SacCalc Data

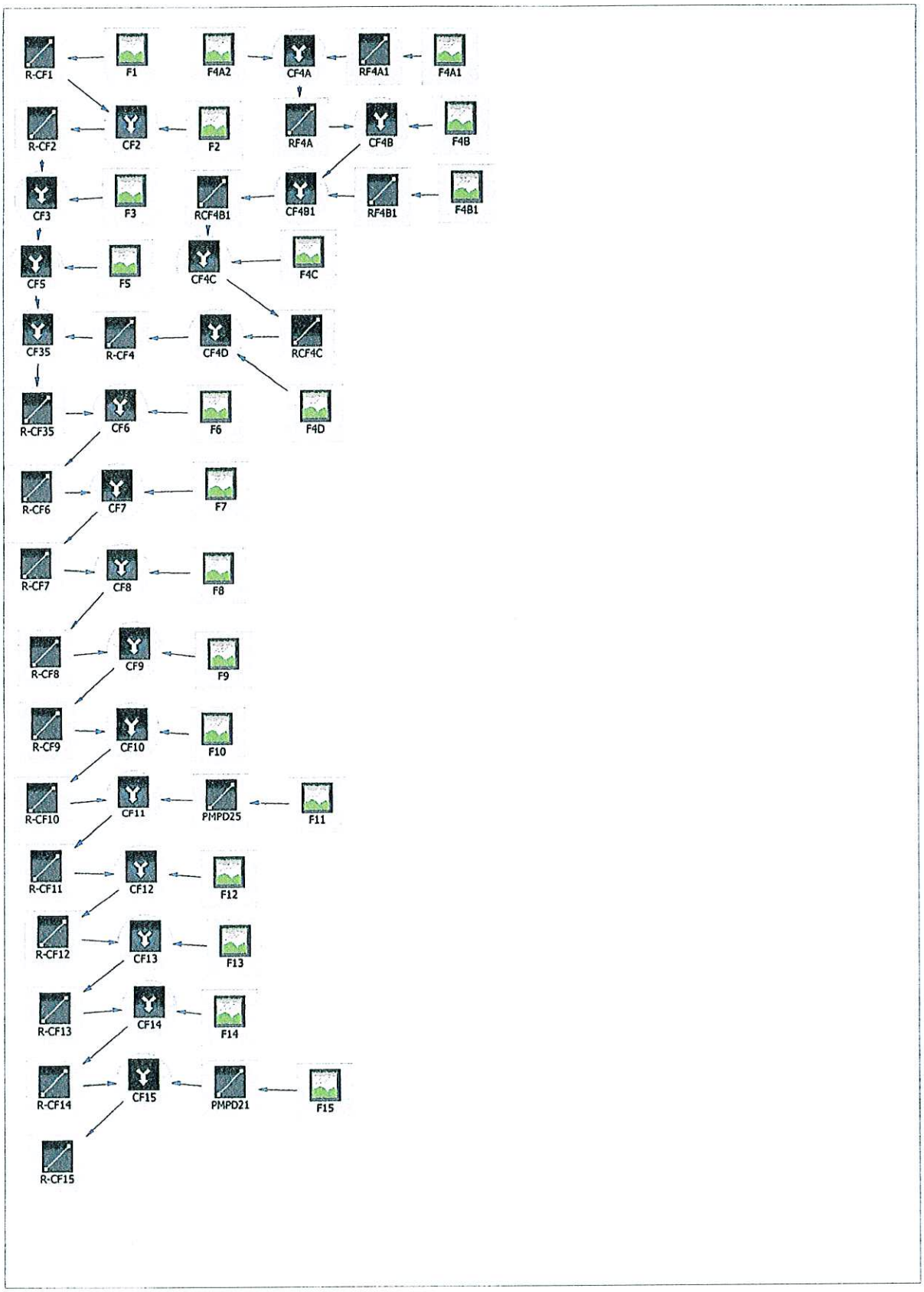
For

Florin Creek – Pre FVCP

Model Schematic Layout

Peak Flow Summary

Report


R-CF1
F1
F4A2
CF4A
RF4A1
F4A1
R-CF2
CF2
F2
RF4A
CF4B
F4B
CF3
F3
RCF4B1
CF4B1
RF4B1
F4B1
CF5
F5
CF4C
F4C
CF35
R-CF4
CF4D
RCF4C
R-CF35
CF6
F6
F4D
R-CF6
CF7
F7
R-CF7
CF8
F8
R-CF8
CF9
F9
R-CF9
CF10
F10
R-CF10
CF11
PMPD25
F11
R-CF11
CF12
F12
R-CF12
CF13
F13
R-CF13
CF14
F14
R-CF14
CF15
PMPD21
F15
R-CF15

View HEC-1 output

Sacramento method results
(Project: FLORIN CREEK)
(100-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
F1	208.	12:55	.39			
R-CF1	202.	13:00	.39			
F2	107.	12:31	.14			
CF2	267.	12:55	.53			
R-CF2	252.	13:06	.53			
F3	114.	12:25	.13			
CF3	301.	13:01	.66			
F5	88.	12:28	.11			
CF5	349.	12:51	.76			
F4D	92.	13:03	.18			
F4C	129.	12:52	.24			
F4A2	92.	12:55	.17			
F4A1	98.	12:48	.17			
RF4A1	75.	13:07	.17			
CF4A	165.	12:58	.34			
RF4A	151.	13:19	.34			
F4B	92.	13:03	.19			
CF4B	238.	13:11	.53			
F4B1	66.	12:35	.09			
RF4B1	61.	12:46	.09			
CF4B1	283.	13:08	.62			
RCF4B1	275.	13:24	.62			
CF4C	368.	13:16	.86			
RCF4C	339.	13:39	.86			
CF4D	406.	13:33	1.04			
R-CF4	386.	13:50	1.04			
CF35	647.	13:27	1.81			
R-CF35	627.	13:46	1.81	.0	9.5	
F6	74.	12:28	.09			
CF6	648.	13:44	1.90			
R-CF6	620.	14:26	1.90	.0	6.1	
F7	250.	12:31	.32			
CF7	677.	14:21	2.22			
R-CF7	661.	14:55	2.22	.0	5.8	
F8	90.	12:34	.13			

CF8	678.	14:53	2.34		
R-CF8	676.	15:13	2.34	.0	4.1
F9	223.	12:25	.26		
CF9	753.	12:41	2.60		
R-CF9	706.	15:09	2.60	.0	4.0
F10	307.	12:27	.36		
CF10	809.	12:28	2.96		
R-CF10	760.	14:40	2.96	.0	21.
F11	97.	12:33	.13		
PMPD25	30.	12:27	.13	.0	6.1
CF11	790.	14:40	3.09		
R-CF11	788.	15:33	3.09	.0	7.8
F12	173.	12:29	.21		
CF12	818.	15:07	3.31		
R-CF12	807.	16:57	3.31	.0	12.
F13	127.	12:56	.24		
CF13	829.	16:40	3.55		
R-CF13	818.	18:31	3.55	.0	12.
F14	289.	12:46	.47		
CF14	851.	18:21	4.02		
R-CF14	851.	18:24	4.02	.0	6.0
F15	194.	12:28	.24		
PMPD21	47.	12:19	.24	.0	13.
CF15	896.	18:10	4.25		
R-CF15	833.	20:29	4.25	.0	11.

(10-year, 1-day rainfall)

ID	Peak flow (cfs)	Time of peak (hours)	Basin area (sq. mi)	Peak stage (feet)	Peak storage (ac-ft)	Diversion volume (ac-ft)
F1	122.	12:55	.39			
R-CF1	121.	13:01	.39			
F2	67.	12:27	.14			
CF2	160.	12:57	.53			
R-CF2	151.	13:10	.53			
F3	75.	12:19	.13			
CF3	180.	13:06	.66			
F5	59.	12:21	.11			
CF5	206.	12:22	.76			
F4D	56.	13:01	.18			
F4C	75.	12:52	.24			
F4A2	55.	12:53	.17			

F4A1	59.	12:46	.17		
RF4A1	45.	13:11	.17		
CF4A	98.	12:57	.34		
RF4A	90.	13:23	.34		
F4B	55.	13:03	.19		
CF4B	140.	13:14	.53		
F4B1	38.	12:36	.09		
RF4B1	35.	12:48	.09		
CF4B1	167.	13:10	.62		
RCF4B1	163.	13:29	.62		
CF4C	216.	13:22	.86		
RCF4C	201.	13:49	.86		
CF4D	239.	13:43	1.04		
R-CF4	228.	14:03	1.04		
CF35	375.	13:36	1.81		
R-CF35	369.	13:50	1.81	.0	3.4
F6	49.	12:21	.09		
CF6	381.	13:47	1.90		
R-CF6	377.	14:09	1.90	.0	2.4
F7	153.	12:29	.32		
CF7	434.	12:34	2.22		
R-CF7	425.	12:43	2.22	.0	2.1
F8	53.	12:33	.13		
CF8	472.	12:41	2.34		
R-CF8	461.	12:55	2.34	.0	2.8
F9	141.	12:21	.26		
CF9	535.	12:52	2.60		
R-CF9	523.	13:13	2.60	.0	1.7
F10	206.	12:20	.36		
CF10	606.	12:49	2.96		
R-CF10	594.	13:17	2.96	.0	13.
F11	65.	12:25	.13		
PMPD25	30.	12:41	.13	.0	3.2
CF11	624.	13:17	3.09		
R-CF11	608.	13:46	3.09	.0	4.2
F12	108.	12:26	.21		
CF12	643.	13:25	3.31		
R-CF12	618.	14:42	3.31	.0	7.0
F13	77.	12:54	.24		
CF13	646.	14:37	3.55		
R-CF13	619.	16:08	3.55	.0	5.2

F14	185.	12:41	.47		
CF14	653.	15:55	4.02		
R-CF14	652.	16:06	4.02	.0	3.8
F15	130.	12:21	.24		
PMPD21	47.	12:27	.24	.0	6.7
CF15	677.	15:45	4.25		
R-CF15	676.	16:23	4.25	.0	4.3

Sacramento Hydrologic Calculator Report

May 4, 2007 12:03

Project Title: FLORIN CREEK
MORRISON CREEK STREAM GROUP - FLORIN CREEK BASIN - EXISTING CONDITIONS SACRAMENTO COUNTY (MAY 1996)

Method: Sacramento County HEC-1 method

Comments: STORM CENTERED FOR ENTIRE ELDER CREEK BASIN PLUS LAGUNA ABOVE CCTRR INFLOW HYDROGRAPHS FOR UNET MODEL (AUGUST 1996) FILENAME: FEX.INT

Date: 5/3/2006

Prepared by: JDH

Watershed Hydrologic Summary Data

Watershed	Area (acres)	Mean Elevation (ft)	Lag Times		Basin "n"		Loss Rates		Percent Impervious	
			Method	Lag Time (min)	Method	Basin "n"	Method	Loss Rate (in/hr)	Method	Impervious Area (%)
F1	251.7	45	Basin "n"	-	Computed	-	Computed	-	Computed	-
F2	87.9	43	Basin "n"	-	Computed	-	Computed	-	Computed	-
F3	82.4	37	Basin "n"	-	Computed	-	Computed	-	Computed	-
F5	67.4	37	Basin "n"	-	Computed	-	Computed	-	Computed	-
F4D	116.9	40	Basin "n"	-	Computed	-	Computed	-	Computed	-
F6	56.4	35	Basin "n"	-	Computed	-	Computed	-	Computed	-
F7	206.1	35	Basin "n"	-	Computed	-	Computed	-	Computed	-
F8	80	34	Basin "n"	-	Computed	-	Computed	-	Computed	-
F9	163.2	32	Basin "n"	-	Computed	-	Computed	-	Computed	-
F10	233	30	Basin "n"	-	Computed	-	Computed	-	Computed	-
F11	83.8	27	Basin "n"	-	Computed	-	Computed	-	Computed	-
F12	137	25	Basin "n"	-	Computed	-	Computed	-	Computed	-
F13	153	22	Basin "n"	-	Computed	-	Computed	-	Computed	-
F14	300.2	20	Basin "n"	-	Computed	-	Computed	-	Computed	-
F15	153	17	Basin "n"	-	Computed	-	Computed	-	Computed	-
F4A2	110.2	50	Basin "n"	-	Computed	-	Computed	-	Computed	-
F4A1	107.1	54	Basin "n"	-	Computed	-	Computed	-	Computed	-
F4B	121.8	49	Basin "n"	-	Computed	-	Computed	-	Computed	-
F4B1	60.5	51	Basin "n"	-	Computed	-	Computed	-	Computed	-
F4C	151.1	43	Basin "n"	-	Computed	-	Computed	-	Computed	-

Basin "n" Method Data for Lag Time Computation

Watershed	Channel Length (ft)	Centroid Length (ft)	Slope (ft/ft)	Channelization	Land Use Impervious Area Percent (% or acres)																
					95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
F1	4800.	2001.	0.0032	Undeveloped		0						0					0	0		192		
				Developed		8.3						6.5					31.5	13.4		0		
F2	3200.	1600.	0.0012	Undeveloped		0		0	0				0				0		0	15.8		
				Developed		0.2		20	29.8				12.1				0.1		9.8	0		
F3	2999.	1399.	0.0010	Undeveloped	0	0					0		0			0			0			
				Developed	0.2	0.1					60.8		15			0.4			5.8			
F5	3701.	1500.	0.0007	Undeveloped							0		0									
				Developed							67		0.5									
F4D	4050	3200	.0011	Undeveloped		0														72.4		
				Developed		44.6														0		
F6	4050.	2149.	0.0023	Undeveloped	0	0		0			0		0		0	0			0			
				Developed	13.6	0.2		4.9			19.5		4.9		1.9	9.5			1.9			
F7	3099.	1600.	0.0024	Undeveloped						46.7			0			46.1			16			
				Developed						73			24.3			0			0			
F8	2450.	1098.	0.0049	Undeveloped									0							62.1		
				Developed									17.9							0		
F9	2497.	1199.	0.0009	Undeveloped	0			0		24.3	0		0						14.7			
				Developed	21.1			10.9		32	13.4		46.7						0			
F10	4599.	2249.	0.0046	Undeveloped						0	0		0									
				Developed						37.8	30.1		165.1									
F11	4198.	2049.	0.0012	Undeveloped									0									
				Developed									83.8									
F12	3300.	1500.	0.0025	Undeveloped	0					0			0						42.2			
				Developed	48					14.1			32.6						0			
F13	3802.	1452.	0.0005	Undeveloped				0	0				0						103.7			
				Developed				21.1	8.3				19.8						0			
F14	6098.	2798.	0.0017	Undeveloped	0	0				0	0		0						87.7			
				Developed	101.8	39.7				2.6	17.3		51.2						0			
F15	3601.	1800.	0.0016	Undeveloped						0			0									
				Developed						8.3			144.6									
F4A2	4100	1800	0.0011	Undeveloped							0						0			70.5		
				Developed							31						8.7			0		
F4A1	3500	1760	.0010	Undeveloped							0						0			54.5		
				Developed							32.2						20.4			0		
				Undeveloped							0						0			99		

F4B	3900	1950	.00100	Developed							14.9						7.9			0		
F4B1	2300	950	.0031	Undeveloped													0		0	51.3		
				Developed													6.5		2.7	0		
F4C	3700	1300	.0017	Undeveloped		0			0		0						0			131.4		
				Developed		0.2			0.4		2						17.1			0		

Refer to the Drainage manual for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Infiltration Loss Rate Data

Watershed	Soil Cover Group	Land Use Impervious Area Percent (% or acres)																
		95	90	85	80	75	70	60	50	40	30	25	20	15	10	5	2	1	1*
F1	B																		
	C																		
	D		8.3						6.5					31.5	13.4		192		
F2	B																		
	C																		
	D		0.2		20	29.8				12.1				0.1		9.8	15.8		
F3	B																		
	C																		
	D	0.2	0.1					60.8		15			0.4			5.8			
F5	B																		
	C																		
	D							67		0.5									
F4D	B																		
	C																		
	D		44.6														72.4		
F6	B																		
	C																		
	D	13.6	0.2		4.9			19.5		4.9		1.9	9.5			1.9			
F7	B																		
	C																		
	D						119.7			24.3			46.1			16			
F8	B																		
	C																		
	D									17.9							62.1		
F9	B																		
	C																		
	D	21.1			10.9		56.3	13.4		46.7						14.7			
F10	B																		
	C																		
	D						37.8	30.1		165.1									
F11	B																		
	C																		
	D									83.8									

F12	B																		
	C																		
	D	48					14.1			32.6						42.2			
F13	B																		
	C																		
	D				21.1	8.3				19.8						103.7			
F14	B																		
	C																		
	D	101.8	39.7				2.6	17.3		51.2						87.7			
F15	B																		
	C																		
	D						8.3			144.6									
F4A2	B																		
	C																		
	D							31						8.7			70.5		
F4A1	B																		
	C																		
	D							32.2						20.4			54.5		
F4B	B																		
	C																		
	D							14.9						7.9			99		
F4B1	B																		
	C																		
	D													6.5		2.7	51.3		
F4C	B																		
	C																		
	D		0.2			0.4		2						17.1			131.4		

Refer to the help file for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Hydrograph Routing – Muskingum–Cunge (Standard)

Routing ID	Route From	Route To	Channel Type	Length (ft)	Slope (ft/ft)	Width or Diameter (ft)	Side Slope (H:V)	Mannings "n"
R-CF1	F1	CF2	Pipe	2400	0.0012	5.5		0.015
R-CF2	CF2	CF3	Trapezoidal	3000	0.0010	8	1:1	0.045
RF4A1	F4A1	CF4A	Trapezoidal	3070	.00065	3	1:1	0.045
RF4A	CF4A	CF4B	Trapezoidal	3550	.0011	10	1:1	.045
RF4B1	F4B1	CF4B1	Trapezoidal	1760	.0016	7	1:1	.045
RCF4B1	CF4B1	CF4C	Trapezoidal	3700	.00170	10	2:1	.0450
RCF4C	CF4C	CF4D	Trapezoidal	04070	0.0008	8	2:1	0.045
R-CF4	CF4D	CF35	Trapezoidal	3100	.0007	12	2:1	.045

Hydrograph Routing – Modified Puls (Storage)

Routing ID	Route From	Route To	No. Steps	Initial Flow (cfs)	Storage-Discharge Relationship											
R-CF35	CF35	CF6	1	-1	Volume (acre-ft)	0	1	2	6	9	11	13	20	33	43	
					Flow (cfs)	0	100	300	500	600	700	800	900	1000	1100	
R-CF6	CF6	CF7	3	-1	Volume (acre-ft)	0	2	5	11	17	23	30	46	66	82	
					Flow (cfs)	0	100	300	500	600	700	800	900	1000	1100	
R-CF7	CF7	CF8	2	-1	Volume (acre-ft)	0	1	3	5	8	14	20	30	41	52	
					Flow (cfs)	0	100	300	500	600	700	800	900	1000	1100	
R-CF8	CF8	CF9	3	-1	Volume (acre-ft)	0	3	6	9	10	13	22	33	44	55	
					Flow (cfs)	0	100	300	500	600	700	800	900	1000	1100	
R-CF9	CF9	CF10	5	-1	Volume (acre-ft)	0	3	6	8	11	19	38	56	66	73	
					Flow (cfs)	0	100	300	500	600	700	800	900	1000	1100	
R-CF10	CF10	CF11	1	-1	Volume (acre-ft)	0	4	8	11	13	17	24	33	41	48	
					Flow (cfs)	0	100	300	500	600	700	800	900	1000	1100	
PMPD25	F11	CF11	1	-1	Volume (acre-ft)	0	2.84	10000								
					Flow (cfs)	0	30	30								
R-CF11	CF11	CF12	3	-1	Volume (acre-ft)	0	3	6	9	12	18	24	32	45	60	
					Flow (cfs)	0	100	300	500	600	700	800	900	1000	1100	
R-CF12	CF12	CF13	5	-1	Volume (acre-ft)	0	5	8	16	23	33	46	64	78	81	
					Flow (cfs)	0	100	225	350	475	600	725	850	975	1100	
R-CF13	CF13	CF14	5	-1	Volume (acre-ft)	0	3	5	7	10	23	42	63	77	84	
					Flow (cfs)	0	100	225	350	475	600	725	850	975	1100	
R-CF14	CF14	CF15	1	-1	Volume (acre-ft)	0	1	1.5	2	2.5	3	5	6	6.5	84	
					Flow (cfs)	0	100	225	350	475	600	725	850	975	1100	
PMPD21	F15	CF15	1	-1	Volume (acre-ft)	0	4.88	10000								

					Flow (cfs)	0	47	47								
R-CF15	CF15	-	5	-1	Volume (acre-ft)	0	5	9	12	15	18	24	62	541	887	
					Flow (cfs)	0	100	225	350	475	600	725	850	975	1100	