

SacCalc Model Data

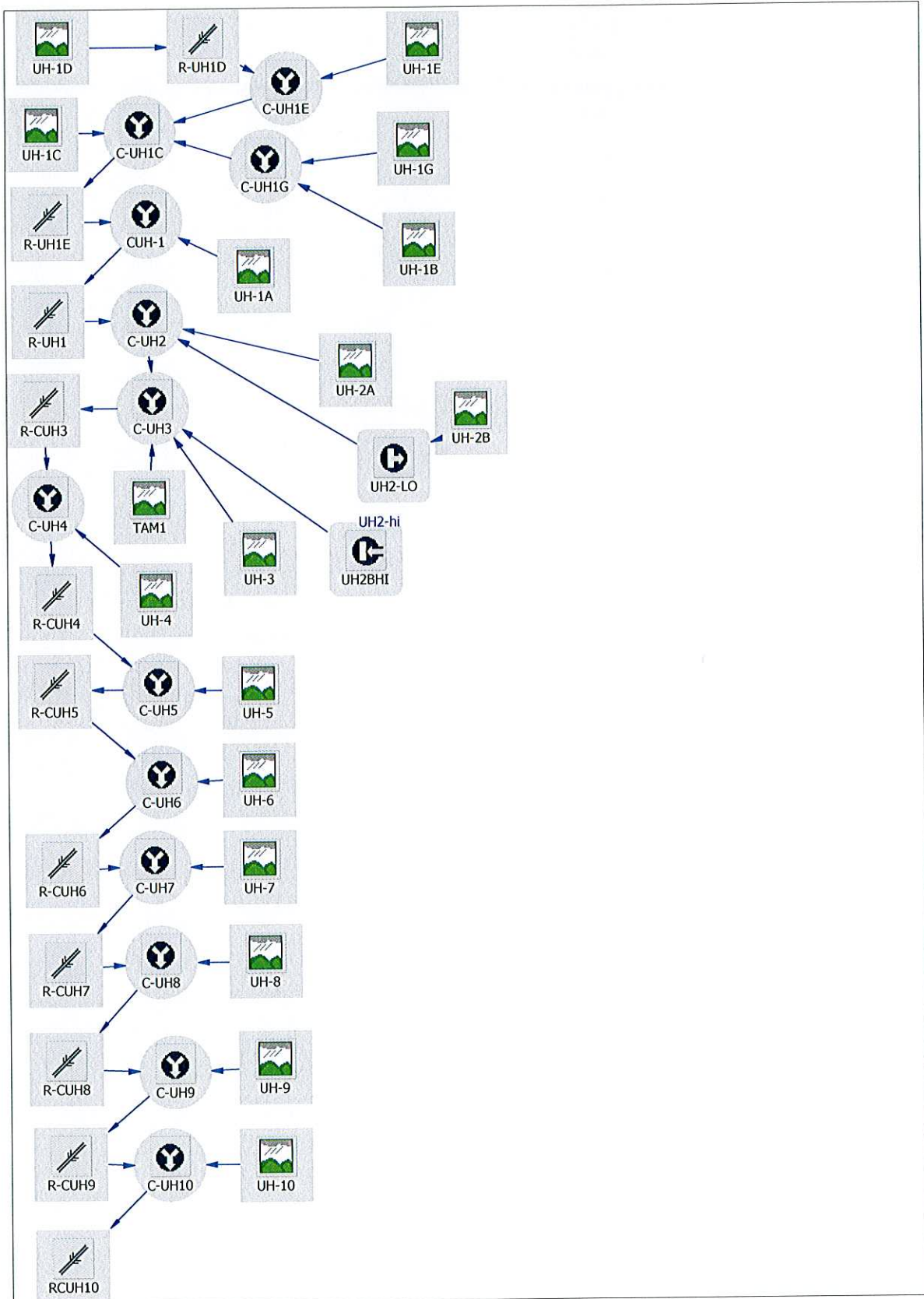
For

Unionhouse Creek – Post Fvcp

Model Schematic Layout

Peak Flow Summary

Report



Sacramento method results
(Project: UHPost Unionhouse post-FVCP conditions)
(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)
UH-5	143.	12:42	.22			
UH-1C	85.	12:34	.12			
UH-1B	200.	12:20	.21			
UH-1G	175.	12:21	.18			
C-UH1G	375.	12:21	.39			
UH-1E	64.	12:12	.05			
UH-1D	158.	12:22	.17			
R-UH1D	148.	12:24	.17			
C-UH1E	191.	12:22	.22			
C-UH1C	632.	12:22	.73			
R-UH1E	604.	12:26	.73	.0	3.6	
UH-1A	411.	12:30	.52			
CUH-1	1006.	12:27	1.25			
R-UH1	669.	13:36	1.25	.0	6.4	
UH-2A	103.	12:36	.15			
UH-2B	186.	12:37	.27			
UH2-LO	72.	12:30	.27			6.84
C-UH2	783.	13:33	1.67			
UH-3	216.	12:42	.34			
TAM1	104.	12:21	.11			
UH2BHI	114.	12:37	.00			
C-UH3	1099.	12:44	2.11			
R-CUH3	1099.	12:44	2.11	.0	.7	
UH-4	151.	12:26	.18			
C-UH4	1204.	12:42	2.29			
R-CUH4	1140.	13:07	2.29	.0	7.8	
C-UH5	1242.	13:05	2.51			
R-CUH5	1179.	13:29	2.51	.0	8.4	
UH-6	239.	12:44	.38			
C-UH6	1313.	13:24	2.89			
R-CUH6	1250.	13:58	2.89	.0	16.	
UH-7	113.	12:33	.15			
C-UH7	1283.	13:56	3.05			
R-CUH7	1256.	14:25	3.05	.0	13.	
UH-8	103.	12:40	.16			
C-UH8	1286.	14:23	3.20			
R-CUH8	1031.	16:22	3.20	.0	22.	
UH-9	178.	12:30	.22			

C-UH9	1046.	16:22	3.43		
R-CUH9	1035.	16:47	3.43	.0	8.9
UH-10	97.	12:17	.09		
C-UH10	1042.	16:47	3.52		
RCUH10	1033.	17:09	3.52	.0	7.1

(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)
UH-5	93.	12:37	.22			
UH-1C	51.	12:32	.12			
UH-1B	120.	12:19	.21			
UH-1G	118.	12:16	.18			
C-UH1G	236.	12:17	.39			
UH-1E	42.	12:09	.05			
UH-1D	94.	12:21	.17			
R-UH1D	88.	12:23	.17			
C-UH1E	112.	12:21	.22			
C-UH1C	383.	12:19	.73			
R-UH1E	371.	12:22	.73	.0	2.2	
UH-1A	265.	12:26	.52			
CUH-1	632.	12:24	1.25			
R-UH1	519.	12:56	1.25	.0	3.8	
UH-2A	71.	12:27	.15			
UH-2B	128.	12:28	.27			
UH2-LO	72.	12:10	.27			2.05
C-UH2	633.	12:55	1.67			
UH-3	147.	12:34	.34			
TAM1	70.	12:16	.11			
UH2BHI	56.	12:28	.00			
C-UH3	790.	12:46	2.11			
R-CUH3	790.	12:46	2.11	.0	.6	
UH-4	100.	12:21	.18			
C-UH4	850.	12:39	2.29			
R-CUH4	827.	13:06	2.29	.0	5.3	
C-UH5	890.	13:03	2.51			
R-CUH5	866.	13:19	2.51	.0	3.8	
UH-6	161.	12:36	.38			
C-UH6	958.	13:15	2.89			
R-CUH6	912.	13:40	2.89	.0	9.3	
UH-7	71.	12:30	.15			
C-UH7	937.	13:39	3.05			
R-CUH7	900.	14:01	3.05	.0	6.6	

UH-8	69.	12:33	.16		
C-UH8	922.	14:00	3.20		
R-CUH8	784.	15:12	3.20	.0	10.
UH-9	107.	12:29	.22		
C-UH9	801.	15:11	3.43		
R-CUH9	797.	15:24	3.43	.0	5.4
UH-10	62.	12:14	.09		
C-UH10	803.	15:24	3.52		
RCUH10	800.	15:37	3.52	.0	5.0

Sacramento Hydrologic Calculator Report

October 12, 2007 12:35

Project Title: UHPost Unionhouse post-FVCP conditions
 Comments: Changed UH-2 to match computed land use % jdh 060109
 Prepared by: naima

Method: Sacramento County HEC-1 method
 Date: 10/18/2005

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 (%)
UH-1D	110.1	73	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-1E	32.3	61	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-1C	75.4	48	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-1B	131.6	68	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-1A	335.257	45	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-2A	93.041	38	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-3	216.4	40	Basin "n"	-	Computed	-	Computed	-	Computed	-
TAM1	68.8	43	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-4	112.6	35	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-5	142	37	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-6	244.8	33	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-7	98.7	30	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-8	99.3	28	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-9	143.5	25	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-10	57.5	25	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-1G	118.1	49	Basin "n"	-	Computed	-	Computed	-	Computed	-
UH-2B	170.75	38	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
UH-1D	3577	1179.5	0.014	Undeveloped														0	0	26.9	
				Developed															29	17.6	36.5
UH-1E	1896	948	0.0095	Undeveloped								0	0							0	
				Developed								31.1	0.3								0.8
UH-1C	2630	1349	0.0044	Undeveloped								0	0					0	0	47.2	
				Developed								27.5	0.2						0.1	0.4	0
UH-1B	2740.8	1370.4	0.0131	Undeveloped	0								0					0	0	24.1	
				Developed	2.6									41.2					33	30.7	0
UH-1A	3076.3	1538.15	0.00065	Undeveloped	0	0		0				0	0		0	0	0	0	0	0.439	
				Developed	4.421	30.7		21				10.7	95.03		37.8	13.5	120.2	1.5			0
UH-2A	5097.8	2548.9	0.0016	Undeveloped	0							0	0					0	0	0.015	
				Developed	2.152							71.828	9.105		3.344	5.415	0.032	1.15			0.015
UH-3	5903.	4361.	0.0030	Undeveloped			0				0		0						0	9.6	
				Developed			26.9				6		164.3								9.5
TAM1	2043.8	1022	.00098	Undeveloped								0									
				Developed									68.8								
UH-4	3400.	1748.	0.002	Undeveloped				0			0	0	0				0		0	0.1	
				Developed				26.6			2	15.8	50.7					1.1			16.3
UH-5	4678.	2519.	.002	Undeveloped							0		0							37.7	
				Developed							89.1		15.3								
UH-6	4726.	2952.	.0010	Undeveloped	0				0			0						9.42	3.88		
				Developed	3.6				15.51				67.59						0	0	
UH-7	3031.	1441.	.0020	Undeveloped								0						43.59			
				Developed									56.41						0		
UH-8	3374.	2798.	0.0010	Undeveloped	0							0							14.86		
				Developed	12.84								72.3								0
UH-9	2160.	1098.	.0029	Undeveloped	0	0		0										38.2	10.2	21.8	
				Developed	20.9	5.8		3.6											0	0	0
UH-10	2920.	1236.	.0029	Undeveloped	0	0														0	
				Developed	39.3	38.2															
UH-1G	2849	1400	0.003	Undeveloped	0								0							0	
				Developed	1.7								116.1								
UH-2B	5097.8	2548.9	0.0016	Undeveloped								0	0				0	0		0.052	
				Developed								3.629	159.812		0.553		4.924	1.788			

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*
UH-1D	B								0.6								0.3		
	C																		
	D								28.3					17.6	36.5		26.6		
U11-1E	B																		
	C																		
	D							31.1	0.3								0.8		
UH-1C	B							2											
	C																		
	D							25.5	0.2					0.1	0.4		47.2		
UH-1B	B																		
	C																		
	D	2.6							41.2					33	30.7		24.1		
U11-1A	B																		
	C																		
	D	4.421	30.7		21			10.7	95.03		37.8	13.5	120.2	1.5			0.439		
UH-2A	B																		
	C																		
	D	2.152						71.828	9.105		3.344	5.415	0.032	1.15			0.015		
UH-3	B																		
	C																		
	D			26.9				6	164.3							9.5	9.6		
TAM1	B																		
	C																		
	D								68.8										
UH-4	B																		
	C																		
	D				26.6		2	15.8	50.7					1.1		16.3	0.1		
UH-5	B																		
	C																		
	D							89.1	15.3								37.7		
UH-6	B																		
	C																		
	D	3.6					15.51		67.59						9.42	3.88			
UH-7	B																		
	C																		
	D								56.41						43.59				
UH-8	B																		
	C																		
	D	12.84							72.3								14.86		
U11-9	B																		
	C																		
	D	20.9	5.8			3.6									38.2	10.2	21.8		
UH-10	B																		
	C																		
	D	39.3	38.2														22.5		
U11-1G	B																		
	C																		
	D	1.7							116.1								0.3		
UH-2B	B																		
	C																		
	D							3.629	159.812		0.553		4.924	1.788		0.052			

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-UH1D	UH-1D	C-UH1E	Pipe	500	0.002	10		0.06

Hydrograph Routing – Modified Puls (Storage)

Routing ID	Route From	Route To	No. Steps	Initial Flow (cfs)	Storage-Discharge Relationship											
					Volume (acre-ft)	0	1.3	1.8	2.3	3.6	4.3	4.7	5	5.4	8	
R-UH1E	C-UH1C	CUH-1	1	-1	Volume (acre-ft)	0	1.3	1.8	2.3	3.6	4.3	4.7	5	5.4	8	
					Flow (cfs)	0	200	300	400	600	800	1000	1200	1400	100	
R-UH1	CUH-1	C-UH2	5	-1	Volume (acre-ft)	0	4.5	7.3	10.3	13.6	22.6	49.6	144.4	156.2	166.6	
					Flow (cfs)	0	100	200	300	400	600	800	1000	1200	1400	
R-CUH3	C-UH3	C-UH4	1	-1	Volume (acre-ft)	0	0.1	0.2	0.3	0.4	0.6	0.7	0.8	0.9		
					Flow (cfs)	0	100	200	300	400	700	1000	1200	1400		
R-CUH5	C-UH5	C-UH6	2	-1	Volume (acre-ft)	0	1.5	2.4	3.1	3.7	4.7	5.8	11.3	17.5	23	
					Flow (cfs)	0	100	200	300	400	600	800	1000	1200	1400	
R-CUH6	C-UH6	C-UH7	2	-1	Volume (acre-ft)	0	2.3	3.7	4.9	6.4	8.5	12.5	23.4	30.3	40.8	
					Flow (cfs)	0	100	200	300	400	600	800	1000	1200	1400	
R-CUH7	C-UH7	C-UH8	2	-1	Volume (acre-ft)	0	1.1	1.7	2.2	3	4.1	8.1	18.3	22.8	31.8	
					Flow (cfs)	0	100	200	300	400	600	800	1000	1200	1400	
R-CUH8	C-UH8	C-UH9	5	-1	Volume (acre-ft)	0	3.5	5.5	7.3	9	22.9	53.8	102.3	144.1	190.6	
					Flow (cfs)	0	100	200	300	400	600	800	1000	1200	1400	
R-CUH9	C-UH9	C-UH10	3	-1	Volume (acre-ft)	0	2.9	4.8	6.6	8.5	12.3	16.4	25.4	32.3	40.3	
					Flow (cfs)	0	100	200	300	400	600	800	1000	1200	1400	
RCUH10	C-UH10	-	3	-1	Volume (acre-ft)	0	2.7	4.2	5.9	7.7	11.2	15	20.2	26.7	33.5	
					Flow (cfs)	0	100	200	300	400	600	800	1000	1200	1400	
R-CUH4	C-UH4	C-UH5	4	-1	Volume (acre-ft)	0	3.6	5.8	7.7	9.9	14.9	20.4	26.8	33.1	42.6	
					Flow (cfs)	0	100	200	300	400	600	800	1000	1200	1400	

