

SacCalc Model Data

For

Elder and Gerber Creeks – Pre Fvcp

Model Schematic Layout

Peak Flow Summary

Report

ELDER/GERBER CREEK BASINS - EXISTING CONDS.



View_HEC-1_output

Sacramento method results
(Project: ELDER/GERBER CREEK BASINS - EXISTING CONDS.)
(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)
G2A	375.	14:04	1.29			
R-G2A	270.	17:03	1.29	.0	14.	
G2B	238.	13:22	.63			
CG2	328.	16:38	1.92			
R-CG2	327.	17:07	1.92	.0	2.5	
G3A	286.	13:29	.80			
CG3A	551.	13:38	2.71			
R-CG3A	475.	15:09	2.71	.0	7.5	
G3B	74.	12:47	.13			
CG3B	494.	15:07	2.85			
R-CG3B	494.	15:19	2.85	.0	1.8	
G3D	189.	13:45	.57			
CG3D	609.	15:04	3.42			
G4	145.	13:15	.35			
CG4	674.	14:54	3.78			
R-CG4	669.	15:32	3.78	.0	5.1	
G3C	134.	12:45	.24			
CG3	698.	15:26	4.01			
G5	156.	13:19	.39			
CG5	764.	15:13	4.41			
E2	264.	14:19	.97			
E1A	456.	13:42	1.38			
R-E1A	379.	15:19	1.38	.0	7.8	
E1C	477.	13:31	1.34			
CE1AC	705.	13:44	2.73			
E1B	351.	14:32	1.38			
R-E1B	276.	15:30	1.38			
R-RE1B	40.	14:31	1.38			114.54
CE1ABC	745.	13:44	4.10			
CE1	637.	17:01	4.10	.0	20.	
R-CE1	635.	17:26	4.10	.0	5.3	
RETE1B	236.	15:30	.00			
TMP1	826.	16:53	4.10			
R-TMP1	753.	19:42	4.10	.0	36.	
CE1A2	821.	19:32	5.08			

E3	252.	13:40	.75		
CE2A3	862.	19:22	5.83		
RCE2A3	843.	20:43	5.83	.0	24.
E4B	310.	13:54	.98		
CE4B	889.	20:35	6.81		
E4A	244.	13:36	.70		
CE4	914.	20:30	7.51		
R-CE4	875.	22:43	7.51	.0	31.
E5	125.	13:20	.32		
CE5	878.	22:42	7.83		
CEG	1421.	16:13	12.24		
R-CEG	1420.	16:29	12.24	.0	14.
E6	147.	12:36	.22		
CE6	1434.	16:27	12.46		
R-CE6	1434.	17:21	12.46	.0	.0
E7	351.	12:57	.70		
CE7	1491.	17:17	13.17		
R-CE7	1489.	17:34	13.17	.0	5.6
E8	170.	12:34	.25		
CE8	1506.	17:33	13.41		
R-CE8	1505.	17:46	13.41	.0	8.3
E9	310.	12:33	.44		
CE9	1532.	17:46	13.85		
R-CE9	1532.	17:53	13.85	.0	4.6
E10	229.	12:27	.29		
CE10	1551.	17:53	14.14		
R-CE10	1550.	17:56	14.14	.0	4.6
E11	201.	12:23	.23		
CE11	1565.	17:56	14.37		
R-CE11	1565.	18:04	14.37	.0	4.5
E12	301.	12:34	.43		
CE12	1594.	18:03	14.80		
R-CE12	1594.	18:10	14.80	.0	4.6
E13	124.	12:26	.15		
CE13	1603.	18:09	14.96		
R-CE13	1603.	18:20	14.96	.0	5.6
E14	808.	12:46	1.39		
R-E14	174.	15:57	1.39	.0	84.
CE14	1776.	18:19	16.35		

(10-year, 1-day rainfall)

	Time of	Basin	Peak	Peak
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ID	Peak flow (cfs)	peak (hours)	area (sq. mi)	stage (feet)	storage (ac-ft)	Diversion volume (ac-ft)
G2A	218.	14:07	1.29			
R-G2A	159.	17:03	1.29	.0	8.4	
G2B	134.	13:23	.63			
CG2	188.	16:43	1.92			
R-CG2	187.	17:08	1.92	.0	1.5	
G3A	162.	13:31	.80			
CG3A	308.	13:40	2.71			
R-CG3A	283.	14:43	2.71	.0	3.5	
G3B	41.	12:47	.13			
CG3B	296.	14:41	2.85			
R-CG3B	295.	14:59	2.85	.0	1.0	
G3D	111.	13:47	.57			
CG3D	374.	14:48	3.42			
G4	83.	13:16	.35			
CG4	418.	14:39	3.78			
R-CG4	416.	15:05	3.78	.0	2.8	
G3C	73.	12:45	.24			
CG3	435.	15:01	4.01			
G5	89.	13:21	.39			
CG5	482.	14:24	4.41			
E2	155.	14:21	.97			
E1A	261.	13:44	1.38			
R-E1A	235.	14:51	1.38	.0	4.7	
E1C	271.	13:33	1.34			
CE1AC	424.	14:17	2.73			
E1B	206.	14:34	1.38			
R-E1B	157.	15:48	1.38			
R-RE1B	40.	14:51	1.38			48.72
CE1ABC	464.	14:17	4.10			
CE1	386.	17:03	4.10	.0	11.	
R-CE1	386.	17:30	4.10	.0	3.5	
RETE1B	117.	15:48	.00			
TMP1	484.	16:54	4.10			
R-TMP1	439.	19:53	4.10	.0	22.	
CE1A2	474.	19:43	5.08			
E3	144.	13:42	.75			
CE2A3	493.	19:35	5.83			
RCE2A3	473.	21:29	5.83	.0	13.	
E4B	184.	13:54	.98			

CE4B	493.	21:22	6.81		
E4A	141.	13:37	.70		
CE4	503.	21:17	7.51		
R-CE4	485.	23:27	7.51	.0	16.
E5	71.	13:21	.32		
CE5	486.	23:26	7.83		
CEG	844.	15:24	12.24		
R-CEG	838.	16:00	12.24	.0	9.6
E6	79.	12:35	.22		
CE6	847.	15:58	12.46		
R-CE6	847.	16:33	12.46	.0	.0
E7	205.	12:54	.70		
CE7	888.	16:28	13.17		
R-CE7	888.	16:37	13.17	.0	3.8
E8	103.	12:28	.25		
CE8	899.	16:37	13.41		
R-CE8	897.	16:54	13.41	.0	5.9
E9	183.	12:28	.44		
CE9	915.	16:53	13.85		
R-CE9	915.	16:57	13.85	.0	3.1
E10	141.	12:21	.29		
CE10	927.	16:57	14.14		
R-CE10	927.	17:04	14.14	.0	3.1
E11	121.	12:18	.23		
CE11	937.	17:04	14.37		
R-CE11	936.	17:15	14.37	.0	3.2
E12	180.	12:28	.43		
CE12	956.	17:15	14.80		
R-CE12	955.	17:26	14.80	.0	3.3
E13	71.	12:23	.15		
CE13	962.	17:26	14.96		
R-CE13	961.	17:37	14.96	.0	3.8
E14	515.	12:37	1.39		
R-E14	171.	14:26	1.39	.0	39.
CE14	1131.	17:36	16.35		

Sacramento Hydrologic Calculator Report

May 4, 2007 11:36

Sacramento County HEC-1 method

Method:

4/21/2005

Project Title: ELDER/GERBER CREEK BASINS - EXISTING CONDS.

Comments: EG24E100 ELDER/GERBER CREEK BASINS - EXISTING CONDS.

Prepared by: BAT

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 (%)
G2A	825	85	Basin "n"	-	Computed	-	Computed	-	Computed	-
G2B	403	75	Basin "n"	-	Computed	-	Computed	-	Computed	-
G3A	509.1	70	Basin "n"	-	Computed	-	Computed	-	Computed	-
G3B	86.2	60	Basin "n"	-	Computed	-	Computed	-	Computed	-
G3D	367.9	59	Basin "n"	-	Computed	-	Computed	-	Computed	-
G4	226.2	60	Basin "n"	-	Computed	-	Computed	-	Computed	-
G5	252.5	48	Basin "n"	-	Computed	-	Computed	-	Computed	-
E1A	885.18	125	Basin "n"	-	Computed	-	Computed	-	Computed	-
E1C	860.69	100	Basin "n"	-	Computed	-	Computed	-	Computed	-
E1B	881	0	Basin "n"	-	Computed	-	Computed	-	Computed	-
E2	623.5	65	Basin "n"	-	Computed	-	Computed	-	Computed	-
E3	483	68	Basin "n"	-	Computed	-	Computed	-	Computed	-
E4B	628	56	Basin "n"	-	Computed	-	Computed	-	Computed	-
E4A	447.6	56	Basin "n"	-	Computed	-	Computed	-	Computed	-
E5	203.2	49	Basin "n"	-	Computed	-	Computed	-	Computed	-
E7	449.9	40	Basin "n"	-	Computed	-	Computed	-	Computed	-
E8	156.9	40	Basin "n"	-	Computed	-	Computed	-	Computed	-
E9	280.71	36	Basin "n"	-	Computed	-	Computed	-	Computed	-
E10	185.71	32	Basin "n"	-	Computed	-	Computed	-	Computed	-
E11	147.52	30	Basin "n"	-	Computed	-	Computed	-	Computed	-
E12	276.48	25	Basin "n"	-	Computed	-	Computed	-	Computed	-
E13	97.05	24	Basin "n"	-	Computed	-	Computed	-	Computed	-
E14	892.73	20	Basin "n"	-	Computed	-	Computed	-	Computed	-
G3C	151.6	59	Basin "n"	-	Computed	-	Computed	-	Computed	-
E6	143.3	45	Basin "n"	-	Computed	-	Computed	-	Computed	-

E9	4604.	2497.	.0025	Developed	13.95			66.54	7.38	104.18			87.39	0
E10	4050.	1843.	.0024	Undeveloped	0	0			0	0			0	0.22
				Developed	12.06	8.85			10.7	17.38	128.57		7.92	0
E11	3400.	1399.	.0024	Undeveloped	0				0	0			0	0.09
				Developed	20.62				0.45	32.65	0.19	77.15	16.37	0
E12	4599.	2339.	.0012	Undeveloped	0				0	0			0	1.23
				Developed	31.57			63.87	83.06	3.16	22.45		71.13	0
E13	3200.	1800.	.0022	Undeveloped	0				0	0			0	0.02
				Developed	23.37			19.11		10.63	0.2		43.73	0
E14	9002.	4499.	.0024	Undeveloped	0	0			0	0			0	12.18
				Developed	229.5	71.89		38.63		90.94	397.71		51.88	0
G3C	3332	1299	0.0049	Undeveloped										151.61
				Developed										0
E6	3802	1800	.0035	Undeveloped									0	34.4
				Developed									64.2	44.7
														0

Refer to the Drainage manual for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Infiltration Loss Rate Data		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*
Watershed	Soil Cover Group																		
G2A	B																		
	C													5.1	34.4	1	89.3		
	D													24	44.4	6.2	620.6		
G2B	B																		
	C												28.4	1.4	97.6	88.9			
	D												10.8		38.2	137.8			
G3A	B																		
	C											2.4	23.1	17		163.9			
	D											1.3	15.7	2.2		283.5			
G3B	B																		
	C												2.5				0.2		
	D											7.6	17.2	0.9			57.9		
G3D	B																		
	C												1.9				0.9		
	D		5.8									7.5	87.9		22.6	241.4			
G4	B																		
	C																		
	D	2											33.5	23.4	8.6	158.8			
G5	B																		
	C																		
	D												34		35.1	183.4			
E1A	B																0.6		
	C												2.2	1.8	80	179.2			
	D											62.9	0.2	12.6	545.7				
E1C	B															1.3	21.9		
	C			3.3									15.6	19.2	7.9	190.3			
	D			3.3									28.3		116.6	452.9			
E1B	B																		
	C												2.8				81.5		
	D												43.2				753.4		
E2	B																		
	C												14.8				121.6		
	D			11.6				3.9					8.9	153.8			308.9		

G3C	C																						
	D																					151.6	
E6	B																						
	C																						
	D																					64.2	
																						44.7	
																							34.4

Refer to the help file for Land Use Impervious Area Percent

*Dense Oaks, Shrubs, Vines

Hydrograph Routing - Muskingum-Cunge 8-Point Cross Section

Routing ID	Route From	Route To	Channel Length (ft)	Slope (ft/ft)	Cross Section Geometry							
					Left OB 1	Left OB 2	Left Bank	Channel Point 1	Channel Point 2	Right Bank	Right OB 1	Right OB 2
R-E1B	E1B	R-RE1B	4000	.0003	0	50	100	104	108	116	166	216
					3.7	3	1.2	.6	.4	1.5	3.7	5.5
					.06			.035			.06	
					Mannings "n"							

Hydrograph Routing - Modified Puls (Storage)

Routing ID	Route From	Route To	No. Steps	Initial Flow (cfs)	Storage-Discharge Relationship													
					Volume (acre-ft)	Flow (cfs)	Volume (acre-ft)	Flow (cfs)	Volume (acre-ft)	Flow (cfs)	Volume (acre-ft)	Flow (cfs)	Volume (acre-ft)	Flow (cfs)	Volume (acre-ft)	Flow (cfs)	Volume (acre-ft)	Flow (cfs)
R-C2A	G2A	CG2	5	0	0	15.2	27.7	51.6	76	100.8	122.7	145.4	169	191.8	221.6			
R-CG2	CG2	CG3A	5	0	0	50	100	200	300	400	500	600	700	800	900			
R-CG3A	CG3A	CG3B	5	0	0	2.5	4.5	7.9	11.3	15.2	20.7	24	26	28.1	30			
R-CG3B	CG3B	CG3D	5	0	0	50	100	200	300	400	500	600	700	800	900			
R-CG4	CG4	CG3	5	0	0	1.9	4.4	10.9	18.9	28.4	40.6	50.6	57.2	63.3	68.6			
R-E1A	E1A	CE1AC	5	0	0	50	100	200	300	400	500	600	700	800	900			
CE1	CE1ABC	R-CE1	5	0	0	0.8	1.3	2.8	5.3	7.6	9.2	11	13.1	15.3	18			
R-CE1	CE1	TMP1	5	0	0	50	100	200	300	400	500	600	700	800	900			
RCE2A3	CE2A3	CE4B	5	0	0	2.1	3.8	7	10	13.4	17.1	21.4	27	34.1	41.5			
R-CE4	CE4	CE5	5	0	0	50	100	200	300	400	500	600	700	800	900			
R-CEG	CEG	CE6	5	0	0	11.2	29.2	34.5	42.4	60.3	77.5	93.3	116.1	141.6	171.8			
R-CE6	CE6	CE7	4451.04	0	0	50	100	200	300	400	500	600	700	800	900			
					0	100	300	350	400	500	600	700	800	900	1000			
					0	7.7	35.6	45	60.3	68.5	91.3	115.9	141.2	166.4	190.9			
					0	100	300	350	400	500	600	700	800	900	1000			
					0	5.1	14.2	16.2	18.1	21.7	25.1	28.5	31.7	34.9	41			
					0	100	300	350	400	500	600	700	800	900	1000			
					0	7.6	39.9	47.6	55.2	71.4	87.5	102.9	115.6	126.3	136.2			
					0	100	300	350	400	500	600	700	800	900	1000			
					0	13.1	44.1	53.5	63.7	83.6	102.7	121.1	139.7	158.4	177.7			
					0	100	300	350	400	500	600	700	800	900	1000			
					0	2.8	16.8	31.8	46.4	56.1	62.3	67.1	71.5	75.6	79.5			
					0	100	400	600	800	1000	1200	1400	1600	1800	2000			
					0	5.2	15.4	22.9	31.3	40.9	51.7	64.7	79.7	94.1	110.7			

R-CE7	CE7	CE8	5	0	Flow (cfs)	0	100	400	600	800	1000	1200	1400	1600	1800	2000
				0	Volume (acre-ft)	0	6.1	12.4	15.6	17.9	20.5	23	25.9	30.5	36.4	64.5
					Flow (cfs)	0	100	400	600	800	1000	1200	1400	1600	1800	2000
R-CE8	CE8	CE9	5	0	Volume (acre-ft)	0	7.3	17.3	22.6	27.3	31.7	35.8	39.7	43.2	47.2	56.2
					Flow (cfs)	0	100	400	600	800	1000	1200	1400	1600	1800	2000
R-CE9	CE9	CE10	4	0	Volume (acre-ft)	0	3	7	10	12	13	15	17	19	20	23
					Flow (cfs)	0	100	400	600	800	1000	1200	1400	1600	1800	2000
R-CE10	CE10	CE11	3	0	Volume (acre-ft)	0	2	5	7	8	10	11	13	14	16	17
					Flow (cfs)	0	100	400	600	800	1000	1200	1400	1600	1800	2000
R-CE11	CE11	CE12	5	0	Volume (acre-ft)	0	4	9	12	14	17	19	21	23	25	27
					Flow (cfs)	0	100	400	600	800	1000	1200	1400	1600	1800	2000
R-CE12	CE12	CE13	5	0	Volume (acre-ft)	0	6	9	12	14	17	19	21	23	25	27
					Flow (cfs)	0	100	400	600	800	1000	1200	1400	1600	1800	2000
R-CE13	CE13	CE14	5	0	Volume (acre-ft)	0	8.6	13.7	18.2	22.4	26.4	30.8	34.6	39	64	
					Flow (cfs)	0	300	600	900	1200	1500	1800	2100	2400	2700	
R-E14	E14	CE14	1	0	Volume (acre-ft)	0	2.35	4.71	7.04	100						
					Flow (cfs)	0	56	113	169	175						
R-TMP1	TMP1	CE1A2	5	0	Volume (acre-ft)	0	22.8	74.4	86.6	98.7	122.8	146.6	169.7	193.5	216.8	239.1
					Flow (cfs)	0	100	300	350	400	500	600	700	800	900	1000

