Appendix B
Stormwater Quality Best Management Practice
Design Handbook

Extended Detention Basin Example

TENTATIVE TRACT MAP

BEING A BOUNDARY MAP OF THE SOUTHWEST QUARTER OF SECTION 11, TOWNSHIP 6 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF RIVERSIDE.

OWNER/DEVELOPER:

ENGINEER:

ASSESSORS PARCEL NO.:

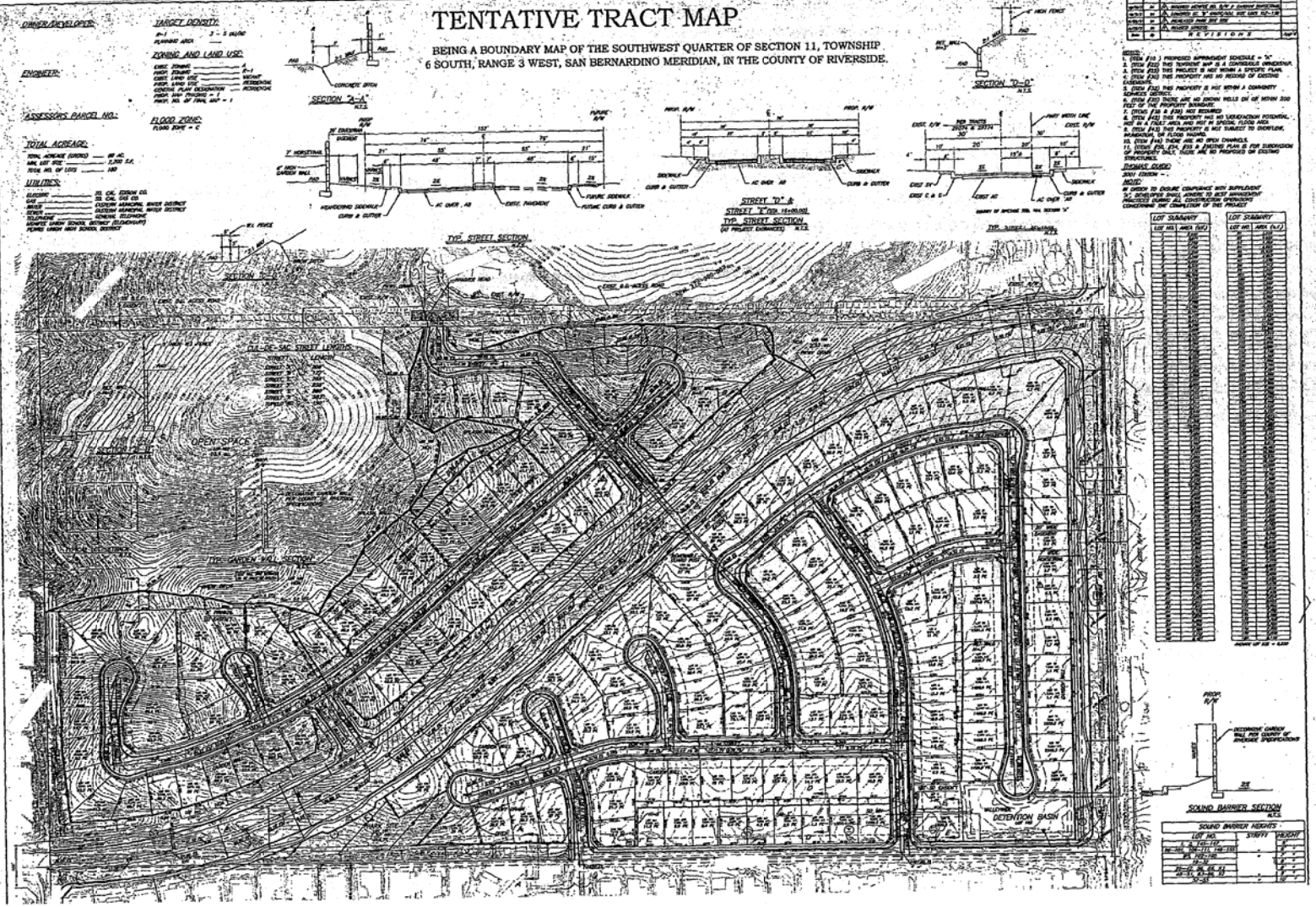
TOTAL ACREAGE:

UTILITIES:

TARGET DENSITY:

ZONING AND LAND USE:

FLOOD ZONE:
FLOOD ZONE = C



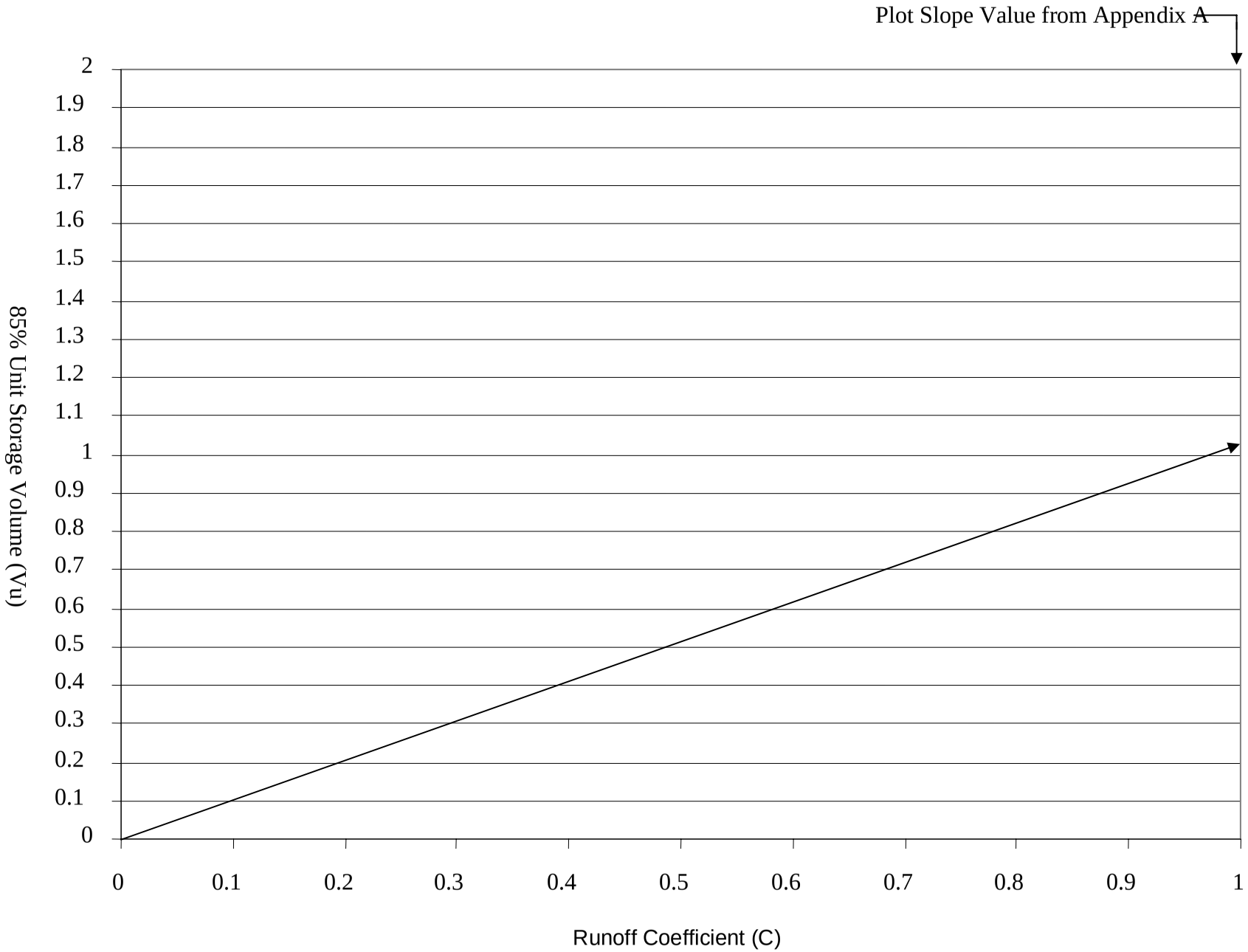


Figure 2 Unit Storage Volume Graph

Datasheet

Site Conditions:

A_{total} = 40 acres (from worksheet 1)
V_{BMP} = 50820 ft^3 (from worksheet 1)
L:W Ratio = 2:1 (min 2:1, consider site constraints)
Basin depth = 4’ (min 3.5’, consider site constraints)

Design Assumptions:

In this example a rectangular basin shape was assumed for simplification. Actual volumes and dimensions will differ based on the configuration of the basin.

Two Stage Design (see Figure 3):
Based on the total depth (outlet to spillway) of 4’, set depth of each stage:
Upper Stage Depth = 2’ (2’ min)
Bottom Stage Depth = 2’ (1.5’ min)

Upper Stage:
The total basin volume must be greater than or equal to the design volume. The bottom stage will hold between 10 and 25 percent of the design volume. The top stage must therefore hold between 75 and 90 percent of the design volume. In this example, the top stage is designed to hold 90 percent of the design volume.

$L = 2 * W$
$0.9V_{BMP} = Depth * (2W^2)$
$45738 = 4*W^2$

W = 106.9’ → round to 110’
L = 220’
$Volume_{US}$ = 48400 ft^2

Bottom Stage:
The bottom stage must hold between 10 and 25 percent of the design volume.

At 10% → $0.1V_{BMP} = D_{Bottom} * W * L_{Bottom}$
$0.1(50820) = (2’)*(110’)* L_{Bottom}$
L_{Bottom} = 23.1’

At 25% → $0.25V_{BMP} = D_{Bottom} * W * L_{Bottom}$
$0.25(50820) = (2’)*(110’)* L_{Bottom}$
L_{Bottom} = 57.8’

Set L_{Bottom} = 30'
$Volume_{BS}$ = 6600 ft^3 (13% of V_{BMP})

Total Basin Volume check:
$Volume_{Basin} = V_{BS} + V_{US}$ = 55000 ft^3 (108% V_{BMP}) $\geq$ V_{BMP} ok

Forebay Design:

In this example a cylindrical forebay shape was assumed for simplification.

Set forebay volume between 5 and 10 percent of the design volume:
$V_F = 0.1V_{BMP}$ = 5082 ft^3
Forebay should drain into low-flow channel in approximately 45 minutes or less. Standing water is not allowable.
$Depth_F$ = 0.8 ft (assumed)
$Area_F$ = (5082)/ depth = 6352.5 ft^2
$Diameter_F$ = SQRT((4* $Area_F$)/ π) = 89.9 → use 90'
For a 45 minute drain time:
Forebay Q_{out} = (5082 ft^3) / (45 min * 60 sec/min) = 1.9 ft^3/s
Size outlet accordingly

Low-flow Channel:

This example assumes a low flow channel depth. The capacity is based on a v-ditch channel at a 2% slope, with side slopes of 2:1. The capacity should be at least twice the forebay outlet rate.

Depth = 0.9 ft (min. 0.75 ft)
Flow capacity = 4.5 ft/s > (2 * Forebay Q_{OUT}) → ok

Basin Outlet:

The stage versus storage graph shows the volume of the proposed basin at various depths:

stage (ft)	storage (ft^3)	storage (acre-ft)
0	0	0.0000
0.5	1650	0.0379
1	3300	0.0758
1.5	4950	0.1136
2	6600	0.1515
2.5	18700	0.4293
3	30800	0.7071
3.5	42900	0.9848
4	55000	1.2626

In this example CivilD was used to route the design volume through the basin for various orifice sizes. After several iterations an appropriate orifice size was chosen of a 2.1-inch diameter. The CivilD program determined the outflow rate at each depth. Please see the attached printout for the routing.

stage (ft)	storage (ft^3)	storage (acre-ft)	Q_{OUT} (cfs)
0	0	0.0000	0.00
0.5	1650	0.0379	0.11
1	3300	0.0758	0.15
1.5	4950	0.1136	0.18
2	6600	0.1515	0.21
2.5	18700	0.4293	0.23
3	30800	0.7071	0.25
3.5	42900	0.9848	0.27
4	55000	1.2626	0.29

For this size orifice:

50% of the V_{BMP} has drained from the basin in 27 hours $\geq$ 24 hours → ok

After	27 hours
Volume Remaining =	0.581 acre-ft
WS Elevation =	2.77 ft

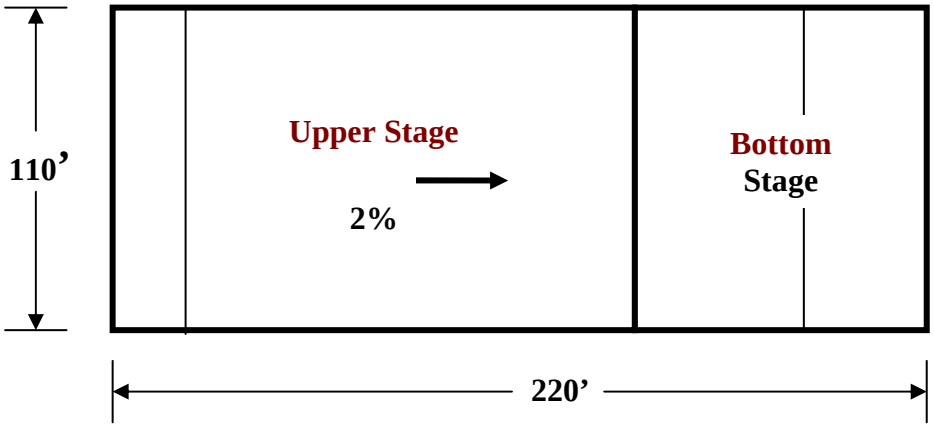
100% of the V_{BMP} has drained from the basin in 60 hours $\geq$ 48 hours
$<$ 72 hours → ok

After	60 hours
Volume Remaining =	0.03 acre-ft
WS Elevation =	0.45 ft

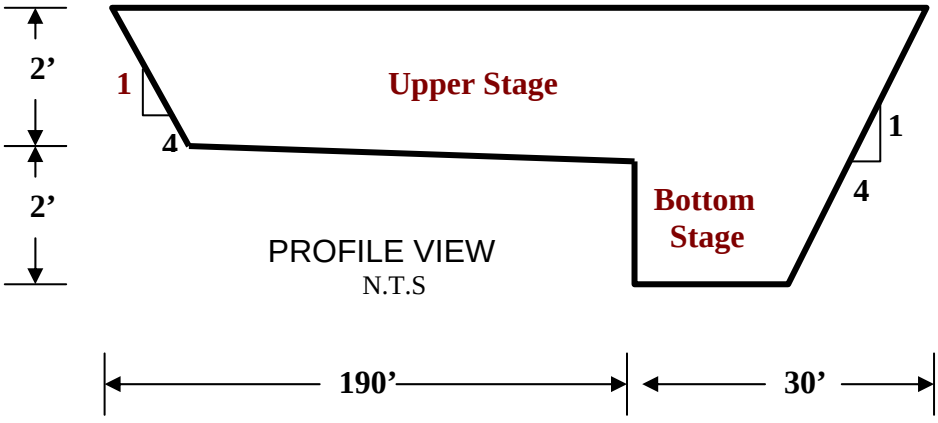
Vegetation:
Native grass chosen as appropriate for the site.

Embankment:
Maximum interior slope of 4:1 and maximum exterior slope of 3:1 chosen.

Access:
Maximum 10% slope and minimum 16’ access roads chosen.



PLAN VIEW
N.T.S.



PROFILE VIEW
N.T.S

Worksheet 1

Design Procedure for BMP Design Volume

85th percentile runoff event

Designer: **Benjie Cho**

Company: **Riverside County Flood Control and Water Conservation District**

Date: **3/1/04**

Project: **BMP Example**

Location:

1. Create Unit Storage Volume Graph a. Site location (Township, Range and Section) b. Slope value from the Design Volume Curve in **Appendix A**. c. Plot this value on the Unit Storage Volume Graph shown on **Figure 2.** d. Draw a straight line form this point to the origin, to create the graph	T **6** &R **3** Section **11**	***(1)***
	Slope = **1.03**	***(2)***
	Is this graph attached? Yes ☒ No ☐	
2. Determine Runoff Coefficient a. Determine total impervious area	$A_{impervious}$ = **20** acres	***(5)***
b. Determine total tributary area	A_{total} = **40** acres	***(6)***
c. Determine Impervious fraction i = ***(5)*** / ***(6)***	i = **.50**	***(7)***
d. Use ***(7)*** in **Figure 1** to find Runoff OR $C = .858i^3 - .78i^2 + .774i + .04$	C = **.34**	***(8)***
3. Determine 85% Unit Storage Volume a. Use ***(8)*** in **Figure 1** Draw a Vertical line from ***(8)*** to the graph, then a Horizontal line to the desired V_u value.	V_u = **.35** in-acre / acre	***(9)***
4. Determine Design Storage Volume a. V_{BMP} = ***(9)*** x ***(6)*** [in- acres]	V_{BMP} = **14** in-acre	***(10)***
b. V_{BMP} = ***(10)*** / 12 [ft- acres]	V_{BMP} = **1.17** ft-acre	***(11)***
c. V_{BMP} = ***(11)*** x 43560 [ft^3]	V_{BMP} = **50820** ft^3	***(12)***

Notes:

Worksheet 3

Design Procedure Form for Extended Detention Basin

Designer: Jennifer Otterson
Company: Riverside County Flood Control and Water Conservation District
Date: 3/2/04
Project: BMP Example
Location: Winchester/Antelope Valley Area

1. Determine Design Volume (Use Worksheet 1) a. Total Tributary Area (minimum 5 ac.) b. Design Volume, V_{BMP}	A_{total} = 40 acres V_{BMP} = 50820 ft^3
2. Basin Length to Width Ratio (2:1 min.)	Ratio = 2:1 L:W
3. Two-Stage Design a. Overall Design 1) Depth (3.5' min.) 2) Width (30' min.) 3) Length (60' min.) 4) Volume (must be ≥ V_{BMP}) b. Upper Stage 1) Depth (2' min.) 2) Bottom Slope (2% to low flow channel recommended) c. Bottom Stage 1) Depth (1.5' to 3') 2) Length 3) Volume (10 to 25% of V_{BMP})	 Depth = 4 ft Width = 110 ft Length = 220 ft Volume = 55000 ft^3 Depth = 2 ft Slope = 2 % Depth = 2 ft Length = 30 ft Volume = 6600 (13%) ft^3
4. Forebay Design a. Forebay Volume (5 to 10% of V_{BMP}) b. Outlet pipe drainage time (≅ 45 min)	Volume = 5082 (10%) ft^3 Drain time = 45 minutes
5. Low-flow Channel a. Depth (9" minimum) b. Flow Capacity (2 * Forebay Q_{OUT})	Depth = 0.9 ft $Q_{Low\ Flow}$ = 4.5 cfs
6. Trash Rack or Gravel Pack (check one)	Trash Rack X Gravel Pack _____

7. Basin Outlet a. Outlet type (check one) b. Orifice Area c. Orifice Type d. Maximum Depth of water above bottom orifice e. Length of time for 50% V_{BMP} drainage (24 hour minimum) f. Length of time for 100% V_{BMP} drainage (between 48 and 72 hours) g. Attached Documents (all required) 1) Stage vs. Discharge 2) Stage vs. Volume 3) Inflow Hydrograph 4) Basin Routing	Single orifice __X__ Multi-orifice plate _____ Perforated Pipe _____ Other _____ Area = 0.024 (2.1" Diameter) ft^2 Type Pipe Depth = 3.8 ft Time 50% = 27 hrs Time 100% = 60 hrs Attached Documents (check) 1) X 2) X 3) X 4) X
8. Increased Runoff (optional) Is this basin also mitigating increased runoff? Attached Documents (all required) for 2, 5, & 10-year storms: 1) Stage vs. Discharge 2) Stage vs. Volume/Storage 3) Inflow Hydrograph 4) Basin Routing	Yes _____ No _X_____ (if No, skip to #9) Attached Documents (check) 1) _____ 2) _____ 3) _____ 4) _____
9. Vegetation (check type)	_X__ Native Grasses ____ Irrigated Turf ____ Other _____
10. Embankment a. Interior slope (4:1 max.) b. Exterior slope (3:1 max.)	Interior Slope = 4:1 Exterior Slope = 3:1
11. Maintenance Access a. Slope (10% max.) b. Width (16 feet min.)	Slope = 10 % Width = 16 ft

FLOOD HYDROGRAPH ROUTING PROGRAM

Study date: 04/15/04

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********** HYDROGRAPH INFORMATION **********

From study/file name: BMPexampl.rte
********** Hydrograph Information **********
From manual input hydrograph

**********HYDROGRAPH DATA**********
Number of intervals = 2
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 84.700 (CFS)
Total volume = 1.167 (Ac.Ft)
Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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Process from Point/Station 1.000 to Point/Station 2.000
**** RETARDING BASIN ROUTING ****
_____

Program computation of outflow v. depth

CALCULATED OUTFLOW DATA AT DEPTH = 0.50(Ft.))
Pipe length = 1.00(Ft.) Elevation difference = 0.10(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 2.10(In.)
NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 0.600(Ft.)
Pipe friction loss = 0.105(Ft.)
Minor friction loss = 0.495(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.111(CFS)

Total outflow at this depth = 0.11(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.00(Ft.))
Pipe length = 1.00(Ft.) Elevation difference = 0.10(Ft.)

Manning's N = 0.013 No. of pipes = 1
Given pipe size = 2.10(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 1.100(Ft.)
Pipe friction loss = 0.193(Ft.)
Minor friction loss = 0.907(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.150(CFS)

Total outflow at this depth = 0.15(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.50(Ft.))
Pipe length = 1.00(Ft.) Elevation difference = 0.10(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 2.10(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 1.600(Ft.)
Pipe friction loss = 0.281(Ft.)
Minor friction loss = 1.320(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.181(CFS)

Total outflow at this depth = 0.18(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.00(Ft.))
Pipe length = 1.00(Ft.) Elevation difference = 0.10(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 2.10(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 2.100(Ft.)
Pipe friction loss = 0.369(Ft.)
Minor friction loss = 1.732(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.207(CFS)

Total outflow at this depth = 0.21(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 2.50(Ft.))
Pipe length = 1.00(Ft.) Elevation difference = 0.10(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 2.10(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 2.600(Ft.)
Pipe friction loss = 0.457(Ft.)
Minor friction loss = 2.144(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.231(CFS)

Total outflow at this depth = 0.23(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 3.00(Ft.))
Pipe length = 1.00(Ft.) Elevation difference = 0.10(Ft.)

Manning's N = 0.013 No. of pipes = 1
Given pipe size = 2.10(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 3.100(Ft.)
Pipe friction loss = 0.545(Ft.)
Minor friction loss = 2.557(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.252(CFS)

Total outflow at this depth = 0.25(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 3.50(Ft.))
Pipe length = 1.00(Ft.) Elevation difference = 0.10(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 2.10(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 3.600(Ft.)
Pipe friction loss = 0.633(Ft.)
Minor friction loss = 2.969(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.272(CFS)

Total outflow at this depth = 0.27(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 4.00(Ft.))
Pipe length = 1.00(Ft.) Elevation difference = 0.10(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 2.10(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 4.100(Ft.)
Pipe friction loss = 0.721(Ft.)
Minor friction loss = 3.381(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.290(CFS)

Total outflow at this depth = 0.29(CFS)

Total number of inflow hydrograph intervals = 2
Hydrograph time unit = 5.000 (Min.)
Initial depth in storage basin = 0.00(Ft.)

Initial basin depth = 0.00 (Ft.)
Initial basin storage = 0.00 (Ac.Ft)
Initial basin outflow = 0.00 (CFS)

Depth vs. Storage and Depth vs. Discharge data:

Basin Depth (Ft.)	Storage (Ac.Ft)	Outflow (CFS)	(S-O*dt/2) (Ac.Ft)	(S+O*dt/2) (Ac.Ft)
0.000	0.000	0.000	0.000	0.000
0.500	0.038	0.111	0.038	0.038

1.000	0.076	0.150	0.075	0.077
1.500	0.114	0.181	0.113	0.115
2.000	0.152	0.207	0.151	0.153
2.500	0.429	0.231	0.428	0.430
3.000	0.707	0.252	0.706	0.708
3.500	0.985	0.272	0.984	0.986
4.000	1.263	0.290	1.262	1.264

Hydrograph Detention Basin Routing

Graph values: 'I'= unit inflow; 'O'=outflow at time shown

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	21.2	42.35	63.53	84.70	Depth (Ft.)
0.083	84.70	0.22	0.291	O	|	|	|	I	2.25
0.167	84.70	0.26	0.873	O	|	|	|	I	3.30
0.250	0.00	0.28	1.162	O	|	|	|	|	3.82
0.333	0.00	0.28	1.160	O	|	|	|	|	3.82
0.417	0.00	0.28	1.158	O	|	|	|	|	3.81
0.500	0.00	0.28	1.157	O	|	|	|	|	3.81
0.583	0.00	0.28	1.155	O	|	|	|	|	3.80
0.667	0.00	0.28	1.153	O	|	|	|	|	3.80
0.750	0.00	0.28	1.151	O	|	|	|	|	3.80
0.833	0.00	0.28	1.149	O	|	|	|	|	3.79
0.917	0.00	0.28	1.147	O	|	|	|	|	3.79
1.000	0.00	0.28	1.145	O	|	|	|	|	3.79
1.083	0.00	0.28	1.143	O	|	|	|	|	3.78
1.167	0.00	0.28	1.141	O	|	|	|	|	3.78
1.250	0.00	0.28	1.139	O	|	|	|	|	3.78
1.333	0.00	0.28	1.137	O	|	|	|	|	3.77
1.417	0.00	0.28	1.135	O	|	|	|	|	3.77
1.500	0.00	0.28	1.133	O	|	|	|	|	3.77
1.583	0.00	0.28	1.131	O	|	|	|	|	3.76
1.667	0.00	0.28	1.129	O	|	|	|	|	3.76
1.750	0.00	0.28	1.127	O	|	|	|	|	3.76
1.833	0.00	0.28	1.125	O	|	|	|	|	3.75
1.917	0.00	0.28	1.124	O	|	|	|	|	3.75
2.000	0.00	0.28	1.122	O	|	|	|	|	3.75
2.083	0.00	0.28	1.120	O	|	|	|	|	3.74
2.167	0.00	0.28	1.118	O	|	|	|	|	3.74
2.250	0.00	0.28	1.116	O	|	|	|	|	3.74
2.333	0.00	0.28	1.114	O	|	|	|	|	3.73
2.417	0.00	0.28	1.112	O	|	|	|	|	3.73
2.500	0.00	0.28	1.110	O	|	|	|	|	3.72
2.583	0.00	0.28	1.108	O	|	|	|	|	3.72
2.667	0.00	0.28	1.106	O	|	|	|	|	3.72
2.750	0.00	0.28	1.104	O	|	|	|	|	3.71
2.833	0.00	0.28	1.102	O	|	|	|	|	3.71
2.917	0.00	0.28	1.100	O	|	|	|	|	3.71
3.000	0.00	0.28	1.098	O	|	|	|	|	3.70
3.083	0.00	0.28	1.097	O	|	|	|	|	3.70
3.167	0.00	0.28	1.095	O	|	|	|	|	3.70
3.250	0.00	0.28	1.093	O	|	|	|	|	3.69
3.333	0.00	0.28	1.091	O	|	|	|	|	3.69
3.417	0.00	0.28	1.089	O	|	|	|	|	3.69

3.500	0.00	0.28	1.087	O	|	|	|	|	3.68
3.583	0.00	0.28	1.085	O	|	|	|	|	3.68
3.667	0.00	0.28	1.083	O	|	|	|	|	3.68
3.750	0.00	0.28	1.081	O	|	|	|	|	3.67
3.833	0.00	0.28	1.079	O	|	|	|	|	3.67
3.917	0.00	0.28	1.077	O	|	|	|	|	3.67
4.000	0.00	0.28	1.075	O	|	|	|	|	3.66
4.083	0.00	0.28	1.074	O	|	|	|	|	3.66
4.167	0.00	0.28	1.072	O	|	|	|	|	3.66
4.250	0.00	0.28	1.070	O	|	|	|	|	3.65
4.333	0.00	0.28	1.068	O	|	|	|	|	3.65
4.417	0.00	0.28	1.066	O	|	|	|	|	3.65
4.500	0.00	0.28	1.064	O	|	|	|	|	3.64
4.583	0.00	0.28	1.062	O	|	|	|	|	3.64
4.667	0.00	0.28	1.060	O	|	|	|	|	3.64
4.750	0.00	0.28	1.058	O	|	|	|	|	3.63
4.833	0.00	0.28	1.056	O	|	|	|	|	3.63
4.917	0.00	0.28	1.055	O	|	|	|	|	3.63
5.000	0.00	0.28	1.053	O	|	|	|	|	3.62
5.083	0.00	0.28	1.051	O	|	|	|	|	3.62
5.167	0.00	0.28	1.049	O	|	|	|	|	3.61
5.250	0.00	0.28	1.047	O	|	|	|	|	3.61
5.333	0.00	0.28	1.045	O	|	|	|	|	3.61
5.417	0.00	0.28	1.043	O	|	|	|	|	3.60
5.500	0.00	0.28	1.041	O	|	|	|	|	3.60
5.583	0.00	0.28	1.039	O	|	|	|	|	3.60
5.667	0.00	0.28	1.037	O	|	|	|	|	3.59
5.750	0.00	0.27	1.036	O	|	|	|	|	3.59
5.833	0.00	0.27	1.034	O	|	|	|	|	3.59
5.917	0.00	0.27	1.032	O	|	|	|	|	3.58
6.000	0.00	0.27	1.030	O	|	|	|	|	3.58
6.083	0.00	0.27	1.028	O	|	|	|	|	3.58
6.167	0.00	0.27	1.026	O	|	|	|	|	3.57
6.250	0.00	0.27	1.024	O	|	|	|	|	3.57
6.333	0.00	0.27	1.022	O	|	|	|	|	3.57
6.417	0.00	0.27	1.020	O	|	|	|	|	3.56
6.500	0.00	0.27	1.019	O	|	|	|	|	3.56
6.583	0.00	0.27	1.017	O	|	|	|	|	3.56
6.667	0.00	0.27	1.015	O	|	|	|	|	3.55
6.750	0.00	0.27	1.013	O	|	|	|	|	3.55
6.833	0.00	0.27	1.011	O	|	|	|	|	3.55
6.917	0.00	0.27	1.009	O	|	|	|	|	3.54
7.000	0.00	0.27	1.007	O	|	|	|	|	3.54
7.083	0.00	0.27	1.005	O	|	|	|	|	3.54
7.167	0.00	0.27	1.003	O	|	|	|	|	3.53
7.250	0.00	0.27	1.002	O	|	|	|	|	3.53
7.333	0.00	0.27	1.000	O	|	|	|	|	3.53
7.417	0.00	0.27	0.998	O	|	|	|	|	3.52
7.500	0.00	0.27	0.996	O	|	|	|	|	3.52
7.583	0.00	0.27	0.994	O	|	|	|	|	3.52
7.667	0.00	0.27	0.992	O	|	|	|	|	3.51
7.750	0.00	0.27	0.990	O	|	|	|	|	3.51
7.833	0.00	0.27	0.988	O	|	|	|	|	3.51
7.917	0.00	0.27	0.987	O	|	|	|	|	3.50
8.000	0.00	0.27	0.985	O	|	|	|	|	3.50
8.083	0.00	0.27	0.983	O	|	|	|	|	3.50

8.167	0.00	0.27	0.981	O	|	|	|	|	3.49
8.250	0.00	0.27	0.979	O	|	|	|	|	3.49
8.333	0.00	0.27	0.977	O	|	|	|	|	3.49
8.417	0.00	0.27	0.975	O	|	|	|	|	3.48
8.500	0.00	0.27	0.974	O	|	|	|	|	3.48
8.583	0.00	0.27	0.972	O	|	|	|	|	3.48
8.667	0.00	0.27	0.970	O	|	|	|	|	3.47
8.750	0.00	0.27	0.968	O	|	|	|	|	3.47
8.833	0.00	0.27	0.966	O	|	|	|	|	3.47
8.917	0.00	0.27	0.964	O	|	|	|	|	3.46
9.000	0.00	0.27	0.962	O	|	|	|	|	3.46
9.083	0.00	0.27	0.961	O	|	|	|	|	3.46
9.167	0.00	0.27	0.959	O	|	|	|	|	3.45
9.250	0.00	0.27	0.957	O	|	|	|	|	3.45
9.333	0.00	0.27	0.955	O	|	|	|	|	3.45
9.417	0.00	0.27	0.953	O	|	|	|	|	3.44
9.500	0.00	0.27	0.951	O	|	|	|	|	3.44
9.583	0.00	0.27	0.949	O	|	|	|	|	3.44
9.667	0.00	0.27	0.948	O	|	|	|	|	3.43
9.750	0.00	0.27	0.946	O	|	|	|	|	3.43
9.833	0.00	0.27	0.944	O	|	|	|	|	3.43
9.917	0.00	0.27	0.942	O	|	|	|	|	3.42
10.000	0.00	0.27	0.940	O	|	|	|	|	3.42
10.083	0.00	0.27	0.938	O	|	|	|	|	3.42
10.167	0.00	0.27	0.936	O	|	|	|	|	3.41
10.250	0.00	0.27	0.935	O	|	|	|	|	3.41
10.333	0.00	0.27	0.933	O	|	|	|	|	3.41
10.417	0.00	0.27	0.931	O	|	|	|	|	3.40
10.500	0.00	0.27	0.929	O	|	|	|	|	3.40
10.583	0.00	0.27	0.927	O	|	|	|	|	3.40
10.667	0.00	0.27	0.925	O	|	|	|	|	3.39
10.750	0.00	0.27	0.924	O	|	|	|	|	3.39
10.833	0.00	0.27	0.922	O	|	|	|	|	3.39
10.917	0.00	0.27	0.920	O	|	|	|	|	3.38
11.000	0.00	0.27	0.918	O	|	|	|	|	3.38
11.083	0.00	0.27	0.916	O	|	|	|	|	3.38
11.167	0.00	0.27	0.914	O	|	|	|	|	3.37
11.250	0.00	0.27	0.912	O	|	|	|	|	3.37
11.333	0.00	0.27	0.911	O	|	|	|	|	3.37
11.417	0.00	0.27	0.909	O	|	|	|	|	3.36
11.500	0.00	0.27	0.907	O	|	|	|	|	3.36
11.583	0.00	0.27	0.905	O	|	|	|	|	3.36
11.667	0.00	0.27	0.903	O	|	|	|	|	3.35
11.750	0.00	0.27	0.901	O	|	|	|	|	3.35
11.833	0.00	0.27	0.900	O	|	|	|	|	3.35
11.917	0.00	0.27	0.898	O	|	|	|	|	3.34
12.000	0.00	0.27	0.896	O	|	|	|	|	3.34
12.083	0.00	0.27	0.894	O	|	|	|	|	3.34
12.167	0.00	0.27	0.892	O	|	|	|	|	3.33
12.250	0.00	0.26	0.891	O	|	|	|	|	3.33
12.333	0.00	0.26	0.889	O	|	|	|	|	3.33
12.417	0.00	0.26	0.887	O	|	|	|	|	3.32
12.500	0.00	0.26	0.885	O	|	|	|	|	3.32
12.583	0.00	0.26	0.883	O	|	|	|	|	3.32
12.667	0.00	0.26	0.881	O	|	|	|	|	3.31
12.750	0.00	0.26	0.880	O	|	|	|	|	3.31

12.833	0.00	0.26	0.878	O	|	|	|	|	3.31
12.917	0.00	0.26	0.876	O	|	|	|	|	3.30
13.000	0.00	0.26	0.874	O	|	|	|	|	3.30
13.083	0.00	0.26	0.872	O	|	|	|	|	3.30
13.167	0.00	0.26	0.871	O	|	|	|	|	3.29
13.250	0.00	0.26	0.869	O	|	|	|	|	3.29
13.333	0.00	0.26	0.867	O	|	|	|	|	3.29
13.417	0.00	0.26	0.865	O	|	|	|	|	3.28
13.500	0.00	0.26	0.863	O	|	|	|	|	3.28
13.583	0.00	0.26	0.861	O	|	|	|	|	3.28
13.667	0.00	0.26	0.860	O	|	|	|	|	3.27
13.750	0.00	0.26	0.858	O	|	|	|	|	3.27
13.833	0.00	0.26	0.856	O	|	|	|	|	3.27
13.917	0.00	0.26	0.854	O	|	|	|	|	3.26
14.000	0.00	0.26	0.852	O	|	|	|	|	3.26
14.083	0.00	0.26	0.851	O	|	|	|	|	3.26
14.167	0.00	0.26	0.849	O	|	|	|	|	3.26
14.250	0.00	0.26	0.847	O	|	|	|	|	3.25
14.333	0.00	0.26	0.845	O	|	|	|	|	3.25
14.417	0.00	0.26	0.843	O	|	|	|	|	3.25
14.500	0.00	0.26	0.842	O	|	|	|	|	3.24
14.583	0.00	0.26	0.840	O	|	|	|	|	3.24
14.667	0.00	0.26	0.838	O	|	|	|	|	3.24
14.750	0.00	0.26	0.836	O	|	|	|	|	3.23
14.833	0.00	0.26	0.834	O	|	|	|	|	3.23
14.917	0.00	0.26	0.833	O	|	|	|	|	3.23
15.000	0.00	0.26	0.831	O	|	|	|	|	3.22
15.083	0.00	0.26	0.829	O	|	|	|	|	3.22
15.167	0.00	0.26	0.827	O	|	|	|	|	3.22
15.250	0.00	0.26	0.825	O	|	|	|	|	3.21
15.333	0.00	0.26	0.824	O	|	|	|	|	3.21
15.417	0.00	0.26	0.822	O	|	|	|	|	3.21
15.500	0.00	0.26	0.820	O	|	|	|	|	3.20
15.583	0.00	0.26	0.818	O	|	|	|	|	3.20
15.667	0.00	0.26	0.816	O	|	|	|	|	3.20
15.750	0.00	0.26	0.815	O	|	|	|	|	3.19
15.833	0.00	0.26	0.813	O	|	|	|	|	3.19
15.917	0.00	0.26	0.811	O	|	|	|	|	3.19
16.000	0.00	0.26	0.809	O	|	|	|	|	3.18
16.083	0.00	0.26	0.808	O	|	|	|	|	3.18
16.167	0.00	0.26	0.806	O	|	|	|	|	3.18
16.250	0.00	0.26	0.804	O	|	|	|	|	3.17
16.333	0.00	0.26	0.802	O	|	|	|	|	3.17
16.417	0.00	0.26	0.800	O	|	|	|	|	3.17
16.500	0.00	0.26	0.799	O	|	|	|	|	3.16
16.583	0.00	0.26	0.797	O	|	|	|	|	3.16
16.667	0.00	0.26	0.795	O	|	|	|	|	3.16
16.750	0.00	0.26	0.793	O	|	|	|	|	3.16
16.833	0.00	0.26	0.792	O	|	|	|	|	3.15
16.917	0.00	0.26	0.790	O	|	|	|	|	3.15
17.000	0.00	0.26	0.788	O	|	|	|	|	3.15
17.083	0.00	0.26	0.786	O	|	|	|	|	3.14
17.167	0.00	0.26	0.784	O	|	|	|	|	3.14
17.250	0.00	0.26	0.783	O	|	|	|	|	3.14
17.333	0.00	0.26	0.781	O	|	|	|	|	3.13
17.417	0.00	0.26	0.779	O	|	|	|	|	3.13

17.500	0.00	0.26	0.777	O	|	|	|	|	3.13
17.583	0.00	0.26	0.776	O	|	|	|	|	3.12
17.667	0.00	0.26	0.774	O	|	|	|	|	3.12
17.750	0.00	0.26	0.772	O	|	|	|	|	3.12
17.833	0.00	0.26	0.770	O	|	|	|	|	3.11
17.917	0.00	0.26	0.768	O	|	|	|	|	3.11
18.000	0.00	0.26	0.767	O	|	|	|	|	3.11
18.083	0.00	0.26	0.765	O	|	|	|	|	3.10
18.167	0.00	0.26	0.763	O	|	|	|	|	3.10
18.250	0.00	0.26	0.761	O	|	|	|	|	3.10
18.333	0.00	0.26	0.760	O	|	|	|	|	3.09
18.417	0.00	0.26	0.758	O	|	|	|	|	3.09
18.500	0.00	0.26	0.756	O	|	|	|	|	3.09
18.583	0.00	0.26	0.754	O	|	|	|	|	3.09
18.667	0.00	0.26	0.753	O	|	|	|	|	3.08
18.750	0.00	0.26	0.751	O	|	|	|	|	3.08
18.833	0.00	0.25	0.749	O	|	|	|	|	3.08
18.917	0.00	0.25	0.747	O	|	|	|	|	3.07
19.000	0.00	0.25	0.746	O	|	|	|	|	3.07
19.083	0.00	0.25	0.744	O	|	|	|	|	3.07
19.167	0.00	0.25	0.742	O	|	|	|	|	3.06
19.250	0.00	0.25	0.740	O	|	|	|	|	3.06
19.333	0.00	0.25	0.739	O	|	|	|	|	3.06
19.417	0.00	0.25	0.737	O	|	|	|	|	3.05
19.500	0.00	0.25	0.735	O	|	|	|	|	3.05
19.583	0.00	0.25	0.733	O	|	|	|	|	3.05
19.667	0.00	0.25	0.732	O	|	|	|	|	3.04
19.750	0.00	0.25	0.730	O	|	|	|	|	3.04
19.833	0.00	0.25	0.728	O	|	|	|	|	3.04
19.917	0.00	0.25	0.726	O	|	|	|	|	3.03
20.000	0.00	0.25	0.725	O	|	|	|	|	3.03
20.083	0.00	0.25	0.723	O	|	|	|	|	3.03
20.167	0.00	0.25	0.721	O	|	|	|	|	3.03
20.250	0.00	0.25	0.719	O	|	|	|	|	3.02
20.333	0.00	0.25	0.718	O	|	|	|	|	3.02
20.417	0.00	0.25	0.716	O	|	|	|	|	3.02
20.500	0.00	0.25	0.714	O	|	|	|	|	3.01
20.583	0.00	0.25	0.712	O	|	|	|	|	3.01
20.667	0.00	0.25	0.711	O	|	|	|	|	3.01
20.750	0.00	0.25	0.709	O	|	|	|	|	3.00
20.833	0.00	0.25	0.707	O	|	|	|	|	3.00
20.917	0.00	0.25	0.705	O	|	|	|	|	3.00
21.000	0.00	0.25	0.704	O	|	|	|	|	2.99
21.083	0.00	0.25	0.702	O	|	|	|	|	2.99
21.167	0.00	0.25	0.700	O	|	|	|	|	2.99
21.250	0.00	0.25	0.699	O	|	|	|	|	2.98
21.333	0.00	0.25	0.697	O	|	|	|	|	2.98
21.417	0.00	0.25	0.695	O	|	|	|	|	2.98
21.500	0.00	0.25	0.693	O	|	|	|	|	2.98
21.583	0.00	0.25	0.692	O	|	|	|	|	2.97
21.667	0.00	0.25	0.690	O	|	|	|	|	2.97
21.750	0.00	0.25	0.688	O	|	|	|	|	2.97
21.833	0.00	0.25	0.686	O	|	|	|	|	2.96
21.917	0.00	0.25	0.685	O	|	|	|	|	2.96
22.000	0.00	0.25	0.683	O	|	|	|	|	2.96
22.083	0.00	0.25	0.681	O	|	|	|	|	2.95

22.167	0.00	0.25	0.680	O	|	|	|	|	2.95
22.250	0.00	0.25	0.678	O	|	|	|	|	2.95
22.333	0.00	0.25	0.676	O	|	|	|	|	2.94
22.417	0.00	0.25	0.674	O	|	|	|	|	2.94
22.500	0.00	0.25	0.673	O	|	|	|	|	2.94
22.583	0.00	0.25	0.671	O	|	|	|	|	2.94
22.667	0.00	0.25	0.669	O	|	|	|	|	2.93
22.750	0.00	0.25	0.668	O	|	|	|	|	2.93
22.833	0.00	0.25	0.666	O	|	|	|	|	2.93
22.917	0.00	0.25	0.664	O	|	|	|	|	2.92
23.000	0.00	0.25	0.662	O	|	|	|	|	2.92
23.083	0.00	0.25	0.661	O	|	|	|	|	2.92
23.167	0.00	0.25	0.659	O	|	|	|	|	2.91
23.250	0.00	0.25	0.657	O	|	|	|	|	2.91
23.333	0.00	0.25	0.656	O	|	|	|	|	2.91
23.417	0.00	0.25	0.654	O	|	|	|	|	2.90
23.500	0.00	0.25	0.652	O	|	|	|	|	2.90
23.583	0.00	0.25	0.650	O	|	|	|	|	2.90
23.667	0.00	0.25	0.649	O	|	|	|	|	2.90
23.750	0.00	0.25	0.647	O	|	|	|	|	2.89
23.833	0.00	0.25	0.645	O	|	|	|	|	2.89
23.917	0.00	0.25	0.644	O	|	|	|	|	2.89
24.000	0.00	0.25	0.642	O	|	|	|	|	2.88
24.083	0.00	0.25	0.640	O	|	|	|	|	2.88
24.167	0.00	0.25	0.639	O	|	|	|	|	2.88
24.250	0.00	0.25	0.637	O	|	|	|	|	2.87
24.333	0.00	0.25	0.635	O	|	|	|	|	2.87
24.417	0.00	0.25	0.633	O	|	|	|	|	2.87
24.500	0.00	0.25	0.632	O	|	|	|	|	2.86
24.583	0.00	0.25	0.630	O	|	|	|	|	2.86
24.667	0.00	0.25	0.628	O	|	|	|	|	2.86
24.750	0.00	0.25	0.627	O	|	|	|	|	2.86
24.833	0.00	0.25	0.625	O	|	|	|	|	2.85
24.917	0.00	0.25	0.623	O	|	|	|	|	2.85
25.000	0.00	0.25	0.622	O	|	|	|	|	2.85
25.083	0.00	0.25	0.620	O	|	|	|	|	2.84
25.167	0.00	0.25	0.618	O	|	|	|	|	2.84
25.250	0.00	0.25	0.617	O	|	|	|	|	2.84
25.333	0.00	0.24	0.615	O	|	|	|	|	2.83
25.417	0.00	0.24	0.613	O	|	|	|	|	2.83
25.500	0.00	0.24	0.611	O	|	|	|	|	2.83
25.583	0.00	0.24	0.610	O	|	|	|	|	2.83
25.667	0.00	0.24	0.608	O	|	|	|	|	2.82
25.750	0.00	0.24	0.606	O	|	|	|	|	2.82
25.833	0.00	0.24	0.605	O	|	|	|	|	2.82
25.917	0.00	0.24	0.603	O	|	|	|	|	2.81
26.000	0.00	0.24	0.601	O	|	|	|	|	2.81
26.083	0.00	0.24	0.600	O	|	|	|	|	2.81
26.167	0.00	0.24	0.598	O	|	|	|	|	2.80
26.250	0.00	0.24	0.596	O	|	|	|	|	2.80
26.333	0.00	0.24	0.595	O	|	|	|	|	2.80
26.417	0.00	0.24	0.593	O	|	|	|	|	2.79
26.500	0.00	0.24	0.591	O	|	|	|	|	2.79
26.583	0.00	0.24	0.590	O	|	|	|	|	2.79
26.667	0.00	0.24	0.588	O	|	|	|	|	2.79
26.750	0.00	0.24	0.586	O	|	|	|	|	2.78

26.833	0.00	0.24	0.585	O	|	|	|	|	2.78
26.917	0.00	0.24	0.583	O	|	|	|	|	2.78
27.000	0.00	0.24	0.581	O	|	|	|	|	2.77
27.083	0.00	0.24	0.580	O	|	|	|	|	2.77
27.167	0.00	0.24	0.578	O	|	|	|	|	2.77
27.250	0.00	0.24	0.576	O	|	|	|	|	2.76
27.333	0.00	0.24	0.575	O	|	|	|	|	2.76
27.417	0.00	0.24	0.573	O	|	|	|	|	2.76
27.500	0.00	0.24	0.571	O	|	|	|	|	2.76
27.583	0.00	0.24	0.570	O	|	|	|	|	2.75
27.667	0.00	0.24	0.568	O	|	|	|	|	2.75
27.750	0.00	0.24	0.566	O	|	|	|	|	2.75
27.833	0.00	0.24	0.565	O	|	|	|	|	2.74
27.917	0.00	0.24	0.563	O	|	|	|	|	2.74
28.000	0.00	0.24	0.561	O	|	|	|	|	2.74
28.083	0.00	0.24	0.560	O	|	|	|	|	2.73
28.167	0.00	0.24	0.558	O	|	|	|	|	2.73
28.250	0.00	0.24	0.556	O	|	|	|	|	2.73
28.333	0.00	0.24	0.555	O	|	|	|	|	2.73
28.417	0.00	0.24	0.553	O	|	|	|	|	2.72
28.500	0.00	0.24	0.551	O	|	|	|	|	2.72
28.583	0.00	0.24	0.550	O	|	|	|	|	2.72
28.667	0.00	0.24	0.548	O	|	|	|	|	2.71
28.750	0.00	0.24	0.546	O	|	|	|	|	2.71
28.833	0.00	0.24	0.545	O	|	|	|	|	2.71
28.917	0.00	0.24	0.543	O	|	|	|	|	2.71
29.000	0.00	0.24	0.541	O	|	|	|	|	2.70
29.083	0.00	0.24	0.540	O	|	|	|	|	2.70
29.167	0.00	0.24	0.538	O	|	|	|	|	2.70
29.250	0.00	0.24	0.536	O	|	|	|	|	2.69
29.333	0.00	0.24	0.535	O	|	|	|	|	2.69
29.417	0.00	0.24	0.533	O	|	|	|	|	2.69
29.500	0.00	0.24	0.532	O	|	|	|	|	2.68
29.583	0.00	0.24	0.530	O	|	|	|	|	2.68
29.667	0.00	0.24	0.528	O	|	|	|	|	2.68
29.750	0.00	0.24	0.527	O	|	|	|	|	2.68
29.833	0.00	0.24	0.525	O	|	|	|	|	2.67
29.917	0.00	0.24	0.523	O	|	|	|	|	2.67
30.000	0.00	0.24	0.522	O	|	|	|	|	2.67
30.083	0.00	0.24	0.520	O	|	|	|	|	2.66
30.167	0.00	0.24	0.518	O	|	|	|	|	2.66
30.250	0.00	0.24	0.517	O	|	|	|	|	2.66
30.333	0.00	0.24	0.515	O	|	|	|	|	2.65
30.417	0.00	0.24	0.514	O	|	|	|	|	2.65
30.500	0.00	0.24	0.512	O	|	|	|	|	2.65
30.583	0.00	0.24	0.510	O	|	|	|	|	2.65
30.667	0.00	0.24	0.509	O	|	|	|	|	2.64
30.750	0.00	0.24	0.507	O	|	|	|	|	2.64
30.833	0.00	0.24	0.505	O	|	|	|	|	2.64
30.917	0.00	0.24	0.504	O	|	|	|	|	2.63
31.000	0.00	0.24	0.502	O	|	|	|	|	2.63
31.083	0.00	0.24	0.500	O	|	|	|	|	2.63
31.167	0.00	0.24	0.499	O	|	|	|	|	2.63
31.250	0.00	0.24	0.497	O	|	|	|	|	2.62
31.333	0.00	0.24	0.496	O	|	|	|	|	2.62
31.417	0.00	0.24	0.494	O	|	|	|	|	2.62

31.500	0.00	0.24	0.492	O	|	|	|	|	2.61
31.583	0.00	0.24	0.491	O	|	|	|	|	2.61
31.667	0.00	0.24	0.489	O	|	|	|	|	2.61
31.750	0.00	0.24	0.488	O	|	|	|	|	2.61
31.833	0.00	0.24	0.486	O	|	|	|	|	2.60
31.917	0.00	0.23	0.484	O	|	|	|	|	2.60
32.000	0.00	0.23	0.483	O	|	|	|	|	2.60
32.083	0.00	0.23	0.481	O	|	|	|	|	2.59
32.167	0.00	0.23	0.479	O	|	|	|	|	2.59
32.250	0.00	0.23	0.478	O	|	|	|	|	2.59
32.333	0.00	0.23	0.476	O	|	|	|	|	2.58
32.417	0.00	0.23	0.475	O	|	|	|	|	2.58
32.500	0.00	0.23	0.473	O	|	|	|	|	2.58
32.583	0.00	0.23	0.471	O	|	|	|	|	2.58
32.667	0.00	0.23	0.470	O	|	|	|	|	2.57
32.750	0.00	0.23	0.468	O	|	|	|	|	2.57
32.833	0.00	0.23	0.467	O	|	|	|	|	2.57
32.917	0.00	0.23	0.465	O	|	|	|	|	2.56
33.000	0.00	0.23	0.463	O	|	|	|	|	2.56
33.083	0.00	0.23	0.462	O	|	|	|	|	2.56
33.167	0.00	0.23	0.460	O	|	|	|	|	2.56
33.250	0.00	0.23	0.458	O	|	|	|	|	2.55
33.333	0.00	0.23	0.457	O	|	|	|	|	2.55
33.417	0.00	0.23	0.455	O	|	|	|	|	2.55
33.500	0.00	0.23	0.454	O	|	|	|	|	2.54
33.583	0.00	0.23	0.452	O	|	|	|	|	2.54
33.667	0.00	0.23	0.450	O	|	|	|	|	2.54
33.750	0.00	0.23	0.449	O	|	|	|	|	2.54
33.833	0.00	0.23	0.447	O	|	|	|	|	2.53
33.917	0.00	0.23	0.446	O	|	|	|	|	2.53
34.000	0.00	0.23	0.444	O	|	|	|	|	2.53
34.083	0.00	0.23	0.442	O	|	|	|	|	2.52
34.167	0.00	0.23	0.441	O	|	|	|	|	2.52
34.250	0.00	0.23	0.439	O	|	|	|	|	2.52
34.333	0.00	0.23	0.438	O	|	|	|	|	2.52
34.417	0.00	0.23	0.436	O	|	|	|	|	2.51
34.500	0.00	0.23	0.435	O	|	|	|	|	2.51
34.583	0.00	0.23	0.433	O	|	|	|	|	2.51
34.667	0.00	0.23	0.431	O	|	|	|	|	2.50
34.750	0.00	0.23	0.430	O	|	|	|	|	2.50
34.833	0.00	0.23	0.428	O	|	|	|	|	2.50
34.917	0.00	0.23	0.427	O	|	|	|	|	2.50
35.000	0.00	0.23	0.425	O	|	|	|	|	2.49
35.083	0.00	0.23	0.423	O	|	|	|	|	2.49
35.167	0.00	0.23	0.422	O	|	|	|	|	2.49
35.250	0.00	0.23	0.420	O	|	|	|	|	2.48
35.333	0.00	0.23	0.419	O	|	|	|	|	2.48
35.417	0.00	0.23	0.417	O	|	|	|	|	2.48
35.500	0.00	0.23	0.415	O	|	|	|	|	2.48
35.583	0.00	0.23	0.414	O	|	|	|	|	2.47
35.667	0.00	0.23	0.412	O	|	|	|	|	2.47
35.750	0.00	0.23	0.411	O	|	|	|	|	2.47
35.833	0.00	0.23	0.409	O	|	|	|	|	2.46
35.917	0.00	0.23	0.408	O	|	|	|	|	2.46
36.000	0.00	0.23	0.406	O	|	|	|	|	2.46
36.083	0.00	0.23	0.404	O	|	|	|	|	2.46

36.167	0.00	0.23	0.403	O	|	|	|	|	2.45
36.250	0.00	0.23	0.401	O	|	|	|	|	2.45
36.333	0.00	0.23	0.400	O	|	|	|	|	2.45
36.417	0.00	0.23	0.398	O	|	|	|	|	2.44
36.500	0.00	0.23	0.397	O	|	|	|	|	2.44
36.583	0.00	0.23	0.395	O	|	|	|	|	2.44
36.667	0.00	0.23	0.393	O	|	|	|	|	2.44
36.750	0.00	0.23	0.392	O	|	|	|	|	2.43
36.833	0.00	0.23	0.390	O	|	|	|	|	2.43
36.917	0.00	0.23	0.389	O	|	|	|	|	2.43
37.000	0.00	0.23	0.387	O	|	|	|	|	2.42
37.083	0.00	0.23	0.386	O	|	|	|	|	2.42
37.167	0.00	0.23	0.384	O	|	|	|	|	2.42
37.250	0.00	0.23	0.382	O	|	|	|	|	2.42
37.333	0.00	0.23	0.381	O	|	|	|	|	2.41
37.417	0.00	0.23	0.379	O	|	|	|	|	2.41
37.500	0.00	0.23	0.378	O	|	|	|	|	2.41
37.583	0.00	0.23	0.376	O	|	|	|	|	2.40
37.667	0.00	0.23	0.375	O	|	|	|	|	2.40
37.750	0.00	0.23	0.373	O	|	|	|	|	2.40
37.833	0.00	0.23	0.372	O	|	|	|	|	2.40
37.917	0.00	0.23	0.370	O	|	|	|	|	2.39
38.000	0.00	0.23	0.368	O	|	|	|	|	2.39
38.083	0.00	0.23	0.367	O	|	|	|	|	2.39
38.167	0.00	0.23	0.365	O	|	|	|	|	2.39
38.250	0.00	0.23	0.364	O	|	|	|	|	2.38
38.333	0.00	0.23	0.362	O	|	|	|	|	2.38
38.417	0.00	0.23	0.361	O	|	|	|	|	2.38
38.500	0.00	0.22	0.359	O	|	|	|	|	2.37
38.583	0.00	0.22	0.358	O	|	|	|	|	2.37
38.667	0.00	0.22	0.356	O	|	|	|	|	2.37
38.750	0.00	0.22	0.354	O	|	|	|	|	2.37
38.833	0.00	0.22	0.353	O	|	|	|	|	2.36
38.917	0.00	0.22	0.351	O	|	|	|	|	2.36
39.000	0.00	0.22	0.350	O	|	|	|	|	2.36
39.083	0.00	0.22	0.348	O	|	|	|	|	2.35
39.167	0.00	0.22	0.347	O	|	|	|	|	2.35
39.250	0.00	0.22	0.345	O	|	|	|	|	2.35
39.333	0.00	0.22	0.344	O	|	|	|	|	2.35
39.417	0.00	0.22	0.342	O	|	|	|	|	2.34
39.500	0.00	0.22	0.341	O	|	|	|	|	2.34
39.583	0.00	0.22	0.339	O	|	|	|	|	2.34
39.667	0.00	0.22	0.338	O	|	|	|	|	2.33
39.750	0.00	0.22	0.336	O	|	|	|	|	2.33
39.833	0.00	0.22	0.334	O	|	|	|	|	2.33
39.917	0.00	0.22	0.333	O	|	|	|	|	2.33
40.000	0.00	0.22	0.331	O	|	|	|	|	2.32
40.083	0.00	0.22	0.330	O	|	|	|	|	2.32
40.167	0.00	0.22	0.328	O	|	|	|	|	2.32
40.250	0.00	0.22	0.327	O	|	|	|	|	2.32
40.333	0.00	0.22	0.325	O	|	|	|	|	2.31
40.417	0.00	0.22	0.324	O	|	|	|	|	2.31
40.500	0.00	0.22	0.322	O	|	|	|	|	2.31
40.583	0.00	0.22	0.321	O	|	|	|	|	2.30
40.667	0.00	0.22	0.319	O	|	|	|	|	2.30
40.750	0.00	0.22	0.318	O	|	|	|	|	2.30

40.833	0.00	0.22	0.316	O	|	|	|	|	2.30
40.917	0.00	0.22	0.315	O	|	|	|	|	2.29
41.000	0.00	0.22	0.313	O	|	|	|	|	2.29
41.083	0.00	0.22	0.312	O	|	|	|	|	2.29
41.167	0.00	0.22	0.310	O	|	|	|	|	2.29
41.250	0.00	0.22	0.308	O	|	|	|	|	2.28
41.333	0.00	0.22	0.307	O	|	|	|	|	2.28
41.417	0.00	0.22	0.305	O	|	|	|	|	2.28
41.500	0.00	0.22	0.304	O	|	|	|	|	2.27
41.583	0.00	0.22	0.302	O	|	|	|	|	2.27
41.667	0.00	0.22	0.301	O	|	|	|	|	2.27
41.750	0.00	0.22	0.299	O	|	|	|	|	2.27
41.833	0.00	0.22	0.298	O	|	|	|	|	2.26
41.917	0.00	0.22	0.296	O	|	|	|	|	2.26
42.000	0.00	0.22	0.295	O	|	|	|	|	2.26
42.083	0.00	0.22	0.293	O	|	|	|	|	2.26
42.167	0.00	0.22	0.292	O	|	|	|	|	2.25
42.250	0.00	0.22	0.290	O	|	|	|	|	2.25
42.333	0.00	0.22	0.289	O	|	|	|	|	2.25
42.417	0.00	0.22	0.287	O	|	|	|	|	2.24
42.500	0.00	0.22	0.286	O	|	|	|	|	2.24
42.583	0.00	0.22	0.284	O	|	|	|	|	2.24
42.667	0.00	0.22	0.283	O	|	|	|	|	2.24
42.750	0.00	0.22	0.281	O	|	|	|	|	2.23
42.833	0.00	0.22	0.280	O	|	|	|	|	2.23
42.917	0.00	0.22	0.278	O	|	|	|	|	2.23
43.000	0.00	0.22	0.277	O	|	|	|	|	2.23
43.083	0.00	0.22	0.275	O	|	|	|	|	2.22
43.167	0.00	0.22	0.274	O	|	|	|	|	2.22
43.250	0.00	0.22	0.272	O	|	|	|	|	2.22
43.333	0.00	0.22	0.271	O	|	|	|	|	2.21
43.417	0.00	0.22	0.269	O	|	|	|	|	2.21
43.500	0.00	0.22	0.268	O	|	|	|	|	2.21
43.583	0.00	0.22	0.266	O	|	|	|	|	2.21
43.667	0.00	0.22	0.265	O	|	|	|	|	2.20
43.750	0.00	0.22	0.263	O	|	|	|	|	2.20
43.833	0.00	0.22	0.262	O	|	|	|	|	2.20
43.917	0.00	0.22	0.260	O	|	|	|	|	2.20
44.000	0.00	0.22	0.259	O	|	|	|	|	2.19
44.083	0.00	0.22	0.257	O	|	|	|	|	2.19
44.167	0.00	0.22	0.256	O	|	|	|	|	2.19
44.250	0.00	0.22	0.254	O	|	|	|	|	2.18
44.333	0.00	0.22	0.253	O	|	|	|	|	2.18
44.417	0.00	0.22	0.251	O	|	|	|	|	2.18
44.500	0.00	0.22	0.250	O	|	|	|	|	2.18
44.583	0.00	0.22	0.248	O	|	|	|	|	2.17
44.667	0.00	0.22	0.247	O	|	|	|	|	2.17
44.750	0.00	0.22	0.245	O	|	|	|	|	2.17
44.833	0.00	0.22	0.244	O	|	|	|	|	2.17
44.917	0.00	0.22	0.242	O	|	|	|	|	2.16
45.000	0.00	0.21	0.241	O	|	|	|	|	2.16
45.083	0.00	0.21	0.240	O	|	|	|	|	2.16
45.167	0.00	0.21	0.238	O	|	|	|	|	2.16
45.250	0.00	0.21	0.237	O	|	|	|	|	2.15
45.333	0.00	0.21	0.235	O	|	|	|	|	2.15
45.417	0.00	0.21	0.234	O	|	|	|	|	2.15

45.500	0.00	0.21	0.232	O	|	|	|	|	2.14
45.583	0.00	0.21	0.231	O	|	|	|	|	2.14
45.667	0.00	0.21	0.229	O	|	|	|	|	2.14
45.750	0.00	0.21	0.228	O	|	|	|	|	2.14
45.833	0.00	0.21	0.226	O	|	|	|	|	2.13
45.917	0.00	0.21	0.225	O	|	|	|	|	2.13
46.000	0.00	0.21	0.223	O	|	|	|	|	2.13
46.083	0.00	0.21	0.222	O	|	|	|	|	2.13
46.167	0.00	0.21	0.220	O	|	|	|	|	2.12
46.250	0.00	0.21	0.219	O	|	|	|	|	2.12
46.333	0.00	0.21	0.217	O	|	|	|	|	2.12
46.417	0.00	0.21	0.216	O	|	|	|	|	2.12
46.500	0.00	0.21	0.215	O	|	|	|	|	2.11
46.583	0.00	0.21	0.213	O	|	|	|	|	2.11
46.667	0.00	0.21	0.212	O	|	|	|	|	2.11
46.750	0.00	0.21	0.210	O	|	|	|	|	2.10
46.833	0.00	0.21	0.209	O	|	|	|	|	2.10
46.917	0.00	0.21	0.207	O	|	|	|	|	2.10
47.000	0.00	0.21	0.206	O	|	|	|	|	2.10
47.083	0.00	0.21	0.204	O	|	|	|	|	2.09
47.167	0.00	0.21	0.203	O	|	|	|	|	2.09
47.250	0.00	0.21	0.201	O	|	|	|	|	2.09
47.333	0.00	0.21	0.200	O	|	|	|	|	2.09
47.417	0.00	0.21	0.198	O	|	|	|	|	2.08
47.500	0.00	0.21	0.197	O	|	|	|	|	2.08
47.583	0.00	0.21	0.196	O	|	|	|	|	2.08
47.667	0.00	0.21	0.194	O	|	|	|	|	2.08
47.750	0.00	0.21	0.193	O	|	|	|	|	2.07
47.833	0.00	0.21	0.191	O	|	|	|	|	2.07
47.917	0.00	0.21	0.190	O	|	|	|	|	2.07
48.000	0.00	0.21	0.188	O	|	|	|	|	2.07
48.083	0.00	0.21	0.187	O	|	|	|	|	2.06
48.167	0.00	0.21	0.185	O	|	|	|	|	2.06
48.250	0.00	0.21	0.184	O	|	|	|	|	2.06
48.333	0.00	0.21	0.182	O	|	|	|	|	2.06
48.417	0.00	0.21	0.181	O	|	|	|	|	2.05
48.500	0.00	0.21	0.180	O	|	|	|	|	2.05
48.583	0.00	0.21	0.178	O	|	|	|	|	2.05
48.667	0.00	0.21	0.177	O	|	|	|	|	2.04
48.750	0.00	0.21	0.175	O	|	|	|	|	2.04
48.833	0.00	0.21	0.174	O	|	|	|	|	2.04
48.917	0.00	0.21	0.172	O	|	|	|	|	2.04
49.000	0.00	0.21	0.171	O	|	|	|	|	2.03
49.083	0.00	0.21	0.170	O	|	|	|	|	2.03
49.167	0.00	0.21	0.168	O	|	|	|	|	2.03
49.250	0.00	0.21	0.167	O	|	|	|	|	2.03
49.333	0.00	0.21	0.165	O	|	|	|	|	2.02
49.417	0.00	0.21	0.164	O	|	|	|	|	2.02
49.500	0.00	0.21	0.162	O	|	|	|	|	2.02
49.583	0.00	0.21	0.161	O	|	|	|	|	2.02
49.667	0.00	0.21	0.159	O	|	|	|	|	2.01
49.750	0.00	0.21	0.158	O	|	|	|	|	2.01
49.833	0.00	0.21	0.157	O	|	|	|	|	2.01
49.917	0.00	0.21	0.155	O	|	|	|	|	2.01
50.000	0.00	0.21	0.154	O	|	|	|	|	2.00
50.083	0.00	0.21	0.152	O	|	|	|	|	2.00

50.167	0.00	0.21	0.151	O	|	|	|	|	1.99
50.250	0.00	0.21	0.149	O	|	|	|	|	1.97
50.333	0.00	0.20	0.148	O	|	|	|	|	1.95
50.417	0.00	0.20	0.147	O	|	|	|	|	1.93
50.500	0.00	0.20	0.145	O	|	|	|	|	1.91
50.583	0.00	0.20	0.144	O	|	|	|	|	1.89
50.667	0.00	0.20	0.142	O	|	|	|	|	1.87
50.750	0.00	0.20	0.141	O	|	|	|	|	1.86
50.833	0.00	0.20	0.140	O	|	|	|	|	1.84
50.917	0.00	0.20	0.138	O	|	|	|	|	1.82
51.000	0.00	0.20	0.137	O	|	|	|	|	1.80
51.083	0.00	0.20	0.136	O	|	|	|	|	1.78
51.167	0.00	0.20	0.134	O	|	|	|	|	1.77
51.250	0.00	0.19	0.133	O	|	|	|	|	1.75
51.333	0.00	0.19	0.132	O	|	|	|	|	1.73
51.417	0.00	0.19	0.130	O	|	|	|	|	1.71
51.500	0.00	0.19	0.129	O	|	|	|	|	1.70
51.583	0.00	0.19	0.128	O	|	|	|	|	1.68
51.667	0.00	0.19	0.126	O	|	|	|	|	1.66
51.750	0.00	0.19	0.125	O	|	|	|	|	1.65
51.833	0.00	0.19	0.124	O	|	|	|	|	1.63
51.917	0.00	0.19	0.122	O	|	|	|	|	1.61
52.000	0.00	0.19	0.121	O	|	|	|	|	1.59
52.083	0.00	0.19	0.120	O	|	|	|	|	1.58
52.167	0.00	0.18	0.119	O	|	|	|	|	1.56
52.250	0.00	0.18	0.117	O	|	|	|	|	1.54
52.333	0.00	0.18	0.116	O	|	|	|	|	1.53
52.417	0.00	0.18	0.115	O	|	|	|	|	1.51
52.500	0.00	0.18	0.114	O	|	|	|	|	1.49
52.583	0.00	0.18	0.112	O	|	|	|	|	1.48
52.667	0.00	0.18	0.111	O	|	|	|	|	1.46
52.750	0.00	0.18	0.110	O	|	|	|	|	1.45
52.833	0.00	0.18	0.109	O	|	|	|	|	1.43
52.917	0.00	0.18	0.107	O	|	|	|	|	1.41
53.000	0.00	0.17	0.106	O	|	|	|	|	1.40
53.083	0.00	0.17	0.105	O	|	|	|	|	1.38
53.167	0.00	0.17	0.104	O	|	|	|	|	1.37
53.250	0.00	0.17	0.103	O	|	|	|	|	1.35
53.333	0.00	0.17	0.101	O	|	|	|	|	1.34
53.417	0.00	0.17	0.100	O	|	|	|	|	1.32
53.500	0.00	0.17	0.099	O	|	|	|	|	1.30
53.583	0.00	0.17	0.098	O	|	|	|	|	1.29
53.667	0.00	0.17	0.097	O	|	|	|	|	1.27
53.750	0.00	0.17	0.096	O	|	|	|	|	1.26
53.833	0.00	0.17	0.095	O	|	|	|	|	1.24
53.917	0.00	0.16	0.093	O	|	|	|	|	1.23
54.000	0.00	0.16	0.092	O	|	|	|	|	1.21
54.083	0.00	0.16	0.091	O	|	|	|	|	1.20
54.167	0.00	0.16	0.090	O	|	|	|	|	1.18
54.250	0.00	0.16	0.089	O	|	|	|	|	1.17
54.333	0.00	0.16	0.088	O	|	|	|	|	1.16
54.417	0.00	0.16	0.087	O	|	|	|	|	1.14
54.500	0.00	0.16	0.086	O	|	|	|	|	1.13
54.583	0.00	0.16	0.085	O	|	|	|	|	1.11
54.667	0.00	0.16	0.083	O	|	|	|	|	1.10
54.750	0.00	0.16	0.082	O	|	|	|	|	1.08

54.833	0.00	0.15	0.081	O	|	|	|	|	1.07
54.917	0.00	0.15	0.080	O	|	|	|	|	1.06
55.000	0.00	0.15	0.079	O	|	|	|	|	1.04
55.083	0.00	0.15	0.078	O	|	|	|	|	1.03
55.167	0.00	0.15	0.077	O	|	|	|	|	1.01
55.250	0.00	0.15	0.076	O	|	|	|	|	1.00
55.333	0.00	0.15	0.075	O	|	|	|	|	0.99
55.417	0.00	0.15	0.074	O	|	|	|	|	0.97
55.500	0.00	0.15	0.073	O	|	|	|	|	0.96
55.583	0.00	0.15	0.072	O	|	|	|	|	0.95
55.667	0.00	0.14	0.071	O	|	|	|	|	0.93
55.750	0.00	0.14	0.070	O	|	|	|	|	0.92
55.833	0.00	0.14	0.069	O	|	|	|	|	0.91
55.917	0.00	0.14	0.068	O	|	|	|	|	0.90
56.000	0.00	0.14	0.067	O	|	|	|	|	0.88
56.083	0.00	0.14	0.066	O	|	|	|	|	0.87
56.167	0.00	0.14	0.065	O	|	|	|	|	0.86
56.250	0.00	0.14	0.064	O	|	|	|	|	0.84
56.333	0.00	0.14	0.063	O	|	|	|	|	0.83
56.417	0.00	0.14	0.062	O	|	|	|	|	0.82
56.500	0.00	0.14	0.061	O	|	|	|	|	0.81
56.583	0.00	0.13	0.060	O	|	|	|	|	0.80
56.667	0.00	0.13	0.060	O	|	|	|	|	0.78
56.750	0.00	0.13	0.059	O	|	|	|	|	0.77
56.833	0.00	0.13	0.058	O	|	|	|	|	0.76
56.917	0.00	0.13	0.057	O	|	|	|	|	0.75
57.000	0.00	0.13	0.056	O	|	|	|	|	0.74
57.083	0.00	0.13	0.055	O	|	|	|	|	0.72
57.167	0.00	0.13	0.054	O	|	|	|	|	0.71
57.250	0.00	0.13	0.053	O	|	|	|	|	0.70
57.333	0.00	0.13	0.052	O	|	|	|	|	0.69
57.417	0.00	0.12	0.052	O	|	|	|	|	0.68
57.500	0.00	0.12	0.051	O	|	|	|	|	0.67
57.583	0.00	0.12	0.050	O	|	|	|	|	0.66
57.667	0.00	0.12	0.049	O	|	|	|	|	0.64
57.750	0.00	0.12	0.048	O	|	|	|	|	0.63
57.833	0.00	0.12	0.047	O	|	|	|	|	0.62
57.917	0.00	0.12	0.046	O	|	|	|	|	0.61
58.000	0.00	0.12	0.046	O	|	|	|	|	0.60
58.083	0.00	0.12	0.045	O	|	|	|	|	0.59
58.167	0.00	0.12	0.044	O	|	|	|	|	0.58
58.250	0.00	0.12	0.043	O	|	|	|	|	0.57
58.333	0.00	0.12	0.042	O	|	|	|	|	0.56
58.417	0.00	0.11	0.042	O	|	|	|	|	0.55
58.500	0.00	0.11	0.041	O	|	|	|	|	0.54
58.583	0.00	0.11	0.040	O	|	|	|	|	0.53
58.667	0.00	0.11	0.039	O	|	|	|	|	0.52
58.750	0.00	0.11	0.039	O	|	|	|	|	0.51
58.833	0.00	0.11	0.038	O	|	|	|	|	0.50
58.917	0.00	0.11	0.037	O	|	|	|	|	0.49
59.000	0.00	0.11	0.036	O	|	|	|	|	0.48
59.083	0.00	0.10	0.036	O	|	|	|	|	0.47
59.167	0.00	0.10	0.035	O	|	|	|	|	0.46
59.250	0.00	0.10	0.034	O	|	|	|	|	0.45

Remaining water in basin = 0.03 (Ac.Ft)

**********HYDROGRAPH DATA**********

Number of intervals = 711
Time interval = 5.0 (Min.)
Maximum/Peak flow rate = 0.283 (CFS)
Total volume = 1.133 (Ac.Ft)

Status of hydrographs being held in storage

	Stream 1	Stream 2	Stream 3	Stream 4	Stream 5
Peak (CFS)	0.000	0.000	0.000	0.000	0.000
Vol (Ac.Ft)	0.000	0.000	0.000	0.000	0.000

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