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CITY OF O'FALLON, MO

STORMWATER DETENTION ANALYSIS
PREPARED BY: BAX ENGINEERING CO., INC.

Avondale Heights & Pennial Park - CITY OF O'FALLON
Detention Analysis For Remainder of Development
BAX PROJECT NO. 96-8791 & 95-7230S
August 13, 2002

INTRODUCTION

Basins proposed in this phase of the development, analyzed in this and previous reports, are designed to operate together as system. For example the basin proposed in Avondale Heights, outlined in this report, cannot operate effectively without the basin in Pennial Park functioning at its design capacity. This analysis was completed on the basis of the basins operating as a whole not individually.

Portions of Avondale Heights and Pennial Park have been previously developed with detention for those developed portions being provided in permanent dry basins and one temporary basin. This detention analysis and report will complete the detention requirements for the overall development limits of both Avondale Heights and Pennial Park.

A majority of the remaining pre-developed area flows to the south collecting in two medium size tributaries draining the development. Both tributaries are to remain following development under the current plan. One tributary flows eastward and runs along the southern boundary of the site. It is labeled as East Branch Tributary B on the Pre and Post-Developed Drainage Area Maps and will be referred to as such through the remainder of this report. The other creek flows north to south beginning at the northern edge of the Avondale Heights limits at the outfall of the Pennial Park basin, on the Pre and Post-Developed Drainage Area Maps it is labeled as Secondary Creek and will hereto be refered to as Secondary Creek throughout the report.

At the confluence of these two drainage ways is the ultimate outfall point of the development, labeled as Discharge Point #1 on both Pre and Post-Developed Drainage Area Maps. Our analysis uses this point as the overall controlling point as a basis for the detention requirements for the site. Detention will ensure that the post-developed flow to the ultimate discharge point will be less than or equal to the existing flow at that point.

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We will also be checking two additional discharge points, one at the intersection of the property boundary and the aforementioned Secondary Creek, hereon known as Discharge Point #2. Discharge Point #3 is located at the intersection of the property boundary and East Branch Tributary B. It is labeled on both the Pre and Post-Developed Drainage Area Maps. Post-Developed flows will be checked at each of the two points ascertaining that they are less than or equal to existing flows.

Detention of runoff will be provided in two wet basins, one within the Pennial Park development, and the other in Avondale Heights. Both are shown on the Post-Developed Drainage Area Map. The basin in Pennial Park is located on the southern edge of the Pennial Park limits, abutting Avondale Heights on the south. The basin discharges into the creek bisecting Avondale Heights on its eastern side, known as Secondary Creek. It is designed as a wet detention facility with a normal water surface elevation of 516.00. The Pennial basin receives a substantial amount of runoff from offsite to the north. Included in the offsite runoff are areas of Cherrywood Parc Plat Five, The Villages of Hutchings Farm, The Estates at Legacy Point and Bradford Heights. From these areas, three existing detention facilities are outfalling to the Pennial basin. More specifically Cherrywood Parc's Plat Five basin, a large basin wet in The Villages of Hutchings Farm and Basin B of The Estates at Legacy Point development. To develop an accurate model of the watershed, detained outflows from the basin were used to generate inflow hydrographs to the Pennial basin. To produce outflow hydrographs at the desired interval and length, input data taken from approved reports was used to recalculate outflow hydrographs from each of the three off-site basins. Recalculating each basin was necessary due to the previous analyzes outflow hydrographs prematurely terminating before all rainfall had left the basin. Each basin is connected to the Pennial basin via a storm sewer network. Outflow hydrographs from each offsite basin were lagged by a specific time that was ascertained by estimating the length of travel time required to traverse through the sewer network as runoff flows to the Pennial basin. By adding this lag time to the front end of each outflow hydrograph, inflow hydrographs into the Pennial basin were generated. The reports and calculations were provided by the City of O'Fallon for Cherrywood Parc and Hutchings Farm, The Estates at Legacy Point detention was designed in-house. The basins were re-ran in Pond7 using information from the reports to achieve outflows at the time interval and overall time period needed for this analysis. Analyzes of the existing basins are included in the calculations section of this report. Other offsite flow to Pennial Park does not flow thru any basin on or off-site on route to the Pennial Park basin, mainly that from The Estates at Legacy Point and Bradford Heights. A time of concentration was determined for that offsite area to achieve an accurate inflow hydrograph. All offsite flows are labeled on the Pre and Post-Developed Drainage Area Maps.

The second basin analyzed in this report is located in Avondale Heights at the southern end of the property along the west side of the creek bisecting the site. Only on-site inflow from Avondale Heights flows to this basin, making the analysis much simpler. The basin outfalls into the Secondary Creek just to the north of the property line. A wet basin design is also used for this facility with a normal water elevation of 498.00.

Directly across the creek from the southern end of the Avondale Heights basin is an existing basin constructed during Phase 4 of Avondale Heights. Grading the remainder of Avondale Heights will reduce the amount of runoff making it to this basin, therefore a reanalysis of the facility has been completed. The analysis is included in this report and revised outflows are shown on the Post-Developed Drainage Area Map.

Each of the basins will be analyzed for the 15 year and 25 year, 20 minute design storms where the 25-year storm is the controlling storm. Each will also be checked for safe passage of the 100 year, 20 minute design storm under low-flow blocked conditions. Again, the basins are designed as a single system, all of the basins must be looked at as an overall system for the following analysis to meet requirements for each development.

EXISTING AND PROPOSED P.I. FACTORS

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

15 Year - 20 Minute storm (5% Imperious):	1.87 cfs/acre
25Year - 20 Minute storm (5% Impervious):	2.31 cfs/acre

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

R-1 ZONING (SINGLE FAMILY RESIDENTIAL)

15 Year - 20 Minute storm (50% Impervious):	2.64 cfs/acre
25 Year - 20 Minute storm (50% Impervious):	3.26 cfs/acre
100 year - 20 Minute storm (50% Impervious):	4.17 cfs/acre

EXISTING RUNOFF TO DISCHARGE POINTS

ULTIMATE OUTFALL POINT – DISCHARGE POINT #1

Existing runoff to the ultimate outfall point has been determined from the attached Pre-Developed Drainage Area Map. (see attached) Offsite flows are included.

15 Year, 20 Minute storm:	**539.05 cfs**
25 Year, 20 Minute storm:	**680.13 cfs**

DISCHARGE POINT #2
Existing runoff has been determined from the Pre-Developed Drainage Area Map. (see attached) Offsite flows are included.

15 Year, 20 Minute storm:	**406.78 cfs**
25 Year, 20 Minute storm:	**516.72 cfs**

DISCHARGE POINT #3
Existing runoff has been determined from the Pre-Developed Drainage Area Map. (see attached)

15 Year, 20 Minute storm:	**132.28 cfs**
25 Year, 20 Minute storm:	**163.41 cfs**

TIME OF CONCENTRATION

AREAS DRAINING TO PENNIAL PARK BASIN
On-Site Area (Pennial Park Area)
The time of concentration flow path begins in the middle of the rear yard of Lot 184 of Pennial Park. Runoff flows overland for approximately 185 feet to the east along the rear yards of Lots 183 and 182; continuing in the swale as shallow concentrated flow along the rear of Lots 181,180 and 179 for approximately 215 feet before entering the storm sewer system at area inlet 165A. From there the flowpath traverses thru 1,880 feet of storm sewer before entering the Pennial Park Basin at FE 101. Time of concentration is estimated as follows:

$T_{(overland)}$:	L = 185 feet Elevation difference = 6.5 feet $T_{(overland)}$ = 3.0 minutes: see figure 1A
$T_{(swale)}$:	L = 215 feet Elevation difference = 5.0 feet $T_{(swale)}$ = 2.0 minutes: see figure 1A
$T_{(pipe)}$:	L = 1,880 feet Estimated Average Velocity of 9.0 ft./sec. $T_{(pipe)}$ = 209 seconds

$T_{(pipe\ total)}$ = 209 sec. ≈ 3.50 Min.
$T_{(overland\ total)}$ = 5.0 Min
$T_{(Total)}$ = 8.50 Min **Use 9.0 Min.**

Off-Site Areas 1 & 2 (To Pennial Park Basin)
Off-site areas 1 and 2 include flows from The Villages at Hutchings Farm and Cherrywood Parc, including outflow from the detention basin of Plat Five of Cherrywood Parc. The time of concentration for these two areas is calculated by estimating the travel time through the storm sewer system flowing to the Pennial basin, starting from mahole 85. The time of concentration is also considered as the lag time for the outflow hydrograph from the Cherrywood Parc basin and is estimated as follows:

$T_{(pipe)}$: L = 1,322 feet
Estimated Average Velocity of 9.0 ft./sec.
$T_{(pipe)}$ = 147 seconds
$T_{(pipe\ total)}$ = 147 sec. ≈ 2.50 Min.
$T_{(Total)}$ = 2.50 Min **Use 3.0 Min.**

Off-Site Areas 3-The Villages at Hutchings Farm
Off-site area 3 includes the outflow from the retention lake currently operating in The Villages at Hutchings Farm. The lag time or time of concentration for this area is determined by estimating the pipe travel time to the Pennial Basin. Travel time calculations begin at area inlet 67, flowing approximately 1,611 feet on its course to the Pennial Basin. Time of concentration is estimated as follows:

$T_{(pipe)}$: L = 1,322 feet
Estimated Average Velocity of 9.0 ft./sec.
$T_{(pipe)}$ = 147 seconds
$T_{(pipe\ total)}$ = 147 sec. ≈ 2.50 Min.
$T_{(Total)}$ = 2.50 Min **Use 3.0 Min.**

Off-Site Area 4 (Bradford Heights and Estates at Legacy Point)
The time of concentration flow path at the building line of Lot 32 of Bradford Heights. Runoff flows overland for approximately 283 feet to the south along the rear yards of Lots 33 and 34 of Bradford Heights and Lot 255 of Villages at Hutchings Farm before entering the storm sewer system at an area inlet in Hutchings Farm on the lot line of Lots 254 & 255. Flow continues 2,806 feet thru the storm sewer system before entering the Pennial Basin. Time of concentration is estimated as follows:

$T_{(overland)}$: L = 283 feet
Elevation difference = 17.5 feet
$T_{(overland)}$ = 3.5 minutes: see figure 1B

$T_{(pipe)}$: L = 2,806 feet
Estimated Average Velocity of 9.0 ft./sec.
$T_{(pipe)}$ = 312 seconds
$T_{(pipe\ total)}$ = 312 sec. ≈ 5.20 Min.
$T_{(overland\ total)}$ = 3.5 Min
$T_{(Total)}$ = 8.70 Min **Use 9.0 Min.**

Off-Site Area 5 (Estates at Legacy Point)
The time of concentration flow path begins in Lot 88 at the building line. Runoff flows overland for approximately 231 feet to the south and west along the rear yards of Lot 91, continuing 74 feet as shallow concentrated flow before entering the storm sewer system at area inlet 152. Flow then travels 3,890 feet thru the storm sewer system before entering the Pennial Basin. Time of concentration is estimated as follows:

$T_{(overland)}$: L = 231 feet
Elevation difference = 16.0 feet
$T_{(overland)}$ = 3.2 minutes: see figure 1C

$T_{(swale)}$: L = 74 feet
Elevation difference = 7.0 feet
$T_{(swale)}$ = 0.4 minutes: see figure 1C

$T_{(pipe)}$: L = 3,890 feet
Estimated Average Velocity of 9.0 ft./sec.
$T_{(pipe)}$ = 432 seconds

$T_{(pipe\ total)}$ = 432 sec. ≈ 7.20 Min.
$T_{(overland\ total)}$ = 3.60 Min
$T_{(Total)}$ = 10.80 Min **Use 10.0 Min.**

Off-Site Areas 6-The Estates at Legacy Point; Basin B
Off-site area 6 includes the outflow from the retention lake currently operating in the subdivision. The lag time or time of concentration for this area is determined by estimating the pipe travel time to the Pennial Basin. Travel time calculations begin at outfall structure 141, flowing approximately 3,357 feet on way to the Pennial Basin. Time of concentration or lag time is estimated as follows:

$T_{(pipe)}$: L = 3,357 feet
Estimated Average Velocity of 9.0 ft./sec.
$T_{(pipe)}$ = 380 seconds

$T_{(pipe\ total)}$ = 380 sec. ≈ 6.21 Min.

$T_{(Total)}$ = 6.21 Min **Use 6.0 Min.**

AREA TO AVONDALE PHASE 7 BASIN

On-Site Area to proposed basin

The time of concentration flow path begins in the middle of Lot 591 of Avondale Heights towards the rear of the lot. Runoff flows overland for approximately 152 feet to the east along the side and rear of Lots 591 & 590 into the rear yard swale, continuing in the swale as shallow concentrated flow along Lot 589 for approximately 110 feet before entering the storm sewer system at an area inlet at the corner of Lots 589 and 588. Flow traverses thru approximately 719 feet of storm sewer system before entering the Avondale Basin. Time of concentration is estimated as follows:

$T_{(overland)}$: L = 152 feet
Elevation difference = 8.0 feet
$T_{(overland)}$ = 2.4 minutes: see figure 1D

$T_{(swale)}$: L = 110 feet
Elevation difference = 4.0 feet
$T_{(swale)}$ = 1.0 minutes: see figure 1D

$T_{(pipe)}$: L = 719 feet
Estimated Average Velocity of 9.0 ft./sec.
$T_{(pipe)}$ = 120 seconds

$T_{(pipe\ total)}$ = 120 sec. ≈ 2.00 Min.
$T_{(overland\ total)}$ = 5.4 Min
$T_{(Total)}$ = 5.4 Min **Use 5.0 Min.**

AREA TO AVONDALE PHASE 4 BASIN

On-Site Area to proposed basin

The time of concentration flow path from the previous analysis for Phase 4's basin was reused in this analysis.

OUTFALL STRUCTURE DESIGNS

Pennial Park Basin

A typical pre-cast triple area inlet with a grate top was selected as the outfall structure for this basin. A slot in the front side of the basin shall be installed at the normal water elevation of 516.00. The slot is 10 feet wide and extends to the top of the structure at 518.60. The flowline of the structure is 514.30, drained by a 3'x6'; 73 foot long box culvert. See Figure 2 for a detail of the structure. In addition to the outfall structure, an emergency spillway will be utilized at the Pennial Park basin. An emergency spillway is proposed because of the large amount of offsite flow coming to the basin. The spillway shall be 30 feet wide and 2 feet deep at an elevation of 522.00. Rip-rap shall line the entire length of the spillway from the normal water surface elevation to the outfall in the secondary creek. The emergency spillway is shown on the Post-Developed Drainage Area Map.

Avondale Heights Basin

A pre-cast single area inlet structure is utilized for the outfall structure for this basin. A grate top is scheduled. An 8"W slot at the normal water elevation of 498.00 shall be cut into the structure on the front side, extending to the top of the structure. The top elevation of the structure shall be 499.20. Flowline of the structure is designed to be 497.00 drained by a 24", 46 foot long concrete pipe. See Figure 3 for a detail of the structure.

PEAK INFLOWS TO BASINS

Inflows to the basin have been determined from the Post Developed Drainage Area Maps (see attached):

PENNIAL PARK BASIN

15 Year, 20 Minute storm:	**365.75 cfs**
25 Year, 20 Minute storm:	**465.96 cfs**
100 Year, 20 Minute storm:	**618.51 cfs**

Note: Inflows from offsite basins are generated from outflow hydrographs of basins. Outflow hydrograph calculations are included in calculations section.

AVONDALE HEIGHTS BASIN

15 Year, 20 Minute storm:	**39.92 cfs**
25 Year, 20 Minute storm:	**49.29 cfs**
100 Year, 20 Minute storm:	**63.05 cfs**

AVONDALE HEIGHTS PHASE 4 BASIN

15 Year, 20 Minute storm:	**24.10 cfs**
25 Year, 20 Minute storm:	**29.76 cfs**
100 Year, 20 Minute storm:	**38.07 cfs**

Note: Flows to Basin in phase 4 revised due to change in drainage areas from grading of remaining development.

STORM ROUTING CALCULATIONS AND RESULTS

As found in the routing calculations attached, the results are as follows:

Pennial Park Basin

20 Minute Storm	Calculated Release Rate	Peak Elevation
15 Year	171.13 cfs	519.58
25 Year	186.28 cfs	520.12
100 Year	227.53 cfs	521.77

Avondale Heights Basin

20 Minute Storm	Calculated Release Rate	Peak Elevation
15 Year	2.59 cfs	499.18
25 Year	6.86 cfs	499.43
100 Year	15.71cfs	499.74
100 Year OS Blocked	17.26 cfs	499.77

FLOW REQUIREMENTS

Discharge Points 1-3

At each of the three discharge points the post-developed flow must be less than the pre-developed flow. The flows, pre and post developed, are labeled at each of the three discharge points on the Post-Developed Drainage Area Map. The post-developed flow at Discharge Point #2 is calculated by summing the outflows from the Pennial Park Basin, Avondale Heights basin and Avondale Heights Phase 4 basin as well as developed and undeveloped direct runoff to Discharge Point #2. The post developed flow at Discharge Point #3 is calculated by adding the outflow from the basin in Avondale Plat 7, which was analyzed previously by Bax Engineering in a report for Avondale Plat 7 and Pennial Park Plat 2, developed and undeveloped flow to Discharge Point #3. Post Developed discharge to Discharge Point #1(ultimate discharge point) is calculated by adding the discharges from Discharge Points #1 and #2. Post-developed flows to each of the three discharge points is less than the pre-developed flows as calculated from the pre and post-developed drainage area maps. (see attached)

SUMMARY

PENNIAL BASIN	
15 Year, 20 Minute H.W.	**519.58**
15 Year, 20 Minute Q	**171.13 cfs**
25 Year, 20 Minute H.W.	**520.12**
25 Year, 20 Minute Q	**186.28 cfs**
100 Year, 20 Minute H.W.	**521.77**
100 Year, 20 Minute Q	**227.53 cfs**
Standard Triple Area Inlet w/ Grate Top	**Sill Elevation = 518.60**
Low-Flow Configuration	**10'W x 2.6'H Slot@516.00 Elev.**
Normal Water Elevation	**516.00**
Emergency Spillway Elevation (30'W)	**522.00**
Top of Berm	**524.00**
AVONDALE BASIN	
15 Year, 20 Minute H.W.	**499.18**
15 Year, 20 Minute Q	**2.59 cfs**
25 Year, 20 Minute H.W.	**499.43**
25 Year, 20 Minute Q	**6.86 cfs**
100 Year, 20 Minute H.W.	**499.74**
100 Year, 20 Minute Q	**15.71 cfs**
100 Year, 20 Minute H.W.-Low-Flow Blocked	**499.77**
Standard Precast Area Inlet w/o top	**Sill Elevation = 499.20**
Low-Flow Configuration	**8"W x 1.2'H Slot @ 498.00 Elev.**
Low-Flow Elevation	**498.00**
Top of Berm	**502.00**

PRE AND POST DEVELOLPED FLOW CHECKS

Discharge Point #1

Post-Developed Q = 462.41 cfs < 680.13 cfs = Pre-Developed Q √

Discharge Point #2

Post-Developed Q = 302.66 cfs < 516.72 cfs = Pre-Developed Q √

Discharge Point #3

Post-Developed Q = 159.75 cfs < 163.41 cfs = Pre-Developed Q √

Time of Concentration Nomographs

Avondale Heights
Pennial Park
Offsite Areas

BAX ENGINEERING

SHEET 1 of 4

Project: Avondale Heights & Pennial Park

Date: 8/13/02 Project No: 96-8791 & 95-7330

Designed: JD Checked: _____

On-Site Area to Pennial Park Basin

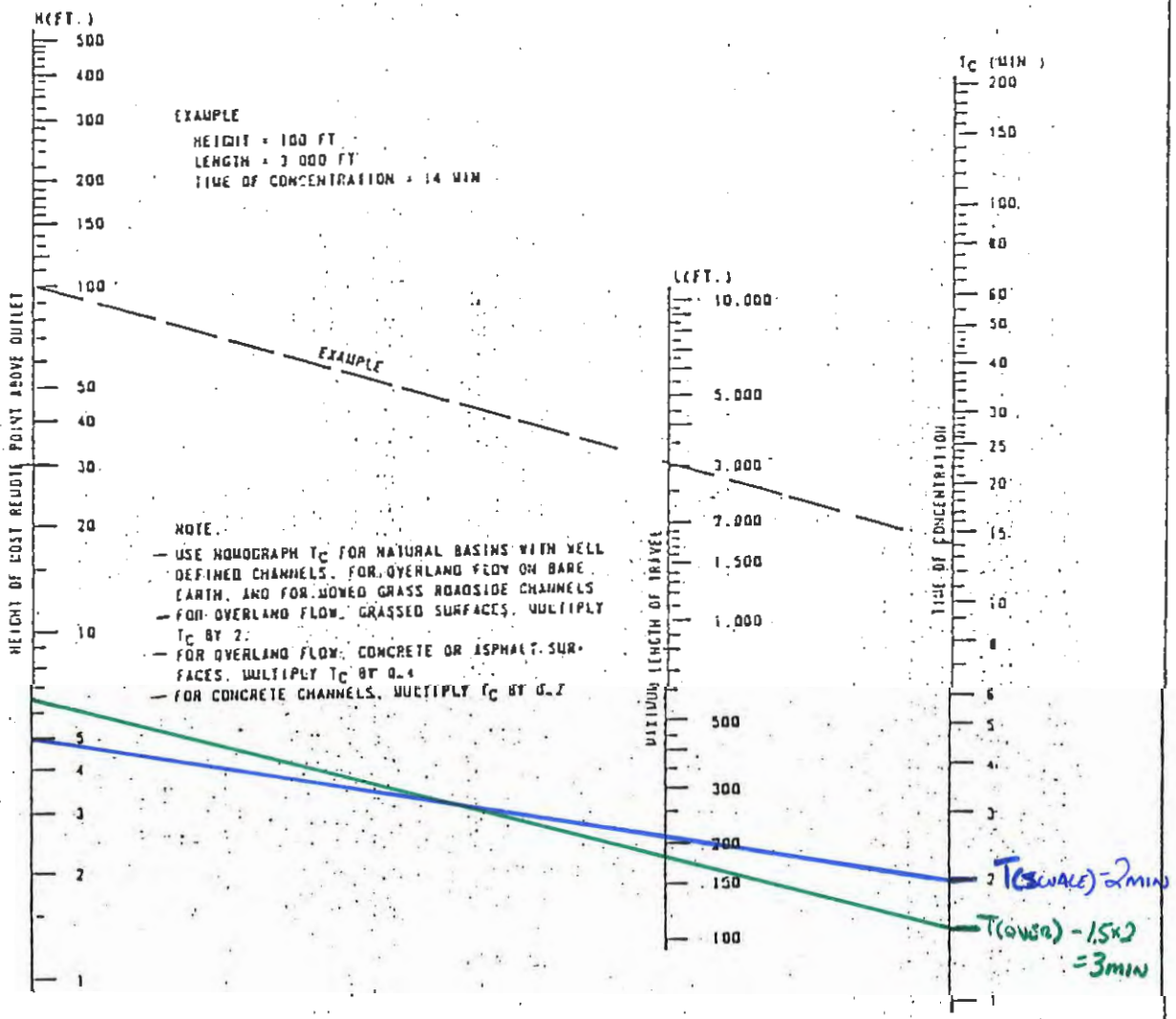

FIGURE 1A

TIME OF CONCENTRATION OF SMALL DRAINAGE BASINS

1052 South Cloverleaf Drive
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BAX ENGINEERING

SHEET 2 of 4

Project: Avondale Heights & Pennial Park

Date: 8/13/02 Project No: 96-879/#95-72303

Designed: JD Checked:

Offsite Area 4 to Pennial Park Basin

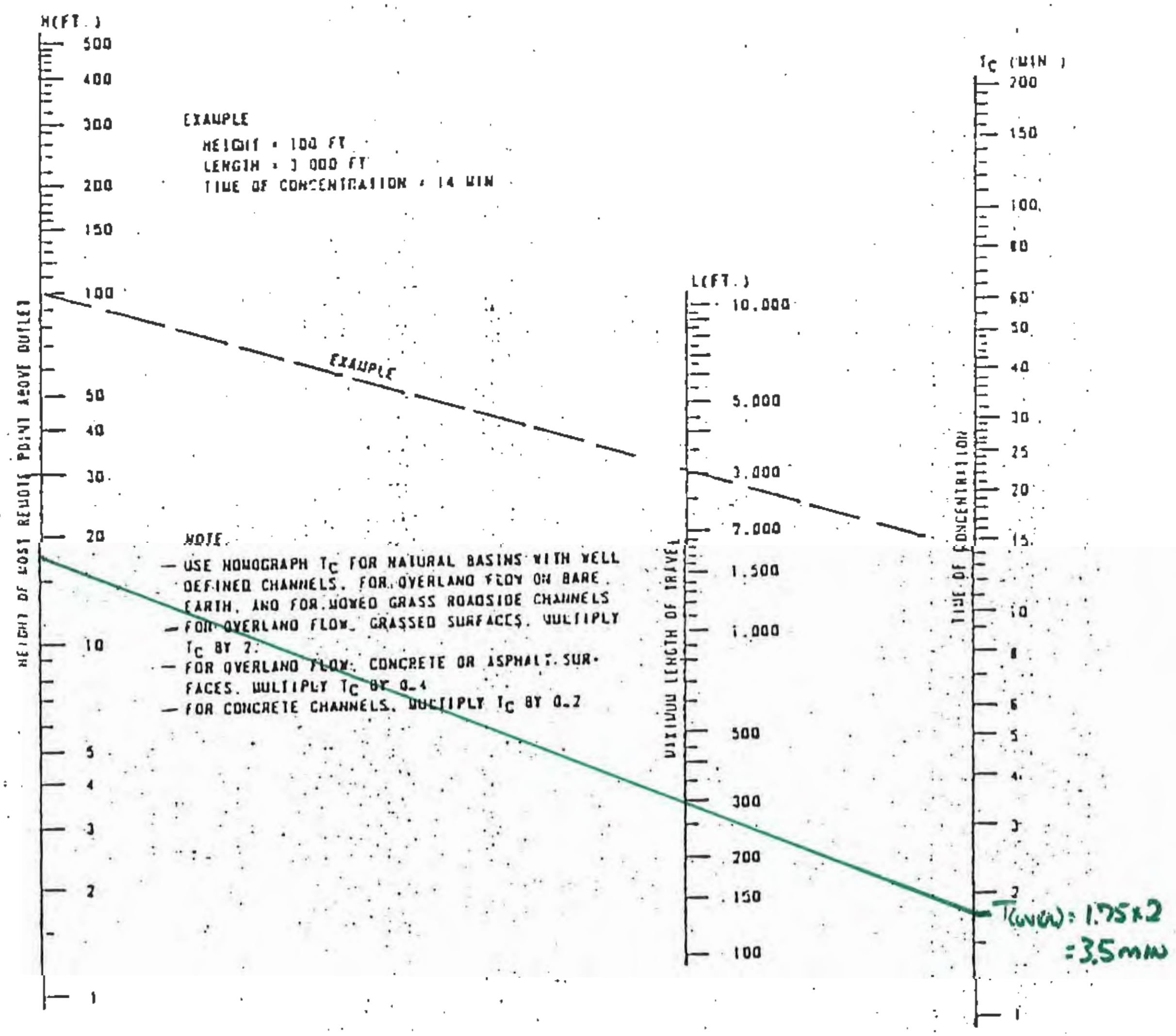

FIGURE 1B

TIME OF CONCENTRATION OF SMALL DRAINAGE BASINS

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314-928-5552 FAX 928-1718

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Project: Avondale Heights & Pennial Park

Date: 8/13/02 Project No: 96-5791-95-7223

Designed: JD Checked:

OFFSITE AREA 5 TO PENNIAL PARK BASIN

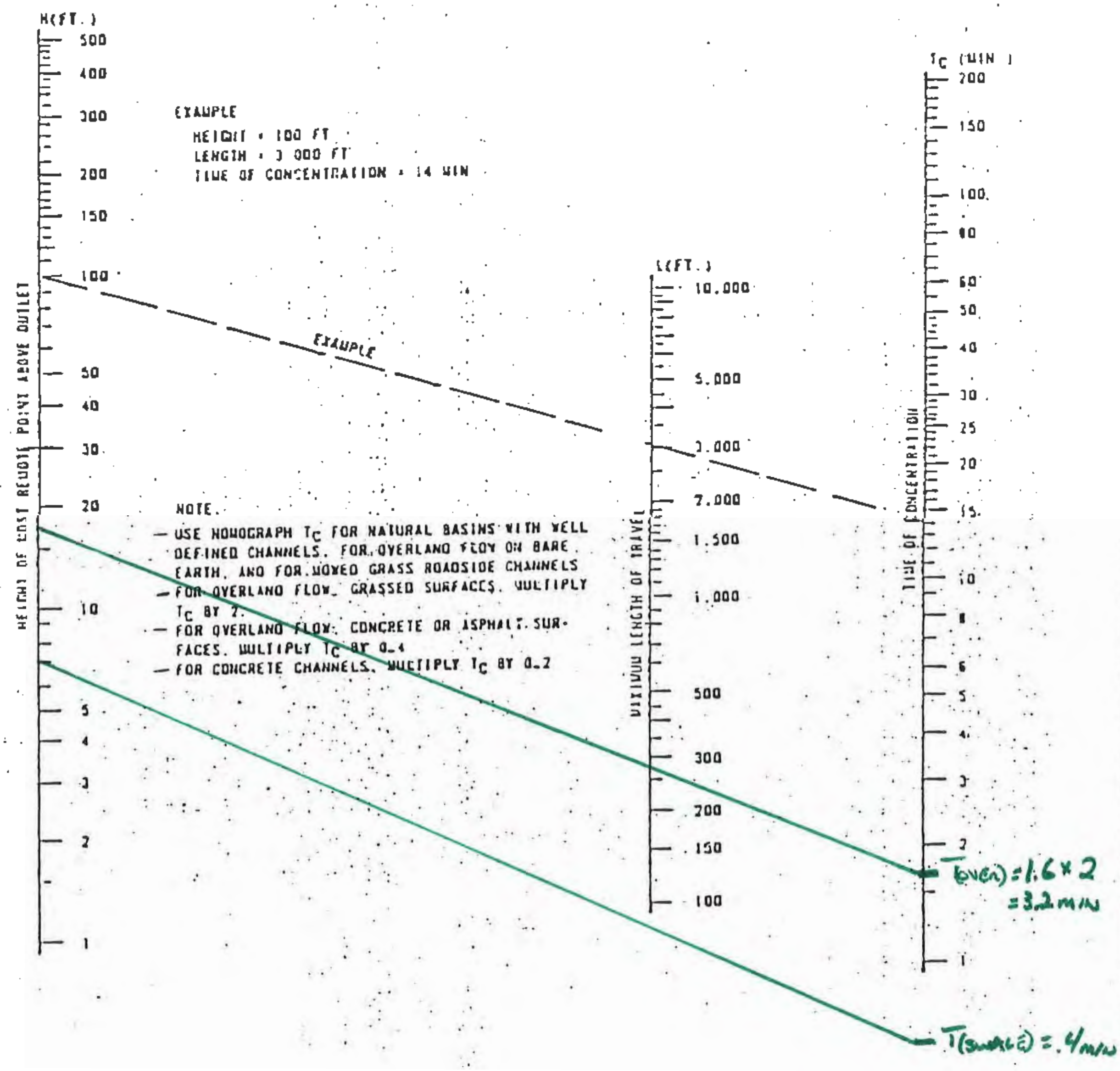

FIGURE 1C

TIME OF CONCENTRATION OF SMALL DRAINAGE BASINS

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BAX ENGINEERING

Project: AVONDALE HEIGHTS & PENNIAL PARK
Date: 8/13/02 Project No: 96-8791 & 95-7325
Designed: JD Checked: _____

ON-SITE AREA TO AVONDALE HEIGHTS BASIN

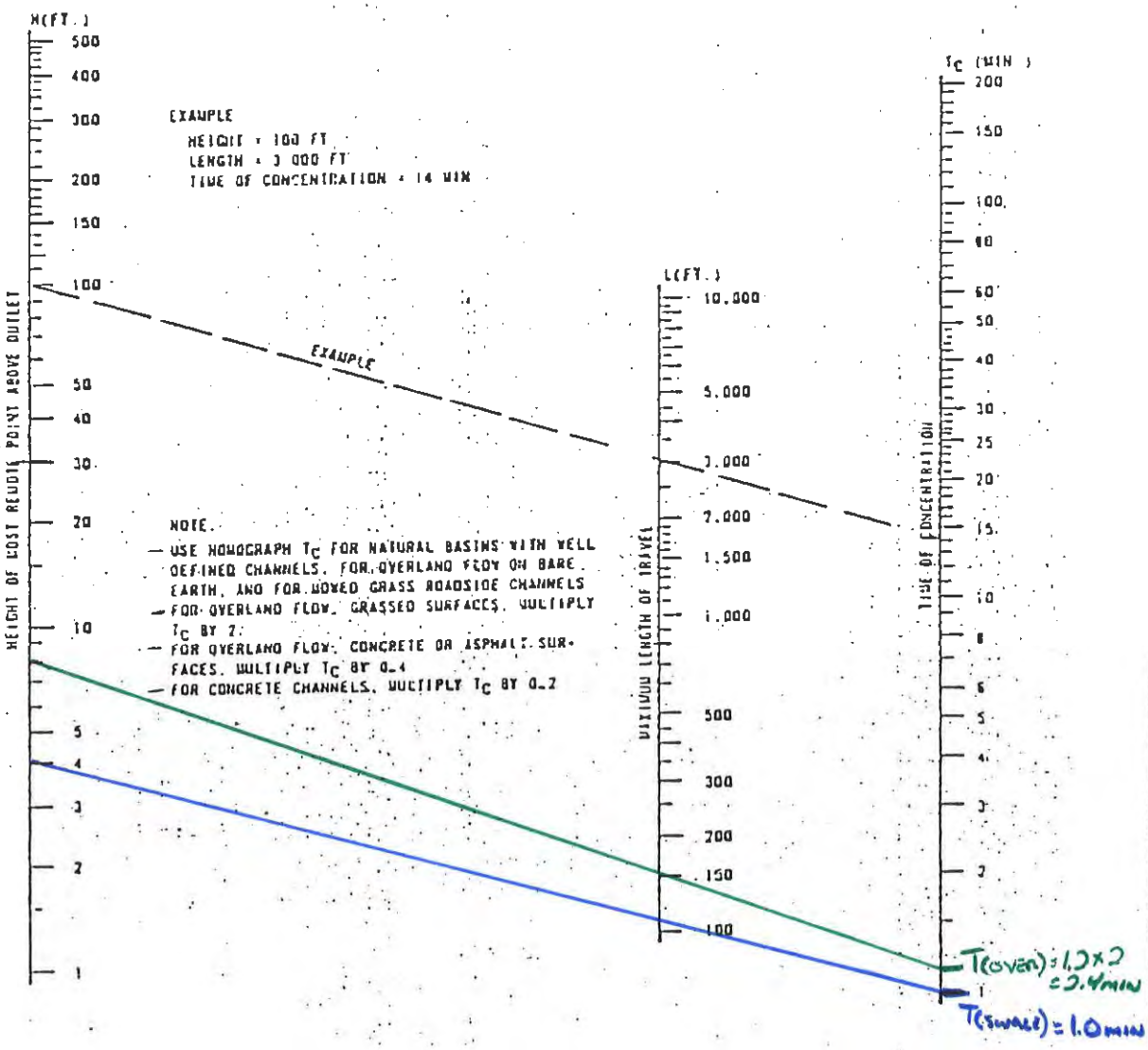

FIGURE 1D

TIME OF CONCENTRATION OF SMALL DRAINAGE BASINS

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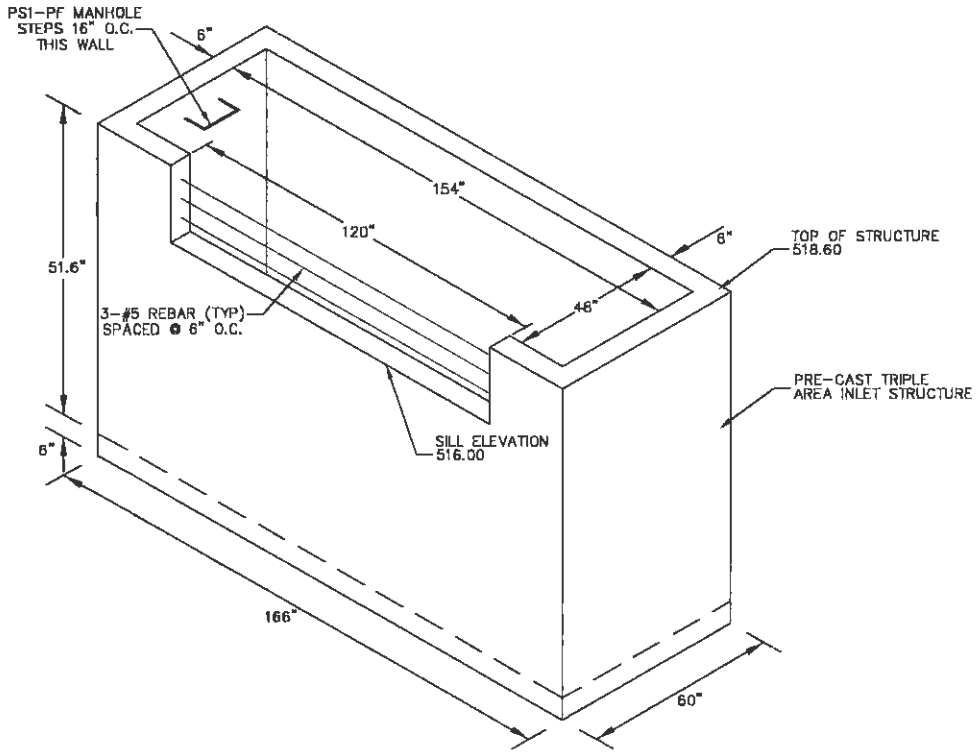
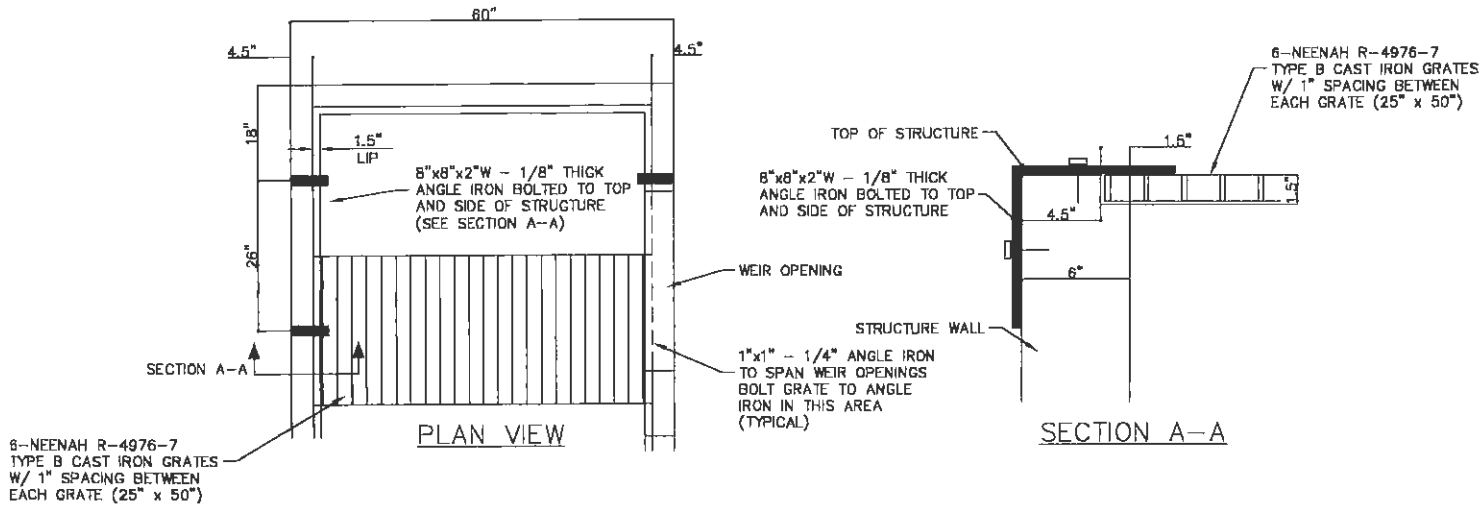
Structure Details
Avondale Heights
Pennial Park

TRIPLE AREA INLET
PENNIAL PARK RETENTION LAKE

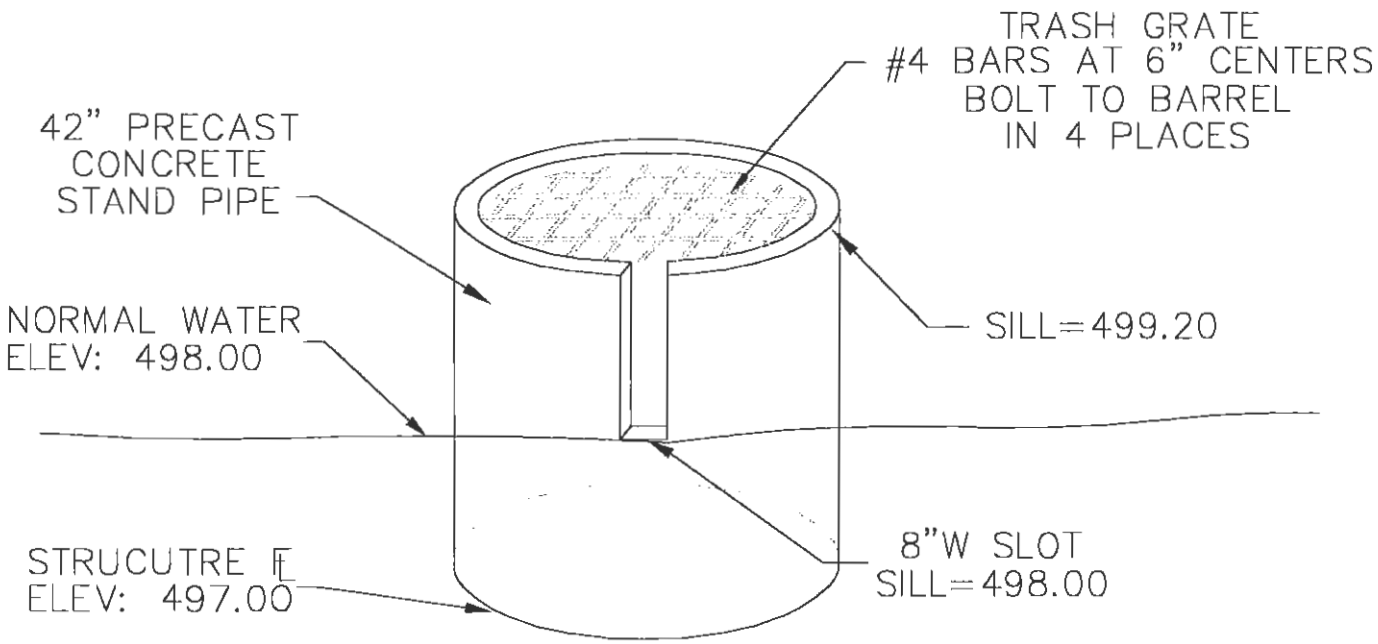




NOTE:
TO ENABLE ACCESS THE GRATE ON THE END OF THE STRUCTURE WITH THE STEPS SHALL BE LATCHED.

GRATE TOP TYP. FOR EACH TRIPLE AREA INLET

FIGURE 2.



OVERFLOW STRUCTURE DETAIL
AVONDALE HEIGHTS

NOT TO SCALE

FIGURE 3.

POND7

Reanalysis of Cherrywood Parc Basin

15, 25 and 100 Year 20 Minute Design Storms

Table of Contents

HYG file = C:\MY DOCUMENTS\CHERRY15.HYG
HYG ID = CherryWood 15 In
HYG Tag = 15yr

Peak Discharge =	63.37 cfs
Time to Peak =	20.00 min
HYG Volume =	76069 cu.ft

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Output Time increment = 1.00 min
Time on left represents time for first value in each row.

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15.00	47.53	50.70	53.86	57.03	60.21
20.00	63.37	60.21	57.03	53.86	50.70
25.00	47.53	44.38	41.19	38.02	34.85
30.00	31.69	28.52	25.35	22.18	19.01
35.00	15.84	12.68	9.67	6.34	3.17
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Time on left represents time for first value in each row.

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265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00

Type.... Read HYG
Name.... 20 MIN INFLOWS Tag: A 15YR
Event: A 15YR
File.... C:\MY DOCUMENTS\CHERRYWOOD.PPW
Title... 20 Minute Inflows to Cherrywood Parc Basins
Storm... Tag: A 15YR

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\CHERRY25.HYG
HYG ID = Cherrywood 25 in
HYG Tag = 25yr

Peak Discharge =	78.33 cfs
Time to Peak =	20.00 min
HYG Volume =	94000 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	3.92	7.83	11.75	15.67
5.00	19.58	23.50	27.42	31.33	35.25
10.00	39.17	43.08	47.00	50.92	54.83
15.00	58.75	62.67	66.58	70.50	74.42
20.00	78.33	74.42	70.50	66.58	62.67
25.00	58.75	54.83	50.92	47.00	43.08
30.00	39.17	35.25	31.33	27.42	23.50
35.00	19.58	15.67	11.75	7.83	3.92
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\CHERY100.HYG
HYG ID = Cherrywood 100
HYG Tag = 100yr

Peak Discharge = 110.87 cfs
Time to Peak = 20.00 min
HYG Volume = 133040 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	5.54	11.09	16.63	22.17
5.00	27.72	33.26	38.80	44.35	49.89
10.00	55.43	60.98	66.52	72.06	77.61
15.00	83.15	88.69	94.24	99.78	105.32
20.00	110.87	105.32	99.78	94.24	88.69
25.00	83.15	77.61	72.06	66.52	60.98
30.00	55.43	49.89	44.35	38.80	33.26
35.00	27.72	22.17	16.63	11.09	5.54
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

File.... C:\MY DOCUMENTS\CHERRYWOOD.PPW
Title... Cherrywood Parc Phase 5 Basin

POND VOLUME CALCULATIONS

Planimeter scale: 1.00 ft/in

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (cu.ft)	Volume Sum (cu.ft)
548.70	.000	.0000	.0000	0	0
550.00	10564.000	.2425	.2425	4578	4578
552.00	14833.000	.3405	.8704	25277	29854
554.00	18557.000	.4260	1.1474	33321	63175
556.00	22508.000	.5167	1.4119	41002	104176

POND VOLUME EQUATIONS

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

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

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

File.... C:\MY DOCUMENTS\CHERRYWOOD.PPW
Title... Cherrywood Parc Outflow Structure

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 548.70 ft
Increment = .30 ft
Max. Elev.= 556.00 ft

****
OUTLET CONNECTIVITY
****

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

Structure	No		Outfall	E1, ft	E2, ft
Inlet Box	AI	--->	CV	553.590	556.000
Orifice-Area	SI	--->	CV	550.700	556.000
Weir-Rectangular	LS	--->	CV	548.700	550.700
Culvert-Circular	CV	--->	TW	548.700	556.000
TW SETUP, DS Channel					

File.... C:\MY DOCUMENTS\CHERRYWOOD.PPW
Title... Cherrywood Parc Outflow Structure

OUTLET STRUCTURE INPUT DATA

Structure ID = AI
Structure Type = Inlet Box

# of Openings	=	1
Invert Elev.	=	553.59 ft
Orifice Area	=	6.2500 sq.ft
Orifice Coeff	=	.600
Weir Length	=	10.00 ft
Weir Coeff.	=	3.000
K, Submerged	=	.000
K, Reverse	=	1.000
Kb,Barrel	=	.000000 (per ft of full flow)
Barrel Length	=	.00 ft
Mannings n	=	.0000

Structure ID = SL
Structure Type = Orifice-Area

# of Openings	=	1
Invert Elev.	=	548.70 ft
Area	=	2.0000 sq.ft
Top of Orifice	=	550.70 ft
Datum Elev.	=	549.70 ft
Orifice Coeff.	=	.600

Structure ID = LS
Structure Type = Weir-Rectangular

# of Openings	=	1
Crest Elev.	=	548.70 ft
Weir Length	=	1.00 ft
Weir Coeff.	=	3.000000

Weir TW effects (Use adjustment equation)

File.... C:\MY DOCUMENTS\CHERRYWOOD.PPW
Title... Cherrywood Parc Outflow Structure

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels	=	1
Barrel Diameter	=	3.0000 ft
Upstream Invert	=	548.70 ft
Dnstream Invert	=	547.80 ft
Horiz. Length	=	50.57 ft
Barrel Length	=	50.58 ft
Barrel Slope	=	.01780 ft/ft

OUTLET CONTROL DATA...

Mannings n	=	.0130
Ke	=	.5000 (forward entrance loss)
Kb	=	.007228 (per ft of full flow)
Kr	=	.5000 (reverse entrance loss)
HW Convergence	=	.100 +/- ft

INLET CONTROL DATA

Equation form	=	1
Inlet Control K	=	.0078
Inlet Control M	=	2.0000
Inlet Control c	=	.02920
Inlet Control Y	=	.7400
T1 ratio (HW/D)	=	1.127
T2 ratio (HW/D)	=	1.198
Slope Factor	=	-.500

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...
At T1 Elev = 552.08 ft ---> Flow = 42.85 cfs
At T2 Elev = 552.29 ft ---> Flow = 48.97 cfs

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

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

Maximum Iterations	=	15
Min. TW tolerance	=	.10 ft
Max. TW tolerance	=	.10 ft
Min. HW tolerance	=	.10 ft
Max. HW tolerance	=	.10 ft
Min. Q tolerance	=	.10 cfs
Max. Q tolerance	=	.10 cfs

File.... C:\MY DOCUMENTS\CHERRYWOOD.PPW
Title... Cherrywood Parc Outflow Structure

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

WS Elev. Elev. ft	Total Q Q cfs	TW Elev ft	Converge Error +/-ft	Notes Contributing Structures
548.70	.00	Free Outfall		(no Q: AI,SL,LS,CV)
549.00	.17	Free Outfall		LS,CV (no Q: AI,SL)
549.30	.78	Free Outfall		LS,CV (no Q: AI,SL)
549.60	1.97	Free Outfall		LS,CV (no Q: AI,SL)
549.90	3.05	Free Outfall		LS,CV (no Q: AI,SL)
550.20	4.30	Free Outfall		LS,CV (no Q: AI,SL)
550.50	5.72	Free Outfall		LS,CV (no Q: AI,SL)
550.80	7.86	Free Outfall		SL,CV (no Q: AI,LS)
551.10	9.05	Free Outfall		SL,CV (no Q: AI,LS)
551.40	10.57	Free Outfall		SL,CV (no Q: AI,LS)
551.70	11.46	Free Outfall		SL,CV (no Q: AI,LS)
552.00	12.33	Free Outfall		SL,CV (no Q: AI,LS)
552.30	13.16	Free Outfall		SL,CV (no Q: AI,LS)
552.60	13.96	Free Outfall		SL,CV (no Q: AI,LS)
552.90	14.73	Free Outfall		SL,CV (no Q: AI,LS)
553.20	15.47	Free Outfall		SL,CV (no Q: AI,LS)
553.50	16.19	Free Outfall		SL,CV (no Q: AI,LS)
553.59	16.40	Free Outfall		SL,CV (no Q: AI,LS)
553.80	19.33	Free Outfall		AI,SL,CV (no Q: LS)
554.10	26.90	Free Outfall		AI,SL,CV (no Q: LS)
554.40	37.05	Free Outfall		AI,SL,CV (no Q: LS)
554.70	46.25	Free Outfall		AI,SL,CV (no Q: LS)
555.00	50.16	Free Outfall		AI,SL,CV (no Q: LS)
555.30	54.01	Free Outfall		AI,SL,CV (no Q: LS)
555.60	66.03	Free Outfall		AI,CV (no Q: SL,LS)
555.90	69.69	Free Outfall		AI,CV (no Q: SL,LS)
556.00	70.86	Free Outfall		AI,CV (no Q: SL,LS)

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - CHERRYWOOD IN A 15YR
Outflow HYG file = NONE STORED - CHERRYWOOD OUT A 15YR

Pond Node Data = CHERRYWOOD
Pond Volume Data = CHERRYWOOD
Pond Outlet Data = CHERRY

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	548.70 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	63.37 cfs	at	20.00 min
Peak Outflow	=	16.08 cfs	at	35.00 min
Peak Elevation	=	553.46 ft		
Peak Storage	=	53358 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	76069
- Infiltration	=	0
- HYG Vol OUT	=	76068
- Retained Vol	=	0
Unrouted Vol	=	-1 cu.ft (.001% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = CHERRYWOOD OUT
HYG Tag = A 15YR

Peak Discharge =	16.08 cfs
Time to Peak =	35.00 min
HYG Volume =	76068 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.22	.62	1.14	1.79
5.00	2.26	2.73	3.23	3.72	4.27
10.00	4.91	5.61	6.66	7.82	8.50
15.00	9.24	10.15	10.87	11.45	12.01
20.00	12.58	13.12	13.58	14.01	14.37
25.00	14.70	14.98	15.22	15.44	15.61
30.00	15.76	15.88	15.97	16.04	16.07
35.00	16.08	16.07	16.03	15.96	15.87
40.00	15.75	15.62	15.49	15.36	15.22
45.00	15.09	14.95	14.82	14.69	14.55
50.00	14.41	14.27	14.14	14.00	13.86
55.00	13.72	13.58	13.44	13.31	13.17
60.00	13.03	12.89	12.75	12.61	12.47
65.00	12.33	12.19	12.04	11.90	11.76
70.00	11.62	11.48	11.33	11.19	11.04
75.00	10.90	10.76	10.62	10.42	10.18
80.00	9.95	9.72	9.50	9.28	9.07
85.00	8.89	8.73	8.56	8.40	8.24
90.00	8.09	7.94	7.72	7.45	7.19
95.00	6.93	6.69	6.45	6.22	6.00
100.00	5.79	5.62	5.48	5.35	5.21
105.00	5.09	4.96	4.84	4.72	4.60
110.00	4.49	4.38	4.27	4.17	4.07
115.00	3.97	3.88	3.78	3.69	3.61
120.00	3.52	3.44	3.35	3.27	3.20
125.00	3.12	3.05	2.95	2.86	2.77
130.00	2.69	2.61	2.53	2.45	2.37
135.00	2.30	2.23	2.16	2.09	2.03
140.00	1.97	1.84	1.72	1.61	1.51
145.00	1.41	1.32	1.24	1.16	1.08
150.00	1.01	.95	.89	.83	.77
155.00	.71	.64	.59	.54	.49
160.00	.44	.41	.37	.34	.31

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.28	.26	.23	.21	.19
170.00	.18	.15	.12	.10	.09
175.00	.07	.06	.05	.04	.03
180.00	.03	.02	.02	.02	.01
185.00	.01	.01	.01	.01	.01
190.00	.00	.00	.00	.00	

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - CHERRYWOOD IN B 25YR
Outflow HYG file = NONE STORED - CHERRYWOOD OUT B 25YR

Pond Node Data = CHERRYWOOD
Pond Volume Data = CHERRYWOOD
Pond Outlet Data = CHERRY

No Infiltration

INITIAL CONDITION5

Starting WS Elev	=	548.70 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	78.33 cfs	at	20.00 min
Peak Outflow	=	26.79 cfs	at	33.00 min
Peak Elevation	=	554.10 ft		
Peak Storage	=	64953 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	94000
- Infiltration	=	0
- HYG Vol OUT	=	93999
- Retained Vol	=	0
Unrouted Vol	=	-1 cu.ft (.001% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = CHERRYWOOD OUT
HYG Tag = B 25YR

Peak Discharge =	26.79 cfs
Time to Peak =	33.00 min
HYG Volume =	93999 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.26	.75	1.34	2.05
5.00	2.53	3.10	3.63	4.24	4.96
10.00	5.77	7.03	8.13	8.90	9.88
15.00	10.78	11.43	12.06	12.70	13.34
20.00	13.98	14.57	15.09	15.56	15.97
25.00	16.33	17.83	19.50	21.82	23.65
30.00	25.03	25.99	26.56	26.79	26.68
35.00	26.28	25.59	24.66	23.49	22.10
40.00	20.51	19.08	18.21	17.38	16.59
45.00	16.30	16.17	16.04	15.91	15.77
50.00	15.64	15.51	15.38	15.24	15.11
55.00	14.98	14.84	14.71	14.57	14.43
60.00	14.30	14.16	14.03	13.89	13.75
65.00	13.61	13.47	13.33	13.20	13.06
70.00	12.91	12.77	12.63	12.49	12.36
75.00	12.21	12.07	11.93	11.78	11.64
80.00	11.51	11.36	11.21	11.07	10.93
85.00	10.79	10.65	10.46	10.22	9.99
90.00	9.76	9.54	9.32	9.11	8.93
95.00	8.76	8.59	8.43	8.27	8.12
100.00	7.96	7.78	7.50	7.23	6.98
105.00	6.73	6.49	6.26	6.04	5.82
110.00	5.65	5.51	5.37	5.24	5.11
115.00	4.98	4.86	4.74	4.62	4.51
120.00	4.40	4.29	4.18	4.09	3.99
125.00	3.89	3.80	3.71	3.62	3.54
130.00	3.45	3.37	3.29	3.21	3.13
135.00	3.06	2.97	2.88	2.79	2.70
140.00	2.62	2.54	2.46	2.39	2.31
145.00	2.24	2.17	2.11	2.04	1.98
150.00	1.87	1.75	1.63	1.53	1.43
155.00	1.34	1.25	1.17	1.10	1.02
160.00	.96	.90	.84	.79	.72

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.65	.60	.54	.50	.45
170.00	.41	.38	.34	.31	.28
175.00	.26	.24	.22	.20	.18
180.00	.16	.13	.11	.09	.07
185.00	.06	.05	.04	.04	.03
190.00	.02	.02	.02	.01	.01
195.00	.01	.01	.01	.01	.00
200.00	.00	.00	.00		

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - CHERRYWOOD IN C 100Y
Outflow HYG file = NONE STORED - CHERRYWOOD OUT C 100Y

Pond Node Data = CHERRYWOOD
Pond Volume Data = CHERRYWOOD
Pond Outlet Data = CHERRY

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	548.70 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	110.87 cfs	at	20.00 min
Peak Outflow	=	50.13 cfs	at	31.00 min
Peak Elevation	=	555.00 ft		
Peak Storage	=	82643 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	133040
- Infiltration	=	0
- HYG Vol OUT	=	133039
- Retained Vol	=	0
Unrouted Vol	=	-1 cu.ft (.001% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = CHERRYWOOD OUT
HYG Tag = C 100Y

Peak Discharge =	50.13 cfs
Time to Peak =	31.00 min
HYG Volume =	133039 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.33	.96	1.79	2.42
5.00	3.10	3.75	4.53	5.45	6.81
10.00	8.17	9.12	10.37	11.22	11.99
15.00	12.77	13.54	14.30	15.06	15.81
20.00	17.32	23.00	29.94	36.73	41.68
25.00	45.65	47.31	48.36	49.15	49.71
30.00	50.03	50.13	50.01	49.69	49.18
35.00	48.47	47.57	46.51	43.92	40.73
40.00	37.32	33.58	30.18	27.13	24.94
45.00	22.97	21.16	19.50	18.54	17.69
50.00	16.89	16.35	16.22	16.09	15.96
55.00	15.83	15.69	15.56	15.43	15.30
60.00	15.16	15.03	14.89	14.76	14.62
65.00	14.49	14.35	14.21	14.08	13.94
70.00	13.80	13.66	13.52	13.39	13.25
75.00	13.11	12.97	12.83	12.69	12.55
80.00	12.41	12.27	12.12	11.98	11.84
85.00	11.70	11.56	11.42	11.27	11.12
90.00	10.98	10.84	10.70	10.56	10.32
95.00	10.08	9.85	9.62	9.40	9.19
100.00	8.99	8.82	8.66	8.49	8.33
105.00	8.18	8.02	7.87	7.60	7.33
110.00	7.07	6.82	6.58	6.35	6.12
115.00	5.90	5.70	5.56	5.42	5.29
120.00	5.16	5.03	4.91	4.78	4.67
125.00	4.55	4.44	4.33	4.22	4.12
130.00	4.02	3.93	3.84	3.74	3.65
135.00	3.57	3.48	3.40	3.32	3.24
140.00	3.16	3.09	3.00	2.91	2.82
145.00	2.74	2.65	2.57	2.49	2.41
150.00	2.34	2.27	2.20	2.13	2.07
155.00	2.00	1.91	1.79	1.68	1.57
160.00	1.47	1.37	1.28	1.20	1.12

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	1.05	.98	.92	.86	.81
170.00	.74	.68	.62	.56	.51
175.00	.47	.43	.39	.36	.32
180.00	.30	.27	.25	.22	.20
185.00	.19	.17	.14	.12	.10
190.00	.08	.07	.06	.05	.04
195.00	.03	.03	.02	.02	.02
200.00	.01	.01	.01	.01	.01
205.00	.00	.00	.00	.00	

POND7

Reanalysis of The Villages at Hutchings Farm Basin

15, 25 and 100 Year 20 Minute Design Storms

Table of Contents

HYG file = C:\HAESTAD\PPKW\5AMPLE\HUTCH15.HYG
HYG ID = 15 Year Inflow
HYG Tag = 15YR

Peak Discharge =	127.62 cfs
Time to Peak =	20.00 min
HYG Volume =	153141 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	12.76	25.52	38.29	51.05
10.00	63.81	76.57	89.33	102.09	114.86
20.00	127.62	114.86	102.09	89.33	76.57
30.00	63.81	51.05	38.29	25.52	12.76
40.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
330.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
400.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\HAESTAD\PPKW\SAMPLE\HUTCH25.HYG
HYG ID = 25 Year Inflow
HYG Tag = 25 YR

Peak Discharge =	157.58 cfs
Time to Peak =	20.00 min
HYG Volume =	189093 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	15.76	31.52	47.27	63.03
10.00	78.79	94.55	110.30	126.06	141.82
20.00	157.58	141.82	126.06	110.30	94.55
30.00	78.79	63.03	47.27	31.52	15.76
40.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
330.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
400.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\HAESTAD\PPKW\SAMPLE\HUTCH100.HYG
HYG ID = 100 Year Inflow
HYG Tag = 100YR

Peak Discharge = 201.58 cfs
Time to Peak = 20.00 min
HYG Volume = 241896 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	20.16	40.32	60.47	80.63
10.00	100.79	120.95	141.11	161.26	181.42
20.00	201.58	181.42	161.26	141.11	120.95
30.00	100.79	80.63	60.47	40.32	20.16
40.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
330.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
400.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
600.00	.00				

File.... C:\HAESTAD\PPKW\SAMPLE\HUTCH.PPW

POND VOLUME CALCULATIONS

Planimeter scale: 1.00 ft/in

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (cu.ft)	Volume Sum (cu.ft)
554.00	39466.000	.9060	.0000	0	0
556.00	46295.000	1.0628	2.9501	85670	85670
558.00	53388.000	1.2256	3.4297	99599	185269
560.00	60864.000	1.3972	3.9315	114170	299439
561.00	65461.000	1.5028	4.3491	63149	362588

POND VOLUME EQUATIONS

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

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

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

File.... C:\HAESTAD\PPKW\SAMPLE\HUTCH.PPW
Title... Hutch Outfall Structure

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 554.00 ft
Increment = .10 ft
Max. Elev.= 560.00 ft

****
OUTLET CONNECTIVITY
****

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

Structure	No.		Outfall	E1, ft	E2, ft
Stand Pipe	GI	--->	TW	558.000	560.000
Orifice-Area	SL	--->	TW	554.000	560.000

TW SETUP, DS Channel

File.... C:\HAESTAD\PPKW\SAMPLE\HUTCH.PPW
Title... Hutch Outfall Structure

OUTLET STRUCTURE INPUT DATA

Structure ID = GI
Structure Type = Stand Pipe

# of Openings	=	1
Invert Elev.	=	558.00 ft
Diameter	=	5.5000 ft
Orifice Area	=	23.7583 sq.ft
Orifice Coeff.	=	3.000
Weir Length	=	17.28 ft
Weir Coeff.	=	.600
K, Submerged	=	.000
K, Reverse	=	1.000
Kb,Barrel	=	.000000 (per ft of full flow)
Barrel Length	=	.00 ft
Mannings n	=	.0000

Structure ID = SL
Structure Type = Orifice-Area

# of Openings	=	1
Invert Elev.	=	554.00 ft
Area	=	2.0000 sq.ft
Top of Orifice	=	556.00 ft
Datum Elev.	=	555.00 ft
Orifice Coeff.	=	.600

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

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

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

File.... C:\HAESTAD\PPKW\SAMPLE\HUTCH.PPW
Title... Hutch Outfall Structure

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

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
554.00	.00	Free Outfall		SL
554.10	.48	Free Outfall		SL
554.20	.96	Free Outfall		SL
554.30	1.44	Free Outfall		SL
554.40	1.93	Free Outfall		SL
554.50	2.41	Free Outfall		SL
554.60	2.89	Free Outfall		SL
554.70	3.37	Free Outfall		SL
554.80	3.85	Free Outfall		SL
554.90	4.33	Free Outfall		SL
555.00	4.81	Free Outfall		SL
555.10	5.29	Free Outfall		SL
555.20	5.78	Free Outfall		SL
555.30	6.26	Free Outfall		SL
555.40	6.74	Free Outfall		SL
555.50	7.22	Free Outfall		SL
555.60	7.70	Free Outfall		SL
555.70	8.18	Free Outfall		SL
555.80	8.66	Free Outfall		SL
555.90	9.14	Free Outfall		SL
556.00	9.63	Free Outfall		SL
556.10	10.10	Free Outfall		SL
556.20	10.54	Free Outfall		SL
556.30	10.98	Free Outfall		SL
556.40	11.39	Free Outfall		SL
556.50	11.79	Free Outfall		SL
556.60	12.18	Free Outfall		SL
556.70	12.55	Free Outfall		SL
556.80	12.91	Free Outfall		SL
556.90	13.27	Free Outfall		SL
557.00	13.61	Free Outfall		SL
557.10	13.95	Free Outfall		SL
557.20	14.28	Free Outfall		SL
557.30	14.60	Free Outfall		SL
557.40	14.91	Free Outfall		SL
557.50	15.22	Free Outfall		SL
557.60	15.52	Free Outfall		SL
557.70	15.82	Free Outfall		SL
557.80	16.11	Free Outfall		SL

File.... C:\HAESTAD\PPKW\SAMPLE\HUTCH.PPW
Title... Hutch Outfall Structure

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
557.90	16.39	Free Outfall		SL
558.00	16.67	Free Outfall		GI +SL
558.10	17.28	Free Outfall		GI +SL
558.20	18.15	Free Outfall		GI +SL
558.30	19.19	Free Outfall		GI +SL
558.40	20.37	Free Outfall		GI +SL
558.50	21.67	Free Outfall		GI +SL
558.60	23.08	Free Outfall		GI +SL
558.70	24.59	Free Outfall		GI +SL
558.80	26.18	Free Outfall		GI +SL
558.90	27.86	Free Outfall		GI +SL
559.00	29.62	Free Outfall		GI +SL
559.10	31.45	Free Outfall		GI +SL
559.20	33.36	Free Outfall		GI +SL
559.30	35.33	Free Outfall		GI +SL
559.40	37.37	Free Outfall		GI +SL
559.50	39.47	Free Outfall		GI +SL
559.60	41.63	Free Outfall		GI +SL
559.70	43.85	Free Outfall		GI +SL
559.80	46.13	Free Outfall		GI +SL
559.90	48.46	Free Outfall		GI +SL
560.00	50.85	Free Outfall		GI +SL

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\HAESTAD\PPKW\SAMPLE\
Inflow HYG file = NONE STORED - HUTCH LAKE IN A 15YR
Outflow HYG file = NONE STORED - HUTCH LAKE OUT A 15YR

Pond Node Data = HUTCH LAKE
Pond Volume Data = HUTCH LAKE
Pond Outlet Data = LAKE OUTFALL

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	554.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	127.62 cfs	at	20.00 min
Peak Outflow	=	13.75 cfs	at	38.00 min
Peak Elevation	=	557.04 ft		
Peak Storage	=	135796 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	153142
- Infiltration	=	0
- HYG Vol OUT	=	153117
- Retained Vol	=	24
Unrouted Vol	=	- cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = HUTCH LAKE OUT
HYG Tag = A 15YR

Peak Discharge =	13.75 cfs
Time to Peak =	38.00 min
HYG Volume =	153117 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.02	.09	.21	.37
5.00	.57	.82	1.11	1.45	1.82
10.00	2.24	2.69	3.18	3.71	4.27
15.00	4.86	5.49	6.15	6.84	7.56
20.00	8.31	9.04	9.72	10.32	10.85
25.00	11.32	11.73	12.09	12.40	12.68
30.00	12.92	13.13	13.30	13.45	13.56
35.00	13.65	13.71	13.75	13.75	13.74
40.00	13.70	13.64	13.58	13.53	13.47
45.00	13.42	13.36	13.30	13.25	13.19
50.00	13.13	13.08	13.02	12.97	12.91
55.00	12.85	12.79	12.74	12.68	12.62
60.00	12.57	12.51	12.45	12.40	12.34
65.00	12.28	12.22	12.17	12.11	12.05
70.00	11.99	11.94	11.88	11.82	11.76
75.00	11.70	11.65	11.59	11.53	11.47
80.00	11.42	11.36	11.30	11.24	11.18
85.00	11.12	11.06	11.01	10.95	10.89
90.00	10.83	10.77	10.71	10.65	10.59
95.00	10.53	10.47	10.41	10.35	10.29
100.00	10.24	10.18	10.12	10.06	10.00
105.00	9.94	9.88	9.82	9.76	9.70
110.00	9.64	9.58	9.52	9.46	9.40
115.00	9.34	9.29	9.23	9.17	9.11
120.00	9.05	9.00	8.94	8.89	8.83
125.00	8.77	8.72	8.66	8.61	8.55
130.00	8.50	8.45	8.39	8.34	8.29
135.00	8.23	8.18	8.13	8.08	8.03
140.00	7.97	7.92	7.87	7.82	7.77
145.00	7.72	7.67	7.62	7.58	7.53
150.00	7.48	7.43	7.38	7.33	7.29
155.00	7.24	7.19	7.15	7.10	7.05
160.00	7.01	6.96	6.92	6.87	6.83

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	6.78	6.74	6.70	6.65	6.61
170.00	6.57	6.52	6.48	6.44	6.40
175.00	6.35	6.31	6.27	6.23	6.19
180.00	6.15	6.11	6.07	6.03	5.99
185.00	5.95	5.91	5.87	5.83	5.79
190.00	5.75	5.72	5.68	5.64	5.60
195.00	5.57	5.53	5.49	5.46	5.42
200.00	5.38	5.35	5.31	5.28	5.24
205.00	5.21	5.17	5.14	5.10	5.07
210.00	5.03	5.00	4.97	4.93	4.90
215.00	4.87	4.84	4.80	4.77	4.74
220.00	4.71	4.67	4.64	4.61	4.58
225.00	4.55	4.52	4.49	4.46	4.43
230.00	4.40	4.37	4.34	4.31	4.28
235.00	4.25	4.22	4.19	4.16	4.14
240.00	4.11	4.08	4.05	4.02	4.00
245.00	3.97	3.94	3.92	3.89	3.86
250.00	3.84	3.81	3.78	3.76	3.73
255.00	3.71	3.68	3.66	3.63	3.61
260.00	3.58	3.56	3.53	3.51	3.48
265.00	3.46	3.44	3.41	3.39	3.37
270.00	3.34	3.32	3.30	3.27	3.25
275.00	3.23	3.21	3.18	3.16	3.14
280.00	3.12	3.10	3.08	3.06	3.03
285.00	3.01	2.99	2.97	2.95	2.93
290.00	2.91	2.89	2.87	2.85	2.83
295.00	2.81	2.79	2.77	2.75	2.73
300.00	2.71	2.69	2.68	2.66	2.64
305.00	2.62	2.60	2.58	2.57	2.55
310.00	2.53	2.51	2.50	2.48	2.46
315.00	2.44	2.43	2.41	2.39	2.38
320.00	2.36	2.34	2.33	2.31	2.29
325.00	2.28	2.26	2.25	2.23	2.21
330.00	2.20	2.18	2.17	2.15	2.14
335.00	2.12	2.11	2.09	2.08	2.06
340.00	2.05	2.03	2.02	2.01	1.99
345.00	1.98	1.96	1.95	1.94	1.92
350.00	1.91	1.90	1.88	1.87	1.86
355.00	1.84	1.83	1.82	1.80	1.79
360.00	1.78	1.77	1.75	1.74	1.73
365.00	1.72	1.70	1.69	1.68	1.67
370.00	1.66	1.64	1.63	1.62	1.61
375.00	1.60	1.59	1.58	1.56	1.55
380.00	1.54	1.53	1.52	1.51	1.50
385.00	1.49	1.48	1.47	1.46	1.45
390.00	1.44	1.43	1.42	1.41	1.40
395.00	1.39	1.38	1.37	1.36	1.35

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	1.34	1.33	1.32	1.31	1.30
405.00	1.29	1.28	1.27	1.26	1.25
410.00	1.24	1.24	1.23	1.22	1.21
415.00	1.20	1.19	1.18	1.18	1.17
420.00	1.16	1.15	1.14	1.13	1.13
425.00	1.12	1.11	1.10	1.09	1.09
430.00	1.08	1.07	1.06	1.06	1.05
435.00	1.04	1.03	1.03	1.02	1.01
440.00	1.00	1.00	.99	.98	.98
445.00	.97	.96	.95	.95	.94
450.00	.93	.93	.92	.91	.91
455.00	.90	.89	.89	.88	.88
460.00	.87	.86	.86	.85	.84
465.00	.84	.83	.83	.82	.81
470.00	.81	.80	.80	.79	.79
475.00	.78	.77	.77	.76	.76
480.00	.75	.75	.74	.74	.73
485.00	.73	.72	.72	.71	.70
490.00	.70	.69	.69	.68	.68
495.00	.67	.67	.67	.66	.66
500.00	.65	.65	.64	.64	.63
505.00	.63	.62	.62	.61	.61
510.00	.61	.60	.60	.59	.59
515.00	.58	.58	.58	.57	.57
520.00	.56	.56	.56	.55	.55
525.00	.54	.54	.54	.53	.53
530.00	.52	.52	.52	.51	.51
535.00	.51	.50	.50	.49	.49
540.00	.49	.48	.48	.48	.47
545.00	.47	.47	.46	.46	.46
550.00	.45	.45	.45	.44	.44
555.00	.44	.43	.43	.43	.42
560.00	.42	.42	.42	.41	.41
565.00	.41	.40	.40	.40	.39
570.00	.39	.39	.39	.38	.38
575.00	.38	.38	.37	.37	.37
580.00	.36	.36	.36	.36	.35
585.00	.35	.35	.35	.34	.34
590.00	.34	.34	.33	.33	.33
595.00	.33	.32	.32	.32	.32
600.00	.31	.31	.31	.31	.31
605.00	.30	.30	.30	.30	.29
610.00	.29	.29	.29	.29	.28
615.00	.28	.28	.28	.28	.27
620.00	.27	.27	.27	.27	.26
625.00	.26	.26	.26	.26	.25
630.00	.25	.25	.25	.25	.25

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
635.00	.24	.24	.24	.24	.24
640.00	.24	.23	.23	.23	.23
645.00	.23	.23	.22	.22	.22
650.00	.22	.22	.22	.21	.21
655.00	.21	.21	.21	.21	.20
660.00	.20	.20	.20	.20	.20
665.00	.20	.19	.19	.19	.19
670.00	.19	.19	.19	.18	.18
675.00	.18	.18	.18	.18	.18
680.00	.18	.17	.17	.17	.17
685.00	.17	.17	.17	.17	.16
690.00	.16	.16	.16	.16	.16
695.00	.16	.16	.16	.15	.15
700.00	.15	.15	.15	.15	.15
705.00	.15	.15	.14	.14	.14
710.00	.14	.14	.14	.14	.14
715.00	.14	.14	.13	.13	.13
720.00	.13	.13	.13	.13	.13
725.00	.13	.13	.12	.12	.12
730.00	.12	.12	.12	.12	.12
735.00	.12	.12	.12	.12	.11
740.00	.11	.11	.11	.11	.11
745.00	.11	.11	.11	.11	.11
750.00	.11	.10	.10	.10	.10
755.00	.10	.10	.10	.10	.10
760.00	.10	.10	.10	.10	.10
765.00	.09	.09	.09	.09	.09
770.00	.09	.09	.09	.09	.09
775.00	.09	.09	.09	.09	.09
780.00	.08	.08	.08	.08	.08
785.00	.08	.08	.08	.08	.08
790.00	.08	.08	.08	.08	.08
795.00	.08	.08	.07	.07	.07
800.00	.07	.07	.07	.07	.07
805.00	.07	.07	.07	.07	.07
810.00	.07	.07	.07	.07	.07
815.00	.07	.07	.06	.06	.06
820.00	.06	.06	.06	.06	.06
825.00	.06	.06	.06	.06	.06
830.00	.06	.06	.06	.06	.06
835.00	.06	.06	.06	.06	.06
840.00	.05	.05	.05	.05	.05
845.00	.05	.05	.05	.05	.05
850.00	.05	.05	.05	.05	.05
855.00	.05	.05	.05	.05	.05
860.00	.05	.05	.05	.05	.05
865.00	.05	.05	.04	.04	.04

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
870.00	.04	.04	.04	.04	.04
875.00	.04	.04	.04	.04	.04
880.00	.04	.04	.04	.04	.04
885.00	.04	.04	.04	.04	.04
890.00	.04	.04	.04	.04	.04
895.00	.04	.04	.04	.04	.04
900.00	.04	.04	.03	.03	.03
905.00	.03	.03	.03	.03	.03
910.00	.03	.03	.03	.03	.03
915.00	.03	.03	.03	.03	.03
920.00	.03	.03	.03	.03	.03
925.00	.03	.03	.03	.03	.03
930.00	.03	.03	.03	.03	.03
935.00	.03	.03	.03	.03	.03
940.00	.03	.03	.03	.03	.03
945.00	.03	.03	.03	.02	.02
950.00	.02	.02	.02	.02	.02
955.00	.02	.02	.02	.02	.02
960.00	.02	.02	.02	.02	.02
965.00	.02	.02	.02	.02	.02
970.00	.02	.02	.02	.02	.02
975.00	.02	.02	.02	.02	.02
980.00	.02	.02	.02	.02	.02
985.00	.02	.02	.02	.02	.02
990.00	.02	.02	.02	.02	.02
995.00	.02	.02	.02	.02	.02
1000.00	.02	.02	.02	.02	.02
1005.00	.02	.02	.02	.02	.02
1010.00	.02	.02	.02	.02	.02
1015.00	.02	.02	.02	.01	.01
1020.00	.01	.01	.01	.01	.01
1025.00	.01	.01	.01	.01	.01
1030.00	.01	.01	.01	.01	.01
1035.00	.01	.01	.01	.01	.01
1040.00	.01	.01	.01	.01	.01
1045.00	.01	.01	.01	.01	.01
1050.00	.01	.01	.01	.01	.01
1055.00	.01	.01	.01	.01	.01
1060.00	.01	.01	.01	.01	.01
1065.00	.01	.01	.01	.01	.01
1070.00	.01	.01	.01	.01	.01
1075.00	.01	.01	.01	.01	.01
1080.00	.01	.01	.01	.01	.01
1085.00	.01	.01	.01	.01	.01
1090.00	.01	.01	.01	.01	.01
1095.00	.01	.01	.01	.01	.01
1100.00	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1105.00	.01	.01	.01	.01	.01
1110.00	.01	.01	.01	.01	.01
1115.00	.01	.01	.01	.01	.01
1120.00	.01	.01	.01	.01	.01
1125.00	.01	.01	.01	.01	.01
1130.00	.01	.01	.01	.01	.01
1135.00	.01	.01	.01	.01	.01
1140.00	.01	.01	.01	.01	.01
1145.00	.01	.01	.01	.01	.01
1150.00	.01	.01	.01	.01	.01
1155.00	.01	.01	.01	.01	.01
1160.00	.01	.01	.01	.01	.01
1165.00	.01	.01	.01	.01	.00
1170.00	.00	.00	.00	.00	.00
1175.00	.00	.00	.00	.00	.00
1180.00	.00	.00	.00	.00	.00
1185.00	.00	.00	.00	.00	.00
1190.00	.00	.00	.00	.00	.00
1195.00	.00	.00	.00	.00	.00
1200.00	.00	.00	.00	.00	.00
1205.00	.00	.00	.00	.00	.00
1210.00	.00	.00	.00	.00	.00
1215.00	.00	.00	.00	.00	.00
1220.00	.00	.00	.00	.00	.00
1225.00	.00	.00	.00	.00	.00
1230.00	.00	.00	.00	.00	.00
1235.00	.00	.00	.00	.00	.00

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\HAESTAD\PPKW\SAMPLE\
Inflow HYG file = NONE STORED - HUTCH LAKE IN B 25YR
Outflow HYG file = NONE STORED - HUTCH LAKE OUT B 25YR

Pond Node Data = HUTCH LAKE
Pond Volume Data = HUTCH LAKE
Pond Outlet Data = LAKE OUTFALL

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	554.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	157.58 cfs	at	20.00 min
Peak Outflow	=	15.78 cfs	at	38.00 min
Peak Elevation	=	557.69 ft		
Peak Storage	=	168697 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	189094
- Infiltration	=	0
- HYG Vol OUT	=	189069
- Retained Vol	=	24
Unrouted Vol	=	-1 cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = HUTCH LAKE OUT
HYG Tag = B 25YR

Peak Discharge =	15.78 cfs
Time to Peak =	38.00 min
HYG Volume =	189069 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.03	.11	.26	.45
5.00	.71	1.01	1.37	1.78	2.24
10.00	2.75	3.30	3.90	4.54	5.23
15.00	5.95	6.71	7.51	8.34	9.21
20.00	10.10	10.90	11.60	12.21	12.75
25.00	13.23	13.65	14.02	14.35	14.63
30.00	14.88	15.10	15.28	15.44	15.56
35.00	15.66	15.72	15.76	15.78	15.76
40.00	15.72	15.67	15.62	15.56	15.51
45.00	15.46	15.40	15.35	15.29	15.24
50.00	15.19	15.13	15.08	15.02	14.97
55.00	14.92	14.86	14.81	14.75	14.70
60.00	14.64	14.59	14.53	14.48	14.42
65.00	14.37	14.32	14.26	14.20	14.15
70.00	14.09	14.04	13.98	13.93	13.87
75.00	13.82	13.76	13.71	13.65	13.60
80.00	13.54	13.48	13.43	13.37	13.31
85.00	13.26	13.20	13.14	13.09	13.03
90.00	12.98	12.92	12.86	12.81	12.75
95.00	12.69	12.64	12.58	12.52	12.46
100.00	12.41	12.35	12.29	12.24	12.18
105.00	12.12	12.06	12.00	11.95	11.89
110.00	11.83	11.77	11.72	11.66	11.60
115.00	11.54	11.48	11.43	11.37	11.31
120.00	11.25	11.19	11.13	11.07	11.02
125.00	10.96	10.90	10.84	10.78	10.72
130.00	10.66	10.60	10.55	10.49	10.43
135.00	10.37	10.31	10.25	10.19	10.13
140.00	10.07	10.01	9.95	9.89	9.83
145.00	9.77	9.71	9.65	9.59	9.53
150.00	9.47	9.41	9.35	9.30	9.24
155.00	9.18	9.12	9.07	9.01	8.95
160.00	8.90	8.84	8.78	8.73	8.67

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	8.62	8.56	8.51	8.46	8.40
170.00	8.35	8.30	8.24	8.19	8.14
175.00	8.09	8.04	7.98	7.93	7.88
180.00	7.83	7.78	7.73	7.68	7.63
185.00	7.58	7.54	7.49	7.44	7.39
190.00	7.34	7.30	7.25	7.20	7.16
195.00	7.11	7.06	7.02	6.97	6.93
200.00	6.88	6.84	6.79	6.75	6.70
205.00	6.66	6.62	6.57	6.53	6.49
210.00	6.45	6.40	6.36	6.32	6.28
215.00	6.24	6.20	6.16	6.11	6.07
220.00	6.03	5.99	5.96	5.92	5.88
225.00	5.84	5.80	5.76	5.72	5.69
230.00	5.65	5.61	5.57	5.54	5.50
235.00	5.46	5.43	5.39	5.35	5.32
240.00	5.28	5.25	5.21	5.18	5.14
245.00	5.11	5.07	5.04	5.01	4.97
250.00	4.94	4.91	4.87	4.84	4.81
255.00	4.78	4.74	4.71	4.68	4.65
260.00	4.62	4.59	4.56	4.52	4.49
265.00	4.46	4.43	4.40	4.37	4.34
270.00	4.31	4.29	4.26	4.23	4.20
275.00	4.17	4.14	4.11	4.09	4.06
280.00	4.03	4.00	3.98	3.95	3.92
285.00	3.89	3.87	3.84	3.82	3.79
290.00	3.76	3.74	3.71	3.69	3.66
295.00	3.64	3.61	3.59	3.56	3.54
300.00	3.51	3.49	3.47	3.44	3.42
305.00	3.39	3.37	3.35	3.32	3.30
310.00	3.28	3.26	3.23	3.21	3.19
315.00	3.17	3.15	3.12	3.10	3.08
320.00	3.06	3.04	3.02	3.00	2.98
325.00	2.95	2.93	2.91	2.89	2.87
330.00	2.85	2.83	2.81	2.79	2.77
335.00	2.76	2.74	2.72	2.70	2.68
340.00	2.66	2.64	2.62	2.61	2.59
345.00	2.57	2.55	2.53	2.52	2.50
350.00	2.48	2.46	2.45	2.43	2.41
355.00	2.40	2.38	2.36	2.35	2.33
360.00	2.31	2.30	2.28	2.26	2.25
365.00	2.23	2.22	2.20	2.19	2.17
370.00	2.16	2.14	2.13	2.11	2.10
375.00	2.08	2.07	2.05	2.04	2.02
380.00	2.01	1.99	1.98	1.97	1.95
385.00	1.94	1.93	1.91	1.90	1.88
390.00	1.87	1.86	1.85	1.83	1.82
395.00	1.81	1.79	1.78	1.77	1.76

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	1.74	1.73	1.72	1.71	1.69
405.00	1.68	1.67	1.66	1.65	1.63
410.00	1.62	1.61	1.60	1.59	1.58
415.00	1.57	1.56	1.54	1.53	1.52
420.00	1.51	1.50	1.49	1.48	1.47
425.00	1.46	1.45	1.44	1.43	1.42
430.00	1.41	1.40	1.39	1.38	1.37
435.00	1.36	1.35	1.34	1.33	1.32
440.00	1.31	1.30	1.29	1.28	1.27
445.00	1.26	1.26	1.25	1.24	1.23
450.00	1.22	1.21	1.20	1.19	1.19
455.00	1.18	1.17	1.16	1.15	1.14
460.00	1.14	1.13	1.12	1.11	1.10
465.00	1.10	1.09	1.08	1.07	1.06
470.00	1.06	1.05	1.04	1.03	1.03
475.00	1.02	1.01	1.01	1.00	.99
480.00	.98	.98	.97	.96	.96
485.00	.95	.94	.94	.93	.92
490.00	.92	.91	.90	.90	.89
495.00	.88	.88	.87	.86	.86
500.00	.85	.85	.84	.83	.83
505.00	.82	.82	.81	.80	.80
510.00	.79	.79	.78	.78	.77
515.00	.76	.76	.75	.75	.74
520.00	.74	.73	.73	.72	.72
525.00	.71	.71	.70	.70	.69
530.00	.69	.68	.68	.67	.67
535.00	.66	.66	.65	.65	.64
540.00	.64	.63	.63	.62	.62
545.00	.62	.61	.61	.60	.60
550.00	.59	.59	.58	.58	.58
555.00	.57	.57	.56	.56	.56
560.00	.55	.55	.54	.54	.54
565.00	.53	.53	.52	.52	.52
570.00	.51	.51	.51	.50	.50
575.00	.50	.49	.49	.48	.48
580.00	.48	.47	.47	.47	.46
585.00	.46	.46	.45	.45	.45
590.00	.44	.44	.44	.43	.43
595.00	.43	.43	.42	.42	.42
600.00	.41	.41	.41	.40	.40
605.00	.40	.40	.39	.39	.39
610.00	.38	.38	.38	.38	.37
615.00	.37	.37	.36	.36	.36
620.00	.36	.35	.35	.35	.35
625.00	.34	.34	.34	.34	.33
630.00	.33	.33	.33	.32	.32

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
635.00	.32	.32	.32	.31	.31
640.00	.31	.31	.30	.30	.30
645.00	.30	.30	.29	.29	.29
650.00	.29	.28	.28	.28	.28
655.00	.28	.27	.27	.27	.27
660.00	.27	.26	.26	.26	.26
665.00	.26	.26	.25	.25	.25
670.00	.25	.25	.24	.24	.24
675.00	.24	.24	.24	.23	.23
680.00	.23	.23	.23	.23	.22
685.00	.22	.22	.22	.22	.22
690.00	.21	.21	.21	.21	.21
695.00	.21	.21	.20	.20	.20
700.00	.20	.20	.20	.19	.19
705.00	.19	.19	.19	.19	.19
710.00	.19	.18	.18	.18	.18
715.00	.18	.18	.18	.17	.17
720.00	.17	.17	.17	.17	.17
725.00	.17	.16	.16	.16	.16
730.00	.16	.16	.16	.16	.16
735.00	.15	.15	.15	.15	.15
740.00	.15	.15	.15	.15	.14
745.00	.14	.14	.14	.14	.14
750.00	.14	.14	.14	.14	.13
755.00	.13	.13	.13	.13	.13
760.00	.13	.13	.13	.13	.12
765.00	.12	.12	.12	.12	.12
770.00	.12	.12	.12	.12	.12
775.00	.12	.11	.11	.11	.11
780.00	.11	.11	.11	.11	.11
785.00	.11	.11	.11	.10	.10
790.00	.10	.10	.10	.10	.10
795.00	.10	.10	.10	.10	.10
800.00	.10	.10	.09	.09	.09
805.00	.09	.09	.09	.09	.09
810.00	.09	.09	.09	.09	.09
815.00	.09	.09	.08	.08	.08
820.00	.08	.08	.08	.08	.08
825.00	.08	.08	.08	.08	.08
830.00	.08	.08	.08	.08	.08
835.00	.07	.07	.07	.07	.07
840.00	.07	.07	.07	.07	.07
845.00	.07	.07	.07	.07	.07
850.00	.07	.07	.07	.07	.06
855.00	.06	.06	.06	.06	.06
860.00	.06	.06	.06	.06	.06
865.00	.06	.06	.06	.06	.06

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
870.00	.06	.06	.06	.06	.06
875.00	.06	.06	.05	.05	.05
880.00	.05	.05	.05	.05	.05
885.00	.05	.05	.05	.05	.05
890.00	.05	.05	.05	.05	.05
895.00	.05	.05	.05	.05	.05
900.00	.05	.05	.05	.05	.05
905.00	.04	.04	.04	.04	.04
910.00	.04	.04	.04	.04	.04
915.00	.04	.04	.04	.04	.04
920.00	.04	.04	.04	.04	.04
925.00	.04	.04	.04	.04	.04
930.00	.04	.04	.04	.04	.04
935.00	.04	.04	.04	.04	.03
940.00	.03	.03	.03	.03	.03
945.00	.03	.03	.03	.03	.03
950.00	.03	.03	.03	.03	.03
955.00	.03	.03	.03	.03	.03
960.00	.03	.03	.03	.03	.03
965.00	.03	.03	.03	.03	.03
970.00	.03	.03	.03	.03	.03
975.00	.03	.03	.03	.03	.03
980.00	.03	.03	.03	.03	.03
985.00	.02	.02	.02	.02	.02
990.00	.02	.02	.02	.02	.02
995.00	.02	.02	.02	.02	.02
1000.00	.02	.02	.02	.02	.02
1005.00	.02	.02	.02	.02	.02
1010.00	.02	.02	.02	.02	.02
1015.00	.02	.02	.02	.02	.02
1020.00	.02	.02	.02	.02	.02
1025.00	.02	.02	.02	.02	.02
1030.00	.02	.02	.02	.02	.02
1035.00	.02	.02	.02	.02	.02
1040.00	.02	.02	.02	.02	.02
1045.00	.02	.02	.02	.02	.02
1050.00	.02	.02	.02	.02	.02
1055.00	.01	.01	.01	.01	.01
1060.00	.01	.01	.01	.01	.01
1065.00	.01	.01	.01	.01	.01
1070.00	.01	.01	.01	.01	.01
1075.00	.01	.01	.01	.01	.01
1080.00	.01	.01	.01	.01	.01
1085.00	.01	.01	.01	.01	.01
1090.00	.01	.01	.01	.01	.01
1095.00	.01	.01	.01	.01	.01
1100.00	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1105.00	.01	.01	.01	.01	.01
1110.00	.01	.01	.01	.01	.01
1115.00	.01	.01	.01	.01	.01
1120.00	.01	.01	.01	.01	.01
1125.00	.01	.01	.01	.01	.01
1130.00	.01	.01	.01	.01	.01
1135.00	.01	.01	.01	.01	.01
1140.00	.01	.01	.01	.01	.01
1145.00	.01	.01	.01	.01	.01
1150.00	.01	.01	.01	.01	.01
1155.00	.01	.01	.01	.01	.01
1160.00	.01	.01	.01	.01	.01
1165.00	.01	.01	.01	.01	.01
1170.00	.01	.01	.01	.01	.01
1175.00	.01	.01	.01	.01	.01
1180.00	.01	.01	.01	.01	.01
1185.00	.01	.01	.01	.01	.01
1190.00	.01	.01	.01	.01	.01
1195.00	.01	.01	.01	.01	.01
1200.00	.01	.01	.01	.01	.01
1205.00	.01	.00	.00	.00	.00
1210.00	.00	.00	.00	.00	.00
1215.00	.00	.00	.00	.00	.00
1220.00	.00	.00	.00	.00	.00
1225.00	.00	.00	.00	.00	.00
1230.00	.00	.00	.00	.00	.00
1235.00	.00	.00	.00	.00	.00
1240.00	.00	.00	.00	.00	.00
1245.00	.00	.00	.00	.00	.00
1250.00	.00	.00	.00	.00	.00
1255.00	.00	.00	.00	.00	.00
1260.00	.00	.00	.00	.00	.00
1265.00	.00	.00	.00	.00	.00
1270.00	.00	.00	.00	.00	.00
1275.00	.00	.00			

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\HAESTAD\PPKW\SAMPLE\
Inflow HYG file = NONE STORED - HUTCH LAKE IN C 100Y
Outflow HYG file = NONE STORED - HUTCH LAKE OUT C 100Y

Pond Node Data = HUTCH LAKE
Pond Volume Data = HUTCH LAKE
Pond Outlet Data = LAKE OUTFALL

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	554.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	201.58 cfs	at	20.00 min
Peak Outflow	=	22.58 cfs	at	38.00 min
Peak Elevation	=	558.56 ft		
Peak Storage	=	215990 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	241896
- Infiltration	=	0
- HYG Vol OUT	=	241872
- Retained Vol	=	24
Unrouted Vol	=	-1 cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = HUTCH LAKE OUT
HYG Tag = C 100Y

Peak Discharge =	22.58 cfs
Time to Peak =	38.00 min
HYG Volume =	241872 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.04	.15	.33	.58
5.00	.90	1.29	1.75	2.27	2.85
10.00	3.49	4.19	4.95	5.75	6.61
15.00	7.51	8.46	9.46	10.45	11.40
20.00	12.30	13.12	13.84	14.47	15.03
25.00	15.53	15.97	16.36	16.74	17.47
30.00	18.36	19.25	20.11	20.86	21.49
35.00	21.99	22.35	22.54	22.58	22.47
40.00	22.21	21.87	21.55	21.25	20.95
45.00	20.65	20.36	20.10	19.84	19.58
50.00	19.33	19.09	18.87	18.66	18.44
55.00	18.23	18.04	17.87	17.70	17.53
60.00	17.36	17.22	17.10	16.99	16.87
65.00	16.76	16.66	16.61	16.55	16.50
70.00	16.45	16.40	16.35	16.29	16.24
75.00	16.19	16.14	16.08	16.03	15.98
80.00	15.92	15.87	15.82	15.76	15.71
85.00	15.66	15.60	15.55	15.50	15.44
90.00	15.39	15.34	15.28	15.23	15.17
95.00	15.12	15.07	15.01	14.96	14.90
100.00	14.85	14.79	14.74	14.69	14.63
105.00	14.58	14.52	14.47	14.41	14.36
110.00	14.30	14.25	14.19	14.14	14.08
115.00	14.03	13.97	13.92	13.86	13.80
120.00	13.75	13.69	13.64	13.58	13.53
125.00	13.47	13.41	13.36	13.30	13.25
130.00	13.19	13.13	13.08	13.02	12.96
135.00	12.91	12.85	12.79	12.74	12.68
140.00	12.62	12.57	12.51	12.45	12.39
145.00	12.34	12.28	12.22	12.16	12.11
150.00	12.05	11.99	11.93	11.88	11.82
155.00	11.76	11.70	11.64	11.59	11.53
160.00	11.47	11.41	11.35	11.29	11.24

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	11.18	11.12	11.06	11.00	10.94
170.00	10.88	10.82	10.77	10.71	10.65
175.00	10.59	10.53	10.47	10.41	10.35
180.00	10.29	10.23	10.17	10.12	10.06
185.00	9.99	9.93	9.87	9.81	9.76
190.00	9.70	9.64	9.58	9.52	9.46
195.00	9.40	9.34	9.28	9.22	9.17
200.00	9.11	9.05	9.00	8.94	8.88
205.00	8.83	8.77	8.72	8.66	8.61
210.00	8.55	8.50	8.44	8.39	8.34
215.00	8.28	8.23	8.18	8.13	8.08
220.00	8.02	7.97	7.92	7.87	7.82
225.00	7.77	7.72	7.67	7.62	7.57
230.00	7.52	7.48	7.43	7.38	7.33
235.00	7.28	7.24	7.19	7.14	7.10
240.00	7.05	7.01	6.96	6.92	6.87
245.00	6.83	6.78	6.74	6.69	6.65
250.00	6.61	6.56	6.52	6.48	6.44
255.00	6.39	6.35	6.31	6.27	6.23
260.00	6.19	6.15	6.11	6.07	6.03
265.00	5.99	5.95	5.91	5.87	5.83
270.00	5.79	5.75	5.71	5.68	5.64
275.00	5.60	5.56	5.53	5.49	5.45
280.00	5.42	5.38	5.35	5.31	5.27
285.00	5.24	5.20	5.17	5.13	5.10
290.00	5.07	5.03	5.00	4.97	4.93
295.00	4.90	4.87	4.83	4.80	4.77
300.00	4.74	4.70	4.67	4.64	4.61
305.00	4.58	4.55	4.52	4.49	4.46
310.00	4.43	4.40	4.37	4.34	4.31
315.00	4.28	4.25	4.22	4.19	4.16
320.00	4.13	4.11	4.08	4.05	4.02
325.00	4.00	3.97	3.94	3.92	3.89
330.00	3.86	3.84	3.81	3.78	3.76
335.00	3.73	3.71	3.68	3.66	3.63
340.00	3.61	3.58	3.56	3.53	3.51
345.00	3.48	3.46	3.44	3.41	3.39
350.00	3.37	3.34	3.32	3.30	3.27
355.00	3.25	3.23	3.21	3.18	3.16
360.00	3.14	3.12	3.10	3.08	3.05
365.00	3.03	3.01	2.99	2.97	2.95
370.00	2.93	2.91	2.89	2.87	2.85
375.00	2.83	2.81	2.79	2.77	2.75
380.00	2.73	2.71	2.69	2.68	2.66
385.00	2.64	2.62	2.60	2.58	2.57
390.00	2.55	2.53	2.51	2.49	2.48
395.00	2.46	2.44	2.43	2.41	2.39

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	2.38	2.36	2.34	2.33	2.31
405.00	2.29	2.28	2.26	2.24	2.23
410.00	2.21	2.20	2.18	2.17	2.15
415.00	2.14	2.12	2.11	2.09	2.08
420.00	2.06	2.05	2.03	2.02	2.01
425.00	1.99	1.98	1.96	1.95	1.94
430.00	1.92	1.91	1.90	1.88	1.87
435.00	1.86	1.84	1.83	1.82	1.80
440.00	1.79	1.78	1.77	1.75	1.74
445.00	1.73	1.72	1.70	1.69	1.68
450.00	1.67	1.66	1.64	1.63	1.62
455.00	1.61	1.60	1.59	1.58	1.56
460.00	1.55	1.54	1.53	1.52	1.51
465.00	1.50	1.49	1.48	1.47	1.46
470.00	1.45	1.44	1.43	1.42	1.41
475.00	1.40	1.39	1.38	1.37	1.36
480.00	1.35	1.34	1.33	1.32	1.31
485.00	1.30	1.29	1.28	1.27	1.26
490.00	1.25	1.24	1.24	1.23	1.22
495.00	1.21	1.20	1.19	1.18	1.18
500.00	1.17	1.16	1.15	1.14	1.13
505.00	1.13	1.12	1.11	1.10	1.09
510.00	1.09	1.08	1.07	1.06	1.06
515.00	1.05	1.04	1.03	1.03	1.02
520.00	1.01	1.00	1.00	.99	.98
525.00	.98	.97	.96	.95	.95
530.00	.94	.93	.93	.92	.91
535.00	.91	.90	.89	.89	.88
540.00	.88	.87	.86	.86	.85
545.00	.84	.84	.83	.83	.82
550.00	.81	.81	.80	.80	.79
555.00	.79	.78	.77	.77	.76
560.00	.76	.75	.75	.74	.74
565.00	.73	.73	.72	.71	.71
570.00	.70	.70	.69	.69	.68
575.00	.68	.67	.67	.66	.66
580.00	.66	.65	.65	.64	.64
585.00	.63	.63	.62	.62	.61
590.00	.61	.61	.60	.60	.59
595.00	.59	.58	.58	.58	.57
600.00	.57	.56	.56	.56	.55
605.00	.55	.54	.54	.54	.53
610.00	.53	.52	.52	.52	.51
615.00	.51	.51	.50	.50	.49
620.00	.49	.49	.48	.48	.48
625.00	.47	.47	.47	.46	.46
630.00	.46	.45	.45	.45	.44

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
635.00	.44	.44	.43	.43	.43
640.00	.42	.42	.42	.42	.41
645.00	.41	.41	.40	.40	.40
650.00	.39	.39	.39	.39	.38
655.00	.38	.38	.37	.37	.37
660.00	.37	.36	.36	.36	.36
665.00	.35	.35	.35	.35	.34
670.00	.34	.34	.34	.33	.33
675.00	.33	.33	.32	.32	.32
680.00	.32	.31	.31	.31	.31
685.00	.31	.30	.30	.30	.30
690.00	.29	.29	.29	.29	.29
695.00	.28	.28	.28	.28	.28
700.00	.27	.27	.27	.27	.27
705.00	.26	.26	.26	.26	.26
710.00	.25	.25	.25	.25	.25
715.00	.25	.24	.24	.24	.24
720.00	.24	.24	.23	.23	.23
725.00	.23	.23	.23	.22	.22
730.00	.22	.22	.22	.22	.21
735.00	.21	.21	.21	.21	.21
740.00	.20	.20	.20	.20	.20
745.00	.20	.20	.19	.19	.19
750.00	.19	.19	.19	.19	.18
755.00	.18	.18	.18	.18	.18
760.00	.18	.18	.17	.17	.17
765.00	.17	.17	.17	.17	.17
770.00	.16	.16	.16	.16	.16
775.00	.16	.16	.16	.16	.15
780.00	.15	.15	.15	.15	.15
785.00	.15	.15	.15	.14	.14
790.00	.14	.14	.14	.14	.14
795.00	.14	.14	.14	.13	.13
800.00	.13	.13	.13	.13	.13
805.00	.13	.13	.13	.12	.12
810.00	.12	.12	.12	.12	.12
815.00	.12	.12	.12	.12	.12
820.00	.11	.11	.11	.11	.11
825.00	.11	.11	.11	.11	.11
830.00	.11	.11	.10	.10	.10
835.00	.10	.10	.10	.10	.10
840.00	.10	.10	.10	.10	.10
845.00	.10	.09	.09	.09	.09
850.00	.09	.09	.09	.09	.09
855.00	.09	.09	.09	.09	.09
860.00	.09	.08	.08	.08	.08
865.00	.08	.08	.08	.08	.08

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
870.00	.08	.08	.08	.08	.08
875.00	.08	.08	.08	.07	.07
880.00	.07	.07	.07	.07	.07
885.00	.07	.07	.07	.07	.07
890.00	.07	.07	.07	.07	.07
895.00	.07	.07	.07	.06	.06
900.00	.06	.06	.06	.06	.06
905.00	.06	.06	.06	.06	.06
910.00	.06	.06	.06	.06	.06
915.00	.06	.06	.06	.06	.06
920.00	.06	.05	.05	.05	.05
925.00	.05	.05	.05	.05	.05
930.00	.05	.05	.05	.05	.05
935.00	.05	.05	.05	.05	.05
940.00	.05	.05	.05	.05	.05
945.00	.05	.05	.05	.04	.04
950.00	.04	.04	.04	.04	.04
955.00	.04	.04	.04	.04	.04
960.00	.04	.04	.04	.04	.04
965.00	.04	.04	.04	.04	.04
970.00	.04	.04	.04	.04	.04
975.00	.04	.04	.04	.04	.04
980.00	.04	.04	.04	.03	.03
985.00	.03	.03	.03	.03	.03
990.00	.03	.03	.03	.03	.03
995.00	.03	.03	.03	.03	.03
1000.00	.03	.03	.03	.03	.03
1005.00	.03	.03	.03	.03	.03
1010.00	.03	.03	.03	.03	.03
1015.00	.03	.03	.03	.03	.03
1020.00	.03	.03	.03	.03	.03
1025.00	.03	.03	.03	.03	.02
1030.00	.02	.02	.02	.02	.02
1035.00	.02	.02	.02	.02	.02
1040.00	.02	.02	.02	.02	.02
1045.00	.02	.02	.02	.02	.02
1050.00	.02	.02	.02	.02	.02
1055.00	.02	.02	.02	.02	.02
1060.00	.02	.02	.02	.02	.02
1065.00	.02	.02	.02	.02	.02
1070.00	.02	.02	.02	.02	.02
1075.00	.02	.02	.02	.02	.02
1080.00	.02	.02	.02	.02	.02
1085.00	.02	.02	.02	.02	.02
1090.00	.02	.02	.02	.02	.02
1095.00	.02	.02	.02	.02	.01
1100.00	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1105.00	.01	.01	.01	.01	.01
1110.00	.01	.01	.01	.01	.01
1115.00	.01	.01	.01	.01	.01
1120.00	.01	.01	.01	.01	.01
1125.00	.01	.01	.01	.01	.01
1130.00	.01	.01	.01	.01	.01
1135.00	.01	.01	.01	.01	.01
1140.00	.01	.01	.01	.01	.01
1145.00	.01	.01	.01	.01	.01
1150.00	.01	.01	.01	.01	.01
1155.00	.01	.01	.01	.01	.01
1160.00	.01	.01	.01	.01	.01
1165.00	.01	.01	.01	.01	.01
1170.00	.01	.01	.01	.01	.01
1175.00	.01	.01	.01	.01	.01
1180.00	.01	.01	.01	.01	.01
1185.00	.01	.01	.01	.01	.01
1190.00	.01	.01	.01	.01	.01
1195.00	.01	.01	.01	.01	.01
1200.00	.01	.01	.01	.01	.01
1205.00	.01	.01	.01	.01	.01
1210.00	.01	.01	.01	.01	.01
1215.00	.01	.01	.01	.01	.01
1220.00	.01	.01	.01	.01	.01
1225.00	.01	.01	.01	.01	.01
1230.00	.01	.01	.01	.01	.01
1235.00	.01	.01	.01	.01	.01
1240.00	.01	.01	.01	.01	.01
1245.00	.01	.01	.01	.01	.01
1250.00	.00	.00	.00	.00	.00
1255.00	.00	.00	.00	.00	.00
1260.00	.00	.00	.00	.00	.00
1265.00	.00	.00	.00	.00	.00
1270.00	.00	.00	.00	.00	.00
1275.00	.00	.00	.00	.00	.00
1280.00	.00	.00	.00	.00	.00
1285.00	.00	.00	.00	.00	.00
1290.00	.00	.00	.00	.00	.00
1295.00	.00	.00	.00	.00	.00
1300.00	.00	.00	.00	.00	.00
1305.00	.00	.00	.00	.00	.00
1310.00	.00	.00	.00	.00	.00
1315.00	.00	.00	.00	.00	.00
1320.00	.00				

Index of Starting Page Numbers for ID Names

POND7

Reanalysis of Estates at Legacy Pointe Basin

15, 25 and 100 Year 20 Minute Design Storms

Table of Contents

HYG file = E:\PONDPACK\10589\10589C15.HYG
HYG ID = 15 Year Inflow
HYG Tag = 15 Yea

Peak Discharge =	69.98 cfs
Time to Peak =	8.00 min
HYG Volume =	1.928 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 4.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	34.99	69.98	69.98	69.98
20.00	69.98	34.99	.00	.00	.00
40.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	

HYG file = E:\PONDPACK\10589\10589C25.HYG
HYG ID = 25 Year Inflow
HYG Tag = 25 YR

Peak Discharge =	86.41 cfs
Time to Peak =	8.00 min
HYG Volume =	2.380 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 4.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	43.21	86.41	86.41	86.41
20.00	86.41	43.21	.00	.00	.00
40.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	

HYG file = E:\PONDPACK\10589\10589C10.HYG
HYG ID = 100 Year Inflow
HYG Tag = 100 YR

Peak Discharge =	110.54 cfs
Time to Peak =	8.00 min
HYG Volume =	3.045 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 4.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	55.27	110.54	110.54	110.54
20.00	110.54	55.27	.00	.00	.00
40.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	

File.... E:\PONDPACK\10589\LEGACY POINTE PHASE 2.PPW
Title... Basin A Pond Volume

POND VOLUME CALCULATIONS

Planimeter scale: 1.00 ft/in

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (ac-ft)	Volume Sum (ac-ft)
579.00	7668.100	.1760	.0000	.000	.000
580.00	11120.970	.2553	.6433	.214	.214
582.00	13677.310	.3140	.8524	.568	.783
584.00	16613.540	.3814	1.0414	.694	1.477

POND VOLUME EQUATIONS

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

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

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

File.... E:\PONDPACK\10589\LEGACY POINTE PHASE 2.PPW
Title... Outfall Structure 141

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 579.00 ft
Increment = .20 ft
Max. Elev.= 584.00 ft

****
OUTLET CONNECTIVITY
****

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

Structure	No.		Outfall	E1, ft	E2, ft
Weir-Rectangular	SI	--->	CV	582.400	584.000
Weir-Rectangular	SL	--->	CV	579.000	584.000
Culvert-Circular	CV	--->	TW	574.850	584.000
TW SETUP, DS Channel					

OUTLET STRUCTURE INPUT DATA

Structure ID = SI
Structure Type = Weir-Rectangular

# of Openings = 1
Crest Elev. = 582.40 ft
Weir Length = 18.76 ft
Weir Coeff. = 3.000000

Weir TW effects (Use adjustment equation)

Structure ID = SL
Structure Type = Weir-Rectangular

# of Openings = 1
Crest Elev. = 579.00 ft
Weir Length = 1.50 ft
Weir Coeff. = 3.000000

Weir TW effects (Use adjustment equation)

File.... E:\PONDPACK\10589\LEGACY POINTE PHASE 2.PPW
Title... Outfall Structure 141

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels	=	1
Barrel Diameter	=	3.5000 ft
Upstream Invert	=	574.85 ft
Dnstream Invert	=	573.81 ft
Horiz. Length	=	104.19 ft
Barrel Length	=	104.20 ft
Barrel Slope	=	.00998 ft/ft

OUTLET CONTROL DATA...

Mannings n	=	.0130
Ke	=	.5000 (forward entrance loss)
Kb	=	.005885 (per ft of full flow)
Kr	=	.5000 (reverse entrance loss)
HW Convergence	=	.050 +/- ft

INLET CONTROL DATA...

Equation form	=	1
Inlet Control K	=	.0078
Inlet Control M	=	2.0000
Inlet Control c	=	.02920
Inlet Control Y	=	.7400
T1 ratio (HW/D)	=	1.131
T2 ratio (HW/D)	=	1.202
Slope Factor	=	-.500
Calc inlet only	=	Yes

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...
At T1 Elev = 578.81 ft ---> Flow = 63.00 cfs
At T2 Elev = 579.06 ft ---> Flow = 72.00 cfs

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

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

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

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
579.00	.00	Free Outfall		(no Q: SI,SL,CV)
579.20	.40	Free Outfall		SL,CV (no Q: SI)
579.40	1.14	Free Outfall		SL,CV (no Q: SI)
579.60	2.09	Free Outfall		SL,CV (no Q: SI)
579.80	3.22	Free Outfall		SL,CV (no Q: SI)
580.00	4.50	Free Outfall		SL,CV (no Q: SI)
580.20	5.92	Free Outfall		SL,CV (no Q: SI)
580.40	7.45	Free Outfall		SL,CV (no Q: SI)
580.60	9.11	Free Outfall		SL,CV (no Q: SI)
580.80	10.87	Free Outfall		SL,CV (no Q: SI)
581.00	12.73	Free Outfall		SL,CV (no Q: SI)
581.20	14.68	Free Outfall		SL,CV (no Q: SI)
581.40	16.73	Free Outfall		SL,CV (no Q: SI)
581.60	18.87	Free Outfall		SL,CV (no Q: SI)
581.80	21.08	Free Outfall		SL,CV (no Q: SI)
582.00	23.38	Free Outfall		SL,CV (no Q: SI)
582.20	25.76	Free Outfall		SL,CV (no Q: SI)
582.40	28.21	Free Outfall		SL,CV (no Q: SI)
582.60	35.77	Free Outfall		SI,SL,CV
582.80	47.57	Free Outfall		SI,SL,CV
583.00	62.15	Free Outfall		SI,SL,CV
583.20	78.58	Free Outfall		SI,SL,CV
583.40	95.28	Free Outfall		SI,SL,CV
583.60	111.48	Free Outfall		SI,SL,CV
583.80	126.69	Free Outfall		SI,SL,CV
584.00	132.48	Free Outfall		SI,SL,CV

LEVEL POOL ROUTING SUMMARY

HYG Dir = E:\PONDPACK\10589\
Inflow HYG file = NONE STORED - BASIN B IN B-15 Y
Outflow HYG file = NONE STORED - BASIN B OUT B-15 Y

Pond Node Data = BASIN B
Pond Volume Data = BASIN A
Pond Outlet Data = BASIN A - OS 141

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	579.00 ft
Starting Volume	=	.000 ac-ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	69.98 cfs	at	8.00 min
Peak Outflow	=	56.93 cfs	at	21.00 min
Peak Elevation	=	582.93 ft		
Peak Storage	=	1.088 ac-ft		

MASS BALANCE (ac-ft)

+ Initial Vol	=	.000
+ HYG Vol IN	=	1.928
- Infiltration	=	.000
- HYG Vol OUT	=	1.928
- Retained Vol	=	.000
Unrouted Vol	=	-.000 ac-ft (.001% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = B-15 Y

Peak Discharge =	56.93 cfs
Time to Peak =	21.00 min
HYG Volume =	1.928 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.07	.26	.71	1.53
5.00	2.73	4.30	6.25	8.65	11.29
10.00	13.94	16.56	19.12	21.62	24.03
15.00	26.35	29.23	35.18	42.39	48.47
20.00	53.96	56.93	56.91	54.67	50.76
25.00	45.93	40.75	35.11	30.62	27.49
30.00	26.09	24.78	23.53	22.36	21.25
35.00	20.21	19.22	18.29	17.41	16.58
40.00	15.80	15.06	14.36	13.70	13.07
45.00	12.48	11.92	11.39	10.88	10.41
50.00	9.96	9.53	9.12	8.74	8.38
55.00	8.04	7.70	7.39	7.10	6.82
60.00	6.55	6.29	6.04	5.81	5.60
65.00	5.39	5.19	5.00	4.81	4.63
70.00	4.46	4.31	4.16	4.01	3.87
75.00	3.73	3.60	3.48	3.35	3.24
80.00	3.13	3.02	2.92	2.83	2.73
85.00	2.64	2.55	2.47	2.39	2.31
90.00	2.23	2.16	2.09	2.02	1.96
95.00	1.90	1.84	1.79	1.73	1.68
100.00	1.63	1.58	1.53	1.49	1.44
105.00	1.40	1.36	1.32	1.28	1.24
110.00	1.20	1.16	1.13	1.10	1.07
115.00	1.05	1.02	.99	.97	.95
120.00	.92	.90	.88	.85	.83
125.00	.81	.79	.77	.75	.73
130.00	.71	.70	.68	.66	.64
135.00	.63	.61	.60	.58	.57
140.00	.55	.54	.53	.51	.50
145.00	.49	.47	.46	.45	.44
150.00	.43	.42	.41	.40	.39
155.00	.39	.38	.38	.37	.36
160.00	.36	.35	.35	.34	.34

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.33	.33	.32	.32	.31
170.00	.31	.30	.30	.29	.29
175.00	.29	.28	.28	.27	.27
180.00	.27	.26	.26	.25	.25
185.00	.25	.24	.24	.23	.23
190.00	.23	.22	.22	.22	.21
195.00	.21	.21	.21	.20	.20
200.00	.20	.19	.19	.19	.18
205.00	.18	.18	.18	.17	.17
210.00	.17	.17	.16	.16	.16
215.00	.16	.15	.15	.15	.15
220.00	.14	.14	.14	.14	.14
225.00	.13	.13	.13	.13	.13
230.00	.12	.12	.12	.12	.12
235.00	.12	.11	.11	.11	.11
240.00	.11	.11	.10	.10	.10
245.00	.10	.10	.10	.09	.09
250.00	.09	.09	.09	.09	.09
255.00	.09	.08	.08	.08	.08
260.00	.08	.08	.08	.08	.07
265.00	.07	.07	.07	.07	.07
270.00	.07	.07	.07	.06	.06
275.00	.06	.06	.06	.06	.06
280.00	.06	.06	.06	.06	.06
285.00	.05	.05	.05	.05	.05
290.00	.05	.05	.05	.05	.05
295.00	.05	.05	.05	.04	.04
300.00	.04	.04	.04	.04	.04
305.00	.04	.04	.04	.04	.04
310.00	.04	.04	.04	.04	.03
315.00	.03	.03	.03	.03	.03
320.00	.03	.03	.03	.03	.03
325.00	.03	.03	.03	.03	.03
330.00	.03	.03	.03	.03	.03
335.00	.03	.03	.02	.02	.02
340.00	.02	.02	.02	.02	.02
345.00	.02	.02	.02	.02	.02
350.00	.02	.02	.02	.02	.02
355.00	.02	.02	.02	.02	.02
360.00	.02	.02	.02	.02	.02
365.00	.02	.02	.02	.02	.02
370.00	.01	.01	.01	.01	.01
375.00	.01	.01	.01	.01	.01
380.00	.01	.01	.01	.01	.01
385.00	.01	.01	.01	.01	.01
390.00	.01	.01	.01	.01	.01
395.00	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.01	.01	.01	.01	.01
405.00	.01	.01	.01	.01	.01
410.00	.01	.01	.01	.01	.01
415.00	.01	.01	.01	.01	.01
420.00	.01	.01	.01	.01	.01
425.00	.01	.01	.01	.01	.01
430.00	.01	.01	.01	.01	.01
435.00	.01	.01	.01	.01	.01
440.00	.01	.01	.01	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00		

LEVEL POOL ROUTING SUMMARY

HYG Dir = E:\PONDPACK\10589\
Inflow HYG file = NONE STORED - BASIN B IN C-25 Y
Outflow HYG file = NONE STORED - BASIN B OUT C-25 Y

Pond Node Data = BASIN B
Pond Volume Data = BASIN A
Pond Outlet Data = BASIN A - OS 141

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	579.00 ft
Starting Volume	=	.000 ac-ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	86.41 cfs	at	8.00 min
Peak Outflow	=	78.87 cfs	at	21.00 min
Peak Elevation	=	583.20 ft		
Peak Storage	=	1.184 ac-ft		

MASS BALANCE (ac-ft)

+ Initial Vol	=	.000
+ HYG Vol IN	=	2.380
- Infiltration	=	.000
- HYG Vol OUT	=	2.380
- Retained Vol	=	.000
Unrouted Vol	=	-.000 ac-ft (.001% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = C-25 Y

Peak Discharge =	78.87 cfs
Time to Peak =	21.00 min
HYG Volume =	2.380 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.08	.32	.94	2.02
5.00	3.58	5.60	8.15	11.27	14.67
10.00	18.08	21.41	24.65	27.78	35.54
15.00	46.38	56.37	64.21	70.38	74.83
20.00	78.05	78.87	76.47	71.72	65.30
25.00	58.03	50.11	42.42	34.87	29.78
30.00	27.24	25.86	24.56	23.32	22.16
35.00	21.06	20.03	19.05	18.13	17.26
40.00	16.44	15.67	14.93	14.24	13.59
45.00	12.96	12.38	11.83	11.30	10.80
50.00	10.33	9.89	9.46	9.05	8.68
55.00	8.32	7.98	7.65	7.34	7.05
60.00	6.77	6.50	6.25	6.00	5.77
65.00	5.56	5.35	5.15	4.96	4.78
70.00	4.60	4.44	4.28	4.13	3.98
75.00	3.84	3.71	3.58	3.45	3.33
80.00	3.22	3.11	3.01	2.91	2.81
85.00	2.72	2.63	2.54	2.45	2.37
90.00	2.29	2.22	2.14	2.07	2.01
95.00	1.95	1.89	1.83	1.78	1.73
100.00	1.67	1.62	1.57	1.53	1.48
105.00	1.44	1.39	1.35	1.31	1.27
110.00	1.23	1.19	1.16	1.13	1.10
115.00	1.07	1.04	1.02	.99	.97
120.00	.94	.92	.89	.87	.85
125.00	.83	.81	.79	.77	.75
130.00	.73	.71	.69	.67	.66
135.00	.64	.63	.61	.59	.58
140.00	.56	.55	.54	.52	.51
145.00	.50	.48	.47	.46	.45
150.00	.44	.43	.42	.40	.40
155.00	.39	.39	.38	.37	.37
160.00	.36	.36	.35	.35	.34

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.34	.33	.33	.32	.32
170.00	.31	.31	.30	.30	.29
175.00	.29	.29	.28	.28	.27
180.00	.27	.26	.26	.26	.25
185.00	.25	.25	.24	.24	.23
190.00	.23	.23	.22	.22	.22
195.00	.21	.21	.21	.20	.20
200.00	.20	.20	.19	.19	.19
205.00	.18	.18	.18	.18	.17
210.00	.17	.17	.17	.16	.16
215.00	.16	.16	.15	.15	.15
220.00	.15	.14	.14	.14	.14
225.00	.14	.13	.13	.13	.13
230.00	.13	.12	.12	.12	.12
235.00	.12	.12	.11	.11	.11
240.00	.11	.11	.11	.10	.10
245.00	.10	.10	.10	.10	.09
250.00	.09	.09	.09	.09	.09
255.00	.09	.09	.08	.08	.08
260.00	.08	.08	.08	.08	.08
265.00	.07	.07	.07	.07	.07
270.00	.07	.07	.07	.07	.06
275.00	.06	.06	.06	.06	.06
280.00	.06	.06	.06	.06	.06
285.00	.05	.05	.05	.05	.05
290.00	.05	.05	.05	.05	.05
295.00	.05	.05	.05	.05	.04
300.00	.04	.04	.04	.04	.04
305.00	.04	.04	.04	.04	.04
310.00	.04	.04	.04	.04	.04
315.00	.03	.03	.03	.03	.03
320.00	.03	.03	.03	.03	.03
325.00	.03	.03	.03	.03	.03
330.00	.03	.03	.03	.03	.03
335.00	.03	.03	.02	.02	.02
340.00	.02	.02	.02	.02	.02
345.00	.02	.02	.02	.02	.02
350.00	.02	.02	.02	.02	.02
355.00	.02	.02	.02	.02	.02
360.00	.02	.02	.02	.02	.02
365.00	.02	.02	.02	.02	.02
370.00	.02	.01	.01	.01	.01
375.00	.01	.01	.01	.01	.01
380.00	.01	.01	.01	.01	.01
385.00	.01	.01	.01	.01	.01
390.00	.01	.01	.01	.01	.01
395.00	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.01	.01	.01	.01	.01
405.00	.01	.01	.01	.01	.01
410.00	.01	.01	.01	.01	.01
415.00	.01	.01	.01	.01	.01
420.00	.01	.01	.01	.01	.01
425.00	.01	.01	.01	.01	.01
430.00	.01	.01	.01	.01	.01
435.00	.01	.01	.01	.01	.01
440.00	.01	.01	.01	.01	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	

LEVEL POOL ROUTING SUMMARY

HYG Dir = E:\PONDPACK\10589\
Inflow HYG file = NONE STORED - BASIN B IN D-100
Outflow HYG file = NONE STORED - BASIN B OUT D-100

Pond Node Data = BASIN B
Pond Volume Data = BASIN A
Pond Outlet Data = BASIN A - OS 141

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	579.00 ft
Starting Volume	=	.000 ac-ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	110.54 cfs	at	8.00 min
Peak Outflow	=	105.11 cfs	at	20.00 min
Peak Elevation	=	583.52 ft		
Peak Storage	=	1.298 ac-ft		

MASS BALANCE (ac-ft)

+ Initial Vol	=	.000
+ HYG Vol IN	=	3.045
- Infiltration	=	.000
- HYG Vol OUT	=	3.045
- Retained Vol	=	.000
Unrouted Vol	=	-.000 ac-ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = D-100

Peak Discharge =	105.11 cfs
Time to Peak =	20.00 min
HYG Volume =	3.045 ac-ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.10	.42	1.31	2.80
5.00	4.88	7.62	11.11	15.32	19.89
10.00	24.38	29.75	44.29	60.59	74.33
15.00	84.39	91.64	96.82	100.47	103.15
20.00	105.11	104.72	100.76	94.12	85.26
25.00	75.02	63.76	52.65	42.01	33.87
30.00	28.92	26.99	25.62	24.33	23.11
35.00	21.96	20.87	19.85	18.88	17.97
40.00	17.11	16.30	15.53	14.80	14.12
45.00	13.47	12.85	12.28	11.73	11.21
50.00	10.71	10.25	9.81	9.39	8.99
55.00	8.61	8.26	7.92	7.59	7.28
60.00	7.00	6.72	6.46	6.20	5.96
65.00	5.73	5.52	5.32	5.12	4.93
70.00	4.75	4.57	4.41	4.25	4.10
75.00	3.96	3.82	3.69	3.56	3.43
80.00	3.31	3.20	3.09	2.99	2.89
85.00	2.79	2.70	2.61	2.52	2.44
90.00	2.36	2.28	2.20	2.13	2.06
95.00	2.00	1.94	1.88	1.82	1.77
100.00	1.72	1.66	1.61	1.56	1.52
105.00	1.47	1.43	1.38	1.34	1.30
110.00	1.26	1.22	1.19	1.15	1.12
115.00	1.09	1.06	1.04	1.01	.99
120.00	.96	.94	.91	.89	.87
125.00	.85	.82	.80	.78	.76
130.00	.74	.73	.71	.69	.67
135.00	.65	.64	.62	.61	.59
140.00	.58	.56	.55	.53	.52
145.00	.51	.49	.48	.47	.46
150.00	.45	.44	.42	.41	.40
155.00	.40	.39	.38	.38	.37
160.00	.37	.36	.36	.35	.35

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.34	.34	.33	.33	.32
170.00	.32	.31	.31	.30	.30
175.00	.29	.29	.28	.28	.28
180.00	.27	.27	.26	.26	.26
185.00	.25	.25	.24	.24	.24
190.00	.23	.23	.23	.22	.22
195.00	.22	.21	.21	.21	.20
200.00	.20	.20	.19	.19	.19
205.00	.19	.18	.18	.18	.18
210.00	.17	.17	.17	.17	.16
215.00	.16	.16	.16	.15	.15
220.00	.15	.15	.14	.14	.14
225.00	.14	.14	.13	.13	.13
230.00	.13	.13	.12	.12	.12
235.00	.12	.12	.11	.11	.11
240.00	.11	.11	.11	.10	.10
245.00	.10	.10	.10	.10	.10
250.00	.09	.09	.09	.09	.09
255.00	.09	.09	.08	.08	.08
260.00	.08	.08	.08	.08	.08
265.00	.08	.07	.07	.07	.07
270.00	.07	.07	.07	.07	.07
275.00	.06	.06	.06	.06	.06
280.00	.06	.06	.06	.06	.06
285.00	.06	.05	.05	.05	.05
290.00	.05	.05	.05	.05	.05
295.00	.05	.05	.05	.05	.04
300.00	.04	.04	.04	.04	.04
305.00	.04	.04	.04	.04	.04
310.00	.04	.04	.04	.04	.04
315.00	.04	.03	.03	.03	.03
320.00	.03	.03	.03	.03	.03
325.00	.03	.03	.03	.03	.03
330.00	.03	.03	.03	.03	.03
335.00	.03	.03	.03	.02	.02
340.00	.02	.02	.02	.02	.02
345.00	.02	.02	.02	.02	.02
350.00	.02	.02	.02	.02	.02
355.00	.02	.02	.02	.02	.02
360.00	.02	.02	.02	.02	.02
365.00	.02	.02	.02	.02	.02
370.00	.02	.02	.01	.01	.01
375.00	.01	.01	.01	.01	.01
380.00	.01	.01	.01	.01	.01
385.00	.01	.01	.01	.01	.01
390.00	.01	.01	.01	.01	.01
395.00	.01	.01	.01	.01	.01

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.01	.01	.01	.01	.01
405.00	.01	.01	.01	.01	.01
410.00	.01	.01	.01	.01	.01
415.00	.01	.01	.01	.01	.01
420.00	.01	.01	.01	.01	.01
425.00	.01	.01	.01	.01	.01
430.00	.01	.01	.01	.01	.01
435.00	.01	.01	.01	.01	.01
440.00	.01	.01	.01	.01	.01
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00

Index of Starting Page Numbers for ID Names

POND 7
Reanalysis of Avondale Phase 4 Basin
15, 25 and 100 Year 20 Minute Design Storms

Table of Contents

HYG file = C:\MY DOCUMENTS\AV04B15.HYG
HYG ID   = Avon B 15 In
HYG Tag = 15yr

Peak Discharge =	24.10 cfs
Time to Peak =	3.00 min
HYG Volume =	28919 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	8.03	16.06	24.10	24.10
5.00	24.10	24.10	24.10	24.10	24.10
10.00	24.10	24.10	24.10	24.10	24.10
15.00	24.10	24.10	24.10	24.10	24.10
20.00	24.10	16.06	8.03	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00

Type.... Read HYG
Name.... 20 MINUTE INFLOW Tag: A15yr
File.... C:\MY DOCUMENTS\PROJECT1.PPW
Title... 15, 25 and 100 Year inflows to Basin B of Avondale
Phase 4
Storm... Tag: A15yr

Event: A15yr

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00				

HYG file = C:\MY DOCUMENTS\AV04B25.HYG
HYG ID = Avon 4B 25 in
HYG Tag = 25yr

Peak Discharge =	29.76 cfs
Time to Peak =	3.00 min
HYG Volume =	35712 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	9.92	19.84	29.76	29.76
5.00	29.76	29.76	29.76	29.76	29.76
10.00	29.76	29.76	29.76	29.76	29.76
15.00	29.76	29.76	29.76	29.76	29.76
20.00	29.76	19.84	9.92	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00				

HYG file = C:\MY DOCUMENTS\AV04B100.HYG
HYG ID = Avon 4B 100 in
HYG Tag = 100yr

Peak Discharge =	38.07 cfs
Time to Peak =	3.00 min
HYG Volume =	45684 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	12.69	25.38	38.07	38.07
5.00	38.07	38.07	38.07	38.07	38.07
10.00	38.07	38.07	38.07	38.07	38.07
15.00	38.07	38.07	38.07	38.07	38.07
20.00	38.07	25.38	12.69	.00	.00
25.00	.00	.00	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00				

File.... C:\MY DOCUMENTS\PROJECT1.PPW
Title... Basin B of Avondale Phase 4

POND VOLUME CALCULATIONS

Planimeter scale: 1.00 ft/in

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (cu.ft)	Volume Sum (cu.ft)
495.00	.000	.0000	.0000	0	0
496.00	5300.010	.1217	.1217	1767	1767
498.00	7676.730	.1762	.4443	12904	14670
500.00	10220.100	.2346	.6142	17836	32507
502.00	12922.030	.2966	.7951	23089	55596

POND VOLUME EQUATIONS

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

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

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

File.... C:\MY DOCUMENTS\PROJECT1.PPW
Title... Overflow structure 59 of Basin B in Avondale Phase 4

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
495.00	.00	Free Outfall		(no Q: AI,OR,SL,CV)
495.20	.00	Free Outfall		(no Q: AI,OR,SL,CV)
495.40	.39	Free Outfall		SL,CV (no Q: AI,OR)
495.60	.88	Free Outfall		SL,CV (no Q: AI,OR)
495.80	1.44	Free Outfall		SL,CV (no Q: AI,OR)
496.00	2.10	Free Outfall		SL,CV (no Q: AI,OR)
496.20	2.80	Free Outfall		SL,CV (no Q: AI,OR)
496.40	3.60	Free Outfall		SL,CV (no Q: AI,OR)
496.60	4.46	Free Outfall		SL,CV (no Q: AI,OR)
496.80	5.39	Free Outfall		SL,CV (no Q: AI,OR)
497.00	7.45	Free Outfall		OR,CV (no Q: AI,SL)
497.20	8.19	Free Outfall		OR,CV (no Q: AI,SL)
497.40	8.86	Free Outfall		OR,CV (no Q: AI,SL)
497.60	9.58	Free Outfall		OR,CV (no Q: AI,SL)
497.80	10.22	Free Outfall		OR,CV (no Q: AI,SL)
498.00	10.82	Free Outfall		OR,CV (no Q: AI,SL)
498.20	11.43	Free Outfall		OR,CV (no Q: AI,SL)
498.40	12.02	Free Outfall		OR,CV (no Q: AI,SL)
498.60	12.63	Free Outfall		OR,CV (no Q: AI,SL)
498.80	13.18	Free Outfall		OR,CV (no Q: AI,SL)
499.00	13.71	Free Outfall		OR,CV (no Q: AI,SL)
499.20	14.23	Free Outfall		OR,CV (no Q: AI,SL)
499.25	14.35	Free Outfall		OR,CV (no Q: AI,SL)
499.40	16.35	Free Outfall		AI,OR,CV (no Q: SL)
499.60	21.03	Free Outfall		AI,OR,CV (no Q: SL)
499.80	27.14	Free Outfall		AI,OR,CV (no Q: SL)
500.00	34.28	Free Outfall		AI,OR,CV (no Q: SL)
500.20	47.91	Free Outfall		AI,CV (no Q: OR,SL)
500.40	53.22	Free Outfall		AI,CV (no Q: OR,SL)
500.60	53.95	Free Outfall		AI,CV (no Q: OR,SL)
500.80	55.58	Free Outfall		AI,CV (no Q: OR,SL)
501.00	57.08	Free Outfall		AI,CV (no Q: OR,SL)
501.20	57.65	Free Outfall		AI,CV (no Q: OR,SL)
501.40	59.13	Free Outfall		AI,CV (no Q: OR,SL)
501.60	60.61	Free Outfall		AI,CV (no Q: OR,SL)
501.80	62.08	Free Outfall		AI,CV (no Q: OR,SL)
502.00	62.54	Free Outfall		AI,CV (no Q: OR,SL)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = A15yr

Peak Discharge =	12.23 cfs
Time to Peak =	21.00 min
HYG Volume =	28904 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.59	1.42	2.24	3.09
5.00	3.99	4.87	6.10	7.57	8.12
10.00	8.59	9.05	9.51	9.90	10.26
15.00	10.59	10.90	11.21	11.51	11.78
20.00	12.05	12.23	12.22	12.04	11.78
25.00	11.52	11.26	11.00	10.74	10.49
30.00	10.24	9.98	9.72	9.45	9.16
35.00	8.88	8.62	8.37	8.12	7.85
40.00	7.59	7.13	6.47	5.86	5.36
45.00	5.12	4.89	4.67	4.46	4.27
50.00	4.08	3.90	3.73	3.57	3.42
55.00	3.28	3.14	3.01	2.89	2.77
60.00	2.66	2.56	2.47	2.37	2.28
65.00	2.20	2.11	2.02	1.93	1.84
70.00	1.76	1.68	1.60	1.53	1.46
75.00	1.38	1.30	1.22	1.14	1.07
80.00	1.01	.94	.89	.79	.71
85.00	.64	.57	.51	.46	.41
90.00	.34	.27	.21	.17	.13
95.00	.10	.08	.06	.05	.04
100.00	.03	.02	.02	.02	.01
105.00	.01	.01	.01	.00	.00
110.00	.00				

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = B25yr

Peak Discharge =	13.89 cfs
Time to Peak =	22.00 min
HYG Volume =	35697 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.69	1.59	2.55	3.66
5.00	4.81	6.50	7.89	8.56	9.19
10.00	9.78	10.29	10.75	11.19	11.61
15.00	12.01	12.40	12.76	13.08	13.39
20.00	13.68	13.87	13.89	13.74	13.49
25.00	13.25	13.00	12.75	12.49	12.22
30.00	11.95	11.69	11.44	11.17	10.91
35.00	10.65	10.41	10.16	9.89	9.63
40.00	9.35	9.06	8.79	8.54	8.29
45.00	8.03	7.76	7.50	6.90	6.26
50.00	5.67	5.27	5.04	4.81	4.60
55.00	4.39	4.20	4.02	3.84	3.68
60.00	3.52	3.37	3.23	3.10	2.97
65.00	2.84	2.73	2.63	2.53	2.43
70.00	2.34	2.25	2.17	2.08	1.99
75.00	1.90	1.81	1.73	1.65	1.58
80.00	1.51	1.44	1.35	1.27	1.19
85.00	1.12	1.05	.98	.92	.85
90.00	.77	.69	.61	.55	.49
95.00	.44	.40	.31	.25	.19
100.00	.15	.12	.09	.07	.06
105.00	.05	.04	.03	.02	.02
110.00	.01	.01	.01	.01	.01
115.00	.00	.00	.00		

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = C100yr

Peak Discharge =	25.40 cfs
Time to Peak =	21.00 min
HYG Volume =	45669 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.84	1.83	3.03	4.53
5.00	6.73	8.23	9.11	9.93	10.62
10.00	11.26	11.85	12.43	12.94	13.41
15.00	13.84	14.25	15.82	18.51	21.23
20.00	24.10	25.40	24.31	21.25	18.29
25.00	16.01	14.70	14.18	13.94	13.70
30.00	13.45	13.21	12.96	12.71	12.45
35.00	12.18	11.91	11.65	11.39	11.13
40.00	10.87	10.61	10.37	10.11	9.85
45.00	9.59	9.30	9.02	8.75	8.50
50.00	8.25	7.99	7.72	7.46	6.79
55.00	6.16	5.58	5.23	5.00	4.78
60.00	4.56	4.36	4.17	3.99	3.82
65.00	3.65	3.49	3.35	3.21	3.08
70.00	2.95	2.82	2.71	2.61	2.51
75.00	2.42	2.33	2.24	2.15	2.07
80.00	1.97	1.88	1.80	1.72	1.64
85.00	1.57	1.50	1.43	1.34	1.26
90.00	1.18	1.11	1.04	.97	.91
95.00	.84	.75	.67	.60	.54
100.00	.48	.43	.38	.30	.24
105.00	.19	.15	.12	.09	.07
110.00	.06	.04	.03	.03	.02
115.00	.02	.01	.01	.01	.01
120.00	.01	.00	.00	.00	

POND7

Routing Calculations

15, 25 and 100 Year 20 Minute Design Storms

Pennial Basin

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HYG file = C:\MY DOCUMENTS\CHRRY 15.HYG
HYG ID = Cherry Out 15
HYG Tag = 15yr

Peak Discharge =	16.08 cfs
Time to Peak =	38.00 min
HYG Volume =	76070 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.00	.22
5.00	.62	1.14	1.79	2.26	2.73
10.00	3.23	3.72	4.27	4.91	5.61
15.00	6.66	7.82	8.50	9.24	10.15
20.00	10.87	11.45	12.01	12.58	13.12
25.00	13.58	14.01	14.37	14.70	14.98
30.00	15.22	15.44	15.61	15.76	15.88
35.00	15.97	16.04	16.07	16.08	16.07
40.00	16.03	15.96	15.87	15.75	15.62
45.00	15.49	15.36	15.22	15.09	14.95
50.00	14.82	14.69	14.55	14.41	14.27
55.00	14.14	14.00	13.86	13.72	13.58
60.00	13.44	13.31	13.17	13.03	12.89
65.00	12.75	12.61	12.47	12.33	12.19
70.00	12.04	11.90	11.76	11.62	11.48
75.00	11.33	11.19	11.04	10.90	10.76
80.00	10.62	10.42	10.18	9.95	9.72
85.00	9.50	9.28	9.07	8.89	8.73
90.00	8.56	8.40	8.24	8.09	7.94
95.00	7.72	7.45	7.19	6.93	6.69
100.00	6.45	6.22	6.00	5.79	5.62
105.00	5.48	5.35	5.21	5.09	4.96
110.00	4.84	4.72	4.60	4.49	4.38
115.00	4.27	4.17	4.07	3.97	3.88
120.00	3.78	3.69	3.61	3.52	3.44
125.00	3.35	3.27	3.20	3.12	3.05
130.00	2.95	2.86	2.77	2.69	2.61
135.00	2.53	2.45	2.37	2.30	2.23
140.00	2.16	2.09	2.03	1.97	1.84
145.00	1.72	1.61	1.51	1.41	1.32
150.00	1.24	1.16	1.08	1.01	.95
155.00	.89	.83	.77	.71	.64

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
160.00	.59	.54	.49	.44	.41
165.00	.37	.34	.31	.28	.26
170.00	.23	.21	.19	.18	.15
175.00	.12	.10	.09	.07	.06
180.00	.05	.04	.03	.03	.02
185.00	.02	.02	.01	.01	.01
190.00	.01	.01	.01	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\CHRRY 25.HYG
HYG ID = Cherry out 25
HYG Tag = 25yr

Peak Discharge =	26.79 cfs
Time to Peak =	36.00 min
HYG Volume =	94001 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.00	.26
5.00	.75	1.34	2.05	2.53	3.10
10.00	3.63	4.24	4.96	5.77	7.03
15.00	8.13	8.90	9.88	10.78	11.43
20.00	12.06	12.70	13.34	13.98	14.57
25.00	15.09	15.56	15.97	16.33	17.83
30.00	19.50	21.82	23.65	25.03	25.99
35.00	26.56	26.79	26.68	26.28	25.59
40.00	24.66	23.49	22.10	20.51	19.08
45.00	18.21	17.38	16.59	16.30	16.17
50.00	16.04	15.91	15.77	15.64	15.51
55.00	15.38	15.24	15.11	14.98	14.84
60.00	14.71	14.57	14.43	14.30	14.16
65.00	14.03	13.89	13.75	13.61	13.47
70.00	13.33	13.20	13.06	12.91	12.77
75.00	12.63	12.49	12.36	12.21	12.07
80.00	11.93	11.78	11.64	11.51	11.36
85.00	11.21	11.07	10.93	10.79	10.65
90.00	10.46	10.22	9.99	9.76	9.54
95.00	9.32	9.11	8.93	8.76	8.59
100.00	8.43	8.27	8.12	7.96	7.78
105.00	7.50	7.23	6.98	6.73	6.49
110.00	6.26	6.04	5.82	5.65	5.51
115.00	5.37	5.24	5.11	4.98	4.86
120.00	4.74	4.62	4.51	4.40	4.29
125.00	4.18	4.09	3.99	3.89	3.80
130.00	3.71	3.62	3.54	3.45	3.37
135.00	3.29	3.21	3.13	3.06	2.97
140.00	2.88	2.79	2.70	2.62	2.54
145.00	2.46	2.39	2.31	2.24	2.17
150.00	2.11	2.04	1.98	1.87	1.75
155.00	1.63	1.53	1.43	1.34	1.25
160.00	1.17	1.10	1.02	.96	.90

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.84	.79	.72	.65	.60
170.00	.54	.50	.45	.41	.38
175.00	.34	.31	.28	.26	.24
180.00	.22	.20	.18	.16	.13
185.00	.11	.09	.07	.06	.05
190.00	.04	.04	.03	.02	.02
195.00	.02	.01	.01	.01	.01
200.00	.01	.00	.00	.00	.00
205.00	.00				

HYG file = C:\MY DOCUMENTS\CHRRY100.HYG
HYG ID = Cherry out 100
HYG Tag = 100yr

Peak Discharge =	50.13 cfs
Time to Peak =	34.00 min
HYG Volume =	133038 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.00	.33
5.00	.96	1.79	2.42	3.10	3.75
10.00	4.53	5.45	6.81	8.17	9.12
15.00	10.37	11.22	11.99	12.77	13.54
20.00	14.30	15.06	15.81	17.32	23.00
25.00	29.94	36.73	41.68	45.65	47.31
30.00	48.36	49.15	49.71	50.03	50.13
35.00	50.01	49.69	49.18	48.47	47.57
40.00	46.51	43.92	40.73	37.32	33.58
45.00	30.18	27.13	24.94	22.97	21.16
50.00	19.50	18.54	17.69	16.89	16.35
55.00	16.22	16.09	15.96	15.83	15.69
60.00	15.56	15.43	15.30	15.16	15.03
65.00	14.89	14.76	14.62	14.49	14.35
70.00	14.21	14.08	13.94	13.80	13.66
75.00	13.52	13.39	13.25	13.11	12.97
80.00	12.83	12.69	12.55	12.41	12.27
85.00	12.12	11.98	11.84	11.70	11.56
90.00	11.42	11.27	11.12	10.98	10.84
95.00	10.70	10.56	10.32	10.08	9.85
100.00	9.62	9.40	9.19	8.99	8.82
105.00	8.66	8.49	8.33	8.18	8.02
110.00	7.87	7.60	7.33	7.07	6.82
115.00	6.58	6.35	6.12	5.90	5.70
120.00	5.56	5.42	5.29	5.16	5.03
125.00	4.91	4.78	4.67	4.55	4.44
130.00	4.33	4.22	4.12	4.02	3.93
135.00	3.84	3.74	3.65	3.57	3.48
140.00	3.40	3.32	3.24	3.16	3.09
145.00	3.00	2.91	2.82	2.74	2.65
150.00	2.57	2.49	2.41	2.34	2.27
155.00	2.20	2.13	2.07	2.00	1.91
160.00	1.79	1.68	1.57	1.47	1.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	1.28	1.20	1.12	1.05	.98
170.00	.92	.86	.81	.74	.68
175.00	.62	.56	.51	.47	.43
180.00	.39	.36	.32	.30	.27
185.00	.25	.22	.20	.19	.17
190.00	.14	.12	.10	.08	.07
195.00	.06	.05	.04	.03	.03
200.00	.02	.02	.02	.01	.01
205.00	.01	.00	.00	.00	.00
210.00	.00				

HYG file = C:\MY DOCUMENTS\HUTCH-15.HYG
HYG ID = 15 Year, Outflow
HYG Tag = 15YR

Peak Discharge =	13.75 cfs
Time to Peak =	40.00 min
HYG Volume =	152986 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.21	.57
10.00	1.11	1.82	2.69	3.71	4.86
20.00	6.15	7.56	9.04	10.32	11.32
30.00	12.09	12.68	13.13	13.45	13.65
40.00	13.75	13.74	13.64	13.53	13.42
50.00	13.30	13.19	13.08	12.97	12.85
60.00	12.74	12.62	12.51	12.40	12.28
70.00	12.17	12.05	11.94	11.82	11.70
80.00	11.59	11.47	11.36	11.24	11.12
90.00	11.01	10.89	10.83	10.71	10.59
100.00	10.47	10.35	10.24	10.12	10.00
110.00	9.88	9.76	9.64	9.52	9.40
120.00	9.29	9.17	9.05	8.94	8.83
130.00	8.72	8.61	8.50	8.39	8.29
140.00	8.18	8.08	7.97	7.87	7.77
150.00	7.67	7.58	7.48	7.38	7.29
160.00	7.19	7.10	7.01	6.92	6.83
170.00	6.74	6.65	6.57	6.48	6.40
180.00	6.31	6.23	6.15	6.07	5.99
190.00	5.95	5.87	5.79	5.75	5.68
200.00	5.60	5.53	5.46	5.38	5.31
210.00	5.24	5.17	5.10	5.03	4.97
220.00	4.90	4.84	4.77	4.71	4.64
230.00	4.58	4.52	4.46	4.40	4.34
240.00	4.28	4.22	4.16	4.11	4.05
250.00	4.00	3.94	3.89	3.84	3.78
260.00	3.73	3.68	3.63	3.58	3.53
270.00	3.48	3.44	3.39	3.34	3.30
280.00	3.25	3.21	3.16	3.12	3.08
290.00	3.03	2.99	2.95	2.91	2.87
300.00	2.83	2.79	2.75	2.71	2.68

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
310.00	2.64	2.60	2.57	2.53	2.50
320.00	2.46	2.43	2.39	2.36	2.33
330.00	2.29	2.26	2.23	2.20	2.17
340.00	2.14	2.11	2.08	2.05	2.02
350.00	1.99	1.96	1.94	1.91	1.88
360.00	1.86	1.83	1.80	1.78	1.75
370.00	1.73	1.70	1.68	1.66	1.63
380.00	1.61	1.59	1.56	1.54	1.52
390.00	1.50	1.48	1.46	1.44	1.42
400.00	1.40	1.38	1.36	1.34	1.32
410.00	1.30	1.28	1.26	1.24	1.23
420.00	1.21	1.19	1.18	1.16	1.14
430.00	1.13	1.11	1.09	1.08	1.06
440.00	1.05	1.03	1.02	1.00	.99
450.00	.98	.96	.95	.93	.92
460.00	.91	.89	.88	.87	.86
470.00	.84	.83	.82	.78	.77
480.00	.76	.75	.74	.73	.72
490.00	.70	.69	.68	.67	.67
500.00	.66	.65	.64	.63	.62
510.00	.61	.60	.59	.58	.58
520.00	.57	.56	.56	.55	.54
530.00	.54	.53	.52	.51	.51
540.00	.50	.49	.48	.48	.47
550.00	.46	.46	.45	.44	.44
560.00	.43	.42	.42	.42	.41
570.00	.41	.40	.39	.39	.38
580.00	.38	.37	.37	.36	.36
590.00	.35	.35	.34	.34	.33
600.00	.33	.32	.32	.31	.31
610.00	.31	.30	.30	.29	.29
620.00	.28	.28	.27	.27	.26
630.00	.26	.25	.25	.24	.24
640.00	.24	.23	.23	.22	.22
650.00	.21	.21	.20	.20	.19
660.00	.19	.18	.18	.17	.17
670.00	.16	.16	.15	.15	.14
680.00	.14	.13	.13	.12	.12
690.00	.11	.10	.09	.09	.08
700.00	.08	.07	.06	.05	.04
710.00	.03	.02	.01	.01	.01
720.00	.00	.00	.00	.00	.00
730.00	.00	.00	.00	.00	.00
740.00	.00	.00	.00	.00	.00
750.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
760.00	.00	.00	.00	.00	.00
770.00	.00	.00	.00	.00	.00
780.00	.00	.00	.00	.00	.00
790.00	.00	.00	.00	.00	.00
800.00	.00				

HYG file = C:\MY DOCUMENTS\HUTCH-25.HYG
HYG ID = 25 Year Outflow
HYG Tag = 25YR

Peak Discharge =	15.76 cfs
Time to Peak =	40.00 min
HYG Volume =	184685 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.26	.71
10.00	1.37	2.24	3.30	4.54	5.95
20.00	7.51	9.21	10.90	12.21	13.23
30.00	14.02	14.63	15.10	15.44	15.66
40.00	15.76	15.76	15.67	15.56	15.46
50.00	15.35	15.24	15.13	15.02	14.92
60.00	14.81	14.70	14.59	14.48	14.37
70.00	14.26	14.15	14.04	13.93	13.82
80.00	13.71	13.60	13.48	13.37	13.26
90.00	13.14	13.03	12.92	12.81	12.69
100.00	12.58	12.46	12.35	12.24	12.12
110.00	12.00	11.89	11.77	11.66	11.25
120.00	11.13	11.02	10.90	10.78	10.66
130.00	10.55	10.43	10.31	10.19	10.07
140.00	9.95	9.83	9.71	9.59	9.47
150.00	9.35	9.24	9.12	9.01	8.90
160.00	8.78	8.67	8.56	8.46	8.35
170.00	8.24	8.14	8.04	7.93	7.83
180.00	7.73	7.63	7.54	7.44	7.34
190.00	7.25	7.16	7.06	6.97	6.88
200.00	6.79	6.70	6.62	6.53	6.45
210.00	6.36	6.28	6.20	6.11	6.03
220.00	5.96	5.88	5.80	5.72	5.65
230.00	5.57	5.50	5.43	5.35	5.28
240.00	5.21	5.14	5.07	5.01	4.94
250.00	4.87	4.84	4.78	4.71	4.65
260.00	4.59	4.52	4.46	4.40	4.34
270.00	4.29	4.23	4.17	4.11	4.06
280.00	4.00	3.95	3.89	3.84	3.79
290.00	3.74	3.69	3.64	3.59	3.54
300.00	3.49	3.44	3.39	3.35	3.30
310.00	3.26	3.21	3.17	3.12	3.08
320.00	3.04	3.00	2.95	2.91	2.87

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
330.00	2.83	2.79	2.76	2.72	2.68
340.00	2.64	2.61	2.57	2.53	2.50
350.00	2.46	2.43	2.40	2.36	2.33
360.00	2.30	2.26	2.23	2.20	2.17
370.00	2.14	2.11	2.08	2.05	2.02
380.00	1.99	1.97	1.94	1.91	1.88
390.00	1.86	1.83	1.81	1.78	1.76
400.00	1.73	1.71	1.68	1.66	1.63
410.00	1.61	1.59	1.57	1.54	1.52
420.00	1.50	1.48	1.46	1.44	1.42
430.00	1.40	1.38	1.36	1.34	1.32
440.00	1.30	1.28	1.26	1.25	1.23
450.00	1.21	1.19	1.18	1.16	1.14
460.00	1.13	1.12	1.10	1.09	1.07
470.00	1.06	1.05	1.03	1.02	1.01
480.00	.99	.98	.96	.95	.94
490.00	.92	.91	.90	.88	.87
500.00	.86	.85	.83	.82	.81
510.00	.80	.79	.78	.76	.75
520.00	.74	.73	.72	.71	.70
530.00	.69	.68	.67	.66	.65
540.00	.64	.63	.62	.62	.61
550.00	.60	.59	.58	.57	.56
560.00	.56	.55	.54	.53	.52
570.00	.52	.51	.50	.50	.49
580.00	.48	.47	.47	.46	.46
590.00	.45	.44	.44	.43	.43
600.00	.42	.42	.41	.41	.40
610.00	.40	.39	.39	.38	.38
620.00	.37	.37	.36	.36	.35
630.00	.35	.34	.34	.33	.32
640.00	.32	.31	.31	.30	.30
650.00	.29	.29	.28	.27	.27
660.00	.26	.26	.25	.25	.24
670.00	.24	.23	.23	.22	.22
680.00	.21	.20	.20	.19	.19
690.00	.19	.18	.18	.17	.17
700.00	.16	.16	.15	.15	.14
710.00	.14	.13	.13	.12	.12
720.00	.10	.09	.09	.08	.08
730.00	.07	.07	.06	.06	.05
740.00	.04	.04	.04	.03	.03
750.00	.03	.02	.02	.02	.01
760.00	.01	.01	.00	.00	.00
770.00	.00	.00	.00	.00	.00
780.00	.00	.00	.00	.00	.00
790.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min	
800.00	.00

HYG file = C:\MY DOCUMENTS\HUTCH100.HYG
HYG ID = 100 Year Outflow
HYG Tag = 100YR

Peak Discharge =	22.54 cfs
Time to Peak =	40.00 min
HYG Volume =	239263 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.33	.90
10.00	1.75	2.85	4.19	5.75	7.51
20.00	9.46	11.40	13.12	14.47	15.53
30.00	16.36	17.47	19.25	20.86	21.99
40.00	22.54	22.47	21.87	21.25	20.65
50.00	20.10	19.58	19.09	18.66	18.23
60.00	17.87	17.53	17.36	17.10	16.87
70.00	16.66	16.55	16.45	16.35	16.24
80.00	16.19	16.08	15.98	15.87	15.76
90.00	15.66	15.55	15.44	15.34	15.23
100.00	15.12	15.01	14.90	14.79	14.69
110.00	14.58	14.47	14.36	14.25	14.14
120.00	14.03	13.92	13.80	13.69	13.58
130.00	13.47	13.36	13.25	13.13	13.02
140.00	12.91	12.79	12.68	12.57	12.45
150.00	12.34	12.22	12.11	11.99	11.88
160.00	11.76	11.64	11.53	11.41	11.29
170.00	11.18	11.06	10.94	10.82	10.71
180.00	10.59	10.47	10.35	10.23	10.12
190.00	9.99	9.87	9.76	9.64	9.52
200.00	9.40	9.28	9.17	9.05	8.94
210.00	8.83	8.72	8.61	8.50	8.39
220.00	8.28	8.18	8.08	7.97	7.87
230.00	7.77	7.67	7.57	7.48	7.38
240.00	7.28	7.19	7.10	6.78	6.69
250.00	6.61	6.52	6.44	6.35	6.27
260.00	6.19	6.11	6.03	5.95	5.87
270.00	5.79	5.71	5.64	5.56	5.49
280.00	5.42	5.35	5.27	5.20	5.13
290.00	5.07	5.00	4.93	4.87	4.80
300.00	4.74	4.67	4.61	4.55	4.49
310.00	4.43	4.37	4.31	4.25	4.19
320.00	4.13	4.08	4.02	3.97	3.92

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
330.00	3.86	3.81	3.76	3.71	3.66
340.00	3.61	3.56	3.51	3.46	3.41
350.00	3.37	3.32	3.27	3.23	3.18
360.00	3.14	3.10	3.05	3.01	2.97
370.00	2.93	2.89	2.85	2.81	2.77
380.00	2.73	2.69	2.66	2.62	2.58
390.00	2.55	2.51	2.48	2.44	2.41
400.00	2.38	2.34	2.31	2.28	2.24
410.00	2.21	2.18	2.15	2.12	2.09
420.00	2.06	2.03	2.01	1.98	1.95
430.00	1.92	1.90	1.87	1.84	1.82
440.00	1.79	1.77	1.74	1.72	1.69
450.00	1.67	1.64	1.62	1.60	1.58
460.00	1.55	1.53	1.51	1.49	1.47
470.00	1.45	1.43	1.41	1.39	1.37
480.00	1.35	1.33	1.31	1.29	1.27
490.00	1.25	1.24	1.22	1.20	1.18
500.00	1.17	1.15	1.13	1.12	1.10
510.00	1.09	1.07	1.06	1.05	1.03
520.00	1.02	1.00	.99	.98	.96
530.00	.95	.93	.92	.91	.89
540.00	.88	.87	.86	.84	.83
550.00	.82	.81	.80	.79	.77
560.00	.76	.75	.74	.73	.72
570.00	.71	.70	.69	.68	.67
580.00	.66	.65	.64	.63	.62
590.00	.61	.61	.60	.59	.58
600.00	.57	.56	.55	.54	.53
610.00	.52	.51	.50	.49	.49
620.00	.49	.48	.47	.46	.45
630.00	.44	.43	.42	.41	.40
640.00	.39	.38	.37	.36	.35
650.00	.34	.33	.32	.31	.30
660.00	.29	.28	.27	.26	.25
670.00	.24	.23	.22	.21	.20
680.00	.19	.18	.17	.16	.15
690.00	.14	.13	.12	.11	.10
700.00	.09	.08	.07	.06	.05
710.00	.04	.03	.02	.01	.00
720.00	.00	.00	.00	.00	.00
730.00	.00	.00	.00	.00	.00
740.00	.00	.00	.00	.00	.00
750.00	.00	.00	.00	.00	.00
760.00	.00	.00	.00	.00	.00
770.00	.00	.00	.00	.00	.00
780.00	.00	.00	.00	.00	.00
790.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min	
800.00	.00

HYG file = C:\MY DOCUMENTS\LGCY 15.HYG
HYG ID = LEGACY 15 yr OUT
HYG Tag = 15YR

Peak Discharge =	56.93 cfs
Time to Peak =	26.00 min
HYG Volume =	83643 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.00	.00
5.00	.00	.07	.26	.71	1.53
10.00	2.73	4.30	6.25	8.65	11.29
15.00	13.94	16.56	19.12	21.62	24.03
20.00	26.35	29.23	35.18	42.39	48.47
25.00	53.96	56.93	56.91	54.67	50.76
30.00	45.93	40.75	35.11	30.62	27.49
35.00	26.09	24.78	23.53	22.36	21.25
40.00	20.21	19.22	18.29	17.41	16.58
45.00	15.80	15.06	14.36	13.70	13.07
50.00	12.48	11.92	11.39	10.88	10.41
55.00	9.96	9.53	9.12	8.74	8.38
60.00	8.04	7.70	7.39	7.10	6.82
65.00	6.55	6.29	6.04	5.81	5.60
70.00	5.39	5.19	5.00	4.81	4.63
75.00	4.46	4.31	4.16	4.01	3.87
80.00	3.73	3.60	3.48	3.35	3.24
85.00	3.13	3.02	2.92	2.83	2.73
90.00	2.64	2.55	2.47	2.39	2.31
95.00	2.23	2.16	2.09	2.02	1.96
100.00	1.90	1.84	1.79	1.73	1.68
105.00	1.63	1.58	1.53	1.49	1.44
110.00	1.40	1.36	1.32	1.28	1.24
115.00	1.20	1.16	1.13	1.10	1.07
120.00	1.05	1.02	.99	.97	.95
125.00	.92	.90	.88	.85	.83
130.00	.81	.79	.77	.75	.73
135.00	.71	.70	.68	.66	.64
140.00	.63	.61	.60	.58	.57
145.00	.55	.54	.53	.51	.50
150.00	.49	.47	.46	.45	.44
155.00	.43	.42	.41	.40	.39
160.00	.39	.38	.38	.37	.36

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.36	.35	.35	.34	.34
170.00	.33	.33	.32	.32	.31
175.00	.31	.30	.30	.29	.29
180.00	.29	.28	.28	.27	.27
185.00	.27	.26	.26	.26	.25
190.00	.25	.25	.24	.24	.23
195.00	.23	.23	.22	.22	.22
200.00	.21	.21	.21	.21	.20
205.00	.20	.20	.19	.19	.19
210.00	.18	.18	.18	.18	.17
215.00	.17	.17	.17	.16	.16
220.00	.16	.16	.16	.15	.15
225.00	.15	.15	.15	.15	.14
230.00	.14	.14	.14	.14	.14
235.00	.13	.13	.13	.13	.13
240.00	.13	.12	.12	.12	.12
245.00	.12	.12	.11	.11	.11
250.00	.11	.11	.10	.10	.10
255.00	.10	.10	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\LGCY 25.HYG
HYG ID = Legacy 25 yr out
HYG Tag = 25YR

Peak Discharge =	78.87 cfs
Time to Peak =	46.00 min
HYG Volume =	206673 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.08	.32
10.00	.94	2.02	3.58	5.60	8.15
20.00	11.27	14.67	18.08	21.41	24.65
30.00	27.78	35.54	46.38	56.37	64.21
40.00	70.38	74.83	78.05	78.87	76.47
50.00	71.72	65.30	58.03	50.11	42.42
60.00	34.87	29.78	27.24	25.86	24.56
70.00	23.32	22.16	21.06	20.03	19.05
80.00	18.13	17.26	16.44	15.67	14.93
90.00	14.24	13.59	12.96	12.38	11.83
100.00	11.30	10.80	10.33	9.89	9.46
110.00	9.05	8.68	8.32	7.98	7.65
120.00	7.34	7.05	6.77	6.50	6.25
130.00	6.00	5.77	5.56	5.35	5.15
140.00	4.96	4.78	4.60	4.44	4.28
150.00	4.13	3.98	3.84	3.71	3.58
160.00	3.45	3.33	3.22	3.11	3.01
170.00	2.91	2.81	2.72	2.63	2.54
180.00	2.45	2.37	2.29	2.22	2.14
190.00	2.07	2.01	1.95	1.89	1.83
200.00	1.78	1.73	1.67	1.62	1.57
210.00	1.53	1.48	1.44	1.39	1.35
220.00	1.31	1.27	1.23	1.19	1.16
230.00	1.13	1.10	1.07	1.04	1.02
240.00	.99	.97	.94	.92	.89
250.00	.87	.85	.83	.81	.79
260.00	.77	.75	.73	.71	.69
270.00	.67	.66	.64	.63	.61
280.00	.59	.58	.56	.55	.54
290.00	.52	.51	.50	.48	.47
300.00	.46	.45	.44	.43	.42
310.00	.40	.40	.39	.39	.80
320.00	.37	.37	.36	.36	.35

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 2.00 min
Time on left represents time for first value in each row.

Time min					
330.00	.35	.34	.34	.33	.33
340.00	.32	.32	.31	.31	.30
350.00	.30	.29	.29	.29	.28
360.00	.28	.27	.27	.26	.26
370.00	.26	.25	.25	.25	.24
380.00	.24	.23	.23	.23	.22
390.00	.22	.22	.21	.21	.21
400.00	.20	.20	.20	.20	.19
410.00	.19	.19	.18	.18	.18
420.00	.18	.17	.17	.17	.17
430.00	.16	.16	.16	.16	.15
440.00	.15	.15	.15	.14	.14
450.00	.14	.14	.14	.13	.13
460.00	.13	.13	.13	.12	.12
470.00	.12	.12	.12	.12	.11
480.00	.11	.11	.11	.11	.11
490.00	.10	.10	.10	.10	.10
500.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\LGCY 100.HYG
HYG ID = LGCY 100 Yr Out
HYG Tag = 100YR

Peak Discharge =	105.11 cfs
Time to Peak =	25.00 min
HYG Volume =	132259 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.00	.00
5.00	.00	.10	.42	1.31	2.80
10.00	4.88	7.62	11.11	15.32	19.89
15.00	24.38	29.75	44.29	60.59	74.33
20.00	84.39	91.64	96.82	100.47	103.15
25.00	105.11	104.72	100.76	94.12	85.26
30.00	75.02	63.76	52.65	42.01	33.87
35.00	28.92	26.99	25.62	24.33	23.11
40.00	21.96	20.87	19.85	18.88	17.97
45.00	17.11	16.30	15.53	14.80	14.12
50.00	13.47	12.85	12.28	11.73	11.21
55.00	10.71	10.25	9.81	9.39	8.99
60.00	8.61	8.26	7.92	7.59	7.28
65.00	7.00	6.72	6.46	6.20	5.96
70.00	5.73	5.52	5.32	5.12	4.93
75.00	4.75	4.57	4.41	4.25	4.10
80.00	3.96	3.82	3.69	3.56	3.43
85.00	3.31	3.20	3.09	2.99	2.89
90.00	2.79	2.70	2.61	2.52	2.44
95.00	2.36	2.28	2.20	2.13	2.06
100.00	2.00	1.94	1.88	1.82	1.77
105.00	1.72	1.66	1.61	1.56	1.52
110.00	1.47	1.43	1.38	1.34	1.30
115.00	1.26	1.22	1.19	1.15	1.12
120.00	1.09	1.06	1.04	1.01	.99
125.00	.96	.94	.91	.89	.87
130.00	.85	.82	.80	.78	.76
135.00	.74	.73	.71	.69	.67
140.00	.65	.64	.62	.61	.59
145.00	.58	.56	.55	.53	.52
150.00	.51	.49	.48	.47	.46
155.00	.45	.44	.42	.41	.40
160.00	.40	.39	.38	.38	.37

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.37	.36	.36	.35	.35
170.00	.34	.34	.33	.33	.32
175.00	.32	.31	.31	.30	.30
180.00	.29	.29	.28	.28	.28
185.00	.27	.27	.26	.26	.26
190.00	.25	.25	.24	.24	.24
195.00	.23	.23	.23	.22	.22
200.00	.22	.21	.21	.21	.20
205.00	.20	.20	.19	.19	.19
210.00	.19	.18	.18	.18	.18
215.00	.17	.17	.17	.17	.16
220.00	.16	.16	.16	.15	.15
225.00	.15	.15	.14	.14	.14
230.00	.14	.14	.13	.13	.13
235.00	.13	.13	.12	.12	.12
240.00	.12	.12	.11	.11	.11
245.00	.11	.11	.11	.10	.10
250.00	.10	.10	.10	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\OFF2-15.HYG
HYG ID = Hutch offsite 2
HYG Tag = 15yr

Peak Discharge =	6.31 cfs
Time to Peak =	7.00 min
HYG Volume =	7568 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.90	1.80	2.70	3.60
5.00	4.50	5.40	6.31	6.31	6.31
10.00	6.31	6.31	6.31	6.31	6.31
15.00	6.31	6.31	6.31	6.31	6.31
20.00	6.31	5.40	4.50	3.60	2.70
25.00	1.80	.90	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
160.00	.00	.00	.00	.00	.00
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\OFF2-25.HYG
HYG ID = Hutch off 2
HYG Tag = 25yr

Peak Discharge =	7.79 cfs
Time to Peak =	7.00 min
HYG Volume =	9347 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	1.11	2.22	3.34	4.45
5.00	5.56	6.68	7.79	7.79	7.79
10.00	7.79	7.79	7.79	7.79	7.79
15.00	7.79	7.79	7.79	7.79	7.79
20.00	7.79	6.68	5.56	4.45	3.34
25.00	2.22	1.11	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\OFF2-100.HYG
HYG ID = Hutch off 2
HYG Tag = 100yr

Peak Discharge =	9.96 cfs
Time to Peak =	7.00 min
HYG Volume =	11952 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	1.42	2.85	4.27	5.69
5.00	7.11	8.54	9.96	9.96	9.96
10.00	9.96	9.96	9.96	9.96	9.96
15.00	9.96	9.96	9.96	9.96	9.96
20.00	9.96	8.54	7.11	5.69	4.27
25.00	2.85	1.42	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\OFF3-15.HYG
HYG ID = Off Area 3-15yr
HYG Tag = 15YR

Peak Discharge =	46.30 cfs
Time to Peak =	9.00 min
HYG Volume =	55674 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	5.14	10.29	15.43	20.57
5.00	25.97	31.11	36.25	41.39	46.30
10.00	46.30	46.30	46.30	46.30	46.30
15.00	46.30	46.30	46.30	46.30	46.30
20.00	46.30	41.39	36.25	31.11	25.97
25.00	20.57	15.43	10.29	5.14	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
160.00	.00	.00	.00	.00	.00
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\OFF3-25.HYG
HYG ID = Off Area 3-25yr
HYG Tag = 25YR

Peak Discharge =	57.18 cfs
Time to Peak =	9.00 min
HYG Volume =	68608 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	6.35	12.71	19.05	25.41
5.00	31.76	38.11	44.45	50.81	57.18
10.00	57.18	57.18	57.18	57.18	57.18
15.00	57.18	57.18	57.18	57.18	57.18
20.00	57.18	50.81	44.45	38.11	31.76
25.00	25.41	19.05	12.71	6.35	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\OFF3-100.HYG
HYG ID = Off Area 3-100yr
HYG Tag = 100YR

Peak Discharge =	73.14 cfs
Time to Peak =	9.00 min
HYG Volume =	87774 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	8.13	16.25	24.38	32.51
5.00	40.64	48.77	56.90	65.03	73.14
10.00	73.14	73.14	73.14	73.14	73.14
15.00	73.14	73.14	73.14	73.14	73.14
20.00	73.14	65.03	56.90	48.77	40.64
25.00	32.51	24.38	16.25	8.13	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\OFF4-15.HYG
HYG ID = Offsite 4 15yr
HYG Tag = 15YR

Peak Discharge =	40.39 cfs
Time to Peak =	10.00 min
HYG Volume =	48468 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 10.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	40.39	40.39	.00	.00
50.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
250.00	.00				

HYG file = C:\MY DOCUMENTS\OFF4-25.HYG
HYG ID = Offsite 4 25yr
HYG Tag = 25YR

Peak Discharge =	49.88 cfs
Time to Peak =	10.00 min
HYG Volume =	59856 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 10.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	49.88	49.88	.00	.00
50.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
250.00	.00				

HYG file = C:\MY DOCUMENTS\OFF4-100.HYG
HYG ID = Offsite 4 100yr
HYG Tag = 100YR

Peak Discharge =	63.80 cfs
Time to Peak =	10.00 min
HYG Volume =	76560 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 10.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	63.80	63.80	.00	.00
50.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
250.00	.00				

HYG file = C:\MY DOCUMENTS\PENN-15.HYG
HYG ID = 15 Year Inflow
HYG Tag = 15YR

Peak Discharge =	185.99 cfs
Time to Peak =	9.00 min
HYG Volume =	223173 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	20.66	41.33	61.99	82.65
5.00	103.31	123.97	144.63	165.29	185.99
10.00	185.99	185.99	185.99	185.99	185.99
15.00	185.99	185.99	185.99	185.99	185.99
20.00	185.99	165.29	144.63	123.97	103.31
25.00	82.65	61.99	41.33	20.66	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
160.00	.00	.00	.00	.00	.00
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\PENN-25.HYG
HYG ID = 25 Year Inflow
HYG Tag = 25YR

Peak Discharge = 229.67 cfs
Time to Peak = 9.00 min
HYG Volume = 275605 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	25.52	51.04	76.56	102.07
5.00	127.60	153.11	178.63	204.15	229.67
10.00	229.67	229.67	229.67	229.67	229.67
15.00	229.67	229.67	229.67	229.67	229.67
20.00	229.67	204.15	178.63	153.11	127.60
25.00	102.07	76.56	51.04	25.52	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

HYG file = C:\MY DOCUMENTS\PENN-100.HYG
HYG ID = 100 Year Inflow
HYG Tag = 100YR

Peak Discharge =	293.77 cfs
Time to Peak =	9.00 min
HYG Volume =	352520 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	32.64	65.28	97.92	130.56
5.00	163.20	195.84	228.48	261.12	293.77
10.00	293.77	293.77	293.77	293.77	293.77
15.00	293.77	293.77	293.77	293.77	293.77
20.00	293.77	261.12	228.48	195.84	163.20
25.00	130.56	97.92	65.28	32.64	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00				

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Title... Lake in Pennial Park

POND VOLUME CALCULATIONS

Planimeter scale: 1.00 ft/in

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (cu.ft)	Volume Sum (cu.ft)
516.00	62509.920	1.4350	.0000	0	0
518.00	68786.590	1.5791	4.5195	131247	131247
520.00	75291.070	1.7284	4.9597	144029	275275
522.00	82022.320	1.8830	5.4155	157265	432541
524.00	90157.310	2.0697	5.9268	172116	604656

POND VOLUME EQUATIONS

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

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

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

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Title... Triple Box Structure in Pennial Park Lake

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 516.00 ft
Increment = .10 ft
Max. Elev.= 524.00 ft

****
OUTLET CONNECTIVITY
****

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

Structure	No.		Outfall	E1, ft	E2, ft
Weir-XY Points	ES	--->	TW	522.000	524.000
Inlet Box	OX	--->	CV	518.600	524.000
Weir-Rectangular	SL	--->	CV	516.000	524.000
Culvert-Box	CV	--->	TW	514.300	524.000

TW SETUP, DS Channel

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Title... Triple Box Structure in Pennial Park Lake

OUTLET STRUCTURE INPUT DATA

Structure ID = ES
Structure Type = Weir-XY Points

# of Openings = 1
WEIR X-Y GROUND POINTS

X, ft	Elev, ft
.00	524.00
6.00	522.00
36.00	522.00
42.00	524.00

Lowest Elev. = 522.00 ft

Weir Table File: EARTH.WCT
Weir Table ID: Emer. Spillway
WEIR COEFFICIENT TABLE

Depth, ft	Weir C
.50	3.0000
1.00	2.7500
2.00	2.5500

Weir TW effects (Use adjustment equation)

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Title... Triple Box Structure in Pennial Park Lake

OUTLET STRUCTURE INPUT DATA

Structure ID	= BOX	
Structure Type	= Inlet Box	
# of Openings	= 1	
Invert Elev.	= S18.60	ft
Orifice Area	= 52.6800	sq.ft
Orifice Coeff.	= .600	
Weir Length	= 34.34	ft
Weir Coeff.	= 3.000	
K, Submerged	= .000	
K, Reverse	= 1.000	
Kb,Barrel	= .000000	(per ft of full flow)
Barrel Length	= .00	ft
Mannings n	= .0000	

Structure ID	= SL	
Structure Type	= Weir-Rectangular	
# of Openings	= 1	
Crest Elev.	= 516.00	ft
Weir Length	= 10.00	ft
Weir Coeff.	= 3.000000	

Weir TW effects (Use adjustment equation)

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Title... Triple Box Structure in Pennial Park Lake

OUTLET STRUCTURE INPUT DATA

Structure ID	=	CV	
Structure Type	=	Culvert-Box	
No. Barrels	=	1	
Barrel Height	=	3.00	ft
Barrel Width	=	6.00	ft
Upstream Invert	=	514.30	ft
Dnstream Invert	=	514.00	ft
Horiz. Length	=	73.05	ft
Barrel Length	=	73.05	ft
Barrel Slope	=	.00411	ft/ft

OUTLET CONTROL DATA...

Mannings n	=	.0130	
Ke	=	.5000	(forward entrance loss)
Kb	=	.004925	(per ft of full flow)
Kr	=	.5000	(reverse entrance loss)
HW Convergence	=	.010	+/- ft

INLET CONTROL DATA...

Equation form	=	2	
Inlet Control K	=	.4950	
Inlet Control M	=	.6670	
Inlet Control c	=	.03140	
Inlet Control Y	=	.8200	
T1 ratio (HW/D)	=	1.142	
T2 ratio (HW/D)	=	1.320	
Slope Factor	=	-.500	

Use unsubmerged inlet control Form 2 equ. below T1 elev.
Use submerged inlet control Form 2 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...
At T1 Elev = 517.72 ft ---> Flow = 109.12 cfs
At T2 Elev = 518.26 ft ---> Flow = 124.71 cfs

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Title... Triple Box Structure in Pennial Park Lake

OUTLET STRUCTURE INPUT DATA

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

FREE OUTFALL CONDITIONS SPECIFIED

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

Type.... Composite Rating Curve
Name.... TRIPLE BOX W/BOX

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Title... Triple Box Structure in Pennial Park Lake

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
516.00	.00	Free Outfall		(no Q: ES,BOX,SL,CV)
516.10	.95	Free Outfall		SL,CV (no Q: ES,BOX)
516.20	2.68	Free Outfall		SL,CV (no Q: ES,BOX)
516.30	4.93	Free Outfall		SL,CV (no Q: ES,BOX)
516.40	7.59	Free Outfall		SL,CV (no Q: ES,BOX)
516.50	10.61	Free Outfall		SL,CV (no Q: ES,BOX)
516.60	13.94	Free Outfall		SL,CV (no Q: ES,BOX)
516.70	17.57	Free Outfall		SL,CV (no Q: ES,BOX)
516.80	21.47	Free Outfall		SL,CV (no Q: ES,BOX)
516.90	25.62	Free Outfall		SL,CV (no Q: ES,BOX)
517.00	30.00	Free Outfall		SL,CV (no Q: ES,BOX)
517.10	34.40	Free Outfall		SL,CV (no Q: ES,BOX)
517.20	38.39	Free Outfall		SL,CV (no Q: ES,BOX)
517.30	42.30	Free Outfall		SL,CV (no Q: ES,BOX)
517.40	46.05	Free Outfall		SL,CV (no Q: ES,BOX)
517.50	49.95	Free Outfall		SL,CV (no Q: ES,BOX)
517.60	53.65	Free Outfall		SL,CV (no Q: ES,BOX)
517.70	57.63	Free Outfall		SL,CV (no Q: ES,BOX)
517.80	61.27	Free Outfall		SL,CV (no Q: ES,BOX)
517.90	65.15	Free Outfall		SL,CV (no Q: ES,BOX)
518.00	69.03	Free Outfall		SL,CV (no Q: ES,BOX)
518.10	73.20	Free Outfall		SL,CV (no Q: ES,BOX)
518.20	76.91	Free Outfall		SL,CV (no Q: ES,BOX)
518.30	80.87	Free Outfall		SL,CV (no Q: ES,BOX)
518.40	84.89	Free Outfall		SL,CV (no Q: ES,BOX)
518.50	90.90	Free Outfall		SL,CV (no Q: ES,BOX)
518.60	91.13	Free Outfall		SL,CV (no Q: ES,BOX)
518.70	104.91	Free Outfall		BOX,SL,CV (no Q: ES)
518.80	103.90	Free Outfall		BOX,SL,CV (no Q: ES)
518.90	120.51	Free Outfall		BOX,SL,CV (no Q: ES)
519.00	123.84	Free Outfall		BOX,SL,CV (no Q: ES)
519.10	154.42	Free Outfall		BOX,CV (no Q: ES,SL)
519.20	158.69	Free Outfall		BOX,CV (no Q: ES,SL)
519.30	162.12	Free Outfall		BOX,CV (no Q: ES,SL)
519.40	165.18	Free Outfall		BOX,CV (no Q: ES,SL)
519.50	168.61	Free Outfall		BOX,CV (no Q: ES,SL)
519.60	171.66	Free Outfall		BOX,CV (no Q: E5,SL)
519.70	174.33	Free Outfall		BOX,CV (no Q: ES,SL)
519.80	176.92	Free Outfall		BOX,CV (no Q: E5,SL)

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Title... Triple Box Structure in Pennial Park Lake

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
519.90	180.05	Free Outfall		BOX,CV (no Q: ES,SL)
520.00	183.11	Free Outfall		BOX,CV (no Q: ES,SL)
520.10	185.78	Free Outfall		BOX,CV (no Q: ES,SL)
520.20	188.45	Free Outfall		BOX,CV (no Q: ES,SL)
520.30	191.50	Free Outfall		BOX,CV (no Q: ES,SL)
520.40	193.79	Free Outfall		BOX,CV (no Q: ES,SL)
520.50	196.84	Free Outfall		BOX,CV (no Q: ES,SL)
520.60	199.13	Free Outfall		BOX,CV (no Q: ES,SL)
520.70	201.80	Free Outfall		BOX,CV (no Q: ES,SL)
520.80	204.47	Free Outfall		BOX,CV (no Q: ES,SL)
520.90	206.76	Free Outfall		BOX,CV (no Q: ES,SL)
521.00	209.43	Free Outfall		BOX,CV (no Q: ES,SL)
521.10	211.72	Free Outfall		BOX,CV (no Q: ES,SL)
521.20	214.39	Free Outfall		BOX,CV (no Q: ES,SL)
521.30	216.67	Free Outfall		BOX,CV (no Q: ES,SL)
521.40	218.96	Free Outfall		BOX,CV (no Q: ES,SL)
521.50	221.25	Free Outfall		BOX,CV (no Q: ES,SL)
521.60	223.54	Free Outfall		BOX,CV (no Q: ES,SL)
521.70	225.83	Free Outfall		BOX,CV (no Q: ES,SL)
521.80	228.12	Free Outfall		BOX,CV (no Q: ES,SL)
521.90	230.41	Free Outfall		BOX,CV (no Q: ES,SL)
522.00	232.70	Free Outfall		BOX,CV (no Q: ES,SL)
522.10	237.85	Free Outfall		ES,BOX,CV (no Q: SL)
522.20	245.44	Free Outfall		ES,BOX,CV (no Q: SL)
522.30	254.28	Free Outfall		ES,BOX,CV (no Q: SL)
522.40	264.88	Free Outfall		ES,BOX,CV (no Q: SL)
522.50	276.32	Free Outfall		ES,BOX,CV (no Q: SL)
522.60	288.57	Free Outfall		ES,BOX,CV (no Q: SL)
522.70	301.14	Free Outfall		ES,BOX,CV (no Q: SL)
522.80	314.68	Free Outfall		ES,BOX,CV (no Q: SL)
522.90	328.38	Free Outfall		ES,BOX,CV (no Q: SL)
523.00	342.92	Free Outfall		ES,BOX,CV (no Q: SL)
523.10	358.46	Free Outfall		ES,BOX,CV (no Q: SL)
523.20	374.62	Free Outfall		ES,BOX,CV (no Q: SL)
523.30	391.35	Free Outfall		ES,BOX,CV (no Q: SL)
523.40	408.64	Free Outfall		ES,BOX,CV (no Q: SL)
523.50	426.83	Free Outfall		ES,BOX,CV (no Q: SL)
523.60	445.14	Free Outfall		ES,BOX,CV (no Q: SL)
523.70	463.93	Free Outfall		ES,BOX,CV (no Q: SL)

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Title... Triple Box Structure in Pennial Park Lake

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
523.80	483.16	Free Outfall		ES,BOX,CV (no Q: SL)
523.90	502.83	Free Outfall		ES,BOX,CV (no Q: SL)
524.00	522.89	Free Outfall		ES,BOX,CV (no Q: SL)

SUMMARY FOR HYDROGRAPH ADDITION
at Node: PENNIAL LAKE IN

HYG Directory: C:\MY DOCUMENTS\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
CHERRY IN	CHERRY FLOWS		Cherry Out 15	15yr
INFLOW 2	LEGACY OUTFLOW		LEGACY 15 yr OUT	15YR
INFLOW 3	HUTCHINGS OUT		15 Year, Outflow	15YR
INFLOW 5	OFFSITE AREA 3		Off Area 3-15yr	15YR
INFLOW	OFFSITE AREA 4		Offsite 4 15yr	15YR
INFLOW 4	ON-SITE INFLOW		15 Year Inflow	15YR
OFFSITE INFLOW	OFF AREA 2		Hutch offsite 2	15yr

INFLOWS TO: PENNIAL LAKE IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	Cherry Out 15	15yr	76070	38.00	16.08
	LEGACY 15 yr OUT	15YR	83643	26.00	56.93
	15 Year, Outflow	15YR	152986	40.00	13.75
	Off Area 3-15yr	15YR	55674	9.00	46.30
	Offsite 4 15yr	15YR	48468	10.00	40.39
	15 Year Inflow	15YR	223173	9.00	185.99
	Hutch offsite 2	15yr	7568	7.00	6.31

TOTAL FLOW INTO: PENNIAL LAKE IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	PENNIAL LAKE IN	A 15YR	637548	20.00	322.36

TOTAL NODE INFLOW...
HYG file =
HYG ID = PENNIAL LAKE IN
HYG Tag = A 15YR

Peak Discharge =	322.36 cfs
Time to Peak =	20.00 min
HYG Volume =	637548 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	30.74	61.50	92.24	123.20
5.00	154.70	186.13	217.90	248.84	280.05
10.00	286.06	288.48	291.33	294.81	298.58
15.00	302.79	307.08	310.90	314.71	318.68
20.00	322.36	295.97	272.44	250.22	226.84
25.00	202.43	175.74	145.84	114.57	81.48
30.00	73.24	68.58	63.40	59.29	56.50
35.00	55.35	54.27	53.15	52.09	51.02
40.00	49.99	48.93	47.90	46.85	45.84
45.00	44.87	43.95	43.05	42.21	41.38
50.00	40.60	39.85	39.13	38.42	37.76
55.00	37.12	36.50	35.89	35.31	34.75
60.00	34.22	33.69	33.18	32.69	32.22
65.00	31.75	31.30	30.85	30.42	30.01
70.00	29.60	29.20	28.81	28.42	28.05
75.00	27.67	27.32	26.96	26.61	26.27
80.00	25.94	25.55	25.13	24.71	24.32
85.00	23.93	23.54	23.17	22.84	22.52
90.00	22.21	21.90	21.60	21.34	21.08
95.00	20.72	20.32	19.93	19.54	19.18
100.00	18.82	18.47	18.14	17.81	17.54
105.00	17.29	17.05	16.80	16.58	16.34
110.00	16.12	15.90	15.68	15.47	15.26
115.00	15.05	14.85	14.66	14.47	14.29
120.00	14.12	13.94	13.77	13.60	13.44
125.00	13.26	13.11	12.96	12.80	12.65
130.00	12.48	12.31	12.15	11.99	11.84
135.00	11.68	11.54	11.39	11.25	11.10
140.00	10.97	10.83	10.71	10.57	10.38
145.00	10.19	10.02	9.86	9.69	9.54
150.00	9.40	9.25	9.12	8.99	8.87
155.00	8.75	8.63	8.51	8.40	8.27
160.00	8.17	8.06	7.97	7.86	7.78

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	7.69	7.61	7.53	7.45	7.38
170.00	7.30	7.23	7.16	7.11	7.03
175.00	6.95	6.88	6.83	6.76	6.70
180.00	6.65	6.59	6.54	6.49	6.44
185.00	6.40	6.35	6.30	6.26	6.23
190.00	6.21	6.17	6.12	6.07	6.02
195.00	6.00	5.98	5.93	5.90	5.86
200.00	5.81	5.77	5.74	5.70	5.66
205.00	5.62	5.58	5.53	5.50	5.46
210.00	5.42	5.38	5.35	5.31	5.27
215.00	5.23	5.20	5.17	5.13	5.09
220.00	5.06	5.03	5.00	4.95	4.92
225.00	4.89	4.86	4.82	4.79	4.75
230.00	4.72	4.69	4.66	4.63	4.60
235.00	4.56	4.53	4.50	4.47	4.44
240.00	4.41	4.37	4.34	4.31	4.28
245.00	4.25	4.23	4.19	4.16	4.13
250.00	4.11	4.08	4.04	4.01	3.99
255.00	3.96	3.94	3.81	3.78	3.75
260.00	3.73	3.70	3.68	3.65	3.63
265.00	3.60	3.58	3.55	3.53	3.50
270.00	3.48	3.46	3.44	3.41	3.39
275.00	3.36	3.34	3.32	3.30	3.27
280.00	3.25	3.23	3.21	3.18	3.16
285.00	3.14	3.12	3.10	3.08	3.05
290.00	3.03	3.01	2.99	2.97	2.95
295.00	2.93	2.91	2.89	2.87	2.85
300.00	2.83	2.81	2.79	2.77	2.75
305.00	2.73	2.71	2.69	2.68	2.66
310.00	2.64	2.62	2.60	2.58	2.57
315.00	2.55	2.53	2.51	2.50	2.48
320.00	2.46	2.44	2.43	2.41	2.39
325.00	2.37	2.36	2.34	2.33	2.31
330.00	2.29	2.27	2.26	2.24	2.23
335.00	2.21	2.20	2.18	2.17	2.15
340.00	2.14	2.12	2.11	2.09	2.08
345.00	2.06	2.05	2.03	2.02	2.00
350.00	1.99	1.97	1.96	1.95	1.94
355.00	1.92	1.91	1.89	1.88	1.87
360.00	1.86	1.84	1.83	1.81	1.80
365.00	1.79	1.78	1.76	1.75	1.74
370.00	1.73	1.71	1.70	1.69	1.68
375.00	1.67	1.66	1.64	1.63	1.62
380.00	1.61	1.60	1.59	1.57	1.56
385.00	1.55	1.54	1.53	1.52	1.51
390.00	1.50	1.49	1.48	1.47	1.46
395.00	1.45	1.44	1.43	1.42	1.41

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min										
400.00	1.40	.00								

SUMMARY FOR HYDROGRAPH ADDITION
at Node: PENNIAL LAKE IN

HYG Directory: C:\MY DOCUMENTS\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
CHERRY IN	CHERRY FLOWS		Cherry out 25	25yr
INFLOW 2	LEGACY OUTFLOW		Legacy 25 yr out	25YR
INFLOW 3	HUTCHINGS OUT		25 Year Outflow	25YR
INFLOW 5	OFFSITE AREA 3		Off Area 3-25yr	25YR
INFLOW	OFFSITE AREA 4		Offsite 4 25yr	25YR
INFLOW 4	ON-SITE INFLOW		25 Year Inflow	25YR
OFFSITE INFLOW	OFF AREA 2		Hutch off 2	25yr

INFLOWS TO: PENNIAL LAKE IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	Cherry out 25	25yr	94001	36.00	26.79
	Legacy 25 yr out	25YR	206673	46.00	78.87
	25 Year Outflow	25YR	184685	40.00	15.76
	Off Area 3-25yr	25YR	68608	9.00	57.18
	Offsite 4 25yr	25YR	59856	10.00	49.88
	25 Year Inflow	25YR	275605	9.00	229.67
	Hutch off 2	25yr	9347	7.00	7.79

TOTAL FLOW INTO: PENNIAL LAKE IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	PENNIAL LAKE IN	B 25YR	882941	20.00	375.36

TOTAL NODE INFLOW...
HYG file =
HYG ID = PENNIAL LAKE IN
HYG Tag = B 25YR

Peak Discharge =	375.36 cfs
Time to Peak =	20.00 min
HYG Volume =	882941 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	37.97	75.95	113.91	152.14
5.00	190.78	229.51	268.52	306.21	344.30
10.00	350.46	352.05	353.74	355.86	358.43
15.00	361.16	363.56	366.52	369.40	372.39
20.00	375.36	340.56	305.76	271.00	236.18
25.00	201.03	165.85	130.43	96.06	62.66
30.00	61.30	67.81	73.82	80.86	87.47
35.00	93.21	98.60	102.52	106.15	108.60
40.00	110.80	111.86	112.69	112.67	112.80
45.00	112.29	111.81	109.77	108.23	105.67
50.00	103.11	99.71	96.31	92.49	88.67
55.00	84.52	80.37	76.34	72.32	68.35
60.00	64.39	61.65	58.91	57.45	55.99
65.00	55.11	54.23	53.38	52.54	51.72
70.00	50.91	50.14	49.37	48.61	47.87
75.00	47.16	46.45	45.77	45.08	44.42
80.00	43.77	43.13	42.50	41.90	41.28
85.00	40.69	40.11	39.54	38.98	38.43
90.00	37.84	37.22	36.61	36.01	35.42
95.00	34.85	34.30	33.78	33.28	32.79
100.00	32.31	31.84	31.38	30.93	30.46
105.00	29.90	29.36	28.83	28.31	27.80
110.00	27.31	26.85	26.39	25.98	25.60
115.00	25.23	24.88	24.38	23.88	23.54
120.00	23.21	22.89	22.58	22.27	21.96
125.00	21.65	21.37	21.08	20.80	20.53
130.00	20.26	19.99	19.74	19.48	19.24
135.00	18.99	18.75	18.51	18.28	18.03
140.00	17.79	17.55	17.31	17.08	16.85
145.00	16.63	16.42	16.20	15.99	15.78
150.00	15.59	15.39	15.20	14.96	14.71
155.00	14.47	14.25	14.03	13.82	13.60
160.00	13.40	13.21	13.02	12.85	12.68

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	12.51	12.36	12.18	12.01	11.85
170.00	11.69	11.55	11.40	11.26	11.14
175.00	11.00	10.87	10.74	10.63	10.51
180.00	10.40	10.29	10.18	10.07	9.96
185.00	9.85	9.75	9.64	9.54	9.45
190.00	9.36	9.28	9.20	9.11	9.03
195.00	8.95	8.87	8.79	8.72	8.65
200.00	8.58	8.50	8.43	8.36	8.29
205.00	8.22	8.15	8.08	8.02	7.95
210.00	7.89	7.82	7.76	7.70	7.64
215.00	7.57	7.50	7.44	7.38	7.32
220.00	7.27	7.21	7.15	7.09	7.03
225.00	6.97	6.91	6.86	6.81	6.75
230.00	6.70	6.65	6.60	6.55	6.50
235.00	6.44	6.39	6.34	6.30	6.25
240.00	6.20	6.15	6.11	6.06	6.01
245.00	5.97	5.93	5.88	5.83	5.78
250.00	5.74	5.71	5.69	5.65	5.61
255.00	5.56	5.52	5.48	5.44	5.40
260.00	5.36	5.31	5.27	5.23	5.19
265.00	5.15	5.11	5.07	5.03	4.99
270.00	4.96	4.92	4.89	4.85	4.81
275.00	4.77	4.74	4.70	4.67	4.63
280.00	4.59	4.56	4.53	4.49	4.45
285.00	4.42	4.39	4.36	4.33	4.29
290.00	4.26	4.23	4.20	4.17	4.14
295.00	4.10	4.07	4.04	4.01	3.98
300.00	3.95	3.46	3.44	3.41	3.39
305.00	3.37	3.35	3.32	3.30	3.28
310.00	3.26	3.23	3.21	3.19	3.17
315.00	3.14	3.12	3.10	3.08	3.06
320.00	3.04	3.02	3.00	2.97	2.95
325.00	2.93	2.91	2.89	2.87	2.85
330.00	2.83	2.81	2.79	2.77	2.76
335.00	2.74	2.72	2.70	2.68	2.66
340.00	2.64	2.62	2.61	2.59	2.57
345.00	2.55	2.53	2.51	2.50	2.48
350.00	2.46	2.44	2.43	2.41	2.40
355.00	2.38	2.36	2.34	2.33	2.31
360.00	2.30	2.28	2.26	2.24	2.23
365.00	2.21	2.20	2.18	2.17	2.15
370.00	2.14	2.12	2.11	2.09	2.08
375.00	2.06	2.05	2.03	2.02	2.00
380.00	1.99	1.98	1.97	1.95	1.94
385.00	1.92	1.91	1.89	1.88	1.87
390.00	1.86	1.84	1.83	1.82	1.81
395.00	1.79	1.78	1.77	1.76	1.74

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min			
400.00	1.73	.00	

SUMMARY FOR HYDROGRAPH ADDITION
at Node: PENNIAL LAKE IN

HYG Directory: C:\MY DOCUMENTS\

Upstream Link ID	Upstream Node ID	HYG file	HYG ID	HYG tag
CHERRY IN	CHERRY FLOWS		Cherry out 100	100yr
INFLOW 2	LEGACY OUTFLOW		LGCY 100 Yr Out	100YR
INFLOW 3	HUTCHINGS OUT		100 Year Outflow	100YR
INFLOW 5	OFFSITE AREA 3		Off Area 3-100yr	100YR
INFLOW	OFFSITE AREA 4		Offsite 4 100yr	100YR
INFLOW 4	ON-SITE INFLOW		100 Year Inflow	100YR
OFFSITE INFLOW	OFF AREA 2		Hutch off 2	100yr

INFLOWS TO: PENNIAL LAKE IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	Cherry out 100	100yr	133038	34.00	50.13
	LGCY 100 Yr Out	100YR	132259	25.00	105.11
	100 Year Outflow	100YR	239263	40.00	22.54
	Off Area 3-100yr	100YR	87774	9.00	73.14
	Offsite 4 100yr	100YR	76560	10.00	63.80
	100 Year Inflow	100YR	352520	9.00	293.77
	Hutch off 2	100yr	11952	7.00	9.96

TOTAL FLOW INTO: PENNIAL LAKE IN

HYG file	HYG ID	HYG tag	Volume cu.ft	Peak Time min	Peak Flow cfs
	PENNIAL LAKE IN	C 100Y	1016135	20.00	548.82

TOTAL NODE INFLOW...
HYG file =
HYG ID = PENNIAL LAKE IN
HYG Tag = C 100Y

Peak Discharge =	548.82 cfs
Time to Peak =	20.00 min
HYG Volume =	1016135 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	48.57	97.14	145.71	194.61
5.00	243.98	293.65	343.46	392.46	442.17
10.00	451.83	456.04	461.44	467.68	473.87
15.00	480.39	487.39	503.58	521.54	537.03
20.00	548.82	509.24	467.56	425.01	385.66
25.00	346.66	305.16	258.11	208.83	154.89
30.00	139.74	129.83	119.83	110.40	103.25
35.00	98.99	97.54	96.23	94.79	92.95
40.00	91.01	87.30	83.05	78.37	73.42
45.00	68.85	64.68	61.42	58.42	55.65
50.00	53.07	51.23	49.55	47.95	46.65
55.00	45.80	45.00	44.21	43.45	42.73
60.00	42.04	41.39	40.75	40.19	39.67
65.00	39.12	38.58	38.06	37.56	37.07
70.00	36.60	36.20	35.81	35.42	35.04
75.00	34.67	34.31	33.95	33.60	33.29
80.00	32.98	32.64	32.32	32.00	31.68
85.00	31.35	31.05	30.74	30.45	30.16
90.00	29.87	29.57	29.28	28.99	28.72
95.00	28.45	28.18	27.80	27.44	27.08
100.00	26.74	26.40	26.08	25.76	25.49
105.00	25.22	24.94	24.68	24.43	24.17
110.00	23.92	23.55	23.18	22.82	22.48
115.00	22.14	21.82	21.50	21.19	20.90
120.00	20.68	20.45	20.25	20.03	19.82
125.00	19.61	19.41	19.21	19.02	18.83
130.00	18.65	18.45	18.28	18.10	17.94
135.00	17.77	17.60	17.43	17.28	17.11
140.00	16.96	16.81	16.65	16.50	16.36
145.00	16.20	16.04	15.88	15.72	15.56
150.00	15.42	15.26	15.11	14.97	14.84
155.00	14.70	14.56	14.42	14.29	14.13
160.00	13.95	13.77	13.59	13.43	13.27

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	13.12	12.97	12.83	12.69	12.56
170.00	12.44	12.32	12.20	12.07	11.94
175.00	11.82	11.69	11.58	11.48	11.38
180.00	11.27	11.18	11.07	10.99	10.90
185.00	10.81	10.72	10.63	10.57	10.48
190.00	10.38	10.30	10.21	10.13	10.07
195.00	9.99	9.92	9.85	9.77	9.71
200.00	9.64	9.57	9.51	9.44	9.38
205.00	9.32	9.25	9.18	9.13	9.07
210.00	9.02	8.95	8.90	8.84	8.79
215.00	8.72	8.67	8.61	8.56	8.49
220.00	8.44	8.39	8.34	8.28	8.23
225.00	8.17	8.12	8.06	8.01	7.96
230.00	7.91	7.86	7.80	7.75	7.70
235.00	7.65	7.61	7.55	7.50	7.45
240.00	7.40	7.35	7.30	7.25	7.21
245.00	7.05	6.89	6.84	6.79	6.75
250.00	6.71	6.66	6.62	6.48	6.44
255.00	6.39	6.35	6.31	6.27	6.23
260.00	6.19	6.15	6.11	6.07	6.03
265.00	5.99	5.95	5.91	5.87	5.83
270.00	5.79	5.75	5.71	5.67	5.64
275.00	5.60	5.56	5.52	5.49	5.45
280.00	5.42	5.38	5.35	5.31	5.27
285.00	5.23	5.20	5.16	5.13	5.10
290.00	5.07	5.03	5.00	4.96	4.93
295.00	4.90	4.87	4.83	4.80	4.77
300.00	4.74	4.70	4.67	4.64	4.61
305.00	4.58	4.55	4.52	4.49	4.46
310.00	4.43	4.40	4.37	4.34	4.31
315.00	4.28	4.25	4.22	4.19	4.16
320.00	4.13	4.10	4.08	4.05	4.02
325.00	3.99	3.97	3.94	3.92	3.89
330.00	3.86	3.83	3.81	3.78	3.76
335.00	3.73	3.71	3.68	3.66	3.63
340.00	3.61	3.58	3.56	3.53	3.51
345.00	3.48	3.46	3.43	3.41	3.39
350.00	3.37	3.34	3.32	3.29	3.27
355.00	3.25	3.23	3.20	3.18	3.16
360.00	3.14	3.12	3.10	3.07	3.05
365.00	3.03	3.01	2.99	2.97	2.95
370.00	2.93	2.91	2.89	2.87	2.85
375.00	2.83	2.81	2.79	2.77	2.75
380.00	2.73	2.71	2.69	2.67	2.66
385.00	2.64	2.62	2.60	2.58	2.56
390.00	2.55	2.53	2.51	2.49	2.48
395.00	2.46	2.44	2.42	2.41	2.39

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min			
400.00	2.38	.00	

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - PENNIAL LAKE IN A 15YR
Outflow HYG file = NONE STORED - PENNIAL LAKE OUT A 15YR

Pond Node Data = PENNIAL LAKE
Pond Volume Data = PENNIAL LAKE
Pond Outlet Data = TRIPLE BOX W/BOX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	516.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	322.36 cfs	at	20.00 min
Peak Outflow	=	171.13 cfs	at	26.00 min
Peak Elevation	=	519.58 ft		
Peak Storage	=	244123 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	637548
- Infiltration	=	0
- HYG Vol OUT	=	637529
- Retained Vol	=	19
Unrouted Vol	= -	cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = PENNIAL LAKE OUT
HYG Tag = A 15YR

Peak Discharge =	171.13 cfs
Time to Peak =	26.00 min
HYG Volume =	637529 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.14	.55	1.49	3.38
5.00	6.47	10.94	17.03	24.85	34.24
10.00	42.97	51.18	59.14	66.84	74.69
15.00	82.16	90.94	104.62	115.29	132.86
20.00	157.62	162.06	165.08	167.73	169.57
25.00	170.67	171.13	170.87	169.88	168.05
30.00	165.54	163.16	160.59	157.61	152.62
35.00	130.80	122.60	120.71	112.60	104.65
40.00	104.31	104.78	100.33	94.50	91.09
45.00	91.00	90.91	88.91	86.60	84.53
50.00	83.05	81.60	80.18	78.79	77.42
55.00	76.12	74.88	73.66	72.36	71.03
60.00	69.73	68.49	67.32	66.17	65.05
65.00	63.94	62.85	61.79	60.78	59.81
70.00	58.86	57.93	56.96	55.98	55.01
75.00	54.07	53.18	52.34	51.51	50.70
80.00	49.90	49.07	48.25	47.45	46.67
85.00	45.90	45.16	44.44	43.73	43.03
90.00	42.34	41.64	40.95	40.27	39.61
95.00	38.96	38.32	37.67	37.03	36.40
100.00	35.78	35.17	34.57	33.94	33.30
105.00	32.68	32.07	31.47	30.89	30.32
110.00	29.77	29.22	28.70	28.18	27.67
115.00	27.18	26.70	26.23	25.77	25.33
120.00	24.92	24.51	24.11	23.72	23.34
125.00	22.96	22.59	22.24	21.89	21.54
130.00	21.22	20.91	20.60	20.30	20.00
135.00	19.71	19.42	19.14	18.86	18.59
140.00	18.32	18.06	17.80	17.55	17.32
145.00	17.08	16.85	16.62	16.39	16.17
150.00	15.95	15.73	15.51	15.30	15.09
155.00	14.88	14.67	14.47	14.27	14.07
160.00	13.88	13.71	13.53	13.36	13.19

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	13.02	12.86	12.70	12.54	12.38
170.00	12.22	12.07	11.92	11.78	11.63
175.00	11.49	11.35	11.21	11.07	10.94
180.00	10.81	10.68	10.56	10.45	10.34
185.00	10.23	10.12	10.01	9.91	9.81
190.00	9.71	9.61	9.51	9.42	9.32
195.00	9.23	9.14	9.05	8.96	8.88
200.00	8.79	8.71	8.62	8.54	8.46
205.00	8.39	8.31	8.23	8.15	8.08
210.00	8.01	7.93	7.86	7.79	7.72
215.00	7.65	7.59	7.53	7.47	7.41
220.00	7.35	7.29	7.24	7.18	7.13
225.00	7.07	7.02	6.96	6.91	6.86
230.00	6.80	6.75	6.70	6.65	6.60
235.00	6.55	6.50	6.45	6.40	6.35
240.00	6.30	6.26	6.21	6.16	6.12
245.00	6.07	6.03	5.98	5.94	5.89
250.00	5.85	5.80	5.76	5.72	5.68
255.00	5.63	5.59	5.55	5.51	5.46
260.00	5.42	5.38	5.34	5.29	5.25
265.00	5.21	5.17	5.13	5.09	5.05
270.00	5.02	4.98	4.94	4.91	4.87
275.00	4.84	4.81	4.78	4.75	4.72
280.00	4.69	4.66	4.63	4.60	4.57
285.00	4.54	4.51	4.48	4.45	4.42
290.00	4.39	4.36	4.33	4.30	4.28
295.00	4.25	4.22	4.19	4.16	4.14
300.00	4.11	4.08	4.06	4.03	4.00
305.00	3.98	3.95	3.92	3.90	3.87
310.00	3.85	3.82	3.79	3.77	3.74
315.00	3.72	3.69	3.67	3.64	3.62
320.00	3.60	3.57	3.55	3.52	3.50
325.00	3.48	3.45	3.43	3.41	3.38
330.00	3.36	3.34	3.32	3.29	3.27
335.00	3.25	3.23	3.21	3.18	3.16
340.00	3.14	3.12	3.10	3.08	3.06
345.00	3.04	3.02	2.99	2.97	2.95
350.00	2.93	2.91	2.89	2.87	2.85
355.00	2.84	2.82	2.80	2.78	2.76
360.00	2.74	2.72	2.70	2.68	2.67
365.00	2.66	2.64	2.63	2.61	2.60
370.00	2.58	2.57	2.56	2.54	2.53
375.00	2.51	2.50	2.49	2.47	2.46
380.00	2.44	2.43	2.42	2.40	2.39
385.00	2.38	2.36	2.35	2.34	2.32
390.00	2.31	2.29	2.28	2.27	2.26
395.00	2.24	2.23	2.22	2.20	2.19

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	2.18	2.15	2.12	2.08	2.05
405.00	2.02	1.98	1.95	1.92	1.89
410.00	1.86	1.83	1.80	1.77	1.74
415.00	1.71	1.68	1.65	1.63	1.60
420.00	1.57	1.55	1.52	1.50	1.47
425.00	1.45	1.42	1.40	1.38	1.36
430.00	1.33	1.31	1.29	1.27	1.25
435.00	1.23	1.21	1.19	1.17	1.15
440.00	1.13	1.11	1.09	1.08	1.06
445.00	1.04	1.02	1.01	.99	.97
450.00	.96	.94	.94	.93	.92
455.00	.91	.90	.89	.89	.88
460.00	.87	.86	.86	.85	.84
465.00	.83	.82	.82	.81	.80
470.00	.80	.79	.78	.77	.77
475.00	.76	.75	.75	.74	.73
480.00	.73	.72	.71	.71	.70
485.00	.69	.69	.68	.68	.67
490.00	.66	.66	.65	.65	.64
495.00	.63	.63	.62	.62	.61
500.00	.61	.60	.59	.59	.58
505.00	.58	.57	.57	.56	.56
510.00	.55	.55	.54	.54	.53
515.00	.53	.52	.52	.51	.51
520.00	.50	.50	.50	.49	.49
525.00	.48	.48	.47	.47	.47
530.00	.46	.46	.45	.45	.44
535.00	.44	.44	.43	.43	.42
540.00	.42	.42	.41	.41	.41
545.00	.40	.40	.40	.39	.39
550.00	.38	.38	.38	.37	.37
555.00	.37	.36	.36	.36	.35
560.00	.35	.35	.34	.34	.34
565.00	.34	.33	.33	.33	.32
570.00	.32	.32	.31	.31	.31
575.00	.31	.30	.30	.30	.30
580.00	.29	.29	.29	.28	.28
585.00	.28	.28	.27	.27	.27
590.00	.27	.26	.26	.26	.26
595.00	.26	.25	.25	.25	.25
600.00	.24	.24	.24	.24	.24
605.00	.23	.23	.23	.23	.22
610.00	.22	.22	.22	.22	.22
615.00	.21	.21	.21	.21	.21
620.00	.20	.20	.20	.20	.20
625.00	.19	.19	.19	.19	.19
630.00	.19	.18	.18	.18	.18

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
635.00	.18	.18	.17	.17	.17
640.00	.17	.17	.17	.17	.16
645.00	.16	.16	.16	.16	.16
650.00	.16	.15	.15	.15	.15
655.00	.15	.15	.15	.14	.14
660.00	.14	.14	.14	.14	.14
665.00	.14	.13	.13	.13	.13
670.00	.13	.13	.13	.13	.12
675.00	.12	.12	.12	.12	.12
680.00	.12	.12	.12	.11	.11
685.00	.11	.11	.11	.11	.11
690.00	.11	.11	.11	.10	.10
695.00	.10	.10	.10	.10	.10
700.00	.10	.10	.10	.10	.09
705.00	.09	.09	.09	.09	.09
710.00	.09	.09	.09	.09	.09
715.00	.09	.09	.08	.08	.08
720.00	.08	.08	.08	.08	.08
725.00	.08	.08	.08	.08	.08
730.00	.07	.07	.07	.07	.07
735.00	.07	.07	.07	.07	.07
740.00	.07	.07	.07	.07	.07
745.00	.07	.06	.06	.06	.06
750.00	.06	.06	.06	.06	.06
755.00	.06	.06	.06	.06	.06
760.00	.06	.06	.06	.06	.06
765.00	.05	.05	.05	.05	.05
770.00	.05	.05	.05	.05	.05
775.00	.05	.05	.05	.05	.05
780.00	.05	.05	.05	.05	.05
785.00	.05	.05	.04	.04	.04
790.00	.04	.04	.04	.04	.04
795.00	.04	.04	.04	.04	.04
800.00	.04	.04	.04	.04	.04
805.00	.04	.04	.04	.04	.04
810.00	.04	.04	.04	.04	.03
815.00	.03	.03	.03	.03	.03
820.00	.03	.03	.03	.03	.03
825.00	.03	.03	.03	.03	.03
830.00	.03	.03	.03	.03	.03
835.00	.03	.03	.03	.03	.03
840.00	.03	.03	.03	.03	.03
845.00	.03	.03	.03	.03	.03
850.00	.03	.02	.02	.02	.02
855.00	.02	.02	.02	.02	.02
860.00	.02	.02	.02	.02	.02
865.00	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
870.00	.02	.02	.02	.02	.02
875.00	.02	.02	.02	.02	.02
880.00	.02	.02	.02	.02	.02
885.00	.02	.02	.02	.02	.02
890.00	.02	.02	.02	.02	.02
895.00	.02	.02	.02	.02	.02
900.00	.02	.02	.02	.02	.02
905.00	.02	.02	.02	.01	.01
910.00	.01	.01	.01	.01	.01
915.00	.01	.01	.01	.01	.01
920.00	.01	.01	.01	.01	.01
925.00	.01	.01	.01	.01	.01
930.00	.01	.01	.01	.01	.01
935.00	.01	.01	.01	.01	.01
940.00	.01	.01	.01	.01	.01
945.00	.01	.01	.01	.01	.01
950.00	.01	.01	.01	.01	.01
955.00	.01	.01	.01	.01	.01
960.00	.01	.01	.01	.01	.01
965.00	.01	.01	.01	.01	.01
970.00	.01	.01	.01	.01	.01
975.00	.01	.01	.01	.01	.01
980.00	.01	.01	.01	.01	.01
985.00	.01	.01	.01	.01	.01
990.00	.01	.01	.01	.01	.01
995.00	.01	.01	.01	.01	.01
1000.00	.01	.01	.01	.01	.01
1005.00	.01	.01	.01	.01	.01
1010.00	.01	.01	.01	.01	.01
1015.00	.01	.01	.01	.01	.01
1020.00	.01	.01	.01	.01	.01
1025.00	.01	.01	.01	.01	.00
1030.00	.00	.00	.00	.00	.00
1035.00	.00	.00	.00	.00	.00
1040.00	.00	.00	.00	.00	.00
1045.00	.00	.00	.00	.00	.00
1050.00	.00	.00	.00	.00	.00
1055.00	.00	.00	.00	.00	.00
1060.00	.00	.00	.00	.00	.00
1065.00	.00	.00	.00	.00	.00
1070.00	.00	.00	.00	.00	.00
1075.00	.00	.00	.00	.00	.00
1080.00	.00	.00	.00	.00	.00
1085.00	.00				

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - PENNIAL LAKE IN B 25YR
Outflow HYG file = NONE STORED - PENNIAL LAKE OUT B 25YR

Pond Node Data = PENNIAL LAKE
Pond Volume Data = PENNIAL LAKE
Pond Outlet Data = TRIPLE BOX W/BOX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	516.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	375.36 cfs	at	20.00 min
Peak Outflow	=	186.28 cfs	at	25.00 min
Peak Elevation	=	520.12 ft		
Peak Storage	=	284237 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	882941
- Infiltration	=	0
- HYG Vol OUT	=	882921
- Retained Vol	=	19
Unrouted Vol	=	-1 cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = PENNIAL LAKE OUT
HYG Tag = B 25YR

Peak Discharge =	186.28 cfs
Time to Peak =	25.00 min
HYG Volume =	882921 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.17	.69	2.02	4.59
5.00	8.80	14.87	23.07	33.35	43.64
10.00	53.77	63.65	73.55	82.81	91.08
15.00	104.00	126.15	158.36	164.03	169.50
20.00	174.15	178.15	181.70	184.12	185.58
25.00	186.28	186.22	185.42	183.90	181.50
30.00	178.58	175.94	173.75	171.69	169.55
35.00	167.48	165.50	163.86	162.39	160.89
40.00	159.46	157.98	156.40	154.88	147.87
45.00	139.90	133.62	128.47	124.07	123.40
50.00	122.88	122.29	121.62	120.87	118.29
55.00	114.17	110.04	105.91	104.04	104.33
60.00	104.65	103.66	98.88	94.40	91.11
65.00	91.04	90.97	90.90	89.03	87.18
70.00	85.38	84.04	82.88	81.73	80.60
75.00	79.49	78.39	77.30	76.27	75.28
80.00	74.29	73.32	72.25	71.18	70.12
85.00	69.08	68.12	67.18	66.24	65.32
90.00	64.41	63.51	62.62	61.74	60.89
95.00	60.08	59.27	58.48	57.69	56.84
100.00	56.00	55.17	54.35	53.55	52.81
105.00	52.08	51.35	50.63	49.91	49.16
110.00	48.42	47.69	46.97	46.25	45.57
115.00	44.90	44.24	43.59	42.94	42.30
120.00	41.65	41.00	40.37	39.74	39.13
125.00	38.53	37.93	37.33	36.75	36.18
130.00	35.61	35.06	34.52	33.95	33.38
135.00	32.82	32.27	31.73	31.21	30.69
140.00	30.19	29.70	29.21	28.74	28.28
145.00	27.82	27.38	26.94	26.51	26.09
150.00	25.68	25.30	24.92	24.55	24.19
155.00	23.83	23.47	23.13	22.78	22.44
160.00	22.11	21.78	21.45	21.15	20.85

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	20.56	20.27	19.99	19.71	19.43
170.00	19.16	18.90	18.63	18.37	18.12
175.00	17.87	17.62	17.40	17.17	16.95
180.00	16.74	16.53	16.32	16.11	15.91
185.00	15.71	15.51	15.32	15.13	14.94
190.00	14.76	14.58	14.40	14.23	14.06
195.00	13.89	13.74	13.59	13.44	13.30
200.00	13.15	13.01	12.87	12.73	12.60
205.00	12.47	12.33	12.20	12.08	11.95
210.00	11.83	11.71	11.59	11.47	11.35
215.00	11.24	11.12	11.01	10.90	10.79
220.00	10.68	10.58	10.49	10.39	10.30
225.00	10.21	10.11	10.02	9.94	9.85
230.00	9.76	9.67	9.59	9.50	9.42
235.00	9.34	9.26	9.18	9.10	9.02
240.00	8.94	8.86	8.79	8.71	8.64
245.00	8.56	8.49	8.42	8.35	8.27
250.00	8.20	8.14	8.07	8.00	7.93
255.00	7.87	7.80	7.74	7.68	7.61
260.00	7.55	7.50	7.45	7.39	7.34
265.00	7.28	7.23	7.18	7.12	7.07
270.00	7.02	6.97	6.92	6.87	6.82
275.00	6.77	6.72	6.67	6.62	6.57
280.00	6.52	6.47	6.42	6.38	6.33
285.00	6.28	6.24	6.19	6.14	6.10
290.00	6.05	6.01	5.96	5.92	5.88
295.00	5.83	5.79	5.75	5.70	5.66
300.00	5.62	5.57	5.52	5.47	5.42
305.00	5.37	5.32	5.27	5.22	5.17
310.00	5.12	5.08	5.03	4.99	4.94
315.00	4.90	4.86	4.83	4.79	4.75
320.00	4.72	4.68	4.65	4.61	4.58
325.00	4.54	4.51	4.48	4.44	4.41
330.00	4.38	4.34	4.31	4.28	4.25
335.00	4.21	4.18	4.15	4.12	4.09
340.00	4.06	4.03	4.00	3.97	3.94
345.00	3.91	3.88	3.86	3.83	3.80
350.00	3.77	3.74	3.72	3.69	3.66
355.00	3.63	3.61	3.58	3.55	3.53
360.00	3.50	3.48	3.45	3.43	3.40
365.00	3.38	3.35	3.33	3.30	3.28
370.00	3.26	3.23	3.21	3.19	3.16
375.00	3.14	3.12	3.09	3.07	3.05
380.00	3.03	3.00	2.98	2.96	2.94
385.00	2.92	2.90	2.88	2.86	2.84
390.00	2.81	2.79	2.77	2.75	2.73
395.00	2.72	2.70	2.68	2.66	2.65

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	2.63	2.60	2.56	2.52	2.48
405.00	2.44	2.40	2.36	2.32	2.28
410.00	2.24	2.21	2.17	2.14	2.10
415.00	2.07	2.03	2.00	1.97	1.93
420.00	1.90	1.87	1.84	1.81	1.78
425.00	1.75	1.72	1.69	1.67	1.64
430.00	1.61	1.59	1.56	1.53	1.51
435.00	1.48	1.46	1.44	1.41	1.39
440.00	1.37	1.34	1.32	1.30	1.28
445.00	1.26	1.24	1.22	1.20	1.18
450.00	1.16	1.14	1.12	1.10	1.08
455.00	1.07	1.05	1.03	1.02	1.00
460.00	.98	.97	.95	.94	.93
465.00	.92	.92	.91	.90	.89
470.00	.88	.87	.87	.86	.85
475.00	.84	.84	.83	.82	.81
480.00	.81	.80	.79	.78	.78
485.00	.77	.76	.76	.75	.74
490.00	.74	.73	.72	.72	.71
495.00	.70	.70	.69	.68	.68
500.00	.67	.67	.66	.65	.65
505.00	.64	.64	.63	.63	.62
510.00	.61	.61	.60	.60	.59
515.00	.59	.58	.58	.57	.57
520.00	.56	.56	.55	.55	.54
525.00	.54	.53	.53	.52	.52
530.00	.51	.51	.50	.50	.49
535.00	.49	.48	.48	.48	.47
540.00	.47	.46	.46	.45	.45
545.00	.45	.44	.44	.43	.43
550.00	.43	.42	.42	.42	.41
555.00	.41	.40	.40	.40	.39
560.00	.39	.39	.38	.38	.38
565.00	.37	.37	.37	.36	.36
570.00	.36	.35	.35	.35	.34
575.00	.34	.34	.33	.33	.33
580.00	.33	.32	.32	.32	.31
585.00	.31	.31	.31	.30	.30
590.00	.30	.29	.29	.29	.29
595.00	.28	.28	.28	.28	.27
600.00	.27	.27	.27	.26	.26
605.00	.26	.26	.25	.25	.25
610.00	.25	.25	.24	.24	.24
615.00	.24	.23	.23	.23	.23
620.00	.23	.22	.22	.22	.22
625.00	.22	.21	.21	.21	.21
630.00	.21	.20	.20	.20	.20

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
635.00	.20	.20	.19	.19	.19
640.00	.19	.19	.19	.18	.18
645.00	.18	.18	.18	.18	.17
650.00	.17	.17	.17	.17	.17
655.00	.16	.16	.16	.16	.16
660.00	.16	.16	.15	.15	.15
665.00	.15	.15	.15	.15	.14
670.00	.14	.14	.14	.14	.14
675.00	.14	.14	.13	.13	.13
680.00	.13	.13	.13	.13	.13
685.00	.13	.12	.12	.12	.12
690.00	.12	.12	.12	.12	.12
695.00	.11	.11	.11	.11	.11
700.00	.11	.11	.11	.11	.11
705.00	.10	.10	.10	.10	.10
710.00	.10	.10	.10	.10	.10
715.00	.10	.09	.09	.09	.09
720.00	.09	.09	.09	.09	.09
725.00	.09	.09	.09	.08	.08
730.00	.08	.08	.08	.08	.08
735.00	.08	.08	.08	.08	.08
740.00	.08	.08	.07	.07	.07
745.00	.07	.07	.07	.07	.07
750.00	.07	.07	.07	.07	.07
755.00	.07	.07	.07	.06	.06
760.00	.06	.06	.06	.06	.06
765.00	.06	.06	.06	.06	.06
770.00	.06	.06	.06	.06	.06
775.00	.06	.05	.05	.05	.05
780.00	.05	.05	.05	.05	.05
785.00	.05	.05	.05	.05	.05
790.00	.05	.05	.05	.05	.05
795.00	.05	.05	.05	.04	.04
800.00	.04	.04	.04	.04	.04
805.00	.04	.04	.04	.04	.04
810.00	.04	.04	.04	.04	.04
815.00	.04	.04	.04	.04	.04
820.00	.04	.04	.04	.04	.04
825.00	.04	.03	.03	.03	.03
830.00	.03	.03	.03	.03	.03
835.00	.03	.03	.03	.03	.03
840.00	.03	.03	.03	.03	.03
845.00	.03	.03	.03	.03	.03
850.00	.03	.03	.03	.03	.03
855.00	.03	.03	.03	.03	.03
860.00	.03	.03	.03	.02	.02
865.00	.02	.02	.02	.02	.02

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
870.00	.02	.02	.02	.02	.02
875.00	.02	.02	.02	.02	.02
880.00	.02	.02	.02	.02	.02
885.00	.02	.02	.02	.02	.02
890.00	.02	.02	.02	.02	.02
895.00	.02	.02	.02	.02	.02
900.00	.02	.02	.02	.02	.02
905.00	.02	.02	.02	.02	.02
910.00	.02	.02	.02	.02	.02
915.00	.02	.02	.02	.02	.01
920.00	.01	.01	.01	.01	.01
925.00	.01	.01	.01	.01	.01
930.00	.01	.01	.01	.01	.01
935.00	.01	.01	.01	.01	.01
940.00	.01	.01	.01	.01	.01
945.00	.01	.01	.01	.01	.01
950.00	.01	.01	.01	.01	.01
955.00	.01	.01	.01	.01	.01
960.00	.01	.01	.01	.01	.01
965.00	.01	.01	.01	.01	.01
970.00	.01	.01	.01	.01	.01
975.00	.01	.01	.01	.01	.01
980.00	.01	.01	.01	.01	.01
985.00	.01	.01	.01	.01	.01
990.00	.01	.01	.01	.01	.01
995.00	.01	.01	.01	.01	.01
1000.00	.01	.01	.01	.01	.01
1005.00	.01	.01	.01	.01	.01
1010.00	.01	.01	.01	.01	.01
1015.00	.01	.01	.01	.01	.01
1020.00	.01	.01	.01	.01	.01
1025.00	.01	.01	.01	.01	.01
1030.00	.01	.01	.01	.01	.01
1035.00	.01	.01	.01	.01	.01
1040.00	.00	.00	.00	.00	.00
1045.00	.00	.00	.00	.00	.00
1050.00	.00	.00	.00	.00	.00
1055.00	.00	.00	.00	.00	.00
1060.00	.00	.00	.00	.00	.00
1065.00	.00	.00	.00	.00	.00
1070.00	.00	.00	.00	.00	.00
1075.00	.00	.00	.00	.00	.00
1080.00	.00	.00	.00	.00	.00
1085.00	.00	.00	.00	.00	.00
1090.00	.00	.00	.00	.00	.00
1095.00	.00	.00			

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - PENNIAL LAKE IN C 100Y
Outflow HYG file = NONE STORED - PENNIAL LAKE OUT C 100Y

Pond Node Data = PENNIAL LAKE
Pond Volume Data = PENNIAL LAKE
Pond Outlet Data = TRIPLE BOX W/BOX

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	516.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	548.82 cfs	at	20.00 min
Peak Outflow	=	227.53 cfs	at	28.00 min
Peak Elevation	=	521.77 ft		
Peak Storage	=	414120 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	1016135
- Infiltration	=	0
- HYG Vol OUT	=	1016115
- Retained Vol	=	19
Unrouted Vol	= -	cu.ft (.000% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = PENNIAL LAKE OUT
HYG Tag = C 100Y

Peak Discharge =	227.53 cfs
Time to Peak =	28.00 min
HYG Volume =	1016115 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.22	.88	2.83	6.60
5.00	12.60	21.22	32.69	44.53	57.09
10.00	70.00	82.86	99.77	122.50	159.83
15.00	168.26	175.44	182.99	190.12	197.24
20.00	204.01	210.10	215.27	219.22	222.38
25.00	224.80	226.50	227.43	227.53	226.77
30.00	225.43	223.90	222.23	220.41	218.48
35.00	216.48	214.45	212.11	210.04	207.79
40.00	205.63	203.46	201.04	198.65	196.37
45.00	193.51	191.17	188.16	185.48	182.73
50.00	179.62	176.54	173.92	171.18	168.09
55.00	164.77	161.78	158.46	154.49	129.69
60.00	122.16	117.84	107.85	104.22	104.76
65.00	99.55	92.86	91.05	90.95	89.49
70.00	86.86	84.51	82.87	81.27	79.72
75.00	78.21	76.75	75.40	74.09	72.75
80.00	71.34	69.97	68.66	67.44	66.25
85.00	65.09	63.95	62.85	61.77	60.75
90.00	59.78	58.83	57.90	56.93	55.95
95.00	55.00	54.08	53.20	52.37	51.56
100.00	50.76	49.98	49.16	48.37	47.59
105.00	46.82	46.08	45.37	44.68	44.00
110.00	43.34	42.69	42.04	41.38	40.72
115.00	40.08	39.46	38.84	38.23	37.61
120.00	37.02	36.43	35.86	35.30	34.75
125.00	34.20	33.62	33.06	32.51	31.98
130.00	31.46	30.95	30.45	29.97	29.50
135.00	29.04	28.59	28.16	27.73	27.32
140.00	26.91	26.52	26.13	25.75	25.40
145.00	25.06	24.72	24.39	24.07	23.75
150.00	23.44	23.14	22.84	22.55	22.26
155.00	21.98	21.71	21.44	21.19	20.94
160.00	20.70	20.45	20.21	19.98	19.74

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	19.51	19.28	19.05	18.83	18.61
170.00	18.40	18.18	17.97	17.77	17.56
175.00	17.37	17.19	17.00	16.82	16.64
180.00	16.47	16.29	16.12	15.95	15.79
185.00	15.62	15.46	15.30	15.15	14.99
190.00	14.84	14.69	14.55	14.40	14.26
195.00	14.12	13.98	13.85	13.73	13.60
200.00	13.48	13.37	13.25	13.13	13.02
205.00	12.91	12.79	12.68	12.58	12.47
210.00	12.36	12.26	12.16	12.06	11.96
215.00	11.86	11.76	11.67	11.57	11.48
220.00	11.39	11.30	11.21	11.12	11.03
225.00	10.94	10.86	10.77	10.69	10.60
230.00	10.53	10.46	10.38	10.31	10.24
235.00	10.17	10.10	10.02	9.96	9.89
240.00	9.82	9.75	9.68	9.61	9.55
245.00	9.48	9.41	9.34	9.27	9.20
250.00	9.13	9.06	8.99	8.93	8.86
255.00	8.79	8.72	8.65	8.59	8.52
260.00	8.46	8.39	8.33	8.27	8.21
265.00	8.15	8.08	8.02	7.96	7.91
270.00	7.85	7.79	7.73	7.67	7.62
275.00	7.57	7.52	7.47	7.42	7.37
280.00	7.32	7.27	7.23	7.18	7.13
285.00	7.09	7.04	6.99	6.95	6.90
290.00	6.86	6.81	6.77	6.72	6.68
295.00	6.64	6.59	6.55	6.51	6.46
300.00	6.42	6.38	6.34	6.30	6.26
305.00	6.21	6.17	6.13	6.09	6.05
310.00	6.01	5.97	5.93	5.89	5.86
315.00	5.82	5.78	5.74	5.70	5.66
320.00	5.63	5.59	5.55	5.51	5.48
325.00	5.44	5.41	5.37	5.33	5.30
330.00	5.26	5.23	5.19	5.16	5.12
335.00	5.09	5.06	5.02	4.99	4.96
340.00	4.92	4.90	4.87	4.84	4.81
345.00	4.78	4.76	4.73	4.70	4.67
350.00	4.65	4.62	4.59	4.57	4.54
355.00	4.51	4.49	4.46	4.43	4.41
360.00	4.38	4.35	4.33	4.30	4.27
365.00	4.25	4.22	4.20	4.17	4.15
370.00	4.12	4.09	4.07	4.04	4.02
375.00	3.99	3.97	3.95	3.92	3.90
380.00	3.87	3.85	3.82	3.80	3.78
385.00	3.75	3.73	3.70	3.68	3.66
390.00	3.63	3.61	3.59	3.57	3.54
395.00	3.52	3.50	3.48	3.45	3.43

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	3.41	3.36	3.29	3.22	3.15
405.00	3.09	3.02	2.96	2.90	2.84
410.00	2.78	2.72	2.67	2.62	2.58
415.00	2.54	2.49	2.45	2.41	2.37
420.00	2.33	2.30	2.26	2.22	2.19
425.00	2.15	2.11	2.08	2.05	2.01
430.00	1.98	1.95	1.91	1.88	1.85
435.00	1.82	1.79	1.76	1.73	1.71
440.00	1.68	1.65	1.62	1.60	1.57
445.00	1.54	1.52	1.49	1.47	1.45
450.00	1.42	1.40	1.38	1.35	1.33
455.00	1.31	1.29	1.27	1.25	1.23
460.00	1.21	1.19	1.17	1.15	1.13
465.00	1.11	1.09	1.07	1.06	1.04
470.00	1.02	1.01	.99	.97	.96
475.00	.94	.94	.93	.92	.91
480.00	.90	.89	.89	.88	.87
485.00	.86	.85	.85	.84	.83
490.00	.82	.82	.81	.80	.79
495.00	.79	.78	.77	.77	.76
500.00	.75	.75	.74	.73	.73
505.00	.72	.71	.71	.70	.69
510.00	.69	.68	.67	.67	.66
515.00	.66	.65	.64	.64	.63
520.00	.63	.62	.62	.61	.61
525.00	.60	.59	.59	.58	.58
530.00	.57	.57	.56	.56	.55
535.00	.55	.54	.54	.53	.53
540.00	.52	.52	.51	.51	.50
545.00	.50	.50	.49	.49	.48
550.00	.48	.47	.47	.46	.46
555.00	.46	.45	.45	.44	.44
560.00	.44	.43	.43	.42	.42
565.00	.42	.41	.41	.41	.40
570.00	.40	.39	.39	.39	.38
575.00	.38	.38	.37	.37	.37
580.00	.36	.36	.36	.35	.35
585.00	.35	.34	.34	.34	.34
590.00	.33	.33	.33	.32	.32
595.00	.32	.31	.31	.31	.31
600.00	.30	.30	.30	.30	.29
605.00	.29	.29	.28	.28	.28
610.00	.28	.27	.27	.27	.27
615.00	.26	.26	.26	.26	.26
620.00	.25	.25	.25	.25	.24
625.00	.24	.24	.24	.24	.23
630.00	.23	.23	.23	.22	.22

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
635.00	.22	.22	.22	.21	.21
640.00	.21	.21	.21	.21	.20
645.00	.20	.20	.20	.20	.19
650.00	.19	.19	.19	.19	.19
655.00	.18	.18	.18	.18	.18
660.00	.18	.17	.17	.17	.17
665.00	.17	.17	.17	.16	.16
670.00	.16	.16	.16	.16	.15
675.00	.15	.15	.15	.15	.15
680.00	.15	.15	.14	.14	.14
685.00	.14	.14	.14	.14	.14
690.00	.13	.13	.13	.13	.13
695.00	.13	.13	.13	.12	.12
700.00	.12	.12	.12	.12	.12
705.00	.12	.12	.11	.11	.11
710.00	.11	.11	.11	.11	.11
715.00	.11	.11	.10	.10	.10
720.00	.10	.10	.10	.10	.10
725.00	.10	.10	.10	.09	.09
730.00	.09	.09	.09	.09	.09
735.00	.09	.09	.09	.09	.09
740.00	.09	.08	.08	.08	.08
745.00	.08	.08	.08	.08	.08
750.00	.08	.08	.08	.08	.07
755.00	.07	.07	.07	.07	.07
760.00	.07	.07	.07	.07	.07
765.00	.07	.07	.07	.07	.07
770.00	.06	.06	.06	.06	.06
775.00	.06	.06	.06	.06	.06
780.00	.06	.06	.06	.06	.06
785.00	.06	.06	.06	.06	.05
790.00	.05	.05	.05	.05	.05
795.00	.05	.05	.05	.05	.05
800.00	.05	.05	.05	.05	.05
805.00	.05	.05	.05	.05	.05
810.00	.05	.04	.04	.04	.04
815.00	.04	.04	.04	.04	.04
820.00	.04	.04	.04	.04	.04
825.00	.04	.04	.04	.04	.04
830.00	.04	.04	.04	.04	.04
835.00	.04	.04	.04	.03	.03
840.00	.03	.03	.03	.03	.03
845.00	.03	.03	.03	.03	.03
850.00	.03	.03	.03	.03	.03
855.00	.03	.03	.03	.03	.03
860.00	.03	.03	.03	.03	.03
865.00	.03	.03	.03	.03	.03

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
870.00	.03	.03	.03	.03	.03
875.00	.02	.02	.02	.02	.02
880.00	.02	.02	.02	.02	.02
885.00	.02	.02	.02	.02	.02
890.00	.02	.02	.02	.02	.02
895.00	.02	.02	.02	.02	.02
900.00	.02	.02	.02	.02	.02
905.00	.02	.02	.02	.02	.02
910.00	.02	.02	.02	.02	.02
915.00	.02	.02	.02	.02	.02
920.00	.02	.02	.02	.02	.02
925.00	.02	.02	.02	.02	.02
930.00	.02	.02	.01	.01	.01
935.00	.01	.01	.01	.01	.01
940.00	.01	.01	.01	.01	.01
945.00	.01	.01	.01	.01	.01
950.00	.01	.01	.01	.01	.01
955.00	.01	.01	.01	.01	.01
960.00	.01	.01	.01	.01	.01
965.00	.01	.01	.01	.01	.01
970.00	.01	.01	.01	.01	.01
975.00	.01	.01	.01	.01	.01
980.00	.01	.01	.01	.01	.01
985.00	.01	.01	.01	.01	.01
990.00	.01	.01	.01	.01	.01
995.00	.01	.01	.01	.01	.01
1000.00	.01	.01	.01	.01	.01
1005.00	.01	.01	.01	.01	.01
1010.00	.01	.01	.01	.01	.01
1015.00	.01	.01	.01	.01	.01
1020.00	.01	.01	.01	.01	.01
1025.00	.01	.01	.01	.01	.01
1030.00	.01	.01	.01	.01	.01
1035.00	.01	.01	.01	.01	.01
1040.00	.01	.01	.01	.01	.01
1045.00	.01	.01	.01	.01	.01
1050.00	.01	.01	.01	.00	.00
1055.00	.00	.00	.00	.00	.00
1060.00	.00	.00	.00	.00	.00
1065.00	.00	.00	.00	.00	.00
1070.00	.00	.00	.00	.00	.00
1075.00	.00	.00	.00	.00	.00
1080.00	.00	.00	.00	.00	.00
1085.00	.00	.00	.00	.00	.00
1090.00	.00	.00	.00	.00	.00
1095.00	.00	.00	.00	.00	.00
1100.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1105.00	.00	.00	.00	.00	.00

Index of Starting Page Numbers for ID Names

POND7

Routing Calculations

15, 25 and 100 Year 20 Minute Design Storms

Avondale Heights

Table of Contents

Type.... Read HYG
Name.... 20 MINUTE INFLOW Tag: A 15yr
Event: A 15yr
File.... C:\MY DOCUMENTS\AVONDALE HEIGHTS DETENTION.PPW
Title... 15, 25 and 100 Year Inflows to Basin B of Avondale Heights
Storm... Tag: A 15yr

HYG file = C:\MY DOCUMENTS\AVON 15.HYG
HYG ID = Avondale 15yr in
HYG Tag = 15yr

Peak Discharge =	39.92 cfs
Time to Peak =	5.00 min
HYG Volume =	47904 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	7.98	15.97	23.95	31.94
5.00	39.92	39.92	39.92	39.92	39.92
10.00	39.92	39.92	39.92	39.92	39.92
15.00	39.92	39.92	39.92	39.92	39.92
20.00	39.92	31.94	23.95	15.97	7.98
25.00	.00	.00	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00

Type.... Read HYG
Name.... 20 MINUTE INFLOW Tag: A 15yr
File.... C:\MY DOCUMENTS\AVONDALE HEIGHTS DETENTION.PPW
Title... 15, 25 and 100 Year Inflows to Basin B of Avondale Heights
Storm... Tag: A 15yr

Event: A 15yr

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00	.00	.00	.00	.00

Type.... Read HYG
Name.... 20 MINUTE INFLOW Tag: A 15yr Event: A 15yr
File.... C:\MY DOCUMENTS\AVONDALE HEIGHTS DETENTION.PPW
Title... 15, 25 and 100 Year Inflows to Basin B of Avondale Heights
Storm... Tag: A 15yr

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
605.00	.00	.00	.00	.00	.00
610.00	.00	.00	.00	.00	.00
615.00	.00	.00	.00	.00	.00
620.00	.00	.00	.00	.00	.00
625.00	.00	.00	.00	.00	.00
630.00	.00	.00	.00	.00	.00
635.00	.00	.00	.00	.00	.00
640.00	.00	.00	.00	.00	.00
645.00	.00	.00	.00	.00	.00
650.00	.00	.00	.00	.00	.00
655.00	.00	.00	.00	.00	.00
660.00	.00	.00	.00	.00	.00
665.00	.00	.00	.00	.00	.00
670.00	.00	.00	.00	.00	.00
675.00	.00	.00	.00	.00	.00
680.00	.00	.00	.00	.00	.00
685.00	.00	.00	.00	.00	.00
690.00	.00	.00	.00	.00	.00
695.00	.00	.00	.00	.00	.00
700.00	.00				

HYG file = C:\MY DOCUMENTS\AVON 25.HYG
HYG ID = Aondale 25yr in
HYG Tag = 25yr

Peak Discharge =	49.29 cfs
Time to Peak =	5.00 min
HYG Volume =	59250 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	9.86	19.72	29.95	39.94
5.00	49.29	49.29	49.29	49.29	49.29
10.00	49.29	49.29	49.20	49.29	49.29
15.00	49.29	49.29	49.29	49.29	49.29
20.00	49.29	39.94	29.95	19.72	9.86
25.00	.00	.00	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00	.00	.00	.00	.00
605.00	.00	.00	.00	.00	.00
610.00	.00	.00	.00	.00	.00
615.00	.00	.00	.00	.00	.00
620.00	.00	.00	.00	.00	.00
625.00	.00	.00	.00	.00	.00
630.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
635.00	.00	.00	.00	.00	.00
640.00	.00	.00	.00	.00	.00
645.00	.00	.00	.00	.00	.00
650.00	.00	.00	.00	.00	.00
655.00	.00	.00	.00	.00	.00
660.00	.00	.00	.00	.00	.00
665.00	.00	.00	.00	.00	.00
670.00	.00	.00	.00	.00	.00
675.00	.00	.00	.00	.00	.00
680.00	.00	.00	.00	.00	.00
685.00	.00	.00	.00	.00	.00
690.00	.00	.00	.00	.00	.00
695.00	.00	.00	.00	.00	.00
700.00	.00				

HYG file = C:\MY DOCUMENTS\AVON 100.HYG
HYG ID = Avondale100yr in
HYG Tag = 100yr

Peak Discharge =	63.05 cfs
Time to Peak =	5.00 min
HYG Volume =	75660 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	12.61	25.22	37.83	50.44
5.00	63.05	63.05	63.05	63.05	63.05
10.00	63.05	63.05	63.05	63.05	63.05
15.00	63.05	63.05	63.05	63.05	63.05
20.00	63.05	50.44	37.83	25.22	12.61
25.00	.00	.00	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00	.00	.00	.00	.00
605.00	.00	.00	.00	.00	.00
610.00	.00	.00	.00	.00	.00
615.00	.00	.00	.00	.00	.00
620.00	.00	.00	.00	.00	.00
625.00	.00	.00	.00	.00	.00
630.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
635.00	.00	.00	.00	.00	.00
640.00	.00	.00	.00	.00	.00
645.00	.00	.00	.00	.00	.00
650.00	.00	.00	.00	.00	.00
655.00	.00	.00	.00	.00	.00
660.00	.00	.00	.00	.00	.00
665.00	.00	.00	.00	.00	.00
670.00	.00	.00	.00	.00	.00
675.00	.00	.00	.00	.00	.00
680.00	.00	.00	.00	.00	.00
685.00	.00	.00	.00	.00	.00
690.00	.00	.00	.00	.00	.00
695.00	.00	.00	.00	.00	.00
700.00	.00				

File.... C:\MY DOCUMENTS\AVONDALE HEIGHTS DETENTION.PPW
Title... Avondale Heights; Basin B

POND VOLUME CALCULATIONS

Planimeter scale: 1.00 ft/in

Elevation (ft)	Planimeter (sq.in)	Area (acres)	A1+A2+sqr(A1*A2) (acres)	Volume (cu.ft)	Volume Sum (cu.ft)
498.00	37603.600	.8633	.0000	0	0
500.00	42556.600	.9770	2.7586	80109	80109
502.00	47610.640	1.0930	3.1033	90120	170229

POND VOLUME EQUATION5

* 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

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Title... Overflow Structure 44 in Basin B of Avondale Heights

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 498.00 ft
Increment = .10 ft
Max. Elev.= 502.00 ft

****
OUTLET CONNECTIVITY
****

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

Structure	No.		Outfall	E1, ft	E2, ft
Stand Pipe	AI	--->	CV	499.200	502.000
Weir-Rectangular	SL	--->	CV	498.000	502.000
Culvert-Circular	CV	--->	TW	497.000	502.000

TW SETUP, DS Channel

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Title... Overflow Structure 44 in Basin B of Avondale Heights

OUTLET STRUCTURE INPUT DATA

Structure ID	= AI	
Structure Type	= Stand Pipe	
# of Openings	= 1	
Invert Elev.	= 499.20	ft
Diameter	= 3.5000	ft
Orifice Area	= 9.6211	sq.ft
Orifice Coeff.	= .600	
Weir Length	= 11.00	ft
Weir Coeff.	= 3.000	
K, Submerged	= .000	
K, Reverse	= 1.000	
Kb,Barrel	= .000000	(per ft of full flow)
Barrel Length	= .00	ft
Mannings n	= .0000	

Structure ID	= SL	
Structure Type	= Weir-Rectangular	
# of Openings	= 1	
Crest Elev.	= 498.00	ft
Weir Length	= .67	ft
Weir Coeff.	= 3.000000	

Weir TW effects (Use adjustment equation)

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Title... Overflow Structure 44 in Basin B of Avondale Heights

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels	=	1	
Barrel Diameter	=	2.0000	ft
Upstream Invert	=	497.00	ft
Dnstream Invert	=	496.00	ft
Horiz. Length	=	46.24	ft
Barrel Length	=	46.25	ft
Barrel Slope	=	.02163	ft/ft

OUTLET CONTROL DATA...

Mannings n	=	.0130	
Ke	=	.5000	(forward entrance loss)
Kb	=	.012411	(per ft of full flow)
Kr	=	.5000	(reverse entrance loss)
HW Convergence	=	.001	+/- ft

INLET CONTROL DATA...

Equation form	=	1
Inlet Control K	=	.0078
Inlet Control M	=	2.0000
Inlet Control c	=	.02920
Inlet Control Y	=	.7400
T1 ratio (HW/D)	=	1.125
T2 ratio (HW/D)	=	1.196
Slope Factor	=	-.500

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...
At T1 Elev = 499.25 ft ---> Flow = 15.55 cfs
At T2 Elev = 499.39 ft ---> Flow = 17.77 cfs

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

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

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

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Title... Overflow Structure 44 in Basin B of Avondale Heights

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

WS Elev, Total Q		Notes		
		Converge		
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
498.00	.00	Free Outfall		(no Q: AI,SL,CV)
498.10	.06	Free Outfall		SL,CV (no Q: AI)
498.20	.18	Free Outfall		SL,CV (no Q: AI)
498.30	.33	Free Outfall		SL,CV (no Q: AI)
498.40	.51	Free Outfall		SL,CV (no Q: AI)
498.50	.71	Free Outfall		SL,CV (no Q: AI)
498.60	.93	Free Outfall		SL,CV (no Q: AI)
498.70	1.18	Free Outfall		SL,CV (no Q: AI)
498.80	1.44	Free Outfall		SL,CV (no Q: AI)
498.90	1.72	Free Outfall		SL,CV (no Q: AI)
499.00	2.01	Free Outfall		SL,CV (no Q: AI)
499.10	2.32	Free Outfall		SL,CV (no Q: AI)
499.20	2.64	Free Outfall		SL,CV (no Q: AI)
499.30	4.00	Free Outfall		AI,SL,CV
499.40	6.10	Free Outfall		AI,SL,CV
499.50	8.65	Free Outfall		AI,SL,CV
499.60	11.49	Free Outfall		AI,SL,CV
499.70	14.57	Free Outfall		AI,CV (no Q: SL)
499.80	17.59	Free Outfall		AI,CV (no Q: SL)
499.90	20.18	Free Outfall		AI,CV (no Q: SL)
500.00	21.07	Free Outfall		AI,CV (no Q: SL)
500.10	21.97	Free Outfall		AI,CV (no Q: SL)
500.20	22.84	Free Outfall		AI,CV (no Q: SL)
500.30	23.68	Free Outfall		AI,CV (no Q: SL)
500.40	24.52	Free Outfall		AI,CV (no Q: SL)
500.50	25.34	Free Outfall		AI,CV (no Q: SL)
500.60	26.13	Free Outfall		AI,CV (no Q: SL)
500.70	26.91	Free Outfall		AI,CV (no Q: SL)
500.80	27.67	Free Outfall		AI,CV (no Q: SL)
500.90	28.41	Free Outfall		AI,CV (no Q: SL)
501.00	29.14	Free Outfall		AI,CV (no Q: SL)
501.10	29.84	Free Outfall		AI,CV (no Q: SL)
501.20	30.45	Free Outfall		AI,CV (no Q: 5L)
501.30	30.99	Free Outfall		AI,CV (no Q: SL)
501.40	31.53	Free Outfall		AI,CV (no Q: SL)
501.50	32.07	Free Outfall		AI,CV (no Q: SL)
501.60	32.59	Free Outfall		AI,CV (no Q: SL)
501.70	33.10	Free Outfall		AI,CV (no Q: SL)
501.80	33.61	Free Outfall		AI,CV (no Q: SL)

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Title... Overflow Structure 44 in Basin B of Avondale Heights

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
501.90	34.11	Free Outfall		AI,CV (no Q: SL)
502.00	34.59	Free Outfall		AI,CV (no Q: SL)

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - BASIN B IN A 15yr
Outflow HYG file = NONE STORED - BASIN B OUT A 15yr

Pond Node Data = BASIN B
Pond Volume Data = BASIN B
Pond Outlet Data = OVERFLOW 44

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	498.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	39.92 cfs	at	5.00 min
Peak Outflow	=	2.59 cfs	at	25.00 min
Peak Elevation	=	499.18 ft		
Peak Storage	=	46222 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	47904
- Infiltration	=	0
- HYG Vol OUT	=	45775
- Retained Vol	=	2126
Unrouted Vol	=	-3 cu.ft (.007% of Inflow Volume)

WARNING: Outflow hydrograph truncated on right side.

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = A 15yr

Peak Discharge =	2.59 cfs
Time to Peak =	25.00 min
HYG Volume =	45775 cu.ft

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.02	.04	.07
5.00	.13	.21	.30	.41	.52
10.00	.64	.77	.91	1.05	1.20
15.00	1.35	1.51	1.67	1.83	2.00
20.00	2.18	2.33	2.45	2.54	2.58
25.00	2.59	2.58	2.57	2.55	2.54
30.00	2.53	2.52	2.50	2.49	2.48
35.00	2.47	2.46	2.45	2.43	2.42
40.00	2.41	2.40	2.39	2.38	2.36
45.00	2.35	2.34	2.33	2.32	2.31
50.00	2.30	2.29	2.28	2.27	2.26
55.00	2.25	2.24	2.23	2.21	2.20
60.00	2.19	2.18	2.17	2.16	2.15
65.00	2.14	2.13	2.12	2.11	2.11
70.00	2.10	2.09	2.08	2.07	2.06
75.00	2.05	2.04	2.03	2.02	2.01
80.00	2.00	1.99	1.98	1.98	1.97
85.00	1.96	1.95	1.94	1.93	1.92
90.00	1.91	1.91	1.90	1.89	1.88
95.00	1.87	1.86	1.86	1.85	1.84
100.00	1.83	1.82	1.82	1.81	1.80
105.00	1.79	1.78	1.78	1.77	1.76
110.00	1.75	1.75	1.74	1.73	1.72
115.00	1.71	1.71	1.70	1.69	1.69
120.00	1.68	1.67	1.67	1.66	1.65
125.00	1.64	1.64	1.63	1.62	1.62
130.00	1.61	1.60	1.60	1.59	1.58
135.00	1.58	1.57	1.56	1.56	1.55
140.00	1.54	1.54	1.53	1.52	1.52
145.00	1.51	1.51	1.50	1.49	1.49

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
150.00	1.48	1.47	1.47	1.46	1.46
155.00	1.45	1.44	1.44	1.43	1.43
160.00	1.42	1.41	1.41	1.40	1.40
165.00	1.39	1.39	1.38	1.38	1.37
170.00	1.36	1.36	1.35	1.35	1.34
175.00	1.34	1.33	1.33	1.32	1.32
180.00	1.31	1.31	1.30	1.30	1.29
185.00	1.29	1.28	1.28	1.27	1.27
190.00	1.26	1.26	1.25	1.25	1.24
195.00	1.24	1.23	1.23	1.22	1.22
200.00	1.21	1.21	1.20	1.20	1.19
205.00	1.19	1.18	1.18	1.17	1.17
210.00	1.17	1.16	1.16	1.15	1.15
215.00	1.14	1.14	1.14	1.13	1.13
220.00	1.12	1.12	1.11	1.11	1.11
225.00	1.10	1.10	1.09	1.09	1.09
230.00	1.08	1.08	1.07	1.07	1.07
235.00	1.06	1.06	1.05	1.05	1.05
240.00	1.04	1.04	1.03	1.03	1.03
245.00	1.02	1.02	1.02	1.01	1.01
250.00	1.00	1.00	1.00	.99	.99
255.00	.99	.98	.98	.97	.97
260.00	.97	.96	.96	.96	.95
265.00	.95	.95	.94	.94	.94
270.00	.93	.93	.93	.92	.92
275.00	.92	.91	.91	.91	.90
280.00	.90	.90	.89	.89	.89
285.00	.89	.88	.88	.88	.87
290.00	.87	.87	.86	.86	.86
295.00	.86	.85	.85	.85	.84
300.00	.84	.84	.83	.83	.83
305.00	.83	.82	.82	.82	.82
310.00	.81	.81	.81	.80	.80
315.00	.80	.80	.79	.79	.79
320.00	.78	.78	.78	.78	.77
325.00	.77	.77	.77	.76	.76
330.00	.76	.76	.75	.75	.75
335.00	.75	.74	.74	.74	.73
340.00	.73	.73	.73	.72	.72
345.00	.72	.72	.72	.71	.71
350.00	.71	.71	.70	.70	.70
355.00	.70	.69	.69	.69	.69
360.00	.69	.68	.68	.68	.68
365.00	.68	.67	.67	.67	.67

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
370.00	.66	.66	.66	.66	.66
375.00	.65	.65	.65	.65	.65
380.00	.64	.64	.64	.64	.64
385.00	.63	.63	.63	.63	.63
390.00	.62	.62	.62	.62	.62
395.00	.61	.61	.61	.61	.61
400.00	.61	.60	.60	.60	.60
405.00	.60	.59	.59	.59	.59
410.00	.59	.58	.58	.58	.58
415.00	.58	.58	.57	.57	.57
420.00	.57	.57	.56	.56	.56
425.00	.56	.56	.56	.55	.55
430.00	.55	.55	.55	.55	.54
435.00	.54	.54	.54	.54	.54
440.00	.53	.53	.53	.53	.53
445.00	.53	.52	.52	.52	.52
450.00	.52	.52	.51	.51	.51
455.00	.51	.51	.51	.51	.50
460.00	.50	.50	.50	.50	.50
465.00	.50	.49	.49	.49	.49
470.00	.49	.49	.49	.48	.48
475.00	.48	.48	.48	.48	.48
480.00	.48	.47	.47	.47	.47
485.00	.47	.47	.47	.46	.46
490.00	.46	.46	.46	.46	.46
495.00	.46	.45	.45	.45	.45
500.00	.45	.45	.45	.45	.44
505.00	.44	.44	.44	.44	.44
510.00	.44	.44	.43	.43	.43
515.00	.43	.43	.43	.43	.43
520.00	.43	.42	.42	.42	.42
525.00	.42	.42	.42	.42	.41
530.00	.41	.41	.41	.41	.41
535.00	.41	.41	.41	.40	.40
540.00	.40	.40	.40	.40	.40
545.00	.40	.40	.39	.39	.39
550.00	.39	.39	.39	.39	.39
555.00	.39	.38	.38	.38	.38
560.00	.38	.38	.38	.38	.38
565.00	.38	.37	.37	.37	.37
570.00	.37	.37	.37	.37	.37
575.00	.36	.36	.36	.36	.36
580.00	.36	.36	.36	.36	.36
585.00	.35	.35	.35	.35	.35

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
590.00	.35	.35	.35	.35	.35
595.00	.35	.34	.34	.34	.34
600.00	.34	.34	.34	.34	.34
605.00	.34	.33	.33	.33	.33
610.00	.33	.33	.33	.33	.33
615.00	.33	.33	.33	.32	.32
620.00	.32	.32	.32	.32	.32
625.00	.32	.32	.32	.32	.32
630.00	.32	.31	.31	.31	.31
635.00	.31	.31	.31	.31	.31
640.00	.31	.31	.31	.31	.31
645.00	.30	.30	.30	.30	.30
650.00	.30	.30	.30	.30	.30
655.00	.30	.30	.30	.30	.29
660.00	.29	.29	.29	.29	.29
665.00	.29	.29	.29	.29	.29
670.00	.29	.29	.29	.29	.28
675.00	.28	.28	.28	.28	.28
680.00	.28	.28	.28	.28	.28
685.00	.28	.28	.28	.28	.27
690.00	.27	.27	.27	.27	.27
695.00	.27	.27	.27	.27	.27
700.00	.27	.27	.27	.27	.26
705.00	.26	.26	.26	.26	.26
710.00	.26	.26	.26	.26	.26
715.00	.26	.26	.26	.26	.26
720.00	.26	.25	.25	.25	.25
725.00	.25	.25	.25	.25	.25
730.00	.25	.25	.25	.25	.25
735.00	.25	.25	.25	.24	.24
740.00	.24	.24	.24	.24	.24
745.00	.24	.24	.24	.24	.24
750.00	.24	.24	.24	.24	.24
755.00	.23	.23	.23	.23	.23
760.00	.23	.23	.23	.23	.23
765.00	.23	.23	.23	.23	.23
770.00	.23	.23	.23	.23	.22
775.00	.22	.22	.22	.22	.22
780.00	.22	.22	.22	.22	.22
785.00	.22	.22	.22	.22	.22
790.00	.22	.22	.22	.21	.21
795.00	.21	.21	.21	.21	.21
800.00	.21	.21	.21	.21	.21
805.00	.21	.21	.21	.21	.21

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
810.00	.21	.21	.21	.20	.20
815.00	.20	.20	.20	.20	.20
820.00	.20	.20	.20	.20	.20
825.00	.20	.20	.20	.20	.20
830.00	.20	.20	.20	.20	.19
835.00	.19	.19	.19	.19	.19
840.00	.19	.19	.19	.19	.19
845.00	.19	.19	.19	.19	.19
850.00	.19	.19	.19	.19	.19
855.00	.19	.18	.18	.18	.18
860.00	.18	.18	.18	.18	.18
865.00	.18	.18	.18	.18	.18
870.00	.18	.18	.18	.18	.18
875.00	.18	.18	.18	.18	.18
880.00	.18	.18	.18	.17	.17
885.00	.17	.17	.17	.17	.17
890.00	.17	.17	.17	.17	.17
895.00	.17	.17	.17	.17	.17
900.00	.17	.17	.17	.17	.17
905.00	.17	.17	.17	.17	.17
910.00	.17	.17	.17	.17	.17
915.00	.16	.16	.16	.16	.16
920.00	.16	.16	.16	.16	.16
925.00	.16	.16	.16	.16	.16
930.00	.16	.16	.16	.16	.16
935.00	.16	.16	.16	.16	.16
940.00	.16	.16	.16	.16	.16
945.00	.16	.16	.16	.16	.15
950.00	.15	.15	.15	.15	.15
955.00	.15	.15	.15	.15	.15
960.00	.15	.15	.15	.15	.15
965.00	.15	.15	.15	.15	.15
970.00	.15	.15	.15	.15	.15
975.00	.15	.15	.15	.15	.15
980.00	.15	.15	.15	.15	.15
985.00	.15	.14	.14	.14	.14
990.00	.14	.14	.14	.14	.14
995.00	.14	.14	.14	.14	.14
1000.00	.14	.14	.14	.14	.14
1005.00	.14	.14	.14	.14	.14
1010.00	.14	.14	.14	.14	.14
1015.00	.14	.14	.14	.14	.14
1020.00	.14	.14	.14	.14	.14
1025.00	.13	.13	.13	.13	.13

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1030.00	.13	.13	.13	.13	.13
1035.00	.13	.13	.13	.13	.13
1040.00	.13	.13	.13	.13	.13
1045.00	.13	.13	.13	.13	.13
1050.00	.13	.13	.13	.13	.13
1055.00	.13	.13	.13	.13	.13
1060.00	.13	.13	.13	.13	.13
1065.00	.13	.12	.12	.12	.12
1070.00	.12	.12	.12	.12	.12
1075.00	.12	.12	.12	.12	.12
1080.00	.12	.12	.12	.12	.12
1085.00	.12	.12	.12	.12	.12
1090.00	.12	.12	.12	.12	.12
1095.00	.12	.12	.12	.12	.12
1100.00	.12	.12	.12	.12	.12
1105.00	.12	.12	.12	.12	.12
1110.00	.12	.12	.11	.11	.11
1115.00	.11	.11	.11	.11	.11
1120.00	.11	.11	.11	.11	.11
1125.00	.11	.11	.11	.11	.11
1130.00	.11	.11	.11	.11	.11
1135.00	.11	.11	.11	.11	.11
1140.00	.11	.11	.11	.11	.11
1145.00	.11	.11	.11	.11	.11
1150.00	.11	.11	.11	.11	.11
1155.00	.11	.11	.11	.11	.11
1160.00	.11	.10	.10	.10	.10
1165.00	.10	.10	.10	.10	.10
1170.00	.10	.10	.10	.10	.10
1175.00	.10	.10	.10	.10	.10
1180.00	.10	.10	.10	.10	.10
1185.00	.10	.10	.10	.10	.10
1190.00	.10	.10	.10	.10	.10
1195.00	.10	.10	.10	.10	.10
1200.00	.10	.10	.10	.10	.10
1205.00	.10	.10	.10	.10	.10
1210.00	.10	.10	.10	.10	.10
1215.00	.10	.09	.09	.09	.09
1220.00	.09	.09	.09	.09	.09
1225.00	.09	.09	.09	.09	.09
1230.00	.09	.09	.09	.09	.09
1235.00	.09	.09	.09	.09	.09
1240.00	.09	.09	.09	.09	.09
1245.00	.09	.09	.09	.09	.09

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1250.00	.09	.09	.09	.09	.09
1255.00	.09	.09	.09	.09	.09
1260.00	.09	.09	.09	.09	.09
1265.00	.09	.09	.09	.09	.09
1270.00	.09	.09	.09	.09	.09
1275.00	.09	.08	.08	.08	.08
1280.00	.08	.08	.08	.08	.08
1285.00	.08	.08	.08	.08	.08
1290.00	.08	.08	.08	.08	.08
1295.00	.08	.08	.08	.08	.08
1300.00	.08	.08	.08	.08	.08
1305.00	.08	.08	.08	.08	.08
1310.00	.08	.08	.08	.08	.08
1315.00	.08	.08	.08	.08	.08
1320.00	.08	.08	.08	.08	.08
1325.00	.08	.08	.08	.08	.08
1330.00	.08	.08	.08	.08	.08
1335.00	.08	.08	.08	.08	.08
1340.00	.08	.08	.08	.08	.08
1345.00	.07	.07	.07	.07	.07
1350.00	.07	.07	.07	.07	.07
1355.00	.07	.07	.07	.07	.07
1360.00	.07	.07	.07	.07	.07
1365.00	.07	.07	.07	.07	.07
1370.00	.07	.07	.07	.07	.07
1375.00	.07	.07	.07	.07	.07
1380.00	.07	.07	.07	.07	.07
1385.00	.07	.07	.07	.07	.07
1390.00	.07	.07	.07	.07	.07
1395.00	.07	.07	.07	.07	.07
1400.00	.07	.07	.07	.07	.07
1405.00	.07	.07	.07	.07	.07
1410.00	.07	.07	.07	.07	.07
1415.00	.07	.07	.07	.07	.07
1420.00	.07	.07	.06	.06	.06
1425.00	.06	.06	.06	.06	.06
1430.00	.06	.06	.06	.06	.06
1435.00	.06	.06	.06	.06	.06
1440.00	.06	.06	.06	.06	.06
1445.00	.06	.06	.06	.06	.06
1450.00	.06	.06	.06	.06	.06
1455.00	.06	.06	.06	.06	.06
1460.00	.06	.06	.06	.06	.06
1465.00	.06	.06	.06	.06	.06

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1470.00	.06	.06	.06	.06	.06
1475.00	.06	.06	.06	.06	.06
1480.00	.06	.06	.06	.06	.06
1485.00	.06	.06	.06	.06	.06
1490.00	.06	.06	.06	.06	.06
1495.00	.06	.06	.06	.06	.06
1500.00	.06	.06	.06	.06	.06
1505.00	.06	.06	.06	.06	.06
1510.00	.06	.06	.06	.06	.06
1515.00	.06	.06	.06	.06	.06
1520.00	.06	.06	.06	.06	.06
1525.00	.06	.06	.06	.06	.06
1530.00	.06	.06	.06	.06	.06
1535.00	.06	.06	.06	.06	.06
1540.00	.06	.06	.06	.06	.06
1545.00	.06	.06	.06	.06	.06
1550.00	.06	.06	.06	.06	.06
1555.00	.06	.06	.06	.06	.06
1560.00	.06	.06	.06	.06	.06
1565.00	.06	.06	.06	.06	.06
1570.00	.06	.06	.06	.06	.06
1575.00	.06	.06	.06	.05	.05
1580.00	.05	.05	.05	.05	.05
1585.00	.05	.05	.05	.05	.05
1590.00	.05	.05	.05	.05	.05
1595.00	.05	.05	.05	.05	.05
1600.00	.05	.05	.05	.05	.05
1605.00	.05	.05	.05	.05	.05
1610.00	.05	.05	.05	.05	.05
1615.00	.05	.05	.05	.05	.05
1620.00	.05	.05	.05	.05	.05
1625.00	.05	.05	.05	.05	.05
1630.00	.05	.05	.05	.05	.05
1635.00	.05	.05	.05	.05	.05
1640.00	.05	.05	.05	.05	.05
1645.00	.05	.05	.05	.05	.05
1650.00	.05	.05	.05	.05	.05
1655.00	.05	.05	.05	.05	.05
1660.00	.05	.05	.05	.05	.05
1665.00	.05	.05	.05	.05	.05
1670.00	.05	.05	.05	.05	.05
1675.00	.05	.05	.05	.05	.05
1680.00	.05	.05	.05	.05	.05
1685.00	.05	.05	.05	.05	.05

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1690.00	.05	.05	.05	.05	.05
1695.00	.05	.05	.05	.05	.05
1700.00	.05	.05	.05	.05	.05
1705.00	.05	.05	.05	.05	.05
1710.00	.05	.05	.05	.05	.05
1715.00	.05	.05	.05	.05	.05
1720.00	.05	.05	.05	.05	.05
1725.00	.05	.05	.05	.05	.05
1730.00	.05	.05	.05	.05	.05
1735.00	.05	.05	.05	.05	.05
1740.00	.05	.05	.05	.05	.05
1745.00	.05	.05	.05	.05	.05
1750.00	.05	.05	.05	.05	.05
1755.00	.05	.05	.05	.05	.05
1760.00	.05	.05	.05	.05	.05
1765.00	.05	.05	.05	.05	.05
1770.00	.05	.05	.05	.05	.05
1775.00	.05	.04	.04	.04	.04
1780.00	.04	.04	.04	.04	.04
1785.00	.04	.04	.04	.04	.04
1790.00	.04	.04	.04	.04	.04
1795.00	.04	.04	.04	.04	.04
1800.00	.04	.04	.04	.04	.04
1805.00	.04	.04	.04	.04	.04
1810.00	.04	.04	.04	.04	.04
1815.00	.04	.04	.04	.04	.04
1820.00	.04	.04	.04	.04	.04
1825.00	.04	.04	.04	.04	.04
1830.00	.04	.04	.04	.04	.04
1835.00	.04	.04	.04	.04	.04
1840.00	.04	.04	.04	.04	.04
1845.00	.04	.04	.04	.04	.04
1850.00	.04	.04	.04	.04	.04
1855.00	.04	.04	.04	.04	.04
1860.00	.04	.04	.04	.04	.04
1865.00	.04	.04	.04	.04	.04
1870.00	.04	.04	.04	.04	.04
1875.00	.04	.04	.04	.04	.04
1880.00	.04	.04	.04	.04	.04
1885.00	.04	.04	.04	.04	.04
1890.00	.04	.04	.04	.04	.04
1895.00	.04	.04	.04	.04	.04
1900.00	.04	.04	.04	.04	.04
1905.00	.04	.04	.04	.04	.04

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1910.00	.04	.04	.04	.04	.04
1915.00	.04	.04	.04	.04	.04
1920.00	.04	.04	.04	.04	.04
1925.00	.04	.04	.04	.04	.04
1930.00	.04	.04	.04	.04	.04
1935.00	.04	.04	.04	.04	.04
1940.00	.04	.04	.04	.04	.04
1945.00	.04	.04	.04	.04	.04
1950.00	.04	.04	.04	.04	.04
1955.00	.04	.04	.04	.04	.04
1960.00	.04	.04	.04	.04	.04
1965.00	.04	.04	.04	.04	.04
1970.00	.04	.04	.04	.04	.04
1975.00	.04	.04	.04	.04	.04
1980.00	.04	.04	.04	.04	.04
1985.00	.04	.04	.04	.04	.04
1990.00	.04	.04	.04	.04	.04
1995.00	.04	.04	.04	.04	.04
2000.00	.04				

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - BASIN B IN B 25yr
Outflow HYG file = NONE STORED - BASIN B OUT B 25yr

Pond Node Data = BASIN B
Pond Volume Data = BASIN B
Pond Outlet Data = OVERFLOW 44

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	498.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	49.29 cfs	at	5.00 min
Peak Outflow	=	6.86 cfs	at	24.00 min
Peak Elevation	=	499.43 ft		
Peak Storage	=	56259 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	59250
- Infiltration	=	0
- HYG Vol OUT	=	57029
- Retained Vol	=	2217
Unrouted Vol	=	-3 cu.ft (.006% of Inflow Volume)

WARNING: Outflow hydrograph truncated on right side.

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = B 25yr

Peak Discharge =	6.86 cfs
Time to Peak =	24.00 min
HYG Volume =	57029 cu.ft

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.02	.04	.09
5.00	.18	.29	.42	.56	.71
10.00	.88	1.06	1.24	1.43	1.63
15.00	1.84	2.05	2.26	2.49	2.93
20.00	3.85	5.00	5.91	6.56	6.86
25.00	6.79	6.54	6.30	6.08	5.89
30.00	5.71	5.54	5.37	5.21	5.05
35.00	4.90	4.75	4.61	4.47	4.33
40.00	4.20	4.07	3.97	3.89	3.81
45.00	3.74	3.66	3.59	3.52	3.45
50.00	3.38	3.31	3.25	3.18	3.12
55.00	3.06	3.00	2.94	2.88	2.82
60.00	2.77	2.71	2.66	2.63	2.62
65.00	2.61	2.60	2.58	2.57	2.56
70.00	2.55	2.53	2.52	2.51	2.50
75.00	2.49	2.47	2.46	2.45	2.44
80.00	2.43	2.42	2.40	2.39	2.38
85.00	2.37	2.36	2.35	2.34	2.32
90.00	2.31	2.30	2.29	2.28	2.27
95.00	2.26	2.25	2.24	2.23	2.22
100.00	2.21	2.20	2.19	2.18	2.17
105.00	2.16	2.15	2.14	2.13	2.12
110.00	2.11	2.10	2.09	2.08	2.07
115.00	2.06	2.05	2.04	2.03	2.02
120.00	2.01	2.01	2.00	1.99	1.98
125.00	1.97	1.96	1.95	1.94	1.94
130.00	1.93	1.92	1.91	1.90	1.89
135.00	1.88	1.88	1.87	1.86	1.85
140.00	1.84	1.84	1.83	1.82	1.81
145.00	1.80	1.80	1.79	1.78	1.77

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
150.00	1.76	1.76	1.75	1.74	1.73
155.00	1.73	1.72	1.71	1.70	1.70
160.00	1.69	1.68	1.68	1.67	1.66
165.00	1.65	1.65	1.64	1.63	1.63
170.00	1.62	1.61	1.61	1.60	1.59
175.00	1.59	1.58	1.57	1.57	1.56
180.00	1.55	1.55	1.54	1.53	1.53
185.00	1.52	1.51	1.51	1.50	1.50
190.00	1.49	1.48	1.48	1.47	1.46
195.00	1.46	1.45	1.45	1.44	1.43
200.00	1.43	1.42	1.42	1.41	1.41
205.00	1.40	1.39	1.39	1.38	1.38
210.00	1.37	1.37	1.36	1.36	1.35
215.00	1.35	1.34	1.34	1.33	1.32
220.00	1.32	1.31	1.31	1.30	1.30
225.00	1.29	1.29	1.28	1.28	1.27
230.00	1.27	1.26	1.26	1.25	1.25
235.00	1.24	1.24	1.23	1.23	1.22
240.00	1.22	1.21	1.21	1.20	1.20
245.00	1.19	1.19	1.19	1.18	1.18
250.00	1.17	1.17	1.16	1.16	1.15
255.00	1.15	1.15	1.14	1.14	1.13
260.00	1.13	1.12	1.12	1.12	1.11
265.00	1.11	1.10	1.10	1.10	1.09
270.00	1.09	1.08	1.08	1.08	1.07
275.00	1.07	1.06	1.06	1.06	1.05
280.00	1.05	1.04	1.04	1.04	1.03
285.00	1.03	1.02	1.02	1.02	1.01
290.00	1.01	1.01	1.00	1.00	.99
295.00	.99	.99	.98	.98	.98
300.00	.97	.97	.97	.96	.96
305.00	.95	.95	.95	.94	.94
310.00	.94	.93	.93	.93	.92
315.00	.92	.92	.91	.91	.91
320.00	.91	.90	.90	.90	.89
325.00	.89	.89	.88	.88	.88
330.00	.87	.87	.87	.87	.86
335.00	.86	.86	.85	.85	.85
340.00	.84	.84	.84	.84	.83
345.00	.83	.83	.82	.82	.82
350.00	.82	.81	.81	.81	.81
355.00	.80	.80	.80	.79	.79
360.00	.79	.79	.78	.78	.78
365.00	.78	.77	.77	.77	.76

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
370.00	.76	.76	.76	.75	.75
375.00	.75	.75	.74	.74	.74
380.00	.74	.73	.73	.73	.73
385.00	.72	.72	.72	.72	.71
390.00	.71	.71	.71	.70	.70
395.00	.70	.70	.70	.69	.69
400.00	.69	.69	.68	.68	.68
405.00	.68	.68	.67	.67	.67
410.00	.67	.67	.66	.66	.66
415.00	.66	.66	.65	.65	.65
420.00	.65	.65	.64	.64	.64
425.00	.64	.64	.63	.63	.63
430.00	.63	.63	.62	.62	.62
435.00	.62	.62	.61	.61	.61
440.00	.61	.61	.60	.60	.60
445.00	.60	.60	.59	.59	.59
450.00	.59	.59	.59	.58	.58
455.00	.58	.58	.58	.57	.57
460.00	.57	.57	.57	.57	.56
465.00	.56	.56	.56	.56	.56
470.00	.55	.55	.55	.55	.55
475.00	.54	.54	.54	.54	.54
480.00	.54	.53	.53	.53	.53
485.00	.53	.53	.52	.52	.52
490.00	.52	.52	.52	.51	.51
495.00	.51	.51	.51	.51	.51
500.00	.50	.50	.50	.50	.50
505.00	.50	.50	.49	.49	.49
510.00	.49	.49	.49	.49	.48
515.00	.48	.48	.48	.48	.48
520.00	.48	.48	.47	.47	.47
525.00	.47	.47	.47	.47	.47
530.00	.46	.46	.46	.46	.46
535.00	.46	.46	.45	.45	.45
540.00	.45	.45	.45	.45	.45
545.00	.44	.44	.44	.44	.44
550.00	.44	.44	.44	.44	.43
555.00	.43	.43	.43	.43	.43
560.00	.43	.43	.42	.42	.42
565.00	.42	.42	.42	.42	.42
570.00	.42	.41	.41	.41	.41
575.00	.41	.41	.41	.41	.40
580.00	.40	.40	.40	.40	.40
585.00	.40	.40	.40	.39	.39

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
590.00	.39	.39	.39	.39	.39
595.00	.39	.39	.39	.38	.38
600.00	.38	.38	.38	.38	.38
605.00	.38	.38	.37	.37	.37
610.00	.37	.37	.37	.37	.37
615.00	.37	.37	.36	.36	.36
620.00	.36	.36	.36	.36	.36
625.00	.36	.36	.35	.35	.35
630.00	.35	.35	.35	.35	.35
635.00	.35	.35	.34	.34	.34
640.00	.34	.34	.34	.34	.34
645.00	.34	.34	.34	.33	.33
650.00	.33	.33	.33	.33	.33
655.00	.33	.33	.33	.33	.32
660.00	.32	.32	.32	.32	.32
665.00	.32	.32	.32	.32	.32
670.00	.32	.32	.32	.31	.31
675.00	.31	.31	.31	.31	.31
680.00	.31	.31	.31	.31	.31
685.00	.31	.30	.30	.30	.30
690.00	.30	.30	.30	.30	.30
695.00	.30	.30	.30	.30	.30
700.00	.29	.29	.29	.29	.29
705.00	.29	.29	.29	.29	.29
710.00	.29	.29	.29	.29	.29
715.00	.28	.28	.28	.28	.28
720.00	.28	.28	.28	.28	.28
725.00	.28	.28	.28	.28	.28
730.00	.27	.27	.27	.27	.27
735.00	.27	.27	.27	.27	.27
740.00	.27	.27	.27	.27	.27
745.00	.27	.26	.26	.26	.26
750.00	.26	.26	.26	.26	.26
755.00	.26	.26	.26	.26	.26
760.00	.26	.26	.25	.25	.25
765.00	.25	.25	.25	.25	.25
770.00	.25	.25	.25	.25	.25
775.00	.25	.25	.25	.25	.24
780.00	.24	.24	.24	.24	.24
785.00	.24	.24	.24	.24	.24
790.00	.24	.24	.24	.24	.24
795.00	.24	.24	.23	.23	.23
800.00	.23	.23	.23	.23	.23
805.00	.23	.23	.23	.23	.23

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
810.00	.23	.23	.23	.23	.23
815.00	.22	.22	.22	.22	.22
820.00	.22	.22	.22	.22	.22
825.00	.22	.22	.22	.22	.22
830.00	.22	.22	.22	.22	.21
835.00	.21	.21	.21	.21	.21
840.00	.21	.21	.21	.21	.21
845.00	.21	.21	.21	.21	.21
850.00	.21	.21	.21	.21	.20
855.00	.20	.20	.20	.20	.20
860.00	.20	.20	.20	.20	.20
865.00	.20	.20	.20	.20	.20
870.00	.20	.20	.20	.20	.20
875.00	.20	.19	.19	.19	.19
880.00	.19	.19	.19	.19	.19
885.00	.19	.19	.19	.19	.19
890.00	.19	.19	.19	.19	.19
895.00	.19	.19	.19	.18	.18
900.00	.18	.18	.18	.18	.18
905.00	.18	.18	.18	.18	.18
910.00	.18	.18	.18	.18	.18
915.00	.18	.18	.18	.18	.18
920.00	.18	.18	.18	.18	.18
925.00	.17	.17	.17	.17	.17
930.00	.17	.17	.17	.17	.17
935.00	.17	.17	.17	.17	.17
940.00	.17	.17	.17	.17	.17
945.00	.17	.17	.17	.17	.17
950.00	.17	.17	.17	.17	.17
955.00	.17	.17	.16	.16	.16
960.00	.16	.16	.16	.16	.16
965.00	.16	.16	.16	.16	.16
970.00	.16	.16	.16	.16	.16
975.00	.16	.16	.16	.16	.16
980.00	.16	.16	.16	.16	.16
985.00	.16	.16	.16	.16	.16
990.00	.16	.15	.15	.15	.15
995.00	.15	.15	.15	.15	.15
1000.00	.15	.15	.15	.15	.15
1005.00	.15	.15	.15	.15	.15
1010.00	.15	.15	.15	.15	.15
1015.00	.15	.15	.15	.15	.15
1020.00	.15	.15	.15	.15	.15
1025.00	.15	.15	.14	.14	.14

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1030.00	.14	.14	.14	.14	.14
1035.00	.14	.14	.14	.14	.14
1040.00	.14	.14	.14	.14	.14
1045.00	.14	.14	.14	.14	.14
1050.00	.14	.14	.14	.14	.14
1055.00	.14	.14	.14	.14	.14
1060.00	.14	.14	.14	.14	.14
1065.00	.14	.13	.13	.13	.13
1070.00	.13	.13	.13	.13	.13
1075.00	.13	.13	.13	.13	.13
1080.00	.13	.13	.13	.13	.13
1085.00	.13	.13	.13	.13	.13
1090.00	.13	.13	.13	.13	.13
1095.00	.13	.13	.13	.13	.13
1100.00	.13	.13	.13	.13	.13
1105.00	.13	.13	.13	.12	.12
1110.00	.12	.12	.12	.12	.12
1115.00	.12	.12	.12	.12	.12
1120.00	.12	.12	.12	.12	.12
1125.00	.12	.12	.12	.12	.12
1130.00	.12	.12	.12	.12	.12
1135.00	.12	.12	.12	.12	.12
1140.00	.12	.12	.12	.12	.12
1145.00	.12	.12	.12	.12	.12
1150.00	.12	.12	.12	.11	.11
1155.00	.11	.11	.11	.11	.11
1160.00	.11	.11	.11	.11	.11
1165.00	.11	.11	.11	.11	.11
1170.00	.11	.11	.11	.11	.11
1175.00	.11	.11	.11	.11	.11
1180.00	.11	.11	.11	.11	.11
1185.00	.11	.11	.11	.11	.11
1190.00	.11	.11	.11	.11	.11
1195.00	.11	.11	.11	.11	.11
1200.00	.11	.11	.11	.10	.10
1205.00	.10	.10	.10	.10	.10
1210.00	.10	.10	.10	.10	.10
1215.00	.10	.10	.10	.10	.10
1220.00	.10	.10	.10	.10	.10
1225.00	.10	.10	.10	.10	.10
1230.00	.10	.10	.10	.10	.10
1235.00	.10	.10	.10	.10	.10
1240.00	.10	.10	.10	.10	.10
1245.00	.10	.10	.10	.10	.10

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1250.00	.10	.10	.10	.10	.10
1255.00	.10	.10	.09	.09	.09
1260.00	.09	.09	.09	.09	.09
1265.00	.09	.09	.09	.09	.09
1270.00	.09	.09	.09	.09	.09
1275.00	.09	.09	.09	.09	.09
1280.00	.09	.09	.09	.09	.09
1285.00	.09	.09	.09	.09	.09
1290.00	.09	.09	.09	.09	.09
1295.00	.09	.09	.09	.09	.09
1300.00	.09	.09	.09	.09	.09
1305.00	.09	.09	.09	.09	.09
1310.00	.09	.09	.09	.09	.09
1315.00	.09	.09	.09	.08	.08
1320.00	.08	.08	.08	.08	.08
1325.00	.08	.08	.08	.08	.08
1330.00	.08	.08	.08	.08	.08
1335.00	.08	.08	.08	.08	.08
1340.00	.08	.08	.08	.08	.08
1345.00	.08	.08	.08	.08	.08
1350.00	.08	.08	.08	.08	.08
1355.00	.08	.08	.08	.08	.08
1360.00	.08	.08	.08	.08	.08
1365.00	.08	.08	.08	.08	.08
1370.00	.08	.08	.08	.08	.08
1375.00	.08	.08	.08	.08	.08
1380.00	.08	.08	.08	.08	.08
1385.00	.08	.07	.07	.07	.07
1390.00	.07	.07	.07	.07	.07
1395.00	.07	.07	.07	.07	.07
1400.00	.07	.07	.07	.07	.07
1405.00	.07	.07	.07	.07	.07
1410.00	.07	.07	.07	.07	.07
1415.00	.07	.07	.07	.07	.07
1420.00	.07	.07	.07	.07	.07
1425.00	.07	.07	.07	.07	.07
1430.00	.07	.07	.07	.07	.07
1435.00	.07	.07	.07	.07	.07
1440.00	.07	.07	.07	.07	.07
1445.00	.07	.07	.07	.07	.07
1450.00	.07	.07	.07	.07	.07
1455.00	.07	.07	.07	.07	.07
1460.00	.07	.07	.07	.07	.06
1465.00	.06	.06	.06	.06	.06

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1470.00	.06	.06	.06	.06	.06
1475.00	.06	.06	.06	.06	.06
1480.00	.06	.06	.06	.06	.06
1485.00	.06	.06	.06	.06	.06
1490.00	.06	.06	.06	.06	.06
1495.00	.06	.06	.06	.06	.06
1500.00	.06	.06	.06	.06	.06
1505.00	.06	.06	.06	.06	.06
1510.00	.06	.06	.06	.06	.06
1515.00	.06	.06	.06	.06	.06
1520.00	.06	.06	.06	.06	.06
1525.00	.06	.06	.06	.06	.06
1530.00	.06	.06	.06	.06	.06
1535.00	.06	.06	.06	.06	.06
1540.00	.06	.06	.06	.06	.06
1545.00	.06	.06	.06	.06	.06
1550.00	.06	.06	.06	.06	.06
1555.00	.06	.06	.06	.06	.06
1560.00	.06	.06	.06	.06	.06
1565.00	.06	.06	.06	.06	.06
1570.00	.06	.06	.06	.06	.06
1575.00	.06	.06	.06	.06	.06
1580.00	.06	.06	.06	.06	.06
1585.00	.06	.06	.06	.06	.06
1590.00	.06	.06	.06	.06	.06
1595.00	.06	.06	.06	.06	.06
1600.00	.06	.06	.06	.06	.06
1605.00	.06	.06	.06	.06	.06
1610.00	.06	.06	.06	.06	.06
1615.00	.06	.06	.06	.06	.05
1620.00	.05	.05	.05	.05	.05
1625.00	.05	.05	.05	.05	.05
1630.00	.05	.05	.05	.05	.05
1635.00	.05	.05	.05	.05	.05
1640.00	.05	.05	.05	.05	.05
1645.00	.05	.05	.05	.05	.05
1650.00	.05	.05	.05	.05	.05
1655.00	.05	.05	.05	.05	.05
1660.00	.05	.05	.05	.05	.05
1665.00	.05	.05	.05	.05	.05
1670.00	.05	.05	.05	.05	.05
1675.00	.05	.05	.05	.05	.05
1680.00	.05	.05	.05	.05	.05
1685.00	.05	.05	.05	.05	.05

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1690.00	.05	.05	.05	.05	.05
1695.00	.05	.05	.05	.05	.05
1700.00	.05	.05	.05	.05	.05
1705.00	.05	.05	.05	.05	.05
1710.00	.05	.05	.05	.05	.05
1715.00	.05	.05	.05	.05	.05
1720.00	.05	.05	.05	.05	.05
1725.00	.05	.05	.05	.05	.05
1730.00	.05	.05	.05	.05	.05
1735.00	.05	.05	.05	.05	.05
1740.00	.05	.05	.05	.05	.05
1745.00	.05	.05	.05	.05	.05
1750.00	.05	.05	.05	.05	.05
1755.00	.05	.05	.05	.05	.05
1760.00	.05	.05	.05	.05	.05
1765.00	.05	.05	.05	.05	.05
1770.00	.05	.05	.05	.05	.05
1775.00	.05	.05	.05	.05	.05
1780.00	.05	.05	.05	.05	.05
1785.00	.05	.05	.05	.05	.05
1790.00	.05	.05	.05	.05	.05
1795.00	.05	.05	.05	.05	.05
1800.00	.05	.05	.05	.05	.05
1805.00	.05	.05	.05	.05	.05
1810.00	.05	.05	.05	.05	.05
1815.00	.05	.05	.05	.04	.04
1820.00	.04	.04	.04	.04	.04
1825.00	.04	.04	.04	.04	.04
1830.00	.04	.04	.04	.04	.04
1835.00	.04	.04	.04	.04	.04
1840.00	.04	.04	.04	.04	.04
1845.00	.04	.04	.04	.04	.04
1850.00	.04	.04	.04	.04	.04
1855.00	.04	.04	.04	.04	.04
1860.00	.04	.04	.04	.04	.04
1865.00	.04	.04	.04	.04	.04
1870.00	.04	.04	.04	.04	.04
1875.00	.04	.04	.04	.04	.04
1880.00	.04	.04	.04	.04	.04
1885.00	.04	.04	.04	.04	.04
1890.00	.04	.04	.04	.04	.04
1895.00	.04	.04	.04	.04	.04
1900.00	.04	.04	.04	.04	.04
1905.00	.04	.04	.04	.04	.04

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1910.00	.04	.04	.04	.04	.04
1915.00	.04	.04	.04	.04	.04
1920.00	.04	.04	.04	.04	.04
1925.00	.04	.04	.04	.04	.04
1930.00	.04	.04	.04	.04	.04
1935.00	.04	.04	.04	.04	.04
1940.00	.04	.04	.04	.04	.04
1945.00	.04	.04	.04	.04	.04
1950.00	.04	.04	.04	.04	.04
1955.00	.04	.04	.04	.04	.04
1960.00	.04	.04	.04	.04	.04
1965.00	.04	.04	.04	.04	.04
1970.00	.04	.04	.04	.04	.04
1975.00	.04	.04	.04	.04	.04
1980.00	.04	.04	.04	.04	.04
1985.00	.04	.04	.04	.04	.04
1990.00	.04	.04	.04	.04	.04
1995.00	.04	.04	.04	.04	.04
2000.00	.04				

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - BASIN B IN C 100y
Outflow HYG file = NONE STORED - BASIN B OUT C 100y

Pond Node Data = BASIN B
Pond Volume Data = BASIN B
Pond Outlet Data = OVERFLOW 44

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	498.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	63.05 cfs	at	5.00 min
Peak Outflow	=	15.71 cfs	at	24.00 min
Peak Elevation	=	499.74 ft		
Peak Storage	=	69038 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	75660
- Infiltration	=	0
- HYG Vol OUT	=	73395
- Retained Vol	=	2263
Unrouted Vol	=	-2 cu.ft (.003% of Inflow Volume)

WARNING: Outflow hydrograph truncated on right side.

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = C 100y

Peak Discharge =	15.71 cfs
Time to Peak =	24.00 min
HYG Volume =	73395 cu.ft

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.01	.03	.06	.13
5.00	.25	.41	.60	.80	1.02
10.00	1.26	1.51	1.77	2.04	2.32
15.00	2.61	3.71	5.35	7.31	9.41
20.00	11.59	13.54	14.86	15.57	15.71
25.00	15.31	14.66	14.03	13.42	12.84
30.00	12.28	11.75	11.26	10.80	10.37
35.00	9.95	9.55	9.16	8.79	8.46
40.00	8.15	7.85	7.57	7.29	7.02
45.00	6.77	6.52	6.28	6.06	5.88
50.00	5.70	5.53	5.36	5.20	5.04
55.00	4.89	4.74	4.60	4.46	4.32
60.00	4.19	4.06	3.96	3.88	3.81
65.00	3.73	3.66	3.58	3.51	3.44
70.00	3.37	3.31	3.24	3.18	3.11
75.00	3.05	2.99	2.93	2.87	2.82
80.00	2.76	2.71	2.65	2.63	2.62
85.00	2.61	2.59	2.58	2.57	2.56
90.00	2.55	2.53	2.52	2.51	2.50
95.00	2.48	2.47	2.46	2.45	2.44
100.00	2.43	2.41	2.40	2.39	2.38
105.00	2.37	2.36	2.35	2.33	2.32
110.00	2.31	2.30	2.29	2.28	2.27
115.00	2.26	2.25	2.24	2.23	2.22
120.00	2.21	2.20	2.19	2.18	2.17
125.00	2.16	2.15	2.14	2.13	2.12
130.00	2.11	2.10	2.09	2.08	2.07
135.00	2.06	2.05	2.04	2.03	2.02
140.00	2.01	2.00	2.00	1.99	1.98
145.00	1.97	1.96	1.95	1.94	1.93

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
150.00	1.93	1.92	1.91	1.90	1.89
155.00	1.88	1.88	1.87	1.86	1.85
160.00	1.84	1.83	1.83	1.82	1.81
165.00	1.80	1.79	1.79	1.78	1.77
170.00	1.76	1.76	1.75	1.74	1.73
175.00	1.72	1.72	1.71	1.70	1.70
180.00	1.69	1.68	1.67	1.67	1.66
185.00	1.65	1.65	1.64	1.63	1.63
190.00	1.62	1.61	1.61	1.60	1.59
195.00	1.59	1.58	1.57	1.57	1.56
200.00	1.55	1.55	1.54	1.53	1.53
205.00	1.52	1.51	1.51	1.50	1.49
210.00	1.49	1.48	1.48	1.47	1.46
215.00	1.46	1.45	1.45	1.44	1.43
220.00	1.43	1.42	1.42	1.41	1.41
225.00	1.40	1.39	1.39	1.38	1.38
230.00	1.37	1.37	1.36	1.36	1.35
235.00	1.35	1.34	1.33	1.33	1.32
240.00	1.32	1.31	1.31	1.30	1.30
245.00	1.29	1.29	1.28	1.28	1.27
250.00	1.27	1.26	1.26	1.25	1.25
255.00	1.24	1.24	1.23	1.23	1.22
260.00	1.22	1.21	1.21	1.20	1.20
265.00	1.19	1.19	1.18	1.18	1.18
270.00	1.17	1.17	1.16	1.16	1.15
275.00	1.15	1.15	1.14	1.14	1.13
280.00	1.13	1.12	1.12	1.12	1.11
285.00	1.11	1.10	1.10	1.10	1.09
290.00	1.09	1.08	1.08	1.08	1.07
295.00	1.07	1.06	1.06	1.06	1.05
300.00	1.05	1.04	1.04	1.04	1.03
305.00	1.03	1.02	1.02	1.02	1.01
310.00	1.01	1.01	1.00	1.00	.99
315.00	.99	.99	.98	.98	.98
320.00	.97	.97	.97	.96	.96
325.00	.95	.95	.95	.94	.94
330.00	.94	.93	.93	.93	.92
335.00	.92	.92	.91	.91	.91
340.00	.90	.90	.90	.90	.89
345.00	.89	.89	.88	.88	.88
350.00	.87	.87	.87	.87	.86
355.00	.86	.86	.85	.85	.85
360.00	.84	.84	.84	.84	.83
365.00	.83	.83	.82	.82	.82

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
370.00	.82	.81	.81	.81	.80
375.00	.80	.80	.80	.79	.79
380.00	.79	.79	.78	.78	.78
385.00	.77	.77	.77	.77	.76
390.00	.76	.76	.76	.75	.75
395.00	.75	.75	.74	.74	.74
400.00	.74	.73	.73	.73	.73
405.00	.72	.72	.72	.72	.71
410.00	.71	.71	.71	.70	.70
415.00	.70	.70	.70	.69	.69
420.00	.69	.69	.68	.68	.68
425.00	.68	.68	.67	.67	.67
430.00	.67	.67	.66	.66	.66
435.00	.66	.66	.65	.65	.65
440.00	.65	.65	.64	.64	.64
445.00	.64	.64	.63	.63	.63
450.00	.63	.63	.62	.62	.62
455.00	.62	.62	.61	.61	.61
460.00	.61	.61	.60	.60	.60
465.00	.60	.60	.59	.59	.59
470.00	.59	.59	.59	.58	.58
475.00	.58	.58	.58	.57	.57
480.00	.57	.57	.57	.57	.56
485.00	.56	.56	.56	.56	.55
490.00	.55	.55	.55	.55	.55
495.00	.54	.54	.54	.54	.54
500.00	.54	.53	.53	.53	.53
505.00	.53	.53	.52	.52	.52
510.00	.52	.52	.52	.51	.51
515.00	.51	.51	.51	.51	.51
520.00	.50	.50	.50	.50	.50
525.00	.50	.50	.49	.49	.49
530.00	.49	.49	.49	.49	.48
535.00	.48	.48	.48	.48	.48
540.00	.48	.48	.47	.47	.47
545.00	.47	.47	.47	.47	.47
550.00	.46	.46	.46	.46	.46
555.00	.46	.46	.45	.45	.45
560.00	.45	.45	.45	.45	.45
565.00	.44	.44	.44	.44	.44
570.00	.44	.44	.44	.44	.43
575.00	.43	.43	.43	.43	.43
580.00	.43	.43	.42	.42	.42
585.00	.42	.42	.42	.42	.42

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
590.00	.41	.41	.41	.41	.41
595.00	.41	.41	.41	.41	.40
600.00	.40	.40	.40	.40	.40
605.00	.40	.40	.40	.39	.39
610.00	.39	.39	.39	.39	.39
615.00	.39	.39	.38	.38	.38
620.00	.38	.38	.38	.38	.38
625.00	.38	.38	.37	.37	.37
630.00	.37	.37	.37	.37	.37
635.00	.37	.37	.36	.36	.36
640.00	.36	.36	.36	.36	.36
645.00	.36	.36	.35	.35	.35
650.00	.35	.35	.35	.35	.35
655.00	.35	.35	.34	.34	.34
660.00	.34	.34	.34	.34	.34
665.00	.34	.34	.33	.33	.33
670.00	.33	.33	.33	.33	.33
675.00	.33	.33	.33	.33	.32
680.00	.32	.32	.32	.32	.32
685.00	.32	.32	.32	.32	.32
690.00	.32	.32	.32	.31	.31
695.00	.31	.31	.31	.31	.31
700.00	.31	.31	.31	.31	.31
705.00	.31	.30	.30	.30	.30
710.00	.30	.30	.30	.30	.30
715.00	.30	.30	.30	.30	.30
720.00	.29	.29	.29	.29	.29
725.00	.29	.29	.29	.29	.29
730.00	.29	.29	.29	.29	.29
735.00	.28	.28	.28	.28	.28
740.00	.28	.28	.28	.28	.28
745.00	.28	.28	.28	.28	.28
750.00	.27	.27	.27	.27	.27
755.00	.27	.27	.27	.27	.27
760.00	.27	.27	.27	.27	.27
765.00	.27	.26	.26	.26	.26
770.00	.26	.26	.26	.26	.26
775.00	.26	.26	.26	.26	.26
780.00	.26	.26	.25	.25	.25
785.00	.25	.25	.25	.25	.25
790.00	.25	.25	.25	.25	.25
795.00	.25	.25	.25	.25	.24
800.00	.24	.24	.24	.24	.24
805.00	.24	.24	.24	.24	.24

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
810.00	.24	.24	.24	.24	.24
815.00	.24	.24	.23	.23	.23
820.00	.23	.23	.23	.23	.23
825.00	.23	.23	.23	.23	.23
830.00	.23	.23	.23	.23	.23
835.00	.22	.22	.22	.22	.22
840.00	.22	.22	.22	.22	.22
845.00	.22	.22	.22	.22	.22
850.00	.22	.22	.22	.22	.21
855.00	.21	.21	.21	.21	.21
860.00	.21	.21	.21	.21	.21
865.00	.21	.21	.21	.21	.21
870.00	.21	.21	.21	.21	.20
875.00	.20	.20	.20	.20	.20
880.00	.20	.20	.20	.20	.20
885.00	.20	.20	.20	.20	.20
890.00	.20	.20	.20	.20	.20
895.00	.20	.19	.19	.19	.19
900.00	.19	.19	.19	.19	.19
905.00	.19	.19	.19	.19	.19
910.00	.19	.19	.19	.19	.19
915.00	.19	.19	.19	.18	.18
920.00	.18	.18	.18	.18	.18
925.00	.18	.18	.18	.18	.18
930.00	.18	.18	.18	.18	.18
935.00	.18	.18	.18	.18	.18
940.00	.18	.18	.18	.18	.18
945.00	.17	.17	.17	.17	.17
950.00	.17	.17	.17	.17	.17
955.00	.17	.17	.17	.17	.17
960.00	.17	.17	.17	.17	.17
965.00	.17	.17	.17	.17	.17
970.00	.17	.17	.17	.17	.17
975.00	.17	.17	.16	.16	.16
980.00	.16	.16	.16	.16	.16
985.00	.16	.16	.16	.16	.16
990.00	.16	.16	.16	.16	.16
995.00	.16	.16	.16	.16	.16
1000.00	.16	.16	.16	.16	.16
1005.00	.16	.16	.16	.16	.16
1010.00	.16	.15	.15	.15	.15
1015.00	.15	.15	.15	.15	.15
1020.00	.15	.15	.15	.15	.15
1025.00	.15	.15	.15	.15	.15

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1030.00	.15	.15	.15	.15	.15
1035.00	.15	.15	.15	.15	.15
1040.00	.15	.15	.15	.15	.15
1045.00	.15	.15	.14	.14	.14
1050.00	.14	.14	.14	.14	.14
1055.00	.14	.14	.14	.14	.14
1060.00	.14	.14	.14	.14	.14
1065.00	.14	.14	.14	.14	.14
1070.00	.14	.14	.14	.14	.14
1075.00	.14	.14	.14	.14	.14
1080.00	.14	.14	.14	.14	.14
1085.00	.14	.13	.13	.13	.13
1090.00	.13	.13	.13	.13	.13
1095.00	.13	.13	.13	.13	.13
1100.00	.13	.13	.13	.13	.13
1105.00	.13	.13	.13	.13	.13
1110.00	.13	.13	.13	.13	.13
1115.00	.13	.13	.13	.13	.13
1120.00	.13	.13	.13	.13	.13
1125.00	.13	.13	.13	.12	.12
1130.00	.12	.12	.12	.12	.12
1135.00	.12	.12	.12	.12	.12
1140.00	.12	.12	.12	.12	.12
1145.00	.12	.12	.12	.12	.12
1150.00	.12	.12	.12	.12	.12
1155.00	.12	.12	.12	.12	.12
1160.00	.12	.12	.12	.12	.12
1165.00	.12	.12	.12	.12	.12
1170.00	.12	.12	.12	.11	.11
1175.00	.11	.11	.11	.11	.11
1180.00	.11	.11	.11	.11	.11
1185.00	.11	.11	.11	.11	.11
1190.00	.11	.11	.11	.11	.11
1195.00	.11	.11	.11	.11	.11
1200.00	.11	.11	.11	.11	.11
1205.00	.11	.11	.11	.11	.11
1210.00	.11	.11	.11	.11	.11
1215.00	.11	.11	.11	.11	.11
1220.00	.11	.11	.11	.10	.10
1225.00	.10	.10	.10	.10	.10
1230.00	.10	.10	.10	.10	.10
1235.00	.10	.10	.10	.10	.10
1240.00	.10	.10	.10	.10	.10
1245.00	.10	.10	.10	.10	.10

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1250.00	.10	.10	.10	.10	.10
1255.00	.10	.10	.10	.10	.10
1260.00	.10	.10	.10	.10	.10
1265.00	.10	.10	.10	.10	.10
1270.00	.10	.10	.10	.10	.10
1275.00	.10	.10	.09	.09	.09
1280.00	.09	.09	.09	.09	.09
1285.00	.09	.09	.09	.09	.09
1290.00	.09	.09	.09	.09	.09
1295.00	.09	.09	.09	.09	.09
1300.00	.09	.09	.09	.09	.09
1305.00	.09	.09	.09	.09	.09
1310.00	.09	.09	.09	.09	.09
1315.00	.09	.09	.09	.09	.09
1320.00	.09	.09	.09	.09	.09
1325.00	.09	.09	.09	.09	.09
1330.00	.09	.09	.09	.09	.09
1335.00	.09	.09	.09	.08	.08
1340.00	.08	.08	.08	.08	.08
1345.00	.08	.08	.08	.08	.08
1350.00	.08	.08	.08	.08	.08
1355.00	.08	.08	.08	.08	.08
1360.00	.08	.08	.08	.08	.08
1365.00	.08	.08	.08	.08	.08
1370.00	.08	.08	.08	.08	.08
1375.00	.08	.08	.08	.08	.08
1380.00	.08	.08	.08	.08	.08
1385.00	.08	.08	.08	.08	.08
1390.00	.08	.08	.08	.08	.08
1395.00	.08	.08	.08	.08	.08
1400.00	.08	.08	.08	.08	.08
1405.00	.08	.07	.07	.07	.07
1410.00	.07	.07	.07	.07	.07
1415.00	.07	.07	.07	.07	.07
1420.00	.07	.07	.07	.07	.07
1425.00	.07	.07	.07	.07	.07
1430.00	.07	.07	.07	.07	.07
1435.00	.07	.07	.07	.07	.07
1440.00	.07	.07	.07	.07	.07
1445.00	.07	.07	.07	.07	.07
1450.00	.07	.07	.07	.07	.07
1455.00	.07	.07	.07	.07	.07
1460.00	.07	.07	.07	.07	.07
1465.00	.07	.07	.07	.07	.07

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1470.00	.07	.07	.07	.07	.07
1475.00	.07	.07	.07	.07	.07
1480.00	.07	.07	.07	.07	.06
1485.00	.06	.06	.06	.06	.06
1490.00	.06	.06	.06	.06	.06
1495.00	.06	.06	.06	.06	.06
1500.00	.06	.06	.06	.06	.06
1505.00	.06	.06	.06	.06	.06
1510.00	.06	.06	.06	.06	.06
1515.00	.06	.06	.06	.06	.06
1520.00	.06	.06	.06	.06	.06
1525.00	.06	.06	.06	.06	.06
1530.00	.06	.06	.06	.06	.06
1535.00	.06	.06	.06	.06	.06
1540.00	.06	.06	.06	.06	.06
1545.00	.06	.06	.06	.06	.06
1550.00	.06	.06	.06	.06	.06
1555.00	.06	.06	.06	.06	.06
1560.00	.06	.06	.06	.06	.06
1565.00	.06	.06	.06	.06	.06
1570.00	.06	.06	.06	.06	.06
1575.00	.06	.06	.06	.06	.06
1580.00	.06	.06	.06	.06	.06
1585.00	.06	.06	.06	.06	.06
1590.00	.06	.06	.06	.06	.06
1595.00	.06	.06	.06	.06	.06
1600.00	.06	.06	.06	.06	.06
1605.00	.06	.06	.06	.06	.06
1610.00	.06	.06	.06	.06	.06
1615.00	.06	.06	.06	.06	.06
1620.00	.06	.06	.06	.06	.06
1625.00	.06	.06	.06	.06	.06
1630.00	.06	.06	.06	.06	.06
1635.00	.06	.06	.06	.06	.05
1640.00	.05	.05	.05	.05	.05
1645.00	.05	.05	.05	.05	.05
1650.00	.05	.05	.05	.05	.05
1655.00	.05	.05	.05	.05	.05
1660.00	.05	.05	.05	.05	.05
1665.00	.05	.05	.05	.05	.05
1670.00	.05	.05	.05	.05	.05
1675.00	.05	.05	.05	.05	.05
1680.00	.05	.05	.05	.05	.05
1685.00	.05	.05	.05	.05	.05

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1690.00	.05	.05	.05	.05	.05
1695.00	.05	.05	.05	.05	.05
1700.00	.05	.05	.05	.05	.05
1705.00	.05	.05	.05	.05	.05
1710.00	.05	.05	.05	.05	.05
1715.00	.05	.05	.05	.05	.05
1720.00	.05	.05	.05	.05	.05
1725.00	.05	.05	.05	.05	.05
1730.00	.05	.05	.05	.05	.05
1735.00	.05	.05	.05	.05	.05
1740.00	.05	.05	.05	.05	.05
1745.00	.05	.05	.05	.05	.05
1750.00	.05	.05	.05	.05	.05
1755.00	.05	.05	.05	.05	.05
1760.00	.05	.05	.05	.05	.05
1765.00	.05	.05	.05	.05	.05
1770.00	.05	.05	.05	.05	.05
1775.00	.05	.05	.05	.05	.05
1780.00	.05	.05	.05	.05	.05
1785.00	.05	.05	.05	.05	.05
1790.00	.05	.05	.05	.05	.05
1795.00	.05	.05	.05	.05	.05
1800.00	.05	.05	.05	.05	.05
1805.00	.05	.05	.05	.05	.05
1810.00	.05	.05	.05	.05	.05
1815.00	.05	.05	.05	.05	.05
1820.00	.05	.05	.05	.05	.05
1825.00	.05	.05	.05	.05	.05
1830.00	.05	.05	.05	.05	.05
1835.00	.05	.05	.05	.04	.04
1840.00	.04	.04	.04	.04	.04
1845.00	.04	.04	.04	.04	.04
1850.00	.04	.04	.04	.04	.04
1855.00	.04	.04	.04	.04	.04
1860.00	.04	.04	.04	.04	.04
1865.00	.04	.04	.04	.04	.04
1870.00	.04	.04	.04	.04	.04
1875.00	.04	.04	.04	.04	.04
1880.00	.04	.04	.04	.04	.04
1885.00	.04	.04	.04	.04	.04
1890.00	.04	.04	.04	.04	.04
1895.00	.04	.04	.04	.04	.04
1900.00	.04	.04	.04	.04	.04
1905.00	.04	.04	.04	.04	.04

WARNING: Hydrograph truncated on right side.

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
1910.00	.04	.04	.04	.04	.04
1915.00	.04	.04	.04	.04	.04
1920.00	.04	.04	.04	.04	.04
1925.00	.04	.04	.04	.04	.04
1930.00	.04	.04	.04	.04	.04
1935.00	.04	.04	.04	.04	.04
1940.00	.04	.04	.04	.04	.04
1945.00	.04	.04	.04	.04	.04
1950.00	.04	.04	.04	.04	.04
1955.00	.04	.04	.04	.04	.04
1960.00	.04	.04	.04	.04	.04
1965.00	.04	.04	.04	.04	.04
1970.00	.04	.04	.04	.04	.04
1975.00	.04	.04	.04	.04	.04
1980.00	.04	.04	.04	.04	.04
1985.00	.04	.04	.04	.04	.04
1990.00	.04	.04	.04	.04	.04
1995.00	.04	.04	.04	.04	.04
2000.00	.04				

Index of Starting Page Numbers for ID Names

POND 7
Routing Calculations for
100 Year 20 Minute Design Storm
With Low Flow 100% Blocked

Avondale Heights

Table of Contents

HYG file = C:\MY DOCUMENTS\AVON 100.HYG
HYG ID = Avondale100yr in
HYG Tag = 100yr

Peak Discharge =	63.05 cfs
Time to Peak =	5.00 min
HYG Volume =	75660 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	12.61	25.22	37.83	50.44
5.00	63.05	63.05	63.05	63.05	63.05
10.00	63.05	63.05	63.05	63.05	63.05
15.00	63.05	63.05	63.05	63.05	63.05
20.00	63.05	50.44	37.83	25.22	12.61
25.00	.00	.00	.00	.00	.00
30.00	.00	.00	.00	.00	.00
35.00	.00	.00	.00	.00	.00
40.00	.00	.00	.00	.00	.00
45.00	.00	.00	.00	.00	.00
50.00	.00	.00	.00	.00	.00
55.00	.00	.00	.00	.00	.00
60.00	.00	.00	.00	.00	.00
65.00	.00	.00	.00	.00	.00
70.00	.00	.00	.00	.00	.00
75.00	.00	.00	.00	.00	.00
80.00	.00	.00	.00	.00	.00
85.00	.00	.00	.00	.00	.00
90.00	.00	.00	.00	.00	.00
95.00	.00	.00	.00	.00	.00
100.00	.00	.00	.00	.00	.00
105.00	.00	.00	.00	.00	.00
110.00	.00	.00	.00	.00	.00
115.00	.00	.00	.00	.00	.00
120.00	.00	.00	.00	.00	.00
125.00	.00	.00	.00	.00	.00
130.00	.00	.00	.00	.00	.00
135.00	.00	.00	.00	.00	.00
140.00	.00	.00	.00	.00	.00
145.00	.00	.00	.00	.00	.00
150.00	.00	.00	.00	.00	.00
155.00	.00	.00	.00	.00	.00
160.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.00	.00	.00	.00	.00
170.00	.00	.00	.00	.00	.00
175.00	.00	.00	.00	.00	.00
180.00	.00	.00	.00	.00	.00
185.00	.00	.00	.00	.00	.00
190.00	.00	.00	.00	.00	.00
195.00	.00	.00	.00	.00	.00
200.00	.00	.00	.00	.00	.00
205.00	.00	.00	.00	.00	.00
210.00	.00	.00	.00	.00	.00
215.00	.00	.00	.00	.00	.00
220.00	.00	.00	.00	.00	.00
225.00	.00	.00	.00	.00	.00
230.00	.00	.00	.00	.00	.00
235.00	.00	.00	.00	.00	.00
240.00	.00	.00	.00	.00	.00
245.00	.00	.00	.00	.00	.00
250.00	.00	.00	.00	.00	.00
255.00	.00	.00	.00	.00	.00
260.00	.00	.00	.00	.00	.00
265.00	.00	.00	.00	.00	.00
270.00	.00	.00	.00	.00	.00
275.00	.00	.00	.00	.00	.00
280.00	.00	.00	.00	.00	.00
285.00	.00	.00	.00	.00	.00
290.00	.00	.00	.00	.00	.00
295.00	.00	.00	.00	.00	.00
300.00	.00	.00	.00	.00	.00
305.00	.00	.00	.00	.00	.00
310.00	.00	.00	.00	.00	.00
315.00	.00	.00	.00	.00	.00
320.00	.00	.00	.00	.00	.00
325.00	.00	.00	.00	.00	.00
330.00	.00	.00	.00	.00	.00
335.00	.00	.00	.00	.00	.00
340.00	.00	.00	.00	.00	.00
345.00	.00	.00	.00	.00	.00
350.00	.00	.00	.00	.00	.00
355.00	.00	.00	.00	.00	.00
360.00	.00	.00	.00	.00	.00
365.00	.00	.00	.00	.00	.00
370.00	.00	.00	.00	.00	.00
375.00	.00	.00	.00	.00	.00
380.00	.00	.00	.00	.00	.00
385.00	.00	.00	.00	.00	.00
390.00	.00	.00	.00	.00	.00
395.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.00	.00	.00	.00	.00
405.00	.00	.00	.00	.00	.00
410.00	.00	.00	.00	.00	.00
415.00	.00	.00	.00	.00	.00
420.00	.00	.00	.00	.00	.00
425.00	.00	.00	.00	.00	.00
430.00	.00	.00	.00	.00	.00
435.00	.00	.00	.00	.00	.00
440.00	.00	.00	.00	.00	.00
445.00	.00	.00	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00	.00	.00	.00	.00
485.00	.00	.00	.00	.00	.00
490.00	.00	.00	.00	.00	.00
495.00	.00	.00	.00	.00	.00
500.00	.00	.00	.00	.00	.00
505.00	.00	.00	.00	.00	.00
510.00	.00	.00	.00	.00	.00
515.00	.00	.00	.00	.00	.00
520.00	.00	.00	.00	.00	.00
525.00	.00	.00	.00	.00	.00
530.00	.00	.00	.00	.00	.00
535.00	.00	.00	.00	.00	.00
540.00	.00	.00	.00	.00	.00
545.00	.00	.00	.00	.00	.00
550.00	.00	.00	.00	.00	.00
555.00	.00	.00	.00	.00	.00
560.00	.00	.00	.00	.00	.00
565.00	.00	.00	.00	.00	.00
570.00	.00	.00	.00	.00	.00
575.00	.00	.00	.00	.00	.00
580.00	.00	.00	.00	.00	.00
585.00	.00	.00	.00	.00	.00
590.00	.00	.00	.00	.00	.00
595.00	.00	.00	.00	.00	.00
600.00	.00	.00	.00	.00	.00
605.00	.00	.00	.00	.00	.00
610.00	.00	.00	.00	.00	.00
615.00	.00	.00	.00	.00	.00
620.00	.00	.00	.00	.00	.00
625.00	.00	.00	.00	.00	.00
630.00	.00	.00	.00	.00	.00

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
635.00	.00	.00	.00	.00	.00
640.00	.00	.00	.00	.00	.00
645.00	.00	.00	.00	.00	.00
650.00	.00	.00	.00	.00	.00
655.00	.00	.00	.00	.00	.00
660.00	.00	.00	.00	.00	.00
665.00	.00	.00	.00	.00	.00
670.00	.00	.00	.00	.00	.00
675.00	.00	.00	.00	.00	.00
680.00	.00	.00	.00	.00	.00
685.00	.00	.00	.00	.00	.00
690.00	.00	.00	.00	.00	.00
695.00	.00	.00	.00	.00	.00
700.00	.00				

File.... C:\MY DOCUMENTS\AVONDALE HEIGHTS DETENTION.PPW
Title... Overflow Structure 44 in Basin B of Avondale Heights

REQUESTED POND WS ELEVATIONS:

Min. Elev.= 498.00 ft
Increment = .10 ft
Max. Elev.= 502.00 ft

****
OUTLET CONNECTIVITY
****

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

Structure	No.		Outfall	E1, ft	E2, ft
Stand Pipe	AI	--->	CV	499.200	502.000
Culvert-Circular	CV	--->	TW	497.000	502.000

TW SETUP, DS Channel

File.... C:\MY DOCUMENTS\AVONDALE HEIGHTS DETENTION.PPW
Title... Overflow Structure 44 in Basin B of Avondale Heights

OUTLET STRUCTURE INPUT DATA

Structure ID = AI
Structure Type = Stand Pipe

# of Openings	=	1
Invert Elev.	=	499.20 ft
Diameter	=	3.5000 ft
Orifice Area	=	9.6211 sq.ft
Orifice Coeff.	=	.600
Weir Length	=	11.00 ft
Weir Coeff.	=	3.000
K, Submerged	=	.000
K, Reverse	=	1.000
Kb,Barrel	=	.000000 (per ft of full flow)
Barrel Length	=	.00 ft
Mannings n	=	.0000

File.... C:\MY DOCUMENTS\AVONDALE HEIGHTS DETENTION.PPW
Title... Overflow Structure 44 in Basin B of Avondale Heights

OUTLET STRUCTURE INPUT DATA

Structure ID = CV
Structure Type = Culvert-Circular

No. Barrels	=	1
Barrel Diameter	=	2.0000 ft
Upstream Invert	=	497.00 ft
Dnstream Invert	=	496.00 ft
Horiz. Length	=	46.24 ft
Barrel Length	=	46.25 ft
Barrel Slope	=	.02163 ft/ft

OUTLET CONTROL DATA...

Mannings n	=	.0130
Ke	=	.5000 (forward entrance loss)
Kb	=	.012411 (per ft of full flow)
Kr	=	.5000 (reverse entrance loss)
HW Convergence	=	.001 +/- ft

INLET CONTROL DATA...

Equation form	=	1
Inlet Control K	=	.0078
Inlet Control M	=	2.0000
Inlet Control c	=	.02920
Inlet Control Y	=	.7400
T1 ratio (HW/D)	=	1.125
T2 ratio (HW/D)	=	1.196
Slope Factor	=	-.500

Use unsubmerged inlet control Form 1 equ. below T1 elev.
Use submerged inlet control Form 1 equ. above T2 elev.

In transition zone between unsubmerged and submerged inlet control, interpolate between flows at T1 & T2...
At T1 Elev = 499.25 ft ---> Flow = 15.55 cfs
At T2 Elev = 499.39 ft ---> Flow = 17.77 cfs

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

FREE OUTFALL CONDITIONS SPECIFIED

CONVERGENCE TOLERANCES...

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

File.... C:\MY DOCUMENTS\AVONDALE HEIGHTS DETENTION.PPW
Title... Overflow Structure 44 in Basin B of Avondale Heights

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
498.00	.00	Free Outfall		(no Q: AI,CV)
498.10	.00	Free Outfall		(no Q: AI,CV)
498.20	.00	Free Outfall		(no Q: AI,CV)
498.30	.00	Free Outfall		(no Q: AI,CV)
498.40	.00	Free Outfall		(no Q: AI,CV)
498.50	.00	Free Outfall		(no Q: AI,CV)
498.60	.00	Free Outfall		(no Q: AI,CV)
498.70	.00	Free Outfall		(no Q: AI,CV)
498.80	.00	Free Outfall		(no Q: AI,CV)
498.90	.00	Free Outfall		(no Q: AI,CV)
499.00	.00	Free Outfall		(no Q: AI,CV)
499.10	.00	Free Outfall		(no Q: AI,CV)
499.20	.00	Free Outfall		(no Q: AI,CV)
499.30	1.04	Free Outfall		AI,CV
499.40	2.95	Free Outfall		AI,CV
499.50	5.42	Free Outfall		AI,CV
499.60	8.34	Free Outfall		AI,CV
499.70	11.66	Free Outfall		AI,CV
499.80	19.25	Free Outfall		AI,CV
499.90	20.18	Free Outfall		AI,CV
500.00	21.07	Free Outfall		AI,CV
500.10	21.97	Free Outfall		AI,CV
500.20	22.84	Free Outfall		AI,CV
500.30	23.68	Free Outfall		AI,CV
500.40	24.52	Free Outfall		AI,CV
500.50	25.34	Free Outfall		AI,CV
500.60	26.13	Free Outfall		AI,CV
500.70	26.91	Free Outfall		AI,CV
500.80	27.67	Free Outfall		AI,CV
500.90	28.41	Free Outfall		AI,CV
501.00	29.14	Free Outfall		AI,CV
501.10	29.84	Free Outfall		AI,CV
501.20	30.45	Free Outfall		AI,CV
501.30	30.99	Free Outfall		AI,CV
501.40	31.53	Free Outfall		AI,CV
501.50	32.07	Free Outfall		AI,CV
501.60	32.59	Free Outfall		AI,CV
501.70	33.10	Free Outfall		AI,CV
501.80	33.61	Free Outfall		AI,CV

File.... C:\MY DOCUMENTS\AVONDALE HEIGHTS DETENTION.PPW
Title... Overflow Structure 44 in Basin B of Avondale Heights

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

WS Elev, Total Q		Converge		Notes
Elev. ft	Q cfs	TW Elev ft	Error +/-ft	Contributing Structures
501.90	34.11	Free Outfall		AI,CV
502.00	34.59	Free Outfall		AI,CV

LEVEL POOL ROUTING SUMMARY

HYG Dir = C:\MY DOCUMENTS\
Inflow HYG file = NONE STORED - BASIN B IN C 100y
Outflow HYG file = NONE STORED - BASIN B OUT C 100y

Pond Node Data = BASIN B
Pond Volume Data = BASIN B
Pond Outlet Data = OS 44 BLOCKED

No Infiltration

INITIAL CONDITIONS

Starting WS Elev	=	498.00 ft
Starting Volume	=	0 cu.ft
Starting Outflow	=	.00 cfs
Starting Infiltr.	=	.00 cfs
Starting Total Qout	=	.00 cfs
Time Increment	=	1.00 min

INFLOW/OUTFLOW HYDROGRAPH SUMMARY

Peak Inflow	=	63.05 cfs	at	5.00 min
Peak Outflow	=	17.26 cfs	at	24.00 min
Peak Elevation	=	499.77 ft		
Peak Storage	=	70543 cu.ft		

MASS BALANCE (cu.ft)

+ Initial Vol	=	0
+ HYG Vol IN	=	75660
- Infiltration	=	0
- HYG Vol OUT	=	28774
- Retained Vol	=	46886
Unrouted Vol	= -	cu.ft (.001% of Inflow Volume)

POND ROUTED TOTAL OUTFLOW HYG...
HYG file =
HYG ID = BASIN B OUT
HYG Tag = C 100y

Peak Discharge =	17.26 cfs
Time to Peak =	24.00 min
HYG Volume =	28774 cu.ft

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
.00	.00	.00	.00	.00	.00
5.00	.00	.00	.00	.00	.00
10.00	.00	.00	.00	.00	.00
15.00	.11	1.09	2.79	4.88	7.20
20.00	9.67	12.10	15.40	17.07	17.26
25.00	16.13	14.47	12.97	11.65	11.11
30.00	10.59	10.10	9.62	9.18	8.75
35.00	8.34	7.99	7.66	7.34	7.04
40.00	6.75	6.47	6.20	5.94	5.70
45.00	5.46	5.26	5.07	4.89	4.72
50.00	4.55	4.39	4.24	4.09	3.94
55.00	3.80	3.67	3.54	3.41	3.29
60.00	3.18	3.07	2.96	2.87	2.79
65.00	2.72	2.64	2.57	2.50	2.43
70.00	2.36	2.30	2.23	2.17	2.11
75.00	2.05	2.00	1.94	1.89	1.84
80.00	1.79	1.74	1.69	1.64	1.60
85.00	1.55	1.51	1.47	1.43	1.39
90.00	1.35	1.31	1.28	1.24	1.21
95.00	1.17	1.14	1.11	1.08	1.05
100.00	1.03	1.01	1.00	.98	.97
105.00	.95	.94	.93	.91	.90
110.00	.88	.87	.86	.84	.83
115.00	.82	.81	.79	.78	.77
120.00	.76	.75	.73	.72	.71
125.00	.70	.69	.68	.67	.66
130.00	.65	.64	.63	.62	.61
135.00	.60	.59	.58	.57	.57
140.00	.56	.55	.54	.53	.52
145.00	.52	.51	.50	.49	.48
150.00	.48	.47	.46	.46	.45
155.00	.44	.44	.43	.42	.42
160.00	.41	.40	.40	.39	.38

HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
165.00	.38	.37	.37	.36	.36
170.00	.35	.35	.34	.34	.33
175.00	.32	.32	.32	.31	.31
180.00	.30	.30	.29	.29	.28
185.00	.28	.27	.27	.27	.26
190.00	.26	.25	.25	.25	.24
195.00	.24	.24	.23	.23	.22
200.00	.22	.22	.21	.21	.21
205.00	.20	.20	.20	.20	.19
210.00	.19	.19	.18	.18	.18
215.00	.18	.17	.17	.17	.17
220.00	.16	.16	.16	.16	.15
225.00	.15	.15	.15	.14	.14
230.00	.14	.14	.14	.13	.13
235.00	.13	.13	.13	.12	.12
240.00	.12	.12	.12	.11	.11
245.00	.11	.11	.11	.11	.10
250.00	.10	.10	.10	.10	.10
255.00	.09	.09	.09	.09	.09
260.00	.09	.09	.09	.08	.08
265.00	.08	.08	.08	.08	.08
270.00	.08	.07	.07	.07	.07
275.00	.07	.07	.07	.07	.07
280.00	.06	.06	.06	.06	.06
285.00	.06	.06	.06	.06	.06
290.00	.06	.05	.05	.05	.05
295.00	.05	.05	.05	.05	.05
300.00	.05	.05	.05	.05	.04
305.00	.04	.04	.04	.04	.04
310.00	.04	.04	.04	.04	.04
315.00	.04	.04	.04	.04	.04
320.00	.03	.03	.03	.03	.03
325.00	.03	.03	.03	.03	.03
330.00	.03	.03	.03	.03	.03
335.00	.03	.03	.03	.03	.03
340.00	.03	.03	.02	.02	.02
345.00	.02	.02	.02	.02	.02
350.00	.02	.02	.02	.02	.02
355.00	.02	.02	.02	.02	.02
360.00	.02	.02	.02	.02	.02
365.00	.02	.02	.02	.02	.02
370.00	.02	.02	.02	.02	.02
375.00	.01	.01	.01	.01	.01
380.00	.01	.01	.01	.01	.01
385.00	.01	.01	.01	.01	.01
390.00	.01	.01	.01	.01	.01
395.00	.01	.01	.01	.01	.01

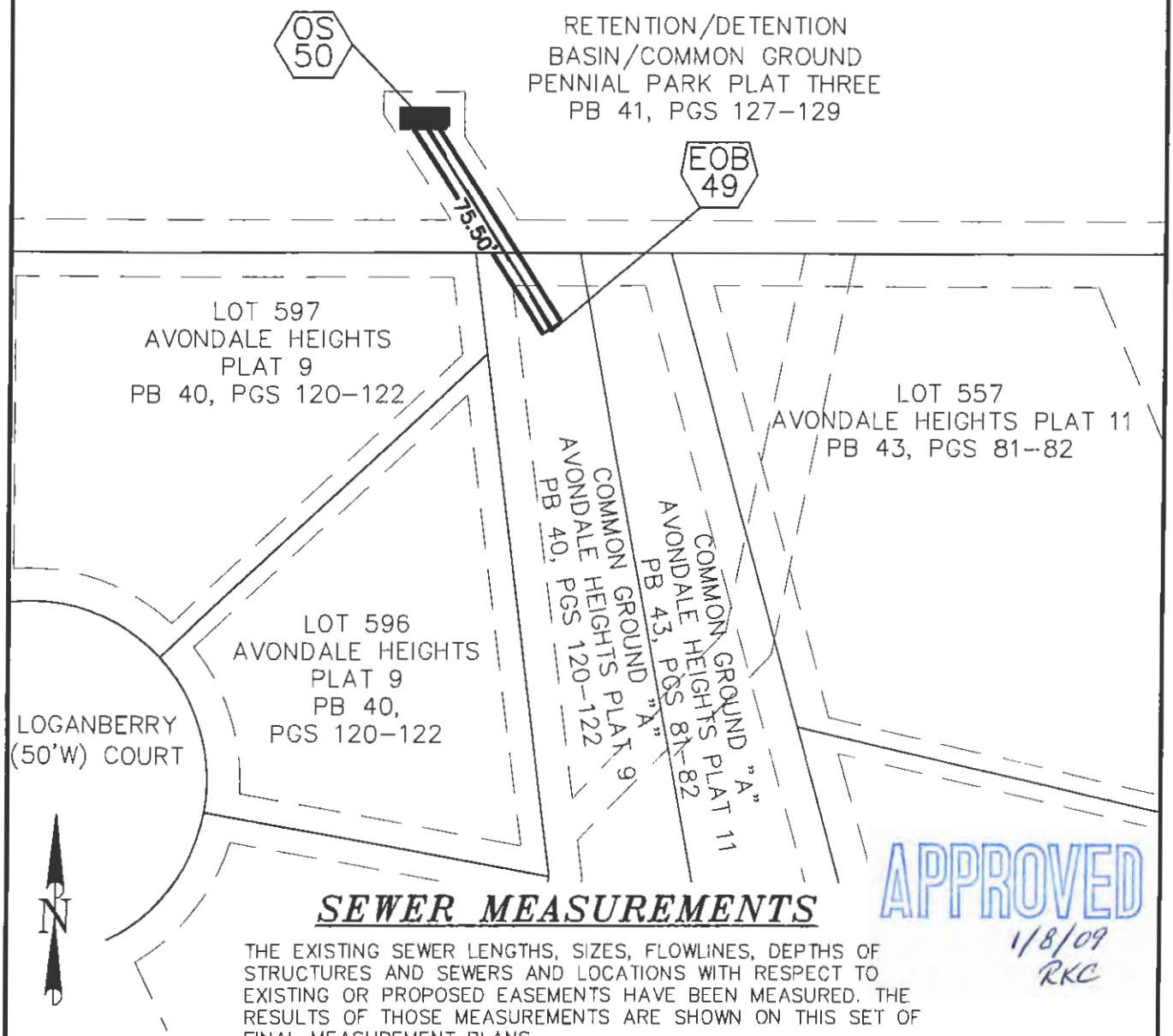
HYDROGRAPH ORDINATES (cfs)
Output Time increment = 1.00 min
Time on left represents time for first value in each row.

Time min					
400.00	.01	.01	.01	.01	.01
405.00	.01	.01	.01	.01	.01
410.00	.01	.01	.01	.01	.01
415.00	.01	.01	.01	.01	.01
420.00	.01	.01	.01	.01	.01
425.00	.01	.01	.01	.01	.01
430.00	.01	.01	.01	.01	.01
435.00	.01	.01	.01	.01	.01
440.00	.01	.01	.01	.01	.01
445.00	.01	.01	.00	.00	.00
450.00	.00	.00	.00	.00	.00
455.00	.00	.00	.00	.00	.00
460.00	.00	.00	.00	.00	.00
465.00	.00	.00	.00	.00	.00
470.00	.00	.00	.00	.00	.00
475.00	.00	.00	.00	.00	.00
480.00	.00				

Index of Starting Page Numbers for ID Names

REVISED PER CITY COMMENTS 12-22-08

FOR BENCHMARK INFORMATION REFER TO PENNIAL PARK PHASE THREE AS-BUILTS.



APPROVED
1/8/09
RKC

SEWER MEASUREMENTS

THE EXISTING SEWER LENGTHS, SIZES, FLOWLINES, DEPTHS OF STRUCTURES AND SEWERS AND LOCATIONS WITH RESPECT TO EXISTING OR PROPOSED EASEMENTS HAVE BEEN MEASURED. THE RESULTS OF THOSE MEASUREMENTS ARE SHOWN ON THIS SET OF FINAL MEASUREMENT PLANS.

ALL PUBLIC SEWERS ARE LOCATED WITHIN DESIGNATED EXISTING OR PROPOSED EASEMENTS EXCEPT AS FOLLOWS:

SCALE: 1' = 50'

EXHIBIT A	
DATE	12/02/08
DRAWN	JLH

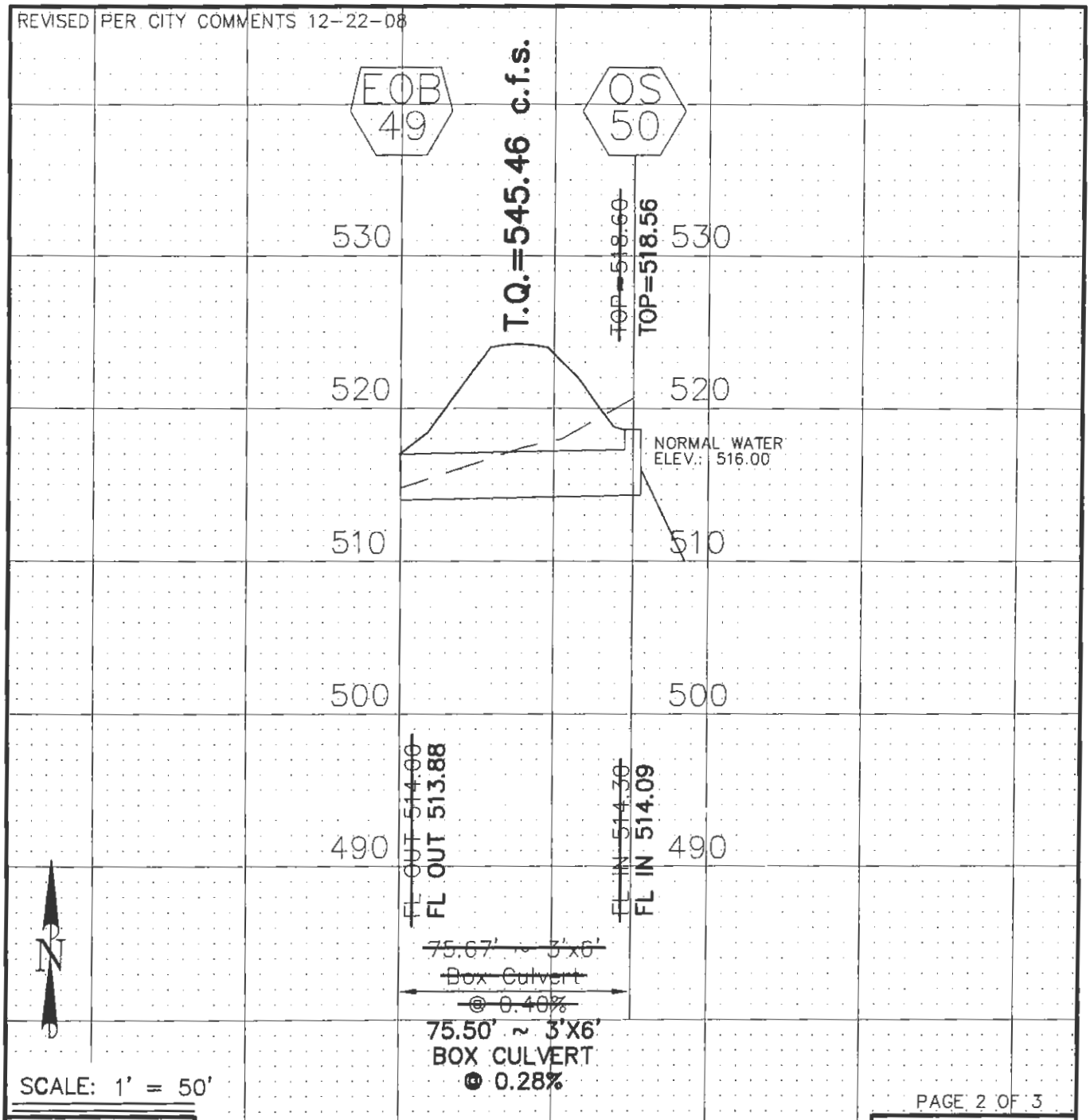
STORM SEWER AS-BUILT EXHIBIT

INITIALS:	
PROJECT	96-8791
FILE	8791ASB-49-50

A TRACT OF LAND BEING PART OF SECTION 4, TOWNSHIP 46 NORTH, RANGE 3 EAST, OF THE FIFTH PRINCIPAL MERIDAN CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

STATE OF MISSOURI
DARREL R. OAKLEY
NUMBER LS-2265
12/2/08
PROFESSIONAL LAND SURVEYOR

REVISED PER CITY COMMENTS 12-22-08



SCALE: 1' = 50'

EXHIBIT A	
DATE	12/02/08
DRAWN	JLH

STORM SEWER AS-BUILT EXHIBIT

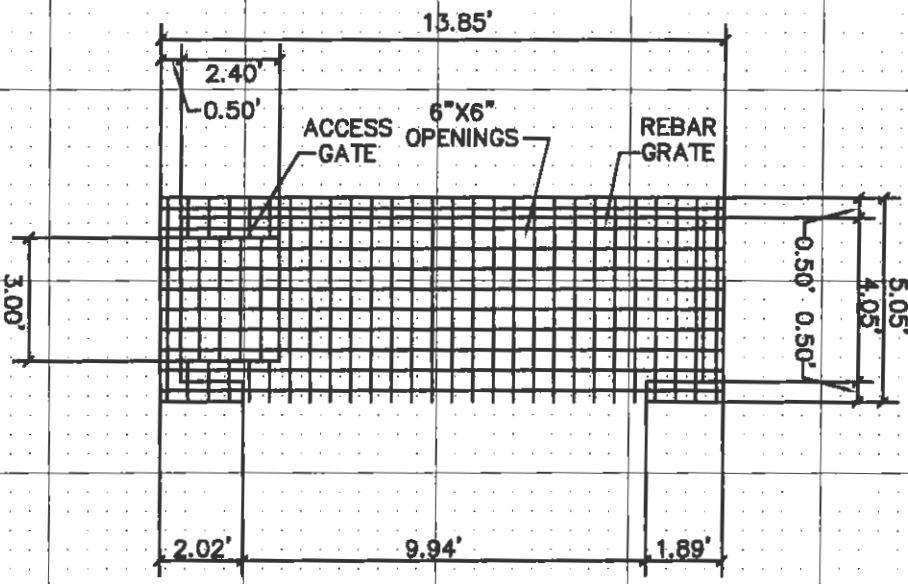
INITIALS:	
PROJECT	96-8791
FILE	8791ASB-49-50

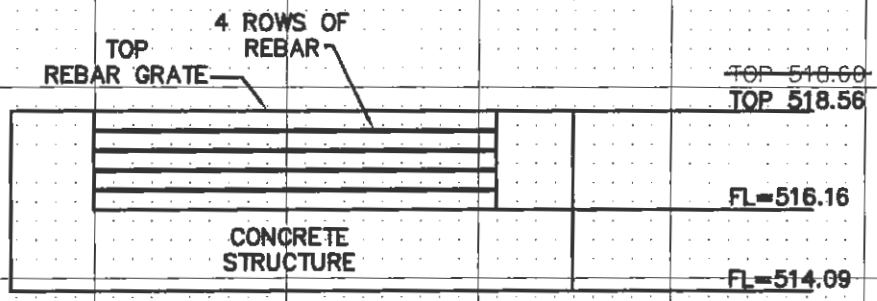
A TRACT OF LAND BEING PART OF SECTION 4,
TOWNSHIP 46 NORTH, RANGE 3 EAST,
OF THE FIFTH PRINCIPAL MERIDAN
CITY OF O'FALLON,
ST. CHARLES COUNTY, MISSOURI

STATE OF MISSOURI
DARREL R.
OAKLEY
NUMBER
12-2265
PROFESSIONAL LAND SURVEYOR

REVISED PER CITY COMMENTS 12-22-08

OUTFALL STRUCTURE 50 DETAIL
NOT TO SCALE
PLAN VIEW





OUTFALL STRUCTURE 50 DETAIL
NOT TO SCALE
PROFILE VIEW

SCALE:

EXHIBIT A	
DATE	12/02/08
DRAWN	JLH

STORM SEWER AS-BUILT EXHIBIT

INITIALS:	
PROJECT	96-8791
FILE	8791ASB-49-50

A TRACT OF LAND BEING PART OF SECTION 4, TOWNSHIP 46 NORTH, RANGE 3 EAST, OF THE FIFTH PRINCIPAL MERIDAN CITY OF O'FALLON, ST. CHARLES COUNTY, MISSOURI

STATE OF MISSOURI
DARREL R. OAKLEY
NUMBER LS-2265
PROFESSIONAL LAND SURVEYOR

NOTE:
ALL FLOWS ARE 25 YEAR FREQUENCY

LEGEND:

- UNDEVELOPED DIRECT RUNOFF
- ON-SITE RUNOFF TO PROPOSED BASINS
- DEVELOPED DIRECT RUNOFF

PREPARED FOR:

POST-DEVELOPED DRAINAGE AREA MAP

DISCLAIMER OF RESPONSIBILITY
I hereby specify that the documents intended to be authenticated by my seal are limited to this sheet, and I hereby disclaim any responsibility for all other Drawings, Specifications, Estimates, Reports or other documents or instruments relating to or intended to be used for any part or parts of the architectural or engineering project or survey.

REVISIONS

ENGINEERING
PLANNING
SURVEYING

1052 South Cloverleaf Drive
St. Peters, MO. 63376-6445
636-928-5552
FAX 928-1718

08-09-02
DATE

96-8791; 95-7230
PROJECT NUMBER

4 OF 4
SHEET OF

8791DAMEXBT.DWG
FILE NAME

JD
DRAWN CHECKED


OFFSITE RUNOFF AREA FOUR LEGACY AND BRADFORD 17.54 ac. @ 3.26 Q = 57.18 c.f.s.
THE VILLAGES OF HUTCHINGS FARM
MATCHLINE
DISCHARGE POINT #2
POST-DEVELOPED Q=302.66 cfs
PRE-DEVELOPED Q=516.72 cfs
ON AND OFF-SITE FLOWS INCLUDED
DISCHARGE POINT #1
ULTIMATE OUTFALL
POINT OF DEVELOPMENT
POST-DEVELOPED Q=462.41 cfs
PRE-DEVELOPED Q=680.13cfs
POST-DEVELOPED Q=159.75 cfs
PRE-DEVELOPED Q=163.41 cfs
← POINT #3
PROPERTY N/F ROBERT & LORETTA PALMER
PROPERTY N/F JAMES & JANICE ZWEIFEL
AVONDALE SPRING
ANALYZED
DISCHARGE POINT
FROM DETENTION
ANALYSIS FOR
AVONDALE PLAT 7
& PENNIAL PARK
PLAT 2
EX. Q=135.24 cfs
POST-DEVELOPED
Q=124.69 cfs
RED CEDAR PARC COURT

NOTE:
ALL FLOWS ARE 25 YEAR FREQUENCY

LEGEND:

- UNDEVELOPED DIRECT RUNOFF
- ON-SITE RUNOFF TO PROPOSED BASINS
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DISCLAIMER OF RESPONSIBILITY

REVISIONS

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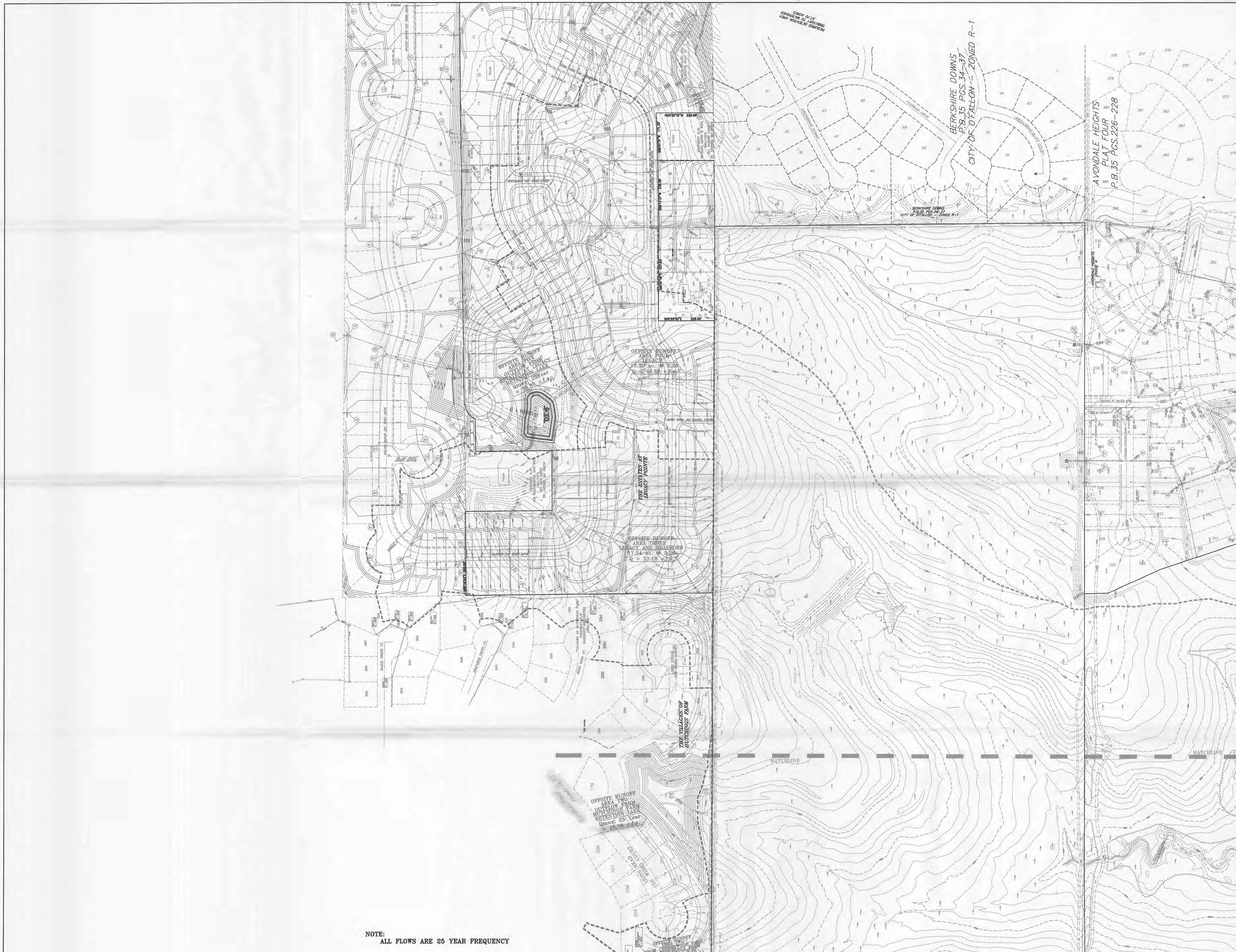
1052 South Cloverleaf Drive
St. Peters, MO. 63376-6445
636-928-5552
FAX 928-1718

08-09-02
DATE
96-8791;95-7230
PROJECT NUMBER
3 OF 4
SHEET OF
8791DAMEXBT.DWG
FILE NAME
JD
DRAWN CHECKED



NOTE:
ALL FLOWS ARE 25 YEAR FREQUENCY

PREPARED FOR: PRE-DEVELOPED DRAINAGE AREA MAP

DISCLAIMER OF RESPONSIBILITY
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