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Hydrology & Hydraulics Study
Fallbrook 6 Unit Subdivision
Calavo Road
Fallbrook, California
TM 5350; Log No. 03-02-070

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OBJECTIVE

To calculate 100-year flows and design both storm drain structures and water quality structures for the proposed six unit residential housing development located in Fallbrook, California.

ASSUMPTIONS

1. Flow calculations per San Diego County Hydrology Manual (2003). Rational method for basins less than one mile.
2. Hydraulic Calculations per City of San Diego Drainage Design Manual (1984).
3. Hydrologic Soil Group C obtained from the Hydrologic Soils Groups – Runoff Potential sheet 12 (Bonsall) of the San Diego Regional Soils Interpretation Study.
3. n=0.015 for Concrete Gutters, n=0.075 For Grass Lined Channel, n = 0.15 for RCP Pipe

INTRODUCTION

The proposed development is located on the eastern side of Calavo Road in Fallbrook, California. The project site is approximately 3.7 acres in size with existing 10% slopes. The proposed development will consist of a six-unit subdivision of detached residential structures and a single access road and cul-de-sac.

DISCUSSION

Project Flows

The existing site sheet and channel flows to the east and south extents of the property (See Attachment 2). Currently there are four outfall locations from the project site. They are located within the eastern gutter of Calavo Road southwest of the project (outfall location 1), the middle of the southern extent of the property line (outfall location 2), the southeastern corner of the property (outfall location 3) and about the middle of the eastern extent of the property line (outfall location 4). The proposed development proposed to outfall runoff from the site in the same locations as in the existing conditions. Increases in flow due to the increase in impervious areas shall be mitigated with detention facilities located on each proposed pad (See Attachment 3). Please see Table 1 for a summary of all outfall location pre and post development flows.

Storm water currently flows onto the site from the neighboring homes uphill from the property. Storm water enters the site at the northern and eastern borders (See Attachment 2). It is proposed the all storm water runoff entering the property from the uphill development shall be redirected

through a variety of drainage structures. Please see the tentative map and Attachment 3.

Table 1: Summary of Pre and Post Development Flows

	Existing Conditions						Proposed Conditions					
Outfall	CA	Tc min	I in/hr	A acres	Basin	Q_{100} cfs	CA	Tc min	I in/hr	A acres	Basin	Q_{100} cfs
1	0.02	6.98	7.43	0.05	E-1	0.11	0.02	6.79	7.57	0.06	P-1	0.14
2	0.74	6.96	7.45	2.14	OE-1 & E-2	5.55	0.89	9.76	5.99	2.02	OP-1 & P-2 – P-13	5.09
3	0.30	7.60	7.04	1.00	E-3	2.11	0.37	10.82	5.60	0.95	P-14 & P-17	2.09
4	0.55	5.87	8.32	1.55	OE-2 & E-4	4.57	0.77	10.48	5.72	1.75	OP-2 &P-18 – P-22	4.41
Total	1.61			4.74		12.34	2.15			4.78		11.73

Detention Basins

Due to the increase in coefficient of runoff "C" from the additional impervious areas, a larger volume of peak storm water runoff is expected. In order to mitigate the increase in peak storm water runoff a series of detention basins are proposed for each lot. Each lot will have a 12" diameter PVC storm drain which will serve to hold storm water runoff. Storm water runoff will be controlled through smaller pipes which cap the 12" PVC storm drain (See Attachment 5).

CONCLUSION

Outfall 1 – 0.03 cfs increase
Outfall 2- 0.46 cfs decrease
Outfall 3 – 0.02 cfs decrease
Outfall 4 – 0.16 cfs decrease

As can be seen, the proposed development will decrease the total 100-year 6-hour runoff exiting the site by 0.61 cfs for a decrease of about 4.9%. Outfall location 1 will see an increase of 0.01 acres and an increase of 0.03 cfs in flow. Outfall location 2 will see a decrease in area of 0.12 acres and a decrease in flow of 0.46 cfs. Outfall location 3 will see a decrease in area of 0.05 acres and a decrease in flow of 0.02 cfs. Outfall location 4 will see an increase in area of 0.20 acres and a decrease in flow of 0.16 cfs. A total increase of area of 0.04 acres can be attributed to slight differences in basins and variables in rounding. The decrease in flow is attributed to detention of flow on site and an increase in times of concentrations.

Outfall location 1 will see a slight increase in total peak runoff flow. The other outfall locations

will see a small decrease in total peak runoff.

Upstream drainage facilities shall not be impacted because all flows entering the site shall be captured by brow ditches. On site, flows from pads shall be carried by a serious of vegetated swales located at the perimeters of the pads. Runoff from the proposed access road will be directed at various locations into the detention facilities beneath each of the six lots. There will be no flows leaving the site larger than what currently leaves the site. Furthermore, the eastern and southern edges will be buffered by a vegetated buffer strip. This vegetated strip shall disperse point flows such that no concentrated runoff shall impact downstream neighbors and runoff velocities shall be reduced to pre development levels through the use of riprap. Finally, the detention facilities shall serve to capture runoff from the proposed access road and keep total peak discharges below predevelopment levels.

The vegetated swales located on the homeowners properties are maintenance category one and shall be kept up by the homeowners as part of their regular landscape maintenance. The vegetated buffer strips, the small detention facilities are category two and shall be maintained by a homeowners. Further details on maintenance requirements, funding and categories may be found within the projects storm water management plan.

There are no nearby floodways or watercourses. There is no danger of erosion or siltation occurring from this development because all downstream locations are already developed, riprap is being used and flows are being reduced by detention to predevelopment levels.

HYDROLOGY CALCULATIONS

Existing Conditions

Outfall Location 1

Fallbrook 6-Unit Subdivision
Basin E-1

Rational Method
100 Year Storm

1 AREA (A) = 2062.63 sq.ft. = 0.05 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN	C	0	=	0.30
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=	
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.30

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 666.5 LOW POINT (Hl) = 645

H = Hh- Hl = 21.50 ft. S= 9.0%

L = 239.77 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.05 MILES

Ti= 6.98 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 7.43 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.11 cfs**

Existing Conditions

Outfall Location 2

Fallbrook 6-Unit Subdivision
Basin OE-1

Rational Method
100 Year Storm

1 AREA (A) = 30109.97 sq.ft. = 0.69 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN		0	=	
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A	C	25	=	0.45
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.45

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 681 LOW POINT (Hl) = 663

H = Hh- Hl = 18.00 ft. S= 9.5%

L = 189.83 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.04 MILES

Ti= 5.57 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 8.60 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **2.68 cfs**

Node - E-2-2 to E-2-3 *Basin E-2*

Data				
P_6 =	3.5 in			
P_{24} =	6.0 in			
Area_Basin E-2 (acres)	1.45			
Area_Basin OE-1 (acres)	0.69		Upstream	
C_Basin E-2	0.30			
CA_Upstream	0.31		Upstream	
Basin E-2				
High point	663			
Low point	637.5			
Distance	266.38	Slope=	0.0957	9.57%
Node E-2-2			Upstream	
Ti (min)	5.57			
I (in/hr)	8.60		CA_Basin E-2=	0.43
Q Node E-2-2	2.68		CA_Upstream=	0.31
			SUM CA=	0.74
			Final Area=	2.14 acres
	Natural Channel		$Tt = (11.9*L^3/(Hp-Lp))^{0.385}$	
	Figure 3-4		Summary	
Tt (Kirpich's)	1.39 min		Q Node E-2-3=	5.55 cfs
Tc=Ti+Tt	6.96 min		I=	7.45 in/hr
I $(7.44P_6(Tc)^{-.645})$ =	7.45 in/hr		Tc=	6.96 min
			Sum CA=	0.74
Q Node E-2-3=	**5.55 cfs**		Area=	2.14 acres

Existing Conditions

Outfall Location 3

Fallbrook 6-Unit Subdivision
Basin E-3

Rational Method
100 Year Storm

1 AREA (A) = 43457.26 sq.ft. = 1.00 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN	C	0	=	0.30

CA = 0.30 C = 0.30

3 TIME OF CONCENTRATION (TC) - (NATURAL WATERSHED)

HIGH POINT (Hh) = 665 LOW POINT (Hl) = 630

H = Hh- Hl = 35.00 ft. S= 10.7%

CHANGE IN ELEV. ALONG EFFECTIVE SLOPE LINE= 35.00 ft.

L = 328.15 ft.

Li= 100.00 ft. 0.06 MILES

Lt= 228.15 ft. 0.04 MILES

Ti= 6.55 MIN FROM FIGURE 3-3

Tt= 1.05 MIN FROM FIGURE 3-4

Tc= 7.60 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 7.04 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **2.11 cfs**

Existing Conditions

Outfall Location 4

Fallbrook 6-Unit Subdivision
Basin OE-2

Rational Method
100 Year Storm

1 AREA (A) = 15243.58 sq.ft. = 0.35 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.	
UNDISTURBED NATURAL	OPEN		0	=
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=
COMMERCIAL/INDUSTRIAL	OFFICE		90	=
COMMERCIAL/INDUSTRIAL	LIMITED		90	=
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=

C = 0.54 FOR 40% IMPERVIOUS C = 0.54

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 681 LOW POINT (Hl) = 671

H = Hh- Hl = 10.00 ft. S= 9.0%

L = 111.22 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.02 MILES

Ti= 4.87 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 9.22 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **1.75 cfs**

Node - E-4-2 to E-4-3 *Basin E-4*

Data				
P_6 =	3.5 in			
P_{24} =	6.0 in			
Area_Basin E-4 (acres)	1.20			
Area_Basin OE-2 (acres)	0.35		Upstream	
C_Basin E-4	0.30			
CA_Upstream	0.19		Upstream	
Basin E-4				
High point	671			
Low point	637.5			
Distance	218.62	Slope=	0.1532	15.32%
Node E-4-2			Upstream	
Ti (min)	4.87			
I (in/hr)	9.22		CA_Basin E-4=	0.36
Q Node E-4-2	1.75		CA_Upstream=	0.19
			SUM CA=	0.55
			Final Area=	1.55 acres
	Natural Channel		$Tt = (11.9*L^3/(Hp-Lp))^{0.385}$	
	Figure 3-4		Summary	
Tt (Kirpich's)	1.00 min		Q Node E-4-3=	4.57 cfs
Tc=Ti+Tt	5.87 min		I=	8.32 in/hr
I $(7.44P_6(Tc)^{-.645})$ =	8.32 in/hr		Tc=	5.87 min
			Sum CA=	0.55
Q Node E-4-3=	**4.57 cfs**		Area=	1.55 acres

Proposed Conditions

Outfall Location 1

Fallbrook 6-Unit Subdivision
Basin P-1

Rational Method
100 Year Storm

1 AREA (A) = 2681.64 sq.ft. = 0.06 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN	C	0	=	0.30
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=	
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.30

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 666.5 LOW POINT (Hl) = 646

H = Hh- Hl = 20.50 ft. S= 9.7%

L = 210.48 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.04 MILES

Ti= 6.79 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 7.57 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.14 cfs**

Proposed Conditions

Outfall Location 2

Fallbrook 6-Unit Subdivision
Basin OP-1

Rational Method
100 Year Storm

1 AREA (A) = 36318.13 sq.ft. = 0.83 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN		0	=	
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A	C	25	=	0.45
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.45

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 681 LOW POINT (Hl) = 662

H = Hh- Hl = 19.00 ft. S= 11.1%

L = 170.64 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.03 MILES

Ti= 5.28 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 8.90 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **3.34 cfs**

Node - P-2-2 to P-2-4 *Basin P-2*

Data				
P_6 =	3.5 in			
P_{24} =	6.0 in			
Area_Basin P-2 (acres)	0.11			
Area_Basin OP-1 (acres)	0.83		Upstream	
C_Basin P-2	0.78		80% Impervious	
CA_Upstream	0.38		Upstream	
Basin P-2				
High point	662			
Low point	656.5			
Distance	158.31	Slope=	0.0347	3.47%
Node P-2-2			Upstream	
Ti (min)	5.28			
I (in/hr)	8.90		CA_Basin P-2=	0.09
Q Node P-2-2	3.34		CA_Upstream=	0.38
			SUM CA=	0.46
Assumptions				
Estimate q_avg (cfs/acre)	4		Final Area=	0.95 acres
Qavg	*3.57 cfs*			
Determine Velocity	6" Curb & Gutter			
Velocity	3.67 fps			
Tt	0.72 min			
Tc=Ti+Tt	6.00 min			
I $(7.44P_6(Tc)^{-.645})$ =	8.20 in/hr			
Q_check (must = Est Q_avg)	*3.57 cfs*			
Q Node P-2-4=	**3.80 cfs**			

Summary	
Q Node P-2-4=	3.80 cfs
I=	8.20 in/hr
Tc=	6.00 min
Sum CA=	0.46
Area=	0.95 acres

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*** Street Flow Analysis ***

Upstream (headworks) Elevation = 662.000(Ft.)
Downstream (outlet) Elevation = 656.500(Ft.)
Runoff/Flow Distance = 156.260(Ft.)
Maximum flow rate in channel(s) = 3.570(CFS)

Top of street segment elevation = 662.000(Ft.)
End of street segment elevation = 656.500(Ft.)
Length of street segment = 156.260(Ft.)
Height of curb above gutter flowline = 6.0(In.)
Width of half street (curb to crown) = 18.000(Ft.)
Distance from crown to crossfall grade break = 17.000(Ft.)
Slope from gutter to grade break (v/hz) = 0.020
Slope from grade break to crown (v/hz) = 0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line = 11.000(Ft.)
Slope from curb to property line (v/hz) = 0.025
Gutter width = 1.000(Ft.)
Gutter hike from flowline = 0.240(In.)
Manning's N in gutter = 0.0160
Manning's N from gutter to grade break = 0.0160
Manning's N from grade break to crown = 0.0160

Half street cross section data points:

X-coordinate (Ft.)	Y-coordinate (Ft.)	
0.0000	0.7750	right of way
11.0000	0.5000	top of curb
11.0000	0.0000	flow line
12.0000	0.0200	gutter end
12.0000	0.0200	grade break
29.0000	0.3600	crown

Depth of flow = 0.197(Ft.)
Average velocity = 3.670(Ft/s)
Total flow rate in 1/2 street = 3.570(CFS)
Streetflow hydraulics:
Halfstreet flow width (curb to crown) = 9.863(Ft.)
Average flow velocity = 3.67(Ft/s)

Channel including Gutter and area towards property line:
Flow Width = 1.000(Ft.) Flow Area = 0.187(Sq.Ft)
Velocity = 4.924(Ft/s) Flow Rate = 0.922(CFS)
Froude No. = 2.0052

Channel from outside edge of gutter towards grade break:
Flow Width = 0.000(Ft.) Flow Area = 0.000(Sq.Ft)
Velocity = 0.000(Ft/s) Flow Rate = 0.000(CFS)
Froude No. = 0.0000

Channel from grade break to crown:
Flow Width = 8.862(Ft.) Flow Area = 0.785(Sq.Ft)
Velocity = 3.371(Ft/s) Flow Rate = 2.648(CFS)
Froude No. = 1.9958

Total flow rate in street = 3.570(CFS)

Fallbrook 6-Unit Subdivision
Basin P-3

Rational Method
100 Year Storm

1 AREA (A) = 4733.65 sq.ft. = 0.11 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.	
UNDISTURBED NATURAL	OPEN		0	=
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=
COMMERCIAL/INDUSTRIAL	OFFICE		90	=
COMMERCIAL/INDUSTRIAL	LIMITED		90	=
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=

FOR 38% IMPERVIOUS C = 0.53 C = 0.53

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 660 LOW POINT (Hl) = 656.5

H = Hh- Hl = 3.50 ft. S= 2.9%

L = 119.26 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.02 MILES

Ti= 7.23 MIN MINIMUM TIME OF CONCENTRATION = 5 MINUTES

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 7.27 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.42 cfs**

Junction Equation
Q for Node P-2-4

Arrange from the lowest Tc to highest Tc | T1<T2<T3 |

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Basin P-2	3.80	6.00	8.20	0.95	0.46
Qt2 = Basin P-3	0.42	7.23	7.27	0.11	0.06
				1.06	0.52

Qt1= Q1+(T1/T2)*Q2= 4.14 cfs

Qt2= Q2+(I2/I1)*Q1= 3.78 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q=	4.14 cfs
Tc associated=	6.00 min
Area(acres)=	1.06 acres
I(in/hr)=	8.20 in/hr

Node - P-2-4 to P-2-5 *Basin P-4*

Data				
P_6 =	3.5 in			
P_{24} =	6.0 in			
Area_Basin P-4 (acres)	0.03			
Area_Node P-2-4 (acres)	1.06		Upstream	
C_Basin P-4	0.77		78% Impervious	
CA_Upstream	0.52		Upstream	
Basin P-4				
High point	656.5			
Low point	655.5			
Distance	51.15	Slope=	0.0196	1.96%
Node P-2-4			Upstream	
Ti (min)	6.00			
I (in/hr)	8.20		CA_Basin P-4=	0.02
Q Node P-2-4	4.14		CA_Upstream=	0.52
			SUM CA=	0.54
Assumptions				
Estimate q_avg (cfs/acre)	6.2		Final Area=	1.08 acres
Qavg	*4.23 cfs*			
Determine Velocity	6" Curb & Gutter			
Velocity	3.14 fps			
Tt	0.27 min		Summary	
Tc=Ti+Tt	6.27 min		Q Node P-2-5=	4.31 cfs
I $(7.44P_6(Tc)^{-.645})$ =	7.97 in/hr		I=	7.97 in/hr
			Tc=	6.27 min
			Sum CA=	0.54
Q_check (must = Est Q_avg)	*4.23 cfs*		Area=	1.08 acres
Q Node P-2-5=	**4.31 cfs**			

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*** Street Flow Analysis ***

Upstream (headworks) Elevation = 656.500(Ft.)
Downstream (outlet) Elevation = 655.500(Ft.)
Runoff/Flow Distance = 51.150(Ft.)
Maximum flow rate in channel(s) = 4.230(CFS)

Top of street segment elevation = 656.500(Ft.)
End of street segment elevation = 655.500(Ft.)
Length of street segment = 51.150(Ft.)
Height of curb above gutter flowline = 6.0(In.)
Width of half street (curb to crown) = 18.000(Ft.)
Distance from crown to crossfall grade break = 16.500(Ft.)
Slope from gutter to grade break (v/hz) = 0.020
Slope from grade break to crown (v/hz) = 0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line = 11.000(Ft.)
Slope from curb to property line (v/hz) = 0.025
Gutter width = 1.500(Ft.)
Gutter hike from flowline = 2.000(In.)
Manning's N in gutter = 0.0150
Manning's N from gutter to grade break = 0.0160
Manning's N from grade break to crown = 0.0160

Half street cross section data points:

X-coordinate (Ft.)	Y-coordinate (Ft.)	
0.0000	0.7750	right of way
11.0000	0.5000	top of curb
11.0000	0.0000	flow line
12.5000	0.1667	gutter end
12.5000	0.1667	grade break
29.0000	0.4967	crown

Depth of flow = 0.360(Ft.)
Average velocity = 3.136(Ft/s)
Total flow rate in 1/2 street = 4.230(CFS)
Streetflow hydraulics:
Halfstreet flow width (curb to crown) = 11.164(Ft.)
Average flow velocity = 3.14(Ft/s)

Channel including Gutter and area towards property line:
Flow Width = 1.500(Ft.) Flow Area = 0.415(Sq.Ft)
Velocity = 4.609(Ft/s) Flow Rate = 1.912(CFS)
Froude No. = 1.5445

Channel from outside edge of gutter towards grade break:
Flow Width = 0.000(Ft.) Flow Area = 0.000(Sq.Ft)
Velocity = 0.000(Ft/s) Flow Rate = 0.000(CFS)
Froude No. = 0.0000

Channel from grade break to crown:
Flow Width = 9.664(Ft.) Flow Area = 0.934(Sq.Ft)
Velocity = 2.482(Ft/s) Flow Rate = 2.318(CFS)
Froude No. = 1.4069

Total flow rate in street = 4.230(CFS)

At Node P-2-5, Diverted 0.81 cfs & 0.20 ac to Basin P-16
At Node P-2-5, Diverted 1.45 cfs & 0.34 ac to Basin P-18

Node - P-2-5 to P-2-7 *Basin P-5*

Data				
P_6 =	3.5 in			
P_{24} =	6.0 in			
Area_Basin P-5 (acres)	0.05			
Area_Node P-2-5 (acres)	0.54		Upstream	
C_Basin P-5	0.74		73% Impervious	
CA_Upstream	0.27		Upstream	
Basin P-5				
High point	655.5			
Low point	655.36			
Distance	69.75	Slope=	0.0020	0.20%
Node P-2-5			Upstream	
Ti (min)	6.27			
I (in/hr)	7.97		CA_Basin P-5=	0.03
Q Node P-2-5	2.05		CA_Upstream=	0.27
			SUM CA=	0.30
Assumptions				
Estimate q_avg (cfs/acre)	3.1		Final Area=	0.59 acres
Qavg	*2.12 cfs*			
Determine Velocity	6" Curb & Gutter			
Velocity	1.12 fps			
Tt	1.04 min			
Tc=Ti+Tt	7.31 min			
I $(7.44P_6(Tc)^{-.645})$ =	7.22 in/hr			
Q_check (must = Est Q_avg)	*2.12 cfs*			
Q Node P-2-7=	**2.20 cfs**			

Summary	
Q Node P-2-7=	2.20 cfs
I=	7.22 in/hr
Tc=	7.31 min
Sum CA=	0.30
Area=	0.59 acres

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-------------------------------------------------------------------
                *** Street Flow Analysis ***

        Upstream (headworks) Elevation =    655.500(Ft.)
        Downstream (outlet) Elevation =    655.360(Ft.)
        Runoff/Flow Distance =     69.750(Ft.)
        Maximum flow rate in channel(s) =      2.120(CFS)
-------------------------------------------------------------------


Top of street segment elevation =    655.500(Ft.)
End of street segment elevation =    655.360(Ft.)
Length of street segment  =    69.750(Ft.)
Height of curb above gutter flowline  =    6.0(In.)
Width of half street (curb to crown)  =  18.000(Ft.)
Distance from crown to crossfall grade break  =  16.500(Ft.)
Slope from gutter to grade break (v/hz) =   0.020
Slope from grade break to crown (v/hz)  =   0.020
Street flow is on [1] side(s) of the street
Distance from curb to property line  =  11.000(Ft.)
Slope from curb to property line (v/hz) =   0.025
Gutter width =   1.500(Ft.)
Gutter hike from flowline =  2.000(In.)
 Manning's N in gutter =  0.0150
 Manning's N from gutter to grade break =  0.0160
 Manning's N from grade break to crown =  0.0160

Half street cross section data points:
   X-coordinate (Ft.)    Y-coordinate (Ft.)
              0.0000                0.7750 right of way
             11.0000                0.5000 top of curb
             11.0000                0.0000 flow line
             12.5000                0.1667 gutter end
             12.5000                0.1667 grade break
             29.0000                0.4967 crown
Depth of flow =   0.405(Ft.)
Average velocity =   1.117(Ft/s)
Total flow rate in 1/2 street =   2.120(CFS)
Streetflow hydraulics:
Halfstreet flow width (curb to crown) =  13.398(Ft.)
Average flow velocity =   1.12(Ft/s)

Channel including Gutter and area towards property line:
        Flow Width =      1.500(Ft.)   Flow Area =      0.482(Sq.Ft)
        Velocity =      1.647(Ft/s)  Flow Rate =      0.794(CFS)
        Froude No. = 0.5121

Channel from outside edge of gutter towards grade break:
        Flow Width =      0.000(Ft.)   Flow Area =      0.000(Sq.Ft)
        Velocity =      0.000(Ft/s)  Flow Rate =      0.000(CFS)
        Froude No. = 0.0000

Channel from grade break to crown:
        Flow Width =     11.898(Ft.)   Flow Area =      1.416(Sq.Ft)
        Velocity =      0.937(Ft/s)  Flow Rate =      1.326(CFS)
        Froude No. = 0.4786

Total flow rate in street =      2.120(CFS)


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Fallbrook 6-Unit Subdivision
Basin P-6

Rational Method
100 Year Storm

1 AREA (A) = 4118.52 sq.ft. = 0.09 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.	
UNDISTURBED NATURAL	OPEN		0	=
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=
COMMERCIAL/INDUSTRIAL	OFFICE		90	=
COMMERCIAL/INDUSTRIAL	LIMITED		90	=
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=

FOR 83% IMPERVIOUS C = 0.80 C = 0.80

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 659.8 LOW POINT (Hl) = 655.36

H = Hh- Hl = 4.44 ft. S= 3.3%

L = 136.59 ft.

L_M= 85.00 ft. FROM TABLE 3-2. 0.03 MILES

Ti= 3.40 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 9.22 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.70 cfs**

Junction Equation
Q for Node P-2-7

Arrange from the lowest Tc to highest Tc | T1<T2<T3 |

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Basin P-6	0.70	3.40	9.22	0.09	0.08
Qt2 = Basin P-5	2.20	7.31	7.22	0.59	0.30
				0.68	0.38

Qt1= Q1+(T1/T2)*Q2= 1.72 cfs

Qt2= Q2+(I2/I1)*Q1= 2.75 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q=	2.75 cfs
Tc associated=	7.31 min
Area(acres)=	0.68 acres
I(in/hr)=	7.22 in/hr

Enters into Detention Systems. 1/2 on Basin P-7 and 1/2 on Basin P-8

Fallbrook 6-Unit Subdivision
Basin P-7

Rational Method
100 Year Storm

1 AREA (A) = 10896.33 sq.ft. = 0.25 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN		0	=	
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=	
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A	C	30	=	0.48
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.48

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 654 LOW POINT (Hl) = 652

H = Hh- Hl = 2.00 ft. S= 0.9%

L = 214.34 ft.

L_M= 50.00 ft. FROM TABLE 3-2. 0.04 MILES

Ti= 8.07 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 6.77 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.81 cfs**

From Detention in Basin P-7 Q (cfs) = 0.94 Area (AC) = 0.34
C = 0.56 Tc (min) = 13.10 I (in/hr) = 4.95

Junction Equation
Q for Node P-2-9

Arrange from the lowest Tc to highest Tc T1<T2<T3

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Basin P-7	0.81	8.07	6.77	0.25	0.12
Qt2 = Detention P-7	0.94	13.10	4.95	0.34	0.19
				0.59	0.31

Qt1= Q1+(T1/T2)*Q2= 1.39 cfs

Qt2= Q2+(I2/I1)*Q1= 1.54 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q= 1.54 cfs
Tc associated= 13.10 min
Area(acres)= 0.59 acres
I(in/hr)= 4.95 in/hr

Fallbrook 6-Unit Subdivision
Basin P-8

Rational Method
100 Year Storm

1 AREA (A) = 16124.21 sq.ft. = 0.37 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN		0	=	
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A	C	25	=	0.45
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.45

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 653 LOW POINT (Hl) = 649

H = Hh- Hl = 4.00 ft. S= 1.9%

L = 208.27 ft.

L_M= 70.00 ft. FROM TABLE 3-2. 0.04 MILES

Ti= 7.89 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 6.87 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **1.14 cfs**

From Detention in Basin P-7 Q (cfs) = 1.26 Area (AC) = 0.34
C = 0.56 Tc (min) = 8.40 I (in/hr) = 6.60

Junction Equation
Q for Node P-2-13

Arrange from the lowest Tc to highest Tc T1<T2<T3

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Basin P-8	1.14	7.89	6.87	0.37	0.17
Qt2 = Detention P-5	1.26	8.40	6.60	0.34	0.19
				0.71	0.36

Qt1= Q1+(T1/T2)*Q2= 2.32 cfs

Qt2= Q2+(I2/I1)*Q1= 2.36 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q= 2.36 cfs
Tc associated= 8.40 min
Area(acres)= 0.71 acres
I(in/hr)= 6.60 in/hr

Area Add
Basin P-9 Nodes 2-11 to 2-13
Area = 0.13 acres C = 0.30 I = 6.60 in/hr
Q = 0.25 cfs

Area Add
Basin P-10 Nodes 2-12 to 2-13
Area = 0.10 acres C = 0.30 I = 6.60 in/hr
Q = 0.19 cfs

Sum Total at Node P 2-13 Q = 2.80 cfs A = 0.94 acres
CA = 0.42

Fallbrook 6-Unit Subdivision
Basin P-11

Rational Method
100 Year Storm

1 AREA (A) = 2403.08 sq.ft. = 0.06 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.	
UNDISTURBED NATURAL	OPEN		0	=
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=
COMMERCIAL/INDUSTRIAL	OFFICE		90	=
COMMERCIAL/INDUSTRIAL	LIMITED		90	=
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=

FOR 81% IMPERVIOUS C = 0.79 C = 0.79

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 662.1 LOW POINT (Hl) = 659.8

H = Hh- Hl = 2.30 ft. S= 2.2%

L = 106.48 ft.

L_M= 75.00 ft. FROM TABLE 3-2. 0.02 MILES

Ti= 3.80 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 9.22 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.40 cfs**

Fallbrook 6-Unit Subdivision
Basin P-12

Rational Method
100 Year Storm

1 AREA (A) = 17070.21 sq.ft. = 0.39 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN		0	=	
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A	C	25	=	0.45
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.45

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 654 LOW POINT (Hl) = 651.95

H = Hh- Hl = 2.05 ft. S= 1.0%

L = 203.08 ft.

L_M= 70.00 ft. FROM TABLE 3-2. 0.04 MILES

Ti= 9.76 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 5.99 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **1.06 cfs**

From Detention in Basin P-12 Q (cfs) = 0.32 Area (AC) = 0.06
C = 0.79 Tc (min) = 6.99 I (in/hr) = 7.43

Junction Equation
Q for Node P-2-18

Arrange from the lowest Tc to highest Tc T1<T2<T3

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Detention P-12	0.32	6.99	7.43	0.06	0.04
Qt2 = Basin P-12	1.06	9.76	5.99	0.39	0.18
				0.45	0.22

Qt1= Q1+(T1/T2)*Q2= 1.08 cfs

Qt2= Q2+(I2/I1)*Q1= 1.32 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q= 1.32 cfs
Tc associated= 9.76 min
Area(acres)= 0.45 acres
I(in/hr)= 5.99 in/hr

Area Add
Basin P-13 Nodes 2-17 to 2-18
Area = 0.05 acres C = 0.30 I = 5.99 in/hr
Q = 0.09 cfs
Area Add

Sum Total at Node P 2-18 Q = 1.40 cfs A = 0.50 acres
CA = 0.23

Junction Equation
Q for Area 2

Arrange from the lowest Tc to highest Tc | T1<T2<T3 |

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Node P-2-13	2.80	8.40	6.60	0.94	0.42
Qt2 = Node P-2-18	1.40	9.76	5.99	0.50	0.23
Qt3 = Node P-2-9	1.54	13.10	4.95	0.59	0.23
				2.02	0.89

Qt1= Q1+(T1/T2)*Q2+(T1/T3*Q3)= 4.99 cfs

Qt2= Q2+(I2/I1)*Q1+(T2/T3*Q3)= 5.09 cfs

Qt3= Q3+(I3/I1)*Q1+(I3/I2*Q2)= 4.79 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Qt=	5.09 cfs
Tc associated=	9.76 min
Area(acres)=	2.02 acres
I(in/hr)=	5.99 in/hr

Proposed Conditions

Outfall Location 3

Fallbrook 6-Unit Subdivision
Basin P-14

Rational Method
100 Year Storm

1 AREA (A) = 11468.28 sq.ft. = 0.26 ACRES

2 COEFFICIENT OF RUNOFF (C)

COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN	C	0	=	0.30
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=	
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.30

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 637.8 LOW POINT (Hl) = 629

H = Hh- Hl = 8.80 ft. S= 4.3%

L = 204.57 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.04 MILES

Ti= 8.90 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 6.36 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.50 cfs**

Fallbrook 6-Unit Subdivision
Basin P-15

Rational Method
100 Year Storm

1 AREA (A) = 5683.69 sq.ft. = 0.13 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN	C	0	=	0.30
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=	
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.30

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 639.4 LOW POINT (Hl) = 629

H = Hh- Hl = 10.40 ft. S= 8.2%

L = 126.08 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.02 MILES

Ti= 7.18 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 7.30 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.29 cfs**

Junction Equation
Q for Node P-3-3

Arrange from the lowest Tc to highest Tc | T1<T2<T3 |

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Basin P-14	0.29	7.18	7.30	0.13	0.04
Qt2 = Basin P-13	0.50	8.90	6.36	0.26	0.08
				0.39	0.12

Qt1= Q1+(T1/T2)*Q2= 0.69 cfs

Qt2= Q2+(I2/I1)*Q1= 0.75 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q=	0.75 cfs
Tc associated=	8.90 min
Area(acres)=	0.39 acres
I(in/hr)=	6.36 in/hr

Fallbrook 6-Unit Subdivision
Basin P-16

Rational Method
100 Year Storm

1 AREA (A) = 11701.48 sq.ft. = 0.27 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN		0	=	
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=	
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A	C	30	=	0.48
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.48

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 654 LOW POINT (Hl) = 652.2

H = Hh- Hl = 1.80 ft. S= 1.0%

L = 175.43 ft.

L_M= 70.00 ft. FROM TABLE 3-2. 0.03 MILES

Ti= 9.26 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 6.20 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.80 cfs**

From Detention in Basin P-16 Q (cfs) = 0.56 Area (AC) = 0.20
C = 0.50 Tc (min) = 10.82 I (in/hr) = 5.60

Junction Equation
Q for Node P-3-6

Arrange from the lowest Tc to highest Tc T1<T2<T3

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Basin P-16	0.80	9.26	6.20	0.27	0.13
Qt2 = Detention P-16	0.56	10.82	5.60	0.20	0.10
				0.47	0.23

Qt1= Q1+(T1/T2)*Q2= 1.28 cfs

Qt2= Q2+(I2/I1)*Q1= 1.28 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q= 1.28 cfs
Tc associated= 10.82 min
Area(acres)= 0.47 acres
I(in/hr)= 5.60 in/hr

Area Add
Basin P-17 Nodes 3-5 to 3-6
Area = 0.09 acres C = 0.30 I = 5.60 in/hr
Q = 0.15 cfs
Area Add

Sum Total at Node P 3-6 Q = 1.43 cfs A = 0.56 acres
CA = 0.26

Junction Equation
Q for Area 3

Arrange from the lowest Tc to highest Tc | T1<T2<T3 |

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Node P-3-3	0.75	8.90	6.36	0.39	0.12
Qt2 = Node P-3-6	1.43	10.82	5.60	0.56	0.26
				0.95	0.37

Qt1= Q1+(T1/T2)*Q2= 1.93 cfs

Qt2= Q2+(I2/I1)*Q1= 2.09 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q=	2.09 cfs
Tc associated=	10.82 min
Area(acres)=	0.95 acres
I(in/hr)=	5.60 in/hr

Fallbrook 6-Unit Subdivision
Basin P-18

Rational Method
100 Year Storm

1 AREA (A) = 16093.18 sq.ft. = 0.37 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN		0	=	
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A	C	25	=	0.45
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.45

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 653 LOW POINT (Hl) = 651

H = Hh- Hl = 2.00 ft. S= 1.0%

L = 206.80 ft.

L_M= 70.00 ft. FROM TABLE 3-2. 0.04 MILES

Ti= 9.90 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 5.94 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **0.99 cfs**

From Detention in Basin P-18 Q (cfs) = 0.97 Area (AC) = 0.34
C = 0.50 Tc (min) = 10.48 I (in/hr) = 5.72

Junction Equation
Q for Node P-4-4

Arrange from the lowest Tc to highest Tc T1<T2<T3

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Basin P-18	0.99	9.90	5.94	0.37	0.17
Qt2 = Detention P-18	0.97	10.48	5.72	0.34	0.17
				0.71	0.34

Qt1= Q1+(T1/T2)*Q2= 1.90 cfs

Qt2= Q2+(I2/I1)*Q1= 1.92 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q= 1.92 cfs
Tc associated= 10.48 min
Area(acres)= 0.71 acres
I(in/hr)= 5.72 in/hr

Area Add
Basin P-19 Nodes 4-11 to 4-13
Area = 0.13 acres C = 0.30 I = 5.72 in/hr
Q = 0.22 cfs

Area Add
Basin P-20 Nodes 4-12 to 4-13
Area = 0.13 acres C = 0.30 I = 5.72 in/hr
Q = 0.23 cfs

Sum Total at Node P 4-4 Q = 2.37 cfs A = 0.97 acres
CA = 0.41

Fallbrook 6-Unit Subdivision
Basin OP-2

Rational Method
100 Year Storm

1 AREA (A) = 11484.74 sq.ft. = 0.26 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.	
UNDISTURBED NATURAL	OPEN		0	=
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=
COMMERCIAL/INDUSTRIAL	OFFICE		90	=
COMMERCIAL/INDUSTRIAL	LIMITED		90	=
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=

C = 0.54 FOR 40% IMPERVIOUS C = 0.54

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 681 LOW POINT (Hl) = 663

H = Hh- Hl = 18.00 ft. S= 8.3%

L = 217.37 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.04 MILES

Ti= 5.01 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 9.21 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **1.31 cfs**

Fallbrook 6-Unit Subdivision
Basin P-21

Rational Method
100 Year Storm

1 AREA (A) = 17125.71 sq.ft. = 0.39 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN		0	=	
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A	C	25	=	0.45
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.45

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 660 LOW POINT (Hl) = 657.3

H = Hh- Hl = 2.70 ft. S= 1.0%

L = 269.61 ft.

L_M= 70.00 ft. FROM TABLE 3-2. 0.05 MILES

Ti= 9.78 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 5.98 IN/HR ($I=7.44P_6(T_C)^{-.645}$)

5 RUNOFF (Q)

Q = CIA = **1.06 cfs**

From Detention in Basin P-21 Q (cfs) = 0.96 Area (AC) = 0.26
C = 0.54 Tc (min) = 8.16 I (in/hr) = 6.72

Junction Equation
Q for Node P-4-8

Arrange from the lowest Tc to highest Tc T1<T2<T3

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Detention P-21	0.96	8.16	6.72	0.26	0.14
Qt2 = Basin P-21	1.06	9.78	5.98	0.39	0.18
				0.66	0.32

Qt1= Q1+(T1/T2)*Q2= 1.84 cfs

Qt2= Q2+(I2/I1)*Q1= 1.91 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Q= 1.91 cfs
Tc associated= 9.78 min
Area(acres)= 0.66 acres
I(in/hr)= 5.98 in/hr

Fallbrook 6-Unit Subdivision
Basin P-22

Rational Method
100 Year Storm

1 AREA (A) = 5421.58 sq.ft. = 0.12 ACRES

2 COEFFICIENT OF RUNOFF (C) COEFFICIENT "C"

LAND USE NRCS ELEMENTS	DENSITY	SOIL TYPE	% IMPERV.		
UNDISTURBED NATURAL	OPEN	C	0	=	0.30
LOW DENSITY RESIDENTIAL	1.0 DU/A		10	=	
LOW DENSITY RESIDENTIAL	2.0 DU/A		20	=	
LOW DENSITY RESIDENTIAL	2.9 DU/A		25	=	
MEDIUM DENSITY RESIDENTIAL	4.3 DU/A		30	=	
MEDIUM DENSITY RESIDENTIAL	7.3 DU/A		40	=	
MEDIUM DENSITY RESIDENTIAL	10.9 DU/A		45	=	
MEDIUM DENSITY RESIDENTIAL	14.5 DU/A		50	=	
HIGH DENSITY RESIDENTIAL	24 DU/A		65	=	
HIGH DENSITY RESIDENTIAL	43.0 DU/A		80	=	
COMMERCIAL/INDUSTRIAL	NEIGH.		80	=	
COMMERCIAL/INDUSTRIAL	GEN. COM.		85	=	
COMMERCIAL/INDUSTRIAL	OFFICE		90	=	
COMMERCIAL/INDUSTRIAL	LIMITED		90	=	
COMMERCIAL/INDUSTRIAL	GEN. IND.		95	=	
				C =	0.30

3 TIME OF CONCENTRATION (TC)

HIGH POINT (Hh) = 663 LOW POINT (Hl) = 640.9

H = Hh- Hl = 22.10 ft. S= 9.3%

L = 237.74 ft.

L_M= 100.00 ft. FROM TABLE 3-2. 0.05 MILES

Ti= 6.90 MIN

4 INTENSITY (I) FOR FREQUENCY YEAR 100

SEE ATTACHMENT 1 FOR PRECIPITATION MAPS FROM THE SAN DIEGO COUNTY HYDROLOGY MANUAL

A) P_6 = 3.5 P_{24} = 6.0 P_6/P_{24} = 58.3%

B) P_6(ADJUSTED) = 3.5

C) I = 7.49 IN/HR ($I=7.44P_6(T_C)^{-0.645}$)

5 RUNOFF (Q)

Q = CIA = **0.28 cfs**

Junction Equation
Q for Area 4

Arrange from the lowest Tc to highest Tc | T1<T2<T3 |

System	Q(cfs)	Tc(min)	I(in/hr)	A(acres)	Sum CA
Qt1 = Basin P-4-10	0.28	6.90	7.49	0.12	0.04
Qt2 = Basin P-4-8	1.91	9.78	5.98	0.66	0.32
Qt3 = Basin P-4-4	2.37	10.48	5.72	0.97	0.41
				1.75	0.77

Qt1= Q1+(T1/T2)*Q2+(T1/T3*Q3)= 3.19 cfs

Qt2= Q2+(I2/I1)*Q1+(T2/T3*Q3)= 4.34 cfs

Qt3= Q3+(I3/I1)*Q1+(I3/I2*Q2)= 4.41 cfs

Select the largest Q and use the Tc associated with that Q:
If Q's are equal, use the lowest value:

Largest Qt=	4.41 cfs
Tc associated=	10.48 min
Area(acres)=	1.75 acres
I(in/hr)=	5.72 in/hr

Water Quality Flows

Water Quality Flows

Intensity = 0.2 in/hr
For 6 hour storm
Intensity = 6x0.2 = 1.2 in

Outfall 2
C = 0.44
A = 2.02 acres
Qwq = 0.44x1.2x2.14 = 1.07 cfs

Outfall 3
C = 0.39
A = 0.95 acres
Qwq = 0.39x1.2x0.95 = 0.44 cfs

Outfall 4
C = 0.44
A = 1.75 acres
Qwq = 0.44x1.2x1.75 = 0.92 cfs

HYDRAULIC CALCULATIONS

Proposed Conditions

Outfall Location 4

Capacity Check for Lot 1 Slope Drain
SDRSD D-75 Type B Modified
Q = 1.46 cfs (Basins P-11 + P-12)
Assumes drain pipe clogged.

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	24.0000 in
Flowrate	1.4600 cfs
Slope	0.5000 ft/ft
Manning's n	0.0150

Computed Results:

Depth	1.7356 in
Area	3.1416 ft2
Wetted Area	0.1014 ft2
Wetted Perimeter	13.0687 in
Perimeter	75.3982 in
Velocity	14.3935 fps
Hydraulic Radius	1.1177 in
Percent Full	7.2315 %
Full flow Flowrate	138.6359 cfs
Full flow velocity	44.1292 fps

Critical Information

Critical depth	5.0121 in
Critical slope	0.0061 ft/ft
Critical velocity	3.0685 fps
Critical area	0.4758 ft2
Critical perimeter	22.7811 in
Critical hydraulic radius	3.0076 in
Critical top width	19.5110 in
Specific energy	3.3642 ft
Minimum energy	0.6265 ft
Froude number	8.1098
Flow condition	Supercritical

Capacity Check for Lot 2 Slope Drain
SDRSD D-75 Type B Modified
Q = 3.015 cfs, (Basin P-8 + 1/2 Node P-2-7)

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	24.0000 in
Flowrate	3.0150 cfs
Slope	0.5000 ft/ft
Manning's n	0.0150

Computed Results:

Depth	2.4471 in
Area	3.1416 ft2
Wetted Area	0.1682 ft2
Wetted Perimeter	15.6003 in
Perimeter	75.3982 in
Velocity	17.9218 fps
Hydraulic Radius	1.5529 in
Percent Full	10.1962 %
Full flow Flowrate	138.6359 cfs
Full flow velocity	44.1292 fps

Critical Information

Critical depth	7.2729 in
Critical slope	0.0059 ft/ft
Critical velocity	3.7508 fps
Critical area	0.8038 ft2
Critical perimeter	27.9815 in
Critical hydraulic radius	4.1367 in
Critical top width	22.0594 in
Specific energy	5.1954 ft
Minimum energy	0.9091 ft
Froude number	8.4750
Flow condition	Supercritical

Capacity Check for Lot 3 Slope Drain
SDRSD D-75 Type B Modified
Q = 2.185 cfs, (Basin P-7 + 1/2 Node P-2-7)

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	24.0000 in
Flowrate	2.1850 cfs
Slope	0.5000 ft/ft
Manning's n	0.0150

Computed Results:

Depth	2.1000 in
Area	3.1416 ft2
Wetted Area	0.1344 ft2
Wetted Perimeter	14.4142 in
Perimeter	75.3982 in
Velocity	16.2624 fps
Hydraulic Radius	1.3423 in
Percent Full	8.7500 %
Full flow Flowrate	138.6359 cfs
Full flow velocity	44.1292 fps

Critical Information

Critical depth	6.1620 in
Critical slope	0.0060 ft/ft
Critical velocity	3.4266 fps
Critical area	0.6377 ft2
Critical perimeter	25.5051 in
Critical hydraulic radius	3.6002 in
Critical top width	20.9683 in
Specific energy	4.2849 ft
Minimum energy	0.7702 ft
Froude number	8.3155
Flow condition	Supercritical

Capacity Check for Lot 4 Slope Drain
SDRSD D-75 Type B Modified
Q = 1.61 cfs, (Basin P-16 + 0.81 cfs diversion from Node P-2-5))

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	24.0000 in
Flowrate	1.6100 cfs
Slope	0.5000 ft/ft
Manning's n	0.0150

Computed Results:

Depth	1.8175 in
Area	3.1416 ft2
Wetted Area	0.1086 ft2
Wetted Perimeter	13.3819 in
Perimeter	75.3982 in
Velocity	14.8267 fps
Hydraulic Radius	1.1685 in
Percent Full	7.5730 %
Full flow Flowrate	138.6359 cfs
Full flow velocity	44.1292 fps

Critical Information

Critical depth	5.2691 in
Critical slope	0.0060 ft/ft
Critical velocity	3.1510 fps
Critical area	0.5110 ft2
Critical perimeter	23.4076 in
Critical hydraulic radius	3.1433 in
Critical top width	19.8691 in
Specific energy	3.5677 ft
Minimum energy	0.6586 ft
Froude number	8.1601
Flow condition	Supercritical

Capacity Check for Lot 5 Slope Drain
SDRSD D-75 Type B Modified
Q = 2.25 cfs, (Basin P-18 + 1.45 cfs diversion from Node P-2-5)

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	24.0000 in
Flowrate	2.2500 cfs
Slope	0.5000 ft/ft
Manning's n	0.0150

Computed Results:

Depth	2.1294 in
Area	3.1416 ft2
Wetted Area	0.1371 ft2
Wetted Perimeter	14.5179 in
Perimeter	75.3982 in
Velocity	16.4071 fps
Hydraulic Radius	1.3602 in
Percent Full	8.8724 %
Full flow Flowrate	138.6359 cfs
Full flow velocity	44.1292 fps

Critical Information

Critical depth	6.2555 in
Critical slope	0.0060 ft/ft
Critical velocity	3.4546 fps
Critical area	0.6513 ft2
Critical perimeter	25.7186 in
Critical hydraulic radius	3.6467 in
Critical top width	21.0713 in
Specific energy	4.3608 ft
Minimum energy	0.7819 ft
Froude number	8.3302
Flow condition	Supercritical

Capacity Check for Lot 6 Slope Drain
SDRSD D-75 Type B Modified
Q = 2.30 cfs, (Basin OP-2 + Basin P-18)

Manning Pipe Calculator

Given Input Data:

Shape	Circular
Solving for	Depth of Flow
Diameter	24.0000 in
Flowrate	2.3000 cfs
Slope	0.5000 ft/ft
Manning's n	0.0150

Computed Results:

Depth	2.1517 in
Area	3.1416 ft2
Wetted Area	0.1393 ft2
Wetted Perimeter	14.5962 in
Perimeter	75.3982 in
Velocity	16.5164 fps
Hydraulic Radius	1.3738 in
Percent Full	8.9654 %
Full flow Flowrate	138.6359 cfs
Full flow velocity	44.1292 fps

Critical Information

Critical depth	6.3265 in
Critical slope	0.0059 ft/ft
Critical velocity	3.4757 fps
Critical area	0.6617 ft2
Critical perimeter	25.8802 in
Critical hydraulic radius	3.6819 in
Critical top width	21.1482 in
Specific energy	4.4186 ft
Minimum energy	0.7908 ft
Froude number	8.3412
Flow condition	Supercritical

Pad Swale Capacity Calculation

Lot 1	Basin P-12	Q = 1.06 cfs
Lot 2	Basin P-8	Q = 1.14 cfs
Lot 3	Basin P-7	Q = 0.81 cfs
Lot 4	Basin P-16	Q = 0.80 cfs
Lot 5	Basin P-18	Q = 0.99 cfs
Lot 6	Basin P-21	Q = 1.06 cfs

Channel Calculator

Given Input Data:

Shape ..... Trapezoidal
Solving for ..... Flowrate
Slope ..... 0.0100 ft/ft
Manning's n 0.0450
Depth ..... 6.0000 in
Height ..... 6.0000 in
Bottom width ..... 0.0000 in
Left slope ..... 0.2000 ft/ft (V/H)
Right slope ..... 0.2000 ft/ft (V/H)

Computed Results:

Flowrate ..... 1.6168 cfs
Velocity ..... 1.2935 fps
Full Flowrate ..... 1.6168 cfs
Flow area 1.2500 ft2
Flow perimeter ..... 61.1882 in
Hydraulic radius ..... 2.9417 in
Top width ..... 60.0000 in
Area 1.2500 ft2
Perimeter ..... 61.1882 in
Percent full ..... 100.0000 %

Critical Information

Critical depth ..... 4.3829 in
Critical slope ..... 0.0534 ft/ft
Critical velocity ..... 2.4240 fps
Critical area 0.6670 ft2
Critical perimeter ..... 44.6973 in
Critical hydraulic radius ..... 2.1489 in
Critical top width ..... 43.8293 in
Specific energy ..... 0.5260 ft
Minimum energy ..... 0.5479 ft
Froude number 0.4561
Flow condition ..... Subcritical

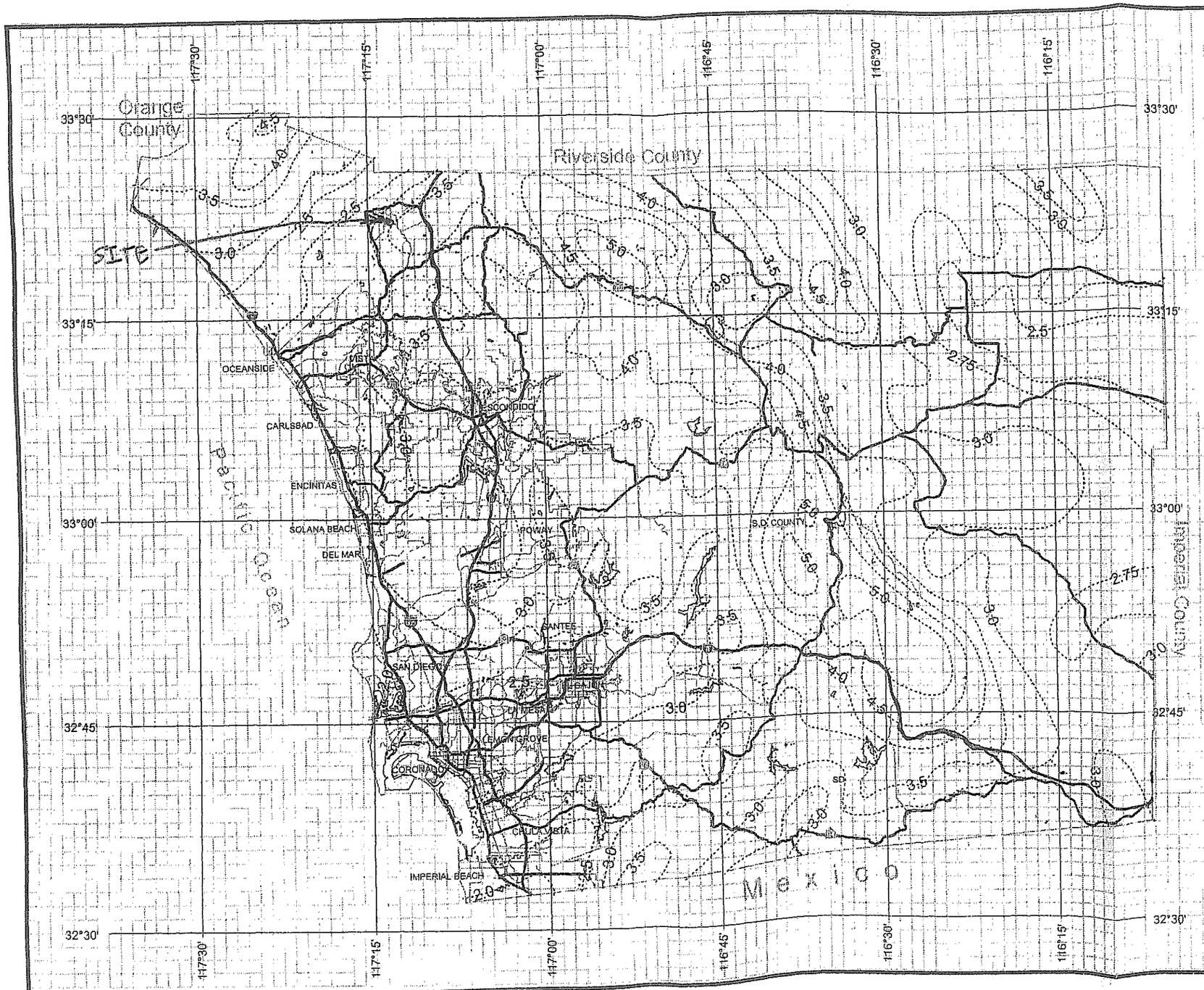
ATTACHMENT 1

County of San Diego Hydrology Manual

Rainfall Isopluvials

100 Year Rainfall Event - 6 Hours

Isopluvial (inches)



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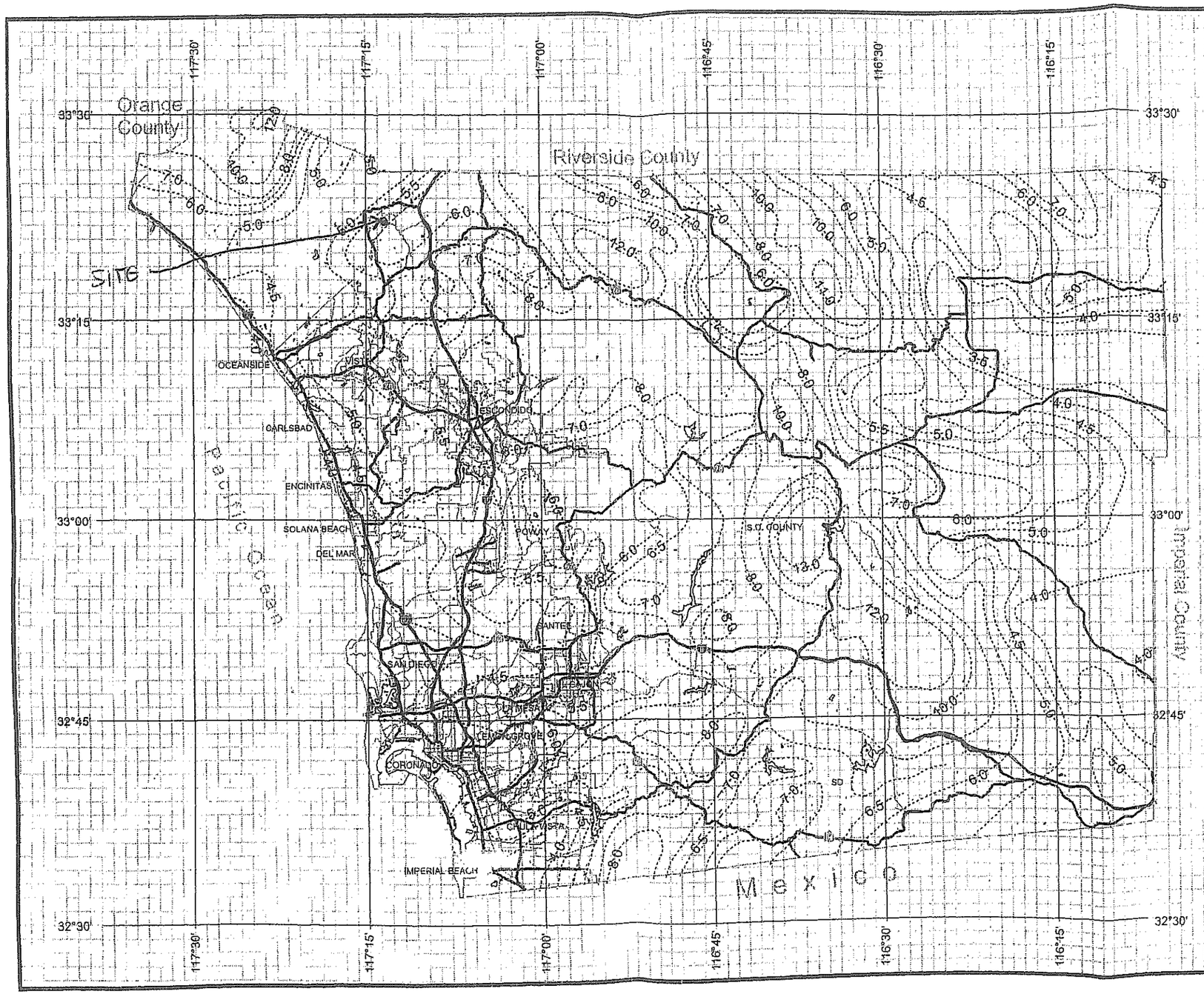
N W E S

3 0 3 Miles

County of San Diego Hydrology Manual

Rainfall Isopluvials



100 Year Rainfall Event - 24 Hours

Isopluvial (inches)

DPW GIS
Department of Public Works
Geographic Information Services

GIS
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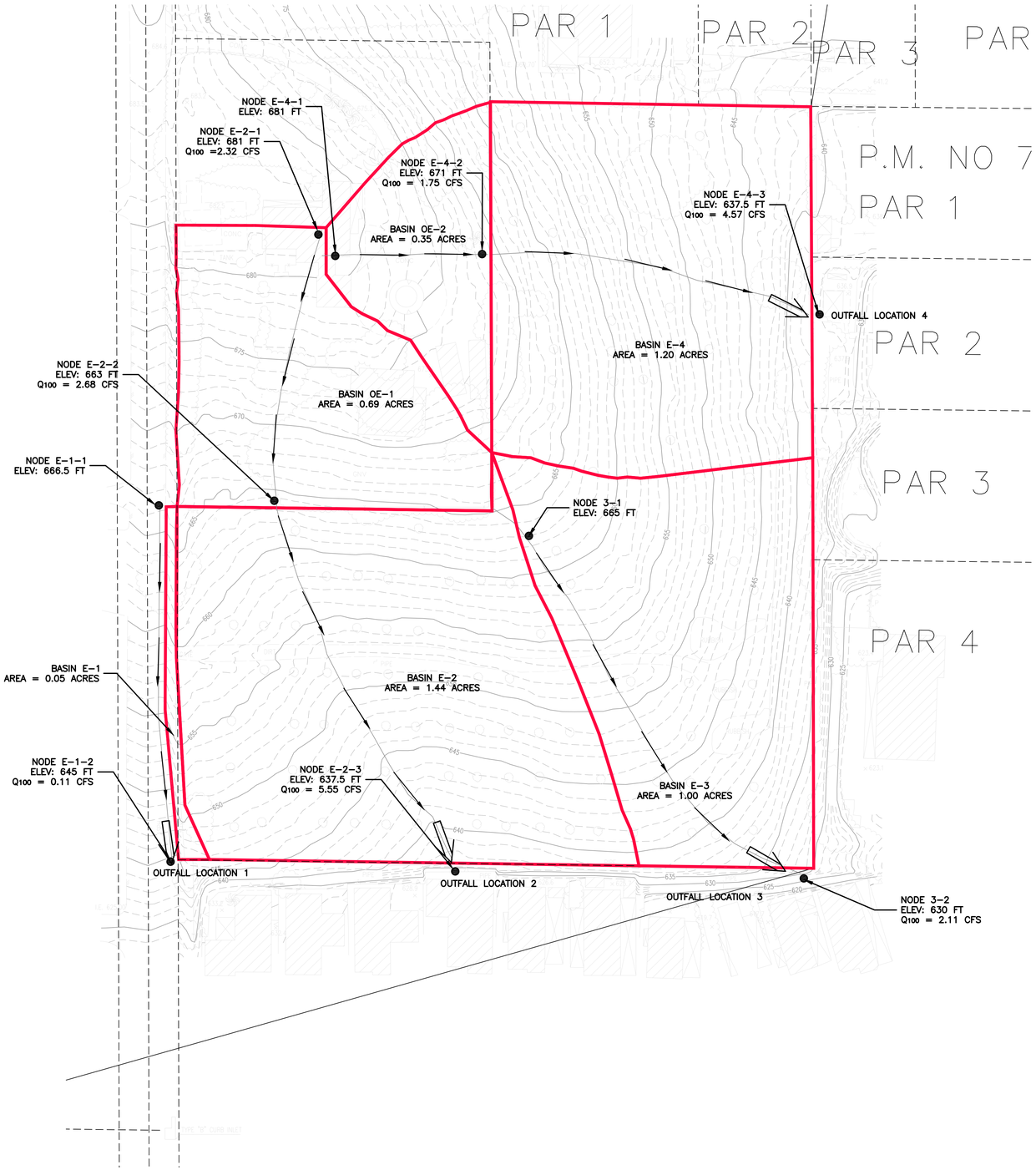
N W E S

3 0 3 Miles

ATTACHMENT 2



NOTE:
ALL BASINS SHEET FLOW FROM THE PERIMETER INSTEAD OF POINT DISCHARGES EXCEPT FOR EXISTING OUTFALL LOCATION 1.

LEGEND

- FLOW DIRECTION ARROW
- HYDROLOGY BASIN
- DISCHARGE LOCATION
- NODE
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR

GRAPHIC SCALE

40' 0 20' 40' 80' 160'

1 inch = 40' ft.

CONSTRUCTION TESTING & ENGINEERING, INC.
PLANNING - CIVIL ENGINEERING - LAND SURVEYING - GEOTECHNICAL
1441 MONTIEL ROAD, SUITE 115 ESCONDIDO CA. 92026, PH:(760) 746-4955

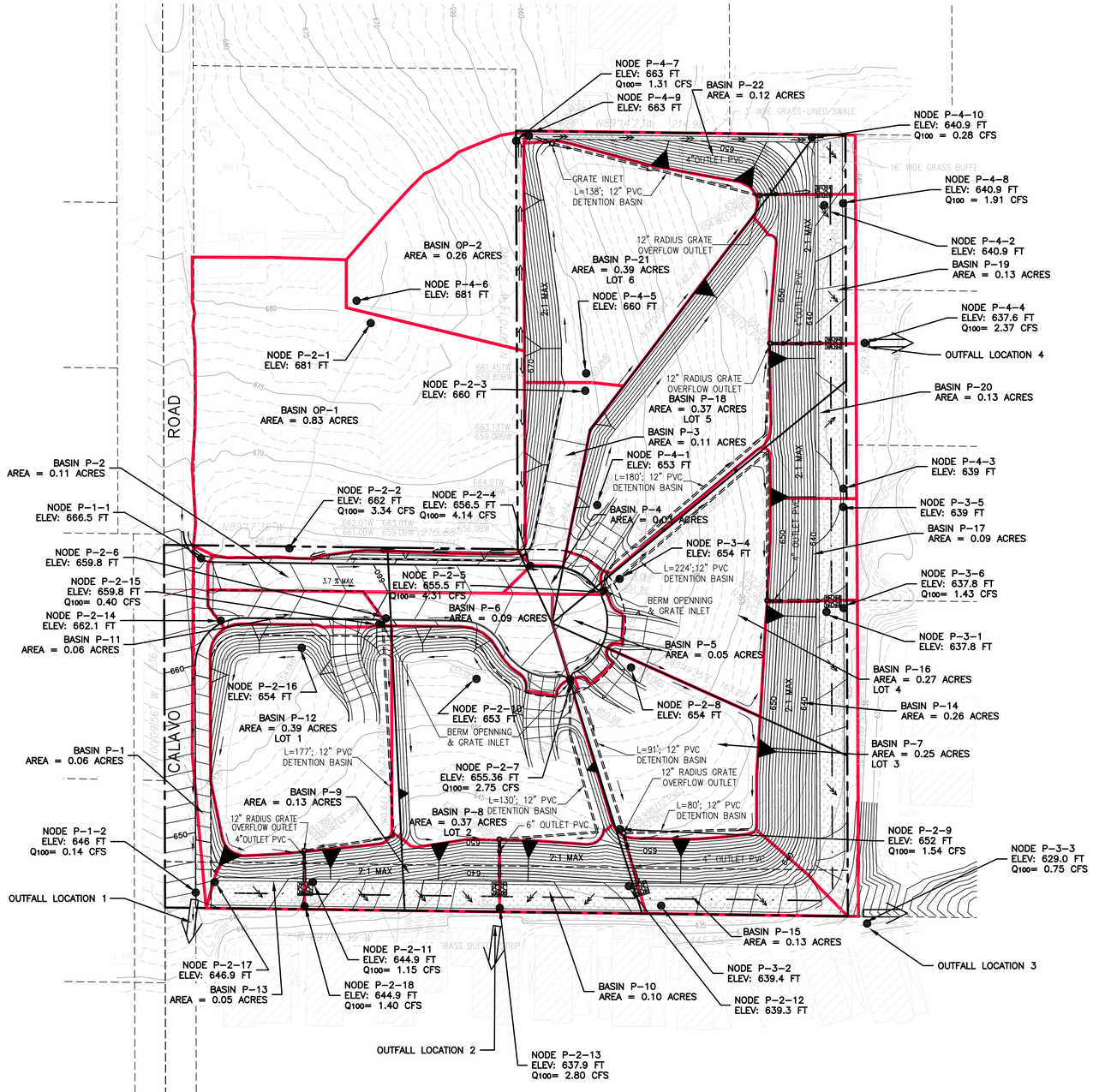
HYDROLOGY MAP – EXISTING CONDITIONS

CTE JOB NO. 10-5914C

ENGINEER'S NAME: CONSTRUCTION TESTING & ENGINEERING, INC.
PHONE NO. (760) 746-4955

\\Engineering\E\Land Projects 2005\10-5914c\dwg\HYDROLOGY\5914HYDRO-EX.dwg 9/7/2006 10:48:18 AM PDT

ATTACHMENT 3



LEGEND

- FLOW DIRECTION ARROW
- HYDROLOGY BASIN
- DISCHARGE LOCATION
- NODE
- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR

GRAPHIC SCALE

40' 0 20' 40' 80' 160'

1 inch = 40' ft.

N

HYDROLOGY MAP – PROPOSED CONDITIONS

CONSTRUCTION TESTING & ENGINEERING, INC.
PLANNING - CIVIL ENGINEERING - LAND SURVEYING - GEOTECHNICAL
1441 MONTIEL ROAD, SUITE 115 ESCONDIDO CA. 92026, PH:(760) 746-4955

ENGINEER'S NAME: CONSTRUCTION TESTING & ENGINEERING, INC.
PHONE NO. (760) 746-4955

CTE JOB NO. 10-5914C

ATTACHMENT 4

Bonsall

San Diego County, California

San Diego County Soils Interpretation Study

HYDROLOGIC SOIL GROUPS - Runoff Potential SEE CAUTION NOTES

Group A	Group B	Group C	Group D
A Low Runoff Potential	B Moderate Runoff Potential	C High Runoff Potential	D Very High Runoff Potential

CAUTION NOTES:

1. User is urged to refer to corresponding SUPPLEMENTAL DATA SHEET for assumptions, criteria, map sources, additional legend items, and necessary explanation of ratings shown on map.

2. This map does not eliminate the need for detailed on-site investigation of the soil and site to determine precise soil conditions prior to undertaking any construction, grading, planting, or other soils related activity.

Base Map Sources: U. S. Geological Survey with California State Coordinate System, Zone 6 Indicated

Prepared by: U. S. Department of Agriculture, Soil Conservation Service

Published by: San Diego County Planning Department for the Comprehensive Planning Organization — 1969

North

SCALE 1:24000

0 2000 4000 6000 feet

0 ¼ mile ½ mile 1 mile

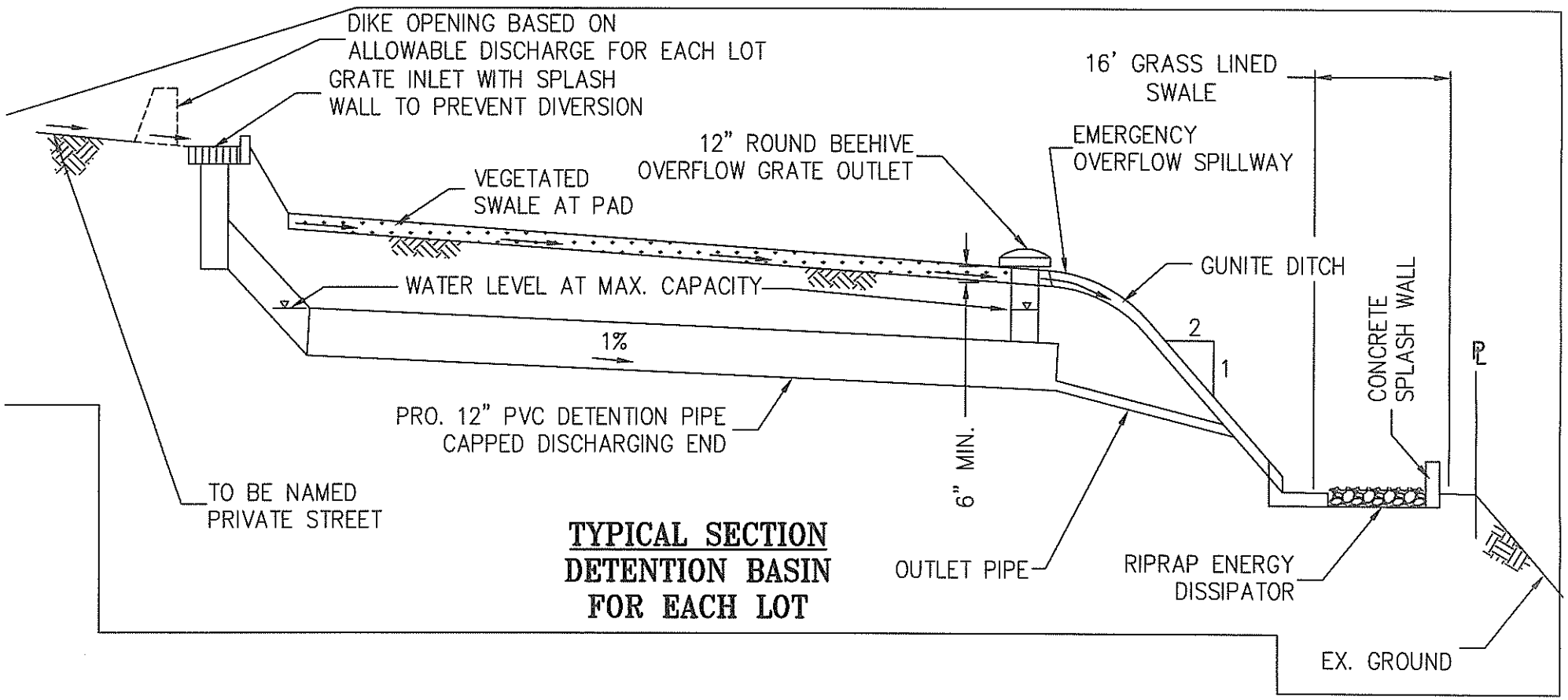
FEDERAL ASSISTANCE — The preparation of this map was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development.

Represents 40 acres

SHEET NAME	SHEET NUMBER
Bonsall	12

RUNOFF POTENTIAL
MAP NO. 12

ATTACHMENT 5



TYPICAL SECTION
DETENTION BASIN
FOR EACH LOT

Detention Basin Volume Calculations

12" PVC Pipe @ 1% slope.
Pipe Area = (pi)(radius)^2 = (pi)(1'/2)^2 = 0.784 sf

Water head at 0.001 ac-ft
0.001 ac-ft x 43560 sf/ac = 43.56 cuft
H = 1.06 ft
V = ((1.06-1)/0.01)x0.784+0.784x100x0.5 = 43.90 cuft

Water head at 0.002 ac-ft
0.002 ac-ft x 43560 sf/ac = 87.12 cuft
H = 1.61 ft
V = ((1.61-1)/0.01)x0.784+0.784x100x0.5 = 87.02 cuft

Water head at 0.003 ac-ft
0.003 ac-ft x 43560 sf/ac = 130.68 cuft
H = 2.16 ft
V = ((2.16-1)/0.01)x0.784+0.784x100x0.5 = 130.14 cuft

<u>Lot 1</u>
Pipe Length = 177 ft
Total Volume = 177x0.784 = 138.77 cuft = 0.0032 ac-ft
Total Head = 177x0.01+1 = 2.77 ft

<u>Lot 2</u>
Pipe Length = 130 ft
Total Volume = 130x0.784 = 101.92 cuft = 0.0023 ac-ft
Total Head = 130x0.01+1 = 2.30 ft

<u>Lot 3</u>
Pipe 1 Length = 91 ft
Pipe 2 Length = 80 ft
Total Volume = (91+80)x0.784 = 134.06 cuft = 0.0031 ac-ft
Total Head = 91x0.01+1 = 1.91 ft

<u>Lot 4</u>
Pipe Length = 224 ft
Total Volume = 224x0.784 = 175.62 cuft = 0.0040 ac-ft
Total Head = 224x0.01+1 = 3.24 ft

<u>Lot 5</u>
Pipe Length = 180 ft
Total Volume = 180x0.784 = 141.12 cuft = 0.0032 ac-ft
Total Head = 180x0.01+1 = 2.80 ft

Lot 6

Pipe Length = 138 ft

Total Volume = 138x0.784 = 108.19 cuft = 0.0025 ac-ft

Total Head = 138x0.01+1 = 2.38 ft

Detention Basin Calculations

Lot 1

Lot 1 Hydrograph

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2006 Version 7.6

Rational method hydrology program based on
San Diego County Flood Control Division 2003 hydrology manual
Rational Hydrology Study Date: 06/27/06

********* Hydrology Study Control Information **********

Program License Serial Number 6024

Rational hydrology study storm event year is 100.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour, precipitation(inches) = 3.500
24 hour precipitation(inches) = 6.000
P6/P24 = 58.3%
San Diego hydrology manual 'C' values used

++
Process from Point/Station 5.200 to Point/Station 5.200
**** USER DEFINED FLOW INFORMATION AT A POINT ****

User specified 'C' value of 0.790 given for subarea
Calculated TC of 3.800 minutes is less than 5 minutes,
resetting TC to 5.0 minutes for rainfall intensity calculations
Rainfall intensity (I) = 9.222(In/Hr) for a 100.0 year storm
User specified values are as follows:
TC = 3.80 min. Rain intensity = 9.22(In/Hr)
Total area = 0.060(Ac.) Total runoff = 0.400(CFS)

++
Process from Point/Station 5.200 to Point/Station 5.200
**** 6 HOUR HYDROGRAPH ****

++
Hydrograph Data - Section 6, San Diego County Hydrology manual, June 2003

Time of Concentration = 3.80
Basin Area = 0.06 Acres
6 Hour Rainfall = 3.500 Inches
Runoff Coefficient = 0.790
Peak Discharge = 0.40 CFS

Time (Min)	Discharge (CFS)
0	0.000
3	0.010
6	0.010
9	0.010
12	0.010
15	0.010
18	0.010
21	0.010
24	0.010
27	0.011
30	0.011
33	0.011
36	0.011
39	0.011
42	0.011
45	0.011
48	0.011
51	0.011
54	0.011
57	0.012
60	0.012
63	0.012
66	0.012
69	0.012
72	0.012

75	0.012
78	0.013
81	0.013
84	0.013
87	0.013
90	0.013
93	0.013
96	0.013
99	0.014
102	0.014
105	0.014
108	0.014
111	0.015
114	0.015
117	0.015
120	0.015
123	0.015
126	0.016
129	0.016
132	0.016
135	0.017
138	0.017
141	0.017
144	0.017
147	0.018
150	0.018
153	0.019
156	0.019
159	0.020
162	0.020
165	0.020
168	0.021
171	0.022
174	0.022
177	0.023
180	0.023
183	0.024
186	0.025
189	0.026
192	0.027
195	0.028
198	0.029
201	0.031
204	0.032
207	0.034
210	0.035
213	0.038
216	0.040
219	0.045
222	0.047
225	0.054
228	0.059
231	0.072
234	0.082
237	0.120
240	0.170
243	0.400
246	0.097
249	0.065
252	0.051
255	0.042
258	0.037
261	0.033
264	0.030
267	0.027
270	0.025
273	0.024
276	0.022
279	0.021
282	0.020
285	0.019
288	0.018
291	0.018
294	0.017
297	0.016
300	0.016
303	0.015
306	0.015
309	0.014

312	0.014
315	0.014
318	0.013
321	0.013
324	0.013
327	0.012
330	0.012
333	0.012
336	0.012
339	0.011
342	0.011
345	0.011
348	0.011
351	0.010
354	0.010
357	0.010
360	0.010
363	0.010

++

6 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 1 Minute intervals ((CFS))

```
Time(h+m) Volume Ac.Ft   Q(CFS)  0         0.1       0.2       0.3       0.4
-------------------------------------------------------------------------
  0+ 0       0.0000      0.00  Q          |         |         |         |
  0+ 1       0.0000      0.00  Q          |         |         |         |
  0+ 2       0.0000      0.01  Q          |         |         |         |
  0+ 3       0.0000      0.01  Q          |         |         |         |
  0+ 4       0.0000      0.01  Q          |         |         |         |
  0+ 5       0.0001      0.01  Q          |         |         |         |
  0+ 6       0.0001      0.01  Q          |         |         |         |
  0+ 7       0.0001      0.01  Q          |         |         |         |
  0+ 8       0.0001      0.01  Q          |         |         |         |
  0+ 9       0.0001      0.01  VQ         |         |         |         |
  0+10       0.0001      0.01  VQ         |         |         |         |
  0+11       0.0001      0.01  VQ         |         |         |         |
  0+12       0.0002      0.01  VQ         |         |         |         |
  0+13       0.0002      0.01  VQ         |         |         |         |
  0+14       0.0002      0.01  VQ         |         |         |         |
  0+15       0.0002      0.01  VQ         |         |         |         |
  0+16       0.0002      0.01  VQ         |         |         |         |
  0+17       0.0002      0.01  VQ         |         |         |         |
  0+18       0.0002      0.01  VQ         |         |         |         |
  0+19       0.0002      0.01  VQ         |         |         |         |
  0+20       0.0003      0.01  VQ         |         |         |         |
  0+21       0.0003      0.01  VQ         |         |         |         |
  0+22       0.0003      0.01  VQ         |         |         |         |
  0+23       0.0003      0.01  VQ         |         |         |         |
  0+24       0.0003      0.01  VQ         |         |         |         |
  0+25       0.0003      0.01  |Q         |         |         |         |
  0+26       0.0003      0.01  |Q         |         |         |         |
  0+27       0.0004      0.01  |Q         |         |         |         |
  0+28       0.0004      0.01  |Q         |         |         |         |
  0+29       0.0004      0.01  |Q         |         |         |         |
  0+30       0.0004      0.01  |Q         |         |         |         |
  0+31       0.0004      0.01  |Q         |         |         |         |
  0+32       0.0004      0.01  |Q         |         |         |         |
  0+33       0.0005      0.01  |Q         |         |         |         |
  0+34       0.0005      0.01  |Q         |         |         |         |
  0+35       0.0005      0.01  |Q         |         |         |         |
  0+36       0.0005      0.01  |Q         |         |         |         |
  0+37       0.0005      0.01  |Q         |         |         |         |
  0+38       0.0005      0.01  |Q         |         |         |         |
  0+39       0.0005      0.01  |Q         |         |         |         |
  0+40       0.0006      0.01  |Q         |         |         |         |
  0+41       0.0006      0.01  |Q         |         |         |         |
  0+42       0.0006      0.01  |Q         |         |         |         |
  0+43       0.0006      0.01  |Q         |         |         |         |
  0+44       0.0006      0.01  |Q         |         |         |         |
  0+45       0.0006      0.01  |Q         |         |         |         |
  0+46       0.0006      0.01  |QV        |         |         |         |
  0+47       0.0007      0.01  |QV        |         |         |         |
  0+48       0.0007      0.01  |QV        |         |         |         |
  0+49       0.0007      0.01  |QV        |         |         |         |
  0+50       0.0007      0.01  |QV        |         |         |         |
  0+51       0.0007      0.01  |QV        |         |         |         |
```

0+52	0.0007	0.01	QV			
0+53	0.0008	0.01	QV			
0+54	0.0008	0.01	QV			
0+55	0.0008	0.01	QV			
0+56	0.0008	0.01	QV			
0+57	0.0008	0.01	QV			
0+58	0.0008	0.01	QV			
0+59	0.0009	0.01	QV			
1+ 0	0.0009	0.01	QV			
1+ 1	0.0009	0.01	QV			
1+ 2	0.0009	0.01	QV			
1+ 3	0.0009	0.01	QV			
1+ 4	0.0009	0.01	QV			
1+ 5	0.0010	0.01	QV			
1+ 6	0.0010	0.01	Q V			
1+ 7	0.0010	0.01	Q V			
1+ 8	0.0010	0.01	Q V			
1+ 9	0.0010	0.01	Q V			
1+10	0.0010	0.01	Q V			
1+11	0.0011	0.01	Q V			
1+12	0.0011	0.01	Q V			
1+13	0.0011	0.01	Q V			
1+14	0.0011	0.01	Q V			
1+15	0.0011	0.01	Q V			
1+16	0.0011	0.01	Q V			
1+17	0.0012	0.01	Q V			
1+18	0.0012	0.01	Q V			
1+19	0.0012	0.01	Q V			
1+20	0.0012	0.01	Q V			
1+21	0.0012	0.01	Q V			
1+22	0.0012	0.01	Q V			
1+23	0.0013	0.01	Q V			
1+24	0.0013	0.01	Q V			
1+25	0.0013	0.01	Q V			
1+26	0.0013	0.01	Q V			
1+27	0.0013	0.01	Q V			
1+28	0.0013	0.01	Q V			
1+29	0.0014	0.01	Q V			
1+30	0.0014	0.01	Q V			
1+31	0.0014	0.01	Q V			
1+32	0.0014	0.01	Q V			
1+33	0.0014	0.01	Q V			
1+34	0.0015	0.01	Q V			
1+35	0.0015	0.01	Q V			
1+36	0.0015	0.01	Q V			
1+37	0.0015	0.01	Q V			
1+38	0.0015	0.01	Q V			
1+39	0.0016	0.01	Q V			
1+40	0.0016	0.01	Q V			
1+41	0.0016	0.01	Q V			
1+42	0.0016	0.01	Q V			
1+43	0.0016	0.01	Q V			
1+44	0.0016	0.01	Q V			
1+45	0.0017	0.01	Q V			
1+46	0.0017	0.01	Q V			
1+47	0.0017	0.01	Q V			
1+48	0.0017	0.01	Q V			
1+49	0.0017	0.01	Q V			
1+50	0.0018	0.01	Q V			
1+51	0.0018	0.01	Q V			
1+52	0.0018	0.01	Q V			
1+53	0.0018	0.01	Q V			
1+54	0.0018	0.01	Q V			
1+55	0.0019	0.01	Q V			
1+56	0.0019	0.01	Q V			
1+57	0.0019	0.01	Q V			
1+58	0.0019	0.02	Q V			
1+59	0.0019	0.02	Q V			
2+ 0	0.0020	0.02	Q V			
2+ 1	0.0020	0.02	Q V			
2+ 2	0.0020	0.02	Q V			
2+ 3	0.0020	0.02	Q V			
2+ 4	0.0021	0.02	Q V			
2+ 5	0.0021	0.02	Q V			
2+ 6	0.0021	0.02	Q V			
2+ 7	0.0021	0.02	Q V			
2+ 8	0.0021	0.02	Q V			
2+ 9	0.0022	0.02	Q V			
2+10	0.0022	0.02	Q V			

2+11	0.0022	0.02		Q V			
2+12	0.0022	0.02		Q V			
2+13	0.0023	0.02		Q V			
2+14	0.0023	0.02		Q V			
2+15	0.0023	0.02		Q V			
2+16	0.0023	0.02		Q V			
2+17	0.0023	0.02		Q V			
2+18	0.0024	0.02		Q V			
2+19	0.0024	0.02		Q V			
2+20	0.0024	0.02		Q V			
2+21	0.0024	0.02		Q V			
2+22	0.0025	0.02		Q V			
2+23	0.0025	0.02		Q V			
2+24	0.0025	0.02		Q V			
2+25	0.0025	0.02		Q V			
2+26	0.0026	0.02		Q V			
2+27	0.0026	0.02		Q V			
2+28	0.0026	0.02		Q V			
2+29	0.0026	0.02		Q V			
2+30	0.0027	0.02		Q V			
2+31	0.0027	0.02		Q V			
2+32	0.0027	0.02		Q V			
2+33	0.0027	0.02		Q V			
2+34	0.0028	0.02		Q V			
2+35	0.0028	0.02		Q V			
2+36	0.0028	0.02		Q V			
2+37	0.0028	0.02		Q V			
2+38	0.0029	0.02		Q V			
2+39	0.0029	0.02		Q V			
2+40	0.0029	0.02		Q V			
2+41	0.0029	0.02		Q V			
2+42	0.0030	0.02		Q V			
2+43	0.0030	0.02		Q V			
2+44	0.0030	0.02		Q V			
2+45	0.0031	0.02		Q V			
2+46	0.0031	0.02		Q V			
2+47	0.0031	0.02		Q V			
2+48	0.0031	0.02		Q V			
2+49	0.0032	0.02		Q V			
2+50	0.0032	0.02		Q V			
2+51	0.0032	0.02		Q V			
2+52	0.0033	0.02		Q V			
2+53	0.0033	0.02		Q V			
2+54	0.0033	0.02		Q V			
2+55	0.0034	0.02		Q V			
2+56	0.0034	0.02		Q V			
2+57	0.0034	0.02		Q V			
2+58	0.0034	0.02		Q V			
2+59	0.0035	0.02		Q V			
3+ 0	0.0035	0.02		Q V			
3+ 1	0.0035	0.02		Q V			
3+ 2	0.0036	0.02		Q	V		
3+ 3	0.0036	0.02		Q	V		
3+ 4	0.0036	0.02		Q	V		
3+ 5	0.0037	0.02		Q	V		
3+ 6	0.0037	0.02		Q	V		
3+ 7	0.0037	0.03		Q	V		
3+ 8	0.0038	0.03		Q	V		
3+ 9	0.0038	0.03		Q	V		
3+10	0.0039	0.03		Q	V		
3+11	0.0039	0.03		Q	V		
3+12	0.0039	0.03		Q	V		
3+13	0.0040	0.03		Q	V		
3+14	0.0040	0.03		Q	V		
3+15	0.0040	0.03		Q	V		
3+16	0.0041	0.03		Q	V		
3+17	0.0041	0.03		Q	V		
3+18	0.0042	0.03		Q	V		
3+19	0.0042	0.03		Q	V		
3+20	0.0042	0.03		Q	V		
3+21	0.0043	0.03		Q	V		
3+22	0.0043	0.03		Q	V		
3+23	0.0044	0.03		Q	V		
3+24	0.0044	0.03		Q	V		
3+25	0.0045	0.03		Q	V		
3+26	0.0045	0.03		Q	V		
3+27	0.0045	0.03		Q	V		
3+28	0.0046	0.03		Q	V		
3+29	0.0046	0.03		Q	V		

Lot 1 Hydrograph

3+30	0.0047	0.04	
3+31	0.0047	0.04	
3+32	0.0048	0.04	
3+33	0.0048	0.04	
3+34	0.0049	0.04	
3+35	0.0050	0.04	
3+36	0.0050	0.04	
3+37	0.0051	0.04	
3+38	0.0051	0.04	
3+39	0.0052	0.04	
3+40	0.0053	0.05	
3+41	0.0053	0.05	
3+42	0.0054	0.05	
3+43	0.0055	0.05	
3+44	0.0055	0.05	
3+45	0.0056	0.05	
3+46	0.0057	0.06	
3+47	0.0058	0.06	
3+48	0.0058	0.06	
3+49	0.0059	0.06	
3+50	0.0060	0.07	
3+51	0.0061	0.07	
3+52	0.0062	0.08	
3+53	0.0063	0.08	
3+54	0.0064	0.08	
3+55	0.0066	0.09	
3+56	0.0067	0.11	
3+57	0.0069	0.12	
3+58	0.0071	0.14	
3+59	0.0073	0.15	
4+ 0	0.0075	0.17	
4+ 1	0.0079	0.25	
4+ 2	0.0083	0.32	
4+ 3	0.0089	0.40	
4+ 4	0.0093	0.30	
4+ 5	0.0095	0.20	
4+ 6	0.0097	0.10	
4+ 7	0.0098	0.09	
4+ 8	0.0099	0.08	
4+ 9	0.0100	0.06	
4+10	0.0101	0.06	
4+11	0.0101	0.06	
4+12	0.0102	0.05	
4+13	0.0103	0.05	
4+14	0.0103	0.05	
4+15	0.0104	0.04	
4+16	0.0104	0.04	
4+17	0.0105	0.04	
4+18	0.0106	0.04	
4+19	0.0106	0.04	
4+20	0.0106	0.03	
4+21	0.0107	0.03	
4+22	0.0107	0.03	
4+23	0.0108	0.03	
4+24	0.0108	0.03	
4+25	0.0109	0.03	
4+26	0.0109	0.03	
4+27	0.0109	0.03	
4+28	0.0110	0.03	
4+29	0.0110	0.03	
4+30	0.0110	0.03	
4+31	0.0111	0.02	
4+32	0.0111	0.02	
4+33	0.0111	0.02	
4+34	0.0112	0.02	
4+35	0.0112	0.02	
4+36	0.0112	0.02	
4+37	0.0113	0.02	
4+38	0.0113	0.02	
4+39	0.0113	0.02	
4+40	0.0114	0.02	
4+41	0.0114	0.02	
4+42	0.0114	0.02	
4+43	0.0114	0.02	
4+44	0.0115	0.02	
4+45	0.0115	0.02	
4+46	0.0115	0.02	
4+47	0.0115	0.02	
4+48	0.0116	0.02	

```
4+49      0.0116     0.02  |Q        |         |         |    V    |
4+50      0.0116     0.02  |Q        |         |         |     V   |
4+51      0.0116     0.02  |Q        |         |         |     V   |
4+52      0.0117     0.02  |Q        |         |         |     V   |
4+53      0.0117     0.02  |Q        |         |         |     V   |
4+54      0.0117     0.02  |Q        |         |         |     V   |
4+55      0.0117     0.02  |Q        |         |         |     V   |
4+56      0.0118     0.02  |Q        |         |         |     V   |
4+57      0.0118     0.02  |Q        |         |         |     V   |
4+58      0.0118     0.02  |Q        |         |         |     V   |
4+59      0.0118     0.02  |Q        |         |         |     V   |
5+ 0      0.0119     0.02  |Q        |         |         |     V   |
5+ 1      0.0119     0.02  |Q        |         |         |     V   |
5+ 2      0.0119     0.02  |Q        |         |         |     V   |
5+ 3      0.0119     0.02  |Q        |         |         |     V   |
5+ 4      0.0119     0.02  |Q        |         |         |     V   |
5+ 5      0.0120     0.01  |Q        |         |         |      V  |
5+ 6      0.0120     0.01  |Q        |         |         |      V  |
5+ 7      0.0120     0.01  |Q        |         |         |      V  |
5+ 8      0.0120     0.01  |Q        |         |         |      V  |
5+ 9      0.0120     0.01  |Q        |         |         |      V  |
5+10      0.0121     0.01  |Q        |         |         |      V  |
5+11      0.0121     0.01  |Q        |         |         |      V  |
5+12      0.0121     0.01  |Q        |         |         |      V  |
5+13      0.0121     0.01  |Q        |         |         |      V  |
5+14      0.0121     0.01  |Q        |         |         |      V  |
5+15      0.0122     0.01  |Q        |         |         |      V  |
5+16      0.0122     0.01  |Q        |         |         |      V  |
5+17      0.0122     0.01  |Q        |         |         |      V  |
5+18      0.0122     0.01  |Q        |         |         |      V  |
5+19      0.0122     0.01  |Q        |         |         |      V  |
5+20      0.0122     0.01  |Q        |         |         |      V  |
5+21      0.0123     0.01  |Q        |         |         |       V |
5+22      0.0123     0.01  |Q        |         |         |       V |
5+23      0.0123     0.01  |Q        |         |         |       V |
5+24      0.0123     0.01  |Q        |         |         |       V |
5+25      0.0123     0.01  |Q        |         |         |       V |
5+26      0.0124     0.01  |Q        |         |         |       V |
5+27      0.0124     0.01  |Q        |         |         |       V |
5+28      0.0124     0.01  |Q        |         |         |       V |
5+29      0.0124     0.01  |Q        |         |         |       V |
5+30      0.0124     0.01  |Q        |         |         |       V |
5+31      0.0124     0.01  |Q        |         |         |       V |
5+32      0.0125     0.01  |Q        |         |         |       V |
5+33      0.0125     0.01  |Q        |         |         |       V |
5+34      0.0125     0.01  |Q        |         |         |       V |
5+35      0.0125     0.01  |Q        |         |         |       V |
5+36      0.0125     0.01  |Q        |         |         |       V |
5+37      0.0125     0.01  |Q        |         |         |       V |
5+38      0.0125     0.01  |Q        |         |         |       V |
5+39      0.0126     0.01  |Q        |         |         |       V |
5+40      0.0126     0.01  |Q        |         |         |       V |
5+41      0.0126     0.01  |Q        |         |         |        V|
5+42      0.0126     0.01  |Q        |         |         |        V|
5+43      0.0126     0.01  |Q        |         |         |        V|
5+44      0.0126     0.01  |Q        |         |         |        V|
5+45      0.0127     0.01  |Q        |         |         |        V|
5+46      0.0127     0.01  |Q        |         |         |        V|
5+47      0.0127     0.01  |Q        |         |         |        V|
5+48      0.0127     0.01  |Q        |         |         |        V|
5+49      0.0127     0.01  |Q        |         |         |        V|
5+50      0.0127     0.01  |Q        |         |         |        V|
5+51      0.0127     0.01  |Q        |         |         |        V|
5+52      0.0128     0.01  |Q        |         |         |        V|
5+53      0.0128     0.01  |Q        |         |         |        V|
5+54      0.0128     0.01  |Q        |         |         |        V|
5+55      0.0128     0.01  |Q        |         |         |        V|
5+56      0.0128     0.01  |Q        |         |         |        V|
5+57      0.0128     0.01  |Q        |         |         |        V|
5+58      0.0128     0.01  |Q        |         |         |        V|
5+59      0.0129     0.01  |Q        |         |         |        V|
6+ 0      0.0129     0.01  Q         |         |         |        V|
6+ 1      0.0129     0.01  Q         |         |         |        V|
6+ 2      0.0129     0.01  Q         |         |         |        V|
6+ 3      0.0129     0.01  Q         |         |         |         V
-----------------------------------------------------------------------
```

Lot 1 Hydrograph

End of computations, total study area = 0.060 (Ac.)

```
                    FLOOD HYDROGRAPH ROUTING PROGRAM
          Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
                      Study date: 06/21/06

---------------------------------------------------------------------


Program License Serial Number 6024

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

                 From study/file name: 5914h4.rte
***************************HYDROGRAPH DATA****************************
                 Number of intervals =   363
                 Time interval =    1.0 (Min.)
                 Maximum/Peak flow rate =        0.400 (CFS)
                 Total volume =       0.013 (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
**********************************************************************


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        9.200 to Point/Station       11.000
**** RETARDING BASIN ROUTING ****
______________________________________________________________________

Program computation of outflow v. depth



CALCULATED OUTFLOW DATA AT DEPTH =    1.05(Ft.))
Pipe length  =    10.31(Ft.)   Elevation difference =   0.30(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      4.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.355(Ft.)
Pipe friction loss =      0.654(Ft.)
Minor friction loss =      0.702(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.479(CFS)

Total outflow at this depth =      0.48(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    1.61(Ft.))
Pipe length  =    10.31(Ft.)   Elevation difference =   0.30(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      4.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.910(Ft.)
Pipe friction loss =      0.921(Ft.)
Minor friction loss =      0.990(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.569(CFS)

Total outflow at this depth =      0.57(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    2.77(Ft.))
Pipe length  =    10.31(Ft.)   Elevation difference =   0.30(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      4.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      3.070(Ft.)
Pipe friction loss =      1.481(Ft.)
Minor friction loss =      1.591(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.721(CFS)
```

Total outflow at this depth = 0.72(CFS)

Total number of inflow hydrograph intervals = 363
Hydrograph time unit = 1.000 (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
1.055	0.001	0.479	0.001	0.001
1.610	0.002	0.569	0.002	0.002
2.770	0.003	0.721	0.003	0.003

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.1	0.20	0.30	0.40	Depth (Ft.)
0.017	0.00	0.00	0.000	o	|	|	|	|	0.00
0.033	0.01	0.00	0.000	o	|	|	|	|	0.01
0.050	0.01	0.01	0.000	o	|	|	|	|	0.01
0.067	0.01	0.01	0.000	o	|	|	|	|	0.02
0.083	0.01	0.01	0.000	o	|	|	|	|	0.02
0.100	0.01	0.01	0.000	o	|	|	|	|	0.02
0.117	0.01	0.01	0.000	o	|	|	|	|	0.02
0.133	0.01	0.01	0.000	o	|	|	|	|	0.02
0.150	0.01	0.01	0.000	o	|	|	|	|	0.02
0.167	0.01	0.01	0.000	o	|	|	|	|	0.02
0.183	0.01	0.01	0.000	o	|	|	|	|	0.02
0.200	0.01	0.01	0.000	o	|	|	|	|	0.02
0.217	0.01	0.01	0.000	o	|	|	|	|	0.02
0.233	0.01	0.01	0.000	o	|	|	|	|	0.02
0.250	0.01	0.01	0.000	o	|	|	|	|	0.02
0.267	0.01	0.01	0.000	o	|	|	|	|	0.02
0.283	0.01	0.01	0.000	o	|	|	|	|	0.02
0.300	0.01	0.01	0.000	o	|	|	|	|	0.02
0.317	0.01	0.01	0.000	o	|	|	|	|	0.02
0.333	0.01	0.01	0.000	o	|	|	|	|	0.02
0.350	0.01	0.01	0.000	o	|	|	|	|	0.02
0.367	0.01	0.01	0.000	o	|	|	|	|	0.02
0.383	0.01	0.01	0.000	o	|	|	|	|	0.02
0.400	0.01	0.01	0.000	o	|	|	|	|	0.02
0.417	0.01	0.01	0.000	o	|	|	|	|	0.02
0.433	0.01	0.01	0.000	o	|	|	|	|	0.02
0.450	0.01	0.01	0.000	o	|	|	|	|	0.02
0.467	0.01	0.01	0.000	o	|	|	|	|	0.02
0.483	0.01	0.01	0.000	o	|	|	|	|	0.02
0.500	0.01	0.01	0.000	o	|	|	|	|	0.02
0.517	0.01	0.01	0.000	o	|	|	|	|	0.02
0.533	0.01	0.01	0.000	o	|	|	|	|	0.02
0.550	0.01	0.01	0.000	o	|	|	|	|	0.02
0.567	0.01	0.01	0.000	o	|	|	|	|	0.02
0.583	0.01	0.01	0.000	o	|	|	|	|	0.02
0.600	0.01	0.01	0.000	o	|	|	|	|	0.02
0.617	0.01	0.01	0.000	o	|	|	|	|	0.02
0.633	0.01	0.01	0.000	o	|	|	|	|	0.02
0.650	0.01	0.01	0.000	o	|	|	|	|	0.02
0.667	0.01	0.01	0.000	o	|	|	|	|	0.02
0.683	0.01	0.01	0.000	o	|	|	|	|	0.02
0.700	0.01	0.01	0.000	o	|	|	|	|	0.02
0.717	0.01	0.01	0.000	o	|	|	|	|	0.02
0.733	0.01	0.01	0.000	o	|	|	|	|	0.02
0.750	0.01	0.01	0.000	o	|	|	|	|	0.02
0.767	0.01	0.01	0.000	o	|	|	|	|	0.02
0.783	0.01	0.01	0.000	o	|	|	|	|	0.02
0.800	0.01	0.01	0.000	o	|	|	|	|	0.02
0.817	0.01	0.01	0.000	o	|	|	|	|	0.02

0.833	0.01	0.01	0.000	o				0.02
0.850	0.01	0.01	0.000	o				0.02
0.867	0.01	0.01	0.000	o				0.03
0.883	0.01	0.01	0.000	o				0.03
0.900	0.01	0.01	0.000	o				0.03
0.917	0.01	0.01	0.000	o				0.03
0.933	0.01	0.01	0.000	o				0.03
0.950	0.01	0.01	0.000	o				0.03
0.967	0.01	0.01	0.000	o				0.03
0.983	0.01	0.01	0.000	o				0.03
1.000	0.01	0.01	0.000	o				0.03
1.017	0.01	0.01	0.000	o				0.03
1.033	0.01	0.01	0.000	o				0.03
1.050	0.01	0.01	0.000	o				0.03
1.067	0.01	0.01	0.000	o				0.03
1.083	0.01	0.01	0.000	o				0.03
1.100	0.01	0.01	0.000	o				0.03
1.117	0.01	0.01	0.000	o				0.03
1.133	0.01	0.01	0.000	o				0.03
1.150	0.01	0.01	0.000	o				0.03
1.167	0.01	0.01	0.000	o				0.03
1.183	0.01	0.01	0.000	o				0.03
1.200	0.01	0.01	0.000	o				0.03
1.217	0.01	0.01	0.000	o				0.03
1.233	0.01	0.01	0.000	o				0.03
1.250	0.01	0.01	0.000	o				0.03
1.267	0.01	0.01	0.000	o				0.03
1.283	0.01	0.01	0.000	o				0.03
1.300	0.01	0.01	0.000	oI				0.03
1.317	0.01	0.01	0.000	|o				0.03
1.333	0.01	0.01	0.000	|o				0.03
1.350	0.01	0.01	0.000	|o				0.03
1.367	0.01	0.01	0.000	|o				0.03
1.383	0.01	0.01	0.000	|o				0.03
1.400	0.01	0.01	0.000	|o				0.03
1.417	0.01	0.01	0.000	|o				0.03
1.433	0.01	0.01	0.000	|o				0.03
1.450	0.01	0.01	0.000	|o				0.03
1.467	0.01	0.01	0.000	|o				0.03
1.483	0.01	0.01	0.000	|o				0.03
1.500	0.01	0.01	0.000	|o				0.03
1.517	0.01	0.01	0.000	|o				0.03
1.533	0.01	0.01	0.000	|o				0.03
1.550	0.01	0.01	0.000	|o				0.03
1.567	0.01	0.01	0.000	|o				0.03
1.583	0.01	0.01	0.000	|o				0.03
1.600	0.01	0.01	0.000	|o				0.03
1.617	0.01	0.01	0.000	|o				0.03
1.633	0.01	0.01	0.000	|o				0.03
1.650	0.01	0.01	0.000	|o				0.03
1.667	0.01	0.01	0.000	|o				0.03
1.683	0.01	0.01	0.000	|o				0.03
1.700	0.01	0.01	0.000	|o				0.03
1.717	0.01	0.01	0.000	|o				0.03
1.733	0.01	0.01	0.000	|o				0.03
1.750	0.01	0.01	0.000	|o				0.03
1.767	0.01	0.01	0.000	|o				0.03
1.783	0.01	0.01	0.000	|o				0.03
1.800	0.01	0.01	0.000	|o				0.03
1.817	0.01	0.01	0.000	|o				0.03
1.833	0.01	0.01	0.000	|o				0.03
1.850	0.01	0.01	0.000	|o				0.03
1.867	0.01	0.01	0.000	|o				0.03
1.883	0.01	0.01	0.000	|o				0.03
1.900	0.01	0.01	0.000	|o				0.03
1.917	0.01	0.01	0.000	|o				0.03
1.933	0.01	0.01	0.000	|o				0.03
1.950	0.01	0.01	0.000	|o				0.03
1.967	0.02	0.01	0.000	|o				0.03
1.983	0.02	0.01	0.000	|o				0.03
2.000	0.02	0.02	0.000	|o				0.03
2.017	0.02	0.02	0.000	|o				0.03
2.033	0.02	0.02	0.000	|o				0.03
2.050	0.02	0.02	0.000	|o				0.03
2.067	0.02	0.02	0.000	|o				0.03
2.083	0.02	0.02	0.000	|o				0.03
2.100	0.02	0.02	0.000	|o				0.03
2.117	0.02	0.02	0.000	|o				0.03
2.133	0.02	0.02	0.000	|o				0.03

2.150	0.02	0.02	0.000	O				0.03
2.167	0.02	0.02	0.000	O				0.04
2.183	0.02	0.02	0.000	O				0.04
2.200	0.02	0.02	0.000	O				0.04
2.217	0.02	0.02	0.000	O				0.04
2.233	0.02	0.02	0.000	O				0.04
2.250	0.02	0.02	0.000	O				0.04
2.267	0.02	0.02	0.000	O				0.04
2.283	0.02	0.02	0.000	O				0.04
2.300	0.02	0.02	0.000	O				0.04
2.317	0.02	0.02	0.000	O				0.04
2.333	0.02	0.02	0.000	O				0.04
2.350	0.02	0.02	0.000	O				0.04
2.367	0.02	0.02	0.000	O				0.04
2.383	0.02	0.02	0.000	O				0.04
2.400	0.02	0.02	0.000	O				0.04
2.417	0.02	0.02	0.000	O				0.04
2.433	0.02	0.02	0.000	O				0.04
2.450	0.02	0.02	0.000	O				0.04
2.467	0.02	0.02	0.000	O				0.04
2.483	0.02	0.02	0.000	O				0.04
2.500	0.02	0.02	0.000	O				0.04
2.517	0.02	0.02	0.000	O				0.04
2.533	0.02	0.02	0.000	O				0.04
2.550	0.02	0.02	0.000	O				0.04
2.567	0.02	0.02	0.000	O				0.04
2.583	0.02	0.02	0.000	O				0.04
2.600	0.02	0.02	0.000	O				0.04
2.617	0.02	0.02	0.000	O				0.04
2.633	0.02	0.02	0.000	O				0.04
2.650	0.02	0.02	0.000	O				0.04
2.667	0.02	0.02	0.000	O				0.04
2.683	0.02	0.02	0.000	O				0.04
2.700	0.02	0.02	0.000	O				0.04
2.717	0.02	0.02	0.000	O				0.04
2.733	0.02	0.02	0.000	O				0.04
2.750	0.02	0.02	0.000	O				0.04
2.767	0.02	0.02	0.000	O				0.04
2.783	0.02	0.02	0.000	O				0.05
2.800	0.02	0.02	0.000	O				0.05
2.817	0.02	0.02	0.000	O				0.05
2.833	0.02	0.02	0.000	O				0.05
2.850	0.02	0.02	0.000	O				0.05
2.867	0.02	0.02	0.000	O				0.05
2.883	0.02	0.02	0.000	O				0.05
2.900	0.02	0.02	0.000	O				0.05
2.917	0.02	0.02	0.000	O				0.05
2.933	0.02	0.02	0.000	O				0.05
2.950	0.02	0.02	0.000	O				0.05
2.967	0.02	0.02	0.000	O				0.05
2.983	0.02	0.02	0.000	O				0.05
3.000	0.02	0.02	0.000	O				0.05
3.017	0.02	0.02	0.000	O				0.05
3.033	0.02	0.02	0.000	O				0.05
3.050	0.02	0.02	0.000	O				0.05
3.067	0.02	0.02	0.000	O				0.05
3.083	0.02	0.02	0.000	O				0.05
3.100	0.02	0.02	0.000	O				0.05
3.117	0.03	0.02	0.000	OI				0.05
3.133	0.03	0.03	0.000	O				0.06
3.150	0.03	0.03	0.000	O				0.06
3.167	0.03	0.03	0.000	O				0.06
3.183	0.03	0.03	0.000	O				0.06
3.200	0.03	0.03	0.000	O				0.06
3.217	0.03	0.03	0.000	O				0.06
3.233	0.03	0.03	0.000	O				0.06
3.250	0.03	0.03	0.000	O				0.06
3.267	0.03	0.03	0.000	O				0.06
3.283	0.03	0.03	0.000	O				0.06
3.300	0.03	0.03	0.000	O				0.06
3.317	0.03	0.03	0.000	O				0.06
3.333	0.03	0.03	0.000	O				0.06
3.350	0.03	0.03	0.000	O				0.07
3.367	0.03	0.03	0.000	O				0.07
3.383	0.03	0.03	0.000	O				0.07
3.400	0.03	0.03	0.000	O				0.07
3.417	0.03	0.03	0.000	O				0.07
3.433	0.03	0.03	0.000	O				0.07
3.450	0.03	0.03	0.000	O				0.07

3.467	0.03	0.03	0.000	O	0.07
3.483	0.03	0.03	0.000	O	0.08
3.500	0.04	0.03	0.000	O	0.08
3.517	0.04	0.04	0.000	O	0.08
3.533	0.04	0.04	0.000	O	0.08
3.550	0.04	0.04	0.000	OI	0.08
3.567	0.04	0.04	0.000	O	0.08
3.583	0.04	0.04	0.000	O	0.09
3.600	0.04	0.04	0.000	O	0.09
3.617	0.04	0.04	0.000	O	0.09
3.633	0.04	0.04	0.000	O	0.09
3.650	0.04	0.04	0.000	O	0.09
3.667	0.05	0.04	0.000	O	0.10
3.683	0.05	0.04	0.000	O	0.10
3.700	0.05	0.05	0.000	O	0.10
3.717	0.05	0.05	0.000	O	0.10
3.733	0.05	0.05	0.000	OI	0.11
3.750	0.05	0.05	0.000	O	0.11
3.767	0.06	0.05	0.000	O	0.12
3.783	0.06	0.05	0.000	O	0.12
3.800	0.06	0.06	0.000	O	0.12
3.817	0.06	0.06	0.000	OI	0.13
3.833	0.07	0.06	0.000	OI	0.14
3.850	0.07	0.07	0.000	O	0.15
3.867	0.08	0.07	0.000	OI	0.15
3.883	0.08	0.07	0.000	OI	0.16
3.900	0.08	0.08	0.000	O	0.17
3.917	0.09	0.08	0.000	OI	0.18
3.933	0.11	0.09	0.000	OI	0.20
3.950	0.12	0.10	0.000	OI	0.23
3.967	0.14	0.12	0.000	OI	0.25
3.983	0.15	0.13	0.000	O I	0.29
4.000	0.17	0.15	0.000	O I	0.32
4.017	0.25	0.18	0.000	O I	0.39
4.033	0.32	0.23	0.000	O I	0.51
4.050	0.40	0.30	0.001	O I	0.65
4.067	0.30	0.32	0.001	I O	0.71
4.083	0.20	0.29	0.001	I O	0.63
4.100	0.10	0.22	0.000	I O	0.48
4.117	0.09	0.15	0.000	I O	0.34
4.133	0.08	0.12	0.000	I O	0.26
4.150	0.06	0.09	0.000	I O	0.21
4.167	0.06	0.08	0.000	I O	0.17
4.183	0.06	0.07	0.000	IO	0.15
4.200	0.05	0.06	0.000	O	0.13
4.217	0.05	0.05	0.000	IO	0.12
4.233	0.05	0.05	0.000	IO	0.11
4.250	0.04	0.05	0.000	O	0.10
4.267	0.04	0.04	0.000	O	0.10
4.283	0.04	0.04	0.000	O	0.09
4.300	0.04	0.04	0.000	IO	0.09
4.317	0.04	0.04	0.000	IO	0.08
4.333	0.03	0.04	0.000	O	0.08
4.350	0.03	0.03	0.000	O	0.08
4.367	0.03	0.03	0.000	O	0.07
4.383	0.03	0.03	0.000	O	0.07
4.400	0.03	0.03	0.000	O	0.07
4.417	0.03	0.03	0.000	O	0.07
4.433	0.03	0.03	0.000	O	0.07
4.450	0.03	0.03	0.000	O	0.06
4.467	0.03	0.03	0.000	O	0.06
4.483	0.03	0.03	0.000	O	0.06
4.500	0.03	0.03	0.000	O	0.06
4.517	0.02	0.03	0.000	IO	0.06
4.533	0.02	0.03	0.000	IO	0.06
4.550	0.02	0.02	0.000	O	0.05
4.567	0.02	0.02	0.000	O	0.05
4.583	0.02	0.02	0.000	O	0.05
4.600	0.02	0.02	0.000	O	0.05
4.617	0.02	0.02	0.000	O	0.05
4.633	0.02	0.02	0.000	O	0.05
4.650	0.02	0.02	0.000	O	0.05
4.667	0.02	0.02	0.000	O	0.05
4.683	0.02	0.02	0.000	O	0.05
4.700	0.02	0.02	0.000	O	0.05
4.717	0.02	0.02	0.000	O	0.04
4.733	0.02	0.02	0.000	O	0.04
4.750	0.02	0.02	0.000	O	0.04
4.767	0.02	0.02	0.000	O	0.04

4.783	0.02	0.02	0.000	|O	|	|	|	0.04
4.800	0.02	0.02	0.000	|O	|	|	|	0.04
4.817	0.02	0.02	0.000	|O	|	|	|	0.04
4.833	0.02	0.02	0.000	|O	|	|	|	0.04
4.850	0.02	0.02	0.000	|O	|	|	|	0.04
4.867	0.02	0.02	0.000	|O	|	|	|	0.04
4.883	0.02	0.02	0.000	|O	|	|	|	0.04
4.900	0.02	0.02	0.000	|O	|	|	|	0.04
4.917	0.02	0.02	0.000	|O	|	|	|	0.04
4.933	0.02	0.02	0.000	|O	|	|	|	0.04
4.950	0.02	0.02	0.000	|O	|	|	|	0.04
4.967	0.02	0.02	0.000	|O	|	|	|	0.04
4.983	0.02	0.02	0.000	|O	|	|	|	0.04
5.000	0.02	0.02	0.000	|O	|	|	|	0.04
5.017	0.02	0.02	0.000	|O	|	|	|	0.04
5.033	0.02	0.02	0.000	|O	|	|	|	0.03
5.050	0.02	0.02	0.000	|O	|	|	|	0.03
5.067	0.02	0.02	0.000	|O	|	|	|	0.03
5.083	0.01	0.02	0.000	|O	|	|	|	0.03
5.100	0.01	0.02	0.000	|O	|	|	|	0.03
5.117	0.01	0.01	0.000	|O	|	|	|	0.03
5.133	0.01	0.01	0.000	|O	|	|	|	0.03
5.150	0.01	0.01	0.000	|O	|	|	|	0.03
5.167	0.01	0.01	0.000	|O	|	|	|	0.03
5.183	0.01	0.01	0.000	|O	|	|	|	0.03
5.200	0.01	0.01	0.000	|O	|	|	|	0.03
5.217	0.01	0.01	0.000	|O	|	|	|	0.03
5.233	0.01	0.01	0.000	|O	|	|	|	0.03
5.250	0.01	0.01	0.000	|O	|	|	|	0.03
5.267	0.01	0.01	0.000	|O	|	|	|	0.03
5.283	0.01	0.01	0.000	|O	|	|	|	0.03
5.300	0.01	0.01	0.000	|O	|	|	|	0.03
5.317	0.01	0.01	0.000	|O	|	|	|	0.03
5.333	0.01	0.01	0.000	|O	|	|	|	0.03
5.350	0.01	0.01	0.000	|O	|	|	|	0.03
5.367	0.01	0.01	0.000	|O	|	|	|	0.03
5.383	0.01	0.01	0.000	|O	|	|	|	0.03
5.400	0.01	0.01	0.000	|O	|	|	|	0.03
5.417	0.01	0.01	0.000	|O	|	|	|	0.03
5.433	0.01	0.01	0.000	IO	|	|	|	0.03
5.450	0.01	0.01	0.000	O	|	|	|	0.03
5.467	0.01	0.01	0.000	O	|	|	|	0.03
5.483	0.01	0.01	0.000	O	|	|	|	0.03
5.500	0.01	0.01	0.000	O	|	|	|	0.03
5.517	0.01	0.01	0.000	O	|	|	|	0.03
5.533	0.01	0.01	0.000	O	|	|	|	0.03
5.550	0.01	0.01	0.000	O	|	|	|	0.03
5.567	0.01	0.01	0.000	O	|	|	|	0.03
5.583	0.01	0.01	0.000	O	|	|	|	0.03
5.600	0.01	0.01	0.000	O	|	|	|	0.03
5.617	0.01	0.01	0.000	O	|	|	|	0.03
5.633	0.01	0.01	0.000	O	|	|	|	0.03
5.650	0.01	0.01	0.000	O	|	|	|	0.03
5.667	0.01	0.01	0.000	O	|	|	|	0.03
5.683	0.01	0.01	0.000	O	|	|	|	0.02
5.700	0.01	0.01	0.000	O	|	|	|	0.02
5.717	0.01	0.01	0.000	O	|	|	|	0.02
5.733	0.01	0.01	0.000	O	|	|	|	0.02
5.750	0.01	0.01	0.000	O	|	|	|	0.02
5.767	0.01	0.01	0.000	O	|	|	|	0.02
5.783	0.01	0.01	0.000	O	|	|	|	0.02
5.800	0.01	0.01	0.000	O	|	|	|	0.02
5.817	0.01	0.01	0.000	O	|	|	|	0.02
5.833	0.01	0.01	0.000	O	|	|	|	0.02
5.850	0.01	0.01	0.000	O	|	|	|	0.02
5.867	0.01	0.01	0.000	O	|	|	|	0.02
5.883	0.01	0.01	0.000	O	|	|	|	0.02
5.900	0.01	0.01	0.000	O	|	|	|	0.02
5.917	0.01	0.01	0.000	O	|	|	|	0.02
5.933	0.01	0.01	0.000	O	|	|	|	0.02
5.950	0.01	0.01	0.000	O	|	|	|	0.02
5.967	0.01	0.01	0.000	O	|	|	|	0.02
5.983	0.01	0.01	0.000	O	|	|	|	0.02
6.000	0.01	0.01	0.000	O	|	|	|	0.02
6.017	0.01	0.01	0.000	O	|	|	|	0.02
6.033	0.01	0.01	0.000	O	|	|	|	0.02
6.050	0.01	0.01	0.000	O	|	|	|	0.02
6.067	0.00	0.01	0.000	O	|	|	|	0.02
6.083	0.00	0.00	0.000	O	|	|	|	0.01

Lot 1 Routing

6.100	0.00	0.00	0.000	o	|	|	|	|	0.00
6.117	0.00	0.00	0.000	o	|	|	|	|	0.00

```
*****************************HYDROGRAPH DATA*****************************
                Number of intervals =   367
                Time interval =    1.0 (Min.)
                Maximum/Peak flow rate =        0.322 (CFS)
                Total volume =       0.013 (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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Detention Basin Calculations

Lot 2

Lot 2 Hydrograph

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2006 Version 7.6

Rational method hydrology program based on
San Diego County Flood Control Division 2003 hydrology manual
Rational Hydrology Study Date: 06/27/06

********* Hydrology Study Control Information **********

Program License Serial Number 6024

Rational hydrology study storm event year is 100.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour, precipitation(inches) = 3.500
24 hour precipitation(inches) = 6.000
P6/P24 = 58.3%
San Diego hydrology manual 'C' values used

++
Process from Point/Station 25.300 to Point/Station 25.300
**** USER DEFINED FLOW INFORMATION AT A POINT ****

User specified 'C' value of 0.560 given for subarea
Rainfall intensity (I) = 7.276(In/Hr) for a 100.0 year storm
User specified values are as follows:
TC = 7.22 min. Rain intensity = 7.28(In/Hr)
Total area = 0.340(Ac.) Total runoff = 1.375(CFS)

++
Process from Point/Station 25.300 to Point/Station 25.300
**** 6 HOUR HYDROGRAPH ****

++
Hydrograph Data - Section 6, San Diego County Hydrology manual, June 2003

Time of Concentration = 7.22
Basin Area = 0.34 Acres
6 Hour Rainfall = 3.500 Inches
Runoff Coefficient = 0.560
Peak Discharge = 1.38 CFS

Time (Min)	Discharge (CFS)
0	0.000
7	0.040
14	0.040
21	0.042
28	0.042
35	0.043
42	0.044
49	0.045
56	0.046
63	0.048
70	0.048
77	0.050
84	0.051
91	0.053
98	0.054
105	0.057
112	0.058
119	0.061
126	0.062
133	0.065
140	0.067
147	0.072
154	0.074
161	0.079
168	0.082
175	0.089
182	0.094

189	0.104
196	0.110
203	0.126
210	0.137
217	0.167
224	0.191
231	0.280
238	0.394
245	1.375
252	0.224
259	0.150
266	0.117
273	0.098
280	0.086
287	0.076
294	0.069
301	0.064
308	0.059
315	0.055
322	0.052
329	0.049
336	0.047
343	0.045
350	0.043
357	0.041
364	0.039

++

6 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 1 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	0.3	0.7	1.0	1.4
0+ 0	0.0000	0.00	Q	|	|	|	|
0+ 1	0.0000	0.01	Q	|	|	|	|
0+ 2	0.0000	0.01	Q	|	|	|	|
0+ 3	0.0000	0.02	Q	|	|	|	|
0+ 4	0.0001	0.02	Q	|	|	|	|
0+ 5	0.0001	0.03	Q	|	|	|	|
0+ 6	0.0002	0.03	Q	|	|	|	|
0+ 7	0.0002	0.04	VQ	|	|	|	|
0+ 8	0.0003	0.04	VQ	|	|	|	|
0+ 9	0.0003	0.04	VQ	|	|	|	|
0+10	0.0004	0.04	VQ	|	|	|	|
0+11	0.0004	0.04	VQ	|	|	|	|
0+12	0.0005	0.04	VQ	|	|	|	|
0+13	0.0006	0.04	VQ	|	|	|	|
0+14	0.0006	0.04	VQ	|	|	|	|
0+15	0.0007	0.04	VQ	|	|	|	|
0+16	0.0007	0.04	VQ	|	|	|	|
0+17	0.0008	0.04	VQ	|	|	|	|
0+18	0.0008	0.04	VQ	|	|	|	|
0+19	0.0009	0.04	VQ	|	|	|	|
0+20	0.0009	0.04	VQ	|	|	|	|
0+21	0.0010	0.04	VQ	|	|	|	|
0+22	0.0011	0.04	VQ	|	|	|	|
0+23	0.0011	0.04	VQ	|	|	|	|
0+24	0.0012	0.04	VQ	|	|	|	|
0+25	0.0012	0.04	VQ	|	|	|	|
0+26	0.0013	0.04	VQ	|	|	|	|
0+27	0.0014	0.04	VQ	|	|	|	|
0+28	0.0014	0.04	|Q	|	|	|	|
0+29	0.0015	0.04	|Q	|	|	|	|
0+30	0.0015	0.04	|Q	|	|	|	|
0+31	0.0016	0.04	|Q	|	|	|	|
0+32	0.0016	0.04	|Q	|	|	|	|
0+33	0.0017	0.04	|Q	|	|	|	|
0+34	0.0018	0.04	|Q	|	|	|	|
0+35	0.0018	0.04	|Q	|	|	|	|
0+36	0.0019	0.04	|Q	|	|	|	|
0+37	0.0019	0.04	|Q	|	|	|	|
0+38	0.0020	0.04	|Q	|	|	|	|
0+39	0.0021	0.04	|Q	|	|	|	|
0+40	0.0021	0.04	|Q	|	|	|	|
0+41	0.0022	0.04	|Q	|	|	|	|
0+42	0.0022	0.04	|Q	|	|	|	|
0+43	0.0023	0.04	|Q	|	|	|	|

0+44	0.0024	0.04	Q			
0+45	0.0024	0.04	Q			
0+46	0.0025	0.04	Q			
0+47	0.0026	0.04	Q			
0+48	0.0026	0.05	Q			
0+49	0.0027	0.05	Q			
0+50	0.0027	0.05	Q			
0+51	0.0028	0.05	QV			
0+52	0.0029	0.05	QV			
0+53	0.0029	0.05	QV			
0+54	0.0030	0.05	QV			
0+55	0.0031	0.05	QV			
0+56	0.0031	0.05	QV			
0+57	0.0032	0.05	QV			
0+58	0.0032	0.05	QV			
0+59	0.0033	0.05	QV			
1+ 0	0.0034	0.05	QV			
1+ 1	0.0034	0.05	QV			
1+ 2	0.0035	0.05	QV			
1+ 3	0.0036	0.05	QV			
1+ 4	0.0036	0.05	QV			
1+ 5	0.0037	0.05	QV			
1+ 6	0.0038	0.05	QV			
1+ 7	0.0038	0.05	QV			
1+ 8	0.0039	0.05	QV			
1+ 9	0.0040	0.05	QV			
1+10	0.0040	0.05	QV			
1+11	0.0041	0.05	QV			
1+12	0.0042	0.05	Q V			
1+13	0.0042	0.05	Q V			
1+14	0.0043	0.05	Q V			
1+15	0.0044	0.05	Q V			
1+16	0.0044	0.05	Q V			
1+17	0.0045	0.05	Q V			
1+18	0.0046	0.05	Q V			
1+19	0.0046	0.05	Q V			
1+20	0.0047	0.05	Q V			
1+21	0.0048	0.05	Q V			
1+22	0.0049	0.05	Q V			
1+23	0.0049	0.05	Q V			
1+24	0.0050	0.05	Q V			
1+25	0.0051	0.05	Q V			
1+26	0.0051	0.05	Q V			
1+27	0.0052	0.05	Q V			
1+28	0.0053	0.05	Q V			
1+29	0.0054	0.05	Q V			
1+30	0.0054	0.05	Q V			
1+31	0.0055	0.05	Q V			
1+32	0.0056	0.05	Q V			
1+33	0.0057	0.05	Q V			
1+34	0.0057	0.05	Q V			
1+35	0.0058	0.05	Q V			
1+36	0.0059	0.05	Q V			
1+37	0.0059	0.05	Q V			
1+38	0.0060	0.05	Q V			
1+39	0.0061	0.05	Q V			
1+40	0.0062	0.05	Q V			
1+41	0.0062	0.06	Q V			
1+42	0.0063	0.06	Q V			
1+43	0.0064	0.06	Q V			
1+44	0.0065	0.06	Q V			
1+45	0.0066	0.06	Q V			
1+46	0.0066	0.06	Q V			
1+47	0.0067	0.06	Q V			
1+48	0.0068	0.06	Q V			
1+49	0.0069	0.06	Q V			
1+50	0.0070	0.06	Q V			
1+51	0.0070	0.06	Q V			
1+52	0.0071	0.06	Q V			
1+53	0.0072	0.06	Q V			
1+54	0.0073	0.06	Q V			
1+55	0.0074	0.06	Q V			
1+56	0.0074	0.06	Q V			
1+57	0.0075	0.06	Q V			
1+58	0.0076	0.06	Q V			
1+59	0.0077	0.06	Q V			
2+ 0	0.0078	0.06	Q V			
2+ 1	0.0079	0.06	Q V			
2+ 2	0.0079	0.06	Q V			

2+ 3	0.0080	0.06		Q V			
2+ 4	0.0081	0.06		Q V			
2+ 5	0.0082	0.06		Q V			
2+ 6	0.0083	0.06		Q V			
2+ 7	0.0084	0.06		Q V			
2+ 8	0.0084	0.06		Q V			
2+ 9	0.0085	0.06		Q V			
2+10	0.0086	0.06		Q V			
2+11	0.0087	0.06		Q V			
2+12	0.0088	0.07		Q V			
2+13	0.0089	0.07		Q V			
2+14	0.0090	0.07		Q V			
2+15	0.0091	0.07		Q V			
2+16	0.0092	0.07		Q V			
2+17	0.0093	0.07		Q V			
2+18	0.0093	0.07		Q V			
2+19	0.0094	0.07		Q V			
2+20	0.0095	0.07		Q V			
2+21	0.0096	0.07		Q V			
2+22	0.0097	0.07		Q V			
2+23	0.0098	0.07		Q V			
2+24	0.0099	0.07		Q V			
2+25	0.0100	0.07		Q V			
2+26	0.0101	0.07		Q V			
2+27	0.0102	0.07		Q V			
2+28	0.0103	0.07		Q V			
2+29	0.0104	0.07		Q V			
2+30	0.0105	0.07		Q V			
2+31	0.0106	0.07		Q V			
2+32	0.0107	0.07		Q V			
2+33	0.0108	0.07		Q V			
2+34	0.0109	0.07		Q V			
2+35	0.0110	0.07		Q V			
2+36	0.0111	0.08		Q V			
2+37	0.0112	0.08		Q V			
2+38	0.0113	0.08		Q V			
2+39	0.0114	0.08		Q V			
2+40	0.0115	0.08		Q V			
2+41	0.0117	0.08		Q V			
2+42	0.0118	0.08		Q V			
2+43	0.0119	0.08		Q V			
2+44	0.0120	0.08		Q V			
2+45	0.0121	0.08		Q V			
2+46	0.0122	0.08		Q V			
2+47	0.0123	0.08		Q V			
2+48	0.0124	0.08		Q V			
2+49	0.0125	0.08		Q V			
2+50	0.0127	0.08		Q V			
2+51	0.0128	0.09		Q V			
2+52	0.0129	0.09		Q V			
2+53	0.0130	0.09		Q V			
2+54	0.0131	0.09		Q V			
2+55	0.0133	0.09		Q V			
2+56	0.0134	0.09		Q V			
2+57	0.0135	0.09		Q V			
2+58	0.0136	0.09		Q V			
2+59	0.0138	0.09		Q V			
3+ 0	0.0139	0.09		Q V			
3+ 1	0.0140	0.09		Q V			
3+ 2	0.0141	0.09		Q V			
3+ 3	0.0143	0.10		Q V			
3+ 4	0.0144	0.10		Q V			
3+ 5	0.0145	0.10		Q V			
3+ 6	0.0147	0.10		Q V			
3+ 7	0.0148	0.10		Q V			
3+ 8	0.0150	0.10		Q V			
3+ 9	0.0151	0.10		Q	V		
3+10	0.0153	0.10		Q	V		
3+11	0.0154	0.11		Q	V		
3+12	0.0155	0.11		Q	V		
3+13	0.0157	0.11		Q	V		
3+14	0.0158	0.11		Q	V		
3+15	0.0160	0.11		Q	V		
3+16	0.0161	0.11		Q	V		
3+17	0.0163	0.11		Q	V		
3+18	0.0165	0.11		Q	V		
3+19	0.0166	0.12		Q	V		
3+20	0.0168	0.12		Q	V		
3+21	0.0170	0.12		Q	V		

Lot 2 Hydrograph

3+22	0.0171	0.12	
3+23	0.0173	0.13	
3+24	0.0175	0.13	
3+25	0.0176	0.13	
3+26	0.0178	0.13	
3+27	0.0180	0.13	
3+28	0.0182	0.13	
3+29	0.0184	0.14	
3+30	0.0186	0.14	
3+31	0.0188	0.14	
3+32	0.0190	0.15	
3+33	0.0192	0.15	
3+34	0.0194	0.15	
3+35	0.0196	0.16	
3+36	0.0198	0.16	
3+37	0.0201	0.17	
3+38	0.0203	0.17	
3+39	0.0205	0.17	
3+40	0.0208	0.18	
3+41	0.0210	0.18	
3+42	0.0213	0.18	
3+43	0.0215	0.19	
3+44	0.0218	0.19	
3+45	0.0221	0.20	
3+46	0.0224	0.22	
3+47	0.0227	0.23	
3+48	0.0230	0.24	
3+49	0.0234	0.25	
3+50	0.0237	0.27	
3+51	0.0241	0.28	
3+52	0.0245	0.30	
3+53	0.0250	0.31	
3+54	0.0254	0.33	
3+55	0.0259	0.35	
3+56	0.0264	0.36	
3+57	0.0269	0.38	
3+58	0.0275	0.39	
3+59	0.0282	0.53	
4+ 0	0.0291	0.67	
4+ 1	0.0302	0.81	
4+ 2	0.0316	0.95	
4+ 3	0.0331	1.09	
4+ 4	0.0348	1.23	
4+ 5	0.0367	1.38	
4+ 6	0.0383	1.21	
4+ 7	0.0398	1.05	
4+ 8	0.0410	0.88	
4+ 9	0.0420	0.72	
4+10	0.0427	0.55	
4+11	0.0433	0.39	
4+12	0.0436	0.22	
4+13	0.0439	0.21	
4+14	0.0442	0.20	
4+15	0.0444	0.19	
4+16	0.0447	0.18	
4+17	0.0449	0.17	
4+18	0.0451	0.16	
4+19	0.0453	0.15	
4+20	0.0455	0.15	
4+21	0.0457	0.14	
4+22	0.0459	0.14	
4+23	0.0461	0.13	
4+24	0.0463	0.13	
4+25	0.0464	0.12	
4+26	0.0466	0.12	
4+27	0.0468	0.11	
4+28	0.0469	0.11	
4+29	0.0471	0.11	
4+30	0.0472	0.11	
4+31	0.0474	0.10	
4+32	0.0475	0.10	
4+33	0.0476	0.10	
4+34	0.0478	0.10	
4+35	0.0479	0.09	
4+36	0.0480	0.09	
4+37	0.0481	0.09	
4+38	0.0483	0.09	
4+39	0.0484	0.09	
4+40	0.0485	0.09	

4+41	0.0486	0.08	Q			V
4+42	0.0487	0.08	Q			V
4+43	0.0489	0.08	Q			V
4+44	0.0490	0.08	Q			V
4+45	0.0491	0.08	Q			V
4+46	0.0492	0.08	Q			V
4+47	0.0493	0.08	Q			V
4+48	0.0494	0.08	Q			V
4+49	0.0495	0.07	Q			V
4+50	0.0496	0.07	Q			V
4+51	0.0497	0.07	Q			V
4+52	0.0498	0.07	Q			V
4+53	0.0499	0.07	Q			V
4+54	0.0500	0.07	Q			V
4+55	0.0501	0.07	Q			V
4+56	0.0502	0.07	Q			V
4+57	0.0503	0.07	Q			V
4+58	0.0504	0.07	Q			V
4+59	0.0504	0.07	Q			V
5+ 0	0.0505	0.06	Q			V
5+ 1	0.0506	0.06	Q			V
5+ 2	0.0507	0.06	Q			V
5+ 3	0.0508	0.06	Q			V
5+ 4	0.0509	0.06	Q			V
5+ 5	0.0510	0.06	Q			V
5+ 6	0.0510	0.06	Q			V
5+ 7	0.0511	0.06	Q			V
5+ 8	0.0512	0.06	Q			V
5+ 9	0.0513	0.06	Q			V
5+10	0.0514	0.06	Q			V
5+11	0.0515	0.06	Q			V
5+12	0.0515	0.06	Q			V
5+13	0.0516	0.06	Q			V
5+14	0.0517	0.06	Q			V
5+15	0.0518	0.06	Q			V
5+16	0.0518	0.05	Q			V
5+17	0.0519	0.05	Q			V
5+18	0.0520	0.05	Q			V
5+19	0.0521	0.05	Q			V
5+20	0.0521	0.05	Q			V
5+21	0.0522	0.05	Q			V
5+22	0.0523	0.05	Q			V
5+23	0.0523	0.05	Q			V
5+24	0.0524	0.05	Q			V
5+25	0.0525	0.05	Q			V
5+26	0.0526	0.05	Q			V
5+27	0.0526	0.05	Q			V
5+28	0.0527	0.05	Q			V
5+29	0.0528	0.05	Q			V
5+30	0.0528	0.05	Q			V
5+31	0.0529	0.05	Q			V
5+32	0.0530	0.05	Q			V
5+33	0.0530	0.05	Q			V
5+34	0.0531	0.05	Q			V
5+35	0.0532	0.05	Q			V
5+36	0.0532	0.05	Q			V
5+37	0.0533	0.05	Q			V
5+38	0.0534	0.05	Q			V
5+39	0.0534	0.05	Q			V
5+40	0.0535	0.05	Q			V
5+41	0.0535	0.05	Q			V
5+42	0.0536	0.04	Q			V
5+43	0.0537	0.04	Q			V
5+44	0.0537	0.04	Q			V
5+45	0.0538	0.04	Q			V
5+46	0.0538	0.04	Q			V
5+47	0.0539	0.04	Q			V
5+48	0.0540	0.04	Q			V
5+49	0.0540	0.04	Q			V
5+50	0.0541	0.04	Q			V
5+51	0.0541	0.04	Q			V
5+52	0.0542	0.04	Q			V
5+53	0.0543	0.04	Q			V
5+54	0.0543	0.04	Q			V
5+55	0.0544	0.04	Q			V
5+56	0.0544	0.04	Q			V
5+57	0.0545	0.04	Q			V
5+58	0.0545	0.04	Q			V
5+59	0.0546	0.04	Q			V

Lot 2 Hydrograph

```
    6+ 0       0.0547      0.04  |Q        |         |         |        V|
    6+ 1       0.0547      0.04  |Q        |         |         |        V|
    6+ 2       0.0548      0.04  |Q        |         |         |        V|
    6+ 3       0.0548      0.04  |Q        |         |         |        V|
    6+ 4       0.0549      0.04  |Q        |         |         |         V
-----------------------------------------------------------------------
```

End of computations, total study area = 0.340 (Ac.)

Lot 2 Routing

```
                    FLOOD HYDROGRAPH ROUTING PROGRAM
            Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
                        Study date: 06/27/06

-----------------------------------------------------------------------



Program License Serial Number 6024

-----------------------------------------------------------------------
********************* HYDROGRAPH INFORMATION **********************

                From study/file name: 5914h3.rte
****************************HYDROGRAPH DATA****************************
                Number of intervals =   364
                Time interval =    1.0 (Min.)
                Maximum/Peak flow rate =        1.375 (CFS)
                Total volume =       0.055 (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
*************************************************************************



++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        5.300 to Point/Station       14.000
**** RETARDING BASIN ROUTING ****
______________________________________________________________________

Program computation of outflow v. depth



CALCULATED OUTFLOW DATA AT DEPTH =    1.05(Ft.))
Pipe length  =    10.44(Ft.)   Elevation difference =   0.11(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      6.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.160(Ft.)
Pipe friction loss =      0.411(Ft.)
Minor friction loss =      0.749(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      1.114(CFS)

Total outflow at this depth =      1.11(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    2.30(Ft.))
Pipe length  =    10.44(Ft.)   Elevation difference =   0.11(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      6.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      2.405(Ft.)
Pipe friction loss =      0.853(Ft.)
Minor friction loss =      1.553(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      1.603(CFS)

Total outflow at this depth =      1.60(CFS)

-----------------------------------------------------------------------
Total number of inflow hydrograph intervals = 364
Hydrograph time unit =  1.000 (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)
-----------------------------------------------------------------------
-----------------------------------------------------------------------
```

Lot 2 Routing

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
1.055	0.001	1.114	0.000	0.002
2.300	0.002	1.603	0.001	0.003

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.3	0.69	1.03	1.38	Depth (Ft.)
0.017	0.01	0.00	0.000	o	|	|	|	|	0.00
0.033	0.01	0.01	0.000	o	|	|	|	|	0.01
0.050	0.02	0.01	0.000	o	|	|	|	|	0.01
0.067	0.02	0.02	0.000	o	|	|	|	|	0.02
0.083	0.03	0.02	0.000	o	|	|	|	|	0.02
0.100	0.03	0.03	0.000	o	|	|	|	|	0.03
0.117	0.04	0.04	0.000	o	|	|	|	|	0.03
0.133	0.04	0.04	0.000	o	|	|	|	|	0.04
0.150	0.04	0.04	0.000	o	|	|	|	|	0.04
0.167	0.04	0.04	0.000	o	|	|	|	|	0.04
0.183	0.04	0.04	0.000	o	|	|	|	|	0.04
0.200	0.04	0.04	0.000	o	|	|	|	|	0.04
0.217	0.04	0.04	0.000	o	|	|	|	|	0.04
0.233	0.04	0.04	0.000	o	|	|	|	|	0.04
0.250	0.04	0.04	0.000	o	|	|	|	|	0.04
0.267	0.04	0.04	0.000	o	|	|	|	|	0.04
0.283	0.04	0.04	0.000	o	|	|	|	|	0.04
0.300	0.04	0.04	0.000	o	|	|	|	|	0.04
0.317	0.04	0.04	0.000	o	|	|	|	|	0.04
0.333	0.04	0.04	0.000	o	|	|	|	|	0.04
0.350	0.04	0.04	0.000	o	|	|	|	|	0.04
0.367	0.04	0.04	0.000	o	|	|	|	|	0.04
0.383	0.04	0.04	0.000	o	|	|	|	|	0.04
0.400	0.04	0.04	0.000	o	|	|	|	|	0.04
0.417	0.04	0.04	0.000	o	|	|	|	|	0.04
0.433	0.04	0.04	0.000	o	|	|	|	|	0.04
0.450	0.04	0.04	0.000	o	|	|	|	|	0.04
0.467	0.04	0.04	0.000	o	|	|	|	|	0.04
0.483	0.04	0.04	0.000	o	|	|	|	|	0.04
0.500	0.04	0.04	0.000	o	|	|	|	|	0.04
0.517	0.04	0.04	0.000	o	|	|	|	|	0.04
0.533	0.04	0.04	0.000	o	|	|	|	|	0.04
0.550	0.04	0.04	0.000	oI	|	|	|	|	0.04
0.567	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.583	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.600	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.617	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.633	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.650	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.667	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.683	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.700	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.717	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.733	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.750	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.767	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.783	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.800	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.817	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.833	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.850	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.867	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.883	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.900	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.917	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.933	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.950	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.967	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.983	0.05	0.05	0.000	|o	|	|	|	|	0.04
1.000	0.05	0.05	0.000	|o	|	|	|	|	0.04
1.017	0.05	0.05	0.000	|o	|	|	|	|	0.04
1.033	0.05	0.05	0.000	|o	|	|	|	|	0.04
1.050	0.05	0.05	0.000	|o	|	|	|	|	0.04
1.067	0.05	0.05	0.000	|o	|	|	|	|	0.05

1.083	0.05	0.05	0.000	o				0.05
1.100	0.05	0.05	0.000	o				0.05
1.117	0.05	0.05	0.000	o				0.05
1.133	0.05	0.05	0.000	o				0.05
1.150	0.05	0.05	0.000	o				0.05
1.167	0.05	0.05	0.000	o				0.05
1.183	0.05	0.05	0.000	o				0.05
1.200	0.05	0.05	0.000	o				0.05
1.217	0.05	0.05	0.000	o				0.05
1.233	0.05	0.05	0.000	o				0.05
1.250	0.05	0.05	0.000	o				0.05
1.267	0.05	0.05	0.000	o				0.05
1.283	0.05	0.05	0.000	o				0.05
1.300	0.05	0.05	0.000	o				0.05
1.317	0.05	0.05	0.000	o				0.05
1.333	0.05	0.05	0.000	o				0.05
1.350	0.05	0.05	0.000	o				0.05
1.367	0.05	0.05	0.000	o				0.05
1.383	0.05	0.05	0.000	o				0.05
1.400	0.05	0.05	0.000	o				0.05
1.417	0.05	0.05	0.000	o				0.05
1.433	0.05	0.05	0.000	o				0.05
1.450	0.05	0.05	0.000	o				0.05
1.467	0.05	0.05	0.000	o				0.05
1.483	0.05	0.05	0.000	o				0.05
1.500	0.05	0.05	0.000	o				0.05
1.517	0.05	0.05	0.000	o				0.05
1.533	0.05	0.05	0.000	o				0.05
1.550	0.05	0.05	0.000	o				0.05
1.567	0.05	0.05	0.000	o				0.05
1.583	0.05	0.05	0.000	o				0.05
1.600	0.05	0.05	0.000	o				0.05
1.617	0.05	0.05	0.000	o				0.05
1.633	0.05	0.05	0.000	o				0.05
1.650	0.05	0.05	0.000	o				0.05
1.667	0.05	0.05	0.000	o				0.05
1.683	0.06	0.05	0.000	o				0.05
1.700	0.06	0.06	0.000	o				0.05
1.717	0.06	0.06	0.000	o				0.05
1.733	0.06	0.06	0.000	o				0.05
1.750	0.06	0.06	0.000	o				0.05
1.767	0.06	0.06	0.000	o				0.05
1.783	0.06	0.06	0.000	o				0.05
1.800	0.06	0.06	0.000	o				0.05
1.817	0.06	0.06	0.000	o				0.05
1.833	0.06	0.06	0.000	o				0.05
1.850	0.06	0.06	0.000	o				0.05
1.867	0.06	0.06	0.000	o				0.05
1.883	0.06	0.06	0.000	o				0.05
1.900	0.06	0.06	0.000	o				0.06
1.917	0.06	0.06	0.000	o				0.06
1.933	0.06	0.06	0.000	o				0.06
1.950	0.06	0.06	0.000	o				0.06
1.967	0.06	0.06	0.000	o				0.06
1.983	0.06	0.06	0.000	o				0.06
2.000	0.06	0.06	0.000	o				0.06
2.017	0.06	0.06	0.000	o				0.06
2.033	0.06	0.06	0.000	o				0.06
2.050	0.06	0.06	0.000	o				0.06
2.067	0.06	0.06	0.000	o				0.06
2.083	0.06	0.06	0.000	o				0.06
2.100	0.06	0.06	0.000	o				0.06
2.117	0.06	0.06	0.000	o				0.06
2.133	0.06	0.06	0.000	o				0.06
2.150	0.06	0.06	0.000	o				0.06
2.167	0.06	0.06	0.000	o				0.06
2.183	0.06	0.06	0.000	o				0.06
2.200	0.07	0.06	0.000	o				0.06
2.217	0.07	0.07	0.000	o				0.06
2.233	0.07	0.07	0.000	o				0.06
2.250	0.07	0.07	0.000	o				0.06
2.267	0.07	0.07	0.000	o				0.06
2.283	0.07	0.07	0.000	o				0.06
2.300	0.07	0.07	0.000	o				0.06
2.317	0.07	0.07	0.000	o				0.06
2.333	0.07	0.07	0.000	o				0.06
2.350	0.07	0.07	0.000	o				0.06
2.367	0.07	0.07	0.000	o				0.06
2.383	0.07	0.07	0.000	o				0.07

2.400	0.07	0.07	0.000	O				0.07
2.417	0.07	0.07	0.000	O				0.07
2.433	0.07	0.07	0.000	O				0.07
2.450	0.07	0.07	0.000	O				0.07
2.467	0.07	0.07	0.000	O				0.07
2.483	0.07	0.07	0.000	O				0.07
2.500	0.07	0.07	0.000	O				0.07
2.517	0.07	0.07	0.000	O				0.07
2.533	0.07	0.07	0.000	O				0.07
2.550	0.07	0.07	0.000	O				0.07
2.567	0.07	0.07	0.000	O				0.07
2.583	0.07	0.07	0.000	O				0.07
2.600	0.08	0.07	0.000	O				0.07
2.617	0.08	0.08	0.000	O				0.07
2.633	0.08	0.08	0.000	O				0.07
2.650	0.08	0.08	0.000	O				0.07
2.667	0.08	0.08	0.000	O				0.07
2.683	0.08	0.08	0.000	O				0.07
2.700	0.08	0.08	0.000	O				0.08
2.717	0.08	0.08	0.000	O				0.08
2.733	0.08	0.08	0.000	O				0.08
2.750	0.08	0.08	0.000	O				0.08
2.767	0.08	0.08	0.000	O				0.08
2.783	0.08	0.08	0.000	O				0.08
2.800	0.08	0.08	0.000	O				0.08
2.817	0.08	0.08	0.000	O				0.08
2.833	0.08	0.08	0.000	O				0.08
2.850	0.09	0.08	0.000	O				0.08
2.867	0.09	0.09	0.000	OI				0.08
2.883	0.09	0.09	0.000	O				0.08
2.900	0.09	0.09	0.000	O				0.08
2.917	0.09	0.09	0.000	O				0.08
2.933	0.09	0.09	0.000	O				0.08
2.950	0.09	0.09	0.000	O				0.09
2.967	0.09	0.09	0.000	O				0.09
2.983	0.09	0.09	0.000	O				0.09
3.000	0.09	0.09	0.000	O				0.09
3.017	0.09	0.09	0.000	O				0.09
3.033	0.09	0.09	0.000	O				0.09
3.050	0.10	0.09	0.000	O				0.09
3.067	0.10	0.10	0.000	O				0.09
3.083	0.10	0.10	0.000	O				0.09
3.100	0.10	0.10	0.000	O				0.09
3.117	0.10	0.10	0.000	O				0.09
3.133	0.10	0.10	0.000	O				0.10
3.150	0.10	0.10	0.000	O				0.10
3.167	0.10	0.10	0.000	O				0.10
3.183	0.11	0.11	0.000	O				0.10
3.200	0.11	0.11	0.000	O				0.10
3.217	0.11	0.11	0.000	O				0.10
3.233	0.11	0.11	0.000	O				0.10
3.250	0.11	0.11	0.000	O				0.10
3.267	0.11	0.11	0.000	O				0.10
3.283	0.11	0.11	0.000	O				0.11
3.300	0.11	0.11	0.000	O				0.11
3.317	0.12	0.12	0.000	O				0.11
3.333	0.12	0.12	0.000	O				0.11
3.350	0.12	0.12	0.000	O				0.11
3.367	0.12	0.12	0.000	O				0.12
3.383	0.13	0.12	0.000	O				0.12
3.400	0.13	0.13	0.000	O				0.12
3.417	0.13	0.13	0.000	OI				0.12
3.433	0.13	0.13	0.000	O				0.12
3.450	0.13	0.13	0.000	O				0.12
3.467	0.13	0.13	0.000	O				0.13
3.483	0.14	0.13	0.000	O				0.13
3.500	0.14	0.14	0.000	O				0.13
3.517	0.14	0.14	0.000	O				0.13
3.533	0.15	0.14	0.000	O				0.14
3.550	0.15	0.15	0.000	O				0.14
3.567	0.15	0.15	0.000	O				0.14
3.583	0.16	0.16	0.000	O				0.15
3.600	0.16	0.16	0.000	O				0.15
3.617	0.17	0.16	0.000	O				0.16
3.633	0.17	0.17	0.000	O				0.16
3.650	0.17	0.17	0.000	OI				0.16
3.667	0.18	0.18	0.000	O				0.17
3.683	0.18	0.18	0.000	O				0.17
3.700	0.18	0.18	0.000	O				0.17

Lot 2 Routing

3.717	0.19	0.19	0.000		0.18
3.733	0.19	0.19	0.000		0.18
3.750	0.20	0.20	0.000		0.19
3.767	0.22	0.21	0.000		0.20
3.783	0.23	0.22	0.000		0.21
3.800	0.24	0.23	0.000		0.22
3.817	0.25	0.25	0.000		0.23
3.833	0.27	0.26	0.000		0.25
3.850	0.28	0.27	0.000		0.26
3.867	0.30	0.29	0.000		0.27
3.883	0.31	0.30	0.000		0.29
3.900	0.33	0.32	0.000		0.30
3.917	0.35	0.33	0.000		0.32
3.933	0.36	0.35	0.000		0.33
3.950	0.38	0.37	0.000		0.35
3.967	0.39	0.38	0.000		0.36
3.983	0.53	0.45	0.000		0.43
4.000	0.67	0.58	0.001		0.55
4.017	0.81	0.72	0.001		0.69
4.033	0.95	0.86	0.001		0.82
4.050	1.09	1.00	0.001		0.95
4.067	1.23	1.13	0.001		1.10
4.083	1.38	1.22	0.001		1.32
4.100	1.21	1.26	0.001		1.42
4.117	1.05	1.19	0.001		1.25
4.133	0.88	1.05	0.001		1.00
4.150	0.72	0.83	0.001		0.79
4.167	0.55	0.66	0.001		0.63
4.183	0.39	0.50	0.000		0.47
4.200	0.22	0.33	0.000		0.31
4.217	0.21	0.23	0.000		0.22
4.233	0.20	0.21	0.000		0.20
4.250	0.19	0.20	0.000		0.19
4.267	0.18	0.19	0.000		0.18
4.283	0.17	0.18	0.000		0.17
4.300	0.16	0.17	0.000		0.16
4.317	0.15	0.16	0.000		0.15
4.333	0.15	0.15	0.000		0.14
4.350	0.14	0.14	0.000		0.14
4.367	0.14	0.14	0.000		0.13
4.383	0.13	0.13	0.000		0.13
4.400	0.13	0.13	0.000		0.12
4.417	0.12	0.13	0.000		0.12
4.433	0.12	0.12	0.000		0.11
4.450	0.11	0.12	0.000		0.11
4.467	0.11	0.11	0.000		0.11
4.483	0.11	0.11	0.000		0.11
4.500	0.11	0.11	0.000		0.10
4.517	0.10	0.11	0.000		0.10
4.533	0.10	0.10	0.000		0.10
4.550	0.10	0.10	0.000		0.09
4.567	0.10	0.10	0.000		0.09
4.583	0.09	0.10	0.000		0.09
4.600	0.09	0.09	0.000		0.09
4.617	0.09	0.09	0.000		0.09
4.633	0.09	0.09	0.000		0.09
4.650	0.09	0.09	0.000		0.08
4.667	0.09	0.09	0.000		0.08
4.683	0.08	0.09	0.000		0.08
4.700	0.08	0.08	0.000		0.08
4.717	0.08	0.08	0.000		0.08
4.733	0.08	0.08	0.000		0.08
4.750	0.08	0.08	0.000		0.08
4.767	0.08	0.08	0.000		0.07
4.783	0.08	0.08	0.000		0.07
4.800	0.08	0.08	0.000		0.07
4.817	0.07	0.08	0.000		0.07
4.833	0.07	0.07	0.000		0.07
4.850	0.07	0.07	0.000		0.07
4.867	0.07	0.07	0.000		0.07
4.883	0.07	0.07	0.000		0.07
4.900	0.07	0.07	0.000		0.07
4.917	0.07	0.07	0.000		0.07
4.933	0.07	0.07	0.000		0.06
4.950	0.07	0.07	0.000		0.06
4.967	0.07	0.07	0.000		0.06
4.983	0.07	0.07	0.000		0.06
5.000	0.06	0.07	0.000		0.06
5.017	0.06	0.06	0.000		0.06

5.033	0.06	0.06	0.000	|o	|	|	|	|	0.06
5.050	0.06	0.06	0.000	|o	|	|	|	|	0.06
5.067	0.06	0.06	0.000	|o	|	|	|	|	0.06
5.083	0.06	0.06	0.000	|o	|	|	|	|	0.06
5.100	0.06	0.06	0.000	|o	|	|	|	|	0.06
5.117	0.06	0.06	0.000	|o	|	|	|	|	0.06
5.133	0.06	0.06	0.000	|o	|	|	|	|	0.06
5.150	0.06	0.06	0.000	|o	|	|	|	|	0.06
5.167	0.06	0.06	0.000	|o	|	|	|	|	0.06
5.183	0.06	0.06	0.000	|o	|	|	|	|	0.05
5.200	0.06	0.06	0.000	|o	|	|	|	|	0.05
5.217	0.06	0.06	0.000	|o	|	|	|	|	0.05
5.233	0.06	0.06	0.000	|o	|	|	|	|	0.05
5.250	0.06	0.06	0.000	|o	|	|	|	|	0.05
5.267	0.05	0.06	0.000	|o	|	|	|	|	0.05
5.283	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.300	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.317	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.333	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.350	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.367	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.383	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.400	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.417	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.433	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.450	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.467	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.483	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.500	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.517	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.533	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.550	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.567	0.05	0.05	0.000	|o	|	|	|	|	0.05
5.583	0.05	0.05	0.000	|o	|	|	|	|	0.04
5.600	0.05	0.05	0.000	|o	|	|	|	|	0.04
5.617	0.05	0.05	0.000	|o	|	|	|	|	0.04
5.633	0.05	0.05	0.000	|o	|	|	|	|	0.04
5.650	0.05	0.05	0.000	|o	|	|	|	|	0.04
5.667	0.05	0.05	0.000	|o	|	|	|	|	0.04
5.683	0.05	0.05	0.000	|o	|	|	|	|	0.04
5.700	0.04	0.05	0.000	|o	|	|	|	|	0.04
5.717	0.04	0.04	0.000	|o	|	|	|	|	0.04
5.733	0.04	0.04	0.000	|o	|	|	|	|	0.04
5.750	0.04	0.04	0.000	|o	|	|	|	|	0.04
5.767	0.04	0.04	0.000	|o	|	|	|	|	0.04
5.783	0.04	0.04	0.000	|o	|	|	|	|	0.04
5.800	0.04	0.04	0.000	|o	|	|	|	|	0.04
5.817	0.04	0.04	0.000	|o	|	|	|	|	0.04
5.833	0.04	0.04	0.000	o	|	|	|	|	0.04
5.850	0.04	0.04	0.000	o	|	|	|	|	0.04
5.867	0.04	0.04	0.000	o	|	|	|	|	0.04
5.883	0.04	0.04	0.000	o	|	|	|	|	0.04
5.900	0.04	0.04	0.000	o	|	|	|	|	0.04
5.917	0.04	0.04	0.000	o	|	|	|	|	0.04
5.933	0.04	0.04	0.000	o	|	|	|	|	0.04
5.950	0.04	0.04	0.000	o	|	|	|	|	0.04
5.967	0.04	0.04	0.000	o	|	|	|	|	0.04
5.983	0.04	0.04	0.000	o	|	|	|	|	0.04
6.000	0.04	0.04	0.000	o	|	|	|	|	0.04
6.017	0.04	0.04	0.000	o	|	|	|	|	0.04
6.033	0.04	0.04	0.000	o	|	|	|	|	0.04
6.050	0.04	0.04	0.000	o	|	|	|	|	0.04
6.067	0.04	0.04	0.000	o	|	|	|	|	0.04
6.083	0.00	0.02	0.000	o	|	|	|	|	0.02
6.100	0.00	0.00	0.000	o	|	|	|	|	0.00
6.117	0.00	0.00	0.000	o	|	|	|	|	0.00

```
****************************HYDROGRAPH DATA****************************
                Number of intervals =   367
                Time interval =    1.0 (Min.)
                Maximum/Peak flow rate =        1.256 (CFS)
                Total volume =       0.055 (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
***********************************************************************

-----------------------------------------------------------------
```

Lot 2 Routing

Detention Basin Calculations

Lot 3

Lot 3 Hydrograph

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2006 Version 7.6

Rational method hydrology program based on
San Diego County Flood Control Division 2003 hydrology manual
Rational Hydrology Study Date: 06/27/06

********* Hydrology Study Control Information **********

Program License Serial Number 6024

Rational hydrology study storm event year is 100.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour, precipitation(inches) = 3.500
24 hour precipitation(inches) = 6.000
P6/P24 = 58.3%
San Diego hydrology manual 'C' values used

++
Process from Point/Station 25.300 to Point/Station 25.300
**** USER DEFINED FLOW INFORMATION AT A POINT ****

User specified 'C' value of 0.560 given for subarea
Rainfall intensity (I) = 7.276(In/Hr) for a 100.0 year storm
User specified values are as follows:
TC = 7.22 min. Rain intensity = 7.28(In/Hr)
Total area = 0.340(Ac.) Total runoff = 1.375(CFS)

++
Process from Point/Station 25.300 to Point/Station 25.300
**** 6 HOUR HYDROGRAPH ****

++
Hydrograph Data - Section 6, San Diego County Hydrology manual, June 2003

Time of Concentration = 7.22
Basin Area = 0.34 Acres
6 Hour Rainfall = 3.500 Inches
Runoff Coefficient = 0.560
Peak Discharge = 1.38 CFS

Time (Min)	Discharge (CFS)
0	0.000
7	0.040
14	0.040
21	0.042
28	0.042
35	0.043
42	0.044
49	0.045
56	0.046
63	0.048
70	0.048
77	0.050
84	0.051
91	0.053
98	0.054
105	0.057
112	0.058
119	0.061
126	0.062
133	0.065
140	0.067
147	0.072
154	0.074
161	0.079
168	0.082
175	0.089
182	0.094

189	0.104
196	0.110
203	0.126
210	0.137
217	0.167
224	0.191
231	0.280
238	0.394
245	1.375
252	0.224
259	0.150
266	0.117
273	0.098
280	0.086
287	0.076
294	0.069
301	0.064
308	0.059
315	0.055
322	0.052
329	0.049
336	0.047
343	0.045
350	0.043
357	0.041
364	0.039

++

6 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 1 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	0.3	0.7	1.0	1.4
0+ 0	0.0000	0.00	Q	|	|	|	|
0+ 1	0.0000	0.01	Q	|	|	|	|
0+ 2	0.0000	0.01	Q	|	|	|	|
0+ 3	0.0000	0.02	Q	|	|	|	|
0+ 4	0.0001	0.02	Q	|	|	|	|
0+ 5	0.0001	0.03	Q	|	|	|	|
0+ 6	0.0002	0.03	Q	|	|	|	|
0+ 7	0.0002	0.04	VQ	|	|	|	|
0+ 8	0.0003	0.04	VQ	|	|	|	|
0+ 9	0.0003	0.04	VQ	|	|	|	|
0+10	0.0004	0.04	VQ	|	|	|	|
0+11	0.0004	0.04	VQ	|	|	|	|
0+12	0.0005	0.04	VQ	|	|	|	|
0+13	0.0006	0.04	VQ	|	|	|	|
0+14	0.0006	0.04	VQ	|	|	|	|
0+15	0.0007	0.04	VQ	|	|	|	|
0+16	0.0007	0.04	VQ	|	|	|	|
0+17	0.0008	0.04	VQ	|	|	|	|
0+18	0.0008	0.04	VQ	|	|	|	|
0+19	0.0009	0.04	VQ	|	|	|	|
0+20	0.0009	0.04	VQ	|	|	|	|
0+21	0.0010	0.04	VQ	|	|	|	|
0+22	0.0011	0.04	VQ	|	|	|	|
0+23	0.0011	0.04	VQ	|	|	|	|
0+24	0.0012	0.04	VQ	|	|	|	|
0+25	0.0012	0.04	VQ	|	|	|	|
0+26	0.0013	0.04	VQ	|	|	|	|
0+27	0.0014	0.04	VQ	|	|	|	|
0+28	0.0014	0.04	|Q	|	|	|	|
0+29	0.0015	0.04	|Q	|	|	|	|
0+30	0.0015	0.04	|Q	|	|	|	|
0+31	0.0016	0.04	|Q	|	|	|	|
0+32	0.0016	0.04	|Q	|	|	|	|
0+33	0.0017	0.04	|Q	|	|	|	|
0+34	0.0018	0.04	|Q	|	|	|	|
0+35	0.0018	0.04	|Q	|	|	|	|
0+36	0.0019	0.04	|Q	|	|	|	|
0+37	0.0019	0.04	|Q	|	|	|	|
0+38	0.0020	0.04	|Q	|	|	|	|
0+39	0.0021	0.04	|Q	|	|	|	|
0+40	0.0021	0.04	|Q	|	|	|	|
0+41	0.0022	0.04	|Q	|	|	|	|
0+42	0.0022	0.04	|Q	|	|	|	|
0+43	0.0023	0.04	|Q	|	|	|	|

0+44	0.0024	0.04	Q
0+45	0.0024	0.04	Q
0+46	0.0025	0.04	Q
0+47	0.0026	0.04	Q
0+48	0.0026	0.05	Q
0+49	0.0027	0.05	Q
0+50	0.0027	0.05	Q
0+51	0.0028	0.05	QV
0+52	0.0029	0.05	QV
0+53	0.0029	0.05	QV
0+54	0.0030	0.05	QV
0+55	0.0031	0.05	QV
0+56	0.0031	0.05	QV
0+57	0.0032	0.05	QV
0+58	0.0032	0.05	QV
0+59	0.0033	0.05	QV
1+ 0	0.0034	0.05	QV
1+ 1	0.0034	0.05	QV
1+ 2	0.0035	0.05	QV
1+ 3	0.0036	0.05	QV
1+ 4	0.0036	0.05	QV
1+ 5	0.0037	0.05	QV
1+ 6	0.0038	0.05	QV
1+ 7	0.0038	0.05	QV
1+ 8	0.0039	0.05	QV
1+ 9	0.0040	0.05	QV
1+10	0.0040	0.05	QV
1+11	0.0041	0.05	QV
1+12	0.0042	0.05	Q V
1+13	0.0042	0.05	Q V
1+14	0.0043	0.05	Q V
1+15	0.0044	0.05	Q V
1+16	0.0044	0.05	Q V
1+17	0.0045	0.05	Q V
1+18	0.0046	0.05	Q V
1+19	0.0046	0.05	Q V
1+20	0.0047	0.05	Q V
1+21	0.0048	0.05	Q V
1+22	0.0049	0.05	Q V
1+23	0.0049	0.05	Q V
1+24	0.0050	0.05	Q V
1+25	0.0051	0.05	Q V
1+26	0.0051	0.05	Q V
1+27	0.0052	0.05	Q V
1+28	0.0053	0.05	Q V
1+29	0.0054	0.05	Q V
1+30	0.0054	0.05	Q V
1+31	0.0055	0.05	Q V
1+32	0.0056	0.05	Q V
1+33	0.0057	0.05	Q V
1+34	0.0057	0.05	Q V
1+35	0.0058	0.05	Q V
1+36	0.0059	0.05	Q V
1+37	0.0059	0.05	Q V
1+38	0.0060	0.05	Q V
1+39	0.0061	0.05	Q V
1+40	0.0062	0.05	Q V
1+41	0.0062	0.06	Q V
1+42	0.0063	0.06	Q V
1+43	0.0064	0.06	Q V
1+44	0.0065	0.06	Q V
1+45	0.0066	0.06	Q V
1+46	0.0066	0.06	Q V
1+47	0.0067	0.06	Q V
1+48	0.0068	0.06	Q V
1+49	0.0069	0.06	Q V
1+50	0.0070	0.06	Q V
1+51	0.0070	0.06	Q V
1+52	0.0071	0.06	Q V
1+53	0.0072	0.06	Q V
1+54	0.0073	0.06	Q V
1+55	0.0074	0.06	Q V
1+56	0.0074	0.06	Q V
1+57	0.0075	0.06	Q V
1+58	0.0076	0.06	Q V
1+59	0.0077	0.06	Q V
2+ 0	0.0078	0.06	Q V
2+ 1	0.0079	0.06	Q V
2+ 2	0.0079	0.06	Q V

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                                                 Lot 3 Hydrograph
2+ 3     0.0080     0.06  |Q   V    |         |         |         |
2+ 4     0.0081     0.06  |Q   V    |         |         |         |
2+ 5     0.0082     0.06  |Q   V    |         |         |         |
2+ 6     0.0083     0.06  |Q    V   |         |         |         |
2+ 7     0.0084     0.06  |Q    V   |         |         |         |
2+ 8     0.0084     0.06  |Q    V   |         |         |         |
2+ 9     0.0085     0.06  |Q    V   |         |         |         |
2+10     0.0086     0.06  |Q    V   |         |         |         |
2+11     0.0087     0.06  |Q    V   |         |         |         |
2+12     0.0088     0.07  |Q    V   |         |         |         |
2+13     0.0089     0.07  |Q    V   |         |         |         |
2+14     0.0090     0.07  |Q    V   |         |         |         |
2+15     0.0091     0.07  |Q    V   |         |         |         |
2+16     0.0092     0.07  |Q    V   |         |         |         |
2+17     0.0093     0.07  |Q    V   |         |         |         |
2+18     0.0093     0.07  |Q    V   |         |         |         |
2+19     0.0094     0.07  |Q    V   |         |         |         |
2+20     0.0095     0.07  |Q    V   |         |         |         |
2+21     0.0096     0.07  |Q     V  |         |         |         |
2+22     0.0097     0.07  |Q     V  |         |         |         |
2+23     0.0098     0.07  | Q    V  |         |         |         |
2+24     0.0099     0.07  | Q    V  |         |         |         |
2+25     0.0100     0.07  | Q    V  |         |         |         |
2+26     0.0101     0.07  | Q    V  |         |         |         |
2+27     0.0102     0.07  | Q    V  |         |         |         |
2+28     0.0103     0.07  | Q    V  |         |         |         |
2+29     0.0104     0.07  | Q    V  |         |         |         |
2+30     0.0105     0.07  | Q    V  |         |         |         |
2+31     0.0106     0.07  | Q    V  |         |         |         |
2+32     0.0107     0.07  | Q    V  |         |         |         |
2+33     0.0108     0.07  | Q    V  |         |         |         |
2+34     0.0109     0.07  | Q    V  |         |         |         |
2+35     0.0110     0.07  | Q     V |         |         |         |
2+36     0.0111     0.08  | Q     V |         |         |         |
2+37     0.0112     0.08  | Q     V |         |         |         |
2+38     0.0113     0.08  | Q     V |         |         |         |
2+39     0.0114     0.08  | Q     V |         |         |         |
2+40     0.0115     0.08  | Q     V |         |         |         |
2+41     0.0117     0.08  | Q     V |         |         |         |
2+42     0.0118     0.08  | Q     V |         |         |         |
2+43     0.0119     0.08  | Q     V |         |         |         |
2+44     0.0120     0.08  | Q     V |         |         |         |
2+45     0.0121     0.08  | Q     V |         |         |         |
2+46     0.0122     0.08  | Q     V |         |         |         |
2+47     0.0123     0.08  | Q     V |         |         |         |
2+48     0.0124     0.08  | Q      V|         |         |         |
2+49     0.0125     0.08  | Q      V|         |         |         |
2+50     0.0127     0.08  | Q      V|         |         |         |
2+51     0.0128     0.09  | Q      V|         |         |         |
2+52     0.0129     0.09  | Q      V|         |         |         |
2+53     0.0130     0.09  | Q      V|         |         |         |
2+54     0.0131     0.09  | Q      V|         |         |         |
2+55     0.0133     0.09  | Q      V|         |         |         |
2+56     0.0134     0.09  | Q      V|         |         |         |
2+57     0.0135     0.09  | Q      V|         |         |         |
2+58     0.0136     0.09  | Q      V|         |         |         |
2+59     0.0138     0.09  | Q       V         |         |         |
3+ 0     0.0139     0.09  | Q       V         |         |         |
3+ 1     0.0140     0.09  | Q       V         |         |         |
3+ 2     0.0141     0.09  | Q       V         |         |         |
3+ 3     0.0143     0.10  | Q       V         |         |         |
3+ 4     0.0144     0.10  | Q       V         |         |         |
3+ 5     0.0145     0.10  | Q       V         |         |         |
3+ 6     0.0147     0.10  | Q       V         |         |         |
3+ 7     0.0148     0.10  | Q       V         |         |         |
3+ 8     0.0150     0.10  | Q       V         |         |         |
3+ 9     0.0151     0.10  |  Q      |V        |         |         |
3+10     0.0153     0.10  |  Q      |V        |         |         |
3+11     0.0154     0.11  |  Q      |V        |         |         |
3+12     0.0155     0.11  |  Q      |V        |         |         |
3+13     0.0157     0.11  |  Q      |V        |         |         |
3+14     0.0158     0.11  |  Q      |V        |         |         |
3+15     0.0160     0.11  |  Q      |V        |         |         |
3+16     0.0161     0.11  |  Q      |V        |         |         |
3+17     0.0163     0.11  |  Q      |V        |         |         |
3+18     0.0165     0.11  |  Q      |V        |         |         |
3+19     0.0166     0.12  |  Q      | V       |         |         |
3+20     0.0168     0.12  |  Q      | V       |         |         |
3+21     0.0170     0.12  |  Q      | V       |         |         |
```

Lot 3 Hydrograph

3+22	0.0171	0.12	
3+23	0.0173	0.13	
3+24	0.0175	0.13	
3+25	0.0176	0.13	
3+26	0.0178	0.13	
3+27	0.0180	0.13	
3+28	0.0182	0.13	
3+29	0.0184	0.14	
3+30	0.0186	0.14	
3+31	0.0188	0.14	
3+32	0.0190	0.15	
3+33	0.0192	0.15	
3+34	0.0194	0.15	
3+35	0.0196	0.16	
3+36	0.0198	0.16	
3+37	0.0201	0.17	
3+38	0.0203	0.17	
3+39	0.0205	0.17	
3+40	0.0208	0.18	
3+41	0.0210	0.18	
3+42	0.0213	0.18	
3+43	0.0215	0.19	
3+44	0.0218	0.19	
3+45	0.0221	0.20	
3+46	0.0224	0.22	
3+47	0.0227	0.23	
3+48	0.0230	0.24	
3+49	0.0234	0.25	
3+50	0.0237	0.27	
3+51	0.0241	0.28	
3+52	0.0245	0.30	
3+53	0.0250	0.31	
3+54	0.0254	0.33	
3+55	0.0259	0.35	
3+56	0.0264	0.36	
3+57	0.0269	0.38	
3+58	0.0275	0.39	
3+59	0.0282	0.53	
4+ 0	0.0291	0.67	
4+ 1	0.0302	0.81	
4+ 2	0.0316	0.95	
4+ 3	0.0331	1.09	
4+ 4	0.0348	1.23	
4+ 5	0.0367	1.38	
4+ 6	0.0383	1.21	
4+ 7	0.0398	1.05	
4+ 8	0.0410	0.88	
4+ 9	0.0420	0.72	
4+10	0.0427	0.55	
4+11	0.0433	0.39	
4+12	0.0436	0.22	
4+13	0.0439	0.21	
4+14	0.0442	0.20	
4+15	0.0444	0.19	
4+16	0.0447	0.18	
4+17	0.0449	0.17	
4+18	0.0451	0.16	
4+19	0.0453	0.15	
4+20	0.0455	0.15	
4+21	0.0457	0.14	
4+22	0.0459	0.14	
4+23	0.0461	0.13	
4+24	0.0463	0.13	
4+25	0.0464	0.12	
4+26	0.0466	0.12	
4+27	0.0468	0.11	
4+28	0.0469	0.11	
4+29	0.0471	0.11	
4+30	0.0472	0.11	
4+31	0.0474	0.10	
4+32	0.0475	0.10	
4+33	0.0476	0.10	
4+34	0.0478	0.10	
4+35	0.0479	0.09	
4+36	0.0480	0.09	
4+37	0.0481	0.09	
4+38	0.0483	0.09	
4+39	0.0484	0.09	
4+40	0.0485	0.09	

4+41	0.0486	0.08	Q			V
4+42	0.0487	0.08	Q			V
4+43	0.0489	0.08	Q			V
4+44	0.0490	0.08	Q			V
4+45	0.0491	0.08	Q			V
4+46	0.0492	0.08	Q			V
4+47	0.0493	0.08	Q			V
4+48	0.0494	0.08	Q			V
4+49	0.0495	0.07	Q			V
4+50	0.0496	0.07	Q			V
4+51	0.0497	0.07	Q			V
4+52	0.0498	0.07	Q			V
4+53	0.0499	0.07	Q			V
4+54	0.0500	0.07	Q			V
4+55	0.0501	0.07	Q			V
4+56	0.0502	0.07	Q			V
4+57	0.0503	0.07	Q			V
4+58	0.0504	0.07	Q			V
4+59	0.0504	0.07	Q			V
5+ 0	0.0505	0.06	Q			V
5+ 1	0.0506	0.06	Q			V
5+ 2	0.0507	0.06	Q			V
5+ 3	0.0508	0.06	Q			V
5+ 4	0.0509	0.06	Q			V
5+ 5	0.0510	0.06	Q			V
5+ 6	0.0510	0.06	Q			V
5+ 7	0.0511	0.06	Q			V
5+ 8	0.0512	0.06	Q			V
5+ 9	0.0513	0.06	Q			V
5+10	0.0514	0.06	Q			V
5+11	0.0515	0.06	Q			V
5+12	0.0515	0.06	Q			V
5+13	0.0516	0.06	Q			V
5+14	0.0517	0.06	Q			V
5+15	0.0518	0.06	Q			V
5+16	0.0518	0.05	Q			V
5+17	0.0519	0.05	Q			V
5+18	0.0520	0.05	Q			V
5+19	0.0521	0.05	Q			V
5+20	0.0521	0.05	Q			V
5+21	0.0522	0.05	Q			V
5+22	0.0523	0.05	Q			V
5+23	0.0523	0.05	Q			V
5+24	0.0524	0.05	Q			V
5+25	0.0525	0.05	Q			V
5+26	0.0526	0.05	Q			V
5+27	0.0526	0.05	Q			V
5+28	0.0527	0.05	Q			V
5+29	0.0528	0.05	Q			V
5+30	0.0528	0.05	Q			V
5+31	0.0529	0.05	Q			V
5+32	0.0530	0.05	Q			V
5+33	0.0530	0.05	Q			V
5+34	0.0531	0.05	Q			V
5+35	0.0532	0.05	Q			V
5+36	0.0532	0.05	Q			V
5+37	0.0533	0.05	Q			V
5+38	0.0534	0.05	Q			V
5+39	0.0534	0.05	Q			V
5+40	0.0535	0.05	Q			V
5+41	0.0535	0.05	Q			V
5+42	0.0536	0.04	Q			V
5+43	0.0537	0.04	Q			V
5+44	0.0537	0.04	Q			V
5+45	0.0538	0.04	Q			V
5+46	0.0538	0.04	Q			V
5+47	0.0539	0.04	Q			V
5+48	0.0540	0.04	Q			V
5+49	0.0540	0.04	Q			V
5+50	0.0541	0.04	Q			V
5+51	0.0541	0.04	Q			V
5+52	0.0542	0.04	Q			V
5+53	0.0543	0.04	Q			V
5+54	0.0543	0.04	Q			V
5+55	0.0544	0.04	Q			V
5+56	0.0544	0.04	Q			V
5+57	0.0545	0.04	Q			V
5+58	0.0545	0.04	Q			V
5+59	0.0546	0.04	Q			V

Lot 3 Hydrograph

```
    6+ 0       0.0547      0.04  |Q        |         |         |        V|
    6+ 1       0.0547      0.04  |Q        |         |         |        V|
    6+ 2       0.0548      0.04  |Q        |         |         |        V|
    6+ 3       0.0548      0.04  |Q        |         |         |        V|
    6+ 4       0.0549      0.04  |Q        |         |         |         V
-----------------------------------------------------------------------
```

End of computations, total study area = 0.340 (Ac.)

Lot 3 Routing

FLOOD HYDROGRAPH ROUTING PROGRAM
Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
Study date: 06/27/06

Program License Serial Number 6024

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

From study/file name: 5914h3.rte
**********HYDROGRAPH DATA**********
Number of intervals = 364
Time interval = 1.0 (Min.)
Maximum/Peak flow rate = 1.375 (CFS)
Total volume = 0.055 (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

****

++
Process from Point/Station 5.300 to Point/Station 7.000
**** RETARDING BASIN ROUTING ****

Program computation of outflow v. depth

CALCULATED OUTFLOW DATA AT DEPTH = 0.73(Ft.))
Pipe length = 25.11(Ft.) Elevation difference = 6.99(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 4.00(In.)
NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 7.720(Ft.)
Pipe friction loss = 5.353(Ft.)
Minor friction loss = 2.361(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.879(CFS)

Total outflow at this depth = 0.88(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.11(Ft.))
Pipe length = 25.11(Ft.) Elevation difference = 6.99(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 4.00(In.)
NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 8.100(Ft.)
Pipe friction loss = 5.616(Ft.)
Minor friction loss = 2.478(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.900(CFS)

Total outflow at this depth = 0.90(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 1.91(Ft.))
Pipe length = 25.11(Ft.) Elevation difference = 6.99(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 4.00(In.)
NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 8.900(Ft.)
Pipe friction loss = 6.171(Ft.)
Minor friction loss = 2.722(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.943(CFS)

Lot 3 Routing

Total outflow at this depth = 0.94(CFS)

Total number of inflow hydrograph intervals = 364
Hydrograph time unit = 1.000 (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
0.730	0.001	0.879	0.000	0.002
1.110	0.002	0.900	0.001	0.003
1.910	0.003	0.943	0.002	0.004

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.3	0.69	1.03	1.38	Depth (Ft.)
0.017	0.01	0.00	0.000	o	|	|	|	|	0.00
0.033	0.01	0.01	0.000	o	|	|	|	|	0.01
0.050	0.02	0.01	0.000	o	|	|	|	|	0.01
0.067	0.02	0.02	0.000	o	|	|	|	|	0.02
0.083	0.03	0.02	0.000	o	|	|	|	|	0.02
0.100	0.03	0.03	0.000	o	|	|	|	|	0.02
0.117	0.04	0.04	0.000	o	|	|	|	|	0.03
0.133	0.04	0.04	0.000	o	|	|	|	|	0.03
0.150	0.04	0.04	0.000	o	|	|	|	|	0.03
0.167	0.04	0.04	0.000	o	|	|	|	|	0.03
0.183	0.04	0.04	0.000	o	|	|	|	|	0.03
0.200	0.04	0.04	0.000	o	|	|	|	|	0.03
0.217	0.04	0.04	0.000	o	|	|	|	|	0.03
0.233	0.04	0.04	0.000	o	|	|	|	|	0.03
0.250	0.04	0.04	0.000	o	|	|	|	|	0.03
0.267	0.04	0.04	0.000	o	|	|	|	|	0.03
0.283	0.04	0.04	0.000	o	|	|	|	|	0.03
0.300	0.04	0.04	0.000	o	|	|	|	|	0.03
0.317	0.04	0.04	0.000	o	|	|	|	|	0.03
0.333	0.04	0.04	0.000	o	|	|	|	|	0.03
0.350	0.04	0.04	0.000	o	|	|	|	|	0.03
0.367	0.04	0.04	0.000	o	|	|	|	|	0.03
0.383	0.04	0.04	0.000	o	|	|	|	|	0.03
0.400	0.04	0.04	0.000	o	|	|	|	|	0.03
0.417	0.04	0.04	0.000	o	|	|	|	|	0.03
0.433	0.04	0.04	0.000	o	|	|	|	|	0.03
0.450	0.04	0.04	0.000	o	|	|	|	|	0.03
0.467	0.04	0.04	0.000	o	|	|	|	|	0.03
0.483	0.04	0.04	0.000	o	|	|	|	|	0.04
0.500	0.04	0.04	0.000	o	|	|	|	|	0.04
0.517	0.04	0.04	0.000	o	|	|	|	|	0.04
0.533	0.04	0.04	0.000	o	|	|	|	|	0.04
0.550	0.04	0.04	0.000	oI	|	|	|	|	0.04
0.567	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.583	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.600	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.617	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.633	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.650	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.667	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.683	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.700	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.717	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.733	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.750	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.767	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.783	0.04	0.04	0.000	|o	|	|	|	|	0.04
0.800	0.05	0.05	0.000	|o	|	|	|	|	0.04
0.817	0.05	0.05	0.000	|o	|	|	|	|	0.04

0.833	0.05	0.05	0.000	o				0.04
0.850	0.05	0.05	0.000	o				0.04
0.867	0.05	0.05	0.000	o				0.04
0.883	0.05	0.05	0.000	o				0.04
0.900	0.05	0.05	0.000	o				0.04
0.917	0.05	0.05	0.000	o				0.04
0.933	0.05	0.05	0.000	o				0.04
0.950	0.05	0.05	0.000	o				0.04
0.967	0.05	0.05	0.000	o				0.04
0.983	0.05	0.05	0.000	o				0.04
1.000	0.05	0.05	0.000	o				0.04
1.017	0.05	0.05	0.000	o				0.04
1.033	0.05	0.05	0.000	o				0.04
1.050	0.05	0.05	0.000	o				0.04
1.067	0.05	0.05	0.000	o				0.04
1.083	0.05	0.05	0.000	o				0.04
1.100	0.05	0.05	0.000	o				0.04
1.117	0.05	0.05	0.000	o				0.04
1.133	0.05	0.05	0.000	o				0.04
1.150	0.05	0.05	0.000	o				0.04
1.167	0.05	0.05	0.000	o				0.04
1.183	0.05	0.05	0.000	o				0.04
1.200	0.05	0.05	0.000	o				0.04
1.217	0.05	0.05	0.000	o				0.04
1.233	0.05	0.05	0.000	o				0.04
1.250	0.05	0.05	0.000	o				0.04
1.267	0.05	0.05	0.000	o				0.04
1.283	0.05	0.05	0.000	o				0.04
1.300	0.05	0.05	0.000	o				0.04
1.317	0.05	0.05	0.000	o				0.04
1.333	0.05	0.05	0.000	o				0.04
1.350	0.05	0.05	0.000	o				0.04
1.367	0.05	0.05	0.000	o				0.04
1.383	0.05	0.05	0.000	o				0.04
1.400	0.05	0.05	0.000	o				0.04
1.417	0.05	0.05	0.000	o				0.04
1.433	0.05	0.05	0.000	o				0.04
1.450	0.05	0.05	0.000	o				0.04
1.467	0.05	0.05	0.000	o				0.04
1.483	0.05	0.05	0.000	o				0.04
1.500	0.05	0.05	0.000	o				0.04
1.517	0.05	0.05	0.000	o				0.04
1.533	0.05	0.05	0.000	o				0.04
1.550	0.05	0.05	0.000	o				0.04
1.567	0.05	0.05	0.000	o				0.04
1.583	0.05	0.05	0.000	o				0.04
1.600	0.05	0.05	0.000	o				0.04
1.617	0.05	0.05	0.000	o				0.04
1.633	0.05	0.05	0.000	o				0.04
1.650	0.05	0.05	0.000	o				0.05
1.667	0.05	0.05	0.000	o				0.05
1.683	0.06	0.05	0.000	o				0.05
1.700	0.06	0.06	0.000	o				0.05
1.717	0.06	0.06	0.000	o				0.05
1.733	0.06	0.06	0.000	o				0.05
1.750	0.06	0.06	0.000	o				0.05
1.767	0.06	0.06	0.000	o				0.05
1.783	0.06	0.06	0.000	o				0.05
1.800	0.06	0.06	0.000	o				0.05
1.817	0.06	0.06	0.000	o				0.05
1.833	0.06	0.06	0.000	o				0.05
1.850	0.06	0.06	0.000	o				0.05
1.867	0.06	0.06	0.000	o				0.05
1.883	0.06	0.06	0.000	o				0.05
1.900	0.06	0.06	0.000	o				0.05
1.917	0.06	0.06	0.000	o				0.05
1.933	0.06	0.06	0.000	o				0.05
1.950	0.06	0.06	0.000	o				0.05
1.967	0.06	0.06	0.000	o				0.05
1.983	0.06	0.06	0.000	o				0.05
2.000	0.06	0.06	0.000	o				0.05
2.017	0.06	0.06	0.000	o				0.05
2.033	0.06	0.06	0.000	o				0.05
2.050	0.06	0.06	0.000	o				0.05
2.067	0.06	0.06	0.000	o				0.05
2.083	0.06	0.06	0.000	o				0.05
2.100	0.06	0.06	0.000	o				0.05
2.117	0.06	0.06	0.000	o				0.05
2.133	0.06	0.06	0.000	o				0.05

2.150	0.06	0.06	0.000	o				0.05
2.167	0.06	0.06	0.000	o				0.05
2.183	0.06	0.06	0.000	o				0.05
2.200	0.07	0.06	0.000	o				0.05
2.217	0.07	0.07	0.000	o				0.05
2.233	0.07	0.07	0.000	o				0.05
2.250	0.07	0.07	0.000	o				0.05
2.267	0.07	0.07	0.000	o				0.05
2.283	0.07	0.07	0.000	o				0.06
2.300	0.07	0.07	0.000	o				0.06
2.317	0.07	0.07	0.000	o				0.06
2.333	0.07	0.07	0.000	o				0.06
2.350	0.07	0.07	0.000	o				0.06
2.367	0.07	0.07	0.000	o				0.06
2.383	0.07	0.07	0.000	o				0.06
2.400	0.07	0.07	0.000	o				0.06
2.417	0.07	0.07	0.000	o				0.06
2.433	0.07	0.07	0.000	o				0.06
2.450	0.07	0.07	0.000	o				0.06
2.467	0.07	0.07	0.000	o				0.06
2.483	0.07	0.07	0.000	o				0.06
2.500	0.07	0.07	0.000	o				0.06
2.517	0.07	0.07	0.000	o				0.06
2.533	0.07	0.07	0.000	o				0.06
2.550	0.07	0.07	0.000	o				0.06
2.567	0.07	0.07	0.000	o				0.06
2.583	0.07	0.07	0.000	o				0.06
2.600	0.08	0.07	0.000	o				0.06
2.617	0.08	0.08	0.000	o				0.06
2.633	0.08	0.08	0.000	o				0.06
2.650	0.08	0.08	0.000	o				0.06
2.667	0.08	0.08	0.000	o				0.06
2.683	0.08	0.08	0.000	o				0.07
2.700	0.08	0.08	0.000	o				0.07
2.717	0.08	0.08	0.000	o				0.07
2.733	0.08	0.08	0.000	o				0.07
2.750	0.08	0.08	0.000	o				0.07
2.767	0.08	0.08	0.000	o				0.07
2.783	0.08	0.08	0.000	o				0.07
2.800	0.08	0.08	0.000	o				0.07
2.817	0.08	0.08	0.000	o				0.07
2.833	0.08	0.08	0.000	o				0.07
2.850	0.09	0.08	0.000	o				0.07
2.867	0.09	0.09	0.000	oI				0.07
2.883	0.09	0.09	0.000	o				0.07
2.900	0.09	0.09	0.000	o				0.07
2.917	0.09	0.09	0.000	o				0.07
2.933	0.09	0.09	0.000	o				0.07
2.950	0.09	0.09	0.000	o				0.07
2.967	0.09	0.09	0.000	o				0.08
2.983	0.09	0.09	0.000	o				0.08
3.000	0.09	0.09	0.000	o				0.08
3.017	0.09	0.09	0.000	o				0.08
3.033	0.09	0.09	0.000	o				0.08
3.050	0.10	0.09	0.000	o				0.08
3.067	0.10	0.10	0.000	o				0.08
3.083	0.10	0.10	0.000	o				0.08
3.100	0.10	0.10	0.000	o				0.08
3.117	0.10	0.10	0.000	o				0.08
3.133	0.10	0.10	0.000	o				0.08
3.150	0.10	0.10	0.000	o				0.09
3.167	0.10	0.10	0.000	o				0.09
3.183	0.11	0.10	0.000	o				0.09
3.200	0.11	0.11	0.000	o				0.09
3.217	0.11	0.11	0.000	o				0.09
3.233	0.11	0.11	0.000	o				0.09
3.250	0.11	0.11	0.000	o				0.09
3.267	0.11	0.11	0.000	o				0.09
3.283	0.11	0.11	0.000	o				0.09
3.300	0.11	0.11	0.000	o				0.09
3.317	0.12	0.12	0.000	o				0.10
3.333	0.12	0.12	0.000	o				0.10
3.350	0.12	0.12	0.000	o				0.10
3.367	0.12	0.12	0.000	o				0.10
3.383	0.13	0.12	0.000	o				0.10
3.400	0.13	0.13	0.000	o				0.10
3.417	0.13	0.13	0.000	oI				0.11
3.433	0.13	0.13	0.000	o				0.11
3.450	0.13	0.13	0.000	o				0.11

3.467	0.13	0.13	0.000		0.11
3.483	0.14	0.13	0.000		0.11
3.500	0.14	0.14	0.000		0.11
3.517	0.14	0.14	0.000		0.11
3.533	0.15	0.14	0.000		0.12
3.550	0.15	0.15	0.000		0.12
3.567	0.15	0.15	0.000		0.13
3.583	0.16	0.16	0.000		0.13
3.600	0.16	0.16	0.000		0.13
3.617	0.17	0.16	0.000		0.14
3.633	0.17	0.17	0.000		0.14
3.650	0.17	0.17	0.000		0.14
3.667	0.18	0.17	0.000		0.14
3.683	0.18	0.18	0.000		0.15
3.700	0.18	0.18	0.000		0.15
3.717	0.19	0.18	0.000		0.15
3.733	0.19	0.19	0.000		0.16
3.750	0.20	0.19	0.000		0.16
3.767	0.22	0.21	0.000		0.17
3.783	0.23	0.22	0.000		0.18
3.800	0.24	0.23	0.000		0.19
3.817	0.25	0.24	0.000		0.20
3.833	0.27	0.26	0.000		0.21
3.850	0.28	0.27	0.000		0.22
3.867	0.30	0.28	0.000		0.24
3.883	0.31	0.30	0.000		0.25
3.900	0.33	0.32	0.000		0.26
3.917	0.35	0.33	0.000		0.28
3.933	0.36	0.35	0.000		0.29
3.950	0.38	0.36	0.000		0.30
3.967	0.39	0.38	0.000		0.32
3.983	0.53	0.44	0.001		0.37
4.000	0.67	0.56	0.001		0.47
4.017	0.81	0.70	0.001		0.58
4.033	0.95	0.84	0.001		0.70
4.050	1.09	0.88	0.001		0.80
4.067	1.23	0.89	0.002		0.94
4.083	1.38	0.91	0.002		1.21
4.100	1.21	0.93	0.003		1.62
4.117	1.05	0.94	0.003		1.84
4.133	0.88	0.94	0.003		1.86
4.150	0.72	0.93	0.003		1.71
4.167	0.55	0.92	0.002		1.40
4.183	0.39	0.89	0.002		1.02
4.200	0.22	0.86	0.001		0.71
4.217	0.21	0.38	0.000		0.31
4.233	0.20	0.25	0.000		0.21
4.250	0.19	0.21	0.000		0.18
4.267	0.18	0.19	0.000		0.16
4.283	0.17	0.18	0.000		0.15
4.300	0.16	0.17	0.000		0.14
4.317	0.15	0.16	0.000		0.13
4.333	0.15	0.15	0.000		0.13
4.350	0.14	0.14	0.000		0.12
4.367	0.14	0.14	0.000		0.12
4.383	0.13	0.14	0.000		0.11
4.400	0.13	0.13	0.000		0.11
4.417	0.12	0.13	0.000		0.10
4.433	0.12	0.12	0.000		0.10
4.450	0.11	0.12	0.000		0.10
4.467	0.11	0.11	0.000		0.10
4.483	0.11	0.11	0.000		0.09
4.500	0.11	0.11	0.000		0.09
4.517	0.10	0.11	0.000		0.09
4.533	0.10	0.10	0.000		0.09
4.550	0.10	0.10	0.000		0.08
4.567	0.10	0.10	0.000		0.08
4.583	0.09	0.10	0.000		0.08
4.600	0.09	0.09	0.000		0.08
4.617	0.09	0.09	0.000		0.08
4.633	0.09	0.09	0.000		0.08
4.650	0.09	0.09	0.000		0.07
4.667	0.09	0.09	0.000		0.07
4.683	0.08	0.09	0.000		0.07
4.700	0.08	0.08	0.000		0.07
4.717	0.08	0.08	0.000		0.07
4.733	0.08	0.08	0.000		0.07
4.750	0.08	0.08	0.000		0.07
4.767	0.08	0.08	0.000		0.07

4.783	0.08	0.08	0.000	|o	|	|	|	0.06
4.800	0.08	0.08	0.000	|o	|	|	|	0.06
4.817	0.07	0.08	0.000	|o	|	|	|	0.06
4.833	0.07	0.07	0.000	|o	|	|	|	0.06
4.850	0.07	0.07	0.000	|o	|	|	|	0.06
4.867	0.07	0.07	0.000	|o	|	|	|	0.06
4.883	0.07	0.07	0.000	|o	|	|	|	0.06
4.900	0.07	0.07	0.000	|o	|	|	|	0.06
4.917	0.07	0.07	0.000	|o	|	|	|	0.06
4.933	0.07	0.07	0.000	|o	|	|	|	0.06
4.950	0.07	0.07	0.000	|o	|	|	|	0.06
4.967	0.07	0.07	0.000	|o	|	|	|	0.06
4.983	0.07	0.07	0.000	|o	|	|	|	0.05
5.000	0.06	0.07	0.000	|o	|	|	|	0.05
5.017	0.06	0.06	0.000	|o	|	|	|	0.05
5.033	0.06	0.06	0.000	|o	|	|	|	0.05
5.050	0.06	0.06	0.000	|o	|	|	|	0.05
5.067	0.06	0.06	0.000	|o	|	|	|	0.05
5.083	0.06	0.06	0.000	|o	|	|	|	0.05
5.100	0.06	0.06	0.000	|o	|	|	|	0.05
5.117	0.06	0.06	0.000	|o	|	|	|	0.05
5.133	0.06	0.06	0.000	|o	|	|	|	0.05
5.150	0.06	0.06	0.000	|o	|	|	|	0.05
5.167	0.06	0.06	0.000	|o	|	|	|	0.05
5.183	0.06	0.06	0.000	|o	|	|	|	0.05
5.200	0.06	0.06	0.000	|o	|	|	|	0.05
5.217	0.06	0.06	0.000	|o	|	|	|	0.05
5.233	0.06	0.06	0.000	|o	|	|	|	0.05
5.250	0.06	0.06	0.000	|o	|	|	|	0.05
5.267	0.05	0.06	0.000	|o	|	|	|	0.05
5.283	0.05	0.05	0.000	|o	|	|	|	0.05
5.300	0.05	0.05	0.000	|o	|	|	|	0.05
5.317	0.05	0.05	0.000	|o	|	|	|	0.04
5.333	0.05	0.05	0.000	|o	|	|	|	0.04
5.350	0.05	0.05	0.000	|o	|	|	|	0.04
5.367	0.05	0.05	0.000	|o	|	|	|	0.04
5.383	0.05	0.05	0.000	|o	|	|	|	0.04
5.400	0.05	0.05	0.000	|o	|	|	|	0.04
5.417	0.05	0.05	0.000	|o	|	|	|	0.04
5.433	0.05	0.05	0.000	|o	|	|	|	0.04
5.450	0.05	0.05	0.000	|o	|	|	|	0.04
5.467	0.05	0.05	0.000	|o	|	|	|	0.04
5.483	0.05	0.05	0.000	|o	|	|	|	0.04
5.500	0.05	0.05	0.000	|o	|	|	|	0.04
5.517	0.05	0.05	0.000	|o	|	|	|	0.04
5.533	0.05	0.05	0.000	|o	|	|	|	0.04
5.550	0.05	0.05	0.000	|o	|	|	|	0.04
5.567	0.05	0.05	0.000	|o	|	|	|	0.04
5.583	0.05	0.05	0.000	|o	|	|	|	0.04
5.600	0.05	0.05	0.000	|o	|	|	|	0.04
5.617	0.05	0.05	0.000	|o	|	|	|	0.04
5.633	0.05	0.05	0.000	|o	|	|	|	0.04
5.650	0.05	0.05	0.000	|o	|	|	|	0.04
5.667	0.05	0.05	0.000	|o	|	|	|	0.04
5.683	0.05	0.05	0.000	|o	|	|	|	0.04
5.700	0.04	0.05	0.000	|o	|	|	|	0.04
5.717	0.04	0.04	0.000	|o	|	|	|	0.04
5.733	0.04	0.04	0.000	|o	|	|	|	0.04
5.750	0.04	0.04	0.000	|o	|	|	|	0.04
5.767	0.04	0.04	0.000	|o	|	|	|	0.04
5.783	0.04	0.04	0.000	|o	|	|	|	0.04
5.800	0.04	0.04	0.000	|o	|	|	|	0.04
5.817	0.04	0.04	0.000	|o	|	|	|	0.04
5.833	0.04	0.04	0.000	Io	|	|	|	0.04
5.850	0.04	0.04	0.000	o	|	|	|	0.04
5.867	0.04	0.04	0.000	o	|	|	|	0.04
5.883	0.04	0.04	0.000	o	|	|	|	0.04
5.900	0.04	0.04	0.000	o	|	|	|	0.03
5.917	0.04	0.04	0.000	o	|	|	|	0.03
5.933	0.04	0.04	0.000	o	|	|	|	0.03
5.950	0.04	0.04	0.000	o	|	|	|	0.03
5.967	0.04	0.04	0.000	o	|	|	|	0.03
5.983	0.04	0.04	0.000	o	|	|	|	0.03
6.000	0.04	0.04	0.000	o	|	|	|	0.03
6.017	0.04	0.04	0.000	o	|	|	|	0.03
6.033	0.04	0.04	0.000	o	|	|	|	0.03
6.050	0.04	0.04	0.000	o	|	|	|	0.03
6.067	0.04	0.04	0.000	o	|	|	|	0.03
6.083	0.00	0.02	0.000	o	|	|	|	0.02

Lot 3 Routing

6.100	0.00	0.01	0.000	o	|	|	|	|	0.01
6.117	0.00	0.00	0.000	o	|	|	|	|	0.00
6.133	0.00	0.00	0.000	o	|	|	|	|	0.00

```
****************************HYDROGRAPH DATA****************************
                Number of intervals =   368
                Time interval =    1.0 (Min.)
                Maximum/Peak flow rate =        0.941 (CFS)
                Total volume =       0.055 (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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Detention Basin Calculations

Lot 4

Lot 4 Hydrograph

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2006 Version 7.6

Rational method hydrology program based on
San Diego County Flood Control Division 2003 hydrology manual
Rational Hydrology Study Date: 06/27/06

********* Hydrology Study Control Information **********

Program License Serial Number 6024

Rational hydrology study storm event year is 100.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour, precipitation(inches) = 3.500
24 hour precipitation(inches) = 6.000
P6/P24 = 58.3%
San Diego hydrology manual 'C' values used

++
Process from Point/Station 2.500 to Point/Station 2.500
**** USER DEFINED FLOW INFORMATION AT A POINT ****

User specified 'C' value of 0.500 given for subarea
Rainfall intensity (I) = 7.969(In/Hr) for a 100.0 year storm
User specified values are as follows:
TC = 6.27 min. Rain intensity = 7.97(In/Hr)
Total area = 0.200(Ac.) Total runoff = 0.810(CFS)

++
Process from Point/Station 2.500 to Point/Station 2.500
**** 6 HOUR HYDROGRAPH ****

++
Hydrograph Data - Section 6, San Diego County Hydrology manual, June 2003

Time of Concentration = 6.27
Basin Area = 0.20 Acres
6 Hour Rainfall = 3.500 Inches
Runoff Coefficient = 0.500
Peak Discharge = 0.81 CFS

Time (Min)	Discharge (CFS)
0	0.000
6	0.021
12	0.021
18	0.022
24	0.022
30	0.022
36	0.023
42	0.023
48	0.023
54	0.024
60	0.024
66	0.025
72	0.026
78	0.026
84	0.027
90	0.028
96	0.028
102	0.029
108	0.030
114	0.031
120	0.031
126	0.033
132	0.034
138	0.035
144	0.036
150	0.038
156	0.039

162	0.041
168	0.043
174	0.046
180	0.048
186	0.052
192	0.054
198	0.060
204	0.064
210	0.073
216	0.079
222	0.097
228	0.111
234	0.162
240	0.229
246	0.810
252	0.130
258	0.087
264	0.068
270	0.057
276	0.050
282	0.044
288	0.040
294	0.037
300	0.034
306	0.032
312	0.030
318	0.029
324	0.027
330	0.026
336	0.025
342	0.024
348	0.023
354	0.022
360	0.021
366	0.021

++

6 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 1 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	0.2	0.4	0.6	0.8
0+ 0	0.0000	0.00	Q	|	|	|	|
0+ 1	0.0000	0.00	Q	|	|	|	|
0+ 2	0.0000	0.01	Q	|	|	|	|
0+ 3	0.0000	0.01	Q	|	|	|	|
0+ 4	0.0000	0.01	Q	|	|	|	|
0+ 5	0.0001	0.02	Q	|	|	|	|
0+ 6	0.0001	0.02	VQ	|	|	|	|
0+ 7	0.0001	0.02	VQ	|	|	|	|
0+ 8	0.0002	0.02	VQ	|	|	|	|
0+ 9	0.0002	0.02	VQ	|	|	|	|
0+10	0.0002	0.02	VQ	|	|	|	|
0+11	0.0002	0.02	VQ	|	|	|	|
0+12	0.0003	0.02	VQ	|	|	|	|
0+13	0.0003	0.02	VQ	|	|	|	|
0+14	0.0003	0.02	VQ	|	|	|	|
0+15	0.0004	0.02	VQ	|	|	|	|
0+16	0.0004	0.02	VQ	|	|	|	|
0+17	0.0004	0.02	VQ	|	|	|	|
0+18	0.0005	0.02	VQ	|	|	|	|
0+19	0.0005	0.02	VQ	|	|	|	|
0+20	0.0005	0.02	VQ	|	|	|	|
0+21	0.0005	0.02	VQ	|	|	|	|
0+22	0.0006	0.02	VQ	|	|	|	|
0+23	0.0006	0.02	VQ	|	|	|	|
0+24	0.0006	0.02	VQ	|	|	|	|
0+25	0.0007	0.02	VQ	|	|	|	|
0+26	0.0007	0.02	VQ	|	|	|	|
0+27	0.0007	0.02	VQ	|	|	|	|
0+28	0.0008	0.02	|Q	|	|	|	|
0+29	0.0008	0.02	|Q	|	|	|	|
0+30	0.0008	0.02	|Q	|	|	|	|
0+31	0.0008	0.02	|Q	|	|	|	|
0+32	0.0009	0.02	|Q	|	|	|	|
0+33	0.0009	0.02	|Q	|	|	|	|
0+34	0.0009	0.02	|Q	|	|	|	|

0+35	0.0010	0.02	Q			
0+36	0.0010	0.02	Q			
0+37	0.0010	0.02	Q			
0+38	0.0011	0.02	Q			
0+39	0.0011	0.02	Q			
0+40	0.0011	0.02	Q			
0+41	0.0012	0.02	Q			
0+42	0.0012	0.02	Q			
0+43	0.0012	0.02	Q			
0+44	0.0013	0.02	Q			
0+45	0.0013	0.02	Q			
0+46	0.0013	0.02	Q			
0+47	0.0013	0.02	Q			
0+48	0.0014	0.02	Q			
0+49	0.0014	0.02	Q			
0+50	0.0014	0.02	Q			
0+51	0.0015	0.02	QV			
0+52	0.0015	0.02	QV			
0+53	0.0015	0.02	QV			
0+54	0.0016	0.02	QV			
0+55	0.0016	0.02	QV			
0+56	0.0016	0.02	QV			
0+57	0.0017	0.02	QV			
0+58	0.0017	0.02	QV			
0+59	0.0017	0.02	QV			
1+ 0	0.0018	0.02	QV			
1+ 1	0.0018	0.02	QV			
1+ 2	0.0018	0.02	QV			
1+ 3	0.0019	0.02	QV			
1+ 4	0.0019	0.02	QV			
1+ 5	0.0020	0.03	QV			
1+ 6	0.0020	0.03	QV			
1+ 7	0.0020	0.03	QV			
1+ 8	0.0021	0.03	QV			
1+ 9	0.0021	0.03	QV			
1+10	0.0021	0.03	QV			
1+11	0.0022	0.03	QV			
1+12	0.0022	0.03	Q V			
1+13	0.0022	0.03	Q V			
1+14	0.0023	0.03	Q V			
1+15	0.0023	0.03	Q V			
1+16	0.0023	0.03	Q V			
1+17	0.0024	0.03	Q V			
1+18	0.0024	0.03	Q V			
1+19	0.0024	0.03	Q V			
1+20	0.0025	0.03	Q V			
1+21	0.0025	0.03	Q V			
1+22	0.0026	0.03	Q V			
1+23	0.0026	0.03	Q V			
1+24	0.0026	0.03	Q V			
1+25	0.0027	0.03	Q V			
1+26	0.0027	0.03	Q V			
1+27	0.0027	0.03	Q V			
1+28	0.0028	0.03	Q V			
1+29	0.0028	0.03	Q V			
1+30	0.0029	0.03	Q V			
1+31	0.0029	0.03	Q V			
1+32	0.0029	0.03	Q V			
1+33	0.0030	0.03	Q V			
1+34	0.0030	0.03	Q V			
1+35	0.0030	0.03	Q V			
1+36	0.0031	0.03	Q V			
1+37	0.0031	0.03	Q V			
1+38	0.0032	0.03	Q V			
1+39	0.0032	0.03	Q V			
1+40	0.0032	0.03	Q V			
1+41	0.0033	0.03	Q V			
1+42	0.0033	0.03	Q V			
1+43	0.0034	0.03	Q V			
1+44	0.0034	0.03	Q V			
1+45	0.0034	0.03	Q V			
1+46	0.0035	0.03	Q V			
1+47	0.0035	0.03	Q V			
1+48	0.0036	0.03	Q V			
1+49	0.0036	0.03	Q V			
1+50	0.0036	0.03	Q V			
1+51	0.0037	0.03	Q V			
1+52	0.0037	0.03	Q V			
1+53	0.0038	0.03	Q V			

```
 1+54    0.0038    0.03  |Q   V    |         |         |         |
 1+55    0.0039    0.03  |Q   V    |         |         |         |
 1+56    0.0039    0.03  |Q   V    |         |         |         |
 1+57    0.0039    0.03  |Q   V    |         |         |         |
 1+58    0.0040    0.03  |Q   V    |         |         |         |
 1+59    0.0040    0.03  |Q   V    |         |         |         |
 2+ 0    0.0041    0.03  |Q   V    |         |         |         |
 2+ 1    0.0041    0.03  |Q   V    |         |         |         |
 2+ 2    0.0042    0.03  |Q   V    |         |         |         |
 2+ 3    0.0042    0.03  |Q   V    |         |         |         |
 2+ 4    0.0043    0.03  |Q   V    |         |         |         |
 2+ 5    0.0043    0.03  |Q   V    |         |         |         |
 2+ 6    0.0043    0.03  |Q   V    |         |         |         |
 2+ 7    0.0044    0.03  |Q    V   |         |         |         |
 2+ 8    0.0044    0.03  |Q    V   |         |         |         |
 2+ 9    0.0045    0.03  |Q    V   |         |         |         |
 2+10    0.0045    0.03  |Q    V   |         |         |         |
 2+11    0.0046    0.03  |Q    V   |         |         |         |
 2+12    0.0046    0.03  |Q    V   |         |         |         |
 2+13    0.0047    0.03  |Q    V   |         |         |         |
 2+14    0.0047    0.03  |Q    V   |         |         |         |
 2+15    0.0048    0.03  |Q    V   |         |         |         |
 2+16    0.0048    0.03  |Q    V   |         |         |         |
 2+17    0.0049    0.03  |Q    V   |         |         |         |
 2+18    0.0049    0.04  |Q    V   |         |         |         |
 2+19    0.0049    0.04  |Q    V   |         |         |         |
 2+20    0.0050    0.04  |Q    V   |         |         |         |
 2+21    0.0050    0.04  |Q    V   |         |         |         |
 2+22    0.0051    0.04  |Q     V  |         |         |         |
 2+23    0.0051    0.04  |Q     V  |         |         |         |
 2+24    0.0052    0.04  |Q     V  |         |         |         |
 2+25    0.0052    0.04  |Q     V  |         |         |         |
 2+26    0.0053    0.04  |Q     V  |         |         |         |
 2+27    0.0053    0.04  |Q     V  |         |         |         |
 2+28    0.0054    0.04  |Q     V  |         |         |         |
 2+29    0.0055    0.04  |Q     V  |         |         |         |
 2+30    0.0055    0.04  |Q     V  |         |         |         |
 2+31    0.0056    0.04  |Q     V  |         |         |         |
 2+32    0.0056    0.04  |Q     V  |         |         |         |
 2+33    0.0057    0.04  |Q     V  |         |         |         |
 2+34    0.0057    0.04  |Q     V  |         |         |         |
 2+35    0.0058    0.04  |Q     V  |         |         |         |
 2+36    0.0058    0.04  |Q      V |         |         |         |
 2+37    0.0059    0.04  |Q      V |         |         |         |
 2+38    0.0059    0.04  |Q      V |         |         |         |
 2+39    0.0060    0.04  |Q      V |         |         |         |
 2+40    0.0060    0.04  | Q     V |         |         |         |
 2+41    0.0061    0.04  | Q     V |         |         |         |
 2+42    0.0062    0.04  | Q     V |         |         |         |
 2+43    0.0062    0.04  | Q     V |         |         |         |
 2+44    0.0063    0.04  | Q     V |         |         |         |
 2+45    0.0063    0.04  | Q     V |         |         |         |
 2+46    0.0064    0.04  | Q     V |         |         |         |
 2+47    0.0064    0.04  | Q     V |         |         |         |
 2+48    0.0065    0.04  | Q     V |         |         |         |
 2+49    0.0066    0.04  | Q      V|         |         |         |
 2+50    0.0066    0.04  | Q      V|         |         |         |
 2+51    0.0067    0.04  | Q      V|         |         |         |
 2+52    0.0067    0.04  | Q      V|         |         |         |
 2+53    0.0068    0.05  | Q      V|         |         |         |
 2+54    0.0069    0.05  | Q      V|         |         |         |
 2+55    0.0069    0.05  | Q      V|         |         |         |
 2+56    0.0070    0.05  | Q      V|         |         |         |
 2+57    0.0071    0.05  | Q      V|         |         |         |
 2+58    0.0071    0.05  | Q      V|         |         |         |
 2+59    0.0072    0.05  | Q      V|         |         |         |
 3+ 0    0.0073    0.05  | Q       V         |         |         |
 3+ 1    0.0073    0.05  | Q       V         |         |         |
 3+ 2    0.0074    0.05  | Q       V         |         |         |
 3+ 3    0.0075    0.05  | Q       V         |         |         |
 3+ 4    0.0075    0.05  | Q       V         |         |         |
 3+ 5    0.0076    0.05  | Q       V         |         |         |
 3+ 6    0.0077    0.05  | Q       V         |         |         |
 3+ 7    0.0077    0.05  | Q       V         |         |         |
 3+ 8    0.0078    0.05  | Q       V         |         |         |
 3+ 9    0.0079    0.05  | Q       V         |         |         |
 3+10    0.0080    0.05  | Q       V         |         |         |
 3+11    0.0080    0.05  | Q       |V        |         |         |
 3+12    0.0081    0.05  | Q       |V        |         |         |
```

Lot 4 Hydrograph

3+13	0.0082	0.06	
3+14	0.0083	0.06	
3+15	0.0084	0.06	
3+16	0.0084	0.06	
3+17	0.0085	0.06	
3+18	0.0086	0.06	
3+19	0.0087	0.06	
3+20	0.0088	0.06	
3+21	0.0088	0.06	
3+22	0.0089	0.06	
3+23	0.0090	0.06	
3+24	0.0091	0.06	
3+25	0.0092	0.07	
3+26	0.0093	0.07	
3+27	0.0094	0.07	
3+28	0.0095	0.07	
3+29	0.0096	0.07	
3+30	0.0097	0.07	
3+31	0.0098	0.07	
3+32	0.0099	0.08	
3+33	0.0100	0.08	
3+34	0.0101	0.08	
3+35	0.0102	0.08	
3+36	0.0103	0.08	
3+37	0.0104	0.08	
3+38	0.0106	0.09	
3+39	0.0107	0.09	
3+40	0.0108	0.09	
3+41	0.0109	0.09	
3+42	0.0111	0.10	
3+43	0.0112	0.10	
3+44	0.0113	0.10	
3+45	0.0115	0.10	
3+46	0.0116	0.11	
3+47	0.0118	0.11	
3+48	0.0119	0.11	
3+49	0.0121	0.12	
3+50	0.0123	0.13	
3+51	0.0125	0.14	
3+52	0.0127	0.15	
3+53	0.0129	0.15	
3+54	0.0131	0.16	
3+55	0.0133	0.17	
3+56	0.0136	0.18	
3+57	0.0139	0.20	
3+58	0.0141	0.21	
3+59	0.0144	0.22	
4+ 0	0.0148	0.23	
4+ 1	0.0152	0.33	
4+ 2	0.0158	0.42	
4+ 3	0.0165	0.52	
4+ 4	0.0173	0.62	
4+ 5	0.0183	0.71	
4+ 6	0.0194	0.81	
4+ 7	0.0204	0.70	
4+ 8	0.0212	0.58	
4+ 9	0.0219	0.47	
4+10	0.0223	0.36	
4+11	0.0227	0.24	
4+12	0.0229	0.13	
4+13	0.0230	0.12	
4+14	0.0232	0.12	
4+15	0.0233	0.11	
4+16	0.0235	0.10	
4+17	0.0236	0.09	
4+18	0.0237	0.09	
4+19	0.0238	0.08	
4+20	0.0240	0.08	
4+21	0.0241	0.08	
4+22	0.0242	0.07	
4+23	0.0243	0.07	
4+24	0.0244	0.07	
4+25	0.0245	0.07	
4+26	0.0245	0.06	
4+27	0.0246	0.06	
4+28	0.0247	0.06	
4+29	0.0248	0.06	
4+30	0.0249	0.06	
4+31	0.0249	0.06	

```
4+32      0.0250      0.05 | Q         |         |         |   V     |
4+33      0.0251      0.05 | Q         |         |         |   V     |
4+34      0.0252      0.05 | Q         |         |         |   V     |
4+35      0.0252      0.05 | Q         |         |         |   V     |
4+36      0.0253      0.05 | Q         |         |         |   V     |
4+37      0.0254      0.05 | Q         |         |         |   V     |
4+38      0.0254      0.05 | Q         |         |         |    V    |
4+39      0.0255      0.05 | Q         |         |         |    V    |
4+40      0.0256      0.05 | Q         |         |         |    V    |
4+41      0.0256      0.05 | Q         |         |         |    V    |
4+42      0.0257      0.04 | Q         |         |         |    V    |
4+43      0.0258      0.04 | Q         |         |         |    V    |
4+44      0.0258      0.04 | Q         |         |         |    V    |
4+45      0.0259      0.04 | Q         |         |         |    V    |
4+46      0.0259      0.04 | Q         |         |         |    V    |
4+47      0.0260      0.04 | Q         |         |         |    V    |
4+48      0.0260      0.04 |Q          |         |         |    V    |
4+49      0.0261      0.04 |Q          |         |         |    V    |
4+50      0.0261      0.04 |Q          |         |         |     V   |
4+51      0.0262      0.04 |Q          |         |         |     V   |
4+52      0.0263      0.04 |Q          |         |         |     V   |
4+53      0.0263      0.04 |Q          |         |         |     V   |
4+54      0.0264      0.04 |Q          |         |         |     V   |
4+55      0.0264      0.04 |Q          |         |         |     V   |
4+56      0.0265      0.04 |Q          |         |         |     V   |
4+57      0.0265      0.04 |Q          |         |         |     V   |
4+58      0.0266      0.04 |Q          |         |         |     V   |
4+59      0.0266      0.03 |Q          |         |         |     V   |
5+ 0      0.0266      0.03 |Q          |         |         |     V   |
5+ 1      0.0267      0.03 |Q          |         |         |     V   |
5+ 2      0.0267      0.03 |Q          |         |         |     V   |
5+ 3      0.0268      0.03 |Q          |         |         |     V   |
5+ 4      0.0268      0.03 |Q          |         |         |      V  |
5+ 5      0.0269      0.03 |Q          |         |         |      V  |
5+ 6      0.0269      0.03 |Q          |         |         |      V  |
5+ 7      0.0270      0.03 |Q          |         |         |      V  |
5+ 8      0.0270      0.03 |Q          |         |         |      V  |
5+ 9      0.0270      0.03 |Q          |         |         |      V  |
5+10      0.0271      0.03 |Q          |         |         |      V  |
5+11      0.0271      0.03 |Q          |         |         |      V  |
5+12      0.0272      0.03 |Q          |         |         |      V  |
5+13      0.0272      0.03 |Q          |         |         |      V  |
5+14      0.0273      0.03 |Q          |         |         |      V  |
5+15      0.0273      0.03 |Q          |         |         |      V  |
5+16      0.0273      0.03 |Q          |         |         |      V  |
5+17      0.0274      0.03 |Q          |         |         |      V  |
5+18      0.0274      0.03 |Q          |         |         |      V  |
5+19      0.0275      0.03 |Q          |         |         |      V  |
5+20      0.0275      0.03 |Q          |         |         |      V  |
5+21      0.0275      0.03 |Q          |         |         |      V  |
5+22      0.0276      0.03 |Q          |         |         |       V |
5+23      0.0276      0.03 |Q          |         |         |       V |
5+24      0.0276      0.03 |Q          |         |         |       V |
5+25      0.0277      0.03 |Q          |         |         |       V |
5+26      0.0277      0.03 |Q          |         |         |       V |
5+27      0.0278      0.03 |Q          |         |         |       V |
5+28      0.0278      0.03 |Q          |         |         |       V |
5+29      0.0278      0.03 |Q          |         |         |       V |
5+30      0.0279      0.03 |Q          |         |         |       V |
5+31      0.0279      0.03 |Q          |         |         |       V |
5+32      0.0279      0.03 |Q          |         |         |       V |
5+33      0.0280      0.03 |Q          |         |         |       V |
5+34      0.0280      0.03 |Q          |         |         |       V |
5+35      0.0280      0.02 |Q          |         |         |       V |
5+36      0.0281      0.02 |Q          |         |         |       V |
5+37      0.0281      0.02 |Q          |         |         |       V |
5+38      0.0281      0.02 |Q          |         |         |       V |
5+39      0.0282      0.02 |Q          |         |         |       V |
5+40      0.0282      0.02 |Q          |         |         |       V |
5+41      0.0282      0.02 |Q          |         |         |       V |
5+42      0.0283      0.02 |Q          |         |         |       V |
5+43      0.0283      0.02 |Q          |         |         |        V|
5+44      0.0283      0.02 |Q          |         |         |        V|
5+45      0.0284      0.02 |Q          |         |         |        V|
5+46      0.0284      0.02 |Q          |         |         |        V|
5+47      0.0284      0.02 |Q          |         |         |        V|
5+48      0.0285      0.02 |Q          |         |         |        V|
5+49      0.0285      0.02 |Q          |         |         |        V|
5+50      0.0285      0.02 |Q          |         |         |        V|
```

Lot 4 Hydrograph

```
   5+51       0.0286      0.02  |Q        |         |         |         V|
   5+52       0.0286      0.02  |Q        |         |         |         V|
   5+53       0.0286      0.02  |Q        |         |         |         V|
   5+54       0.0287      0.02  |Q        |         |         |         V|
   5+55       0.0287      0.02  |Q        |         |         |         V|
   5+56       0.0287      0.02  |Q        |         |         |         V|
   5+57       0.0287      0.02  |Q        |         |         |         V|
   5+58       0.0288      0.02  |Q        |         |         |         V|
   5+59       0.0288      0.02  |Q        |         |         |         V|
   6+ 0       0.0288      0.02  |Q        |         |         |         V|
   6+ 1       0.0289      0.02  |Q        |         |         |         V|
   6+ 2       0.0289      0.02  |Q        |         |         |         V|
   6+ 3       0.0289      0.02  |Q        |         |         |         V|
   6+ 4       0.0289      0.02  |Q        |         |         |         V|
   6+ 5       0.0290      0.02  |Q        |         |         |         V|
   6+ 6       0.0290      0.02  |Q        |         |         |          V
-------------------------------------------------------------------------
```

End of computations, total study area = 0.200 (Ac.)

```
                    FLOOD HYDROGRAPH ROUTING PROGRAM
          Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
                       Study date: 06/20/06

---------------------------------------------------------------------


Program License Serial Number 6024

---------------------------------------------------------------------
******************** HYDROGRAPH INFORMATION ********************

                 From study/file name: 5914h2.rte
***************************HYDROGRAPH DATA***************************
                 Number of intervals =   366
                 Time interval =    1.0 (Min.)
                 Maximum/Peak flow rate =        0.810 (CFS)
                 Total volume =       0.029 (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
*********************************************************************


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       2.500 to Point/Station       3.100
**** RETARDING BASIN ROUTING ****
______________________________________________________________________

Program computation of outflow v. depth



CALCULATED OUTFLOW DATA AT DEPTH =    1.05(Ft.))
Pipe length  =     9.24(Ft.)   Elevation difference =   0.10(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      3.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.150(Ft.)
Pipe friction loss =      0.633(Ft.)
Minor friction loss =      0.517(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 =    1.61(Ft.))
Pipe length  =     9.24(Ft.)   Elevation difference =   0.10(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      3.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      1.710(Ft.)
Pipe friction loss =      0.942(Ft.)
Minor friction loss =      0.769(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.282(CFS)

Total outflow at this depth =      0.28(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    2.16(Ft.))
Pipe length  =     9.24(Ft.)   Elevation difference =   0.10(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      3.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      2.260(Ft.)
Pipe friction loss =      1.245(Ft.)
Minor friction loss =      1.017(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.324(CFS)
```

Total outflow at this depth = 0.32(CFS)

CALCULATED OUTFLOW DATA AT DEPTH = 3.24(Ft.))
Pipe length = 9.24(Ft.) Elevation difference = 0.10(Ft.)
Manning's N = 0.013 No. of pipes = 1
Given pipe size = 3.00(In.)
NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is 3.340(Ft.)
Pipe friction loss = 1.840(Ft.)
Minor friction loss = 1.503(Ft.) K-factor = 1.50
Calculated flow rate through pipe(s) = 0.394(CFS)

Total outflow at this depth = 0.39(CFS)

Total number of inflow hydrograph intervals = 366
Hydrograph time unit = 1.000 (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
1.050	0.001	0.231	0.001	0.001
1.610	0.002	0.282	0.002	0.002
2.160	0.003	0.324	0.003	0.003
3.240	0.004	0.394	0.004	0.004

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.2	0.41	0.61	0.81	Depth (Ft.)
0.017	0.00	0.00	0.000	o	|	|	|	|	0.00
0.033	0.01	0.00	0.000	o	|	|	|	|	0.01
0.050	0.01	0.00	0.000	o	|	|	|	|	0.02
0.067	0.01	0.01	0.000	o	|	|	|	|	0.03
0.083	0.02	0.01	0.000	o	|	|	|	|	0.04
0.100	0.02	0.01	0.000	o	|	|	|	|	0.05
0.117	0.02	0.01	0.000	o	|	|	|	|	0.06
0.133	0.02	0.02	0.000	o	|	|	|	|	0.07
0.150	0.02	0.02	0.000	o	|	|	|	|	0.08
0.167	0.02	0.02	0.000	o	|	|	|	|	0.08
0.183	0.02	0.02	0.000	o	|	|	|	|	0.09
0.200	0.02	0.02	0.000	o	|	|	|	|	0.09
0.217	0.02	0.02	0.000	o	|	|	|	|	0.09
0.233	0.02	0.02	0.000	o	|	|	|	|	0.09
0.250	0.02	0.02	0.000	o	|	|	|	|	0.09
0.267	0.02	0.02	0.000	o	|	|	|	|	0.09
0.283	0.02	0.02	0.000	o	|	|	|	|	0.10
0.300	0.02	0.02	0.000	o	|	|	|	|	0.10
0.317	0.02	0.02	0.000	o	|	|	|	|	0.10
0.333	0.02	0.02	0.000	o	|	|	|	|	0.10
0.350	0.02	0.02	0.000	o	|	|	|	|	0.10
0.367	0.02	0.02	0.000	o	|	|	|	|	0.10
0.383	0.02	0.02	0.000	o	|	|	|	|	0.10
0.400	0.02	0.02	0.000	o	|	|	|	|	0.10
0.417	0.02	0.02	0.000	o	|	|	|	|	0.10
0.433	0.02	0.02	0.000	o	|	|	|	|	0.10
0.450	0.02	0.02	0.000	o	|	|	|	|	0.10
0.467	0.02	0.02	0.000	o	|	|	|	|	0.10
0.483	0.02	0.02	0.000	o	|	|	|	|	0.10
0.500	0.02	0.02	0.000	o	|	|	|	|	0.10
0.517	0.02	0.02	0.000	o	|	|	|	|	0.10
0.533	0.02	0.02	0.000	o	|	|	|	|	0.10
0.550	0.02	0.02	0.000	o	|	|	|	|	0.10
0.567	0.02	0.02	0.000	o	|	|	|	|	0.10

0.583	0.02	0.02	0.000	O				0.10
0.600	0.02	0.02	0.000	O				0.10
0.617	0.02	0.02	0.000	O				0.10
0.633	0.02	0.02	0.000	O				0.10
0.650	0.02	0.02	0.000	O				0.10
0.667	0.02	0.02	0.000	O				0.10
0.683	0.02	0.02	0.000	O				0.10
0.700	0.02	0.02	0.000	O				0.10
0.717	0.02	0.02	0.000	O				0.10
0.733	0.02	0.02	0.000	O				0.10
0.750	0.02	0.02	0.000	O				0.11
0.767	0.02	0.02	0.000	O				0.11
0.783	0.02	0.02	0.000	O				0.11
0.800	0.02	0.02	0.000	O				0.11
0.817	0.02	0.02	0.000	O				0.11
0.833	0.02	0.02	0.000	O				0.11
0.850	0.02	0.02	0.000	O				0.11
0.867	0.02	0.02	0.000	O				0.11
0.883	0.02	0.02	0.000	O				0.11
0.900	0.02	0.02	0.000	O				0.11
0.917	0.02	0.02	0.000	O				0.11
0.933	0.02	0.02	0.000	O				0.11
0.950	0.02	0.02	0.000	O				0.11
0.967	0.02	0.02	0.000	O				0.11
0.983	0.02	0.02	0.000	O				0.11
1.000	0.02	0.02	0.000	O				0.11
1.017	0.02	0.02	0.000	O				0.11
1.033	0.02	0.02	0.000	O				0.11
1.050	0.02	0.02	0.000	O				0.11
1.067	0.02	0.02	0.000	O				0.11
1.083	0.03	0.02	0.000	O				0.11
1.100	0.03	0.02	0.000	O				0.11
1.117	0.03	0.02	0.000	O				0.11
1.133	0.03	0.03	0.000	O				0.11
1.150	0.03	0.03	0.000	OI				0.11
1.167	0.03	0.03	0.000	OI				0.11
1.183	0.03	0.03	0.000	OI				0.11
1.200	0.03	0.03	0.000	|O				0.11
1.217	0.03	0.03	0.000	|O				0.12
1.233	0.03	0.03	0.000	|O				0.12
1.250	0.03	0.03	0.000	|O				0.12
1.267	0.03	0.03	0.000	|O				0.12
1.283	0.03	0.03	0.000	|O				0.12
1.300	0.03	0.03	0.000	|O				0.12
1.317	0.03	0.03	0.000	|O				0.12
1.333	0.03	0.03	0.000	|O				0.12
1.350	0.03	0.03	0.000	|O				0.12
1.367	0.03	0.03	0.000	|O				0.12
1.383	0.03	0.03	0.000	|O				0.12
1.400	0.03	0.03	0.000	|O				0.12
1.417	0.03	0.03	0.000	|O				0.12
1.433	0.03	0.03	0.000	|O				0.12
1.450	0.03	0.03	0.000	|O				0.12
1.467	0.03	0.03	0.000	|O				0.12
1.483	0.03	0.03	0.000	|O				0.12
1.500	0.03	0.03	0.000	|O				0.12
1.517	0.03	0.03	0.000	|O				0.12
1.533	0.03	0.03	0.000	|O				0.12
1.550	0.03	0.03	0.000	|O				0.13
1.567	0.03	0.03	0.000	|O				0.13
1.583	0.03	0.03	0.000	|O				0.13
1.600	0.03	0.03	0.000	|O				0.13
1.617	0.03	0.03	0.000	|O				0.13
1.633	0.03	0.03	0.000	|O				0.13
1.650	0.03	0.03	0.000	|O				0.13
1.667	0.03	0.03	0.000	|O				0.13
1.683	0.03	0.03	0.000	|O				0.13
1.700	0.03	0.03	0.000	|O				0.13
1.717	0.03	0.03	0.000	|O				0.13
1.733	0.03	0.03	0.000	|O				0.13
1.750	0.03	0.03	0.000	|O				0.13
1.767	0.03	0.03	0.000	|O				0.13
1.783	0.03	0.03	0.000	|O				0.13
1.800	0.03	0.03	0.000	|O				0.13
1.817	0.03	0.03	0.000	|O				0.13
1.833	0.03	0.03	0.000	|O				0.13
1.850	0.03	0.03	0.000	|O				0.13
1.867	0.03	0.03	0.000	|O				0.14
1.883	0.03	0.03	0.000	|O				0.14

1.900	0.03	0.03	0.000	o				0.14
1.917	0.03	0.03	0.000	o				0.14
1.933	0.03	0.03	0.000	o				0.14
1.950	0.03	0.03	0.000	o				0.14
1.967	0.03	0.03	0.000	o				0.14
1.983	0.03	0.03	0.000	o				0.14
2.000	0.03	0.03	0.000	o				0.14
2.017	0.03	0.03	0.000	o				0.14
2.033	0.03	0.03	0.000	o				0.14
2.050	0.03	0.03	0.000	o				0.14
2.067	0.03	0.03	0.000	o				0.14
2.083	0.03	0.03	0.000	o				0.14
2.100	0.03	0.03	0.000	o				0.15
2.117	0.03	0.03	0.000	o				0.15
2.133	0.03	0.03	0.000	o				0.15
2.150	0.03	0.03	0.000	o				0.15
2.167	0.03	0.03	0.000	o				0.15
2.183	0.03	0.03	0.000	o				0.15
2.200	0.03	0.03	0.000	o				0.15
2.217	0.03	0.03	0.000	o				0.15
2.233	0.03	0.03	0.000	o				0.15
2.250	0.03	0.03	0.000	o				0.15
2.267	0.03	0.03	0.000	o				0.15
2.283	0.03	0.03	0.000	o				0.15
2.300	0.04	0.03	0.000	o				0.16
2.317	0.04	0.03	0.000	o				0.16
2.333	0.04	0.03	0.000	o				0.16
2.350	0.04	0.04	0.000	o				0.16
2.367	0.04	0.04	0.000	o				0.16
2.383	0.04	0.04	0.000	o				0.16
2.400	0.04	0.04	0.000	o				0.16
2.417	0.04	0.04	0.000	o				0.16
2.433	0.04	0.04	0.000	o				0.16
2.450	0.04	0.04	0.000	o				0.16
2.467	0.04	0.04	0.000	o				0.17
2.483	0.04	0.04	0.000	o				0.17
2.500	0.04	0.04	0.000	o				0.17
2.517	0.04	0.04	0.000	o				0.17
2.533	0.04	0.04	0.000	o				0.17
2.550	0.04	0.04	0.000	o				0.17
2.567	0.04	0.04	0.000	o				0.17
2.583	0.04	0.04	0.000	o				0.17
2.600	0.04	0.04	0.000	o				0.17
2.617	0.04	0.04	0.000	o				0.18
2.633	0.04	0.04	0.000	o				0.18
2.650	0.04	0.04	0.000	o				0.18
2.667	0.04	0.04	0.000	o				0.18
2.683	0.04	0.04	0.000	o				0.18
2.700	0.04	0.04	0.000	o				0.18
2.717	0.04	0.04	0.000	o				0.18
2.733	0.04	0.04	0.000	o				0.19
2.750	0.04	0.04	0.000	o				0.19
2.767	0.04	0.04	0.000	o				0.19
2.783	0.04	0.04	0.000	o				0.19
2.800	0.04	0.04	0.000	o				0.19
2.817	0.04	0.04	0.000	o				0.19
2.833	0.04	0.04	0.000	o				0.19
2.850	0.04	0.04	0.000	o				0.20
2.867	0.04	0.04	0.000	o				0.20
2.883	0.05	0.04	0.000	o				0.20
2.900	0.05	0.04	0.000	o				0.20
2.917	0.05	0.04	0.000	o				0.20
2.933	0.05	0.05	0.000	o				0.21
2.950	0.05	0.05	0.000	o				0.21
2.967	0.05	0.05	0.000	o				0.21
2.983	0.05	0.05	0.000	o				0.21
3.000	0.05	0.05	0.000	o				0.21
3.017	0.05	0.05	0.000	o				0.21
3.033	0.05	0.05	0.000	o				0.22
3.050	0.05	0.05	0.000	o				0.22
3.067	0.05	0.05	0.000	o				0.22
3.083	0.05	0.05	0.000	oI				0.22
3.100	0.05	0.05	0.000	oI				0.23
3.117	0.05	0.05	0.000	oI				0.23
3.133	0.05	0.05	0.000	o				0.23
3.150	0.05	0.05	0.000	o				0.23
3.167	0.05	0.05	0.000	o				0.24
3.183	0.05	0.05	0.000	o				0.24
3.200	0.05	0.05	0.000	o				0.24

3.217	0.06	0.05	0.000		0.24
3.233	0.06	0.05	0.000		0.25
3.250	0.06	0.05	0.000		0.25
3.267	0.06	0.06	0.000		0.25
3.283	0.06	0.06	0.000		0.26
3.300	0.06	0.06	0.000		0.26
3.317	0.06	0.06	0.000		0.26
3.333	0.06	0.06	0.000		0.27
3.350	0.06	0.06	0.000		0.27
3.367	0.06	0.06	0.000		0.27
3.383	0.06	0.06	0.000		0.28
3.400	0.06	0.06	0.000		0.28
3.417	0.07	0.06	0.000		0.28
3.433	0.07	0.06	0.000		0.29
3.450	0.07	0.06	0.000		0.29
3.467	0.07	0.07	0.000		0.30
3.483	0.07	0.07	0.000		0.31
3.500	0.07	0.07	0.000		0.31
3.517	0.07	0.07	0.000		0.32
3.533	0.08	0.07	0.000		0.32
3.550	0.08	0.07	0.000		0.33
3.567	0.08	0.07	0.000		0.33
3.583	0.08	0.07	0.000		0.34
3.600	0.08	0.08	0.000		0.34
3.617	0.08	0.08	0.000		0.35
3.633	0.09	0.08	0.000		0.36
3.650	0.09	0.08	0.000		0.37
3.667	0.09	0.08	0.000		0.38
3.683	0.09	0.09	0.000		0.39
3.700	0.10	0.09	0.000		0.40
3.717	0.10	0.09	0.000		0.41
3.733	0.10	0.09	0.000		0.43
3.750	0.10	0.10	0.000		0.44
3.767	0.11	0.10	0.000		0.45
3.783	0.11	0.10	0.000		0.46
3.800	0.11	0.10	0.000		0.47
3.817	0.12	0.11	0.000		0.48
3.833	0.13	0.11	0.000		0.50
3.850	0.14	0.12	0.001		0.53
3.867	0.15	0.12	0.001		0.56
3.883	0.15	0.13	0.001		0.59
3.900	0.16	0.14	0.001		0.63
3.917	0.17	0.15	0.001		0.66
3.933	0.18	0.16	0.001		0.70
3.950	0.20	0.16	0.001		0.75
3.967	0.21	0.17	0.001		0.79
3.983	0.22	0.19	0.001		0.84
4.000	0.23	0.20	0.001		0.89
4.017	0.33	0.22	0.001		0.99
4.033	0.42	0.24	0.001		1.13
4.050	0.52	0.25	0.001		1.30
4.067	0.62	0.28	0.002		1.54
4.083	0.71	0.30	0.002		1.82
4.100	0.81	0.32	0.003		2.17
4.117	0.70	0.36	0.004		2.78
4.133	0.58	0.39	0.004		3.17
	Warning: Basin depth limit exceeded, the data here is an estimation				
4.150	0.47	0.40	0.004		3.36
	Warning: Basin depth limit exceeded, the data here is an estimation				
4.167	0.36	0.40	0.004		3.38
4.183	0.24	0.39	0.004		3.23
4.200	0.13	0.37	0.004		2.94
4.217	0.12	0.35	0.003		2.59
4.233	0.12	0.33	0.003		2.26
4.250	0.11	0.32	0.003		2.05
4.267	0.10	0.30	0.003		1.89
4.283	0.09	0.29	0.002		1.74
4.300	0.09	0.28	0.002		1.59
4.317	0.08	0.27	0.002		1.45
4.333	0.08	0.25	0.001		1.31
4.350	0.08	0.24	0.001		1.18
4.367	0.07	0.23	0.001		1.06
4.383	0.07	0.19	0.001		0.86
4.400	0.07	0.16	0.001		0.71
4.417	0.07	0.13	0.001		0.60
4.433	0.06	0.11	0.000		0.52
4.450	0.06	0.10	0.000		0.45
4.467	0.06	0.09	0.000		0.41
4.483	0.06	0.08	0.000		0.37

4.500	0.06	0.07	0.000	O				0.34
4.517	0.06	0.07	0.000	O				0.32
4.533	0.05	0.07	0.000	O				0.30
4.550	0.05	0.06	0.000	O				0.28
4.567	0.05	0.06	0.000	O				0.27
4.583	0.05	0.06	0.000	O				0.26
4.600	0.05	0.06	0.000	IO				0.25
4.617	0.05	0.05	0.000	IO				0.24
4.633	0.05	0.05	0.000	IO				0.24
4.650	0.05	0.05	0.000	IO				0.23
4.667	0.05	0.05	0.000	O				0.23
4.683	0.05	0.05	0.000	O				0.22
4.700	0.04	0.05	0.000	O				0.22
4.717	0.04	0.05	0.000	O				0.21
4.733	0.04	0.05	0.000	O				0.21
4.750	0.04	0.04	0.000	O				0.20
4.767	0.04	0.04	0.000	O				0.20
4.783	0.04	0.04	0.000	O				0.20
4.800	0.04	0.04	0.000	O				0.19
4.817	0.04	0.04	0.000	O				0.19
4.833	0.04	0.04	0.000	O				0.19
4.850	0.04	0.04	0.000	O				0.18
4.867	0.04	0.04	0.000	O				0.18
4.883	0.04	0.04	0.000	O				0.18
4.900	0.04	0.04	0.000	O				0.18
4.917	0.04	0.04	0.000	O				0.17
4.933	0.04	0.04	0.000	O				0.17
4.950	0.04	0.04	0.000	O				0.17
4.967	0.04	0.04	0.000	O				0.17
4.983	0.03	0.04	0.000	O				0.16
5.000	0.03	0.04	0.000	O				0.16
5.017	0.03	0.04	0.000	O				0.16
5.033	0.03	0.03	0.000	O				0.16
5.050	0.03	0.03	0.000	O				0.16
5.067	0.03	0.03	0.000	O				0.15
5.083	0.03	0.03	0.000	O				0.15
5.100	0.03	0.03	0.000	O				0.15
5.117	0.03	0.03	0.000	O				0.15
5.133	0.03	0.03	0.000	O				0.15
5.150	0.03	0.03	0.000	O				0.15
5.167	0.03	0.03	0.000	O				0.14
5.183	0.03	0.03	0.000	O				0.14
5.200	0.03	0.03	0.000	O				0.14
5.217	0.03	0.03	0.000	O				0.14
5.233	0.03	0.03	0.000	O				0.14
5.250	0.03	0.03	0.000	O				0.14
5.267	0.03	0.03	0.000	O				0.14
5.283	0.03	0.03	0.000	O				0.14
5.300	0.03	0.03	0.000	O				0.13
5.317	0.03	0.03	0.000	O				0.13
5.333	0.03	0.03	0.000	O				0.13
5.350	0.03	0.03	0.000	O				0.13
5.367	0.03	0.03	0.000	O				0.13
5.383	0.03	0.03	0.000	O				0.13
5.400	0.03	0.03	0.000	O				0.13
5.417	0.03	0.03	0.000	O				0.13
5.433	0.03	0.03	0.000	O				0.12
5.450	0.03	0.03	0.000	O				0.12
5.467	0.03	0.03	0.000	O				0.12
5.483	0.03	0.03	0.000	O				0.12
5.500	0.03	0.03	0.000	O				0.12
5.517	0.03	0.03	0.000	O				0.12
5.533	0.03	0.03	0.000	O				0.12
5.550	0.03	0.03	0.000	O				0.12
5.567	0.03	0.03	0.000	IO				0.12
5.583	0.02	0.03	0.000	IO				0.12
5.600	0.02	0.03	0.000	IO				0.12
5.617	0.02	0.03	0.000	O				0.11
5.633	0.02	0.03	0.000	O				0.11
5.650	0.02	0.02	0.000	O				0.11
5.667	0.02	0.02	0.000	O				0.11
5.683	0.02	0.02	0.000	O				0.11
5.700	0.02	0.02	0.000	O				0.11
5.717	0.02	0.02	0.000	O				0.11
5.733	0.02	0.02	0.000	O				0.11
5.750	0.02	0.02	0.000	O				0.11
5.767	0.02	0.02	0.000	O				0.11
5.783	0.02	0.02	0.000	O				0.11
5.800	0.02	0.02	0.000	O				0.11

5.817	0.02	0.02	0.000	o	|	|	|	|	0.11
5.833	0.02	0.02	0.000	o	|	|	|	|	0.10
5.850	0.02	0.02	0.000	o	|	|	|	|	0.10
5.867	0.02	0.02	0.000	o	|	|	|	|	0.10
5.883	0.02	0.02	0.000	o	|	|	|	|	0.10
5.900	0.02	0.02	0.000	o	|	|	|	|	0.10
5.917	0.02	0.02	0.000	o	|	|	|	|	0.10
5.933	0.02	0.02	0.000	o	|	|	|	|	0.10
5.950	0.02	0.02	0.000	o	|	|	|	|	0.10
5.967	0.02	0.02	0.000	o	|	|	|	|	0.10
5.983	0.02	0.02	0.000	o	|	|	|	|	0.10
6.000	0.02	0.02	0.000	o	|	|	|	|	0.10
6.017	0.02	0.02	0.000	o	|	|	|	|	0.10
6.033	0.02	0.02	0.000	o	|	|	|	|	0.10
6.050	0.02	0.02	0.000	o	|	|	|	|	0.10
6.067	0.02	0.02	0.000	o	|	|	|	|	0.10
6.083	0.02	0.02	0.000	o	|	|	|	|	0.10
6.100	0.02	0.02	0.000	o	|	|	|	|	0.10
6.117	0.00	0.02	0.000	o	|	|	|	|	0.08
6.133	0.00	0.01	0.000	o	|	|	|	|	0.06
6.150	0.00	0.01	0.000	o	|	|	|	|	0.04
6.167	0.00	0.01	0.000	o	|	|	|	|	0.03
6.183	0.00	0.00	0.000	o	|	|	|	|	0.02
6.200	0.00	0.00	0.000	o	|	|	|	|	0.02
6.217	0.00	0.00	0.000	o	|	|	|	|	0.01
6.233	0.00	0.00	0.000	o	|	|	|	|	0.01
6.250	0.00	0.00	0.000	o	|	|	|	|	0.01
6.267	0.00	0.00	0.000	o	|	|	|	|	0.00
6.283	0.00	0.00	0.000	o	|	|	|	|	0.00

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

Number of intervals = 377
Time interval = 1.0 (Min.)
Maximum/Peak flow rate = 0.403 (CFS)
Total volume = 0.029 (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

****

Detention Basin Calculations

Lot 5

Lot 5 Hydrograph

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2006 Version 7.6

Rational method hydrology program based on
San Diego County Flood Control Division 2003 hydrology manual
Rational Hydrology Study Date: 06/27/06

********* Hydrology Study Control Information **********

Program License Serial Number 6024

Rational hydrology study storm event year is 100.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour, precipitation(inches) = 3.500
24 hour precipitation(inches) = 6.000
P6/P24 = 58.3%
San Diego hydrology manual 'C' values used

++
Process from Point/Station 2.500 to Point/Station 2.500
**** USER DEFINED FLOW INFORMATION AT A POINT ****

User specified 'C' value of 0.500 given for subarea
Rainfall intensity (I) = 7.969(In/Hr) for a 100.0 year storm
User specified values are as follows:
TC = 6.27 min. Rain intensity = 7.97(In/Hr)
Total area = 0.340(Ac.) Total runoff = 1.450(CFS)

++
Process from Point/Station 2.500 to Point/Station 2.500
**** 6 HOUR HYDROGRAPH ****

++
Hydrograph Data - Section 6, San Diego County Hydrology manual, June 2003

Time of Concentration = 6.27
Basin Area = 0.34 Acres
6 Hour Rainfall = 3.500 Inches
Runoff Coefficient = 0.500
Peak Discharge = 1.45 CFS

Time (Min)	Discharge (CFS)
0	0.000
6	0.035
12	0.036
18	0.037
24	0.037
30	0.038
36	0.038
42	0.039
48	0.040
54	0.041
60	0.042
66	0.043
72	0.043
78	0.045
84	0.045
90	0.047
96	0.048
102	0.049
108	0.050
114	0.052
120	0.053
126	0.056
132	0.057
138	0.060
144	0.061
150	0.065
156	0.066

162	0.071
168	0.073
174	0.078
180	0.081
186	0.088
192	0.092
198	0.102
204	0.109
210	0.125
216	0.135
222	0.165
228	0.188
234	0.276
240	0.389
246	1.450
252	0.221
258	0.148
264	0.116
270	0.097
276	0.084
282	0.075
288	0.068
294	0.063
300	0.058
306	0.055
312	0.051
318	0.049
324	0.046
330	0.044
336	0.042
342	0.040
348	0.039
354	0.038
360	0.036
366	0.035

++

6 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 1 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	0.4	0.7	1.1	1.5
0+ 0	0.0000	0.00	Q	|	|	|	|
0+ 1	0.0000	0.01	Q	|	|	|	|
0+ 2	0.0000	0.01	Q	|	|	|	|
0+ 3	0.0000	0.02	Q	|	|	|	|
0+ 4	0.0001	0.02	Q	|	|	|	|
0+ 5	0.0001	0.03	Q	|	|	|	|
0+ 6	0.0002	0.04	Q	|	|	|	|
0+ 7	0.0002	0.04	Q	|	|	|	|
0+ 8	0.0003	0.04	Q	|	|	|	|
0+ 9	0.0003	0.04	Q	|	|	|	|
0+10	0.0004	0.04	Q	|	|	|	|
0+11	0.0004	0.04	Q	|	|	|	|
0+12	0.0005	0.04	Q	|	|	|	|
0+13	0.0005	0.04	Q	|	|	|	|
0+14	0.0006	0.04	Q	|	|	|	|
0+15	0.0006	0.04	VQ	|	|	|	|
0+16	0.0007	0.04	VQ	|	|	|	|
0+17	0.0007	0.04	VQ	|	|	|	|
0+18	0.0008	0.04	VQ	|	|	|	|
0+19	0.0008	0.04	VQ	|	|	|	|
0+20	0.0009	0.04	VQ	|	|	|	|
0+21	0.0009	0.04	VQ	|	|	|	|
0+22	0.0010	0.04	VQ	|	|	|	|
0+23	0.0010	0.04	VQ	|	|	|	|
0+24	0.0011	0.04	VQ	|	|	|	|
0+25	0.0011	0.04	VQ	|	|	|	|
0+26	0.0012	0.04	VQ	|	|	|	|
0+27	0.0012	0.04	VQ	|	|	|	|
0+28	0.0013	0.04	|Q	|	|	|	|
0+29	0.0013	0.04	|Q	|	|	|	|
0+30	0.0014	0.04	|Q	|	|	|	|
0+31	0.0014	0.04	|Q	|	|	|	|
0+32	0.0015	0.04	|Q	|	|	|	|
0+33	0.0015	0.04	|Q	|	|	|	|
0+34	0.0016	0.04	|Q	|	|	|	|

0+35	0.0016	0.04	Q			
0+36	0.0017	0.04	Q			
0+37	0.0018	0.04	Q			
0+38	0.0018	0.04	Q			
0+39	0.0019	0.04	Q			
0+40	0.0019	0.04	Q			
0+41	0.0020	0.04	Q			
0+42	0.0020	0.04	Q			
0+43	0.0021	0.04	Q			
0+44	0.0021	0.04	Q			
0+45	0.0022	0.04	Q			
0+46	0.0022	0.04	Q			
0+47	0.0023	0.04	Q			
0+48	0.0023	0.04	Q			
0+49	0.0024	0.04	Q			
0+50	0.0025	0.04	Q			
0+51	0.0025	0.04	QV			
0+52	0.0026	0.04	QV			
0+53	0.0026	0.04	QV			
0+54	0.0027	0.04	QV			
0+55	0.0027	0.04	QV			
0+56	0.0028	0.04	QV			
0+57	0.0029	0.04	QV			
0+58	0.0029	0.04	QV			
0+59	0.0030	0.04	QV			
1+ 0	0.0030	0.04	QV			
1+ 1	0.0031	0.04	QV			
1+ 2	0.0031	0.04	QV			
1+ 3	0.0032	0.04	QV			
1+ 4	0.0033	0.04	QV			
1+ 5	0.0033	0.04	QV			
1+ 6	0.0034	0.04	QV			
1+ 7	0.0034	0.04	QV			
1+ 8	0.0035	0.04	QV			
1+ 9	0.0036	0.04	QV			
1+10	0.0036	0.04	QV			
1+11	0.0037	0.04	QV			
1+12	0.0037	0.04	QV			
1+13	0.0038	0.04	Q V			
1+14	0.0039	0.04	Q V			
1+15	0.0039	0.04	Q V			
1+16	0.0040	0.04	Q V			
1+17	0.0040	0.04	Q V			
1+18	0.0041	0.04	Q V			
1+19	0.0042	0.04	Q V			
1+20	0.0042	0.04	Q V			
1+21	0.0043	0.05	Q V			
1+22	0.0043	0.05	Q V			
1+23	0.0044	0.05	Q V			
1+24	0.0045	0.05	Q V			
1+25	0.0045	0.05	Q V			
1+26	0.0046	0.05	Q V			
1+27	0.0047	0.05	Q V			
1+28	0.0047	0.05	Q V			
1+29	0.0048	0.05	Q V			
1+30	0.0049	0.05	Q V			
1+31	0.0049	0.05	Q V			
1+32	0.0050	0.05	Q V			
1+33	0.0050	0.05	Q V			
1+34	0.0051	0.05	Q V			
1+35	0.0052	0.05	Q V			
1+36	0.0052	0.05	Q V			
1+37	0.0053	0.05	Q V			
1+38	0.0054	0.05	Q V			
1+39	0.0054	0.05	Q V			
1+40	0.0055	0.05	Q V			
1+41	0.0056	0.05	Q V			
1+42	0.0056	0.05	Q V			
1+43	0.0057	0.05	Q V			
1+44	0.0058	0.05	Q V			
1+45	0.0059	0.05	Q V			
1+46	0.0059	0.05	Q V			
1+47	0.0060	0.05	Q V			
1+48	0.0061	0.05	Q V			
1+49	0.0061	0.05	Q V			
1+50	0.0062	0.05	Q V			
1+51	0.0063	0.05	Q V			
1+52	0.0063	0.05	Q V			
1+53	0.0064	0.05	Q V			

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 1+54      0.0065     0.05  |Q    V      |            |            |            |
 1+55      0.0066     0.05  |Q    V      |            |            |            |
 1+56      0.0066     0.05  |Q    V      |            |            |            |
 1+57      0.0067     0.05  |Q    V      |            |            |            |
 1+58      0.0068     0.05  |Q    V      |            |            |            |
 1+59      0.0069     0.05  |Q    V      |            |            |            |
 2+ 0      0.0069     0.05  |Q    V      |            |            |            |
 2+ 1      0.0070     0.05  |Q    V      |            |            |            |
 2+ 2      0.0071     0.05  |Q    V      |            |            |            |
 2+ 3      0.0072     0.05  |Q    V      |            |            |            |
 2+ 4      0.0072     0.05  |Q    V      |            |            |            |
 2+ 5      0.0073     0.06  |Q    V      |            |            |            |
 2+ 6      0.0074     0.06  |Q    V      |            |            |            |
 2+ 7      0.0075     0.06  |Q    V      |            |            |            |
 2+ 8      0.0075     0.06  |Q     V     |            |            |            |
 2+ 9      0.0076     0.06  |Q     V     |            |            |            |
 2+10      0.0077     0.06  |Q     V     |            |            |            |
 2+11      0.0078     0.06  |Q     V     |            |            |            |
 2+12      0.0078     0.06  |Q     V     |            |            |            |
 2+13      0.0079     0.06  |Q     V     |            |            |            |
 2+14      0.0080     0.06  |Q     V     |            |            |            |
 2+15      0.0081     0.06  |Q     V     |            |            |            |
 2+16      0.0082     0.06  |Q     V     |            |            |            |
 2+17      0.0082     0.06  |Q     V     |            |            |            |
 2+18      0.0083     0.06  |Q     V     |            |            |            |
 2+19      0.0084     0.06  |Q     V     |            |            |            |
 2+20      0.0085     0.06  |Q     V     |            |            |            |
 2+21      0.0086     0.06  |Q     V     |            |            |            |
 2+22      0.0087     0.06  |Q     V     |            |            |            |
 2+23      0.0087     0.06  |Q      V    |            |            |            |
 2+24      0.0088     0.06  |Q      V    |            |            |            |
 2+25      0.0089     0.06  |Q      V    |            |            |            |
 2+26      0.0090     0.06  |Q      V    |            |            |            |
 2+27      0.0091     0.06  |Q      V    |            |            |            |
 2+28      0.0092     0.06  |Q      V    |            |            |            |
 2+29      0.0093     0.06  |Q      V    |            |            |            |
 2+30      0.0094     0.06  |Q      V    |            |            |            |
 2+31      0.0094     0.06  |Q      V    |            |            |            |
 2+32      0.0095     0.07  |Q      V    |            |            |            |
 2+33      0.0096     0.07  |Q      V    |            |            |            |
 2+34      0.0097     0.07  |Q      V    |            |            |            |
 2+35      0.0098     0.07  |Q      V    |            |            |            |
 2+36      0.0099     0.07  |Q      V    |            |            |            |
 2+37      0.0100     0.07  |Q       V   |            |            |            |
 2+38      0.0101     0.07  |Q       V   |            |            |            |
 2+39      0.0102     0.07  |Q       V   |            |            |            |
 2+40      0.0103     0.07  |Q       V   |            |            |            |
 2+41      0.0104     0.07  |Q       V   |            |            |            |
 2+42      0.0105     0.07  |Q       V   |            |            |            |
 2+43      0.0106     0.07  |Q       V   |            |            |            |
 2+44      0.0107     0.07  |Q       V   |            |            |            |
 2+45      0.0108     0.07  |Q       V   |            |            |            |
 2+46      0.0109     0.07  |Q       V   |            |            |            |
 2+47      0.0110     0.07  |Q       V   |            |            |            |
 2+48      0.0111     0.07  | Q      V   |            |            |            |
 2+49      0.0112     0.07  | Q      V   |            |            |            |
 2+50      0.0113     0.07  | Q         V|            |            |            |
 2+51      0.0114     0.08  | Q         V|            |            |            |
 2+52      0.0115     0.08  | Q         V|            |            |            |
 2+53      0.0116     0.08  | Q         V|            |            |            |
 2+54      0.0117     0.08  | Q         V|            |            |            |
 2+55      0.0118     0.08  | Q         V|            |            |            |
 2+56      0.0119     0.08  | Q         V|            |            |            |
 2+57      0.0120     0.08  | Q         V|            |            |            |
 2+58      0.0121     0.08  | Q         V|            |            |            |
 2+59      0.0122     0.08  | Q         V|            |            |            |
 3+ 0      0.0123     0.08  | Q         V|            |            |            |
 3+ 1      0.0125     0.08  | Q         V|            |            |            |
 3+ 2      0.0126     0.08  | Q          V            |            |            |
 3+ 3      0.0127     0.08  | Q          V            |            |            |
 3+ 4      0.0128     0.09  | Q          V            |            |            |
 3+ 5      0.0129     0.09  | Q          V            |            |            |
 3+ 6      0.0131     0.09  | Q          V            |            |            |
 3+ 7      0.0132     0.09  | Q          V            |            |            |
 3+ 8      0.0133     0.09  | Q          V            |            |            |
 3+ 9      0.0134     0.09  | Q          V            |            |            |
 3+10      0.0135     0.09  | Q          V            |            |            |
 3+11      0.0137     0.09  | Q          V            |            |            |
 3+12      0.0138     0.09  | Q          |V           |            |            |
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3+13	0.0139	0.09	
3+14	0.0141	0.10	
3+15	0.0142	0.10	
3+16	0.0143	0.10	
3+17	0.0145	0.10	
3+18	0.0146	0.10	
3+19	0.0148	0.10	
3+20	0.0149	0.10	
3+21	0.0150	0.11	
3+22	0.0152	0.11	
3+23	0.0153	0.11	
3+24	0.0155	0.11	
3+25	0.0156	0.11	
3+26	0.0158	0.11	
3+27	0.0160	0.12	
3+28	0.0161	0.12	
3+29	0.0163	0.12	
3+30	0.0165	0.12	
3+31	0.0166	0.13	
3+32	0.0168	0.13	
3+33	0.0170	0.13	
3+34	0.0172	0.13	
3+35	0.0174	0.13	
3+36	0.0175	0.14	
3+37	0.0177	0.14	
3+38	0.0179	0.15	
3+39	0.0181	0.15	
3+40	0.0184	0.16	
3+41	0.0186	0.16	
3+42	0.0188	0.17	
3+43	0.0190	0.17	
3+44	0.0193	0.17	
3+45	0.0195	0.18	
3+46	0.0198	0.18	
3+47	0.0200	0.18	
3+48	0.0203	0.19	
3+49	0.0206	0.20	
3+50	0.0209	0.22	
3+51	0.0212	0.23	
3+52	0.0215	0.25	
3+53	0.0219	0.26	
3+54	0.0223	0.28	
3+55	0.0227	0.29	
3+56	0.0231	0.31	
3+57	0.0236	0.33	
3+58	0.0240	0.35	
3+59	0.0245	0.37	
4+ 0	0.0251	0.39	
4+ 1	0.0259	0.57	
4+ 2	0.0269	0.74	
4+ 3	0.0281	0.92	
4+ 4	0.0297	1.10	
4+ 5	0.0314	1.27	
4+ 6	0.0334	1.45	
4+ 7	0.0351	1.25	
4+ 8	0.0366	1.04	
4+ 9	0.0377	0.84	
4+10	0.0386	0.63	
4+11	0.0392	0.43	
4+12	0.0395	0.22	
4+13	0.0398	0.21	
4+14	0.0400	0.20	
4+15	0.0403	0.18	
4+16	0.0405	0.17	
4+17	0.0407	0.16	
4+18	0.0409	0.15	
4+19	0.0411	0.14	
4+20	0.0413	0.14	
4+21	0.0415	0.13	
4+22	0.0417	0.13	
4+23	0.0419	0.12	
4+24	0.0420	0.12	
4+25	0.0422	0.11	
4+26	0.0423	0.11	
4+27	0.0425	0.11	
4+28	0.0426	0.10	
4+29	0.0427	0.10	
4+30	0.0429	0.10	
4+31	0.0430	0.09	

4+32	0.0431	0.09	Q			V
4+33	0.0433	0.09	Q			V
4+34	0.0434	0.09	Q			V
4+35	0.0435	0.09	Q			V
4+36	0.0436	0.08	Q			V
4+37	0.0437	0.08	Q			V
4+38	0.0438	0.08	Q			V
4+39	0.0440	0.08	Q			V
4+40	0.0441	0.08	Q			V
4+41	0.0442	0.08	Q			V
4+42	0.0443	0.08	Q			V
4+43	0.0444	0.07	Q			V
4+44	0.0445	0.07	Q			V
4+45	0.0446	0.07	Q			V
4+46	0.0447	0.07	Q			V
4+47	0.0448	0.07	Q			V
4+48	0.0449	0.07	Q			V
4+49	0.0450	0.07	Q			V
4+50	0.0451	0.07	Q			V
4+51	0.0451	0.07	Q			V
4+52	0.0452	0.06	Q			V
4+53	0.0453	0.06	Q			V
4+54	0.0454	0.06	Q			V
4+55	0.0455	0.06	Q			V
4+56	0.0456	0.06	Q			V
4+57	0.0457	0.06	Q			V
4+58	0.0457	0.06	Q			V
4+59	0.0458	0.06	Q			V
5+ 0	0.0459	0.06	Q			V
5+ 1	0.0460	0.06	Q			V
5+ 2	0.0461	0.06	Q			V
5+ 3	0.0461	0.06	Q			V
5+ 4	0.0462	0.06	Q			V
5+ 5	0.0463	0.06	Q			V
5+ 6	0.0464	0.05	Q			V
5+ 7	0.0464	0.05	Q			V
5+ 8	0.0465	0.05	Q			V
5+ 9	0.0466	0.05	Q			V
5+10	0.0467	0.05	Q			V
5+11	0.0467	0.05	Q			V
5+12	0.0468	0.05	Q			V
5+13	0.0469	0.05	Q			V
5+14	0.0469	0.05	Q			V
5+15	0.0470	0.05	Q			V
5+16	0.0471	0.05	Q			V
5+17	0.0471	0.05	Q			V
5+18	0.0472	0.05	Q			V
5+19	0.0473	0.05	Q			V
5+20	0.0473	0.05	Q			V
5+21	0.0474	0.05	Q			V
5+22	0.0475	0.05	Q			V
5+23	0.0475	0.05	Q			V
5+24	0.0476	0.05	Q			V
5+25	0.0477	0.05	Q			V
5+26	0.0477	0.05	Q			V
5+27	0.0478	0.05	Q			V
5+28	0.0479	0.04	Q			V
5+29	0.0479	0.04	Q			V
5+30	0.0480	0.04	Q			V
5+31	0.0480	0.04	Q			V
5+32	0.0481	0.04	Q			V
5+33	0.0482	0.04	Q			V
5+34	0.0482	0.04	Q			V
5+35	0.0483	0.04	Q			V
5+36	0.0483	0.04	Q			V
5+37	0.0484	0.04	Q			V
5+38	0.0484	0.04	Q			V
5+39	0.0485	0.04	Q			V
5+40	0.0486	0.04	Q			V
5+41	0.0486	0.04	Q			V
5+42	0.0487	0.04	Q			V
5+43	0.0487	0.04	Q			V
5+44	0.0488	0.04	Q			V
5+45	0.0488	0.04	Q			V
5+46	0.0489	0.04	Q			V
5+47	0.0489	0.04	Q			V
5+48	0.0490	0.04	Q			V
5+49	0.0491	0.04	Q			V
5+50	0.0491	0.04	Q			V

Lot 5 Hydrograph

5+51	0.0492	0.04	|Q	|	|	|	V|
5+52	0.0492	0.04	|Q	|	|	|	V|
5+53	0.0493	0.04	|Q	|	|	|	V|
5+54	0.0493	0.04	|Q	|	|	|	V|
5+55	0.0494	0.04	|Q	|	|	|	V|
5+56	0.0494	0.04	|Q	|	|	|	V|
5+57	0.0495	0.04	|Q	|	|	|	V|
5+58	0.0495	0.04	|Q	|	|	|	V|
5+59	0.0496	0.04	|Q	|	|	|	V|
6+ 0	0.0496	0.04	|Q	|	|	|	V|
6+ 1	0.0497	0.04	Q	|	|	|	V|
6+ 2	0.0497	0.04	Q	|	|	|	V|
6+ 3	0.0498	0.04	Q	|	|	|	V|
6+ 4	0.0498	0.04	Q	|	|	|	V|
6+ 5	0.0499	0.04	Q	|	|	|	V|
6+ 6	0.0499	0.04	Q	|	|	|	V

End of computations, total study area = 0.340 (Ac.)

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                    FLOOD HYDROGRAPH ROUTING PROGRAM
          Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
                      Study date: 06/27/06

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Program License Serial Number 6024

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

                From study/file name: 5914h1.rte
***************************HYDROGRAPH DATA***************************
                Number of intervals =   366
                Time interval =    1.0 (Min.)
                Maximum/Peak flow rate =        1.450 (CFS)
                Total volume =       0.050 (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
*********************************************************************


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station        2.500 to Point/Station        4.400
**** RETARDING BASIN ROUTING ****
______________________________________________________________________

Program computation of outflow v. depth



CALCULATED OUTFLOW DATA AT DEPTH =    1.06(Ft.))
Pipe length  =    26.46(Ft.)   Elevation difference =   7.40(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      4.00(In.)
 NOTE: Assuming outlet depth at soffit of outlet.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      8.127(Ft.)
Pipe friction loss =      5.730(Ft.)
Minor friction loss =      2.399(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.886(CFS)

Total outflow at this depth =      0.89(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    1.60(Ft.))
Pipe length  =    26.46(Ft.)   Elevation difference =   7.40(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      4.00(In.)
 NOTE: Assuming outlet depth at soffit of outlet.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      8.667(Ft.)
Pipe friction loss =      6.111(Ft.)
Minor friction loss =      2.558(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.915(CFS)

Total outflow at this depth =      0.91(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    2.80(Ft.))
Pipe length  =    26.46(Ft.)   Elevation difference =   7.40(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      4.00(In.)
 NOTE: Assuming outlet depth at soffit of outlet.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      9.867(Ft.)
Pipe friction loss =      6.957(Ft.)
Minor friction loss =      2.912(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.976(CFS)
```

Total outflow at this depth = 0.98(CFS)

Total number of inflow hydrograph intervals = 366
Hydrograph time unit = 1.000 (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
1.060	0.001	0.886	0.000	0.002
1.600	0.002	0.915	0.001	0.003
2.800	0.003	0.976	0.002	0.004

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.4	0.72	1.09	1.45	Depth (Ft.)
0.017	0.01	0.00	0.000	o	|	|	|	|	0.00
0.033	0.01	0.01	0.000	o	|	|	|	|	0.01
0.050	0.02	0.01	0.000	o	|	|	|	|	0.02
0.067	0.02	0.02	0.000	o	|	|	|	|	0.02
0.083	0.03	0.02	0.000	o	|	|	|	|	0.03
0.100	0.04	0.03	0.000	o	|	|	|	|	0.04
0.117	0.04	0.03	0.000	o	|	|	|	|	0.04
0.133	0.04	0.04	0.000	o	|	|	|	|	0.04
0.150	0.04	0.04	0.000	o	|	|	|	|	0.04
0.167	0.04	0.04	0.000	o	|	|	|	|	0.04
0.183	0.04	0.04	0.000	o	|	|	|	|	0.04
0.200	0.04	0.04	0.000	o	|	|	|	|	0.04
0.217	0.04	0.04	0.000	o	|	|	|	|	0.04
0.233	0.04	0.04	0.000	o	|	|	|	|	0.04
0.250	0.04	0.04	0.000	o	|	|	|	|	0.04
0.267	0.04	0.04	0.000	o	|	|	|	|	0.04
0.283	0.04	0.04	0.000	o	|	|	|	|	0.04
0.300	0.04	0.04	0.000	o	|	|	|	|	0.04
0.317	0.04	0.04	0.000	o	|	|	|	|	0.04
0.333	0.04	0.04	0.000	o	|	|	|	|	0.04
0.350	0.04	0.04	0.000	o	|	|	|	|	0.04
0.367	0.04	0.04	0.000	o	|	|	|	|	0.04
0.383	0.04	0.04	0.000	o	|	|	|	|	0.04
0.400	0.04	0.04	0.000	o	|	|	|	|	0.04
0.417	0.04	0.04	0.000	o	|	|	|	|	0.04
0.433	0.04	0.04	0.000	o	|	|	|	|	0.04
0.450	0.04	0.04	0.000	o	|	|	|	|	0.04
0.467	0.04	0.04	0.000	o	|	|	|	|	0.04
0.483	0.04	0.04	0.000	o	|	|	|	|	0.05
0.500	0.04	0.04	0.000	o	|	|	|	|	0.05
0.517	0.04	0.04	0.000	o	|	|	|	|	0.05
0.533	0.04	0.04	0.000	o	|	|	|	|	0.05
0.550	0.04	0.04	0.000	o	|	|	|	|	0.05
0.567	0.04	0.04	0.000	o	|	|	|	|	0.05
0.583	0.04	0.04	0.000	o	|	|	|	|	0.05
0.600	0.04	0.04	0.000	o	|	|	|	|	0.05
0.617	0.04	0.04	0.000	o	|	|	|	|	0.05
0.633	0.04	0.04	0.000	o	|	|	|	|	0.05
0.650	0.04	0.04	0.000	o	|	|	|	|	0.05
0.667	0.04	0.04	0.000	o	|	|	|	|	0.05
0.683	0.04	0.04	0.000	o	|	|	|	|	0.05
0.700	0.04	0.04	0.000	o	|	|	|	|	0.05
0.717	0.04	0.04	0.000	o	|	|	|	|	0.05
0.733	0.04	0.04	0.000	o	|	|	|	|	0.05
0.750	0.04	0.04	0.000	o	|	|	|	|	0.05
0.767	0.04	0.04	0.000	o	|	|	|	|	0.05
0.783	0.04	0.04	0.000	o	|	|	|	|	0.05
0.800	0.04	0.04	0.000	o	|	|	|	|	0.05
0.817	0.04	0.04	0.000	o	|	|	|	|	0.05

0.833	0.04	0.04	0.000	o				0.05
0.850	0.04	0.04	0.000	o				0.05
0.867	0.04	0.04	0.000	o				0.05
0.883	0.04	0.04	0.000	o				0.05
0.900	0.04	0.04	0.000	o				0.05
0.917	0.04	0.04	0.000	o				0.05
0.933	0.04	0.04	0.000	o				0.05
0.950	0.04	0.04	0.000	o				0.05
0.967	0.04	0.04	0.000	o				0.05
0.983	0.04	0.04	0.000	o				0.05
1.000	0.04	0.04	0.000	o				0.05
1.017	0.04	0.04	0.000	o				0.05
1.033	0.04	0.04	0.000	o				0.05
1.050	0.04	0.04	0.000	o				0.05
1.067	0.04	0.04	0.000	o				0.05
1.083	0.04	0.04	0.000	o				0.05
1.100	0.04	0.04	0.000	o				0.05
1.117	0.04	0.04	0.000	o				0.05
1.133	0.04	0.04	0.000	o				0.05
1.150	0.04	0.04	0.000	o				0.05
1.167	0.04	0.04	0.000	o				0.05
1.183	0.04	0.04	0.000	o				0.05
1.200	0.04	0.04	0.000	o				0.05
1.217	0.04	0.04	0.000	o				0.05
1.233	0.04	0.04	0.000	o				0.05
1.250	0.04	0.04	0.000	o				0.05
1.267	0.04	0.04	0.000	o				0.05
1.283	0.04	0.04	0.000	o				0.05
1.300	0.04	0.04	0.000	o				0.05
1.317	0.04	0.04	0.000	o				0.05
1.333	0.04	0.04	0.000	o				0.05
1.350	0.05	0.05	0.000	o				0.05
1.367	0.05	0.05	0.000	o				0.05
1.383	0.05	0.05	0.000	oI				0.05
1.400	0.05	0.05	0.000	|o				0.05
1.417	0.05	0.05	0.000	|o				0.05
1.433	0.05	0.05	0.000	|o				0.05
1.450	0.05	0.05	0.000	|o				0.06
1.467	0.05	0.05	0.000	|o				0.06
1.483	0.05	0.05	0.000	|o				0.06
1.500	0.05	0.05	0.000	|o				0.06
1.517	0.05	0.05	0.000	|o				0.06
1.533	0.05	0.05	0.000	|o				0.06
1.550	0.05	0.05	0.000	|o				0.06
1.567	0.05	0.05	0.000	|o				0.06
1.583	0.05	0.05	0.000	|o				0.06
1.600	0.05	0.05	0.000	|o				0.06
1.617	0.05	0.05	0.000	|o				0.06
1.633	0.05	0.05	0.000	|o				0.06
1.650	0.05	0.05	0.000	|o				0.06
1.667	0.05	0.05	0.000	|o				0.06
1.683	0.05	0.05	0.000	|o				0.06
1.700	0.05	0.05	0.000	|o				0.06
1.717	0.05	0.05	0.000	|o				0.06
1.733	0.05	0.05	0.000	|o				0.06
1.750	0.05	0.05	0.000	|o				0.06
1.767	0.05	0.05	0.000	|o				0.06
1.783	0.05	0.05	0.000	|o				0.06
1.800	0.05	0.05	0.000	|o				0.06
1.817	0.05	0.05	0.000	|o				0.06
1.833	0.05	0.05	0.000	|o				0.06
1.850	0.05	0.05	0.000	|o				0.06
1.867	0.05	0.05	0.000	|o				0.06
1.883	0.05	0.05	0.000	|o				0.06
1.900	0.05	0.05	0.000	|o				0.06
1.917	0.05	0.05	0.000	|o				0.06
1.933	0.05	0.05	0.000	|o				0.06
1.950	0.05	0.05	0.000	|o				0.06
1.967	0.05	0.05	0.000	|o				0.06
1.983	0.05	0.05	0.000	|o				0.06
2.000	0.05	0.05	0.000	|o				0.06
2.017	0.05	0.05	0.000	|o				0.06
2.033	0.05	0.05	0.000	|o				0.06
2.050	0.05	0.05	0.000	|o				0.06
2.067	0.05	0.05	0.000	|o				0.07
2.083	0.06	0.06	0.000	|o				0.07
2.100	0.06	0.06	0.000	|o				0.07
2.117	0.06	0.06	0.000	|o				0.07
2.133	0.06	0.06	0.000	|o				0.07

2.150	0.06	0.06	0.000	o				0.07
2.167	0.06	0.06	0.000	o				0.07
2.183	0.06	0.06	0.000	o				0.07
2.200	0.06	0.06	0.000	o				0.07
2.217	0.06	0.06	0.000	o				0.07
2.233	0.06	0.06	0.000	o				0.07
2.250	0.06	0.06	0.000	o				0.07
2.267	0.06	0.06	0.000	o				0.07
2.283	0.06	0.06	0.000	o				0.07
2.300	0.06	0.06	0.000	o				0.07
2.317	0.06	0.06	0.000	o				0.07
2.333	0.06	0.06	0.000	o				0.07
2.350	0.06	0.06	0.000	o				0.07
2.367	0.06	0.06	0.000	o				0.07
2.383	0.06	0.06	0.000	o				0.07
2.400	0.06	0.06	0.000	o				0.07
2.417	0.06	0.06	0.000	o				0.07
2.433	0.06	0.06	0.000	o				0.07
2.450	0.06	0.06	0.000	o				0.07
2.467	0.06	0.06	0.000	o				0.08
2.483	0.06	0.06	0.000	o				0.08
2.500	0.06	0.06	0.000	o				0.08
2.517	0.06	0.06	0.000	o				0.08
2.533	0.07	0.06	0.000	o				0.08
2.550	0.07	0.07	0.000	o				0.08
2.567	0.07	0.07	0.000	o				0.08
2.583	0.07	0.07	0.000	o				0.08
2.600	0.07	0.07	0.000	o				0.08
2.617	0.07	0.07	0.000	o				0.08
2.633	0.07	0.07	0.000	o				0.08
2.650	0.07	0.07	0.000	o				0.08
2.667	0.07	0.07	0.000	o				0.08
2.683	0.07	0.07	0.000	o				0.08
2.700	0.07	0.07	0.000	o				0.08
2.717	0.07	0.07	0.000	o				0.08
2.733	0.07	0.07	0.000	o				0.08
2.750	0.07	0.07	0.000	o				0.09
2.767	0.07	0.07	0.000	o				0.09
2.783	0.07	0.07	0.000	o				0.09
2.800	0.07	0.07	0.000	o				0.09
2.817	0.07	0.07	0.000	o				0.09
2.833	0.07	0.07	0.000	o				0.09
2.850	0.08	0.07	0.000	o				0.09
2.867	0.08	0.08	0.000	o				0.09
2.883	0.08	0.08	0.000	o				0.09
2.900	0.08	0.08	0.000	o				0.09
2.917	0.08	0.08	0.000	o				0.09
2.933	0.08	0.08	0.000	o				0.09
2.950	0.08	0.08	0.000	o				0.09
2.967	0.08	0.08	0.000	o				0.10
2.983	0.08	0.08	0.000	o				0.10
3.000	0.08	0.08	0.000	o				0.10
3.017	0.08	0.08	0.000	o				0.10
3.033	0.08	0.08	0.000	o				0.10
3.050	0.08	0.08	0.000	o				0.10
3.067	0.09	0.08	0.000	o				0.10
3.083	0.09	0.09	0.000	o				0.10
3.100	0.09	0.09	0.000	o				0.10
3.117	0.09	0.09	0.000	o				0.11
3.133	0.09	0.09	0.000	o				0.11
3.150	0.09	0.09	0.000	o				0.11
3.167	0.09	0.09	0.000	oI				0.11
3.183	0.09	0.09	0.000	o				0.11
3.200	0.09	0.09	0.000	o				0.11
3.217	0.09	0.09	0.000	o				0.11
3.233	0.10	0.09	0.000	o				0.11
3.250	0.10	0.10	0.000	o				0.11
3.267	0.10	0.10	0.000	o				0.12
3.283	0.10	0.10	0.000	o				0.12
3.300	0.10	0.10	0.000	o				0.12
3.317	0.10	0.10	0.000	o				0.12
3.333	0.10	0.10	0.000	o				0.12
3.350	0.11	0.10	0.000	o				0.13
3.367	0.11	0.11	0.000	o				0.13
3.383	0.11	0.11	0.000	o				0.13
3.400	0.11	0.11	0.000	o				0.13
3.417	0.11	0.11	0.000	o				0.13
3.433	0.11	0.11	0.000	o				0.13
3.450	0.12	0.11	0.000	o				0.14

3.467	0.12	0.12	0.000		0.14
3.483	0.12	0.12	0.000		0.14
3.500	0.12	0.12	0.000		0.15
3.517	0.13	0.12	0.000		0.15
3.533	0.13	0.13	0.000		0.15
3.550	0.13	0.13	0.000		0.15
3.567	0.13	0.13	0.000		0.16
3.583	0.13	0.13	0.000		0.16
3.600	0.14	0.13	0.000		0.16
3.617	0.14	0.14	0.000		0.16
3.633	0.15	0.14	0.000		0.17
3.650	0.15	0.15	0.000		0.17
3.667	0.16	0.15	0.000		0.18
3.683	0.16	0.16	0.000		0.19
3.700	0.17	0.16	0.000		0.19
3.717	0.17	0.17	0.000		0.20
3.733	0.17	0.17	0.000		0.20
3.750	0.18	0.17	0.000		0.21
3.767	0.18	0.18	0.000		0.21
3.783	0.18	0.18	0.000		0.22
3.800	0.19	0.18	0.000		0.22
3.817	0.20	0.19	0.000		0.23
3.833	0.22	0.21	0.000		0.25
3.850	0.23	0.22	0.000		0.26
3.867	0.25	0.23	0.000		0.28
3.883	0.26	0.25	0.000		0.30
3.900	0.28	0.26	0.000		0.32
3.917	0.29	0.28	0.000		0.34
3.933	0.31	0.30	0.000		0.36
3.950	0.33	0.32	0.000		0.38
3.967	0.35	0.34	0.000		0.40
3.983	0.37	0.35	0.000		0.42
4.000	0.39	0.37	0.000		0.45
4.017	0.57	0.45	0.001		0.54
4.033	0.74	0.61	0.001		0.72
4.050	0.92	0.78	0.001		0.93
4.067	1.10	0.89	0.001		1.12
4.083	1.27	0.90	0.002		1.34
4.100	1.45	0.92	0.002		1.76
4.117	1.25	0.96	0.003		2.44
4.133	1.04	0.97	0.003		2.73
4.150	0.84	0.97	0.003		2.68
4.167	0.63	0.95	0.003		2.30
4.183	0.43	0.92	0.002		1.63
4.200	0.22	0.89	0.001		1.18
4.217	0.21	0.50	0.001		0.60
4.233	0.20	0.28	0.000		0.33
4.250	0.18	0.21	0.000		0.25
4.267	0.17	0.19	0.000		0.22
4.283	0.16	0.17	0.000		0.21
4.300	0.15	0.16	0.000		0.19
4.317	0.14	0.15	0.000		0.18
4.333	0.14	0.14	0.000		0.17
4.350	0.13	0.14	0.000		0.16
4.367	0.13	0.13	0.000		0.16
4.383	0.12	0.13	0.000		0.15
4.400	0.12	0.12	0.000		0.14
4.417	0.11	0.12	0.000		0.14
4.433	0.11	0.11	0.000		0.13
4.450	0.11	0.11	0.000		0.13
4.467	0.10	0.11	0.000		0.13
4.483	0.10	0.10	0.000		0.12
4.500	0.10	0.10	0.000		0.12
4.517	0.09	0.10	0.000		0.12
4.533	0.09	0.09	0.000		0.11
4.550	0.09	0.09	0.000		0.11
4.567	0.09	0.09	0.000		0.11
4.583	0.09	0.09	0.000		0.11
4.600	0.08	0.09	0.000		0.10
4.617	0.08	0.08	0.000		0.10
4.633	0.08	0.08	0.000		0.10
4.650	0.08	0.08	0.000		0.10
4.667	0.08	0.08	0.000		0.10
4.683	0.08	0.08	0.000		0.09
4.700	0.08	0.08	0.000		0.09
4.717	0.07	0.08	0.000		0.09
4.733	0.07	0.07	0.000		0.09
4.750	0.07	0.07	0.000		0.09
4.767	0.07	0.07	0.000		0.09

4.783	0.07	0.07	0.000	|o	|	|	|	0.08
4.800	0.07	0.07	0.000	|o	|	|	|	0.08
4.817	0.07	0.07	0.000	|o	|	|	|	0.08
4.833	0.07	0.07	0.000	|o	|	|	|	0.08
4.850	0.07	0.07	0.000	|o	|	|	|	0.08
4.867	0.06	0.07	0.000	|o	|	|	|	0.08
4.883	0.06	0.06	0.000	|o	|	|	|	0.08
4.900	0.06	0.06	0.000	|o	|	|	|	0.08
4.917	0.06	0.06	0.000	|o	|	|	|	0.08
4.933	0.06	0.06	0.000	|o	|	|	|	0.07
4.950	0.06	0.06	0.000	|o	|	|	|	0.07
4.967	0.06	0.06	0.000	|o	|	|	|	0.07
4.983	0.06	0.06	0.000	|o	|	|	|	0.07
5.000	0.06	0.06	0.000	|o	|	|	|	0.07
5.017	0.06	0.06	0.000	|o	|	|	|	0.07
5.033	0.06	0.06	0.000	|o	|	|	|	0.07
5.050	0.06	0.06	0.000	|o	|	|	|	0.07
5.067	0.06	0.06	0.000	|o	|	|	|	0.07
5.083	0.06	0.06	0.000	|o	|	|	|	0.07
5.100	0.05	0.06	0.000	|o	|	|	|	0.07
5.117	0.05	0.05	0.000	|o	|	|	|	0.07
5.133	0.05	0.05	0.000	|o	|	|	|	0.06
5.150	0.05	0.05	0.000	|o	|	|	|	0.06
5.167	0.05	0.05	0.000	|o	|	|	|	0.06
5.183	0.05	0.05	0.000	|o	|	|	|	0.06
5.200	0.05	0.05	0.000	|o	|	|	|	0.06
5.217	0.05	0.05	0.000	|o	|	|	|	0.06
5.233	0.05	0.05	0.000	|o	|	|	|	0.06
5.250	0.05	0.05	0.000	|o	|	|	|	0.06
5.267	0.05	0.05	0.000	|o	|	|	|	0.06
5.283	0.05	0.05	0.000	|o	|	|	|	0.06
5.300	0.05	0.05	0.000	|o	|	|	|	0.06
5.317	0.05	0.05	0.000	|o	|	|	|	0.06
5.333	0.05	0.05	0.000	|o	|	|	|	0.06
5.350	0.05	0.05	0.000	|o	|	|	|	0.06
5.367	0.05	0.05	0.000	|o	|	|	|	0.06
5.383	0.05	0.05	0.000	|o	|	|	|	0.06
5.400	0.05	0.05	0.000	|o	|	|	|	0.06
5.417	0.05	0.05	0.000	|o	|	|	|	0.06
5.433	0.05	0.05	0.000	|o	|	|	|	0.05
5.450	0.05	0.05	0.000	Io	|	|	|	0.05
5.467	0.04	0.05	0.000	o	|	|	|	0.05
5.483	0.04	0.04	0.000	o	|	|	|	0.05
5.500	0.04	0.04	0.000	o	|	|	|	0.05
5.517	0.04	0.04	0.000	o	|	|	|	0.05
5.533	0.04	0.04	0.000	o	|	|	|	0.05
5.550	0.04	0.04	0.000	o	|	|	|	0.05
5.567	0.04	0.04	0.000	o	|	|	|	0.05
5.583	0.04	0.04	0.000	o	|	|	|	0.05
5.600	0.04	0.04	0.000	o	|	|	|	0.05
5.617	0.04	0.04	0.000	o	|	|	|	0.05
5.633	0.04	0.04	0.000	o	|	|	|	0.05
5.650	0.04	0.04	0.000	o	|	|	|	0.05
5.667	0.04	0.04	0.000	o	|	|	|	0.05
5.683	0.04	0.04	0.000	o	|	|	|	0.05
5.700	0.04	0.04	0.000	o	|	|	|	0.05
5.717	0.04	0.04	0.000	o	|	|	|	0.05
5.733	0.04	0.04	0.000	o	|	|	|	0.05
5.750	0.04	0.04	0.000	o	|	|	|	0.05
5.767	0.04	0.04	0.000	o	|	|	|	0.05
5.783	0.04	0.04	0.000	o	|	|	|	0.05
5.800	0.04	0.04	0.000	o	|	|	|	0.05
5.817	0.04	0.04	0.000	o	|	|	|	0.05
5.833	0.04	0.04	0.000	o	|	|	|	0.05
5.850	0.04	0.04	0.000	o	|	|	|	0.05
5.867	0.04	0.04	0.000	o	|	|	|	0.05
5.883	0.04	0.04	0.000	o	|	|	|	0.05
5.900	0.04	0.04	0.000	o	|	|	|	0.05
5.917	0.04	0.04	0.000	o	|	|	|	0.04
5.933	0.04	0.04	0.000	o	|	|	|	0.04
5.950	0.04	0.04	0.000	o	|	|	|	0.04
5.967	0.04	0.04	0.000	o	|	|	|	0.04
5.983	0.04	0.04	0.000	o	|	|	|	0.04
6.000	0.04	0.04	0.000	o	|	|	|	0.04
6.017	0.04	0.04	0.000	o	|	|	|	0.04
6.033	0.04	0.04	0.000	o	|	|	|	0.04
6.050	0.04	0.04	0.000	o	|	|	|	0.04
6.067	0.04	0.04	0.000	o	|	|	|	0.04
6.083	0.04	0.04	0.000	o	|	|	|	0.04

Lot 5 Routing

6.100	0.04	0.04	0.000	o	|	|	|	|	0.04
6.117	0.00	0.02	0.000	o	|	|	|	|	0.03
6.133	0.00	0.01	0.000	o	|	|	|	|	0.01
6.150	0.00	0.00	0.000	o	|	|	|	|	0.00
6.167	0.00	0.00	0.000	o	|	|	|	|	0.00

```
****************************HYDROGRAPH DATA****************************
                Number of intervals =   370
                Time interval =    1.0 (Min.)
                Maximum/Peak flow rate =        0.972 (CFS)
                Total volume =       0.050 (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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Detention Basin Calculations

Lot 6

Lot 6 Hydrograph

San Diego County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c)1991-2006 Version 7.6

Rational method hydrology program based on
San Diego County Flood Control Division 2003 hydrology manual
Rational Hydrology Study Date: 06/27/06

********* Hydrology Study Control Information **********

Program License Serial Number 6024

Rational hydrology study storm event year is 100.0
English (in-lb) input data Units used

Map data precipitation entered:
6 hour, precipitation(inches) = 3.500
24 hour precipitation(inches) = 6.000
P6/P24 = 58.3%
San Diego hydrology manual 'C' values used

++
Process from Point/Station 7.000 to Point/Station 7.000
**** USER DEFINED FLOW INFORMATION AT A POINT ****

User specified 'C' value of 0.540 given for subarea
Rainfall intensity (I) = 9.210(In/Hr) for a 100.0 year storm
User specified values are as follows:
TC = 5.01 min. Rain intensity = 9.21(In/Hr)
Total area = 0.260(Ac.) Total runoff = 1.310(CFS)

++
Process from Point/Station 7.000 to Point/Station 7.000
**** 6 HOUR HYDROGRAPH ****

++
Hydrograph Data - Section 6, San Diego County Hydrology manual, June 2003

Time of Concentration = 5.01
Basin Area = 0.26 Acres
6 Hour Rainfall = 3.500 Inches
Runoff Coefficient = 0.540
Peak Discharge = 1.31 CFS

Time (Min)	Discharge (CFS)
0	0.000
5	0.029
10	0.030
15	0.030
20	0.030
25	0.031
30	0.031
35	0.032
40	0.032
45	0.033
50	0.033
55	0.034
60	0.034
65	0.035
70	0.036
75	0.037
80	0.037
85	0.038
90	0.039
95	0.040
100	0.040
105	0.042
110	0.042
115	0.044
120	0.044
125	0.046
130	0.047

135	0.049
140	0.050
145	0.052
150	0.053
155	0.056
160	0.057
165	0.060
170	0.062
175	0.066
180	0.068
185	0.073
190	0.075
195	0.082
200	0.086
205	0.095
210	0.101
215	0.116
220	0.125
225	0.153
230	0.175
235	0.256
240	0.361
245	1.310
250	0.206
255	0.138
260	0.108
265	0.090
270	0.078
275	0.070
280	0.064
285	0.058
290	0.054
295	0.051
300	0.048
305	0.045
310	0.043
315	0.041
320	0.039
325	0.038
330	0.036
335	0.035
340	0.034
345	0.033
350	0.032
355	0.031
360	0.030
365	0.029

++

6 - H O U R S T O R M

R u n o f f H y d r o g r a p h

Hydrograph in 1 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	0.3	0.7	1.0	1.3
0+ 0	0.0000	0.00	Q	|	|	|	|
0+ 1	0.0000	0.01	Q	|	|	|	|
0+ 2	0.0000	0.01	Q	|	|	|	|
0+ 3	0.0000	0.02	Q	|	|	|	|
0+ 4	0.0001	0.02	Q	|	|	|	|
0+ 5	0.0001	0.03	Q	|	|	|	|
0+ 6	0.0002	0.03	Q	|	|	|	|
0+ 7	0.0002	0.03	Q	|	|	|	|
0+ 8	0.0002	0.03	Q	|	|	|	|
0+ 9	0.0003	0.03	Q	|	|	|	|
0+10	0.0003	0.03	Q	|	|	|	|
0+11	0.0004	0.03	Q	|	|	|	|
0+12	0.0004	0.03	Q	|	|	|	|
0+13	0.0004	0.03	Q	|	|	|	|
0+14	0.0005	0.03	Q	|	|	|	|
0+15	0.0005	0.03	Q	|	|	|	|
0+16	0.0006	0.03	Q	|	|	|	|
0+17	0.0006	0.03	Q	|	|	|	|
0+18	0.0007	0.03	Q	|	|	|	|
0+19	0.0007	0.03	Q	|	|	|	|
0+20	0.0007	0.03	Q	|	|	|	|
0+21	0.0008	0.03	Q	|	|	|	|
0+22	0.0008	0.03	Q	|	|	|	|

0+23	0.0009	0.03	Q				
0+24	0.0009	0.03	Q				
0+25	0.0009	0.03	Q				
0+26	0.0010	0.03	Q				
0+27	0.0010	0.03	QV				
0+28	0.0011	0.03	QV				
0+29	0.0011	0.03	QV				
0+30	0.0012	0.03	QV				
0+31	0.0012	0.03	QV				
0+32	0.0013	0.03	QV				
0+33	0.0013	0.03	QV				
0+34	0.0013	0.03	QV				
0+35	0.0014	0.03	QV				
0+36	0.0014	0.03	QV				
0+37	0.0015	0.03	QV				
0+38	0.0015	0.03	QV				
0+39	0.0016	0.03	QV				
0+40	0.0016	0.03	QV				
0+41	0.0016	0.03	QV				
0+42	0.0017	0.03	QV				
0+43	0.0017	0.03	QV				
0+44	0.0018	0.03	|Q				
0+45	0.0018	0.03	|Q				
0+46	0.0019	0.03	|Q				
0+47	0.0019	0.03	|Q				
0+48	0.0020	0.03	|Q				
0+49	0.0020	0.03	|Q				
0+50	0.0021	0.03	|QV				
0+51	0.0021	0.03	|QV				
0+52	0.0021	0.03	|QV				
0+53	0.0022	0.03	|QV				
0+54	0.0022	0.03	|QV				
0+55	0.0023	0.03	|QV				
0+56	0.0023	0.03	|QV				
0+57	0.0024	0.03	|QV				
0+58	0.0024	0.03	|QV				
0+59	0.0025	0.03	|QV				
1+ 0	0.0025	0.03	|QV				
1+ 1	0.0026	0.03	|QV				
1+ 2	0.0026	0.03	|QV				
1+ 3	0.0027	0.03	|QV				
1+ 4	0.0027	0.04	|QV				
1+ 5	0.0028	0.04	|QV				
1+ 6	0.0028	0.04	|QV				
1+ 7	0.0029	0.04	|QV				
1+ 8	0.0029	0.04	|QV				
1+ 9	0.0030	0.04	|QV				
1+10	0.0030	0.04	|QV				
1+11	0.0031	0.04	|QV				
1+12	0.0031	0.04	|Q V				
1+13	0.0032	0.04	|Q V				
1+14	0.0032	0.04	|Q V				
1+15	0.0033	0.04	|Q V				
1+16	0.0033	0.04	|Q V				
1+17	0.0034	0.04	|Q V				
1+18	0.0034	0.04	|Q V				
1+19	0.0035	0.04	|Q V				
1+20	0.0035	0.04	|Q V				
1+21	0.0036	0.04	|Q V				
1+22	0.0036	0.04	|Q V				
1+23	0.0037	0.04	|Q V				
1+24	0.0037	0.04	|Q V				
1+25	0.0038	0.04	|Q V				
1+26	0.0038	0.04	|Q V				
1+27	0.0039	0.04	|Q V				
1+28	0.0039	0.04	|Q V				
1+29	0.0040	0.04	|Q V				
1+30	0.0040	0.04	|Q V				
1+31	0.0041	0.04	|Q V				
1+32	0.0041	0.04	|Q V				
1+33	0.0042	0.04	|Q V				
1+34	0.0043	0.04	|Q V				
1+35	0.0043	0.04	|Q V				
1+36	0.0044	0.04	|Q V				
1+37	0.0044	0.04	|Q V				
1+38	0.0045	0.04	|Q V				
1+39	0.0045	0.04	|Q V				
1+40	0.0046	0.04	|Q V				
1+41	0.0046	0.04	|Q V				

1+42	0.0047	0.04		Q V			
1+43	0.0048	0.04		Q V			
1+44	0.0048	0.04		Q V			
1+45	0.0049	0.04		Q V			
1+46	0.0049	0.04		Q V			
1+47	0.0050	0.04		Q V			
1+48	0.0050	0.04		Q V			
1+49	0.0051	0.04		Q V			
1+50	0.0052	0.04		Q V			
1+51	0.0052	0.04		Q V			
1+52	0.0053	0.04		Q V			
1+53	0.0053	0.04		Q V			
1+54	0.0054	0.04		Q V			
1+55	0.0055	0.04		Q V			
1+56	0.0055	0.04		Q V			
1+57	0.0056	0.04		Q V			
1+58	0.0056	0.04		Q V			
1+59	0.0057	0.04		Q V			
2+ 0	0.0058	0.04		Q V			
2+ 1	0.0058	0.04		Q V			
2+ 2	0.0059	0.05		Q V			
2+ 3	0.0059	0.05		Q V			
2+ 4	0.0060	0.05		Q V			
2+ 5	0.0061	0.05		Q V			
2+ 6	0.0061	0.05		Q V			
2+ 7	0.0062	0.05		Q V			
2+ 8	0.0063	0.05		Q V			
2+ 9	0.0063	0.05		Q V			
2+10	0.0064	0.05		Q V			
2+11	0.0065	0.05		Q V			
2+12	0.0065	0.05		Q V			
2+13	0.0066	0.05		Q V			
2+14	0.0067	0.05		Q V			
2+15	0.0067	0.05		Q V			
2+16	0.0068	0.05		Q V			
2+17	0.0069	0.05		Q V			
2+18	0.0069	0.05		Q V			
2+19	0.0070	0.05		Q V			
2+20	0.0071	0.05		Q V			
2+21	0.0071	0.05		Q V			
2+22	0.0072	0.05		Q V			
2+23	0.0073	0.05		Q V			
2+24	0.0073	0.05		Q V			
2+25	0.0074	0.05		Q V			
2+26	0.0075	0.05		Q V			
2+27	0.0076	0.05		Q V			
2+28	0.0076	0.05		Q V			
2+29	0.0077	0.05		Q V			
2+30	0.0078	0.05		Q V			
2+31	0.0078	0.05		Q V			
2+32	0.0079	0.05		Q V			
2+33	0.0080	0.05		Q V			
2+34	0.0081	0.06		Q V			
2+35	0.0081	0.06		Q V			
2+36	0.0082	0.06		Q V			
2+37	0.0083	0.06		Q V			
2+38	0.0084	0.06		Q V			
2+39	0.0085	0.06		Q V			
2+40	0.0085	0.06		Q V			
2+41	0.0086	0.06		Q V			
2+42	0.0087	0.06		Q V			
2+43	0.0088	0.06		Q V			
2+44	0.0089	0.06		Q V			
2+45	0.0089	0.06		Q V			
2+46	0.0090	0.06		Q V			
2+47	0.0091	0.06		Q V			
2+48	0.0092	0.06		Q V			
2+49	0.0093	0.06		Q V			
2+50	0.0094	0.06		Q V			
2+51	0.0094	0.06		Q V			
2+52	0.0095	0.06		Q V			
2+53	0.0096	0.06		Q V			
2+54	0.0097	0.06		Q V			
2+55	0.0098	0.07		Q V			
2+56	0.0099	0.07		Q V			
2+57	0.0100	0.07		Q V			
2+58	0.0101	0.07		Q V			
2+59	0.0102	0.07		Q V			
3+ 0	0.0103	0.07		Q V			

Lot 6 Hydrograph

3+ 1	0.0104	0.07	
3+ 2	0.0105	0.07	
3+ 3	0.0105	0.07	
3+ 4	0.0106	0.07	
3+ 5	0.0107	0.07	
3+ 6	0.0108	0.07	
3+ 7	0.0109	0.07	
3+ 8	0.0111	0.07	
3+ 9	0.0112	0.07	
3+10	0.0113	0.08	
3+11	0.0114	0.08	
3+12	0.0115	0.08	
3+13	0.0116	0.08	
3+14	0.0117	0.08	
3+15	0.0118	0.08	
3+16	0.0119	0.08	
3+17	0.0120	0.08	
3+18	0.0122	0.08	
3+19	0.0123	0.09	
3+20	0.0124	0.09	
3+21	0.0125	0.09	
3+22	0.0126	0.09	
3+23	0.0128	0.09	
3+24	0.0129	0.09	
3+25	0.0130	0.10	
3+26	0.0131	0.10	
3+27	0.0133	0.10	
3+28	0.0134	0.10	
3+29	0.0136	0.10	
3+30	0.0137	0.10	
3+31	0.0138	0.10	
3+32	0.0140	0.11	
3+33	0.0141	0.11	
3+34	0.0143	0.11	
3+35	0.0144	0.12	
3+36	0.0146	0.12	
3+37	0.0148	0.12	
3+38	0.0149	0.12	
3+39	0.0151	0.12	
3+40	0.0153	0.13	
3+41	0.0155	0.13	
3+42	0.0157	0.14	
3+43	0.0159	0.14	
3+44	0.0161	0.15	
3+45	0.0163	0.15	
3+46	0.0165	0.16	
3+47	0.0167	0.16	
3+48	0.0169	0.17	
3+49	0.0172	0.17	
3+50	0.0174	0.17	
3+51	0.0177	0.19	
3+52	0.0180	0.21	
3+53	0.0183	0.22	
3+54	0.0186	0.24	
3+55	0.0189	0.26	
3+56	0.0193	0.28	
3+57	0.0197	0.30	
3+58	0.0202	0.32	
3+59	0.0207	0.34	
4+ 0	0.0211	0.36	
4+ 1	0.0219	0.55	
4+ 2	0.0229	0.74	
4+ 3	0.0242	0.93	
4+ 4	0.0258	1.12	
4+ 5	0.0276	1.31	
4+ 6	0.0291	1.09	
4+ 7	0.0303	0.87	
4+ 8	0.0311	0.65	
4+ 9	0.0317	0.43	
4+10	0.0320	0.21	
4+11	0.0323	0.19	
4+12	0.0325	0.18	
4+13	0.0328	0.16	
4+14	0.0330	0.15	
4+15	0.0332	0.14	
4+16	0.0333	0.13	
4+17	0.0335	0.13	
4+18	0.0337	0.12	
4+19	0.0338	0.11	

4+20	0.0340	0.11	Q			V
4+21	0.0341	0.10	Q			V
4+22	0.0343	0.10	Q			V
4+23	0.0344	0.10	Q			V
4+24	0.0345	0.09	Q			V
4+25	0.0346	0.09	Q			V
4+26	0.0348	0.09	Q			V
4+27	0.0349	0.09	Q			V
4+28	0.0350	0.08	Q			V
4+29	0.0351	0.08	Q			V
4+30	0.0352	0.08	Q			V
4+31	0.0353	0.08	Q			V
4+32	0.0354	0.08	Q			V
4+33	0.0355	0.07	Q			V
4+34	0.0356	0.07	Q			V
4+35	0.0357	0.07	Q			V
4+36	0.0358	0.07	Q			V
4+37	0.0359	0.07	Q			V
4+38	0.0360	0.07	Q			V
4+39	0.0361	0.06	Q			V
4+40	0.0362	0.06	Q			V
4+41	0.0363	0.06	Q			V
4+42	0.0363	0.06	Q			V
4+43	0.0364	0.06	Q			V
4+44	0.0365	0.06	Q			V
4+45	0.0366	0.06	Q			V
4+46	0.0367	0.06	Q			V
4+47	0.0368	0.06	Q			V
4+48	0.0368	0.06	Q			V
4+49	0.0369	0.06	Q			V
4+50	0.0370	0.05	Q			V
4+51	0.0371	0.05	Q			V
4+52	0.0371	0.05	Q			V
4+53	0.0372	0.05	Q			V
4+54	0.0373	0.05	Q			V
4+55	0.0373	0.05	Q			V
4+56	0.0374	0.05	Q			V
4+57	0.0375	0.05	Q			V
4+58	0.0375	0.05	Q			V
4+59	0.0376	0.05	Q			V
5+ 0	0.0377	0.05	Q			V
5+ 1	0.0377	0.05	Q			V
5+ 2	0.0378	0.05	Q			V
5+ 3	0.0379	0.05	Q			V
5+ 4	0.0379	0.05	Q			V
5+ 5	0.0380	0.05	Q			V
5+ 6	0.0381	0.04	Q			V
5+ 7	0.0381	0.04	Q			V
5+ 8	0.0382	0.04	Q			V
5+ 9	0.0382	0.04	Q			V
5+10	0.0383	0.04	Q			V
5+11	0.0384	0.04	Q			V
5+12	0.0384	0.04	Q			V
5+13	0.0385	0.04	Q			V
5+14	0.0385	0.04	Q			V
5+15	0.0386	0.04	Q			V
5+16	0.0386	0.04	Q			V
5+17	0.0387	0.04	Q			V
5+18	0.0387	0.04	Q			V
5+19	0.0388	0.04	Q			V
5+20	0.0389	0.04	Q			V
5+21	0.0389	0.04	Q			V
5+22	0.0390	0.04	Q			V
5+23	0.0390	0.04	Q			V
5+24	0.0391	0.04	Q			V
5+25	0.0391	0.04	Q			V
5+26	0.0392	0.04	Q			V
5+27	0.0392	0.04	Q			V
5+28	0.0393	0.04	Q			V
5+29	0.0393	0.04	Q			V
5+30	0.0394	0.04	Q			V
5+31	0.0394	0.04	Q			V
5+32	0.0395	0.04	Q			V
5+33	0.0395	0.04	Q			V
5+34	0.0396	0.04	Q			V
5+35	0.0396	0.03	Q			V
5+36	0.0397	0.03	Q			V
5+37	0.0397	0.03	Q			V
5+38	0.0398	0.03	Q			V

Lot 6 Hydrograph

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   5+39       0.0398      0.03  |Q        |         |         |        V |
   5+40       0.0399      0.03  |Q        |         |         |        V |
   5+41       0.0399      0.03  |Q        |         |         |        V |
   5+42       0.0399      0.03  |Q        |         |         |         V|
   5+43       0.0400      0.03  |Q        |         |         |         V|
   5+44       0.0400      0.03  |Q        |         |         |         V|
   5+45       0.0401      0.03  Q         |         |         |         V|
   5+46       0.0401      0.03  Q         |         |         |         V|
   5+47       0.0402      0.03  Q         |         |         |         V|
   5+48       0.0402      0.03  Q         |         |         |         V|
   5+49       0.0403      0.03  Q         |         |         |         V|
   5+50       0.0403      0.03  Q         |         |         |         V|
   5+51       0.0403      0.03  Q         |         |         |         V|
   5+52       0.0404      0.03  Q         |         |         |         V|
   5+53       0.0404      0.03  Q         |         |         |         V|
   5+54       0.0405      0.03  Q         |         |         |         V|
   5+55       0.0405      0.03  Q         |         |         |         V|
   5+56       0.0406      0.03  Q         |         |         |         V|
   5+57       0.0406      0.03  Q         |         |         |         V|
   5+58       0.0406      0.03  Q         |         |         |         V|
   5+59       0.0407      0.03  Q         |         |         |         V|
   6+ 0       0.0407      0.03  Q         |         |         |         V|
   6+ 1       0.0408      0.03  Q         |         |         |         V|
   6+ 2       0.0408      0.03  Q         |         |         |         V|
   6+ 3       0.0408      0.03  Q         |         |         |         V|
   6+ 4       0.0409      0.03  Q         |         |         |         V|
   6+ 5       0.0409      0.03  Q         |         |         |          V
-----------------------------------------------------------------------
```

End of computations, total study area = 0.260 (Ac.)

Lot 6 Routing

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                    FLOOD HYDROGRAPH ROUTING PROGRAM
            Copyright (c) CIVILCADD/CIVILDESIGN, 1989 - 2005
                       Study date: 06/21/06

-----------------------------------------------------------------------



Program License Serial Number 6024

-----------------------------------------------------------------------
********************* HYDROGRAPH INFORMATION **********************

                From study/file name: 5914h5.rte
****************************HYDROGRAPH DATA****************************
                Number of intervals =   365
                Time interval =    1.0 (Min.)
                Maximum/Peak flow rate =        1.310 (CFS)
                Total volume =       0.041 (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
************************************************************************


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station       47.000 to Point/Station       48.000
**** RETARDING BASIN ROUTING ****
______________________________________________________________________

Program computation of outflow v. depth



CALCULATED OUTFLOW DATA AT DEPTH =    1.05(Ft.))
Pipe length  =    18.94(Ft.)   Elevation difference =   5.30(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      4.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      6.355(Ft.)
Pipe friction loss =      4.009(Ft.)
Minor friction loss =      2.345(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.876(CFS)

Total outflow at this depth =      0.88(CFS)


CALCULATED OUTFLOW DATA AT DEPTH =    2.38(Ft.))
Pipe length  =    18.94(Ft.)   Elevation difference =   5.30(Ft.)
Manning's N = 0.013   No. of pipes = 1
Given pipe size =      4.00(In.)
 NOTE: Assuming free outlet flow.
NOTE: Normal flow is pressure flow.
The total friction loss through the pipe is      7.680(Ft.)
Pipe friction loss =      4.845(Ft.)
Minor friction loss =      2.834(Ft.)     K-factor =   1.50
Calculated flow rate through pipe(s) =      0.963(CFS)

Total outflow at this depth =      0.96(CFS)

-----------------------------------------------------------------------
Total number of inflow hydrograph intervals = 365
Hydrograph time unit =  1.000 (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)
-----------------------------------------------------------------------
-----------------------------------------------------------------------
```

Lot 6 Routing

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
1.055	0.001	0.876	0.000	0.002
2.380	0.002	0.963	0.001	0.003

Hydrograph Detention Basin Routing

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

Time (Hours)	Inflow (CFS)	Outflow (CFS)	Storage (Ac.Ft)	.0	0.3	0.66	0.98	1.31	Depth (Ft.)
0.017	0.01	0.00	0.000	o	|	|	|	|	0.00
0.033	0.01	0.01	0.000	o	|	|	|	|	0.01
0.050	0.02	0.01	0.000	o	|	|	|	|	0.02
0.067	0.02	0.02	0.000	o	|	|	|	|	0.02
0.083	0.03	0.02	0.000	o	|	|	|	|	0.03
0.100	0.03	0.03	0.000	o	|	|	|	|	0.03
0.117	0.03	0.03	0.000	o	|	|	|	|	0.03
0.133	0.03	0.03	0.000	o	|	|	|	|	0.04
0.150	0.03	0.03	0.000	o	|	|	|	|	0.04
0.167	0.03	0.03	0.000	o	|	|	|	|	0.04
0.183	0.03	0.03	0.000	o	|	|	|	|	0.04
0.200	0.03	0.03	0.000	o	|	|	|	|	0.04
0.217	0.03	0.03	0.000	o	|	|	|	|	0.04
0.233	0.03	0.03	0.000	o	|	|	|	|	0.04
0.250	0.03	0.03	0.000	o	|	|	|	|	0.04
0.267	0.03	0.03	0.000	o	|	|	|	|	0.04
0.283	0.03	0.03	0.000	o	|	|	|	|	0.04
0.300	0.03	0.03	0.000	o	|	|	|	|	0.04
0.317	0.03	0.03	0.000	o	|	|	|	|	0.04
0.333	0.03	0.03	0.000	o	|	|	|	|	0.04
0.350	0.03	0.03	0.000	o	|	|	|	|	0.04
0.367	0.03	0.03	0.000	o	|	|	|	|	0.04
0.383	0.03	0.03	0.000	o	|	|	|	|	0.04
0.400	0.03	0.03	0.000	o	|	|	|	|	0.04
0.417	0.03	0.03	0.000	o	|	|	|	|	0.04
0.433	0.03	0.03	0.000	o	|	|	|	|	0.04
0.450	0.03	0.03	0.000	o	|	|	|	|	0.04
0.467	0.03	0.03	0.000	o	|	|	|	|	0.04
0.483	0.03	0.03	0.000	o	|	|	|	|	0.04
0.500	0.03	0.03	0.000	o	|	|	|	|	0.04
0.517	0.03	0.03	0.000	o	|	|	|	|	0.04
0.533	0.03	0.03	0.000	o	|	|	|	|	0.04
0.550	0.03	0.03	0.000	o	|	|	|	|	0.04
0.567	0.03	0.03	0.000	o	|	|	|	|	0.04
0.583	0.03	0.03	0.000	o	|	|	|	|	0.04
0.600	0.03	0.03	0.000	o	|	|	|	|	0.04
0.617	0.03	0.03	0.000	o	|	|	|	|	0.04
0.633	0.03	0.03	0.000	o	|	|	|	|	0.04
0.650	0.03	0.03	0.000	o	|	|	|	|	0.04
0.667	0.03	0.03	0.000	o	|	|	|	|	0.04
0.683	0.03	0.03	0.000	o	|	|	|	|	0.04
0.700	0.03	0.03	0.000	o	|	|	|	|	0.04
0.717	0.03	0.03	0.000	o	|	|	|	|	0.04
0.733	0.03	0.03	0.000	o	|	|	|	|	0.04
0.750	0.03	0.03	0.000	o	|	|	|	|	0.04
0.767	0.03	0.03	0.000	o	|	|	|	|	0.04
0.783	0.03	0.03	0.000	o	|	|	|	|	0.04
0.800	0.03	0.03	0.000	o	|	|	|	|	0.04
0.817	0.03	0.03	0.000	o	|	|	|	|	0.04
0.833	0.03	0.03	0.000	o	|	|	|	|	0.04
0.850	0.03	0.03	0.000	o	|	|	|	|	0.04
0.867	0.03	0.03	0.000	o	|	|	|	|	0.04
0.883	0.03	0.03	0.000	o	|	|	|	|	0.04
0.900	0.03	0.03	0.000	o	|	|	|	|	0.04
0.917	0.03	0.03	0.000	o	|	|	|	|	0.04
0.933	0.03	0.03	0.000	o	|	|	|	|	0.04
0.950	0.03	0.03	0.000	o	|	|	|	|	0.04
0.967	0.03	0.03	0.000	o	|	|	|	|	0.04
0.983	0.03	0.03	0.000	o	|	|	|	|	0.04
1.000	0.03	0.03	0.000	o	|	|	|	|	0.04
1.017	0.03	0.03	0.000	o	|	|	|	|	0.04
1.033	0.03	0.03	0.000	o	|	|	|	|	0.04
1.050	0.03	0.03	0.000	o	|	|	|	|	0.04
1.067	0.04	0.03	0.000	o	|	|	|	|	0.04

1.083	0.04	0.04	0.000	O				0.04
1.100	0.04	0.04	0.000	O				0.04
1.117	0.04	0.04	0.000	O				0.04
1.133	0.04	0.04	0.000	O				0.04
1.150	0.04	0.04	0.000	O				0.04
1.167	0.04	0.04	0.000	O				0.04
1.183	0.04	0.04	0.000	O				0.04
1.200	0.04	0.04	0.000	O				0.04
1.217	0.04	0.04	0.000	O				0.04
1.233	0.04	0.04	0.000	O				0.04
1.250	0.04	0.04	0.000	O				0.04
1.267	0.04	0.04	0.000	O				0.04
1.283	0.04	0.04	0.000	O				0.04
1.300	0.04	0.04	0.000	O				0.04
1.317	0.04	0.04	0.000	O				0.04
1.333	0.04	0.04	0.000	O				0.04
1.350	0.04	0.04	0.000	O				0.04
1.367	0.04	0.04	0.000	O				0.04
1.383	0.04	0.04	0.000	O				0.05
1.400	0.04	0.04	0.000	O				0.05
1.417	0.04	0.04	0.000	O				0.05
1.433	0.04	0.04	0.000	O				0.05
1.450	0.04	0.04	0.000	O				0.05
1.467	0.04	0.04	0.000	O				0.05
1.483	0.04	0.04	0.000	O				0.05
1.500	0.04	0.04	0.000	O				0.05
1.517	0.04	0.04	0.000	O				0.05
1.533	0.04	0.04	0.000	O				0.05
1.550	0.04	0.04	0.000	O				0.05
1.567	0.04	0.04	0.000	O				0.05
1.583	0.04	0.04	0.000	O				0.05
1.600	0.04	0.04	0.000	O				0.05
1.617	0.04	0.04	0.000	O				0.05
1.633	0.04	0.04	0.000	O				0.05
1.650	0.04	0.04	0.000	O				0.05
1.667	0.04	0.04	0.000	O				0.05
1.683	0.04	0.04	0.000	O				0.05
1.700	0.04	0.04	0.000	O				0.05
1.717	0.04	0.04	0.000	OI				0.05
1.733	0.04	0.04	0.000	|O				0.05
1.750	0.04	0.04	0.000	|O				0.05
1.767	0.04	0.04	0.000	|O				0.05
1.783	0.04	0.04	0.000	|O				0.05
1.800	0.04	0.04	0.000	|O				0.05
1.817	0.04	0.04	0.000	|O				0.05
1.833	0.04	0.04	0.000	|O				0.05
1.850	0.04	0.04	0.000	|O				0.05
1.867	0.04	0.04	0.000	|O				0.05
1.883	0.04	0.04	0.000	|O				0.05
1.900	0.04	0.04	0.000	|O				0.05
1.917	0.04	0.04	0.000	|O				0.05
1.933	0.04	0.04	0.000	|O				0.05
1.950	0.04	0.04	0.000	|O				0.05
1.967	0.04	0.04	0.000	|O				0.05
1.983	0.04	0.04	0.000	|O				0.05
2.000	0.04	0.04	0.000	|O				0.05
2.017	0.04	0.04	0.000	|O				0.05
2.033	0.05	0.04	0.000	|O				0.05
2.050	0.05	0.05	0.000	|O				0.05
2.067	0.05	0.05	0.000	|O				0.05
2.083	0.05	0.05	0.000	|O				0.06
2.100	0.05	0.05	0.000	|O				0.06
2.117	0.05	0.05	0.000	|O				0.06
2.133	0.05	0.05	0.000	|O				0.06
2.150	0.05	0.05	0.000	|O				0.06
2.167	0.05	0.05	0.000	|O				0.06
2.183	0.05	0.05	0.000	|O				0.06
2.200	0.05	0.05	0.000	|O				0.06
2.217	0.05	0.05	0.000	|O				0.06
2.233	0.05	0.05	0.000	|O				0.06
2.250	0.05	0.05	0.000	|O				0.06
2.267	0.05	0.05	0.000	|O				0.06
2.283	0.05	0.05	0.000	|O				0.06
2.300	0.05	0.05	0.000	|O				0.06
2.317	0.05	0.05	0.000	|O				0.06
2.333	0.05	0.05	0.000	|O				0.06
2.350	0.05	0.05	0.000	|O				0.06
2.367	0.05	0.05	0.000	|O				0.06
2.383	0.05	0.05	0.000	|O				0.06

2.400	0.05	0.05	0.000	O				0.06
2.417	0.05	0.05	0.000	O				0.06
2.433	0.05	0.05	0.000	O				0.06
2.450	0.05	0.05	0.000	O				0.06
2.467	0.05	0.05	0.000	O				0.06
2.483	0.05	0.05	0.000	O				0.06
2.500	0.05	0.05	0.000	O				0.06
2.517	0.05	0.05	0.000	O				0.06
2.533	0.05	0.05	0.000	O				0.06
2.550	0.05	0.05	0.000	O				0.07
2.567	0.06	0.05	0.000	O				0.07
2.583	0.06	0.06	0.000	O				0.07
2.600	0.06	0.06	0.000	O				0.07
2.617	0.06	0.06	0.000	O				0.07
2.633	0.06	0.06	0.000	O				0.07
2.650	0.06	0.06	0.000	O				0.07
2.667	0.06	0.06	0.000	O				0.07
2.683	0.06	0.06	0.000	O				0.07
2.700	0.06	0.06	0.000	O				0.07
2.717	0.06	0.06	0.000	O				0.07
2.733	0.06	0.06	0.000	O				0.07
2.750	0.06	0.06	0.000	O				0.07
2.767	0.06	0.06	0.000	O				0.07
2.783	0.06	0.06	0.000	O				0.07
2.800	0.06	0.06	0.000	O				0.07
2.817	0.06	0.06	0.000	O				0.07
2.833	0.06	0.06	0.000	O				0.07
2.850	0.06	0.06	0.000	O				0.07
2.867	0.06	0.06	0.000	O				0.08
2.883	0.06	0.06	0.000	O				0.08
2.900	0.06	0.06	0.000	O				0.08
2.917	0.07	0.06	0.000	O				0.08
2.933	0.07	0.07	0.000	O				0.08
2.950	0.07	0.07	0.000	O				0.08
2.967	0.07	0.07	0.000	O				0.08
2.983	0.07	0.07	0.000	O				0.08
3.000	0.07	0.07	0.000	O				0.08
3.017	0.07	0.07	0.000	O				0.08
3.033	0.07	0.07	0.000	O				0.08
3.050	0.07	0.07	0.000	O				0.08
3.067	0.07	0.07	0.000	O				0.09
3.083	0.07	0.07	0.000	O				0.09
3.100	0.07	0.07	0.000	O				0.09
3.117	0.07	0.07	0.000	O				0.09
3.133	0.07	0.07	0.000	O				0.09
3.150	0.07	0.07	0.000	O				0.09
3.167	0.08	0.07	0.000	O				0.09
3.183	0.08	0.08	0.000	O				0.09
3.200	0.08	0.08	0.000	O				0.09
3.217	0.08	0.08	0.000	O				0.09
3.233	0.08	0.08	0.000	O				0.10
3.250	0.08	0.08	0.000	OI				0.10
3.267	0.08	0.08	0.000	O				0.10
3.283	0.08	0.08	0.000	O				0.10
3.300	0.08	0.08	0.000	O				0.10
3.317	0.09	0.08	0.000	O				0.10
3.333	0.09	0.09	0.000	O				0.10
3.350	0.09	0.09	0.000	O				0.10
3.367	0.09	0.09	0.000	O				0.11
3.383	0.09	0.09	0.000	O				0.11
3.400	0.09	0.09	0.000	O				0.11
3.417	0.10	0.09	0.000	O				0.11
3.433	0.10	0.10	0.000	O				0.11
3.450	0.10	0.10	0.000	O				0.12
3.467	0.10	0.10	0.000	O				0.12
3.483	0.10	0.10	0.000	O				0.12
3.500	0.10	0.10	0.000	O				0.12
3.517	0.10	0.10	0.000	O				0.12
3.533	0.11	0.10	0.000	O				0.13
3.550	0.11	0.11	0.000	O				0.13
3.567	0.11	0.11	0.000	O				0.13
3.583	0.12	0.11	0.000	O				0.14
3.600	0.12	0.12	0.000	O				0.14
3.617	0.12	0.12	0.000	O				0.14
3.633	0.12	0.12	0.000	O				0.14
3.650	0.12	0.12	0.000	OI				0.15
3.667	0.13	0.12	0.000	O				0.15
3.683	0.13	0.13	0.000	O				0.15
3.700	0.14	0.13	0.000	O				0.16

3.717	0.14	0.14	0.000					0.17
3.733	0.15	0.14	0.000					0.17
3.750	0.15	0.15	0.000					0.18
3.767	0.16	0.15	0.000					0.19
3.783	0.16	0.16	0.000					0.19
3.800	0.17	0.16	0.000					0.20
3.817	0.17	0.17	0.000					0.20
3.833	0.17	0.17	0.000					0.21
3.850	0.19	0.18	0.000					0.22
3.867	0.21	0.19	0.000					0.23
3.883	0.22	0.21	0.000					0.25
3.900	0.24	0.23	0.000					0.27
3.917	0.26	0.24	0.000					0.29
3.933	0.28	0.26	0.000					0.31
3.950	0.30	0.28	0.000					0.34
3.967	0.32	0.30	0.000					0.36
3.983	0.34	0.32	0.000					0.39
4.000	0.36	0.34	0.000					0.41
4.017	0.55	0.43	0.000					0.52
4.033	0.74	0.59	0.001					0.71
4.050	0.93	0.78	0.001					0.93
4.067	1.12	0.89	0.001					1.26
4.083	1.31	0.93	0.002					1.82
4.100	1.09	0.96	0.002					2.29
4.117	0.87	0.96	0.002					2.33
4.133	0.65	0.94	0.002					1.98
4.150	0.43	0.89	0.001					1.29
4.167	0.21	0.55	0.001					0.66
4.183	0.19	0.29	0.000					0.34
4.200	0.18	0.21	0.000					0.25
4.217	0.16	0.18	0.000					0.22
4.233	0.15	0.16	0.000					0.20
4.250	0.14	0.15	0.000					0.18
4.267	0.13	0.14	0.000					0.17
4.283	0.13	0.13	0.000					0.16
4.300	0.12	0.12	0.000					0.15
4.317	0.11	0.12	0.000					0.14
4.333	0.11	0.11	0.000					0.14
4.350	0.10	0.11	0.000					0.13
4.367	0.10	0.10	0.000					0.12
4.383	0.10	0.10	0.000					0.12
4.400	0.09	0.10	0.000					0.12
4.417	0.09	0.09	0.000					0.11
4.433	0.09	0.09	0.000					0.11
4.450	0.09	0.09	0.000					0.11
4.467	0.08	0.09	0.000					0.10
4.483	0.08	0.08	0.000					0.10
4.500	0.08	0.08	0.000					0.10
4.517	0.08	0.08	0.000					0.09
4.533	0.08	0.08	0.000					0.09
4.550	0.07	0.07	0.000					0.09
4.567	0.07	0.07	0.000					0.09
4.583	0.07	0.07	0.000					0.09
4.600	0.07	0.07	0.000					0.08
4.617	0.07	0.07	0.000					0.08
4.633	0.07	0.07	0.000					0.08
4.650	0.06	0.07	0.000					0.08
4.667	0.06	0.06	0.000					0.08
4.683	0.06	0.06	0.000					0.08
4.700	0.06	0.06	0.000					0.08
4.717	0.06	0.06	0.000					0.07
4.733	0.06	0.06	0.000					0.07
4.750	0.06	0.06	0.000					0.07
4.767	0.06	0.06	0.000					0.07
4.783	0.06	0.06	0.000					0.07
4.800	0.06	0.06	0.000					0.07
4.817	0.06	0.06	0.000					0.07
4.833	0.05	0.05	0.000					0.07
4.850	0.05	0.05	0.000					0.07
4.867	0.05	0.05	0.000					0.06
4.883	0.05	0.05	0.000					0.06
4.900	0.05	0.05	0.000					0.06
4.917	0.05	0.05	0.000					0.06
4.933	0.05	0.05	0.000					0.06
4.950	0.05	0.05	0.000					0.06
4.967	0.05	0.05	0.000					0.06
4.983	0.05	0.05	0.000					0.06
5.000	0.05	0.05	0.000					0.06
5.017	0.05	0.05	0.000					0.06

5.033	0.05	0.05	0.000	|O	|	|	|	0.06
5.050	0.05	0.05	0.000	|O	|	|	|	0.06
5.067	0.05	0.05	0.000	|O	|	|	|	0.06
5.083	0.05	0.05	0.000	|O	|	|	|	0.05
5.100	0.04	0.05	0.000	|O	|	|	|	0.05
5.117	0.04	0.04	0.000	|O	|	|	|	0.05
5.133	0.04	0.04	0.000	|O	|	|	|	0.05
5.150	0.04	0.04	0.000	|O	|	|	|	0.05
5.167	0.04	0.04	0.000	|O	|	|	|	0.05
5.183	0.04	0.04	0.000	|O	|	|	|	0.05
5.200	0.04	0.04	0.000	|O	|	|	|	0.05
5.217	0.04	0.04	0.000	|O	|	|	|	0.05
5.233	0.04	0.04	0.000	|O	|	|	|	0.05
5.250	0.04	0.04	0.000	IO	|	|	|	0.05
5.267	0.04	0.04	0.000	O	|	|	|	0.05
5.283	0.04	0.04	0.000	O	|	|	|	0.05
5.300	0.04	0.04	0.000	O	|	|	|	0.05
5.317	0.04	0.04	0.000	O	|	|	|	0.05
5.333	0.04	0.04	0.000	O	|	|	|	0.05
5.350	0.04	0.04	0.000	O	|	|	|	0.05
5.367	0.04	0.04	0.000	O	|	|	|	0.05
5.383	0.04	0.04	0.000	O	|	|	|	0.05
5.400	0.04	0.04	0.000	O	|	|	|	0.05
5.417	0.04	0.04	0.000	O	|	|	|	0.05
5.433	0.04	0.04	0.000	O	|	|	|	0.05
5.450	0.04	0.04	0.000	O	|	|	|	0.04
5.467	0.04	0.04	0.000	O	|	|	|	0.04
5.483	0.04	0.04	0.000	O	|	|	|	0.04
5.500	0.04	0.04	0.000	O	|	|	|	0.04
5.517	0.04	0.04	0.000	O	|	|	|	0.04
5.533	0.04	0.04	0.000	O	|	|	|	0.04
5.550	0.04	0.04	0.000	O	|	|	|	0.04
5.567	0.04	0.04	0.000	O	|	|	|	0.04
5.583	0.03	0.04	0.000	O	|	|	|	0.04
5.600	0.03	0.03	0.000	O	|	|	|	0.04
5.617	0.03	0.03	0.000	O	|	|	|	0.04
5.633	0.03	0.03	0.000	O	|	|	|	0.04
5.650	0.03	0.03	0.000	O	|	|	|	0.04
5.667	0.03	0.03	0.000	O	|	|	|	0.04
5.683	0.03	0.03	0.000	O	|	|	|	0.04
5.700	0.03	0.03	0.000	O	|	|	|	0.04
5.717	0.03	0.03	0.000	O	|	|	|	0.04
5.733	0.03	0.03	0.000	O	|	|	|	0.04
5.750	0.03	0.03	0.000	O	|	|	|	0.04
5.767	0.03	0.03	0.000	O	|	|	|	0.04
5.783	0.03	0.03	0.000	O	|	|	|	0.04
5.800	0.03	0.03	0.000	O	|	|	|	0.04
5.817	0.03	0.03	0.000	O	|	|	|	0.04
5.833	0.03	0.03	0.000	O	|	|	|	0.04
5.850	0.03	0.03	0.000	O	|	|	|	0.04
5.867	0.03	0.03	0.000	O	|	|	|	0.04
5.883	0.03	0.03	0.000	O	|	|	|	0.04
5.900	0.03	0.03	0.000	O	|	|	|	0.04
5.917	0.03	0.03	0.000	O	|	|	|	0.04
5.933	0.03	0.03	0.000	O	|	|	|	0.04
5.950	0.03	0.03	0.000	O	|	|	|	0.04
5.967	0.03	0.03	0.000	O	|	|	|	0.04
5.983	0.03	0.03	0.000	O	|	|	|	0.04
6.000	0.03	0.03	0.000	O	|	|	|	0.04
6.017	0.03	0.03	0.000	O	|	|	|	0.04
6.033	0.03	0.03	0.000	O	|	|	|	0.04
6.050	0.03	0.03	0.000	O	|	|	|	0.04
6.067	0.03	0.03	0.000	O	|	|	|	0.04
6.083	0.03	0.03	0.000	O	|	|	|	0.04
6.100	0.00	0.02	0.000	O	|	|	|	0.02
6.117	0.00	0.00	0.000	O	|	|	|	0.01
6.133	0.00	0.00	0.000	O	|	|	|	0.00
6.150	0.00	0.00	0.000	O	|	|	|	0.00

```
****************************HYDROGRAPH DATA****************************
                Number of intervals =   369
                Time interval =    1.0 (Min.)
                Maximum/Peak flow rate =        0.959 (CFS)
                Total volume =       0.041 (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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