | 0.00 | 0.0 | 646.4 | 649.0 | 1.30 | 460.89 |
| 36.0 | 0.00 | 0.0 | 643.8 | 646.4 | 1.30 | 460.88 |
| 37.0 | 0.00 | 0.0 | 641.2 | 643.8 | 1.30 | 460.88 |
| 38.0 | 0.00 | 0.0 | 638.6 | 641.2 | 1.30 | 460.87 |
| 39.0 | 0.00 | 0.0 | 636.0 | 638.6 | 1.30 | 460.86 |
| 40.0 | 0.00 | 0.0 | 633.4 | 636.0 | 1.30 | 460.86 |
| 41.0 | 0.00 | 0.0 | 630.8 | 633.4 | 1.30 | 460.85 |
| 42.0 | 0.00 | 0.0 | 628.2 | 630.8 | 1.30 | 460.84 |
| 43.0 | 0.00 | 0.0 | 625.6 | 628.2 | 1.30 | 460.84 |
| 44.0 | 0.00 | 0.0 | 623.0 | 625.6 | 1.30 | 460.83 |

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-15YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q15OUT .HYD

INFLOW HYDROGRAPH

| TIME (min) | INFLOW (cfs) |
|---|---|
| 45.0 | 0.00 |
| 46.0 | 0.00 |
| 47.0 | 0.00 |
| 48.0 | 0.00 |
| 49.0 | 0.00 |
| 50.0 | 0.00 |
| 51.0 | 0.00 |
| 52.0 | 0.00 |
| 53.0 | 0.00 |
| 54.0 | 0.00 |
| 55.0 | 0.00 |
| 56.0 | 0.00 |
| 57.0 | 0.00 |
| 58.0 | 0.00 |
| 59.0 | 0.00 |
| 60.0 | 0.00 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| 0.0 | 620.4 | 623.0 | 1.30 | 460.83 |
| 0.0 | 617.8 | 620.4 | 1.30 | 460.82 |
| 0.0 | 615.2 | 617.8 | 1.30 | 460.81 |
| 0.0 | 612.6 | 615.2 | 1.30 | 460.81 |
| 0.0 | 610.0 | 612.6 | 1.30 | 460.80 |
| 0.0 | 607.5 | 610.0 | 1.30 | 460.79 |
| 0.0 | 604.9 | 607.5 | 1.29 | 460.79 |
| 0.0 | 602.3 | 604.9 | 1.29 | 460.78 |
| 0.0 | 599.7 | 602.3 | 1.29 | 460.78 |
| 0.0 | 597.1 | 599.7 | 1.28 | 460.77 |
| 0.0 | 594.6 | 597.1 | 1.28 | 460.76 |
| 0.0 | 592.0 | 594.6 | 1.28 | 460.76 |
| 0.0 | 589.5 | 592.0 | 1.28 | 460.75 |
| 0.0 | 586.9 | 589.5 | 1.27 | 460.74 |
| 0.0 | 584.4 | 586.9 | 1.27 | 460.74 |
| 0.0 | 581.9 | 584.4 | 1.27 | 460.73 |

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

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-15YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q15OUT .HYD

Starting Pond W.S. Elevation = 458.00 ft

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

| | | |
|---|---|---|
| Peak Inflow | = | 18.17 cfs |
| Peak Outflow | = | 1.30 cfs |
| Peak Elevation | = | 460.97 ft |

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

| | | |
|---|---|---|
| Initial Storage | = | 0 cu-ft |
| Peak Storage From Storm | = | 20,447 cu-ft |
| Total Storage in Pond | = | 20,447 cu-ft |

Return Freq: 15 years

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-15YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q15OUT .HYD

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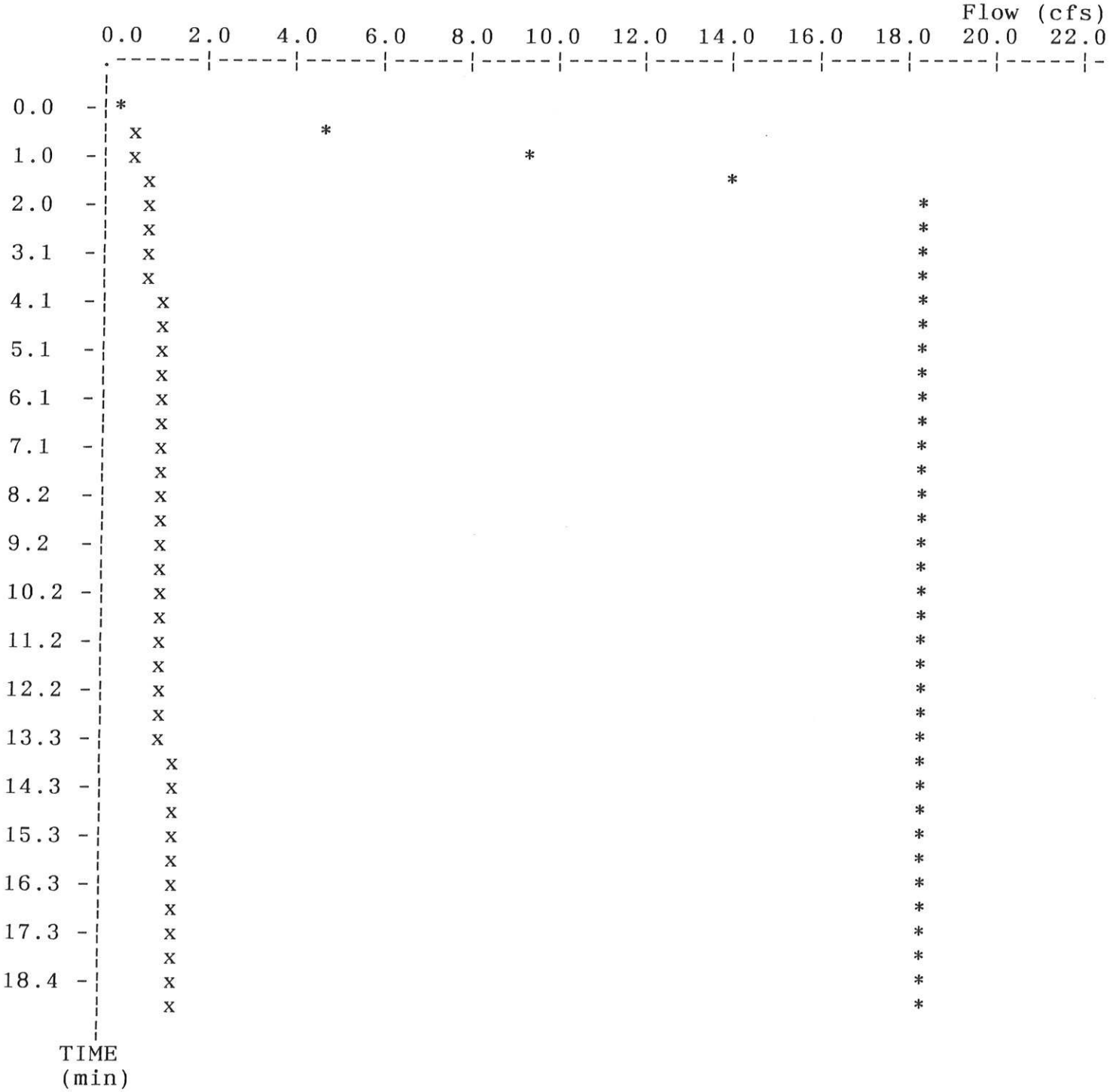
Peak Inflow = 18.17 cfs
Peak Outflow = 1.30 cfs
Peak Elevation = 460.97 ft




x File: C:\PONDPACK\10001Q\Q15OUT .HYD Qmax = 1.3 cfs
* File: C:\PONDPACK\10001Q\Q-15YR .HYD Qmax = 18.2 cfs

**********
*
* HOMEFIELD VILLAGE Q
* DETENTION BASIN DESIGN
* PREPARED BY BAX ENGINEERING
* REVISED 08-09-99
*
**********

Inflow Hydrograph: C:\PONDPACK\10001Q\Q-25YR .HYD
Rating Table file: C:\PONDPACK\10001Q\10001Q .PND

----INITIAL CONDITIONS----
Elevation = 458.00 ft
Outflow = 0.00 cfs
Storage = 0 cu-ft

GIVEN POND DATA

INTERMEDIATE ROUTING COMPUTATIONS

| ELEVATION (ft) | OUTFLOW (cfs) | STORAGE (cu-ft) | 2S/t (cfs) | 2S/t + O (cfs) |
|---|---|---|---|---|
| 458.00 | 0.0 | 0 | 0.0 | 0.0 |
| 458.20 | 0.1 | 11 | 0.4 | 0.5 |
| 458.40 | 0.2 | 89 | 3.0 | 3.2 |
| 458.60 | 0.4 | 301 | 10.0 | 10.4 |
| 458.80 | 0.6 | 713 | 23.8 | 24.4 |
| 459.00 | 0.7 | 1,393 | 46.4 | 47.1 |
| 459.20 | 0.8 | 2,341 | 78.0 | 78.8 |
| 459.40 | 0.9 | 3,533 | 117.8 | 118.7 |
| 459.60 | 0.9 | 4,995 | 166.5 | 167.4 |
| 459.80 | 1.0 | 6,757 | 225.2 | 226.2 |
| 460.00 | 1.1 | 8,846 | 294.9 | 296.0 |
| 460.20 | 1.1 | 11,134 | 371.1 | 372.2 |
| 460.40 | 1.2 | 13,477 | 449.2 | 450.4 |
| 460.60 | 1.2 | 15,875 | 529.2 | 530.4 |
| 460.80 | 1.3 | 18,330 | 611.0 | 612.3 |
| 461.00 | 1.3 | 20,840 | 694.7 | 696.0 |
| 461.20 | 1.4 | 23,409 | 780.3 | 781.7 |
| 461.40 | 1.4 | 26,035 | 867.8 | 869.2 |
| 461.60 | 1.5 | 28,719 | 957.3 | 958.8 |
| 461.80 | 1.5 | 31,463 | 1048.7 | 1050.2 |
| 462.00 | 1.6 | 34,266 | 1142.2 | 1143.8 |
| 462.20 | 1.6 | 37,132 | 1237.7 | 1239.3 |
| 462.40 | 1.7 | 40,061 | 1335.4 | 1337.1 |
| 462.60 | 1.7 | 43,056 | 1435.2 | 1436.9 |
| 462.80 | 1.7 | 46,117 | 1537.2 | 1538.9 |
| 463.00 | 1.8 | 49,244 | 1641.5 | 1643.3 |
| 463.20 | 5.3 | 52,438 | 1747.9 | 1753.2 |
| 463.40 | 11.7 | 55,700 | 1856.7 | 1868.4 |
| 463.60 | 19.9 | 59,030 | 1967.7 | 1987.6 |
| 463.80 | 29.6 | 62,430 | 2081.0 | 2110.6 |
| 464.00 | 2.0 | 65,900 | 2196.7 | 2198.7 |

Time increment (t) = 1.0 min.

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-25YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q25OUT .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 | 458.00 |
| 1.0 | 11.22 | 11.2 | 10.4 | 11.2 | 0.41 | 458.61 |
| 2.0 | 22.44 | 33.7 | 42.7 | 44.1 | 0.69 | 458.97 |
| 3.0 | 22.44 | 44.9 | 85.9 | 87.6 | 0.82 | 459.24 |
| 4.0 | 22.44 | 44.9 | 129.0 | 130.8 | 0.90 | 459.45 |
| 5.0 | 22.44 | 44.9 | 172.1 | 173.9 | 0.91 | 459.62 |
| 6.0 | 22.44 | 44.9 | 215.0 | 216.9 | 0.98 | 459.77 |
| 7.0 | 22.44 | 44.9 | 257.8 | 259.9 | 1.05 | 459.90 |
| 8.0 | 22.44 | 44.9 | 300.4 | 302.6 | 1.10 | 460.02 |
| 9.0 | 22.44 | 44.9 | 343.1 | 345.3 | 1.10 | 460.13 |
| 10.0 | 22.44 | 44.9 | 385.8 | 388.0 | 1.12 | 460.24 |
| 11.0 | 22.44 | 44.9 | 428.3 | 430.6 | 1.17 | 460.35 |
| 12.0 | 22.44 | 44.9 | 470.8 | 473.2 | 1.20 | 460.46 |
| 13.0 | 22.44 | 44.9 | 513.2 | 515.6 | 1.20 | 460.56 |
| 14.0 | 22.44 | 44.9 | 555.7 | 558.1 | 1.23 | 460.67 |
| 15.0 | 22.44 | 44.9 | 598.0 | 600.5 | 1.29 | 460.77 |
| 16.0 | 22.44 | 44.9 | 640.2 | 642.8 | 1.30 | 460.87 |
| 17.0 | 22.44 | 44.9 | 682.5 | 685.1 | 1.30 | 460.97 |
| 18.0 | 22.44 | 44.9 | 724.7 | 727.4 | 1.34 | 461.07 |
| 19.0 | 22.44 | 44.9 | 766.8 | 769.6 | 1.39 | 461.17 |
| 20.0 | 22.44 | 44.9 | 808.9 | 811.7 | 1.40 | 461.27 |
| 21.0 | 11.22 | 33.7 | 839.8 | 842.6 | 1.40 | 461.34 |
| 22.0 | 0.00 | 11.2 | 848.2 | 851.0 | 1.40 | 461.36 |
| 23.0 | 0.00 | 0.0 | 845.4 | 848.2 | 1.40 | 461.35 |
| 24.0 | 0.00 | 0.0 | 842.6 | 845.4 | 1.40 | 461.35 |
| 25.0 | 0.00 | 0.0 | 839.8 | 842.6 | 1.40 | 461.34 |
| 26.0 | 0.00 | 0.0 | 837.0 | 839.8 | 1.40 | 461.33 |
| 27.0 | 0.00 | 0.0 | 834.2 | 837.0 | 1.40 | 461.33 |
| 28.0 | 0.00 | 0.0 | 831.4 | 834.2 | 1.40 | 461.32 |
| 29.0 | 0.00 | 0.0 | 828.6 | 831.4 | 1.40 | 461.31 |
| 30.0 | 0.00 | 0.0 | 825.8 | 828.6 | 1.40 | 461.31 |
| 31.0 | 0.00 | 0.0 | 823.0 | 825.8 | 1.40 | 461.30 |
| 32.0 | 0.00 | 0.0 | 820.2 | 823.0 | 1.40 | 461.29 |
| 33.0 | 0.00 | 0.0 | 817.4 | 820.2 | 1.40 | 461.29 |
| 34.0 | 0.00 | 0.0 | 814.6 | 817.4 | 1.40 | 461.28 |
| 35.0 | 0.00 | 0.0 | 811.8 | 814.6 | 1.40 | 461.28 |
| 36.0 | 0.00 | 0.0 | 809.0 | 811.8 | 1.40 | 461.27 |
| 37.0 | 0.00 | 0.0 | 806.2 | 809.0 | 1.40 | 461.26 |
| 38.0 | 0.00 | 0.0 | 803.4 | 806.2 | 1.40 | 461.26 |
| 39.0 | 0.00 | 0.0 | 800.6 | 803.4 | 1.40 | 461.25 |
| 40.0 | 0.00 | 0.0 | 797.8 | 800.6 | 1.40 | 461.24 |
| 41.0 | 0.00 | 0.0 | 795.0 | 797.8 | 1.40 | 461.24 |
| 42.0 | 0.00 | 0.0 | 792.2 | 795.0 | 1.40 | 461.23 |
| 43.0 | 0.00 | 0.0 | 789.4 | 792.2 | 1.40 | 461.22 |
| 44.0 | 0.00 | 0.0 | 786.6 | 789.4 | 1.40 | 461.22 |

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-25YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q25OUT .HYD

INFLOW HYDROGRAPH

| TIME (min) | INFLOW (cfs) |
|---|---|
| 45.0 | 0.00 |
| 46.0 | 0.00 |
| 47.0 | 0.00 |
| 48.0 | 0.00 |
| 49.0 | 0.00 |
| 50.0 | 0.00 |
| 51.0 | 0.00 |
| 52.0 | 0.00 |
| 53.0 | 0.00 |
| 54.0 | 0.00 |
| 55.0 | 0.00 |
| 56.0 | 0.00 |
| 57.0 | 0.00 |
| 58.0 | 0.00 |
| 59.0 | 0.00 |
| 60.0 | 0.00 |

ROUTING COMPUTATIONS

| I1+I2 (cfs) | 2S/t - O (cfs) | 2S/t + O (cfs) | OUTFLOW (cfs) | ELEVATION (ft) |
|---|---|---|---|---|
| 0.0 | 783.8 | 786.6 | 1.40 | 461.21 |
| 0.0 | 781.0 | 783.8 | 1.40 | 461.20 |
| 0.0 | 778.2 | 781.0 | 1.40 | 461.20 |
| 0.0 | 775.4 | 778.2 | 1.40 | 461.19 |
| 0.0 | 772.6 | 775.4 | 1.39 | 461.19 |
| 0.0 | 769.8 | 772.6 | 1.39 | 461.18 |
| 0.0 | 767.1 | 769.8 | 1.39 | 461.17 |
| 0.0 | 764.3 | 767.1 | 1.38 | 461.17 |
| 0.0 | 761.5 | 764.3 | 1.38 | 461.16 |
| 0.0 | 758.8 | 761.5 | 1.38 | 461.15 |
| 0.0 | 756.0 | 758.8 | 1.37 | 461.15 |
| 0.0 | 753.3 | 756.0 | 1.37 | 461.14 |
| 0.0 | 750.6 | 753.3 | 1.37 | 461.13 |
| 0.0 | 747.8 | 750.6 | 1.36 | 461.13 |
| 0.0 | 745.1 | 747.8 | 1.36 | 461.12 |
| 0.0 | 742.4 | 745.1 | 1.36 | 461.11 |

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

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-25YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q25OUT .HYD

Starting Pond W.S. Elevation = 458.00 ft

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

| | | |
|---|---|---|
| Peak Inflow | = | 22.44 cfs |
| Peak Outflow | = | 1.40 cfs |
| Peak Elevation | = | 461.36 ft |

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

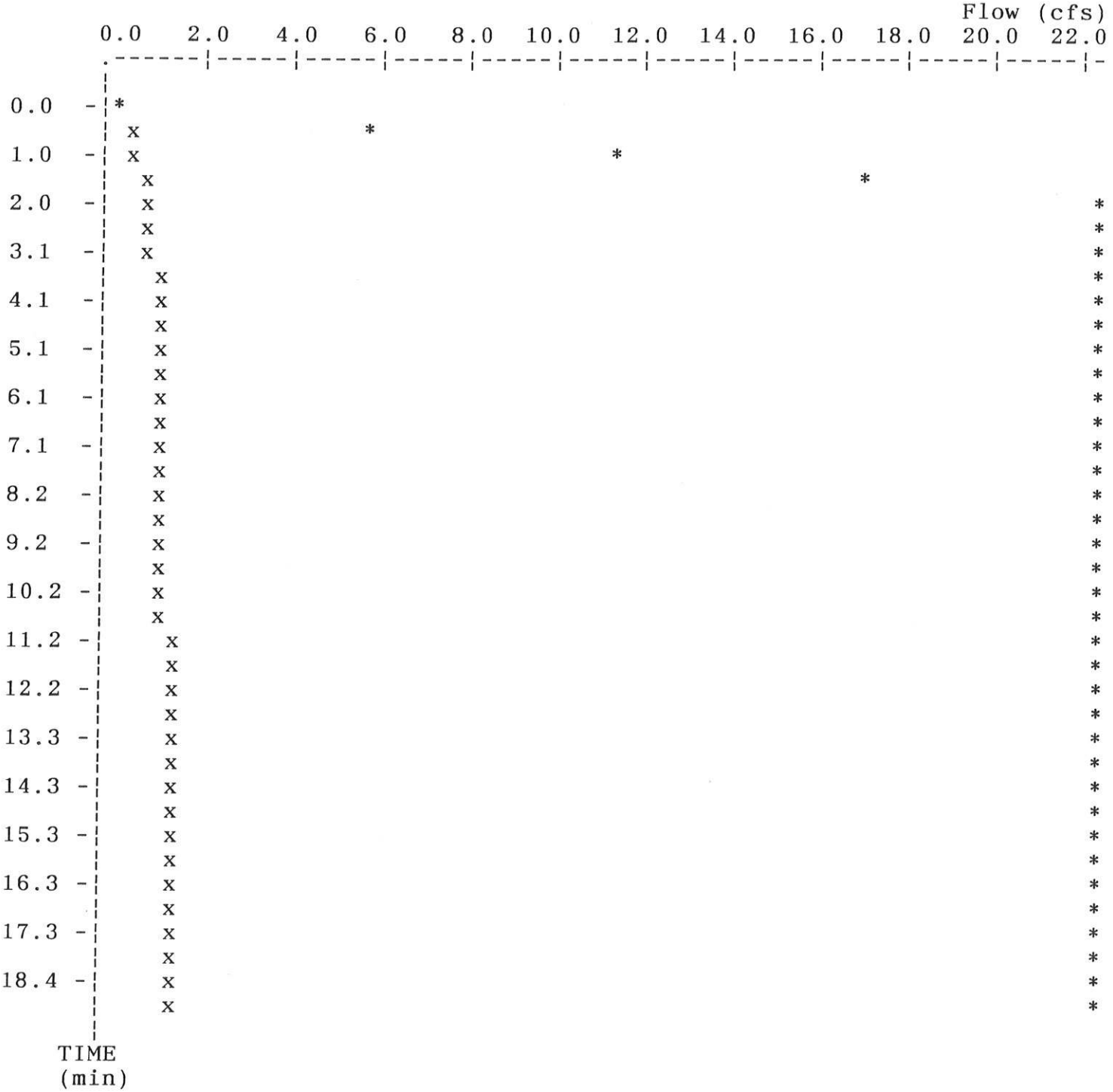
| | | |
|---|---|---|
| Initial Storage | = | 0 cu-ft |
| Peak Storage From Storm | = | 25,488 cu-ft |
| Total Storage in Pond | = | 25,488 cu-ft |

Return Freq: 25 years

Pond File: C:\PONDPACK\10001Q\10001Q .PND
Inflow Hydrograph: C:\PONDPACK\10001Q\Q-25YR .HYD
Outflow Hydrograph: C:\PONDPACK\10001Q\Q25OUT .HYD

EXECUTED: 08-09-1999 13:44:37

Peak Inflow = 22.44 cfs
Peak Outflow = 1.40 cfs
Peak Elevation = 461.36 ft




x File: C:\PONDPACK\10001Q\Q25OUT .HYD Qmax = 1.4 cfs
* File: C:\PONDPACK\10001Q\Q-25YR .HYD Qmax = 22.4 cfs