Sun Valley Area Drainage Master Plan

Technical Appendices

Step 2

Proposed Alternatives
Analysis Report

Volume 5

WHITE TANK WASH
SUB-AREA

Flood Control District of Maricopa County

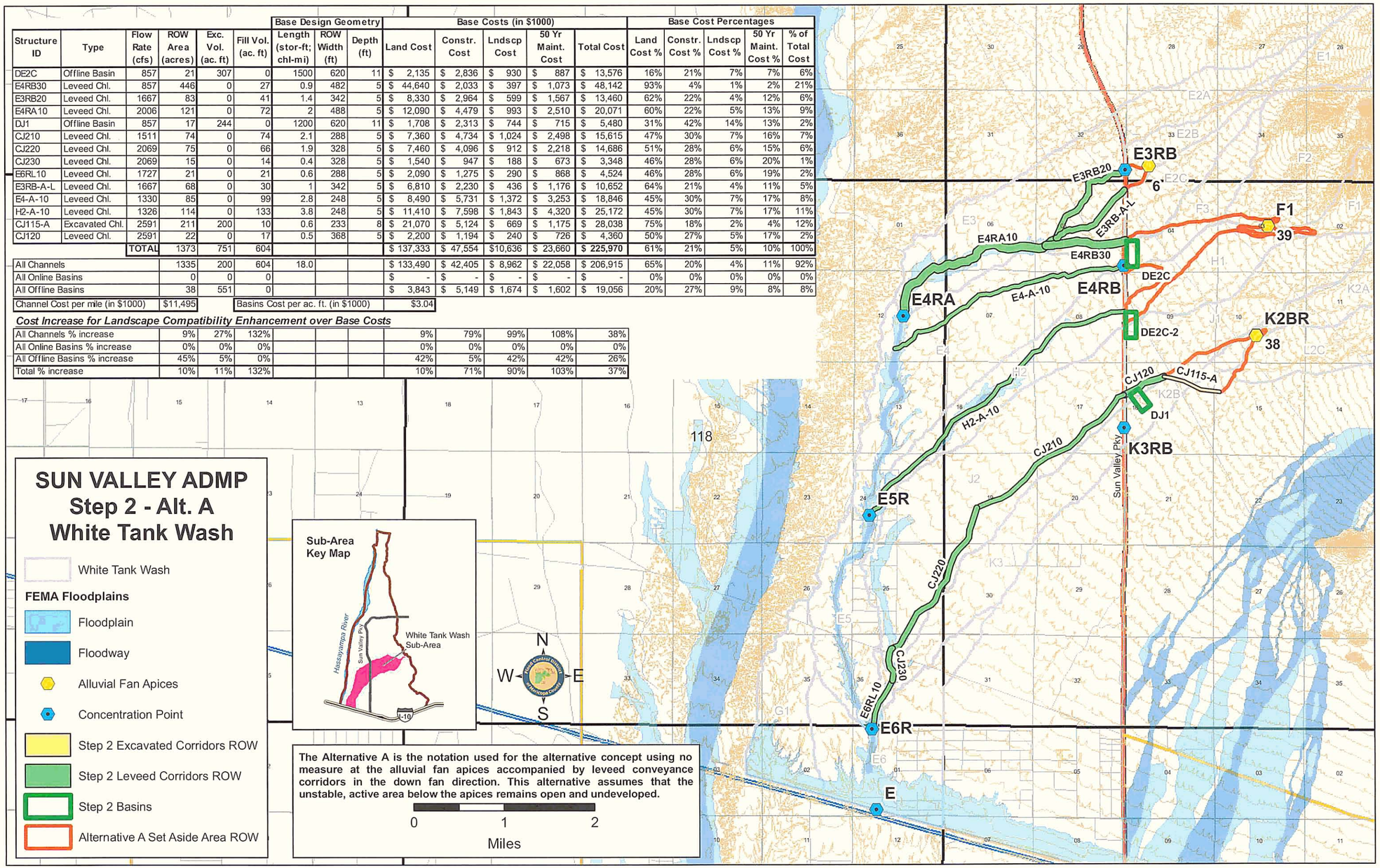
September 2006

Structure ID	Type	Flow Rate (cfs)	ROW Area (acres)	Exc. Vol. (ac. ft)	Fill Vol. (ac. ft)	Base Design Geometry: Length (stor-ft; chl-mi)	ROW Width (ft)	Depth (ft)	Base Costs (in $1000): Land Cost	Constr. Cost	Lndscp Cost	50 Yr Maint. Cost	Total Cost	Base Cost Percentages: Land Cost %	Constr. Cost %	Lndscp Cost %	50 Yr Maint. Cost %	% of Total Cost
DE2C	Offline Basin	857	21	307	0	1500	620	11	$ 2,135	$ 2,836	$ 930	$ 887	$ 13,576	16%	21%	7%	7%	6%
E4RB30	Leveed Chl.	857	446	0	27	0.9	482	5	$ 44,640	$ 2,033	$ 397	$ 1,073	$ 48,142	93%	4%	1%	2%	21%
E3RB20	Leveed Chl.	1667	83	0	41	1.4	342	5	$ 8,330	$ 2,964	$ 599	$ 1,567	$ 13,460	62%	22%	4%	12%	6%
E4RA10	Leveed Chl.	2006	121	0	72	2	488	5	$ 12,090	$ 4,479	$ 993	$ 2,510	$ 20,071	60%	22%	5%	13%	9%
DJ1	Offline Basin	857	17	244	0	1200	620	11	$ 1,708	$ 2,313	$ 744	$ 715	$ 5,480	31%	42%	14%	13%	2%
CJ210	Leveed Chl.	1511	74	0	74	2.1	288	5	$ 7,360	$ 4,734	$ 1,024	$ 2,498	$ 15,615	47%	30%	7%	16%	7%
CJ220	Leveed Chl.	2069	75	0	66	1.9	328	5	$ 7,460	$ 4,096	$ 912	$ 2,218	$ 14,686	51%	28%	6%	15%	6%
CJ230	Leveed Chl.	2069	15	0	14	0.4	328	5	$ 1,540	$ 947	$ 188	$ 673	$ 3,348	46%	28%	6%	20%	1%
E6RL10	Leveed Chl.	1727	21	0	21	0.6	288	5	$ 2,090	$ 1,275	$ 290	$ 868	$ 4,524	46%	28%	6%	19%	2%
E3RB-A-L	Leveed Chl.	1667	68	0	30	1	342	5	$ 6,810	$ 2,230	$ 436	$ 1,176	$ 10,652	64%	21%	4%	11%	5%
E4-A-10	Leveed Chl.	1330	85	0	99	2.8	248	5	$ 8,490	$ 5,731	$ 1,372	$ 3,253	$ 18,846	45%	30%	7%	17%	8%
H2-A-10	Leveed Chl.	1326	114	0	133	3.8	248	5	$ 11,410	$ 7,598	$ 1,843	$ 4,320	$ 25,172	45%	30%	7%	17%	11%
CJ115-A	Excavated Chl.	2591	211	200	10	0.6	233	8	$ 21,070	$ 5,124	$ 669	$ 1,175	$ 28,038	75%	18%	2%	4%	12%
CJ120	Leveed Chl.	2591	22	0	17	0.5	368	5	$ 2,200	$ 1,194	$ 240	$ 726	$ 4,360	50%	27%	5%	17%	2%
		TOTAL	1373	751	604				$ 137,333	$ 47,554	$10,636	$ 23,660	$ 225,970	61%	21%	5%	10%	100%
All Channels			1335	200	604	18.0			$ 133,490	$ 42,405	$ 8,962	$ 22,058	$ 206,915	65%	20%	4%	11%	92%
All Online Basins			0	0	0				$ -	$ -	$ -	$ -	$ -	0%	0%	0%	0%	0%
All Offline Basins			38	551	0				$ 3,843	$ 5,149	$ 1,674	$ 1,602	$ 19,056	20%	27%	9%	8%	8%

Channel Cost per mile (in $1000)	$11,495	Basins Cost per ac. ft. (in $1000)	$3.04

Cost Increase for Landscape Compatibility Enhancement over Base Costs

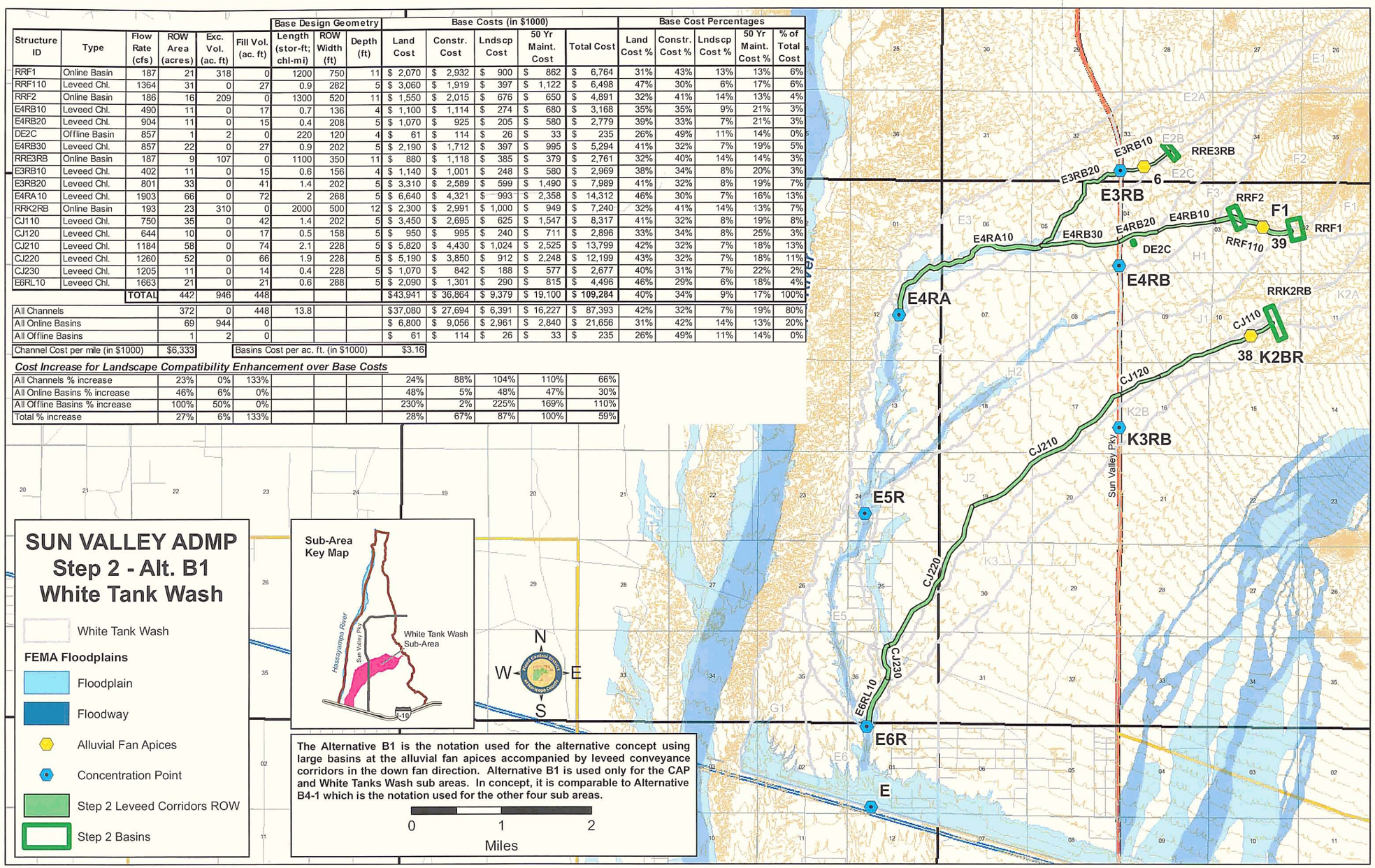
All Channels % increase	9%	27%	132%				9%	79%	99%	108%	38%
All Online Basins % increase	0%	0%	0%				0%	0%	0%	0%	0%
All Offline Basins % increase	45%	5%	0%				42%	5%	42%	42%	26%
Total % increase	10%	11%	132%				10%	71%	90%	103%	37%



Structure ID	Type	Flow Rate (cfs)	ROW Area (acres)	Exc. Vol. (ac. ft)	Fill Vol. (ac. ft)	Base Design Geometry: Length (stor-ft; chl-mi)	ROW Width (ft)	Depth (ft)	Base Costs (in $1000): Land Cost	Constr. Cost	Lndscp Cost	50 Yr Maint. Cost	Total Cost	Base Cost Percentages: Land Cost %	Constr. Cost %	Lndscp Cost %	50 Yr Maint. Cost %	% of Total Cost
RRF1	Online Basin	187	21	318	0	1200	750	11	$ 2,070	$ 2,932	$ 900	$ 862	$ 6,764	31%	43%	13%	13%	6%
RRF110	Leveed Chl.	1364	31	0	27	0.9	282	5	$ 3,060	$ 1,919	$ 397	$ 1,122	$ 6,498	47%	30%	6%	17%	6%
RRF2	Online Basin	186	16	209	0	1300	520	11	$ 1,550	$ 2,015	$ 676	$ 650	$ 4,891	32%	41%	14%	13%	4%
E4RB10	Leveed Chl.	490	11	0	17	0.7	136	4	$ 1,100	$ 1,114	$ 274	$ 680	$ 3,168	35%	35%	9%	21%	3%
E4RB20	Leveed Chl.	904	11	0	15	0.4	208	5	$ 1,070	$ 925	$ 205	$ 580	$ 2,779	39%	33%	7%	21%	3%
DE2C	Offline Basin	857	1	2	0	220	120	4	$ 61	$ 114	$ 26	$ 33	$ 235	26%	49%	11%	14%	0%
E4RB30	Leveed Chl.	857	22	0	27	0.9	202	5	$ 2,190	$ 1,712	$ 397	$ 995	$ 5,294	41%	32%	7%	19%	5%
RRE3RB	Online Basin	187	9	107	0	1100	350	11	$ 880	$ 1,118	$ 385	$ 379	$ 2,761	32%	40%	14%	14%	3%
E3RB10	Leveed Chl.	402	11	0	15	0.6	156	4	$ 1,140	$ 1,001	$ 248	$ 580	$ 2,969	38%	34%	8%	20%	3%
E3RB20	Leveed Chl.	801	33	0	41	1.4	202	5	$ 3,310	$ 2,589	$ 599	$ 1,490	$ 7,989	41%	32%	8%	19%	7%
E4RA10	Leveed Chl.	1903	66	0	72	2	268	5	$ 6,640	$ 4,321	$ 993	$ 2,358	$ 14,312	46%	30%	7%	16%	13%
RRK2RB	Online Basin	193	23	310	0	2000	500	12	$ 2,300	$ 2,991	$ 1,000	$ 949	$ 7,240	32%	41%	14%	13%	7%
CJ110	Leveed Chl.	750	35	0	42	1.4	202	5	$ 3,450	$ 2,695	$ 625	$ 1,547	$ 8,317	41%	32%	8%	19%	8%
CJ120	Leveed Chl.	644	10	0	17	0.5	158	5	$ 950	$ 995	$ 240	$ 711	$ 2,896	33%	34%	8%	25%	3%
CJ210	Leveed Chl.	1184	58	0	74	2.1	228	5	$ 5,820	$ 4,430	$ 1,024	$ 2,525	$ 13,799	42%	32%	7%	18%	13%
CJ220	Leveed Chl.	1260	52	0	66	1.9	228	5	$ 5,190	$ 3,850	$ 912	$ 2,248	$ 12,199	43%	32%	7%	18%	11%
CJ230	Leveed Chl.	1205	11	0	14	0.4	228	5	$ 1,070	$ 842	$ 188	$ 577	$ 2,677	40%	31%	7%	22%	2%
E6RL10	Leveed Chl.	1663	21	0	21	0.6	288	5	$ 2,090	$ 1,301	$ 290	$ 815	$ 4,496	46%	29%	6%	18%	4%
	TOTAL		442	946	448				$43,941	$ 36,864	$ 9,379	$ 19,100	$ 109,284	40%	34%	9%	17%	100%
All Channels			372	0	448	13.8			$37,080	$ 27,694	$ 6,391	$ 16,227	$ 87,393	42%	32%	7%	19%	80%
All Online Basins			69	944	0				$ 6,800	$ 9,056	$ 2,961	$ 2,840	$ 21,656	31%	42%	14%	13%	20%
All Offline Basins			1	2	0				$ 61	$ 114	$ 26	$ 33	$ 235	26%	49%	11%	14%	0%
Channel Cost per mile (in $1000)			$6,333		Basins Cost per ac. ft. (in $1000)				$3.16									

Cost Increase for Landscape Compatibility Enhancement over Base Costs

All Channels % increase	23%	0%	133%				24%	88%	104%	110%	66%
All Online Basins % increase	46%	6%	0%				48%	5%	48%	47%	30%
All Offline Basins % increase	100%	50%	0%				230%	2%	225%	169%	110%
Total % increase	27%	6%	133%				28%	67%	87%	100%	59%

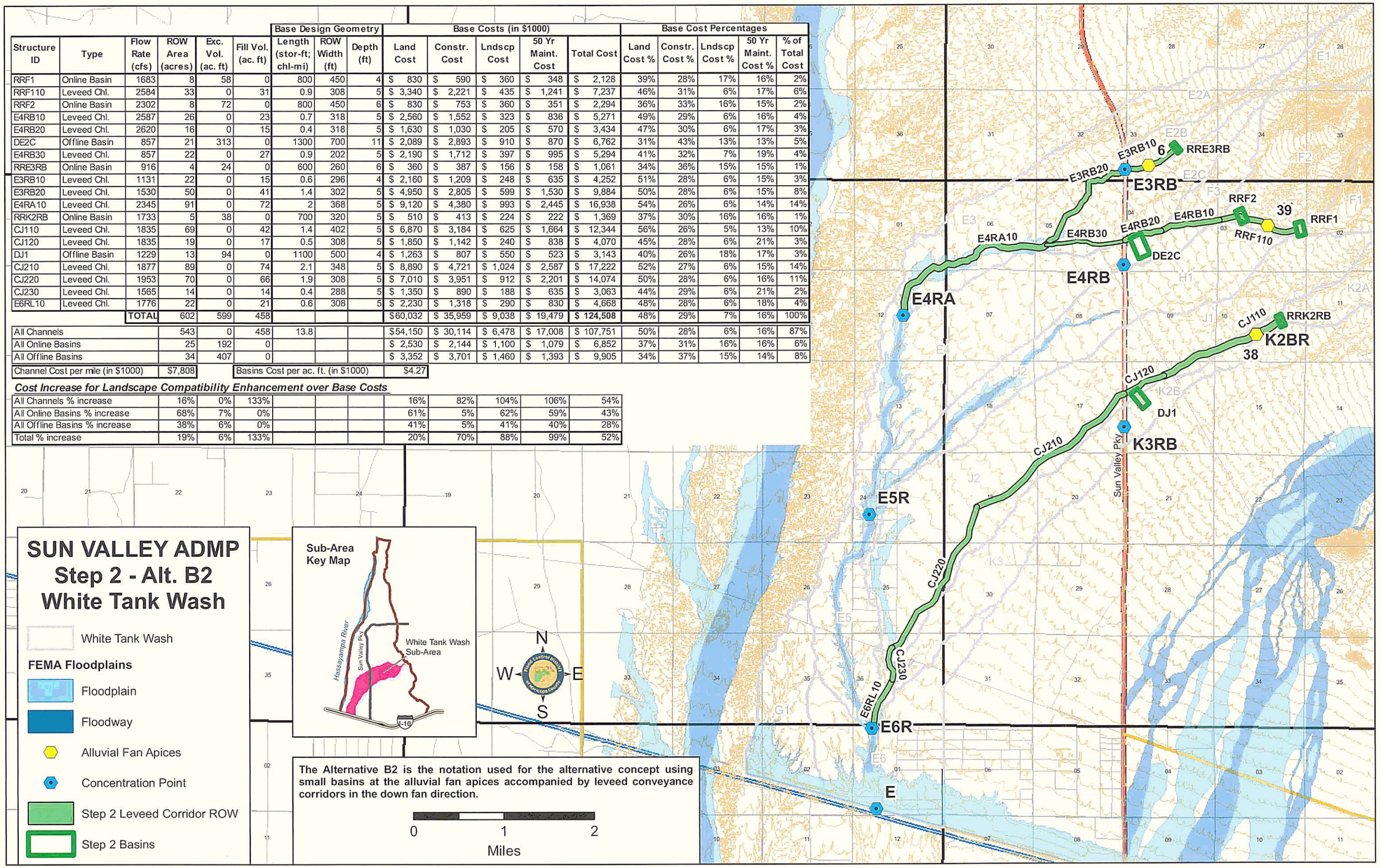


Structure ID	Type	Flow Rate (cfs)	ROW Area (acres)	Exc. Vol. (ac. ft)	Fill Vol. (ac. ft)	Base Design Geometry: Length (stor-ft; chl-mi)	ROW Width (ft)	Depth (ft)	Base Costs (in $1000): Land Cost	Constr. Cost	Lndscp Cost	50 Yr Maint. Cost	Total Cost	Base Cost Percentages: Land Cost %	Constr. Cost %	Lndscp Cost %	50 Yr Maint. Cost %	% of Total Cost
RRF1	Online Basin	1683	8	58	0	800	450	4	$ 830	$ 590	$ 360	$ 348	$ 2,128	39%	28%	17%	16%	2%
RRF110	Leveed Chl.	2584	33	0	31	0.9	308	5	$ 3,340	$ 2,221	$ 435	$ 1,241	$ 7,237	46%	31%	6%	17%	6%
RRF2	Online Basin	2302	8	72	0	800	450	6	$ 830	$ 753	$ 360	$ 351	$ 2,294	36%	33%	16%	15%	2%
E4RB10	Leveed Chl.	2587	26	0	23	0.7	318	5	$ 2,560	$ 1,552	$ 323	$ 836	$ 5,271	49%	29%	6%	16%	4%
E4RB20	Leveed Chl.	2620	16	0	15	0.4	318	5	$ 1,630	$ 1,030	$ 205	$ 570	$ 3,434	47%	30%	6%	17%	3%
DE2C	Offline Basin	857	21	313	0	1300	700	11	$ 2,089	$ 2,893	$ 910	$ 870	$ 6,762	31%	43%	13%	13%	5%
E4RB30	Leveed Chl.	857	22	0	27	0.9	202	5	$ 2,190	$ 1,712	$ 397	$ 995	$ 5,294	41%	32%	7%	19%	4%
RRE3RB	Online Basin	916	4	24	0	600	260	6	$ 360	$ 387	$ 156	$ 158	$ 1,061	34%	36%	15%	15%	1%
E3RB10	Leveed Chl.	1131	22	0	15	0.6	296	4	$ 2,160	$ 1,209	$ 248	$ 635	$ 4,252	51%	28%	6%	15%	3%
E3RB20	Leveed Chl.	1530	50	0	41	1.4	302	5	$ 4,950	$ 2,805	$ 599	$ 1,530	$ 9,884	50%	28%	6%	15%	8%
E4RA10	Leveed Chl.	2345	91	0	72	2	368	5	$ 9,120	$ 4,380	$ 993	$ 2,445	$ 16,938	54%	26%	6%	14%	14%
RRK2RB	Online Basin	1733	5	38	0	700	320	5	$ 510	$ 413	$ 224	$ 222	$ 1,369	37%	30%	16%	16%	1%
CJ110	Leveed Chl.	1835	69	0	42	1.4	402	5	$ 6,870	$ 3,184	$ 625	$ 1,664	$ 12,344	56%	26%	5%	13%	10%
CJ120	Leveed Chl.	1835	19	0	17	0.5	308	5	$ 1,850	$ 1,142	$ 240	$ 838	$ 4,070	45%	28%	6%	21%	3%
DJ1	Offline Basin	1229	13	94	0	1100	500	4	$ 1,263	$ 807	$ 550	$ 523	$ 3,143	40%	26%	18%	17%	3%
CJ210	Leveed Chl.	1877	89	0	74	2.1	348	5	$ 8,890	$ 4,721	$ 1,024	$ 2,587	$ 17,222	52%	27%	6%	15%	14%
CJ220	Leveed Chl.	1953	70	0	66	1.9	308	5	$ 7,010	$ 3,951	$ 912	$ 2,201	$ 14,074	50%	28%	6%	16%	11%
CJ230	Leveed Chl.	1565	14	0	14	0.4	288	5	$ 1,350	$ 890	$ 188	$ 635	$ 3,063	44%	29%	6%	21%	2%
E6RL10	Leveed Chl.	1776	22	0	21	0.6	308	5	$ 2,230	$ 1,318	$ 290	$ 830	$ 4,668	48%	28%	6%	18%	4%
		TOTAL	602	599	458				$60,032	$ 35,959	$ 9,038	$ 19,479	$ 124,508	48%	29%	7%	16%	100%
All Channels			543	0	458	13.8			$54,150	$ 30,114	$ 6,478	$ 17,008	$ 107,751	50%	28%	6%	16%	87%
All Online Basins			25	192	0				$ 2,530	$ 2,144	$ 1,100	$ 1,079	$ 6,852	37%	31%	16%	16%	6%
All Offline Basins			34	407	0				$ 3,352	$ 3,701	$ 1,460	$ 1,393	$ 9,905	34%	37%	15%	14%	8%

Channel Cost per mile (in $1000)	$7,808	Basins Cost per ac. ft. (in $1000)	$4.27	

Cost Increase for Landscape Compatibility Enhancement over Base Costs

All Channels % increase	16%	0%	133%				16%	82%	104%	106%	54%
All Online Basins % increase	68%	7%	0%				61%	5%	62%	59%	43%
All Offline Basins % increase	38%	6%	0%				41%	5%	41%	40%	28%
Total % increase	19%	6%	133%				20%	70%	88%	99%	52%



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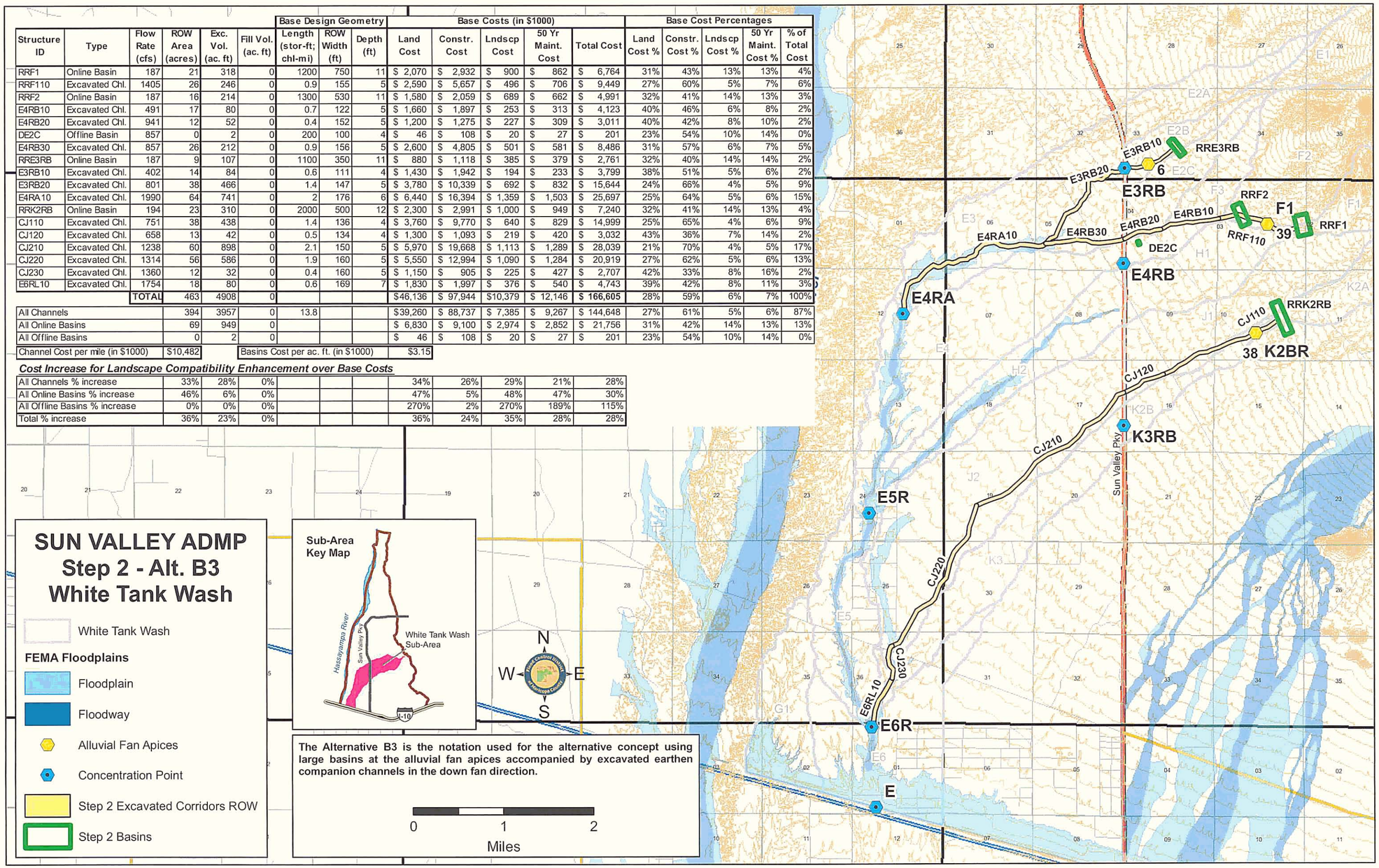
RRF1	Online Basin	187	21	318	0	1200	750	11	$ 2,070	$ 2,932	$ 900	$ 862	$ 6,764	31%	43%	13%	13%	4%
RRF110	Excavated Chl.	1405	26	246	0	0.9	155	5	$ 2,590	$ 5,657	$ 496	$ 706	$ 9,449	27%	60%	5%	7%	6%
RRF2	Online Basin	187	16	214	0	1300	530	11	$ 1,580	$ 2,059	$ 689	$ 662	$ 4,991	32%	41%	14%	13%	3%
E4RB10	Excavated Chl.	491	17	80	0	0.7	122	5	$ 1,660	$ 1,897	$ 253	$ 313	$ 4,123	40%	46%	6%	8%	2%
E4RB20	Excavated Chl.	941	12	52	0	0.4	152	5	$ 1,200	$ 1,275	$ 227	$ 309	$ 3,011	40%	42%	8%	10%	2%
DE2C	Offline Basin	857	0	2	0	200	100	4	$ 46	$ 108	$ 20	$ 27	$ 201	23%	54%	10%	14%	0%
E4RB30	Excavated Chl.	857	26	212	0	0.9	156	5	$ 2,600	$ 4,805	$ 501	$ 581	$ 8,486	31%	57%	6%	7%	5%
RRE3RB	Online Basin	187	9	107	0	1100	350	11	$ 880	$ 1,118	$ 385	$ 379	$ 2,761	32%	40%	14%	14%	2%
E3RB10	Excavated Chl.	402	14	84	0	0.6	111	4	$ 1,430	$ 1,942	$ 194	$ 233	$ 3,799	38%	51%	5%	6%	2%
E3RB20	Excavated Chl.	801	38	466	0	1.4	147	5	$ 3,780	$ 10,339	$ 692	$ 832	$ 15,644	24%	66%	4%	5%	9%
E4RA10	Excavated Chl.	1990	64	741	0	2	176	6	$ 6,440	$ 16,394	$ 1,359	$ 1,503	$ 25,697	25%	64%	5%	6%	15%
RRK2RB	Online Basin	194	23	310	0	2000	500	12	$ 2,300	$ 2,991	$ 1,000	$ 949	$ 7,240	32%	41%	14%	13%	4%
CJ110	Excavated Chl.	751	38	438	0	1.4	136	4	$ 3,760	$ 9,770	$ 640	$ 829	$ 14,999	25%	65%	4%	6%	9%
CJ120	Excavated Chl.	658	13	42	0	0.5	134	4	$ 1,300	$ 1,093	$ 219	$ 420	$ 3,032	43%	36%	7%	14%	2%
CJ210	Excavated Chl.	1238	60	898	0	2.1	150	5	$ 5,970	$ 19,668	$ 1,113	$ 1,289	$ 28,039	21%	70%	4%	5%	17%
CJ220	Excavated Chl.	1314	56	586	0	1.9	160	5	$ 5,550	$ 12,994	$ 1,090	$ 1,284	$ 20,919	27%	62%	5%	6%	13%
CJ230	Excavated Chl.	1360	12	32	0	0.4	160	5	$ 1,150	$ 905	$ 225	$ 427	$ 2,707	42%	33%	8%	16%	2%
E6RL10	Excavated Chl.	1754	18	80	0	0.6	169	7	$ 1,830	$ 1,997	$ 376	$ 540	$ 4,743	39%	42%	8%	11%	3%
	TOTAL		463	4908	0				$46,136	$ 97,944	$10,379	$ 12,146	**$ 166,605**	28%	59%	6%	7%	100%
All Channels			394	3957	0	13.8			$39,260	$ 88,737	$ 7,385	$ 9,267	$ 144,648	27%	61%	5%	6%	87%
All Online Basins			69	949	0				$ 6,830	$ 9,100	$ 2,974	$ 2,852	$ 21,756	31%	42%	14%	13%	13%
All Offline Basins			0	2	0				$ 46	$ 108	$ 20	$ 27	$ 201	23%	54%	10%	14%	0%

Channel Cost per mile (in $1000)	$10,482	Basins Cost per ac. ft. (in $1000)	$3.15

Cost Increase for Landscape Compatibility Enhancement over Base Costs

All Channels % increase	33%	28%	0%				34%	26%	29%	21%	28%
All Online Basins % increase	46%	6%	0%				47%	5%	48%	47%	30%
All Offline Basins % increase	0%	0%	0%				270%	2%	270%	189%	115%
Total % increase	36%	23%	0%				36%	24%	35%	28%	28%



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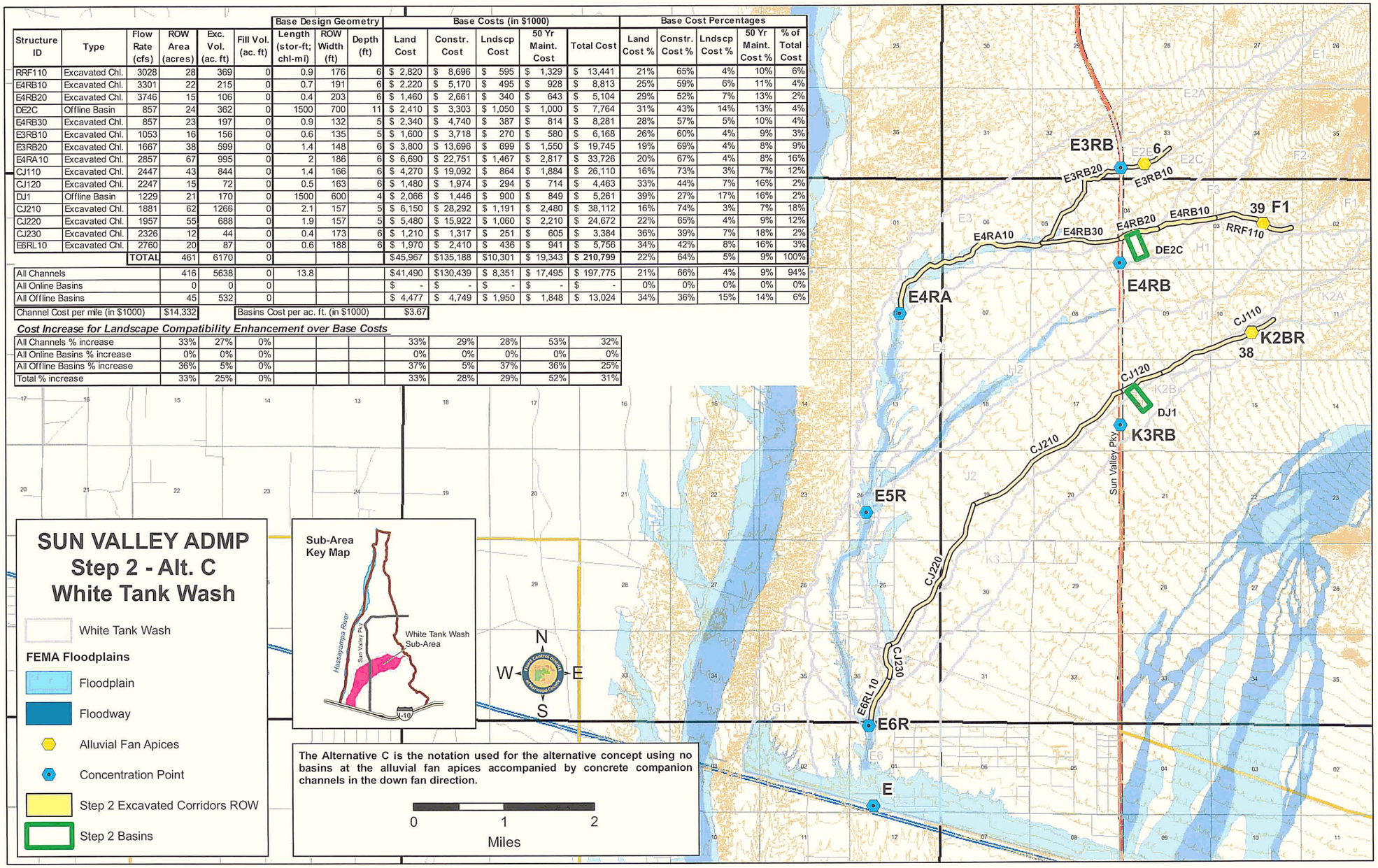
RRF110	Excavated Chl.	3028	28	369	0	0.9	176	6	$ 2,820	$ 8,696	$ 595	$ 1,329	$ 13,441	21%	65%	4%	10%	6%
E4RB10	Excavated Chl.	3301	22	215	0	0.7	191	6	$ 2,220	$ 5,170	$ 495	$ 928	$ 8,813	25%	59%	6%	11%	4%
E4RB20	Excavated Chl.	3746	15	106	0	0.4	203	6	$ 1,460	$ 2,661	$ 340	$ 643	$ 5,104	29%	52%	7%	13%	2%
DE2C	Offline Basin	857	24	362	0	1500	700	11	$ 2,410	$ 3,303	$ 1,050	$ 1,000	$ 7,764	31%	43%	14%	13%	4%
E4RB30	Excavated Chl.	857	23	197	0	0.9	132	5	$ 2,340	$ 4,740	$ 387	$ 814	$ 8,281	28%	57%	5%	10%	4%
E3RB10	Excavated Chl.	1053	16	156	0	0.6	135	5	$ 1,600	$ 3,718	$ 270	$ 580	$ 6,168	26%	60%	4%	9%	3%
E3RB20	Excavated Chl.	1667	38	599	0	1.4	148	6	$ 3,800	$ 13,696	$ 699	$ 1,550	$ 19,745	19%	69%	4%	8%	9%
E4RA10	Excavated Chl.	2857	67	995	0	2	186	6	$ 6,690	$ 22,751	$ 1,467	$ 2,817	$ 33,726	20%	67%	4%	8%	16%
CJ110	Excavated Chl.	2447	43	844	0	1.4	166	6	$ 4,270	$ 19,092	$ 864	$ 1,884	$ 26,110	16%	73%	3%	7%	12%
CJ120	Excavated Chl.	2247	15	72	0	0.5	163	6	$ 1,480	$ 1,974	$ 294	$ 714	$ 4,463	33%	44%	7%	16%	2%
DJ1	Offline Basin	1229	21	170	0	1500	600	4	$ 2,066	$ 1,446	$ 900	$ 849	$ 5,261	39%	27%	17%	16%	2%
CJ210	Excavated Chl.	1881	62	1266	0	2.1	157	5	$ 6,150	$ 28,292	$ 1,191	$ 2,480	$ 38,112	16%	74%	3%	7%	18%
CJ220	Excavated Chl.	1957	55	688	0	1.9	157	5	$ 5,480	$ 15,922	$ 1,060	$ 2,210	$ 24,672	22%	65%	4%	9%	12%
CJ230	Excavated Chl.	2326	12	44	0	0.4	173	6	$ 1,210	$ 1,317	$ 251	$ 605	$ 3,384	36%	39%	7%	18%	2%
E6RL10	Excavated Chl.	2760	20	87	0	0.6	188	6	$ 1,970	$ 2,410	$ 436	$ 941	$ 5,756	34%	42%	8%	16%	3%
		TOTAL	461	6170	0				$45,967	$135,188	$10,301	$ 19,343	$ 210,799	22%	64%	5%	9%	100%
All Channels			416	5638	0	13.8			$41,490	$130,439	$ 8,351	$ 17,495	$ 197,775	21%	66%	4%	9%	94%
All Online Basins			0	0	0				$ -	$ -	$ -	$ -	$ -	0%	0%	0%	0%	0%
All Offline Basins			45	532	0				$ 4,477	$ 4,749	$ 1,950	$ 1,848	$ 13,024	34%	36%	15%	14%	6%
Channel Cost per mile (in $1000)			$14,332		Basins Cost per ac. ft. (in $1000)				$3.67									

Cost Increase for Landscape Compatibility Enhancement over Base Costs

All Channels % increase	33%	27%	0%				33%	29%	28%	53%	32%
All Online Basins % increase	0%	0%	0%				0%	0%	0%	0%	0%
All Offline Basins % increase	36%	5%	0%				37%	5%	37%	36%	25%
Total % increase	33%	25%	0%				33%	28%	29%	52%	31%



SUN VALLEY ADMP
Step 2 - Alt. C
White Tank Wash

White Tank Wash

FEMA Floodplains

- Floodplain
- Floodway
- Alluvial Fan Apices
- Concentration Point
- Step 2 Excavated Corridors ROW
- Step 2 Basins

The Alternative C is the notation used for the alternative concept using no basins at the alluvial fan apices accompanied by concrete companion channels in the down fan direction.

```
1****************************************                    ****************************************
 *                                      *                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
 *              JUN   1998              *                    *   HYDROLOGIC ENGINEERING CENTER      *
 *            VERSION 4.1               *                    *         609 SECOND STREET            *
 *                                      *                    *      DAVIS, CALIFORNIA 95616         *
 *  RUN DATE   19APR06  TIME  15:21:35  *                    *          (916) 756-1104              *
 *                                      *                    *                                      *
 ****************************************                    ****************************************

                                    X     X  XXXXXXX   XXXXX           X
                                    X     X  X        X     X         XX
                                    X     X  X        X               X
                                    XXXXXXX  XXXX     X        XXXXX  X
                                    X     X  X        X               X
                                    X     X  X        X     X         X
                                    X     X  XXXXXXX   XXXXX         XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                          PAGE  1

      LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

        1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
        2           ID    SUN VALLEY ADMP
        3           ID     - WHITE TANK WASH SUB-AREA
        4           ID     - ALTERNATIVE A
        5           ID
        6           ID  Alternative Description
        7           ID  The main design objective of the A Alternative is to allow the
        8           ID  natural geomorphic processes to occur within a designated active
        9           ID  area downstream of the apex.  The objective then is to control
       10           ID  the flow path downstream of the region of uncertainty.  The flows
       11           ID  will be captured in the up-fan area by excavated collector channels
       12           ID  and/or diversion levees.  Once collected, the flows are routed
       13           ID  downstream using leveed corridors similar to the B alternatives.
       14           ID
       15           ID
       16           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
       17           ID   JANUARY 2006
       18           ID
       19           ID   MODEL BASED UPON:
       20           ID
       21           ID  Buckeye/Sun Valley ADMS - May 2005
       22           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
       23           ID  basins E-K with Aluvial Fan updates
       24           ID  100-year 6-hour
       25           ID  Existing Conditions
       26           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
       27           ID  Rainfall Loss Method - Green & Ampt
       28           ID  Unit Hydrograph Method - FCDMC S-Graph
       29           ID  Channel Routing Method - Normal Depth
       30           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
       31           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
       32           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
                    *DIAGRAM
       33           IT       5 01JAN94       0    2000
       34           IO       5
       35           IN      15 01JAN94       0
       36           JD    3.23     0.01
                    * 6-hour distribution, pattern 1.0
       37           PC     0.0    0.008    0.016    0.025    0.033    0.041     0.05    0.058    0.066    0.074
       38           PC   0.087    0.099    0.118    0.138    0.216    0.377    0.834    0.911    0.931     0.95
       39           PC   0.962    0.972    0.983    0.991      1.0
       40           IN      15 01JAN94       0
       41           JD   3.211      0.5
                    * 6-hour distribution, pattern 1.0
       42           PC     0.0    0.008    0.016    0.025    0.033    0.041     0.05    0.058    0.066    0.074
       43           PC   0.087    0.099    0.118    0.138    0.216    0.377    0.834    0.911    0.931     0.95
       44           PC   0.962    0.972    0.983    0.991      1.0
       45           IN      15 01JAN94       0
       46           JD   3.188      1.0
                    * 6-hour distribution, pattern 1.4
       47           PC     0.0   0.0084    0.016    0.025   0.0334   0.0414   0.0504   0.0584   0.0664   0.0748
       48           PC   0.087   0.0994   0.1188    0.148   0.2304   0.4067   0.7778   0.8813   0.9186   0.9452
       49           PC  0.9572   0.9684   0.9798   0.9898      1.0
       50           IN      15 01JAN94       0
       51           JD   3.101      5.0
                    * 6-hour distribution, pattern 2.3
1                                          HEC-1 INPUT                                          PAGE  2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  52          PC     0.0   0.011  0.0173  0.0267  0.0387   0.049  0.0593  0.0693  0.0797  0.0903
  53          PC   0.103  0.1173  0.1383  0.1827  0.2693   0.458   0.686  0.8233  0.8893  0.9293
  54          PC  0.9487   0.962  0.9743  0.9877     1.0
  55          IN      15 01JAN94       0
  56          JD   3.036    10.0
              * 6-hour distribution, pattern 2.7
  57          PC     0.0  0.0134  0.0189  0.0287  0.0443  0.0574  0.0694  0.0818  0.0949  0.1076
  58          PC  0.1223  0.1382  0.1604  0.2063  0.2902  0.4664  0.6764  0.8069  0.8765  0.9189
  59          PC  0.9471  0.9608  0.9735  0.9873     1.0
  60          IN      15 01JAN94       0
  61          JD   2.939    20.0
              * 6-hour distribution, pattern 3.1
  62          PC     0.0  0.0158   0.022  0.0329  0.0511  0.0663  0.0799  0.0948  0.1102  0.1246
  63          PC   0.141  0.1587  0.1828    0.23  0.3122  0.4758  0.6684  0.7929  0.8643  0.9087
  64          PC  0.9434   0.958  0.9718  0.9863     1.0
  65          IN      15 01JAN94       0
  66          JD   2.875    30.0
              * 6-hour distribution, pattern 3.4
  67          PC     0.0  0.0172  0.0256  0.0378  0.0565  0.0719  0.0868   0.103  0.1191  0.1342
  68          PC  0.1513  0.1702  0.1961  0.2439  0.3263  0.4824  0.6655  0.7875   0.858  0.9031
  69          PC   0.939  0.9544  0.9697  0.9851     1.0
  70          IN      15 01JAN94       0
  71          JD    2.81    40.0
              * 6-hour distribution, pattern 3.5
  72          PC     0.0  0.0182  0.0281  0.0413  0.0604  0.0759  0.0916  0.1088  0.1254   0.141
  73          PC  0.1586  0.1783  0.2056  0.2537  0.3362   0.487  0.6636  0.7836  0.8535  0.8991
  74          PC  0.9358  0.9519  0.9682  0.9843     1.0
  75          IN      15 01JAN94       0
  76          JD   2.584   100.0
              * 6-hour distribution, pattern 4.1
  77          PC     0.0  0.0212  0.0355  0.0515  0.0715  0.0877   0.106  0.1261  0.1443  0.1618
  78          PC  0.1812  0.2036  0.2347  0.2837   0.367   0.501  0.6559  0.7704  0.8392  0.8864
  79          PC  0.9256   0.944  0.9633  0.9817     1.0
              *

  80          KK      F1   BASIN
  81          KM    TOTAL FLOW TO APEX 39
  82          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
  83          KM   L=5.07      Lca=2.57      S=369.39      Kn=0.050      LAG=61.9
  84          KM   S-GRAPH TYPE=PHX MNT
  85          BA   3.103
  86          LG   0.297   0.329   4.244   0.378  12.997
  87          UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
  88          UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
  89          UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
  90          UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
  91          UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
  92          UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
              *
1                                          HEC-1 INPUT                                          PAGE  3

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  93          KK   F1-F2   ROUTE
  94          KM    Slope=(1493.3 - 1433.6) / 4725.1
  95          RS       4    FLOW      -1
  96          RC   0.045   0.045   0.045  4725.10.012648   105.0
  97          RX     0.0    15.0    15.0    15.0   315.0   315.0   315.0   330.0
  98          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

  99          KK      F2   BASIN
 100          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 101          KM   L=3.88      Lca=1.80      S=161.60      Kn=0.050      LAG=57.0
 102          KM   S-GRAPH TYPE=PHX MNT
 103          BA   2.209
 104          LG    0.35    0.35   4.375   0.362   3.346
 105          UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
 106          UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
 107          UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
 108          UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
 109          UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
 110          UI   25.01   25.01   25.01     0.0
              *

 111          KK     F3R COMBINE
 112          KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
 113          HC       2
              *

 114          KK  F2-E2C   ROUTE
 115          KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
 116          KM    Slope=(1433.6 - 1368.3) / 5731.3
 117          RS       4    FLOW      -1
 118          RC   0.045   0.045   0.045  5731.30.011392   105.0
 119          RX     0.0    15.0    15.0    15.0   245.0   245.0   245.0   260.0
 120          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 121          KK      F3   BASIN
 122          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
```

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 123          KM   L=2.71     Lca=1.26     S=81.34     Kn=0.055     LAG=54.2
 124          KM   S-GRAPH TYPE=DES RNGLND
 125          BA   0.736
 126          LG    0.35    0.35   3.284    0.64     0.0
 127          UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
 128          UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
 129          UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
 130          UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
 131          UI     0.0
              *
1                                          HEC-1 INPUT                                                    PAGE  4

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 132          KK     CF3 COMBINE
 133          KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
 134          HC       2
              *

 135          KK     E2C   BASIN
 136          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 137          KM   L=2.38     Lca=1.01     S=92.90     Kn=0.055     LAG=46.0
 138          KM   S-GRAPH TYPE=DES RNGLND
 139          BA   0.716
 140          LG    0.35    0.35   4.343   0.357     0.0
 141          UI     0.0   55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
 142          UI  498.61  439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
 143          UI   84.51   59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
 144          UI   13.41   13.41   13.41   13.41     0.0
              *

 145          KK    CE2R COMBINE
 146          KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
 147          HC       2
              *

 148          KK    DE2C  DIVERT
 149          KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
 150          KM    STRUCTURE ID:DE2C
 151          KM    DIMENSIONS: L=1500ft, W=620ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 187 ac-f
 152          DT    DOUT
 153          DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
 154          DI  3000.0  4000.0
 155          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
 156          DQ  2143.0  3143.0
              *

 157          KK  E2C-E3   ROUTE
 158          KM   PROPOSED CHANNEL
 159          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
 160          KM    STRUCTURE ID(s): E4RB30
 161          KM    Slope=(1368.3 - 1313.1) / 4724.8
 162          RS      13    FLOW      -1
 163          RC   0.045   0.045   0.045  4724.80.011682   104.5
 164          RX     0.0    13.5    13.5    13.5   413.5   413.5   413.5   427.0
 165          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
              *

 166          KK      E1   BASIN
 167          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 168          KM   L=2.51     Lca=1.13     S=178.34     Kn=0.055     LAG=43.3
 169          KM   S-GRAPH TYPE=PHX MNT
 170          BA   0.956
 171          LG    0.35   0.378   5.377   0.222    0.69
 172          UI     0.0   74.86   77.94  239.17  368.29  486.24  570.86   714.2  832.85  536.73
 173          UI  451.19  405.28  360.54  317.72  278.78  233.78  192.26  176.85  160.99  130.76
 174          UI  107.56   95.43   81.98   76.82   57.39   57.39   44.31   36.63   36.63   36.63
 175          UI   23.53   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35
1                                          HEC-1 INPUT                                                    PAGE  5

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 176          UI     0.0
              *

 177          KK  E1-E2B   ROUTE
 178          RS       5    FLOW     0.0     0.0
 179          RC    0.05   0.047  0.04610992.72   0.016     0.0
 180          RX     0.0    65.0   140.0   170.0   185.0   200.0   270.0   340.0
 181          RY    24.0    21.0    17.0    10.0    10.0    14.0    18.0    22.0
              *

 182          KK     E2B   BASIN
 183          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 184          KM   L=2.08     Lca=1.07     S=87.98     Kn=0.055     LAG=45.2
 185          KM   S-GRAPH TYPE=DES RNGLND
 186          BA   0.466
 187          LG    0.35    0.38     5.6    0.21     0.0
 188          UI     0.0    32.1    32.1   94.97  150.03  204.82  250.49  285.24   306.5  304.84
 189          UI  285.73  244.25   203.0  165.28   137.3  113.17   92.95    75.5   62.33   52.17
 190          UI   43.31   34.02   28.77   21.97   21.97   16.14    7.81    7.81    7.81    7.81
 191          UI    7.81    7.81    7.81    7.81
              *
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 192          KK    E3RB COMBINE
 193          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
 194          HC       2
              *

 195          KK  E2B-E3   ROUTE
 196          KM   PROPOSED CHANNEL
 197          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
 198          KM    STRUCTURE ID(s): E3RB20
 199          KM    Slope=(1401.8 - 1313.1) / 7135.1
 200          RS      12    FLOW      -1
 201          RC   0.045   0.045   0.045  7135.10.012431   104.5
 202          RX     0.0    13.5    13.5    13.5   273.5   273.5   273.5   287.0
 203          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
              *

 204          KK   E3MID COMBINE
 205          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
 206          HC       2
              *

 207          KK  E3E4RA   ROUTE
 208          KM   PROPOSED CHANNEL
 209          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
 210          KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
 211          KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
 212          KM    STRUCTURE ID(s): E4RA10
 213          KM    Slope=(1313.1 - 1230.3) / 10788.6
 214          RS      12    FLOW      -1
 215          RC   0.045   0.045   0.045 10788.6 0.00767   105.0
 216          RX     0.0    15.0    15.0    15.0   415.0   415.0   415.0   430.0
 217          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *
1                                          HEC-1 INPUT                                          PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 218          KK     E2A   BASIN
 219          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 220          KM   L=2.90      Lca=1.20      S=100.83      Kn=0.055      LAG=52.4
 221          KM   S-GRAPH TYPE=DES RNGLND
 222          BA   0.797
 223          LG    0.35    0.38     5.6    0.21     0.0
 224          UI     0.0    51.6    51.6  110.43  196.83  277.44  347.94  413.76  460.03   489.1
 225          UI  494.55   472.6  438.77  369.81  310.92  263.99  224.69  190.62  158.99  135.09
 226          UI  112.23   97.29   80.97   70.86    54.7   53.12   35.32   35.32   35.32   21.96
 227          UI   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56     0.0
              *

 228          KK  E2A-E3   ROUTE
 229          RS      13    FLOW     0.0     0.0
 230          RC   0.052   0.046  0.05219626.03  0.0093     0.0
 231          RX     0.0   133.0   173.0   213.0   223.0   263.0   303.0   403.0
 232          RY    22.0    17.0    14.0    10.0    10.0    15.0    18.0    22.0
              *

 233          KK      E3   BASIN
 234          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 235          KM   L=3.87      Lca=1.99      S=49.65      Kn=0.050      LAG=74.5
 236          KM   S-GRAPH TYPE=DES RNGLND
 237          BA   2.488
 238          LG    0.35    0.35   4.362   0.346     0.0
 239          UI     0.0  111.69  111.69  111.69  226.88  361.12  481.81  599.56  708.99  795.91
 240          UI  924.44  981.52 1023.08 1070.39 1070.39 1054.33 1012.16  958.83  843.16   765.0
 241          UI  671.82  595.75  537.55  476.38  423.35  378.09  335.18  305.82   252.8  234.07
 242          UI  210.57  188.36  171.26  154.61  118.38  118.38  115.87   76.46   76.46   76.46
 243          UI   76.46   75.47   27.18   27.18   27.18   27.18   27.18   27.18   27.18   27.18
 244          UI   27.18   27.18   27.18   27.18   27.18   27.18
              *

 245          KK   E4RAR COMBINE
 246          KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
 247          HC       2
              *

 248          KK    E4RA COMBINE
 249          KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
 250          HC       2
              *

 251          KK   E3-E4   ROUTE
 252          KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
 253          RS      14    FLOW     0.0     0.0
 254          RC   0.056   0.049  0.05613854.98  0.0048     0.0
 255          RX     0.0   570.0   650.0   690.0   705.0   735.0   810.0  1200.0
 256          RY    21.0    14.0    13.0    10.0    10.0    12.5    14.5    21.0
              *
1                                          HEC-1 INPUT                                          PAGE  7

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 257          KK      E4   BASIN
 258          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
```

```
259          KM   L=5.36     Lca=2.81     S=38.26     Kn=0.050     LAG=101.9
260          KM   S-GRAPH TYPE=DES RNGLND
261          KO       0        0     0.0        1       22
262          BA   3.042
263          LG    0.35     0.35   3.816   0.439     0.0
264          UI     0.0   100.41  100.41  100.41  100.41   158.4  288.69  358.15  433.82  515.05
265          UI  586.72   661.74  710.91  802.48  849.78  890.67  905.99   962.3   962.3   962.3
266          UI  958.07   920.61  904.77  855.38  781.14  712.32  671.29  604.26   557.2  512.12
267          UI  469.45   435.76   392.7  363.69  334.37  307.94  277.85  264.88  224.23  220.83
268          UI  189.31   189.31  167.81  153.97  153.97   127.9  106.43  106.43  106.43  101.85
269          UI   68.74    68.74   68.74   68.74   68.74   68.74    56.9   24.44   24.44   24.44
270          UI   24.44    24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44
271          UI   24.44    24.44   24.44   24.44   24.44   24.44
             *

272          KK    E5RR COMBINE
273          KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
274          HC       2
             *

275          KK      H1   BASIN
276          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
277          KM   L=2.41     Lca=1.09     S=64.59     Kn=0.055     LAG=51.2
278          KM   S-GRAPH TYPE=DES RNGLND
279          BA   1.066
280          LG    0.35     0.35   2.733   0.945     0.0
281          UI     0.0    70.38   70.38  156.67  277.53  386.09  481.01   579.0   629.6  674.43
282          UI  672.95   639.66  573.48  484.85  407.01  343.97  290.32  244.62  205.27   171.4
283          UI  143.72   125.14  107.91   82.11   74.59   59.78   48.17   48.17   44.03   17.13
284          UI   17.13    17.13   17.13   17.13   17.13   17.13   17.13   17.13     0.0
             *

285          KK   H1-H2   ROUTE
286          KM    ROUTE RUNOFF FROM H1 TO E5R
287          RS      21     FLOW     0.0     0.0
288          RC   0.053     0.05  0.05321739.03  0.0082     0.0
289          RX     0.0    330.0   430.0   465.0   495.0   530.0   630.0   960.0
290          RY    17.0     14.0    12.0    10.0    10.0    12.0    14.0    17.0
             *

291          KK      H2   BASIN
292          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
293          KM   L=4.41     Lca=2.60     S=44.71     Kn=0.050     LAG=88.9
294          KM   S-GRAPH TYPE=DES RNGLND
295          BA     1.4
296          LG    0.35     0.35   3.222   0.664     0.0
297          UI     0.0    52.96   52.96   52.96   52.96  142.93  178.39   226.9  274.71  319.58
298          UI  365.35    394.2  441.12  466.71   479.3  507.56  507.56  507.56  494.47  478.59
299          UI  456.68   413.58  373.47  343.47  306.13  279.54  254.31  232.29  208.19  189.77
300          UI  169.44   155.74  145.02  121.24  117.25   99.85   99.85   83.38   81.21   75.85
301          UI   56.14    56.14   56.14   49.15   36.25   36.25   36.25   36.25   36.25    27.6
302          UI   12.89    12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89
1                                          HEC-1 INPUT                                                    PAGE   8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

303          UI   12.89    12.89   12.89   12.89   12.89   12.89     0.0
             *

304          KK    E5RL COMBINE
305          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
306          HC       2
             *

307          KK     E5R COMBINE
308          KM    COMBINE ALL FLOWS AT E5R
309          HC       2
             *

310          KK   E4-E5   ROUTE
311          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
312          RS      14     FLOW     0.0     0.0
313          RC    0.06     0.05   0.0615206.17  0.0051     0.0
314          RX     0.0   1010.0  1080.0  1090.0  1110.0  1120.0  1190.0  2200.0
315          RY    27.0     16.0    15.0    10.0    10.0    14.0    16.0    27.0
             *

316          KK      E5   BASIN
317          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
318          KM   L=3.01     Lca=1.41     S=28.56     Kn=0.050     LAG=65.8
319          KM   S-GRAPH TYPE=DES RNGLND
320          BA   1.308
321          LG   0.347    0.344    3.94   0.429   0.968
322          UI     0.0    66.73   66.73   66.73  187.33  261.54  342.37  416.83  480.54  556.36
323          UI  598.07   622.96  639.46  636.14  605.78  574.36  496.51  443.91  383.22  336.88
324          UI  298.49   258.94  227.11  198.14  176.39   149.0   129.8   120.7  102.31   94.82
325          UI   70.72    70.72   61.39   45.68   45.68   45.68   45.68   18.08   16.24   16.24
326          UI   16.24    16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24     0.0
             *

327          KK    E6RR COMBINE
328          KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
329          KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
330          KM    (WEST CORRIDOR U/S OF E6R)
331          HC       2
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                *
 332            KK      K1   BASIN
 333            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 334            KM   L=3.23      Lca=1.84      S=681.00      Kn=0.050      LAG=40.4
 335            KM   S-GRAPH TYPE=PHX MNT
 336            BA   1.543
 337            LG   0.112   0.255   4.365   0.366  21.277
 338            UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
 339            UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
 340            UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
 341            UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
                *
1                                          HEC-1 INPUT                                          PAGE  9

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 342            KK  K1-K2A   ROUTE
 343            KM    ROUTE RUNOFF FROM K1 TO APEX 38
 344            RS      10    FLOW      0.0      0.0
 345            RC    0.05   0.048   0.0519434.11   0.017      0.0
 346            RX     0.0    20.0    65.0    85.0   235.0   259.0   289.0   309.0
 347            RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
                *

 348            KK      K2A   BASIN
 349            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 350            KM   L=5.29      Lca=2.72      S=126.78      Kn=0.055      LAG=87.2
 351            KM   S-GRAPH TYPE=DES RNGLND
 352            BA   1.949
 353            LG   0.341   0.347   4.907   0.278   1.288
 354            UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
 355            UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
 356            UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
 357            UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
 358            UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
 359            UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
 360            UI   18.36   18.36   18.36   18.36     0.0
                *

 361            KK    K2BR COMBINE
 362            KM    COMBINE FLOWS AT APEX 38
 363            HC       2
                *

 364            KK      L2C   BASIN
 365            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 366            KM   L=3.20      Lca=1.65      S=91.31      Kn=0.055      LAG=61.2
 367            KM   S-GRAPH TYPE=DES RNGLND
 368            BA   1.328
 369            LG    0.35    0.35   4.189   0.422     0.0
 370            UI     0.0   73.31   73.31   99.98  227.13  318.43   414.0  500.47   577.1  643.23
 371            UI  678.82  702.58  699.63  666.25  621.66  533.29  468.31  402.86  351.31  303.79
 372            UI   266.7  226.83  200.74  164.03  144.98  131.86  112.41   97.97    77.7    77.7
 373            UI   56.55   50.18   50.18   50.18   28.53   17.84   17.84   17.84   17.84   17.84
 374            UI   17.84   17.84   17.84   17.84   17.84     0.0
                *

 375            KK    CL2C COMBINE
 376            KM    COMBINE FLOWS AT APEX 38 with runoff from subbasin L2C
 377            HC       2
                *

 378            KK  K2A-J1   ROUTE
 379            KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
 380            KM    SLOPE = (1420 - 1315) / 8500
 381            RS       6    FLOW       -1
 382            RC   0.045   0.045   0.045    8500  0.0124   105.0
 383            RX     0.0    15.0    15.0    15.0   265.0   265.0   265.0   280.0
 384            RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
                *
1                                          HEC-1 INPUT                                          PAGE 10

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 385            KK      J1   BASIN
 386            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 387            KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
 388            KM   S-GRAPH TYPE=DES RNGLND
 389            BA   1.734
 390            LG    0.35    0.35    3.25   0.652     0.0
 391            UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
 392            UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
 393            UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
 394            UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
 395            UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
 396            UI   18.95   18.95   18.95   18.95   18.95   18.95
                *

 397            KK     CJ1 COMBINE
 398            KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
 399            KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
 400            HC       2
```

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                *
401             KK     DJ1  DIVERT
402             KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
403             KM    STRUCTURE ID:DJ1
404             KM    DIMENSIONS: L=1200ft, W=620ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 148.7 ac
405             DT    DOUT
406             DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
407             DI  1500.0  2500.0
408             DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
409             DQ   643.0  1643.0
                *

410             KK   J1-J2   ROUTE
411             KM   PROPOSED CHANNEL
412             KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
413             KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
414             KM    Slope=(1316.8 - 1104.3) / 23082.2
415             RS      16     FLOW      -1
416             RC   0.045   0.045   0.045 23082.20.009207   105.0
417             RX     0.0    15.0    15.0    15.0   255.0   255.0   255.0   270.0
418             RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
                *

419             KK      J2   BASIN
420             KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
421             KM   L=5.18      Lca=2.51      S=45.01      Kn=0.050      LAG=93.2
422             KM   S-GRAPH TYPE=DES RNGLND
423             BA   3.638
424             LG   0.349   0.348   3.621   0.496   0.281
425             UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
426             UI  857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
427             UI  1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
428             UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
429             UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
430             UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

431             UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
                *

432             KK     CJ2 COMBINE
433             KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
434             HC       2
                *

435             KK   J2-K3   ROUTE
436             KM   PROPOSED CHANNEL
437             KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
438             KM    STRUCTURE ID(s): E6RL10
439             KM    Slope=(1104.3 - 1084.9) / 3156.5
440             RS       3     FLOW      -1
441             RC   0.045   0.045   0.045  3156.50.006135   105.0
442             RX     0.0    15.0    15.0    15.0   215.0   215.0   215.0   230.0
443             RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
                *

444             KK      K2B   BASIN
445             KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
446             KM   L=2.01      Lca=0.83      S=60.78      Kn=0.055      LAG=43.5
447             KM   S-GRAPH TYPE=DES RNGLND
448             BA   0.416
449             LG    0.35    0.35   2.708   0.961     0.0
450             UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
451             UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
452             UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
453             UI    7.93    7.93     0.0
                *

454             KK  K2B-K3   ROUTE
455             KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
456             RS      19     FLOW     0.0     0.0
457             RC    0.05   0.048   0.0525950.11  0.0084     0.0
458             RX     0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
459             RY    20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
                *

460             KK      K3   BASIN
461             KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
462             KM   L=4.92      Lca=2.65      S=44.16      Kn=0.050      LAG=93.6
463             KM   S-GRAPH TYPE=DES RNGLND
464             BA   1.636
465             LG    0.35    0.35   3.421   0.582     0.0
466             UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
467             UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
468             UI  528.98  508.31  466.83  418.22  391.32  351.35  318.32  291.61  266.72  243.82
469             UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
470             UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
471             UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
472             UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 473          KK     CK3 COMBINE
 474          KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
 475          HC       2
              *

 476          KK    E6RL COMBINE
 477          KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
 478          HC       2
              *

 479          KK     R6R COMBINE
 480          KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
 481          HC       2
              *

 482          KK   E5-E6   ROUTE
 483          KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
 484          RS       4    FLOW      0.0      0.0
 485          RC   0.063   0.051   0.063  5105.8  0.0037      0.0
 486          RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
 487          RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
              *

 488          KK      E6   BASIN
 489          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 490          KM   L=3.04      Lca=1.06      S=34.17      Kn=0.050      LAG=57.1
 491          KM   S-GRAPH TYPE=DES RNGLND
 492          BA   2.038
 493          LG   0.343   0.336   4.356   0.367   0.711
 494          UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
 495          UI  1153.6 1153.67 1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
 496          UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
 497          UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
 498          UI    29.3    29.3     0.0
              *

 499          KK       E COMBINE
 500          KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
 501          HC       2
              *

 502          KK      G1   BASIN
 503          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 504          KM   L=2.38      Lca=1.08      S=33.76      Kn=0.045      LAG=47.1
 505          KM   S-GRAPH TYPE=DES RNGLND
 506          BA   1.119
 507          LG    0.35    0.35    4.68   0.299     0.0
 508          UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
 509          UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
 510          UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
 511          UI   19.51   19.51   19.51   19.51   19.51     0.0
 512          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   80          F1
                V
                V
   93       F1-F2
                .
                .
   99           .          F2
                .           .
                .           .
  111         F3R...........
                V
                V
  114      F2-E2C
                .
                .
  121           .          F3
                .           .
                .           .
  132        CF3............
                .
                .
  135           .         E2C
                .           .
                .           .
  145       CE2R............
                .
                .
  152           .-------->    DOUT
  148        DE2C
                V
                V
  157      E2C-E3
                .
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              .
166           .          E1
              .           V
              .           V
177           .      E1-E2B
              .           .
              .           .
182           .           .          E2B
              .           .            .
              .           .            .
192           .       E3RB............
              .           V
              .           V
195           .      E2B-E3
              .           .
              .           .
204       E3MID............
              V
              V
207      E3E4RA
              .
              .
218           .         E2A
              .           V
              .           V
228           .      E2A-E3
              .           .
              .           .
233           .           .           E3
              .           .            .
              .           .            .
245           .       E4RAR............
              .           .
              .           .
248        E4RA............
              V
              V
251       E3-E4
              .
              .
257           .          E4
              .           .
              .           .
272        E5RR............
              .
              .
275           .          H1
              .           V
              .           V
285           .       H1-H2
              .           .
              .           .
291           .           .           H2
              .           .            .
              .           .            .
304           .       E5RL............
              .           .
              .           .
307         E5R............
              V
              V
310       E4-E5
              .
              .
316           .          E5
              .           .
              .           .
327        E6RR............
              .
              .
332           .          K1
              .           V
              .           V
342           .      K1-K2A
              .           .
              .           .
348           .           .          K2A
              .           .            .
              .           .            .
361           .       K2BR............
              .           .
              .           .
364           .           .          L2C
              .           .            .
              .           .            .
375           .       CL2C............
              .           V
              .           V
378           .      K2A-J1
              .           .
              .           .
385           .           .           J1
              .           .            .
              .           .            .
397           .         CJ1............
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                .          .
                .          .
  405           .          .-------->    DOUT
  401           .        DJ1
                .          V
                .          V
  410           .       J1-J2
                .          .
                .          .
  419           .          .          J2
                .          .           .
                .          .           .
  432           .        CJ2............
                .          V
                .          V
  435           .       J2-K3
                .          .
                .          .
  444           .          .        K2B
                .          .          V
                .          .          V
  454           .          .     K2B-K3
                .          .           .
                .          .           .
  460           .          .           .          K3
                .          .           .           .
                .          .           .           .
  473           .          .        CK3............
                .          .           .
                .          .           .
  476           .       E6RL............
                .          .
                .          .
  479         E6R............
                V
                V
  482       E5-E6
                .
                .
  488           .          E6
                .          .
                .          .
  499           E............
                .
                .
  502           .          G1
```

```
(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *              JUN   1998              *
 *           VERSION 4.1                *
 *                                      *
 *  RUN DATE   19APR06  TIME  15:21:35  *
 *                                      *
 ****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

STEP 2 HYDROLOGY FOR WHITE TANK WASH
SUN VALLEY ADMP
- WHITE TANK WASH SUB-AREA
- ALTERNATIVE A

Alternative Description
The main design objective of the A Alternative is to allow the natural geomorphic processes to occur within a designated active area downstream of the apex. The objective then is to control the flow path downstream of the region of uncertainty. The flows will be captured in the up-fan area by excavated collector channels and/or diversion levees. Once collected, the flows are routed downstream using leveed corridors similar to the B alternatives.

JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
JANUARY 2006

MODEL BASED UPON:

Buckeye/Sun Valley ADMS - May 2005
Michael Baker Jr., Inc. - Modeler: Jacob Lesue
basins E-K with Aluvial Fan updates
100-year 6-hour
Existing Conditions
Area 3 - Sub-basins E-K (Aluvial Fan updates)
Rainfall Loss Method - Green & Ampt
Unit Hydrograph Method - FCDMC S-Graph
Channel Routing Method - Normal Depth
Land Use - FCDMC GIS Data: mag_landuse (2000)
Soil Data - USDA SCS Soil Survey (1972 & 1981)
Units - L(mi) Lca(mi) S(ft/mi) LAG(min)

```
34 IO          OUTPUT CONTROL VARIABLES
                     IPRNT           5  PRINT CONTROL
                     IPLOT           0  PLOT CONTROL
                     QSCAL          0.  HYDROGRAPH PLOT SCALE

   IT          HYDROGRAPH TIME DATA
                      NMIN           5  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1JAN94  STARTING DATE
                     ITIME        0000  STARTING TIME
                        NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      7JAN94  ENDING DATE
                    NDTIME        2235  ENDING TIME
                     ICENT          19  CENTURY MARK

                COMPUTATION INTERVAL     .08 HOURS
                     TOTAL TIME BASE  166.58 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT

36 JD          INDEX STORM NO. 1
                      STRM        3.23  PRECIPITATION DEPTH
                      TRDA         .01  TRANSPOSITION DRAINAGE AREA

37 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                     .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                     .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00

41 JD          INDEX STORM NO. 2
                      STRM        3.21  PRECIPITATION DEPTH
                      TRDA         .50  TRANSPOSITION DRAINAGE AREA

42 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                     .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                     .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00

46 JD          INDEX STORM NO. 3
                      STRM        3.19  PRECIPITATION DEPTH
                      TRDA        1.00  TRANSPOSITION DRAINAGE AREA

47 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                     .03       .03       .06       .06       .06       .12       .12       .12       .03       .03
                     .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00

51 JD          INDEX STORM NO. 4
                      STRM        3.10  PRECIPITATION DEPTH
                      TRDA        5.00  TRANSPOSITION DRAINAGE AREA

52 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                     .03       .03       .06       .06       .06       .08       .08       .08       .05       .05
                     .05       .02       .02       .02       .01       .01       .01       .01       .01       .01
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00

56 JD          INDEX STORM NO. 5
                      STRM        3.04  PRECIPITATION DEPTH
                      TRDA       10.00  TRANSPOSITION DRAINAGE AREA

57 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
                     .01       .01       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                     .03       .03       .06       .06       .06       .07       .07       .07       .04       .04
                     .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00
```

```
 61 JD          INDEX STORM NO. 6
                      STRM        2.94  PRECIPITATION DEPTH
                      TRDA       20.00  TRANSPOSITION DRAINAGE AREA

 62 PI            PRECIPITATION PATTERN
                     .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                     .01       .01       .01       .01       .01       .00       .00       .00       .00       .00
                     .00       .01       .01       .01       .00       .00       .00       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                     .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                     .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00

 66 JD          INDEX STORM NO. 7
                      STRM        2.88  PRECIPITATION DEPTH
                      TRDA       30.00  TRANSPOSITION DRAINAGE AREA

 67 PI            PRECIPITATION PATTERN
                     .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                     .01       .01       .01       .01       .01       .00       .00       .00       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                     .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                     .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .00
                     .00       .00

 71 JD          INDEX STORM NO. 8
                      STRM        2.81  PRECIPITATION DEPTH
                      TRDA       40.00  TRANSPOSITION DRAINAGE AREA

 72 PI            PRECIPITATION PATTERN
                     .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                     .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                     .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01

 76 JD          INDEX STORM NO. 9
                      STRM        2.58  PRECIPITATION DEPTH
                      TRDA      100.00  TRANSPOSITION DRAINAGE AREA

 77 PI            PRECIPITATION PATTERN
                     .01       .01       .01       .00       .00       .00       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                     .03       .03       .04       .04       .04       .05       .05       .05       .04       .04
                     .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 257 KK     *     E4     *      BASIN
            *            *
            **************

 261 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           1  PUNCH COMPUTED HYDROGRAPH
                       IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        2000  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .083  TIME INTERVAL IN HOURS

1
                                                RUNOFF SUMMARY
                                        FLOW IN CUBIC FEET PER SECOND
                                      TIME IN HOURS,  AREA IN SQUARE MILES

                                      PEAK   TIME OF     AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN     MAXIMUM     TIME OF
          OPERATION        STATION    FLOW    PEAK                                          AREA      STAGE     MAX STAGE
+                                                          6-HOUR     24-HOUR     72-HOUR

          HYDROGRAPH AT
+                             F1      1773.   4.83         444.        113.         38.      3.10

          ROUTED TO
+                           F1-F2     1724.   5.00         443.        113.         38.      3.10

          HYDROGRAPH AT
+                             F2      1306.   4.75         280.         70.         23.      2.21
```

	2 COMBINED AT							
+		F3R	2479.	4.83	654.	166.	55.	5.31
	ROUTED TO							
+		F2-E2C	2434.	5.08	652.	166.	55.	5.31
	HYDROGRAPH AT							
+		F3	454.	4.75	84.	21.	7.	.74
	2 COMBINED AT							
+		CF3	2568.	5.08	689.	176.	59.	6.05
	HYDROGRAPH AT							
+		E2C	658.	4.58	108.	27.	9.	.72
	2 COMBINED AT							
+		CE2R	2785.	5.00	751.	191.	64.	6.76
	DIVERSION TO							
+		DOUT	1928.	5.00	301.	75.	25.	6.76
	HYDROGRAPH AT							
+		DE2C	857.	4.50	450.	116.	39.	6.76
	ROUTED TO							
+		E2C-E3	872.	4.92	448.	116.	39.	6.76
	HYDROGRAPH AT							
+		E1	894.	4.50	148.	37.	12.	.96
	ROUTED TO							
+		E1-E2B	794.	4.83	148.	37.	12.	.96
	HYDROGRAPH AT							
+		E2B	450.	4.58	72.	18.	6.	.47
	2 COMBINED AT							
+		E3RB	1053.	4.83	205.	51.	17.	1.42
	ROUTED TO							
+		E2B-E3	1016.	5.17	205.	51.	17.	1.42
	2 COMBINED AT							
+		E3MID	1594.	5.25	607.	156.	52.	8.19
	ROUTED TO							
+		E3E4RA	1505.	5.92	584.	156.	52.	8.19
	HYDROGRAPH AT							
+		E2A	680.	4.67	127.	32.	11.	.80
	ROUTED TO							
+		E2A-E3	561.	5.67	126.	32.	11.	.80
	HYDROGRAPH AT							
+		E3	1149.	5.08	301.	75.	25.	2.49
	2 COMBINED AT							
+		E4RAR	1175.	5.42	393.	99.	33.	3.28
	2 COMBINED AT							
+		E4RA	2163.	5.92	848.	231.	77.	11.47
	ROUTED TO							
+		E3-E4	1858.	7.08	837.	231.	77.	11.47
	HYDROGRAPH AT							
+		E4	923.	5.42	319.	80.	27.	3.04
	2 COMBINED AT							
+		E5RR	1950.	7.08	991.	279.	93.	14.51
	HYDROGRAPH AT							
+		H1	497.	4.75	86.	22.	7.	1.07
	ROUTED TO							
+		H1-H2	331.	6.33	85.	22.	7.	1.07
	HYDROGRAPH AT							
+		H2	446.	5.25	134.	33.	11.	1.40
	2 COMBINED AT							
+		E5RL	389.	5.25	176.	45.	15.	2.47
	2 COMBINED AT							
+		E5R	1971.	7.08	1037.	292.	97.	16.98
	ROUTED TO							
+		E4-E5	1808.	8.42	1031.	292.	97.	16.98
	HYDROGRAPH AT							
+		E5	713.	4.92	165.	41.	14.	1.31
	2 COMBINED AT							

```
+                          E6RR    1804.   8.42     1071.     315.     105.    18.29
         HYDROGRAPH AT
+                           K1     1564.   4.50      291.      73.      24.     1.54
         ROUTED TO
+                        K1-K2A    1236.   5.25      289.      73.      24.     1.54
         HYDROGRAPH AT
+                          K2A      894.   5.25      269.      68.      23.     1.95
         2 COMBINED AT
+                          K2BR    1890.   5.25      517.     131.      44.     3.49
         HYDROGRAPH AT
+                           L2C      754.   4.83      161.      40.      13.     1.33
         2 COMBINED AT
+                          CL2C    2196.   5.25      624.     157.      52.     4.82
         ROUTED TO
+                        K2A-J1    2095.   5.58      620.     157.      52.     4.82
         HYDROGRAPH AT
+                           J1      626.   5.08      160.      40.      13.     1.73
         2 COMBINED AT
+                          CJ1     2258.   5.58      701.     179.      60.     6.55
         DIVERSION TO
+                          DOUT    1401.   5.58      232.      58.      19.     6.55
         HYDROGRAPH AT
+                          DJ1      857.   4.92      469.     121.      40.     6.55
         ROUTED TO
+                        J1-J2      856.   7.17      433.     121.      40.     6.55
         HYDROGRAPH AT
+                           J2     1093.   5.33      349.      87.      29.     3.64
         2 COMBINED AT
+                          CJ2     1035.   6.92      637.     186.      62.    10.19
         ROUTED TO
+                        J2-K3     1028.   7.08      634.     186.      62.    10.19
         HYDROGRAPH AT
+                          K2B      309.   4.58       45.      11.       4.      .42
         ROUTED TO
+                        K2B-K3     172.   6.50       45.      11.       4.      .42
         HYDROGRAPH AT
+                           K3      520.   5.33      165.      41.      14.     1.64
         2 COMBINED AT
+                          CK3      495.   5.33      181.      46.      15.     2.05
         2 COMBINED AT
+                          E6RL    1094.   5.42      713.     208.      69.    12.24
         2 COMBINED AT
+                           E6R    2243.   8.17     1493.     446.     149.    30.53
         ROUTED TO
+                        E5-E6     2217.   8.67     1481.     446.     149.    30.53
         HYDROGRAPH AT
+                           E6      1228.   4.75      253.      63.      21.     2.04
         2 COMBINED AT
+                            E     2217.   8.67     1534.     481.     160.    32.57
         HYDROGRAPH AT
+                           G1      927.   4.67      160.      40.      13.     1.12

*** NORMAL END OF HEC-1 ***
```

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1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   19APR06  TIME  15:21:37  *
*                                      *
****************************************
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```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
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```
X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX          XXX
```

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
1                                    HEC-1 INPUT                                    PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
  2           ID    SUN VALLEY ADMP
  3           ID     - WHITE TANK WASH SUB-AREA
  4           ID     - ALTERNATIVE A
  5           ID
  6           ID  Alternative Description
  7           ID  The main design objective of the A Alternative is to allow the
  8           ID  natural geomorphic processes to occur within a designated active
  9           ID  area downstream of the apex.  The objective then is to control
 10           ID  the flow path downstream of the region of uncertainty.  The flows
 11           ID  will be captured in the up-fan area by excavated collector channels
 12           ID  and/or diversion levees.  Once collected, the flows are routed
 13           ID  downstream using leveed corridors similar to the B alternatives.
 14           ID
 15           ID
 16           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
 17           ID   JANUARY 2006
 18           ID
 19           ID   MODEL BASED UPON:
 20           ID
 21           ID  Buckeye/Sun Valley ADMS - May 2005
 22           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
 23           ID  basins E-K with Aluvial Fan updates
 24           ID  100-year 24-hour
 25           ID  Existing Conditions
 26           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
 27           ID  Rainfall Loss Method - Green & Ampt
 28           ID  Unit Hydrograph Method - FCDMC S-Graph
 29           ID  Channel Routing Method - Normal Depth
 30           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
 31           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
 32           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
              *DIAGRAM
 33           IT       5 01JAN94       0    2000
 34           IO       5
 35           IN      15 01JAN94       0
 36           JD    4.16    0.01
              * SCS TYPE II 24-hour distribution
 37           PC     0.0   0.002   0.005   0.008   0.011   0.014   0.017    0.02   0.023   0.026
 38           PC   0.029   0.032   0.035   0.038   0.041   0.044   0.048   0.052   0.056    0.06
 39           PC   0.064   0.068   0.072   0.076    0.08   0.085    0.09   0.095     0.1   0.105
 40           PC    0.11   0.115    0.12   0.126   0.133    0.14   0.147   0.155   0.163   0.172
 41           PC   0.181   0.191   0.203   0.218   0.236   0.257   0.283   0.387   0.663   0.707
 42           PC   0.735   0.758   0.776   0.791   0.804   0.815   0.825   0.834   0.842   0.849
 43           PC   0.856   0.863   0.869   0.875   0.881   0.887   0.893   0.898   0.903   0.908
 44           PC   0.913   0.918   0.922   0.926    0.93   0.934   0.938   0.942   0.946    0.95
 45           PC   0.953   0.956   0.959   0.962   0.965   0.968   0.971   0.974   0.977    0.98
 46           PC   0.983   0.986   0.989   0.992   0.995   0.998     1.0
 47           JD   3.952    10.0
 48           JD   3.819    20.0
 49           JD    3.69    40.0
 50           JD   3.565    80.0
              *
1                                    HEC-1 INPUT                                    PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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KK      F1   BASIN
KM    TOTAL FLOW TO APEX 39
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=5.07     Lca=2.57     S=369.39     Kn=0.050     LAG=61.9
KM   S-GRAPH TYPE=PHX MNT
BA   3.103
LG   0.297   0.329   4.244   0.378  12.997
UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
*

KK   F1-F2   ROUTE
KM    Slope=(1493.3 - 1433.6) / 4725.1
RS       4    FLOW      -1
RC   0.045   0.045   0.045  4725.10.012648   105.0
RX     0.0    15.0    15.0    15.0   315.0   315.0   315.0   330.0
RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
*

KK      F2   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=3.88     Lca=1.80     S=161.60     Kn=0.050     LAG=57.0
KM   S-GRAPH TYPE=PHX MNT
BA   2.209
LG    0.35    0.35   4.375   0.362   3.346
UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
UI   25.01   25.01   25.01     0.0
*

KK     F3R COMBINE
KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
HC       2
*

KK  F2-E2C   ROUTE
KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
KM    Slope=(1433.6 - 1368.3) / 5731.3
RS       4    FLOW      -1
RC   0.045   0.045   0.045  5731.30.011392   105.0
RX     0.0    15.0    15.0    15.0   245.0   245.0   245.0   260.0
RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
*
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1 HEC-1 INPUT PAGE 3

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK      F3   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=2.71     Lca=1.26     S=81.34     Kn=0.055     LAG=54.2
KM   S-GRAPH TYPE=DES RNGLND
BA   0.736
LG    0.35    0.35   3.284    0.64     0.0
UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
UI     0.0
*

KK     CF3 COMBINE
KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
HC       2
*

KK     E2C   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=2.38     Lca=1.01     S=92.90     Kn=0.055     LAG=46.0
KM   S-GRAPH TYPE=DES RNGLND
BA   0.716
LG    0.35    0.35   4.343   0.357     0.0
UI     0.0   55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
UI  498.61  439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
UI   84.51   59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
UI   13.41   13.41   13.41   13.41     0.0
*

KK    CE2R COMBINE
KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
HC       2
*

KK    DE2C  DIVERT
KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
KM    STRUCTURE ID:DE2C
KM    DIMENSIONS: L=1500ft, W=620ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 187 ac-f
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 123          DT    DOUT
 124          DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
 125          DI  3000.0  4000.0
 126          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
 127          DQ  2143.0  3143.0
              *

 128          KK  E2C-E3   ROUTE
 129          KM   PROPOSED CHANNEL
 130          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
 131          KM    STRUCTURE ID(s): E4RB30
 132          KM    Slope=(1368.3 - 1313.1) / 4724.8
 133          RS      13    FLOW      -1
 134          RC   0.045   0.045   0.045  4724.80.011682   104.5
 135          RX     0.0    13.5    13.5    13.5   413.5   413.5   427.0
1                                          HEC-1 INPUT                                                    PAGE  4

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 136          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
              *

 137          KK      E1   BASIN
 138          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 139          KM   L=2.51     Lca=1.13     S=178.34     Kn=0.055     LAG=43.3
 140          KM   S-GRAPH TYPE=PHX MNT
 141          BA   0.956
 142          LG    0.35   0.378   5.377   0.222    0.69
 143          UI     0.0   74.86   77.94  239.17  368.29  486.24  570.86   714.2  832.85  536.73
 144          UI  451.19  405.28  360.54  317.72  278.78  233.78  192.26  176.85  160.99  130.76
 145          UI  107.56   95.43   81.98   76.82   57.39   57.39   44.31   36.63   36.63   36.63
 146          UI   23.53   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35
 147          UI     0.0
              *

 148          KK  E1-E2B   ROUTE
 149          RS       5    FLOW     0.0     0.0
 150          RC    0.05   0.047  0.04610992.72   0.016     0.0
 151          RX     0.0    65.0   140.0   170.0   185.0   200.0   270.0   340.0
 152          RY    24.0    21.0    17.0    10.0    10.0    14.0    18.0    22.0
              *

 153          KK     E2B   BASIN
 154          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 155          KM   L=2.08     Lca=1.07     S=87.98     Kn=0.055     LAG=45.2
 156          KM   S-GRAPH TYPE=DES RNGLND
 157          BA   0.466
 158          LG    0.35    0.38     5.6    0.21     0.0
 159          UI     0.0    32.1    32.1   94.97  150.03  204.82  250.49  285.24   306.5  304.84
 160          UI  285.73  244.25   203.0  165.28   137.3  113.17   92.95    75.5   62.33   52.17
 161          UI   43.31   34.02   28.77   21.97   21.97   16.14    7.81    7.81    7.81    7.81
 162          UI    7.81    7.81    7.81    7.81
              *

 163          KK    E3RB COMBINE
 164          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
 165          HC       2
              *

 166          KK  E2B-E3   ROUTE
 167          KM   PROPOSED CHANNEL
 168          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
 169          KM    STRUCTURE ID(s): E3RB20
 170          KM    Slope=(1401.8 - 1313.1) / 7135.1
 171          RS      12    FLOW      -1
 172          RC   0.045   0.045   0.045  7135.10.012431   104.5
 173          RX     0.0    13.5    13.5    13.5   273.5   273.5   273.5   287.0
 174          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
              *
1                                          HEC-1 INPUT                                                    PAGE  5

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 175          KK   E3MID COMBINE
 176          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
 177          HC       2
              *

 178          KK  E3E4RA   ROUTE
 179          KM   PROPOSED CHANNEL
 180          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
 181          KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
 182          KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
 183          KM    STRUCTURE ID(s): E4RA10
 184          KM    Slope=(1313.1 - 1230.3) / 10788.6
 185          RS      12    FLOW      -1
 186          RC   0.045   0.045   0.045 10788.6 0.00767   105.0
 187          RX     0.0    15.0    15.0    15.0   415.0   415.0   415.0   430.0
 188          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 189          KK     E2A   BASIN
 190          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 191          KM   L=2.90     Lca=1.20     S=100.83     Kn=0.055     LAG=52.4
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192          KM   S-GRAPH TYPE=DES RNGLND
193          BA   0.797
194          LG    0.35    0.38     5.6    0.21     0.0
195          UI     0.0    51.6    51.6  110.43  196.83  277.44  347.94  413.76  460.03   489.1
196          UI  494.55   472.6  438.77  369.81  310.92  263.99  224.69  190.62  158.99  135.09
197          UI  112.23   97.29   80.97   70.86    54.7   53.12   35.32   35.32   35.32   21.96
198          UI   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56     0.0
             *

199          KK  E2A-E3   ROUTE
200          RS      13    FLOW     0.0     0.0
201          RC   0.052   0.046  0.05219626.03  0.0093     0.0
202          RX     0.0   133.0   173.0   213.0   223.0   263.0   303.0   403.0
203          RY    22.0    17.0    14.0    10.0    10.0    15.0    18.0    22.0
             *

204          KK      E3   BASIN
205          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
206          KM   L=3.87      Lca=1.99      S=49.65      Kn=0.050      LAG=74.5
207          KM   S-GRAPH TYPE=DES RNGLND
208          BA   2.488
209          LG    0.35    0.35   4.362   0.346     0.0
210          UI     0.0  111.69  111.69  111.69  226.88  361.12  481.81  599.56  708.99  795.91
211          UI  924.44  981.52 1023.08 1070.39 1070.39 1054.33 1012.16  958.83  843.16   765.0
212          UI  671.82  595.75  537.55  476.38  423.35  378.09  335.18  305.82   252.8  234.07
213          UI  210.57  188.36  171.26  154.61  118.38  118.38  115.87   76.46   76.46   76.46
214          UI   76.46   75.47   27.18   27.18   27.18   27.18   27.18   27.18   27.18   27.18
215          UI   27.18   27.18   27.18   27.18   27.18   27.18
             *
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1 HEC-1 INPUT PAGE 6

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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

216          KK   E4RAR COMBINE
217          KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
218          HC       2
             *

219          KK    E4RA COMBINE
220          KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
221          HC       2
             *

222          KK   E3-E4   ROUTE
223          KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
224          RS      14    FLOW     0.0     0.0
225          RC   0.056   0.049  0.05613854.98  0.0048     0.0
226          RX     0.0   570.0   650.0   690.0   705.0   735.0   810.0  1200.0
227          RY    21.0    14.0    13.0    10.0    10.0    12.5    14.5    21.0
             *

228          KK      E4   BASIN
229          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
230          KM   L=5.36      Lca=2.81      S=38.26      Kn=0.050      LAG=101.9
231          KM   S-GRAPH TYPE=DES RNGLND
232          KO       0       0     0.0       1      22
233          BA   3.042
234          LG    0.35    0.35   3.816   0.439     0.0
235          UI     0.0  100.41  100.41  100.41  100.41   158.4  288.69  358.15  433.82  515.05
236          UI  586.72  661.74  710.91  802.48  849.78  890.67  905.99   962.3   962.3   962.3
237          UI  958.07  920.61  904.77  855.38  781.14  712.32  671.29  604.26   557.2  512.12
238          UI  469.45  435.76   392.7  363.69  334.37  307.94  277.85  264.88  224.23  220.83
239          UI  189.31  189.31  167.81  153.97  153.97   127.9  106.43  106.43  106.43  101.85
240          UI   68.74   68.74   68.74   68.74   68.74   68.74    56.9   24.44   24.44   24.44
241          UI   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44
242          UI   24.44   24.44   24.44   24.44   24.44   24.44
             *

243          KK    E5RR COMBINE
244          KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
245          HC       2
             *

246          KK      H1   BASIN
247          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
248          KM   L=2.41      Lca=1.09      S=64.59      Kn=0.055      LAG=51.2
249          KM   S-GRAPH TYPE=DES RNGLND
250          BA   1.066
251          LG    0.35    0.35   2.733   0.945     0.0
252          UI     0.0   70.38   70.38  156.67  277.53  386.09  481.01   579.0   629.6  674.43
253          UI  672.95  639.66  573.48  484.85  407.01  343.97  290.32  244.62  205.27   171.4
254          UI  143.72  125.14  107.91   82.11   74.59   59.78   48.17   48.17   44.03   17.13
255          UI   17.13   17.13   17.13   17.13   17.13   17.13   17.13   17.13     0.0
             *
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1 HEC-1 INPUT PAGE 7

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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

256          KK   H1-H2   ROUTE
257          KM    ROUTE RUNOFF FROM H1 TO E5R
258          RS      21    FLOW     0.0     0.0
259          RC   0.053    0.05   0.05321739.03  0.0082     0.0
260          RX     0.0   330.0   430.0   465.0   495.0   530.0   630.0   960.0
```

```
261          RY    17.0    14.0    12.0    10.0    10.0    12.0    14.0    17.0
             *

262          KK      H2   BASIN
263          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
264          KM   L=4.41      Lca=2.60      S=44.71      Kn=0.050      LAG=88.9
265          KM   S-GRAPH TYPE=DES RNGLND
266          BA     1.4
267          LG    0.35    0.35   3.222   0.664     0.0
268          UI     0.0   52.96   52.96   52.96   52.96  142.93  178.39   226.9  274.71  319.58
269          UI  365.35   394.2  441.12  466.71   479.3  507.56  507.56  507.56  494.47  478.59
270          UI  456.68  413.58  373.47  343.47  306.13  279.54  254.31  232.29  208.19  189.77
271          UI  169.44  155.74  145.02  121.24  117.25   99.85   99.85   83.38   81.21   75.85
272          UI   56.14   56.14   56.14   49.15   36.25   36.25   36.25   36.25   36.25    27.6
273          UI   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89
274          UI   12.89   12.89   12.89   12.89   12.89   12.89     0.0
             *

275          KK    E5RL COMBINE
276          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
277          HC       2
             *

278          KK     E5R COMBINE
279          KM    COMBINE ALL FLOWS AT E5R
280          HC       2
             *

281          KK   E4-E5   ROUTE
282          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
283          RS      14    FLOW     0.0     0.0
284          RC    0.06    0.05    0.0615206.17  0.0051     0.0
285          RX     0.0  1010.0  1080.0  1090.0  1110.0  1120.0  1190.0  2200.0
286          RY    27.0    16.0    15.0    10.0    10.0    14.0    16.0    27.0
             *

287          KK      E5   BASIN
288          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
289          KM   L=3.01      Lca=1.41      S=28.56      Kn=0.050      LAG=65.8
290          KM   S-GRAPH TYPE=DES RNGLND
291          BA   1.308
292          LG   0.347   0.344    3.94   0.429   0.968
293          UI     0.0   66.73   66.73   66.73  187.33  261.54  342.37  416.83  480.54  556.36
294          UI  598.07  622.96  639.46  636.14  605.78  574.36  496.51  443.91  383.22  336.88
295          UI  298.49  258.94  227.11  198.14  176.39   149.0   129.8   120.7  102.31   94.82
296          UI   70.72   70.72   61.39   45.68   45.68   45.68   45.68   18.08   16.24   16.24
297          UI   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24     0.0
             *
1                                          HEC-1 INPUT                                                    PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

298          KK    E6RR COMBINE
299          KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
300          KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
301          KM    (WEST CORRIDOR U/S OF E6R)
302          HC       2
             *

303          KK      K1   BASIN
304          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
305          KM   L=3.23      Lca=1.84      S=681.00      Kn=0.050      LAG=40.4
306          KM   S-GRAPH TYPE=PHX MNT
307          BA   1.543
308          LG   0.112   0.255   4.365   0.366  21.277
309          UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
310          UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
311          UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
312          UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
             *

313          KK  K1-K2A   ROUTE
314          KM    ROUTE RUNOFF FROM K1 TO APEX 38
315          RS      10    FLOW     0.0     0.0
316          RC    0.05   0.048   0.0519434.11   0.017     0.0
317          RX     0.0    20.0    55.0    85.0   235.0   259.0   289.0   309.0
318          RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
             *

319          KK     K2A   BASIN
320          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
321          KM   L=5.29      Lca=2.72      S=126.78      Kn=0.055      LAG=87.2
322          KM   S-GRAPH TYPE=DES RNGLND
323          BA   1.949
324          LG   0.341   0.347   4.907   0.278   1.288
325          UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
326          UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
327          UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
328          UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
329          UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
330          UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
331          UI   18.36   18.36   18.36   18.36     0.0
             *
```

```
 332          KK    K2BR COMBINE
 333          KM    COMBINE FLOWS AT APEX 38
 334          HC       2
              *

 335          KK     L2C   BASIN
 336          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 337          KM   L=3.20      Lca=1.65      S=91.31      Kn=0.055      LAG=61.2
 338          KM   S-GRAPH TYPE=DES RNGLND
 339          BA   1.328
 340          LG    0.35    0.35   4.189   0.422     0.0
 341          UI     0.0   73.31   73.31   99.98  227.13  318.43   414.0  500.47   577.1  643.23
1                                          HEC-1 INPUT                                                    PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 342          UI  678.82  702.58  699.63  666.25  621.66  533.29  468.31  402.86  351.31  303.79
 343          UI   266.7  226.83  200.74  164.03  144.98  131.86  112.41   97.97    77.7    77.7
 344          UI   56.55   50.18   50.18   50.18   28.53   17.84   17.84   17.84   17.84   17.84
 345          UI   17.84   17.84   17.84   17.84   17.84     0.0
              *

 346          KK    CL2C COMBINE
 347          KM    COMBINE FLOWS AT APEX 38 with runoff from subbasin L2C
 348          HC       2
              *

 349          KK  K2A-J1   ROUTE
 350          KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
 351          KM    SLOPE = (1420 - 1315) / 8500
 352          RS       6    FLOW      -1
 353          RC   0.045   0.045   0.045    8500  0.0124   105.0
 354          RX     0.0    15.0    15.0    15.0   265.0   265.0   265.0   280.0
 355          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 356          KK      J1   BASIN
 357          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 358          KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
 359          KM   S-GRAPH TYPE=DES RNGLND
 360          BA   1.734
 361          LG    0.35    0.35    3.25   0.652     0.0
 362          UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
 363          UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
 364          UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
 365          UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
 366          UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
 367          UI   18.95   18.95   18.95   18.95   18.95   18.95
              *

 368          KK     CJ1 COMBINE
 369          KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
 370          KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
 371          HC       2
              *

 372          KK     DJ1  DIVERT
 373          KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
 374          KM    STRUCTURE ID:DJ1
 375          KM    DIMENSIONS: L=1200ft, W=620ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 148.7 ac
 376          DT    DOUT
 377          DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
 378          DI  1500.0  2500.0
 379          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
 380          DQ   643.0  1643.0
              *
1                                          HEC-1 INPUT                                                    PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 381          KK   J1-J2   ROUTE
 382          KM   PROPOSED CHANNEL
 383          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
 384          KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
 385          KM    Slope=(1316.8 - 1104.3) / 23082.2
 386          RS      16    FLOW      -1
 387          RC   0.045   0.045   0.045 23082.20.009207   105.0
 388          RX     0.0    15.0    15.0    15.0   255.0   255.0   255.0   270.0
 389          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 390          KK      J2   BASIN
 391          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 392          KM   L=5.18      Lca=2.51      S=45.01      Kn=0.050      LAG=93.2
 393          KM   S-GRAPH TYPE=DES RNGLND
 394          BA   3.638
 395          LG   0.349   0.348   3.621   0.496   0.281
 396          UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
 397          UI  857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
 398          UI  1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
 399          UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
 400          UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
 401          UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
 402          UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
```

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                 *

 403             KK     CJ2 COMBINE
 404             KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
 405             HC       2
                 *

 406             KK   J2-K3   ROUTE
 407             KM   PROPOSED CHANNEL
 408             KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
 409             KM    STRUCTURE ID(s): E6RL10
 410             KM    Slope=(1104.3 - 1084.9) / 3156.5
 411             RS       3    FLOW      -1
 412             RC   0.045   0.045   0.045  3156.50.006135   105.0
 413             RX     0.0    15.0    15.0    15.0   215.0   215.0   215.0   230.0
 414             RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
                 *

 415             KK     K2B   BASIN
 416             KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 417             KM   L=2.01      Lca=0.83      S=60.78      Kn=0.055      LAG=43.5
 418             KM   S-GRAPH TYPE=DES RNGLND
 419             BA   0.416
 420             LG    0.35    0.35   2.708   0.961     0.0
 421             UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
 422             UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
 423             UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
 424             UI    7.93    7.93     0.0
                 *
1                                          HEC-1 INPUT                                          PAGE 11

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 425             KK  K2B-K3   ROUTE
 426             KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
 427             RS      19    FLOW     0.0     0.0
 428             RC    0.05   0.048   0.0525950.11  0.0084     0.0
 429             RX     0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
 430             RY    20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
                 *

 431             KK      K3   BASIN
 432             KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 433             KM   L=4.92      Lca=2.65      S=44.16      Kn=0.050      LAG=93.6
 434             KM   S-GRAPH TYPE=DES RNGLND
 435             BA   1.636
 436             LG    0.35    0.35   3.421   0.582     0.0
 437             UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
 438             UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
 439             UI  528.98  508.31  466.83  418.22  391.32  351.35  318.32  291.61  266.72  243.82
 440             UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
 441             UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
 442             UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
 443             UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
                 *

 444             KK     CK3 COMBINE
 445             KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
 446             HC       2
                 *

 447             KK    E6RL COMBINE
 448             KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
 449             HC       2
                 *

 450             KK     E6R COMBINE
 451             KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
 452             HC       2
                 *

 453             KK   E5-E6   ROUTE
 454             KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
 455             RS       4    FLOW     0.0     0.0
 456             RC   0.063   0.051   0.063  5105.8  0.0037     0.0
 457             RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
 458             RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
                 *

 459             KK      E6   BASIN
 460             KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 461             KM   L=3.04      Lca=1.06      S=34.17      Kn=0.050      LAG=57.1
 462             KM   S-GRAPH TYPE=DES RNGLND
 463             BA   2.038
 464             LG   0.343   0.336   4.356   0.367   0.711
 465             UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
 466             UI  1153.6 1153.67  1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
1                                          HEC-1 INPUT                                          PAGE 12

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 467             UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
 468             UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
 469             UI    29.3    29.3     0.0
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                    *
470                 KK       E COMBINE
471                 KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
472                 HC       2
                    *

473                 KK      G1   BASIN
474                 KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
475                 KM   L=2.38     Lca=1.08     S=33.76     Kn=0.045     LAG=47.1
476                 KM   S-GRAPH TYPE=DES RNGLND
477                 BA   1.119
478                 LG    0.35    0.35    4.68   0.299     0.0
479                 UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
480                 UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
481                 UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
482                 UI   19.51   19.51   19.51   19.51   19.51     0.0
483                 ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    51          F1
                 V
                 V
    64       F1-F2
                 .
                 .
    70           .          F2
                 .           .
                 .           .
    82         F3R............
                 V
                 V
    85      F2-E2C
                 .
                 .
    92           .          F3
                 .           .
                 .           .
   103         CF3............
                 .
                 .
   106           .         E2C
                 .           .
                 .           .
   116        CE2R............
                 .
                 .
   123           .------->    DOUT
   119        DE2C
                 V
                 V
   128      E2C-E3
                 .
                 .
   137           .          E1
                 .           V
                 .           V
   148           .      E1-E2B
                 .           .
                 .           .
   153           .           .         E2B
                 .           .           .
                 .           .           .
   163           .       E3RB............
                 .           V
                 .           V
   166           .      E2B-E3
                 .           .
                 .           .
   175       E3MID............
                 V
                 V
   178      E3E4RA
                 .
                 .
   189           .         E2A
                 .           V
                 .           V
   199           .      E2A-E3
                 .           .
                 .           .
   204           .           .          E3
                 .           .           .
                 .           .           .
   216           .      E4RAR............
                 .           .
                 .           .
   219        E4RA............
                 V
                 V
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222        E3-E4
               .
               .
228            .           E4
               .            .
               .            .
243         E5RR............
               .
               .
246            .           H1
               .            V
               .            V
256            .        H1-H2
               .            .
               .            .
262            .            .           H2
               .            .            .
               .            .            .
275            .         E5RL............
               .            .
               .            .
278          E5R............
               V
               V
281        E4-E5
               .
               .
287            .           E5
               .            .
               .            .
298         E6RR............
               .
               .
303            .           K1
               .            V
               .            V
313            .       K1-K2A
               .            .
               .            .
319            .            .          K2A
               .            .            .
               .            .            .
332            .         K2BR............
               .            .
               .            .
335            .            .          L2C
               .            .            .
               .            .            .
346            .         CL2C............
               .            V
               .            V
349            .       K2A-J1
               .            .
               .            .
356            .            .           J1
               .            .            .
               .            .            .
368            .          CJ1............
               .            .
               .            .
376            .            .-------->    DOUT
372            .          DJ1
               .            V
               .            V
381            .        J1-J2
               .            .
               .            .
390            .            .           J2
               .            .            .
               .            .            .
403            .          CJ2............
               .            V
               .            V
406            .        J2-K3
               .            .
               .            .
415            .            .          K2B
               .            .            V
               .            .            V
425            .            .       K2B-K3
               .            .            .
               .            .            .
431            .            .            .           K3
               .            .            .            .
               .            .            .            .
444            .            .          CK3............
               .            .            .
               .            .            .
447            .         E6RL............
               .            .
               .            .
450          E6R............
               V
               V
453        E5-E6
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  459           .          E6
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                .           .
  470           E...........
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                .
  473           .          G1

 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************                    ****************************************
 *                                      *                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
 *              JUN   1998              *                    *   HYDROLOGIC ENGINEERING CENTER      *
 *            VERSION 4.1               *                    *         609 SECOND STREET            *
 *                                      *                    *      DAVIS, CALIFORNIA 95616         *
 *  RUN DATE   19APR06  TIME  15:21:37  *                    *          (916) 756-1104              *
 *                                      *                    *                                      *
 ****************************************                    ****************************************
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                    STEP 2 HYDROLOGY FOR WHITE TANK WASH
                    SUN VALLEY ADMP
                     - WHITE TANK WASH SUB-AREA
                     - ALTERNATIVE A

                  Alternative Description
                  The main design objective of the A Alternative is to allow the
                  natural geomorphic processes to occur within a designated active
                  area downstream of the apex.  The objective then is to control
                  the flow path downstream of the region of uncertainty.  The flows
                  will be captured in the up-fan area by excavated collector channels
                  and/or diversion levees.  Once collected, the flows are routed
                  downstream using leveed corridors similar to the B alternatives.


                   JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
                  JANUARY 2006

                   MODEL BASED UPON:

                  Buckeye/Sun Valley ADMS - May 2005
                  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
                  basins E-K with Aluvial Fan updates
                  100-year 24-hour
                  Existing Conditions
                  Area 3 - Sub-basins E-K (Aluvial Fan updates)
                  Rainfall Loss Method - Green & Ampt
                  Unit Hydrograph Method - FCDMC S-Graph
                  Channel Routing Method - Normal Depth
                  Land Use - FCDMC GIS Data: mag_landuse (2000)
                  Soil Data - USDA SCS Soil Survey (1972 & 1981)
                  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)

  34 IO          OUTPUT CONTROL VARIABLES
                       IPRNT           5  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE

     IT          HYDROGRAPH TIME DATA
                        NMIN           5  MINUTES IN COMPUTATION INTERVAL
                       IDATE      1JAN94  STARTING DATE
                       ITIME        0000  STARTING TIME
                          NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                      NDDATE      7JAN94  ENDING DATE
                      NDTIME        2235  ENDING TIME
                       ICENT          19  CENTURY MARK

                 COMPUTATION INTERVAL     .08 HOURS
                      TOTAL TIME BASE  166.58 HOURS

           ENGLISH UNITS
                DRAINAGE AREA          SQUARE MILES
                PRECIPITATION DEPTH    INCHES
                LENGTH, ELEVATION      FEET
                FLOW                   CUBIC FEET PER SECOND
                STORAGE VOLUME         ACRE-FEET
                SURFACE AREA           ACRES
                TEMPERATURE            DEGREES FAHRENHEIT

  36 JD          INDEX STORM NO. 1
                        STRM        4.16  PRECIPITATION DEPTH
                        TRDA         .01  TRANSPOSITION DRAINAGE AREA

  37 PI            PRECIPITATION PATTERN
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.01	.00	.01
.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00		

47 JD INDEX STORM NO. 2
STRM 3.95 PRECIPITATION DEPTH
TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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48 JD INDEX STORM NO. 3
STRM 3.82 PRECIPITATION DEPTH
TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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49 JD INDEX STORM NO. 4

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                    STRM        3.69  PRECIPITATION DEPTH
                    TRDA       40.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
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 50 JD          INDEX STORM NO. 5
                    STRM        3.57  PRECIPITATION DEPTH
                    TRDA       80.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
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            *            *
 228 KK     *     E4     *      BASIN
            *            *
            **************

 232 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          5  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          1  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .083  TIME INTERVAL IN HOURS

1
                                    RUNOFF SUMMARY
                              FLOW IN CUBIC FEET PER SECOND
                           TIME IN HOURS,  AREA IN SQUARE MILES
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	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	F1	1868.	12.83	433.	121.	40.	3.10		
+	ROUTED TO	F1-F2	1784.	13.00	432.	121.	40.	3.10		
+	HYDROGRAPH AT	F2	1333.	12.75	266.	69.	23.	2.21		
+	2 COMBINED AT	F3R	2855.	12.83	692.	188.	63.	5.31		
+	ROUTED TO	F2-E2C	2763.	13.00	689.	188.	63.	5.31		
+	HYDROGRAPH AT	F3	375.	12.75	69.	17.	6.	.74		
+	2 COMBINED AT	CF3	3053.	13.00	754.	205.	68.	6.05		
+	HYDROGRAPH AT	E2C	541.	12.58	88.	22.	7.	.72		
+	2 COMBINED AT	CE2R	3348.	13.00	837.	226.	75.	6.76		
+	DIVERSION TO	DOUT	2491.	13.00	372.	93.	31.	6.76		
+	HYDROGRAPH AT	DE2C	857.	12.42	465.	132.	44.	6.76		
+	ROUTED TO	E2C-E3	869.	12.83	462.	132.	44.	6.76		
+	HYDROGRAPH AT	E1	790.	12.50	125.	32.	11.	.96		
+	ROUTED TO	E1-E2B	687.	12.83	125.	32.	11.	.96		
+	HYDROGRAPH AT	E2B	352.	12.58	57.	14.	5.	.47		
+	2 COMBINED AT	E3RB	958.	12.83	181.	45.	15.	1.42		
+	ROUTED TO	E2B-E3	919.	13.17	181.	45.	15.	1.42		
+	2 COMBINED AT	E3MID	1756.	13.17	639.	177.	59.	8.19		
+	ROUTED TO	E3E4RA	1623.	13.83	616.	177.	59.	8.19		
+	HYDROGRAPH AT	E2A	572.	12.67	105.	26.	9.	.80		
+	ROUTED TO	E2A-E3	461.	13.67	105.	26.	9.	.80		
+	HYDROGRAPH AT	E3	1130.	13.00	289.	72.	24.	2.49		
+	2 COMBINED AT	E4RAR	1177.	13.42	389.	98.	33.	3.28		
+	2 COMBINED AT	E4RA	2507.	13.83	961.	271.	90.	11.47		
+	ROUTED TO	E3-E4	2110.	14.92	951.	271.	90.	11.47		
+	HYDROGRAPH AT	E4	966.	13.42	328.	83.	28.	3.04		
+	2 COMBINED AT	E5RR	2338.	14.92	1214.	346.	115.	14.51		
+	HYDROGRAPH AT	H1	472.	12.75	82.	20.	7.	1.07		
+	ROUTED TO	H1-H2	314.	14.33	80.	20.	7.	1.07		
+	HYDROGRAPH AT	H2	432.	13.25	128.	32.	11.	1.40		
	2 COMBINED AT									

+	E5RL	469.	14.25	202.	52.	17.	2.47
2 COMBINED AT +	E5R	2597.	14.83	1385.	390.	130.	16.98
ROUTED TO +	E4-E5	2401.	16.08	1378.	390.	130.	16.98
HYDROGRAPH AT +	E5	645.	12.92	147.	37.	12.	1.31
2 COMBINED AT +	E6RR	2398.	16.08	1458.	424.	142.	18.29
HYDROGRAPH AT +	K1	1433.	12.50	254.	74.	25.	1.54
ROUTED TO +	K1-K2A	1031.	13.25	254.	74.	25.	1.54
HYDROGRAPH AT +	K2A	827.	13.25	245.	62.	21.	1.95
2 COMBINED AT +	K2BR	1839.	13.25	495.	135.	45.	3.49
HYDROGRAPH AT +	L2C	692.	12.83	145.	36.	12.	1.33
2 COMBINED AT +	CL2C	2276.	13.25	635.	170.	57.	4.82
ROUTED TO +	K2A-J1	2164.	13.50	631.	170.	57.	4.82
HYDROGRAPH AT +	J1	633.	13.08	160.	40.	13.	1.73
2 COMBINED AT +	CJ1	2591.	13.50	780.	208.	70.	6.55
DIVERSION TO +	DOUT	1734.	13.50	297.	74.	25.	6.55
HYDROGRAPH AT +	DJ1	857.	12.83	484.	134.	45.	6.55
ROUTED TO +	J1-J2	857.	15.08	452.	134.	45.	6.55
HYDROGRAPH AT +	J2	1212.	13.33	379.	95.	32.	3.64
2 COMBINED AT +	CJ2	1207.	13.33	769.	227.	76.	10.19
ROUTED TO +	J2-K3	1193.	13.42	766.	227.	76.	10.19
HYDROGRAPH AT +	K2B	217.	12.58	32.	8.	3.	.42
ROUTED TO +	K2B-K3	110.	14.67	32.	8.	3.	.42
HYDROGRAPH AT +	K3	507.	13.33	160.	40.	13.	1.64
2 COMBINED AT +	CK3	506.	13.33	188.	48.	16.	2.05
2 COMBINED AT +	E6RL	1651.	13.42	930.	270.	90.	12.24
2 COMBINED AT +	E6R	3203.	15.92	2267.	661.	221.	30.53
ROUTED TO +	E5-E6	3175.	16.25	2248.	661.	221.	30.53
HYDROGRAPH AT +	E6	1194.	12.75	237.	60.	20.	2.04
2 COMBINED AT +	E	3175.	16.25	2364.	714.	239.	32.57
HYDROGRAPH AT +	G1	819.	12.58	136.	34.	11.	1.12

*** NORMAL END OF HEC-1 ***

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1****************************************                    ****************************************
*                                      *                    *                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
*              JUN   1998              *                    *   HYDROLOGIC ENGINEERING CENTER      *
*            VERSION 4.1               *                    *         609 SECOND STREET            *
*                                      *                    *      DAVIS, CALIFORNIA 95616         *
*  RUN DATE   19APR06  TIME  15:27:15  *                    *          (916) 756-1104              *
*                                      *                    *                                      *
****************************************                    ****************************************

                                    X     X  XXXXXXX   XXXXX           X
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                                    X     X  X        X                X
                                    XXXXXXX  XXXX     X        XXXXX   X
                                    X     X  X        X                X
                                    X     X  X        X     X          X
                                    X     X  XXXXXXX   XXXXX          XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                          PAGE  1

  LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

    1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
    2           ID    SUN VALLEY ADMP
    3           ID     - WHITE TANK WASH SUB-AREA
    4           ID     - ALTERNATIVE B1
    5           ID        big inline basin at apex, leveed downstream corridors
    6           ID
    7           ID  Alternative Description
    8           ID  The purpose of Alternative B is to capture the upstream flow at the
    9           ID  apex using online detention basins.  The presence of the detention
   10           ID  basins eliminates the downstream alluvial fan uncertainties by
   11           ID  controlling the flow from the apices to the outfall.  Alternative B1
   12           ID  is based on using a relatively larger on-line detention basin at the
   13           ID  apex accompanied by smaller leveed channel sections in the down fan
   14           ID  direction.  Alternative B1 is used for the CAP and White Tanks Wash
   15           ID  subareas which do not have more than one reasonable set of alignments
   16           ID  for the corridors.
   17           ID
   18           ID
   19           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
   20           ID    JANUARY 2006
   21           ID
   22           ID   MODEL BASED UPON:
   23           ID
   24           ID  Buckeye/Sun Valley ADMS - May 2005
   25           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
   26           ID  basins E-K with Aluvial Fan updates
   27           ID  100-year 6-hour
   28           ID  Existing Conditions
   29           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
   30           ID  Rainfall Loss Method - Green & Ampt
   31           ID  Unit Hydrograph Method - FCDMC S-Graph
   32           ID  Channel Routing Method - Normal Depth
   33           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
   34           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
   35           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
                *DIAGRAM
   36           IT       5 01JAN94       0    2000
   37           IO       5
   38           IN      15 01JAN94       0
   39           JD    3.23    0.01
                * 6-hour distribution, pattern 1.0
   40           PC     0.0   0.008   0.016   0.025   0.033   0.041    0.05   0.058   0.066   0.074
   41           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931    0.95
   42           PC   0.962   0.972   0.983   0.991     1.0
   43           IN      15 01JAN94       0
   44           JD   3.211     0.5
                * 6-hour distribution, pattern 1.0
   45           PC     0.0   0.008   0.016   0.025   0.033   0.041    0.05   0.058   0.066   0.074
   46           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931    0.95
   47           PC   0.962   0.972   0.983   0.991     1.0
   48           IN      15 01JAN94       0
   49           JD   3.188     1.0
                * 6-hour distribution, pattern 1.4
   50           PC     0.0  0.0084   0.016   0.025  0.0334  0.0414  0.0504  0.0584  0.0664  0.0748
   51           PC   0.087  0.0994  0.1188   0.148  0.2304  0.4067  0.7778  0.8813  0.9186  0.9452
1                                          HEC-1 INPUT                                          PAGE  2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  52          PC  0.9572  0.9684  0.9798  0.9898     1.0
  53          IN      15 01JAN94       0
  54          JD   3.101     5.0
              * 6-hour distribution, pattern 2.3
  55          PC     0.0   0.011  0.0173  0.0267  0.0387   0.049  0.0593  0.0693  0.0797  0.0903
  56          PC   0.103  0.1173  0.1383  0.1827  0.2693   0.458   0.686  0.8233  0.8893  0.9293
  57          PC  0.9487   0.962  0.9743  0.9877     1.0
  58          IN      15 01JAN94       0
  59          JD   3.036    10.0
              * 6-hour distribution, pattern 2.7
  60          PC     0.0  0.0134  0.0189  0.0287  0.0443  0.0574  0.0694  0.0818  0.0949  0.1076
  61          PC  0.1223  0.1382  0.1604  0.2063  0.2902  0.4664  0.6764  0.8069  0.8765  0.9189
  62          PC  0.9471  0.9608  0.9735  0.9873     1.0
  63          IN      15 01JAN94       0
  64          JD   2.939    20.0
              * 6-hour distribution, pattern 3.1
  65          PC     0.0  0.0158   0.022  0.0329  0.0511  0.0663  0.0799  0.0948  0.1102  0.1246
  66          PC   0.141  0.1587  0.1828    0.23  0.3122  0.4758  0.6684  0.7929  0.8643  0.9087
  67          PC  0.9434   0.958  0.9718  0.9863     1.0
  68          IN      15 01JAN94       0
  69          JD   2.875    30.0
              * 6-hour distribution, pattern 3.4
  70          PC     0.0  0.0172  0.0256  0.0378  0.0565  0.0719  0.0868   0.103  0.1191  0.1342
  71          PC  0.1513  0.1702  0.1961  0.2439  0.3263  0.4824  0.6655  0.7875   0.858  0.9031
  72          PC   0.939  0.9544  0.9697  0.9851     1.0
  73          IN      15 01JAN94       0
  74          JD    2.81    40.0
              * 6-hour distribution, pattern 3.5
  75          PC     0.0  0.0182  0.0281  0.0413  0.0604  0.0759  0.0916  0.1088  0.1254   0.141
  76          PC  0.1586  0.1783  0.2056  0.2537  0.3362   0.487  0.6636  0.7836  0.8535  0.8991
  77          PC  0.9358  0.9519  0.9682  0.9843     1.0
  78          IN      15 01JAN94       0
  79          JD   2.584   100.0
              * 6-hour distribution, pattern 4.1
  80          PC     0.0  0.0212  0.0355  0.0515  0.0715  0.0877   0.106  0.1261  0.1443  0.1618
  81          PC  0.1812  0.2036  0.2347  0.2837   0.367   0.501  0.6559  0.7704  0.8392  0.8864
  82          PC  0.9256   0.944  0.9633  0.9817     1.0
              *

  83          KK      F1   BASIN
  84          KM    TOTAL FLOW TO APEX 39
  85          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
  86          KM   L=5.07      Lca=2.57      S=369.39      Kn=0.050      LAG=61.9
  87          KM   S-GRAPH TYPE=PHX MNT
  88          BA   3.103
  89          LG   0.297   0.329   4.244   0.378  12.997
  90          UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
  91          UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
  92          UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
  93          UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
  94          UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
  95          UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
              *
1                                          HEC-1 INPUT                                          PAGE  3

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  96          KK    RRF1 STORAGE
  97          KM    ROUTE RUNOFF FROM F1 THROUGH PROPOSED DETENTION BASIN AT APEX 39
  98          KM   PROPOSED DETENTION BASIN
  99          KM    STRUCTURE ID:RRF1
 100          KM    DIMENSIONS: L=1200ft, W=750ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 181.8 ac
 101          RS       1    STOR       0
 102          SV     0.0    17.0    34.3    51.9    69.7   106.0   143.4   181.8   221.2   261.7
 103          SE     0.0     1.0     2.0     3.0     4.0     6.0     8.0    10.0    12.0    14.0
 104          SQ     0.0    60.5    85.6   104.8   121.0   148.2   171.1   191.3   209.6   226.4
              *

 105          KK   F1-F2   ROUTE
 106          KM   PROPOSED CHANNEL
 107          KM    STRUCTURE ID(s): RRF110
 108          KM    Slope=(1493.3 - 1433.6) / 4725.1
 109          RS       3    FLOW      -1
 110          RC   0.045   0.045   0.045  4725.10.012648   104.5
 111          RX     0.0    13.5    13.5    13.5   213.5   213.5   213.5   227.0
 112          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
              *

 113          KK      F2   BASIN
 114          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 115          KM   L=3.88      Lca=1.80      S=161.60      Kn=0.050      LAG=57.0
 116          KM   S-GRAPH TYPE=PHX MNT
 117          BA   2.209
 118          LG    0.35    0.35   4.375   0.362   3.346
 119          UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
 120          UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
 121          UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
 122          UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
 123          UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
 124          UI   25.01   25.01   25.01     0.0
              *
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125          KK     F3R COMBINE
126          KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
127          HC       2
             *

128          KK    RRF2 STORAGE
129          KM    ROUTE RUNOFF FROM F1 AND F2 THROUGH PROPOSED DETENTION BASIN AT F2
130          KM   PROPOSED DETENTION BASIN
131          KM    STRUCTURE ID:RRF2
132          KM    DIMENSIONS: L=1300ft, W=520ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 133.8 ac
133          RS       1    STOR       0
134          SV     0.0    12.3    24.9    50.7    77.4   105.2   133.8   148.5   163.5   178.7
135          SE     0.0     1.0     2.0     4.0     6.0     8.0    10.0    11.0    12.0    13.0
136          SQ     0.0    60.5    85.6   121.0   148.2   171.1   191.3   200.7   209.6   218.2
             *
1                                        HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

137          KK  F2-E2C   ROUTE
138          KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
139          KM    MODIFIED FOR STEP 2 OF ADMP
140          KM   PROPOSED CHANNEL
141          KM    STRUCTURE ID(s): E4RB10, E4RB20
142          KM    Slope=(1433.6 - 1368.3) / 5731.3
143          RS       4    FLOW      -1
144          RC   0.045   0.045   0.045  5731.30.011392   105.0
145          RX     0.0    15.0    15.0    15.0   135.0   135.0   135.0   150.0
146          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
             *

147          KK      F3   BASIN
148          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
149          KM   L=2.71     Lca=1.26     S=81.34     Kn=0.055     LAG=54.2
150          KM   S-GRAPH TYPE=DES RNGLND
151          BA   0.736
152          LG    0.35    0.35   3.284    0.64     0.0
153          UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
154          UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
155          UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
156          UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
157          UI     0.0
             *

158          KK     CF3 COMBINE
159          KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
160          HC       2
             *

161          KK     E2C   BASIN
162          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
163          KM   L=2.38     Lca=1.01     S=92.90     Kn=0.055     LAG=46.0
164          KM   S-GRAPH TYPE=DES RNGLND
165          BA   0.716
166          LG    0.35    0.35   4.343   0.357     0.0
167          UI     0.0   55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
168          UI  498.61  439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
169          UI   84.51   59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
170          UI   13.41   13.41   13.41   13.41     0.0
             *

171          KK    CE2R COMBINE
172          KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
173          HC       2
             *

174          KK    DE2C  DIVERT
175          KM   PROPOSED Offline Detention Basin AT SUN VALLEY PARKWAY
176          KM    STRUCTURE ID:DE2C
177          KM    DIMENSIONS: L=220ft, W=120ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 1.4 ac-ft
178          DT    DOUT
179          DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
180          DI  1200.0  1179.7
1                                        HEC-1 INPUT                                          PAGE  5

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

181          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
182          DQ   343.0   323.0
             *

183          KK  E2C-E3   ROUTE
184          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
185          KM   PROPOSED CHANNEL
186          KM    STRUCTURE ID(s): E4RB30
187          KM    Slope=(1368.3 - 1313.1) / 4724.8
188          RS      13    FLOW      -1
189          RC   0.045   0.045   0.045  4724.80.011682   104.5
190          RX     0.0    13.5    13.5    13.5   133.5   133.5   133.5   147.0
191          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
             *

192          KK      E1   BASIN
193          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
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194          KM   L=2.51      Lca=1.13      S=178.34      Kn=0.055      LAG=43.3
195          KM   S-GRAPH TYPE=PHX MNT
196          BA   0.956
197          LG    0.35    0.378    5.377    0.222     0.69
198          UI     0.0    74.86    77.94   239.17   368.29   486.24   570.86    714.2   832.85   536.73
199          UI  451.19   405.28   360.54   317.72   278.78   233.78   192.26   176.85   160.99   130.76
200          UI  107.56    95.43    81.98    76.82    57.39    57.39    44.31    36.63    36.63    36.63
201          UI   23.53    14.35    14.35    14.35    14.35    14.35    14.35    14.35    14.35    14.35
202          UI     0.0
             *

203          KK  E1-E2B   ROUTE
204          RS       5    FLOW      0.0      0.0
205          RC    0.05   0.047   0.04610992.72    0.016      0.0
206          RX     0.0    65.0    140.0    170.0    185.0    200.0    270.0    340.0
207          RY    24.0    21.0     17.0     10.0     10.0     14.0     18.0     22.0
             *

208          KK     E2B   BASIN
209          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
210          KM   L=2.08      Lca=1.07      S=87.98      Kn=0.055      LAG=45.2
211          KM   S-GRAPH TYPE=DES RNGLND
212          BA   0.466
213          LG    0.35     0.38      5.6     0.21      0.0
214          UI     0.0     32.1     32.1    94.97   150.03   204.82   250.49   285.24    306.5   304.84
215          UI  285.73   244.25    203.0   165.28    137.3   113.17    92.95     75.5    62.33    52.17
216          UI   43.31    34.02    28.77    21.97    21.97    16.14     7.81     7.81     7.81     7.81
217          UI    7.81     7.81     7.81     7.81
             *

218          KK    E3RB COMBINE
219          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
220          HC       2
             *
1                                          HEC-1 INPUT                                                    PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

221          KK  RRE3RB STORAGE
222          KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 6
223          KM   PROPOSED DETENTION BASIN
224          KM    STRUCTURE ID:RRE3RB
225          KM    DIMENSIONS: L=1100ft, W=350ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 72.4 ac-
226          RS       1    STOR       0
227          SV     0.0      3.2      6.4      9.7     13.0     26.7     41.2     56.4     72.4     89.1
228          SE     0.0      0.5      1.0      1.5      2.0      4.0      6.0      8.0     10.0     12.0
229          SQ     0.0     42.8     60.5     74.1     85.6    121.0    148.2    171.1    191.3    209.6
             *

230          KK  E2B-E3   ROUTE
231          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
232          KM   PROPOSED CHANNEL
233          KM    STRUCTURE ID(s): E3RB10, E3RE20
234          KM    Slope=(1456.8 - 1313.1) / 10317.4
235          RS      12    FLOW      -1
236          RC   0.045   0.045   0.045 10317.40.013931    104.5
237          RX     0.0    13.5     13.5     13.5    133.5    133.5    133.5    147.0
238          RY   104.5   100.0    100.0    100.0    100.0    100.0    100.0    104.5
             *

239          KK   E3MID COMBINE
240          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
241          HC       2
             *

242          KK  E3E4RA   ROUTE
243          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
244          KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
245          KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
246          KM   PROPOSED CHANNEL
247          KM    STRUCTURE ID(s): E4RA10
248          KM    Slope=(1313.1 - 1230.3) / 10788.6
249          RS      12    FLOW      -1
250          RC   0.045   0.045   0.045 10788.6 0.00767    105.0
251          RX     0.0    15.0     15.0     15.0    195.0    195.0    195.0    210.0
252          RY   105.0   100.0    100.0    100.0    100.0    100.0    100.0    105.0
             *

253          KK     E2A   BASIN
254          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
255          KM   L=2.90      Lca=1.20      S=100.83      Kn=0.055      LAG=52.4
256          KM   S-GRAPH TYPE=DES RNGLND
257          BA   0.797
258          LG    0.35     0.38      5.6     0.21      0.0
259          UI     0.0     51.6     51.6   110.43   196.83   277.44   347.94   413.76   460.03    489.1
260          UI  494.55   472.6   438.77   369.81   310.92   263.99   224.69   190.62   158.99   135.09
261          UI  112.23    97.29    80.97    70.86     54.7    53.12    35.32    35.32    35.32    21.96
262          UI   12.56    12.56    12.56    12.56    12.56    12.56    12.56    12.56    12.56      0.0
             *
1                                          HEC-1 INPUT                                                    PAGE  7

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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263          KK  E2A-E3   ROUTE
264          RS      13    FLOW     0.0     0.0
265          RC   0.052   0.046   0.05219626.03  0.0093     0.0
266          RX     0.0   133.0   173.0   213.0   223.0   263.0   303.0   403.0
267          RY    22.0    17.0    14.0    10.0    10.0    15.0    18.0    22.0
             *

268          KK      E3   BASIN
269          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
270          KM   L=3.87     Lca=1.99     S=49.65     Kn=0.050     LAG=74.5
271          KM   S-GRAPH TYPE=DES RNGLND
272          BA   2.488
273          LG    0.35    0.35   4.362   0.346     0.0
274          UI     0.0  111.69  111.69  111.69  226.88  361.12  481.81  599.56  708.99  795.91
275          UI  924.44  981.52 1023.08 1070.39 1070.39 1054.33 1012.16  958.83  843.16   765.0
276          UI  671.82  595.75  537.55  476.38  423.35  378.09  335.18  305.82   252.8  234.07
277          UI  210.57  188.36  171.26  154.61  118.38  118.38  115.87   76.46   76.46   76.46
278          UI   76.46   75.47   27.18   27.18   27.18   27.18   27.18   27.18   27.18   27.18
279          UI   27.18   27.18   27.18   27.18   27.18   27.18
             *

280          KK   E4RAR COMBINE
281          KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
282          HC       2
             *

283          KK    E4RA COMBINE
284          KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
285          HC       2
             *
             *  SPOT FOR POTENTIAL DETENTION BASIN AT START OF WHITE TANK WASH
             *

286          KK   E3-E4   ROUTE
287          KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
288          RS      14    FLOW     0.0     0.0
289          RC   0.056   0.049   0.05613854.98  0.0048     0.0
290          RX     0.0   570.0   650.0   690.0   705.0   735.0   810.0  1200.0
291          RY    21.0    14.0    13.0    10.0    10.0    12.5    14.5    21.0
             *

292          KK      E4   BASIN
293          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
294          KM   L=5.36     Lca=2.81     S=38.26     Kn=0.050     LAG=101.9
295          KM   S-GRAPH TYPE=DES RNGLND
296          KO       0       0     0.0       1      22
297          BA   3.042
298          LG    0.35    0.35   3.816   0.439     0.0
299          UI     0.0  100.41  100.41  100.41  100.41   158.4  288.69  358.15  433.82  515.05
300          UI  586.72  661.74  710.91  802.48  849.78  890.67  905.99   962.3   962.3   962.3
301          UI  958.07  920.61  904.77  855.38  781.14  712.32  671.29  604.26   557.2  512.12
302          UI  469.45  435.76   392.7  363.69  334.37  307.94  277.85  264.88  224.23  220.83
303          UI  189.31  189.31  167.81  153.97  153.97   127.9  106.43  106.43  106.43  101.85
304          UI   68.74   68.74   68.74   68.74   68.74   68.74    56.9   24.44   24.44   24.44
1                                          HEC-1 INPUT                                          PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

305          UI   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44
306          UI   24.44   24.44   24.44   24.44   24.44   24.44
             *

307          KK    E5RR COMBINE
308          KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
309          HC       2
             *

310          KK      H1   BASIN
311          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
312          KM   L=2.41     Lca=1.09     S=64.59     Kn=0.055     LAG=51.2
313          KM   S-GRAPH TYPE=DES RNGLND
314          BA   1.066
315          LG    0.35    0.35   2.733   0.945     0.0
316          UI     0.0   70.38   70.38  156.67  277.53  386.09  481.01   579.0   629.6  674.43
317          UI  672.95  639.66  573.48  484.85  407.01  343.97  290.32  244.62  205.27   171.4
318          UI  143.72  125.14  107.91   82.11   74.59   59.78   48.17   48.17   44.03   17.13
319          UI   17.13   17.13   17.13   17.13   17.13   17.13   17.13   17.13     0.0
             *

320          KK   H1-H2   ROUTE
321          KM    ROUTE RUNOFF FROM H1 TO E5R
322          RS      21    FLOW     0.0     0.0
323          RC   0.053    0.05   0.05321739.03  0.0082     0.0
324          RX     0.0   330.0   430.0   465.0   495.0   530.0   630.0   960.0
325          RY    17.0    14.0    12.0    10.0    10.0    12.0    14.0    17.0
             *

326          KK      H2   BASIN
327          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
328          KM   L=4.41     Lca=2.60     S=44.71     Kn=0.050     LAG=88.9
329          KM   S-GRAPH TYPE=DES RNGLND
330          BA     1.4
331          LG    0.35    0.35   3.222   0.664     0.0
332          UI     0.0   52.96   52.96   52.96   52.96  142.93  178.39   226.9  274.71  319.58
333          UI  365.35   394.2  441.12  466.71   479.3  507.56  507.56  507.56  494.47  478.59
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 334          UI  456.68  413.58  373.47  343.47  306.13  279.54  254.31  232.29  208.19  189.77
 335          UI  169.44  155.74  145.02  121.24  117.25   99.85   99.85   83.38   81.21   75.85
 336          UI   56.14   56.14   56.14   49.15   36.25   36.25   36.25   36.25   36.25    27.6
 337          UI   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89
 338          UI   12.89   12.89   12.89   12.89   12.89   12.89     0.0
              *

 339          KK    E5RL COMBINE
 340          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
 341          HC       2
              *

 342          KK     E5R COMBINE
 343          KM    COMBINE ALL FLOWS AT E5R
 344          HC       2
              *
1                                          HEC-1 INPUT                                          PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 345          KK   E4-E5   ROUTE
 346          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
 347          RS      14    FLOW     0.0     0.0
 348          RC    0.06    0.05    0.0615206.17  0.0051     0.0
 349          RX     0.0  1010.0  1080.0  1090.0  1110.0  1120.0  1190.0  2200.0
 350          RY    27.0    16.0    15.0    10.0    10.0    14.0    16.0    27.0
              *

 351          KK      E5   BASIN
 352          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 353          KM   L=3.01      Lca=1.41      S=28.56      Kn=0.050      LAG=65.8
 354          KM   S-GRAPH TYPE=DES RNGLND
 355          BA   1.308
 356          LG   0.347   0.344    3.94   0.429   0.968
 357          UI     0.0   66.73   66.73   66.73  187.33  261.54  342.37  416.83  480.54  556.36
 358          UI  598.07  622.96  639.46  636.14  605.78  574.36  496.51  443.91  383.22  336.88
 359          UI  298.49  258.94  227.11  198.14  176.39   149.0   129.8   120.7  102.31   94.82
 360          UI   70.72   70.72   61.39   45.68   45.68   45.68   45.68   18.08   16.24   16.24
 361          UI   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24     0.0
              *

 362          KK    E6RR COMBINE
 363          KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
 364          KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
 365          KM    (WEST CORRIDOR U/S OF E6R)
 366          HC       2
              *

 367          KK      K1   BASIN
 368          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 369          KM   L=3.23      Lca=1.84      S=681.00      Kn=0.050      LAG=40.4
 370          KM   S-GRAPH TYPE=PHX MNT
 371          BA   1.543
 372          LG   0.112   0.255   4.365   0.366  21.277
 373          UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
 374          UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
 375          UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
 376          UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
              *

 377          KK  K1-K2A   ROUTE
 378          KM    ROUTE RUNOFF FROM K1 TO APEX 38
 379          RS      10    FLOW     0.0     0.0
 380          RC    0.05   0.048   0.0519434.11   0.017     0.0
 381          RX     0.0    20.0    55.0    85.0   235.0   259.0   289.0   309.0
 382          RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
              *

 383          KK     K2A   BASIN
 384          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 385          KM   L=5.29      Lca=2.72      S=126.78      Kn=0.055      LAG=87.2
 386          KM   S-GRAPH TYPE=DES RNGLND
 387          BA   1.949
 388          LG   0.341   0.347   4.907   0.278   1.288
1                                          HEC-1 INPUT                                          PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 389          UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
 390          UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
 391          UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
 392          UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
 393          UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
 394          UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
 395          UI   18.36   18.36   18.36   18.36     0.0
              *

 396          KK    K2BR COMBINE
 397          KM    COMBINE FLOWS AT APEX 38
 398          HC       2
              *

 399          KK  RRK2RB STORAGE
 400          KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 38
```

```
401          KM   PROPOSED DETENTION BASIN
402          KM    STRUCTURE ID:RRK2RB
403          KM    DIMENSIONS: L=2000ft, W=500ft, D=12ft, Sideslope (?H:1V)= 3,  Vol.= 219.5 ac
404          RS       1    STOR       0
405          SV     0.0    18.3    55.9    94.8   135.0   155.6   176.6   197.8   219.5   263.7
406          SE     0.0     1.0     3.0     5.0     7.0     8.0     9.0    10.0    11.0    13.0
407          SQ     0.0    60.5   104.8   135.3   160.1   171.1   181.5   191.3   200.7   218.2
             *

408          KK  K2A-2B   ROUTE
409          KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
410          KM    MODIFIED FOR STEP 2 OF ADMP
411          KM   PROPOSED CHANNEL
412          KM    STRUCTURE ID(s): CJ110, CJ120
413          KM    Slope=(1437.6 - 1316.8) / 10052.6
414          RS       4    FLOW      -1
415          RC   0.045   0.045   0.045 10052.60.012015   105.0
416          RX     0.0    15.0    15.0    15.0    85.0    85.0    85.0   100.0
417          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
             *

418          KK      J1   BASIN
419          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
420          KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
421          KM   S-GRAPH TYPE=DES RNGLND
422          BA   1.734
423          LG    0.35    0.35    3.25   0.652     0.0
424          UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
425          UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
426          UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
427          UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
428          UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
429          UI   18.95   18.95   18.95   18.95   18.95   18.95
             *
```



```
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

430          KK     CJ1 COMBINE
431          KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
432          KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
433          HC       2
             *

434          KK   J1-J2   ROUTE
435          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
436          KM   PROPOSED CHANNEL
437          KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
438          KM    Slope=(1316.8 - 1104.3) / 23082.2
439          RS      16    FLOW      -1
440          RC   0.045   0.045   0.045 23082.20.009207   105.0
441          RX     0.0    15.0    15.0    15.0   155.0   155.0   155.0   170.0
442          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
             *

443          KK      J2   BASIN
444          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
445          KM   L=5.18      Lca=2.51      S=45.01      Kn=0.050      LAG=93.2
446          KM   S-GRAPH TYPE=DES RNGLND
447          BA   3.638
448          LG   0.349   0.348   3.621   0.496   0.281
449          UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
450          UI  857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
451          UI 1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
452          UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
453          UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
454          UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
455          UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
             *

456          KK     CJ2 COMBINE
457          KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
458          HC       2
             *

459          KK   J2-K3   ROUTE
460          KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
461          KM   PROPOSED CHANNEL
462          KM    STRUCTURE ID(s): E6RL10
463          KM    Slope=(1104.3 - 1084.9) / 3156.5
464          RS       3    FLOW      -1
465          RC   0.045   0.045   0.045  3156.50.006135   105.0
466          RX     0.0    15.0    15.0    15.0   215.0   215.0   215.0   230.0
467          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
             *

468          KK     K2B   BASIN
469          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
470          KM   L=2.01      Lca=0.83      S=60.78      Kn=0.055      LAG=43.5
471          KM   S-GRAPH TYPE=DES RNGLND
472          BA   0.416
473          LG    0.35    0.35   2.708   0.961     0.0
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 474          UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
 475          UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
 476          UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
 477          UI    7.93    7.93     0.0
              *

 478          KK  K2B-K3   ROUTE
 479          KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
 480          RS       19    FLOW     0.0     0.0
 481          RC     0.05   0.048    0.0525950.11  0.0084     0.0
 482          RX      0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
 483          RY     20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
              *

 484          KK       K3   BASIN
 485          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 486          KM   L=4.92      Lca=2.65      S=44.16      Kn=0.050      LAG=93.6
 487          KM   S-GRAPH TYPE=DES RNGLND
 488          BA   1.636
 489          LG    0.35    0.35   3.421   0.582     0.0
 490          UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
 491          UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
 492          UI  528.98  508.31  466.83  418.22  391.32  361.35  318.32  291.61  266.72  243.82
 493          UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
 494          UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
 495          UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
 496          UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
              *

 497          KK     CK3 COMBINE
 498          KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
 499          HC       2
              *

 500          KK    E6RL COMBINE
 501          KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
 502          HC       2
              *

 503          KK     E6R COMBINE
 504          KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
 505          HC       2
              *

 506          KK   E5-E6   ROUTE
 507          KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
 508          RS       4    FLOW     0.0     0.0
 509          RC   0.063   0.051   0.063  5105.8  0.0037     0.0
 510          RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
 511          RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
              *
1                                                HEC-1 INPUT                                                PAGE 13

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 512          KK       E6   BASIN
 513          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 514          KM   L=3.04      Lca=1.06      S=34.17      Kn=0.050      LAG=57.1
 515          KM   S-GRAPH TYPE=DES RNGLND
 516          BA   2.038
 517          LG   0.343   0.336   4.356   0.367   0.711
 518          UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
 519          UI  1153.6 1153.67  1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
 520          UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
 521          UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
 522          UI    29.3    29.3     0.0
              *

 523          KK        E COMBINE
 524          KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
 525          HC       2
              *

 526          KK       G1   BASIN
 527          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 528          KM   L=2.38      Lca=1.08      S=33.76      Kn=0.045      LAG=47.1
 529          KM   S-GRAPH TYPE=DES RNGLND
 530          BA   1.119
 531          LG    0.35    0.35    4.68   0.299     0.0
 532          UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
 533          UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
 534          UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
 535          UI   19.51   19.51   19.51   19.51   19.51     0.0
 536          ZZ
1
          SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.     (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   83        F1
```

```
                V
                V
 96          RRF1
                V
                V
105         F1-F2
                .
                .
113             .           F2
                .            .
                .            .
125          F3R............
                V
                V
128         RRF2
                V
                V
137        F2-E2C
                .
                .
147             .           F3
                .            .
                .            .
158          CF3............
                .
                .
161             .          E2C
                .            .
                .            .
171         CE2R............
                .
                .
178             .-------->    DOUT
174         DE2C
                V
                V
183        E2C-E3
                .
                .
192             .           N1
                .            V
                .            V
203             .       E1-E2B
                .            .
                .            .
208             .            .          E2B
                .            .            .
                .            .            .
218             .         E3RB............
                .            V
                .            V
221             .       RRE3RB
                .            V
                .            V
230             .       E2B-E3
                .            .
                .            .
239         E3MID............
                V
                V
242        E3E4RA
                .
                .
253             .          E2A
                .            V
                .            V
263             .       E2A-E3
                .            .
                .            .
268             .            .           E3
                .            .            .
                .            .            .
280             .        E4RAR............
                .            .
                .            .
283         E4RA............
                V
                V
286         E3-E4
                .
                .
292             .           E4
                .            .
                .            .
307         E5RR............
                .
                .
310             .           H1
                .            V
                .            V
320             .        H1-H2
                .            .
                .            .
326             .            .           H2
                .            .            .
```

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                .          .          .
339             .        E5RL...........
                .          .
                .          .
342           E5R...........
                V
                V
345         E4-E5
                .
                .
351             .         E5
                .          .
                .          .
362          E6RR...........
                .
                .
367             .         K1
                .          V
                .          V
377             .      K1-K2A
                .          .
                .          .
383             .          .         K2A
                .          .           .
                .          .           .
396             .       K2BR...........
                .          V
                .          V
399             .      RRK2RB
                .          V
                .          V
408             .      K2A-2B
                .          .
                .          .
418             .          .          J1
                .          .           .
                .          .           .
430             .        CJ1...........
                .          V
                .          V
434             .      J1-J2
                .          .
                .          .
443             .          .          J2
                .          .           .
                .          .           .
456             .        CJ2...........
                .          V
                .          V
459             .      J2-K3
                .          .
                .          .
468             .          .         K2B
                .          .           V
                .          .           V
478             .          .      K2B-K3
                .          .           .
                .          .           .
484             .          .           .          K3
                .          .           .           .
                .          .           .           .
497             .          .         CK3...........
                .          .           .
                .          .           .
500             .       E6RL...........
                .          .
                .          .
503           E6R...........
                V
                V
506         E5-E6
                .
                .
512             .         E6
                .          .
                .          .
523           E...........
                .
                .
526             .         G1
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1****************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *              JUN   1998              *
 *           VERSION 4.1                *
 *                                      *
 *  RUN DATE   19APR06  TIME  15:27:15  *
 *                                      *
 ****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

```
STEP 2 HYDROLOGY FOR WHITE TANK WASH
SUN VALLEY ADMP
 - WHITE TANK WASH SUB-AREA
 - ALTERNATIVE B1
    big inline basin at apex, leveed downstream corridors

Alternative Description
The purpose of Alternative B is to capture the upstream flow at the
apex using online detention basins.  The presence of the detention
basins eliminates the downstream alluvial fan uncertainties by
controlling the flow from the apices to the outfall.  Alternative B1
is based on using a relatively larger on-line detention basin at the
apex accompanied by smaller leveed channel sections in the down fan
direction.  Alternative B1 is used for the CAP and White Tanks Wash
subareas which do not have more than one reasonable set of alignments
for the corridors.

JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
JANUARY 2006

MODEL BASED UPON:

Buckeye/Sun Valley ADMS - May 2005
Michael Baker Jr., Inc. - Modeler: Jacob Lesue
basins E-K with Aluvial Fan updates
100-year 6-hour
Existing Conditions
Area 3 - Sub-basins E-K (Aluvial Fan updates)
Rainfall Loss Method - Green & Ampt
Unit Hydrograph Method - FCDMC S-Graph
Channel Routing Method - Normal Depth
Land Use - FCDMC GIS Data: mag_landuse (2000)
Soil Data - USDA SCS Soil Survey (1972 & 1981)
Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)

37 IO        OUTPUT CONTROL VARIABLES
                IPRNT          5  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT        HYDROGRAPH TIME DATA
                 NMIN          5  MINUTES IN COMPUTATION INTERVAL
                IDATE     1JAN94  STARTING DATE
                ITIME       0000  STARTING TIME
                   NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
              NDDATE     7JAN94  ENDING DATE
              NDTIME       2235  ENDING TIME
               ICENT         19  CENTURY MARK

          COMPUTATION INTERVAL     .08 HOURS
               TOTAL TIME BASE  166.58 HOURS

      ENGLISH UNITS
           DRAINAGE AREA          SQUARE MILES
           PRECIPITATION DEPTH    INCHES
           LENGTH, ELEVATION      FEET
           FLOW                   CUBIC FEET PER SECOND
           STORAGE VOLUME         ACRE-FEET
           SURFACE AREA           ACRES
           TEMPERATURE            DEGREES FAHRENHEIT

39 JD        INDEX STORM NO. 1
                STRM        3.23  PRECIPITATION DEPTH
                TRDA         .01  TRANSPOSITION DRAINAGE AREA

40 PI          PRECIPITATION PATTERN
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                 .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                 .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00

44 JD        INDEX STORM NO. 2
                STRM        3.21  PRECIPITATION DEPTH
                TRDA         .50  TRANSPOSITION DRAINAGE AREA

45 PI          PRECIPITATION PATTERN
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                 .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                 .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00

49 JD        INDEX STORM NO. 3
                STRM        3.19  PRECIPITATION DEPTH
                TRDA        1.00  TRANSPOSITION DRAINAGE AREA
```

```
50 PI          PRECIPITATION PATTERN
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                  .03       .03       .06       .06       .06       .12       .12       .12       .03       .03
                  .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00

54 JD         INDEX STORM NO. 4
                 STRM        3.10  PRECIPITATION DEPTH
                 TRDA        5.00  TRANSPOSITION DRAINAGE AREA

55 PI          PRECIPITATION PATTERN
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                  .03       .03       .06       .06       .06       .08       .08       .08       .05       .05
                  .05       .02       .02       .02       .01       .01       .01       .01       .01       .01
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00

59 JD         INDEX STORM NO. 5
                 STRM        3.04  PRECIPITATION DEPTH
                 TRDA       10.00  TRANSPOSITION DRAINAGE AREA

60 PI          PRECIPITATION PATTERN
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
                  .01       .01       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                  .03       .03       .06       .06       .06       .07       .07       .07       .04       .04
                  .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00

64 JD         INDEX STORM NO. 6
                 STRM        2.94  PRECIPITATION DEPTH
                 TRDA       20.00  TRANSPOSITION DRAINAGE AREA

65 PI          PRECIPITATION PATTERN
                  .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                  .01       .01       .01       .01       .01       .00       .00       .00       .00       .00
                  .00       .01       .01       .01       .00       .00       .00       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                  .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                  .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00

69 JD         INDEX STORM NO. 7
                 STRM        2.88  PRECIPITATION DEPTH
                 TRDA       30.00  TRANSPOSITION DRAINAGE AREA

70 PI          PRECIPITATION PATTERN
                  .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                  .01       .01       .01       .01       .01       .00       .00       .00       .01       .01
                  .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                  .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                  .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .01       .01       .01       .00
                  .00       .00

74 JD         INDEX STORM NO. 8
                 STRM        2.81  PRECIPITATION DEPTH
                 TRDA       40.00  TRANSPOSITION DRAINAGE AREA

75 PI          PRECIPITATION PATTERN
                  .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                  .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                  .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                  .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                  .01       .01

79 JD         INDEX STORM NO. 9
                 STRM        2.58  PRECIPITATION DEPTH
                 TRDA      100.00  TRANSPOSITION DRAINAGE AREA

80 PI          PRECIPITATION PATTERN
                  .01       .01       .01       .00       .00       .00       .01       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                  .03       .03       .04       .04       .04       .05       .05       .05       .04       .04
                  .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                  .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                  .01       .01
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 292 KK     *     E4     *        BASIN
            *            *
            **************

 296 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          5  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          1  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .083  TIME INTERVAL IN HOURS

1
                                                RUNOFF SUMMARY
                                        FLOW IN CUBIC FEET PER SECOND
                                      TIME IN HOURS,  AREA IN SQUARE MILES

                                      PEAK   TIME OF     AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN     MAXIMUM     TIME OF
          OPERATION        STATION    FLOW    PEAK                                          AREA      STAGE     MAX STAGE
+                                                          6-HOUR     24-HOUR     72-HOUR

          HYDROGRAPH AT
+                              F1    1773.   4.83          444.        113.        38.       3.10
          ROUTED TO
+                            RRF1     187.   6.83          177.        110.        38.       3.10
          ROUTED TO
+                           F1-F2     187.   7.33          176.        110.        38.       3.10
          HYDROGRAPH AT
+                              F2    1306.   4.75          280.         70.        23.       2.21
          2 COMBINED AT
+                             F3R    1095.   4.75          380.        163.        55.       5.31
          ROUTED TO
+                            RRF2     178.   8.58          177.        150.        55.       5.31
          ROUTED TO
+                          F2-E2C     178.   9.00          177.        150.        55.       5.31
          HYDROGRAPH AT
+                              F3     454.   4.75           84.         21.         7.        .74
          2 COMBINED AT
+                             CF3     274.   4.83          192.        157.        59.       6.05
          HYDROGRAPH AT
+                             E2C     658.   4.58          108.         27.         9.        .72
          2 COMBINED AT
+                            CE2R     669.   4.67          257.        173.        64.       6.76
          DIVERSION TO
+                            DOUT       0.    .00            0.          0.         0.       6.76
          HYDROGRAPH AT
+                            DE2C     669.   4.67          257.        173.        64.       6.76
          ROUTED TO
+                          E2C-E3     664.   4.92          256.        173.        64.       6.76
          HYDROGRAPH AT
+                              E1     894.   4.50          148.         37.        12.        .96
          ROUTED TO
+                          E1-E2B     794.   4.83          148.         37.        12.        .96
          HYDROGRAPH AT
+                             E2B     450.   4.58           72.         18.         6.        .47
          2 COMBINED AT
+                            E3RB    1053.   4.83          205.         51.        17.       1.42
          ROUTED TO
+                           RRE3RB     187.   6.00          156.         51.        17.       1.42
          ROUTED TO
+                           E2B-E3     187.   6.67          154.         51.        17.       1.42
          2 COMBINED AT
+                            E3MID     664.   4.92          372.        215.        78.       8.19
          ROUTED TO
+                           E3E4RA     546.   5.67          346.        205.        75.       8.19
```

+	HYDROGRAPH AT	E2A	680.	4.67	127.	32.	11.	.80
+	ROUTED TO	E2A-E3	561.	5.67	126.	32.	11.	.80
+	HYDROGRAPH AT	E3	1149.	5.08	301.	75.	25.	2.49
+	2 COMBINED AT	E4RAR	1175.	5.42	393.	99.	33.	3.28
+	2 COMBINED AT	E4RA	1336.	5.67	581.	269.	97.	11.47
+	ROUTED TO	E3-E4	1154.	6.75	571.	266.	97.	11.47
+	HYDROGRAPH AT	E4	923.	5.42	319.	80.	27.	3.04
+	2 COMBINED AT	E5RR	1305.	6.67	713.	306.	111.	14.51
+	HYDROGRAPH AT	H1	497.	4.75	86.	22.	7.	1.07
+	ROUTED TO	H1-H2	331.	6.33	85.	22.	7.	1.07
+	HYDROGRAPH AT	H2	446.	5.25	134.	33.	11.	1.40
+	2 COMBINED AT	E5RL	389.	5.25	176.	45.	15.	2.47
+	2 COMBINED AT	E5R	1350.	5.83	759.	315.	114.	16.98
+	ROUTED TO	E4-E5	1284.	7.33	755.	314.	114.	16.98
+	HYDROGRAPH AT	E5	713.	4.92	165.	41.	14.	1.31
+	2 COMBINED AT	E6RR	1280.	7.25	787.	330.	121.	18.29
+	HYDROGRAPH AT	K1	1564.	4.50	291.	73.	24.	1.54
+	ROUTED TO	K1-K2A	1236.	5.25	289.	73.	24.	1.54
+	HYDROGRAPH AT	K2A	894.	5.25	269.	68.	23.	1.95
+	2 COMBINED AT	K2BR	1890.	5.25	517.	131.	44.	3.49
+	ROUTED TO	RRK2RB	193.	7.92	184.	125.	44.	3.49
+	ROUTED TO	K2A-2B	193.	8.42	184.	124.	44.	3.49
+	HYDROGRAPH AT	J1	626.	5.08	160.	40.	13.	1.73
+	2 COMBINED AT	CJ1	471.	5.08	250.	147.	52.	5.23
+	ROUTED TO	J1-J2	368.	6.75	228.	142.	52.	5.23
+	HYDROGRAPH AT	J2	1093.	5.33	349.	87.	29.	3.64
+	2 COMBINED AT	CJ2	885.	5.33	421.	197.	71.	8.86
+	ROUTED TO	J2-K3	875.	5.50	418.	196.	71.	8.86
+	HYDROGRAPH AT	K2B	309.	4.58	45.	11.	4.	.42
+	ROUTED TO	K2B-K3	172.	6.50	45.	11.	4.	.42
+	HYDROGRAPH AT	K3	520.	5.33	165.	41.	14.	1.64
+	2 COMBINED AT	CK3	495.	5.33	181.	46.	15.	2.05

+	2 COMBINED AT	E6RL	1135.	5.42	499.	216.	77.	10.92
+	2 COMBINED AT	E6R	1437.	5.67	1002.	450.	162.	29.20
+	ROUTED TO	E5-E6	1364.	6.42	992.	450.	162.	29.20
+	HYDROGRAPH AT	E6	1228.	4.75	253.	63.	21.	2.04
+	2 COMBINED AT	E	1381.	6.25	1038.	471.	170.	31.24
+	HYDROGRAPH AT	G1	927.	4.67	160.	40.	13.	1.12

*** NORMAL END OF HEC-1 ***

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1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN  1998               *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   19APR06  TIME  15:27:16  *
*                                      *
****************************************
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*************************************
*                                   *
*   U.S. ARMY CORPS OF ENGINEERS    *
*   HYDROLOGIC ENGINEERING CENTER   *
*         609 SECOND STREET         *
*      DAVIS, CALIFORNIA 95616      *
*          (916) 756-1104           *
*                                   *
*************************************
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X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX          XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1 HEC-1 INPUT PAGE 1

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
  2           ID    SUN VALLEY ADMP
  3           ID     - WHITE TANK WASH SUB-AREA
  4           ID     - ALTERNATIVE B1
  5           ID        big inline basin at apex, leveed downstream corridors
  6           ID
  7           ID  Alternative Description
  8           ID  The purpose of Alternative B is to capture the upstream flow at the
  9           ID  apex using online detention basins.  The presence of the detention
 10           ID  basins eliminates the downstream alluvial fan uncertainties by
 11           ID  controlling the flow from the apices to the outfall.  Alternative B1
 12           ID  is based on using a relatively larger on-line detention basin at the
 13           ID  apex accompanied by smaller leveed channel sections in the down fan
 14           ID  direction.  Alternative B1 is used for the CAP and White Tanks Wash
 15           ID  subareas which do not have more than one reasonable set of alignments
 16           ID  for the corridors.
 17           ID
 18           ID
 19           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
 20           ID    JANUARY 2006
 21           ID
 22           ID   MODEL BASED UPON:
 23           ID
 24           ID  Buckeye/Sun Valley ADMS - May 2005
 25           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
 26           ID  basins E-K with Aluvial Fan updates
 27           ID  100-year 24-hour
 28           ID  Existing Conditions
 29           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
 30           ID  Rainfall Loss Method - Green & Ampt
 31           ID  Unit Hydrograph Method - FCDMC S-Graph
 32           ID  Channel Routing Method - Normal Depth
 33           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
 34           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
 35           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
              *DIAGRAM
 36           IT       5 01JAN94       0    2000
 37           IO       5
 38           IN      15 01JAN94       0
 39           JD    4.16    0.01
              * SCS TYPE II 24-hour distribution
 40           PC     0.0   0.002   0.005   0.008   0.011   0.014   0.017    0.02   0.023   0.026
 41           PC   0.029   0.032   0.035   0.038   0.041   0.044   0.048   0.052   0.056    0.06
 42           PC   0.064   0.068   0.072   0.076    0.08   0.085    0.09   0.095     0.1   0.105
 43           PC    0.11   0.115    0.12   0.126   0.133    0.14   0.147   0.155   0.163   0.172
 44           PC   0.181   0.191   0.203   0.218   0.236   0.257   0.283   0.387   0.663   0.707
 45           PC   0.735   0.758   0.776   0.791   0.804   0.815   0.825   0.834   0.842   0.849
 46           PC   0.856   0.863   0.869   0.875   0.881   0.887   0.893   0.898   0.903   0.908
 47           PC   0.913   0.918   0.922   0.926    0.93   0.934   0.938   0.942   0.946    0.95
 48           PC   0.953   0.956   0.959   0.962   0.965   0.968   0.971   0.974   0.977    0.98
 49           PC   0.983   0.986   0.989   0.992   0.995   0.998     1.0
 50           JD   3.952    10.0
 51           JD   3.819    20.0
 52           JD    3.69    40.0
 53           JD   3.565    80.0
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1 HEC-1 INPUT PAGE 2

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  54          KK      F1   BASIN
  55          KM    TOTAL FLOW TO APEX 39
  56          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
  57          KM   L=5.07      Lca=2.57      S=369.39      Kn=0.050      LAG=61.9
  58          KM   S-GRAPH TYPE=PHX MNT
  59          BA   3.103
  60          LG   0.297   0.329   4.244   0.378  12.997
  61          UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
  62          UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
  63          UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
  64          UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
  65          UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
  66          UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
              *

  67          KK    RRF1 STORAGE
  68          KM    ROUTE RUNOFF FROM F1 THROUGH PROPOSED DETENTION BASIN AT APEX 39
  69          KM   PROPOSED DETENTION BASIN
  70          KM    STRUCTURE ID:RRF1
  71          KM    DIMENSIONS: L=1200ft, W=750ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 181.8 ac
  72          RS       1    STOR       0
  73          SV     0.0    17.0    34.3    51.9    69.7   106.0   143.4   181.8   221.2   261.7
  74          SE     0.0     1.0     2.0     3.0     4.0     6.0     8.0    10.0    12.0    14.0
  75          SQ     0.0    60.5    85.6   104.8   121.0   148.2   171.1   191.3   209.6   226.4
              *

  76          KK   F1-F2   ROUTE
  77          KM   PROPOSED CHANNEL
  78          KM    STRUCTURE ID(s): RRF110
  79          KM    Slope=(1493.3 - 1433.6) / 4725.1
  80          RS       3    FLOW      -1
  81          RC   0.045   0.045   0.045  4725.10.012648   104.5
  82          RX     0.0    13.5    13.5    13.5   213.5   213.5   213.5   227.0
  83          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
              *

  84          KK      F2   BASIN
  85          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
  86          KM   L=3.88      Lca=1.80      S=161.60      Kn=0.050      LAG=57.0
  87          KM   S-GRAPH TYPE=PHX MNT
  88          BA   2.209
  89          LG    0.35    0.35   4.375   0.362   3.346
  90          UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
  91          UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
  92          UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
  93          UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
  94          UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
  95          UI   25.01   25.01   25.01     0.0
              *
1                                          HEC-1 INPUT                                          PAGE  3

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  96          KK     F3R COMBINE
  97          KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
  98          HC       2
              *

  99          KK    RRF2 STORAGE
 100          KM    ROUTE RUNOFF FROM F1 AND F2 THROUGH PROPOSED DETENTION BASIN AT F2
 101          KM   PROPOSED DETENTION BASIN
 102          KM    STRUCTURE ID:RRF2
 103          KM    DIMENSIONS: L=1300ft, W=520ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 133.8 ac
 104          RS       1    STOR       0
 105          SV     0.0    12.3    24.9    50.7    77.4   105.2   133.8   148.5   163.5   178.7
 106          SE     0.0     1.0     2.0     4.0     6.0     8.0    10.0    11.0    12.0    13.0
 107          SQ     0.0    60.5    85.6   121.0   148.2   171.1   191.3   200.7   209.6   218.2
              *

 108          KK  F2-E2C   ROUTE
 109          KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
 110          KM    MODIFIED FOR STEP 2 OF ADMP
 111          KM   PROPOSED CHANNEL
 112          KM    STRUCTURE ID(s): E4RB10, E4RB20
 113          KM    Slope=(1433.6 - 1368.3) / 5731.3
 114          RS       4    FLOW      -1
 115          RC   0.045   0.045   0.045  5731.30.011392   105.0
 116          RX     0.0    15.0    15.0    15.0   135.0   135.0   135.0   150.0
 117          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 118          KK      F3   BASIN
 119          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 120          KM   L=2.71      Lca=1.26      S=81.34      Kn=0.055      LAG=54.2
 121          KM   S-GRAPH TYPE=DES RNGLND
 122          BA   0.736
 123          LG    0.35    0.35   3.284    0.64     0.0
 124          UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
 125          UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
 126          UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
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127          UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
128          UI     0.0
             *

129          KK     CF3 COMBINE
130          KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
131          HC       2
             *

132          KK     E2C   BASIN
133          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
134          KM   L=2.38      Lca=1.01      S=92.90      Kn=0.055      LAG=46.0
135          KM   S-GRAPH TYPE=DES RNGLND
136          BA   0.716
137          LG    0.35    0.35   4.343   0.357     0.0
138          UI     0.0   55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
139          UI  498.61  439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
1                                          HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

140          UI   84.51   59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
141          UI   13.41   13.41   13.41   13.41     0.0
             *

142          KK    CE2R COMBINE
143          KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
144          HC       2
             *

145          KK    DE2C  DIVERT
146          KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
147          KM    STRUCTURE ID:DE2C
148          KM    DIMENSIONS: L=220ft, W=120ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 1.4 ac-ft
149          DT    DOUT
150          DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
151          DI  1200.0  1179.7
152          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
153          DQ   343.0   323.0
             *

154          KK  E2C-E3   ROUTE
155          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
156          KM   PROPOSED CHANNEL
157          KM    STRUCTURE ID(s): E4RB30
158          KM    Slope=(1368.3 - 1313.1) / 4724.8
159          RS      13    FLOW      -1
160          RC   0.045   0.045   0.045  4724.80.011682   104.5
161          RX     0.0    13.5    13.5    13.5   133.5   133.5   133.5   147.0
162          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
             *

163          KK      E1   BASIN
164          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
165          KM   L=2.51      Lca=1.13      S=178.34      Kn=0.055      LAG=43.3
166          KM   S-GRAPH TYPE=PHX MNT
167          BA   0.956
168          LG    0.35   0.378   5.377   0.222    0.69
169          UI     0.0   74.86   77.94  239.17  368.29  486.24  570.86   714.2  832.85  536.73
170          UI  451.19  405.28  360.54  317.72  278.78  233.78  192.26  176.85  160.99  130.76
171          UI  107.56   95.43   81.98   76.82   57.39   57.39   44.31   36.63   36.63   36.63
172          UI   23.53   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35
173          UI     0.0
             *

174          KK  E1-E2B   ROUTE
175          RS       5    FLOW     0.0     0.0
176          RC    0.05   0.047   0.04610992.72   0.016     0.0
177          RX     0.0    65.0   140.0   170.0   185.0   200.0   270.0   340.0
178          RY    24.0    21.0    17.0    10.0    10.0    14.0    18.0    22.0
             *
1                                          HEC-1 INPUT                                          PAGE  5

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

179          KK     E2B   BASIN
180          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
181          KM   L=2.08      Lca=1.07      S=87.98      Kn=0.055      LAG=45.2
182          KM   S-GRAPH TYPE=DES RNGLND
183          BA   0.466
184          LG    0.35    0.38     5.6    0.21     0.0
185          UI     0.0    32.1    32.1   94.97  150.03  204.82  250.49  285.24   306.5  304.84
186          UI  285.73  244.25   203.0  165.28   137.3  113.17   92.95    75.5   62.33   52.17
187          UI   43.31   34.02   28.77   21.97   21.97   16.14    7.81    7.81    7.81    7.81
188          UI    7.81    7.81    7.81    7.81
             *

189          KK    E3RB COMBINE
190          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
191          HC       2
             *

192          KK  RRE3RB STORAGE
193          KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 6
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194          KM   PROPOSED DETENTION BASIN
195          KM    STRUCTURE ID:RRE3RB
196          KM    DIMENSIONS: L=1100ft, W=350ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 72.4 ac-
197          RS       1     STOR       0
198          SV     0.0      3.2      6.4      9.7     13.0     26.7     41.2     56.4     72.4     89.1
199          SE     0.0      0.5      1.0      1.5      2.0      4.0      6.0      8.0     10.0     12.0
200          SQ     0.0     42.8     60.5     74.1     85.6    121.0    148.2    171.1    191.3    209.6
             *

201          KK  E2B-E3   ROUTE
202          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
203          KM   PROPOSED CHANNEL
204          KM    STRUCTURE ID(s): E3RB10, E3RB20
205          KM    Slope=(1456.8 - 1313.1) / 10317.4
206          RS      12     FLOW      -1
207          RC   0.045    0.045    0.045 10317.40.013931    104.5
208          RX     0.0     13.5     13.5     13.5    133.5    133.5    133.5    147.0
209          RY   104.5    100.0    100.0    100.0    100.0    100.0    100.0    104.5
             *

210          KK   E3MID COMBINE
211          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
212          HC       2
             *

213          KK  E3E4RA   ROUTE
214          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
215          KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
216          KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
217          KM   PROPOSED CHANNEL
218          KM    STRUCTURE ID(s): E4RA10
219          KM    Slope=(1313.1 - 1230.3) / 10788.6
220          RS      12     FLOW      -1
221          RC   0.045    0.045    0.045 10788.6 0.00767    105.0
222          RX     0.0     15.0     15.0     15.0    195.0    195.0    195.0    210.0
1                                          HEC-1 INPUT                                                    PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

223          RY   105.0    100.0    100.0    100.0    100.0    100.0    100.0    105.0
             *

224          KK     E2A   BASIN
225          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
226          KM   L=2.90      Lca=1.20      S=100.83      Kn=0.055      LAG=52.4
227          KM   S-GRAPH TYPE=DES RNGLND
228          BA   0.797
229          LG    0.35     0.38      5.6     0.21      0.0
230          UI     0.0     51.6     51.6   110.43   196.83   277.44   347.94   413.76   460.03    489.1
231          UI  494.55    472.6   438.77   369.81   310.92   263.99   224.69   190.62   158.99   135.09
232          UI  112.23    97.29    80.97    70.86     54.7    53.12    35.32    35.32    35.32    21.96
233          UI   12.56    12.56    12.56    12.56    12.56    12.56    12.56    12.56    12.56      0.0
             *

234          KK  E2A-E3   ROUTE
235          RS      13     FLOW      0.0      0.0
236          RC   0.052    0.046   0.05219626.03  0.0093      0.0
237          RX     0.0    133.0    173.0    213.0    223.0    263.0    303.0    403.0
238          RY    22.0     17.0     14.0     10.0     10.0     15.0     18.0     22.0
             *

239          KK      E3   BASIN
240          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
241          KM   L=3.87      Lca=1.99      S=49.65      Kn=0.050      LAG=74.5
242          KM   S-GRAPH TYPE=DES RNGLND
243          BA   2.488
244          LG    0.35     0.35    4.362    0.346      0.0
245          UI     0.0   111.69   111.69   111.69   226.88   361.12   481.81   599.56   708.99   795.91
246          UI  924.44   981.52  1023.08  1070.39  1070.39  1054.33  1012.16   958.83   843.16    765.0
247          UI  671.82   595.75   537.55   476.38   423.35   378.09   335.18   305.82   252.8   234.07
248          UI  210.57   188.36   171.26   154.61   118.38   118.38   115.87    76.46    76.46    76.46
249          UI   76.46    75.47    27.18    27.18    27.18    27.18    27.18    27.18    27.18    27.18
250          UI   27.18    27.18    27.18    27.18    27.18    27.18
             *

251          KK   E4RAR COMBINE
252          KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
253          HC       2
             *

254          KK    E4RA COMBINE
255          KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
256          HC       2
             *
             *  SPOT FOR POTENTIAL DETENTION BASIN AT START OF WHITE TANK WASH
             *

257          KK   E3-E4   ROUTE
258          KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
259          RS      14     FLOW      0.0      0.0
260          RC   0.056    0.049   0.05613854.98  0.0048      0.0
261          RX     0.0    570.0    650.0    690.0    705.0    735.0    810.0   1200.0
262          RY    21.0     14.0     13.0     10.0     10.0     12.5     14.5     21.0
             *
1                                          HEC-1 INPUT                                                    PAGE  7
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 263          KK      E4   BASIN
 264          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 265          KM   L=5.36      Lca=2.81      S=38.26      Kn=0.050      LAG=101.9
 266          KM   S-GRAPH TYPE=DES RNGLND
 267          KO       0        0     0.0        1       22
 268          BA   3.042
 269          LG    0.35     0.35   3.816    0.439      0.0
 270          UI     0.0   100.41  100.41   100.41   100.41    158.4  288.69  358.15  433.82  515.05
 271          UI  586.72   661.74  710.91   802.48   849.78   890.67  905.99   962.3   962.3   962.3
 272          UI  958.07   920.61  904.77   855.38   781.14   712.32  671.29  604.26   557.2  512.12
 273          UI  469.45   435.76   392.7   363.69   334.37   307.94  277.85  264.88  224.23  220.83
 274          UI  189.31   189.31  167.81   153.97   153.97    127.9  106.43  106.43  106.43  101.85
 275          UI   68.74    68.74   68.74    68.74    68.74    68.74    56.9   24.44   24.44   24.44
 276          UI   24.44    24.44   24.44    24.44    24.44    24.44   24.44   24.44   24.44   24.44
 277          UI   24.44    24.44   24.44    24.44    24.44    24.44
              *

 278          KK    E5RR COMBINE
 279          KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
 280          HC       2
              *

 281          KK      H1   BASIN
 282          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 283          KM   L=2.41      Lca=1.09      S=64.59      Kn=0.055      LAG=51.2
 284          KM   S-GRAPH TYPE=DES RNGLND
 285          BA   1.066
 286          LG    0.35     0.35   2.733    0.945      0.0
 287          UI     0.0    70.38   70.38   156.67   277.53   386.09  481.01   579.0   629.6  674.43
 288          UI  672.95   639.66  573.48   484.85   407.01   343.97  290.32  244.62  205.27   171.4
 289          UI  143.72   125.14  107.91    82.11    74.59    69.78   48.17   48.17   44.03   17.13
 290          UI   17.13    17.13   17.13    17.13    17.13    17.13   17.13   17.13     0.0
              *

 291          KK   H1-H2   ROUTE
 292          KM    ROUTE RUNOFF FROM H1 TO E5R
 293          RS       21     FLOW      0.0      0.0
 294          RC    0.053     0.05   0.05321739.03   0.0082      0.0
 295          RX      0.0    330.0    430.0    465.0    495.0    530.0   630.0   960.0
 296          RY     17.0     14.0     12.0     10.0     10.0     12.0    14.0    17.0
              *

 297          KK      H2   BASIN
 298          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 299          KM   L=4.41      Lca=2.60      S=44.71      Kn=0.050      LAG=88.9
 300          KM   S-GRAPH TYPE=DES RNGLND
 301          BA     1.4
 302          LG    0.35     0.35   3.222    0.664      0.0
 303          UI     0.0    52.96   52.96    52.96    52.96   142.93  178.39   226.9  274.71  319.58
 304          UI  365.35    394.2  441.12   466.71    479.3   507.56  507.56  507.56  494.47  478.59
 305          UI  456.68   413.58  373.47   343.47   306.13   279.54  254.31  232.29  208.19  189.77
 306          UI  169.44   155.74  145.02   121.24   117.25    99.85   99.85   83.38   81.21   75.85
 307          UI   56.14    56.14   56.14    49.15    36.25    36.25   36.25   36.25   36.25    27.6
 308          UI   12.89    12.89   12.89    12.89    12.89    12.89   12.89   12.89   12.89   12.89
1                                                  HEC-1 INPUT                                          PAGE  8

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 309          UI   12.89    12.89   12.89    12.89    12.89    12.89     0.0
              *

 310          KK    E5RL COMBINE
 311          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
 312          HC       2
              *

 313          KK     E5R COMBINE
 314          KM    COMBINE ALL FLOWS AT E5R
 315          HC       2
              *

 316          KK   E4-E5   ROUTE
 317          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
 318          RS       14     FLOW      0.0      0.0
 319          RC     0.06     0.05   0.0615206.17   0.0051      0.0
 320          RX      0.0   1010.0   1080.0   1090.0   1110.0   1120.0  1190.0  2200.0
 321          RY     27.0     16.0     15.0     10.0     10.0     14.0    16.0    27.0
              *

 322          KK      E5   BASIN
 323          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 324          KM   L=3.01      Lca=1.41      S=28.56      Kn=0.050      LAG=65.8
 325          KM   S-GRAPH TYPE=DES RNGLND
 326          BA   1.308
 327          LG   0.347    0.344     3.94    0.429    0.968
 328          UI     0.0    66.73   66.73    66.73   187.33   261.54  342.37  416.83  480.54  556.36
 329          UI  598.07   622.96  639.46   636.14   605.78   574.36  496.51  443.91  383.22  336.88
 330          UI  298.49   258.94  227.11   198.14   176.39    149.0   129.8   120.7  102.31   94.82
 331          UI   70.72    70.72   61.39    45.68    45.68    45.68   45.68   18.08   16.24   16.24
 332          UI   16.24    16.24   16.24    16.24    16.24    16.24   16.24   16.24   16.24     0.0
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333          KK    E6RR COMBINE
334          KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
335          KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
336          KM    (WEST CORRIDOR U/S OF E6R)
337          HC       2
             *

338          KK      K1   BASIN
339          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
340          KM   L=3.23      Lca=1.84      S=681.00      Kn=0.050      LAG=40.4
341          KM   S-GRAPH TYPE=PHX MNT
342          BA   1.543
343          LG   0.112   0.255   4.365   0.366  21.277
344          UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
345          UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
346          UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
347          UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
             *
1                                          HEC-1 INPUT                                          PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

348          KK  K1-K2A   ROUTE
349          KM    ROUTE RUNOFF FROM K1 TO APEX 38
350          RS      10    FLOW     0.0     0.0
351          RC    0.05   0.048    0.0519434.11   0.017     0.0
352          RX     0.0    20.0    55.0    85.0   235.0   259.0   289.0   309.0
353          RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
             *

354          KK     K2A   BASIN
355          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
356          KM   L=5.29      Lca=2.72      S=126.78      Kn=0.055      LAG=87.2
357          KM   S-GRAPH TYPE=DES RNGLND
358          BA   1.949
359          LG   0.341   0.347   4.907   0.278   1.288
360          UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
361          UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
362          UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
363          UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
364          UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
365          UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
366          UI   18.36   18.36   18.36   18.36     0.0
             *

367          KK    K2BR COMBINE
368          KM    COMBINE FLOWS AT APEX 38
369          HC       2
             *

370          KK  RRK2RB STORAGE
371          KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 38
372          KM   PROPOSED DETENTION BASIN
373          KM    STRUCTURE ID:RRK2RB
374          KM    DIMENSIONS: L=2000ft, W=500ft, D=12ft, Sideslope (?H:1V)= 3,  Vol.= 219.5 ac
375          RS       1    STOR       0
376          SV     0.0    18.3    55.9    94.8   135.0   155.6   176.6   197.8   219.5   263.7
377          SE     0.0     1.0     3.0     5.0     7.0     8.0     9.0    10.0    11.0    13.0
378          SQ     0.0    60.5   104.8   135.3   160.1   171.1   181.5   191.3   200.7   218.2
             *

379          KK  K2A-2B   ROUTE
380          KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
381          KM    MODIFIED FOR STEP 2 OF ADMP
382          KM   PROPOSED CHANNEL
383          KM    STRUCTURE ID(s): CJ110, CJ120
384          KM    Slope=(1437.6 - 1316.8) / 10052.6
385          RS       4    FLOW      -1
386          RC   0.045   0.045   0.045 10052.60.012015   105.0
387          RX     0.0    15.0    15.0    15.0    85.0    85.0    85.0   100.0
388          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
             *
1                                          HEC-1 INPUT                                          PAGE 10

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

389          KK      J1   BASIN
390          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
391          KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
392          KM   S-GRAPH TYPE=DES RNGLND
393          BA   1.734
394          LG    0.35    0.35    3.25   0.652     0.0
395          UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
396          UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
397          UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
398          UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
399          UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
400          UI   18.95   18.95   18.95   18.95   18.95   18.95
             *

401          KK     CJ1 COMBINE
402          KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
```

```
 403          KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
 404          HC       2
              *

 405          KK   J1-J2   ROUTE
 406          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
 407          KM   PROPOSED CHANNEL
 408          KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
 409          KM    Slope=(1316.8 - 1104.3) / 23082.2
 410          RS      16     FLOW      -1
 411          RC   0.045   0.045   0.045 23082.20.009207   105.0
 412          RX     0.0    15.0    15.0    15.0   155.0   155.0   155.0   170.0
 413          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 414          KK      J2   BASIN
 415          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 416          KM   L=5.18      Lca=2.51      S=45.01      Kn=0.050      LAG=93.2
 417          KM   S-GRAPH TYPE=DES RNGLND
 418          BA   3.638
 419          LG   0.349   0.348   3.621   0.496   0.281
 420          UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
 421          UI  857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
 422          UI  1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
 423          UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
 424          UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
 425          UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
 426          UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
              *

 427          KK     CJ2 COMBINE
 428          KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
 429          HC       2
              *
1                                          HEC-1 INPUT                                          PAGE 11

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 430          KK   J2-K3   ROUTE
 431          KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
 432          KM   PROPOSED CHANNEL
 433          KM    STRUCTURE ID(s): E6RL10
 434          KM    Slope=(1104.3 - 1084.9) / 3156.5
 435          RS       3     FLOW      -1
 436          RC   0.045   0.045   0.045 3156.50.006135   105.0
 437          RX     0.0    15.0    15.0    15.0   215.0   215.0   215.0   230.0
 438          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 439          KK     K2B   BASIN
 440          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 441          KM   L=2.01      Lca=0.83      S=60.78      Kn=0.055      LAG=43.5
 442          KM   S-GRAPH TYPE=DES RNGLND
 443          BA   0.416
 444          LG    0.35    0.35   2.708   0.961     0.0
 445          UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
 446          UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
 447          UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
 448          UI    7.93    7.93     0.0
              *

 449          KK  K2B-K3   ROUTE
 450          KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
 451          RS      19     FLOW     0.0     0.0
 452          RC    0.05   0.048    0.0525950.11  0.0084     0.0
 453          RX     0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
 454          RY    20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
              *

 455          KK      K3   BASIN
 456          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 457          KM   L=4.92      Lca=2.65      S=44.16      Kn=0.050      LAG=93.6
 458          KM   S-GRAPH TYPE=DES RNGLND
 459          BA   1.636
 460          LG    0.35    0.35   3.421   0.582     0.0
 461          UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
 462          UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
 463          UI  528.98  508.31  466.83  418.22  391.32  351.35  318.32  291.61  266.72  243.82
 464          UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
 465          UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
 466          UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
 467          UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
              *

 468          KK     CK3 COMBINE
 469          KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
 470          HC       2
              *
1                                          HEC-1 INPUT                                          PAGE 12

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 471          KK    E6RL COMBINE
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472          KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
473          HC       2
             *

474          KK     E6R COMBINE
475          KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
476          HC       2
             *

477          KK   E5-E6   ROUTE
478          KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
479          RS       4    FLOW     0.0     0.0
480          RC   0.063   0.051   0.063  5105.8  0.0037     0.0
481          RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
482          RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
             *

483          KK      E6   BASIN
484          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
485          KM   L=3.04      Lca=1.06      S=34.17      Kn=0.050      LAG=57.1
486          KM   S-GRAPH TYPE=DES RNGLND
487          BA   2.038
488          LG   0.343   0.336   4.356   0.367   0.711
489          UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
490          UI  1153.6 1153.67  1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
491          UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
492          UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
493          UI    29.3    29.3     0.0
             *

494          KK       E COMBINE
495          KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
496          HC       2
             *

497          KK      G1   BASIN
498          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
499          KM   L=2.38      Lca=1.08      S=33.76      Kn=0.045      LAG=47.1
500          KM   S-GRAPH TYPE=DES RNGLND
501          BA   1.119
502          LG    0.35    0.35    4.68   0.299     0.0
503          UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
504          UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
505          UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
506          UI   19.51   19.51   19.51   19.51   19.51     0.0
507          ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

  NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   54          F1
                V
                V
   67        RRF1
                V
                V
   76       F1-F2
                .
                .
   84            .          F2
                 .           .
                 .           .
   96         F3R............
                V
                V
   99        RRF2
                V
                V
  108      F2-E2C
                .
                .
  118            .          F3
                 .           .
                 .           .
  129         CF3............
                .
                .
  132            .         E2C
                 .           .
                 .           .
  142        CE2R............
                .
                .
  149            .-------->    DOUT
  145        DE2C
                V
                V
  154      E2C-E3
                .
                .
  163            .          E1
                 .           V
```

```
                .           V
174             .      E1-E2B
                .           .
                .           .
179             .           .          E2B
                .           .            .
                .           .            .
189             .       E3RB............
                .           V
                .           V
192             .      RRE3RB
                .           V
                .           V
201             .      E2B-E3
                .           .
                .           .
210         E3MID...........
                V
                V
213         E3E4RA
                .
                .
224             .         E2A
                .           V
                .           V
234             .      E2A-E3
                .           .
                .           .
239             .           .           E3
                .           .            .
                .           .            .
251             .       E4RAR............
                .           .
                .           .
254          E4RA...........
                V
                V
257          E3-E4
                .
                .
263             .          E4
                .           .
                .           .
278          E5RR...........
                .
                .
281             .          H1
                .           V
                .           V
291             .       H1-H2
                .           .
                .           .
297             .           .           H2
                .           .            .
                .           .            .
310             .       E5RL............
                .           .
                .           .
313           E5R...........
                V
                V
316          E4-E5
                .
                .
322             .          E5
                .           .
                .           .
333          E6RR...........
                .
                .
338             .          K1
                .           V
                .           V
348             .      K1-K2A
                .           .
                .           .
354             .           .          K2A
                .           .            .
                .           .            .
367             .       K2BR............
                .           V
                .           V
370             .      RRK2RB
                .           V
                .           V
379             .      K2A-2B
                .           .
                .           .
389             .           .           J1
                .           .            .
                .           .            .
401             .        CJ1............
                .           V
                .           V
405             .       J1-J2
```

```
                .          .
                .          .
  414           .          .          J2
                .          .           .
                .          .           .
  427           .       CJ2............
                .         V
                .         V
  430           .      J2-K3
                .          .
                .          .
  439           .          .        K2B
                .          .         V
                .          .         V
  449           .          .     K2B-K3
                .          .           .
                .          .           .
  455           .          .           .          K3
                .          .           .           .
                .          .           .           .
  468           .          .        CK3............
                .          .           .
                .          .           .
  471           .      E6RL............
                .          .
                .          .
  474        E6R............
               V
               V
  477      E5-E6
                .
                .
  483           .         E6
                .          .
                .          .
  494           E............
                .
                .
  497           .         G1
```

```
(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   19APR06  TIME  15:27:16  *
*                                      *
****************************************
```

```
*************************************
*                                   *
*    U.S. ARMY CORPS OF ENGINEERS   *
*    HYDROLOGIC ENGINEERING CENTER  *
*          609 SECOND STREET        *
*       DAVIS, CALIFORNIA 95616     *
*           (916) 756-1104          *
*                                   *
*************************************
```

STEP 2 HYDROLOGY FOR WHITE TANK WASH
SUN VALLEY ADMP
- WHITE TANK WASH SUB-AREA
- ALTERNATIVE B1
  big inline basin at apex, leveed downstream corridors

Alternative Description
The purpose of Alternative B is to capture the upstream flow at the apex using online detention basins. The presence of the detention basins eliminates the downstream alluvial fan uncertainties by controlling the flow from the apices to the outfall. Alternative B1 is based on using a relatively larger on-line detention basin at the apex accompanied by smaller leveed channel sections in the down fan direction. Alternative B1 is used for the CAP and White Tanks Wash subareas which do not have more than one reasonable set of alignments for the corridors.

JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
JANUARY 2006

MODEL BASED UPON:

Buckeye/Sun Valley ADMS - May 2005
Michael Baker Jr., Inc. - Modeler: Jacob Lesue
basins E-K with Aluvial Fan updates
100-year 24-hour
Existing Conditions
Area 3 - Sub-basins E-K (Aluvial Fan updates)
Rainfall Loss Method - Green & Ampt
Unit Hydrograph Method - FCDMC S-Graph
Channel Routing Method - Normal Depth
Land Use - FCDMC GIS Data: mag_landuse (2000)
Soil Data - USDA SCS Soil Survey (1972 & 1981)
Units - L(mi) Lca(mi) S(ft/mi) LAG(min)

```
 37 IO        OUTPUT CONTROL VARIABLES
                    IPRNT          5  PRINT CONTROL
                    IPLOT          0  PLOT CONTROL
                    QSCAL         0.  HYDROGRAPH PLOT SCALE
```

```
 IT          HYDROGRAPH TIME DATA
                   NMIN          5  MINUTES IN COMPUTATION INTERVAL
                  IDATE     1JAN94  STARTING DATE
                  ITIME       0000  STARTING TIME
                     NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                 NDDATE     7JAN94  ENDING DATE
                 NDTIME       2235  ENDING TIME
                  ICENT         19  CENTURY MARK

               COMPUTATION INTERVAL      .08 HOURS
                    TOTAL TIME BASE   166.58 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT

 39 JD           INDEX STORM NO. 1
                   STRM       4.16  PRECIPITATION DEPTH
                   TRDA        .01  TRANSPOSITION DRAINAGE AREA

 40 PI             PRECIPITATION PATTERN
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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                   .01      .01      .01      .01      .01      .01      .01      .01      .03      .03
                   .03      .09      .09      .09      .01      .01      .01      .01      .01      .01
                   .01      .01      .01      .01      .01      .01      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00

 50 JD           INDEX STORM NO. 2
                   STRM       3.95  PRECIPITATION DEPTH
                   TRDA      10.00  TRANSPOSITION DRAINAGE AREA

  0 PI             PRECIPITATION PATTERN
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .01      .00      .01
                   .01      .01      .01      .01      .01      .01      .01      .01      .03      .03
                   .03      .09      .09      .09      .01      .01      .01      .01      .01      .01
                   .01      .01      .01      .01      .01      .01      .00      .00      .00      .00
                   .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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                   .00      .00      .00      .00      .00      .00      .00      .00

 51 JD           INDEX STORM NO. 3
                   STRM       3.82  PRECIPITATION DEPTH
                   TRDA      20.00  TRANSPOSITION DRAINAGE AREA
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```
  0 PI           PRECIPITATION PATTERN
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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 52 JD          INDEX STORM NO. 4
                      STRM       3.69  PRECIPITATION DEPTH
                      TRDA      40.00  TRANSPOSITION DRAINAGE AREA

  0 PI           PRECIPITATION PATTERN
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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 53 JD          INDEX STORM NO. 5
                      STRM       3.57  PRECIPITATION DEPTH
                      TRDA      80.00  TRANSPOSITION DRAINAGE AREA

  0 PI           PRECIPITATION PATTERN
                    .00      .00      .00      .00      .00      .00      .00      .00      .00      .00
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          **************
          *            *
 263 KK   *     E4     *      BASIN
          *            *
          **************

 267 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          5  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          1  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .083  TIME INTERVAL IN HOURS

1
                                          RUNOFF SUMMARY
                                     FLOW IN CUBIC FEET PER SECOND
                                  TIME IN HOURS,  AREA IN SQUARE MILES

                                     PEAK   TIME OF     AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN     MAXIMUM     TIME OF
        OPERATION        STATION     FLOW    PEAK                                           AREA      STAGE     MAX STAGE
+                                                          6-HOUR     24-HOUR     72-HOUR

        HYDROGRAPH AT
+                            F1     1868.   12.83          433.        121.         40.      3.10

        ROUTED TO
+                          RRF1      185.   14.92          175.        114.         40.      3.10

        ROUTED TO
+                          F1-F2     184.   15.33          175.        114.         40.      3.10

        HYDROGRAPH AT
+                            F2     1333.   12.75          266.         69.         23.      2.21

        2 COMBINED AT
+                           F3R     1364.   12.75          408.        179.         63.      5.31

        ROUTED TO
+                          RRF2      186.   16.42          185.        162.         63.      5.31

        ROUTED TO
+                        F2-E2C      186.   16.92          185.        162.         63.      5.31

        HYDROGRAPH AT
+                            F3      375.   12.75           69.         17.          6.       .74

        2 COMBINED AT
+                           CF3      397.   12.75          219.        175.         68.      6.05

        HYDROGRAPH AT
+                           E2C      541.   12.58           88.         22.          7.       .72

        2 COMBINED AT
+                          CE2R      904.   12.67          300.        196.         75.      6.76

        DIVERSION TO
+                          DOUT       47.   12.67            1.          0.          0.      6.76

        HYDROGRAPH AT
+                          DE2C      857.   12.58          298.        195.         75.      6.76

        ROUTED TO
+                        E2C-E3      861.   12.83          296.        195.         75.      6.76

        HYDROGRAPH AT
+                            E1      790.   12.50          125.         32.         11.       .96

        ROUTED TO
+                        E1-E2B      687.   12.83          125.         32.         11.       .96

        HYDROGRAPH AT
+                           E2B      352.   12.58           57.         14.          5.       .47

        2 COMBINED AT
+                          E3RB      958.   12.83          181.         45.         15.      1.42

        ROUTED TO
+                        RRE3RB      175.   14.00          144.         45.         15.      1.42

        ROUTED TO
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+		E2B-E3	175.	14.67	142.	45.	15.	1.42
+	2 COMBINED AT	E3MID	862.	12.83	416.	239.	90.	8.19
+	ROUTED TO	E3E4RA	786.	13.50	398.	235.	90.	8.19
+	HYDROGRAPH AT	E2A	572.	12.67	105.	26.	9.	.80
+	ROUTED TO	E2A-E3	461.	13.67	105.	26.	9.	.80
+	HYDROGRAPH AT	E3	1130.	13.00	289.	72.	24.	2.49
+	2 COMBINED AT	E4RAR	1177.	13.42	389.	98.	33.	3.28
+	2 COMBINED AT	E4RA	1903.	13.50	716.	322.	120.	11.47
+	ROUTED TO	E3-E4	1607.	14.58	704.	320.	120.	11.47
+	HYDROGRAPH AT	E4	966.	13.42	328.	83.	28.	3.04
+	2 COMBINED AT	E5RR	1964.	14.50	952.	387.	144.	14.51
+	HYDROGRAPH AT	H1	472.	12.75	82.	20.	7.	1.07
+	ROUTED TO	H1-H2	314.	14.33	80.	20.	7.	1.07
+	HYDROGRAPH AT	H2	432.	13.25	128.	32.	11.	1.40
+	2 COMBINED AT	E5RL	469.	14.25	202.	52.	17.	2.47
+	2 COMBINED AT	E5R	2350.	14.42	1123.	431.	159.	16.98
+	ROUTED TO	E4-E5	2175.	15.67	1116.	429.	159.	16.98
+	HYDROGRAPH AT	E5	645.	12.92	147.	37.	12.	1.31
+	2 COMBINED AT	E6RR	2175.	15.67	1189.	455.	169.	18.29
+	HYDROGRAPH AT	K1	1433.	12.50	254.	74.	25.	1.54
+	ROUTED TO	K1-K2A	1031.	13.25	254.	74.	25.	1.54
+	HYDROGRAPH AT	K2A	827.	13.25	245.	62.	21.	1.95
+	2 COMBINED AT	K2BR	1839.	13.25	495.	135.	45.	3.49
+	ROUTED TO	RRK2RB	189.	15.92	181.	126.	45.	3.49
+	ROUTED TO	K2A-2B	189.	16.42	181.	125.	45.	3.49
+	HYDROGRAPH AT	J1	633.	13.08	160.	40.	13.	1.73
+	2 COMBINED AT	CJ1	644.	13.08	291.	162.	58.	5.23
+	ROUTED TO	J1-J2	533.	14.42	267.	158.	58.	5.23
+	HYDROGRAPH AT	J2	1212.	13.33	379.	95.	32.	3.64
+	2 COMBINED AT	CJ2	1205.	13.33	580.	246.	89.	8.86
+	ROUTED TO	J2-K3	1191.	13.42	577.	245.	89.	8.86
+	HYDROGRAPH AT	K2B	217.	12.58	32.	8.	3.	.42

+	ROUTED TO	K2B-K3	110.	14.67	32.	8.	3.	.42
+	HYDROGRAPH AT	K3	507.	13.33	160.	40.	13.	1.64
+	2 COMBINED AT	CK3	506.	13.33	188.	48.	16.	2.05
+	2 COMBINED AT	E6RL	1663.	13.42	747.	288.	103.	10.92
+	2 COMBINED AT	E6R	2712.	14.83	1814.	703.	257.	29.20
+	ROUTED TO	E5-E6	2674.	15.42	1799.	702.	257.	29.20
+	HYDROGRAPH AT	E6	1194.	12.75	237.	60.	20.	2.04
+	2 COMBINED AT	E	2674.	15.33	1932.	747.	274.	31.24
+	HYDROGRAPH AT	G1	819.	12.58	136.	34.	11.	1.12

*** NORMAL END OF HEC-1 ***

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1****************************************                                    ****************************************
 *                                      *                                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                    *    U.S. ARMY CORPS OF ENGINEERS      *
 *              JUN   1998              *                                    *    HYDROLOGIC ENGINEERING CENTER     *
 *            VERSION 4.1               *                                    *          609 SECOND STREET           *
 *                                      *                                    *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   19APR06  TIME  15:33:01  *                                    *          (916) 756-1104              *
 *                                      *                                    *                                      *
 ****************************************                                    ****************************************

                                        X     X  XXXXXXX   XXXXX           X
                                        X     X  X        X     X         XX
                                        X     X  X        X                X
                                        XXXXXXX  XXXX     X        XXXXX   X
                                        X     X  X        X                X
                                        X     X  X        X     X          X
                                        X     X  XXXXXXX   XXXXX         XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                                HEC-1 INPUT                                                    PAGE  1

      LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

        1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
        2           ID    SUN VALLEY ADMP
        3           ID     - WHITE TANK WASH SUB-AREA
        4           ID     - ALTERNATIVE B2
        5           ID         small online detention basin at apex
        6           ID         with leveed downstream corridors
        7           ID
        8           ID   Alternative Description
        9           ID   The purpose of Alternative B is to capture the upstream flow at the
       10           ID   apex using online detention basins.  The presence of the detention
       11           ID   basins eliminates the downstream alluvial fan uncertainties by
       12           ID   controlling the flow from the apices to the outfall.  Alternative B2
       13           ID   is based on using a relatively smaller on-line detention basin at the
       14           ID   apex accompanied by larger leveed channel sections in the down fan
       15           ID   direction.
       16           ID
       17           ID
       18           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
       19           ID   JANUARY 2006
       20           ID
       21           ID   MODEL BASED UPON:
       22           ID
       23           ID  Buckeye/Sun Valley ADMS - May 2005
       24           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
       25           ID  basins E-K with Aluvial Fan updates
       26           ID  100-year 6-hour
       27           ID  Existing Conditions
       28           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
       29           ID  Rainfall Loss Method - Green & Ampt
       30           ID  Unit Hydrograph Method - FCDMC S-Graph
       31           ID  Channel Routing Method - Normal Depth
       32           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
       33           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
       34           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
                    *DIAGRAM
       35           IT       5 01JAN94       0    2000
       36           IO       5
       37           IN      15 01JAN94       0
       38           JD    3.23    0.01
                    * 6-hour distribution, pattern 1.0
       39           PC     0.0   0.008   0.016   0.025   0.033   0.041    0.05   0.058   0.066   0.074
       40           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931    0.95
       41           PC   0.962   0.972   0.983   0.991     1.0
       42           IN      15 01JAN94       0
       43           JD   3.211     0.5
                    * 6-hour distribution, pattern 1.0
       44           PC     0.0   0.008   0.016   0.025   0.033   0.041    0.05   0.058   0.066   0.074
       45           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931    0.95
       46           PC   0.962   0.972   0.983   0.991     1.0
       47           IN      15 01JAN94       0
       48           JD   3.188     1.0
                    * 6-hour distribution, pattern 1.4
       49           PC     0.0  0.0084   0.016   0.025  0.0334  0.0414  0.0504  0.0584  0.0664  0.0748
       50           PC   0.087  0.0994  0.1188   0.148  0.2304  0.4067  0.7778  0.8813  0.9186  0.9452
       51           PC  0.9572  0.9684  0.9798  0.9898     1.0
1                                                HEC-1 INPUT                                                    PAGE  2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 52           IN      15 01JAN94        0
 53           JD   3.101     5.0
              * 6-hour distribution, pattern 2.3
 54           PC     0.0   0.011  0.0173  0.0267  0.0387   0.049  0.0593  0.0693  0.0797  0.0903
 55           PC   0.103  0.1173  0.1383  0.1827  0.2693   0.458   0.686  0.8233  0.8893  0.9293
 56           PC  0.9487   0.962  0.9743  0.9877     1.0
 57           IN      15 01JAN94        0
 58           JD   3.036    10.0
              * 6-hour distribution, pattern 2.7
 59           PC     0.0  0.0134  0.0189  0.0287  0.0443  0.0574  0.0694  0.0818  0.0949  0.1076
 60           PC  0.1223  0.1382  0.1604  0.2063  0.2902  0.4664  0.6764  0.8069  0.8765  0.9189
 61           PC  0.9471  0.9608  0.9735  0.9873     1.0
 62           IN      15 01JAN94        0
 63           JD   2.939    20.0
              * 6-hour distribution, pattern 3.1
 64           PC     0.0  0.0158   0.022  0.0329  0.0511  0.0663  0.0799  0.0948  0.1102  0.1246
 65           PC   0.141  0.1587  0.1828    0.23  0.3122  0.4758  0.6684  0.7929  0.8643  0.9087
 66           PC  0.9434   0.958  0.9718  0.9863     1.0
 67           IN      15 01JAN94        0
 68           JD   2.875    30.0
              * 6-hour distribution, pattern 3.4
 69           PC     0.0  0.0172  0.0256  0.0378  0.0565  0.0719  0.0868   0.103  0.1191  0.1342
 70           PC  0.1513  0.1702  0.1961  0.2439  0.3263  0.4824  0.6655  0.7875   0.858  0.9031
 71           PC   0.939  0.9544  0.9697  0.9851     1.0
 72           IN      15 01JAN94        0
 73           JD    2.81    40.0
              * 6-hour distribution, pattern 3.5
 74           PC     0.0  0.0182  0.0281  0.0413  0.0604  0.0759  0.0916  0.1088  0.1254   0.141
 75           PC  0.1586  0.1783  0.2056  0.2537  0.3362   0.487  0.6636  0.7836  0.8535  0.8991
 76           PC  0.9358  0.9519  0.9682  0.9843     1.0
 77           IN      15 01JAN94        0
 78           JD   2.584   100.0
              * 6-hour distribution, pattern 4.1
 79           PC     0.0  0.0212  0.0355  0.0515  0.0715  0.0877   0.106  0.1261  0.1443  0.1618
 80           PC  0.1812  0.2036  0.2347  0.2837   0.367   0.501  0.6559  0.7704  0.8392  0.8864
 81           PC  0.9256   0.944  0.9633  0.9817     1.0
              *

 82           KK      F1   BASIN
 83           KM    TOTAL FLOW TO APEX 39
 84           KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 85           KM   L=5.07      Lca=2.57      S=369.39      Kn=0.050      LAG=61.9
 86           KM   S-GRAPH TYPE=PHX MNT
 87           BA   3.103
 88           LG   0.297   0.329   4.244   0.378  12.997
 89           UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
 90           UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
 91           UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
 92           UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
 93           UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
 94           UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 95           KK    RRF1 STORAGE
 96           KM   PROPOSED DETENTION BASIN
 97           KM    ROUTE RUNOFF FROM F1 THROUGH PROPOSED DETENTION BASIN AT APEX 39
 98           KM    STRUCTURE ID:RRF1
 99           KM    DIMENSIONS: L=800ft, W=450ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 22.4 ac-ft
100           RS       1    STOR       0
101           SV     0.0     7.3    14.8    22.4    30.3    38.2    46.4    54.7    63.2    71.9
102           SE     0.0     1.0     2.0     3.0     4.0     5.0     6.0     7.0     8.0     9.0
103           SQ     0.0  1134.5  1604.4  1965.0  2269.0  2536.8  2779.0  3001.6  3208.9  3403.5
              *

104           KK   F1-F2   ROUTE
105           KM   PROPOSED CHANNEL
106           KM    STRUCTURE ID(s): RRF110
107           KM    Slope=(1493.3 - 1433.6) / 4725.1
108           RS       3    FLOW      -1
109           RC   0.045   0.045   0.045  4725.10.012648   105.0
110           RX     0.0    15.0    15.0    15.0   235.0   235.0   235.0   250.0
111           RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

112           KK      F2   BASIN
113           KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
114           KM   L=3.88      Lca=1.80      S=161.60      Kn=0.050      LAG=57.0
115           KM   S-GRAPH TYPE=PHX MNT
116           BA   2.209
117           LG    0.35    0.35   4.375   0.362   3.346
118           UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
119           UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
120           UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
121           UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
122           UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
123           UI   25.01   25.01   25.01     0.0
              *

124           KK     F3R COMBINE
```

```
125          KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
126          HC       2
             *

127          KK    RRF2 STORAGE
128          KM   PROPOSED DETENTION BASIN
129          KM    ROUTE RUNOFF FROM F1 AND F2 THROUGH PROPOSED DETENTION BASIN AT F2
130          KM    STRUCTURE ID:RRF2
131          KM    DIMENSIONS: L=800ft, W=450ft, D=6ft, Sideslope (?H:1V)= 3,  Vol.= 36.6 ac-ft
132          RS       1    STOR       0
133          SV     0.0     7.0    14.1    28.9    44.4    60.5    68.9    77.4    81.7    86.0
134          SE     0.0     1.0     2.0     4.0     6.0     8.0     9.0    10.0    10.5    11.0
135          SQ     0.0  1134.5  1604.4  2269.0  2779.0  3208.9  3403.5  3587.6  3676.2  3762.7
             *
1                                          HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

136          KK  F2-E2C   ROUTE
137          KM   PROPOSED CHANNEL
138          KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
139          KM    MODIFIED FOR STEP 2 OF ADMP
140          KM    STRUCTURE ID(s): E4RB10, E4RB20
141          KM    Slope=(1433.6 - 1368.3) / 5731.3
142          RS       4    FLOW      -1
143          RC   0.045   0.045   0.045  5731.30.011392   105.0
144          RX     0.0    15.0    15.0    15.0   245.0   245.0   245.0   260.0
145          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
             *

146          KK      F3   BASIN
147          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
148          KM   L=2.71      Lca=1.26      S=81.34      Kn=0.055      LAG=54.2
149          KM   S-GRAPH TYPE=DES RNGLND
150          BA   0.736
151          LG    0.35    0.35   3.284    0.64     0.0
152          UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
153          UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
154          UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
155          UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
156          UI     0.0
             *

157          KK     CF3 COMBINE
158          KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
159          HC       2
             *

160          KK     E2C   BASIN
161          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
162          KM   L=2.38      Lca=1.01      S=92.90      Kn=0.055      LAG=46.0
163          KM   S-GRAPH TYPE=DES RNGLND
164          BA   0.716
165          LG    0.35    0.35   4.343   0.357     0.0
166          UI     0.0   55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
167          UI  498.61  439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
168          UI   84.51   59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
169          UI   13.41   13.41   13.41   13.41     0.0
             *

170          KK    CE2R COMBINE
171          KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
172          HC       2
             *

173          KK    DE2C  DIVERT
174          KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
175          KM    STRUCTURE ID:DE2C
176          KM    DIMENSIONS: L=1300ft, W=700ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 183.6 ac
177          DT    DOUT
178          DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
179          DI  1200.0  3000.0
1                                          HEC-1 INPUT                                          PAGE  5

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

180          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
181          DQ   343.0  2143.0
             *

182          KK  E2C-E3   ROUTE
183          KM   PROPOSED CHANNEL
184          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
185          KM    STRUCTURE ID(s): E4RB30
186          KM    Slope=(1368.3 - 1313.1) / 4724.8
187          RS      13    FLOW      -1
188          RC   0.045   0.045   0.045  4724.80.011682   104.5
189          RX     0.0    13.5    13.5    13.5   133.5   133.5   133.5   147.0
190          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
             *

191          KK      E1   BASIN
192          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
193          KM   L=2.51      Lca=1.13      S=178.34      Kn=0.055      LAG=43.3
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194          KM   S-GRAPH TYPE=PHX MNT
195          BA   0.956
196          LG    0.35   0.378   5.377   0.222    0.69
197          UI     0.0   74.86   77.94  239.17  368.29  486.24  570.86   714.2  832.85  536.73
198          UI  451.19  405.28  360.54  317.72  278.78  233.78  192.26  176.85  160.99  130.76
199          UI  107.56   95.43   81.98   76.82   57.39   57.39   44.31   36.63   36.63   36.63
200          UI   23.53   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35
201          UI     0.0
             *

202          KK  E1-E2B   ROUTE
203          RS       5    FLOW     0.0     0.0
204          RC    0.05   0.047  0.04610992.72   0.016     0.0
205          RX     0.0    65.0   140.0   170.0   185.0   200.0   270.0   340.0
206          RY    24.0    21.0    17.0    10.0    10.0    14.0    18.0    22.0
             *

207          KK     E2B   BASIN
208          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
209          KM   L=2.08      Lca=1.07      S=87.98      Kn=0.055      LAG=45.2
210          KM   S-GRAPH TYPE=DES RNGLND
211          BA   0.466
212          LG    0.35    0.38     5.6    0.21     0.0
213          UI     0.0    32.1    32.1   94.97  150.03  204.82  250.49  285.24   306.5  304.84
214          UI  285.73  244.25   203.0  165.28   137.3  113.17   92.95    75.5   62.33   52.17
215          UI   43.31   34.02   28.77   21.97   21.97   16.14    7.81    7.81    7.81    7.81
216          UI    7.81    7.81    7.81    7.81
             *

217          KK    E3RB COMBINE
218          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
219          HC       2
             *
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1 HEC-1 INPUT PAGE 6

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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

220          KK  RRE3RB STORAGE
221          KM   PROPOSED DETENTION BASIN
222          KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 6
223          KM    STRUCTURE ID:RRE3RB
224          KM    DIMENSIONS: L=600ft, W=260ft, D=6ft, Sideslope (?H:1V)= 3,  Vol.= 15.2 ac-ft
225          RS       1    STOR       0
226          SV     0.0     5.8     7.3     8.8    10.4    12.0    15.2    18.6    22.1    25.7
227          SE     0.0     2.0     2.5     3.0     3.5     4.0     5.0     6.0     7.0     8.0
228          SQ     0.0   668.5   747.4   818.8   884.4   945.4  1057.0  1157.9  1250.7  1337.0
             *

229          KK  E2B-E3   ROUTE
230          KM   PROPOSED CHANNEL
231          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
232          KM    STRUCTURE ID(s): E3RB10, E3RB20
233          KM    Slope=(1456.8 - 1313.1) / 10317.4
234          RS      12    FLOW      -1
235          RC   0.045   0.045   0.045 10317.40.013931   104.5
236          RX     0.0    13.5    13.5    13.5   233.5   233.5   233.5   247.0
237          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
             *

238          KK   E3MID COMBINE
239          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
240          HC       2
             *

241          KK  E3E4RA   ROUTE
242          KM   PROPOSED CHANNEL
243          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
244          KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
245          KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
246          KM    STRUCTURE ID(s): E4RA10
247          KM    Slope=(1313.1 - 1230.3) / 10788.6
248          RS      12    FLOW      -1
249          RC   0.045   0.045   0.045 10788.6 0.00767   105.0
250          RX     0.0    15.0    15.0    15.0   295.0   295.0   295.0   310.0
251          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
             *

252          KK     E2A   BASIN
253          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
254          KM   L=2.90      Lca=1.20      S=100.83      Kn=0.055      LAG=52.4
255          KM   S-GRAPH TYPE=DES RNGLND
256          BA   0.797
257          LG    0.35    0.38     5.6    0.21     0.0
258          UI     0.0    51.6    51.6  110.43  196.83  277.44  347.94  413.76  460.03   489.1
259          UI  494.55   472.6  438.77  369.81  310.92  263.99  224.69  190.62  158.99  135.09
260          UI  112.23   97.29   80.97   70.86    54.7   53.12   35.32   35.32   35.32   21.96
261          UI   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56     0.0
             *
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1 HEC-1 INPUT PAGE 7

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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

262          KK  E2A-E3   ROUTE
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263          RS      13    FLOW     0.0     0.0
264          RC   0.052   0.046   0.05219626.03  0.0093     0.0
265          RX     0.0   133.0   173.0   213.0   223.0   263.0   303.0   403.0
266          RY    22.0    17.0    14.0    10.0    10.0    15.0    18.0    22.0
             *

267          KK      E3   BASIN
268          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
269          KM   L=3.87      Lca=1.99      S=49.65      Kn=0.050      LAG=74.5
270          KM   S-GRAPH TYPE=DES RNGLND
271          BA   2.488
272          LG    0.35    0.35   4.362   0.346     0.0
273          UI     0.0  111.69  111.69  111.69  226.88  361.12  481.81  599.56  708.99  795.91
274          UI  924.44  981.52 1023.08 1070.39 1070.39 1054.33 1012.16  958.83  843.16   765.0
275          UI  671.82  595.75  537.55  476.38  423.35  378.09  335.18  305.82   252.8  234.07
276          UI  210.57  188.36  171.26  154.61  118.38  118.38  115.87   76.46   76.46   76.46
277          UI   76.46   75.47   27.18   27.18   27.18   27.18   27.18   27.18   27.18   27.18
278          UI   27.18   27.18   27.18   27.18   27.18   27.18
             *

279          KK   E4RAR COMBINE
280          KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
281          HC       2
             *

282          KK    E4RA COMBINE
283          KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
284          HC       2
             *
             *  SPOT FOR POTENTIAL DETENTION BASIN AT START OF WHITE TANK WASH
             *

285          KK   E3-E4   ROUTE
286          KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
287          RS      14    FLOW     0.0     0.0
288          RC   0.056   0.049   0.05613854.98  0.0048     0.0
289          RX     0.0   570.0   650.0   690.0   705.0   735.0   810.0  1200.0
290          RY    21.0    14.0    13.0    10.0    10.0    12.5    14.5    21.0
             *

291          KK      E4   BASIN
292          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
293          KM   L=5.36      Lca=2.81      S=38.26      Kn=0.050      LAG=101.9
294          KM   S-GRAPH TYPE=DES RNGLND
295          KO       0       0     0.0       1      22
296          BA   3.042
297          LG    0.35    0.35   3.816   0.439     0.0
298          UI     0.0  100.41  100.41  100.41  100.41   158.4  288.69  358.15  433.82  515.05
299          UI  586.72  661.74  710.91  802.48  849.78  890.67  905.99   962.3   962.3   962.3
300          UI  958.07  920.61  904.77  855.38  781.14  712.32  671.29  604.26   557.2  512.12
301          UI  469.45  435.76   392.7  363.69  334.37  307.94  277.85  264.88  224.23  220.83
302          UI  189.31  189.31  167.81  153.97  153.97   127.9  106.43  106.43  106.43  101.85
303          UI   68.74   68.74   68.74   68.74   68.74   68.74    56.9   24.44   24.44   24.44
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

304          UI   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44
305          UI   24.44   24.44   24.44   24.44   24.44   24.44
             *

306          KK    E5RR COMBINE
307          KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
308          HC       2
             *

309          KK      H1   BASIN
310          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
311          KM   L=2.41      Lca=1.09      S=64.59      Kn=0.055      LAG=51.2
312          KM   S-GRAPH TYPE=DES RNGLND
313          BA   1.066
314          LG    0.35    0.35   2.733   0.945     0.0
315          UI     0.0   70.38   70.38  156.67  277.53  386.09  481.01   579.0   629.6  674.43
316          UI  672.95  639.66  573.48  484.85  407.01  343.97  290.32  244.62  205.27   171.4
317          UI  143.72  125.14  107.91   82.11   74.59   59.78   48.17   48.17   44.03   17.13
318          UI   17.13   17.13   17.13   17.13   17.13   17.13   17.13   17.13     0.0
             *

319          KK   H1-H2   ROUTE
320          KM    ROUTE RUNOFF FROM H1 TO E5R
321          RS      21    FLOW     0.0     0.0
322          RC   0.053    0.05   0.05321739.03  0.0082     0.0
323          RX     0.0   330.0   430.0   465.0   495.0   530.0   630.0   960.0
324          RY    17.0    14.0    12.0    10.0    10.0    12.0    14.0    17.0
             *

325          KK      H2   BASIN
326          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
327          KM   L=4.41      Lca=2.60      S=44.71      Kn=0.050      LAG=88.9
328          KM   S-GRAPH TYPE=DES RNGLND
329          BA      1.4
330          LG    0.35    0.35   3.222   0.664     0.0
331          UI     0.0   52.96   52.96   52.96   52.96  142.93  178.39   226.9  274.71  319.58
332          UI  365.35   394.2  441.12  466.71   479.3  507.56  507.56  507.56  494.47  478.59
333          UI  456.68  413.58  373.47  343.47  306.13  279.54  254.31  232.29  208.19  189.77
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334          UI  169.44  155.74  145.02  121.24  117.25   99.85   99.85   83.38   81.21   75.85
335          UI   56.14   56.14   56.14   49.15   36.25   36.25   36.25   36.25   36.25   27.6
336          UI   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89
337          UI   12.89   12.89   12.89   12.89   12.89   12.89     0.0
             *

338          KK    E5RL COMBINE
339          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
340          HC       2
             *

341          KK     E5R COMBINE
342          KM    COMBINE ALL FLOWS AT E5R
343          HC       2
             *
1                                          HEC-1 INPUT                                          PAGE  9

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

344          KK   E4-E5   ROUTE
345          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
346          RS      14    FLOW     0.0     0.0
347          RC    0.06    0.05    0.0615206.17  0.0051     0.0
348          RX     0.0  1010.0  1080.0  1090.0  1110.0  1120.0  1190.0  2200.0
349          RY    27.0    16.0    15.0    10.0    10.0    14.0    16.0    27.0
             *

350          KK      E5   BASIN
351          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
352          KM   L=3.01      Lca=1.41      S=28.56      Kn=0.050      LAG=65.8
353          KM   S-GRAPH TYPE=DES RNGLND
354          BA   1.308
355          LG   0.347   0.344    3.94   0.429   0.968
356          UI     0.0   66.73   66.73   66.73  187.33  261.54  342.37  416.83  480.54  556.36
357          UI  598.07  622.96  639.46  636.14  605.78  574.36  496.51  443.91  383.22  336.88
358          UI  298.49  258.94  227.11  198.14  176.39   149.0   129.8   120.7  102.31   94.82
359          UI   70.72   70.72   61.39   45.68   45.68   45.68   45.68   18.08   16.24   16.24
360          UI   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24     0.0
             *

361          KK    E6RR COMBINE
362          KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
363          KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
364          KM    (WEST CORRIDOR U/S OF E6R)
365          HC       2
             *

366          KK      K1   BASIN
367          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
368          KM   L=3.23      Lca=1.84      S=681.00      Kn=0.050      LAG=40.4
369          KM   S-GRAPH TYPE=PHX MNT
370          BA   1.543
371          LG   0.112   0.255    4.365   0.366  21.277
372          UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
373          UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
374          UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
375          UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
             *

376          KK  K1-K2A   ROUTE
377          KM    ROUTE RUNOFF FROM K1 TO APEX 38
378          RS      10    FLOW     0.0     0.0
379          RC    0.05   0.048    0.0519434.11   0.017     0.0
380          RX     0.0    20.0    55.0    85.0   235.0   259.0   289.0   309.0
381          RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
             *

382          KK     K2A   BASIN
383          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
384          KM   L=5.29      Lca=2.72      S=126.78      Kn=0.055      LAG=87.2
385          KM   S-GRAPH TYPE=DES RNGLND
386          BA   1.949
387          LG   0.341   0.347    4.907   0.278   1.288
1                                          HEC-1 INPUT                                          PAGE 10

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

388          UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
389          UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
390          UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
391          UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
392          UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
393          UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
394          UI   18.36   18.36   18.36   18.36     0.0
             *

395          KK    K2BR COMBINE
396          KM    COMBINE FLOWS AT APEX 38
397          HC       2
             *

398          KK  RRK2RB STORAGE
399          KM   PROPOSED DETENTION BASIN
400          KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 38
```

```
KM    STRUCTURE ID:RRK2RB
KM    DIMENSIONS: L=700ft, W=320ft, D=5ft, Sideslope (?H:1V)= 3,  Vol.= 17.9 ac-ft
RS       1    STOR       0
SV     0.0     2.1     4.3     6.4     8.7    13.2    17.9    22.7    43.3    60.2
SE     0.0     0.5     1.0     1.5     2.0     3.0     4.0     5.0     9.0    12.0
SQ     0.0   668.5   945.4  1157.9  1337.0  1637.5  1890.8  2114.0  2836.3  3275.0
*

KK  K2A-2B   ROUTE
KM   PROPOSED CHANNEL
KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
KM    MODIFIED FOR STEP 2 OF ADMP
KM    STRUCTURE ID(s): CJ110, CJ120
KM    Slope=(1437.6 - 1316.8) / 10052.6
RS       4    FLOW      -1
RC   0.045   0.045   0.045 10052.60.012015   105.0
RX     0.0    15.0    15.0    15.0   235.0   235.0   235.0   250.0
RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
*

KK      J1   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
KM   S-GRAPH TYPE=DES RNGLND
BA   1.734
LG    0.35    0.35    3.25   0.652     0.0
UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
UI   18.95   18.95   18.95   18.95   18.95   18.95
*
```

1 HEC-1 INPUT PAGE 11

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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK     CJ1 COMBINE
KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
HC       2
*

KK     DJ1  DIVERT
KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
KM    STRUCTURE ID:DJ1
KM    DIMENSIONS: L=1100ft, W=500ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 34.6 ac-f
DT    DOUT
DI     0.0   140.0   280.0   420.0   560.0   688.0   840.0   980.0  1120.0  1229.0
DI  1400.0  3000.0
DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
DQ   171.0  1771.0
*

KK   J1-J2   ROUTE
KM   PROPOSED CHANNEL
KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
KM    Slope=(1316.8 - 1104.3) / 23082.2
RS      16    FLOW      -1
RC   0.045   0.045   0.045 23082.20.009207   105.0
RX     0.0    15.0    15.0    15.0   215.0   215.0   215.0   230.0
RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
*

KK      J2   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=5.18      Lca=2.51      S=45.01      Kn=0.050      LAG=93.2
KM   S-GRAPH TYPE=DES RNGLND
BA   3.638
LG   0.349   0.348   3.621   0.496   0.281
UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
UI  857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
UI  1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
*

KK     CJ2 COMBINE
KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
HC       2
*

KK   J2-K3   ROUTE
KM   PROPOSED CHANNEL
KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
KM    STRUCTURE ID(s): E6RL10
KM    Slope=(1104.3 - 1084.9) / 3156.5
RS       3    FLOW      -1
```

1 HEC-1 INPUT PAGE 12

```
LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
473          RC   0.045   0.045   0.045  3156.50.006135   105.0
474          RX     0.0    15.0    15.0    15.0   235.0   235.0   235.0   250.0
475          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
             *

476          KK     K2B   BASIN
477          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
478          KM   L=2.01      Lca=0.83      S=60.78      Kn=0.055      LAG=43.5
479          KM   S-GRAPH TYPE=DES RNGLND
480          BA   0.416
481          LG    0.35    0.35   2.708   0.961     0.0
482          UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
483          UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
484          UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
485          UI    7.93    7.93     0.0
             *

486          KK  K2B-K3   ROUTE
487          KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
488          RS      19    FLOW     0.0     0.0
489          RC    0.05   0.048   0.0525950.11  0.0084     0.0
490          RX     0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
491          RY    20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
             *

492          KK      K3   BASIN
493          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
494          KM   L=4.92      Lca=2.65      S=44.16      Kn=0.050      LAG=93.6
495          KM   S-GRAPH TYPE=DES RNGLND
496          BA   1.636
497          LG    0.35    0.35   3.421   0.582     0.0
498          UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
499          UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
500          UI  528.98  508.31  466.83  418.22  391.32  351.35  318.32  291.61  266.72  243.82
501          UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
502          UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
503          UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
504          UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
             *

505          KK     CK3 COMBINE
506          KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
507          HC       2
             *

508          KK    E6RL COMBINE
509          KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
510          HC       2
             *
1                                          HEC-1 INPUT                                          PAGE 13

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

511          KK     E6R COMBINE
512          KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
513          HC       2
             *

514          KK   E5-E6   ROUTE
515          KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
516          RS       4    FLOW     0.0     0.0
517          RC   0.063   0.051   0.063  5105.8  0.0037     0.0
518          RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
519          RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
             *

520          KK      E6   BASIN
521          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
522          KM   L=3.04      Lca=1.06      S=34.17      Kn=0.050      LAG=57.1
523          KM   S-GRAPH TYPE=DES RNGLND
524          BA   2.038
525          LG   0.343   0.336   4.356   0.367   0.711
526          UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
527          UI  1153.6 1153.67 1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
528          UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
529          UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
530          UI    29.3    29.3     0.0
             *

531          KK       E COMBINE
532          KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
533          HC       2
             *

534          KK      G1   BASIN
535          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
536          KM   L=2.38      Lca=1.08      S=33.76      Kn=0.045      LAG=47.1
537          KM   S-GRAPH TYPE=DES RNGLND
538          BA   1.119
539          LG    0.35    0.35    4.68   0.299     0.0
540          UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
541          UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
542          UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
```

```
          543          UI   19.51   19.51   19.51   19.51   19.51     0.0
          544          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    82          F1
                 V
                 V
    95        RRF1
                 V
                 V
   104       F1-F2
                 .
                 .
   112           .          F2
                 .           .
                 .           .
   124         F3R............
                 V
                 V
   127        RRF2
                 V
                 V
   136      F2-E2C
                 .
                 .
   146           .          F3
                 .           .
                 .           .
   157         CF3............
                 .
                 .
   160           .         E2C
                 .           .
                 .           .
   170        CE2R............
                 .
                 .
   177           .-------->    DOUT
   173        DE2C
                 V
                 V
   182      E2C-E3
                 .
                 .
   191           .          E1
                 .           V
                 .           V
   202           .      E1-E2B
                 .           .
                 .           .
   207           .           .         E2B
                 .           .           .
                 .           .           .
   217           .        E3RB............
                 .           V
                 .           V
   220           .      RRE3RB
                 .           V
                 .           V
   229           .      E2B-E3
                 .           .
                 .           .
   238       E3MID............
                 V
                 V
   241      E3E4RA
                 .
                 .
   252           .         E2A
                 .           V
                 .           V
   262           .      E2A-E3
                 .           .
                 .           .
   267           .           .          E3
                 .           .           .
                 .           .           .
   279           .       E4RAR............
                 .           .
                 .           .
   282        E4RA............
                 V
                 V
   285       E3-E4
                 .
                 .
   291           .          E4
                 .           .
                 .           .
   306        E5RR............
```

```
              .
              .
309           .          H1
              .           V
              .           V
319           .       H1-H2
              .           .
              .           .
325           .           .          H2
              .           .           .
              .           .           .
338           .       E5RL............
              .           .
              .           .
341        E5R............
             V
             V
344      E4-E5
              .
              .
350           .          E5
              .           .
              .           .
361       E6RR............
              .
              .
366           .          K1
              .           V
              .           V
376           .      K1-K2A
              .           .
              .           .
382           .           .         K2A
              .           .           .
              .           .           .
395           .       K2BR............
              .           V
              .           V
398           .      RRK2RB
              .           V
              .           V
407           .      K2A-2B
              .           .
              .           .
417           .           .          J1
              .           .           .
              .           .           .
429           .        CJ1............
              .           .
              .           .
437           .           .-------->    DOUT
433           .        DJ1
              .           V
              .           V
442           .       J1-J2
              .           .
              .           .
451           .           .          J2
              .           .           .
              .           .           .
464           .        CJ2............
              .           V
              .           V
467           .       J2-K3
              .           .
              .           .
476           .           .         K2B
              .           .           V
              .           .           V
486           .           .      K2B-K3
              .           .           .
              .           .           .
492           .           .           .          K3
              .           .           .           .
              .           .           .           .
505           .           .         CK3............
              .           .           .
              .           .           .
508           .       E6RL............
              .           .
              .           .
511        E6R............
             V
             V
514      E5-E6
              .
              .
520           .          E6
              .           .
              .           .
531          E............
              .
              .
534           .          G1
```

```
 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*************************************
 *                                   *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
 *              JUN   1998           *
 *            VERSION 4.1            *
 *                                   *
 *  RUN DATE   19APR06  TIME  15:33:01   *
 *                                   *
 *************************************
```

```
*************************************
*                                   *
*    U.S. ARMY CORPS OF ENGINEERS   *
*    HYDROLOGIC ENGINEERING CENTER  *
*          609 SECOND STREET        *
*       DAVIS, CALIFORNIA 95616     *
*           (916) 756-1104          *
*                                   *
*************************************
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```
                    STEP 2 HYDROLOGY FOR WHITE TANK WASH
                    SUN VALLEY ADMP
                     - WHITE TANK WASH SUB-AREA
                     - ALTERNATIVE B2
                         small online detention basin at apex
                         with leveed downstream corridors

                   Alternative Description
                   The purpose of Alternative B is to capture the upstream flow at the
                   apex using online detention basins.  The presence of the detention
                   basins eliminates the downstream alluvial fan uncertainties by
                   controlling the flow from the apices to the outfall.  Alternative B2
                   is based on using a relatively smaller on-line detention basin at the
                   apex accompanied by larger leveed channel sections in the down fan
                   direction.


                    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
                   JANUARY 2006

                   MODEL BASED UPON:

                  Buckeye/Sun Valley ADMS - May 2005
                  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
                  basins E-K with Aluvial Fan updates
                  100-year 6-hour
                  Existing Conditions
                  Area 3 - Sub-basins E-K (Aluvial Fan updates)
                  Rainfall Loss Method - Green & Ampt
                  Unit Hydrograph Method - FCDMC S-Graph
                  Channel Routing Method - Normal Depth
                  Land Use - FCDMC GIS Data: mag_landuse (2000)
                  Soil Data - USDA SCS Soil Survey (1972 & 1981)
                  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)

 36 IO          OUTPUT CONTROL VARIABLES
                      IPRNT          5  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE

    IT          HYDROGRAPH TIME DATA
                       NMIN          5  MINUTES IN COMPUTATION INTERVAL
                      IDATE     1JAN94  STARTING DATE
                      ITIME       0000  STARTING TIME
                         NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE     7JAN94  ENDING DATE
                     NDTIME       2235  ENDING TIME
                      ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL     .08 HOURS
                      TOTAL TIME BASE  166.58 HOURS

          ENGLISH UNITS
               DRAINAGE AREA          SQUARE MILES
               PRECIPITATION DEPTH    INCHES
               LENGTH, ELEVATION      FEET
               FLOW                   CUBIC FEET PER SECOND
               STORAGE VOLUME         ACRE-FEET
               SURFACE AREA           ACRES
               TEMPERATURE            DEGREES FAHRENHEIT

 38 JD          INDEX STORM NO. 1
                       STRM        3.23  PRECIPITATION DEPTH
                       TRDA         .01  TRANSPOSITION DRAINAGE AREA

 39 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                     .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                     .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00

 43 JD          INDEX STORM NO. 2
                       STRM        3.21  PRECIPITATION DEPTH
                       TRDA         .50  TRANSPOSITION DRAINAGE AREA

 44 PI            PRECIPITATION PATTERN
```

```
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

48 JD         INDEX STORM NO. 3
                STRM        3.19  PRECIPITATION DEPTH
                TRDA        1.00  TRANSPOSITION DRAINAGE AREA

49 PI           PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                .03       .03       .06       .06       .06       .12       .12       .12       .03       .03
                .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

53 JD         INDEX STORM NO. 4
                STRM        3.10  PRECIPITATION DEPTH
                TRDA        5.00  TRANSPOSITION DRAINAGE AREA

54 PI           PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                .03       .03       .06       .06       .06       .08       .08       .08       .05       .05
                .05       .02       .02       .02       .01       .01       .01       .01       .01       .01
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

58 JD         INDEX STORM NO. 5
                STRM        3.04  PRECIPITATION DEPTH
                TRDA       10.00  TRANSPOSITION DRAINAGE AREA

59 PI           PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
                .01       .01       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .06       .06       .06       .07       .07       .07       .04       .04
                .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

63 JD         INDEX STORM NO. 6
                STRM        2.94  PRECIPITATION DEPTH
                TRDA       20.00  TRANSPOSITION DRAINAGE AREA

64 PI           PRECIPITATION PATTERN
                .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                .01       .01       .01       .01       .01       .00       .00       .00       .00       .00
                .00       .01       .01       .01       .00       .00       .00       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

68 JD         INDEX STORM NO. 7
                STRM        2.88  PRECIPITATION DEPTH
                TRDA       30.00  TRANSPOSITION DRAINAGE AREA

69 PI           PRECIPITATION PATTERN
                .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                .01       .01       .01       .01       .01       .00       .00       .00       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .00
                .00       .00

73 JD         INDEX STORM NO. 8
                STRM        2.81  PRECIPITATION DEPTH
                TRDA       40.00  TRANSPOSITION DRAINAGE AREA

74 PI           PRECIPITATION PATTERN
                .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01

78 JD         INDEX STORM NO. 9
                STRM        2.58  PRECIPITATION DEPTH
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                    TRDA      100.00  TRANSPOSITION DRAINAGE AREA

 79 PI            PRECIPITATION PATTERN
                     .01       .01       .01       .00       .00       .00       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                     .03       .03       .04       .04       .04       .05       .05       .05       .04       .04
                     .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                     .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                     .01       .01

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

            **************
            *            *
 291 KK     *        E4  *        BASIN
            *            *
            **************

 295 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           1  PUNCH COMPUTED HYDROGRAPH
                       IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        2000  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .083  TIME INTERVAL IN HOURS

1
                                          RUNOFF SUMMARY
                                     FLOW IN CUBIC FEET PER SECOND
                                   TIME IN HOURS,  AREA IN SQUARE MILES

                                     PEAK   TIME OF     AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN     MAXIMUM     TIME OF
          OPERATION        STATION   FLOW    PEAK                                           AREA      STAGE     MAX STAGE
+                                                        6-HOUR     24-HOUR     72-HOUR

          HYDROGRAPH AT
+                             F1    1773.   4.83         444.        113.         38.      3.10
          ROUTED TO
+                           RRF1    1633.   4.92         444.        113.         38.      3.10
          ROUTED TO
+                          F1-F2    1601.   5.08         442.        113.         38.      3.10
          HYDROGRAPH AT
+                             F2    1306.   4.75         280.         70.         23.      2.21
          2 COMBINED AT
+                            F3R    2291.   5.00         654.        166.         55.      5.31
          ROUTED TO
+                           RRF2    2135.   5.17         654.        166.         55.      5.31
          ROUTED TO
+                         F2-E2C    2111.   5.42         652.        166.         55.      5.31
          HYDROGRAPH AT
+                             F3     454.   4.75          84.         21.          7.       .74
          2 COMBINED AT
+                            CF3    2190.   5.33         688.        176.         59.      6.05
          HYDROGRAPH AT
+                            E2C     658.   4.58         108.         27.          9.       .72
          2 COMBINED AT
+                           CE2R    2311.   5.25         750.        191.         64.      6.76
          DIVERSION TO
+                           DOUT    1454.   5.25         289.         72.         24.      6.76
          HYDROGRAPH AT
+                           DE2C     857.   4.58         461.        119.         40.      6.76
          ROUTED TO
+                         E2C-E3     875.   4.83         460.        119.         40.      6.76
          HYDROGRAPH AT
+                             E1     894.   4.50         148.         37.         12.       .96
          ROUTED TO
+                         E1-E2B     794.   4.83         148.         37.         12.       .96
          HYDROGRAPH AT
+                            E2B     450.   4.58          72.         18.          6.       .47
          2 COMBINED AT
+                           E3RB    1053.   4.83         205.         51.         17.      1.42
```

+	ROUTED TO	RRE3RB	916.	5.00	205.	51.	17.	1.42
+	ROUTED TO	E2B-E3	886.	5.50	205.	51.	17.	1.42
+	2 COMBINED AT	E3MID	1541.	5.50	617.	159.	53.	8.19
+	ROUTED TO	E3E4RA	1495.	6.08	598.	159.	53.	8.19
+	HYDROGRAPH AT	E2A	680.	4.67	127.	32.	11.	.80
+	ROUTED TO	E2A-E3	561.	5.67	126.	32.	11.	.80
+	HYDROGRAPH AT	E3	1149.	5.08	301.	75.	25.	2.49
+	2 COMBINED AT	E4RAR	1175.	5.42	393.	99.	33.	3.28
+	2 COMBINED AT	E4RA	2060.	6.00	868.	233.	78.	11.47
+	ROUTED TO	E3-E4	1898.	7.08	857.	233.	78.	11.47
+	HYDROGRAPH AT	E4	923.	5.42	319.	80.	27.	3.04
+	2 COMBINED AT	E5RR	1993.	7.08	1010.	281.	94.	14.51
+	HYDROGRAPH AT	H1	497.	4.75	86.	22.	7.	1.07
+	ROUTED TO	H1-H2	331.	6.33	85.	22.	7.	1.07
+	HYDROGRAPH AT	H2	446.	5.25	134.	33.	11.	1.40
+	2 COMBINED AT	E5RL	389.	5.25	176.	45.	15.	2.47
+	2 COMBINED AT	E5R	2014.	7.08	1056.	294.	98.	16.98
+	ROUTED TO	E4-E5	1874.	8.42	1050.	294.	98.	16.98
+	HYDROGRAPH AT	E5	713.	4.92	165.	41.	14.	1.31
+	2 COMBINED AT	E6RR	1872.	8.42	1093.	318.	106.	18.29
+	HYDROGRAPH AT	K1	1564.	4.50	291.	73.	24.	1.54
+	ROUTED TO	K1-K2A	1236.	5.25	289.	73.	24.	1.54
+	HYDROGRAPH AT	K2A	894.	5.25	269.	68.	23.	1.95
+	2 COMBINED AT	K2BR	1890.	5.25	517.	131.	44.	3.49
+	ROUTED TO	RRK2RB	1733.	5.50	517.	131.	44.	3.49
+	ROUTED TO	K2A-2B	1636.	5.92	511.	131.	44.	3.49
+	HYDROGRAPH AT	J1	626.	5.08	160.	40.	13.	1.73
+	2 COMBINED AT	CJ1	1748.	5.83	601.	155.	52.	5.23
+	DIVERSION TO	DOUT	519.	5.83	56.	14.	5.	5.23
+	HYDROGRAPH AT	DJ1	1229.	5.58	544.	141.	47.	5.23
+	ROUTED TO	J1-J2	1223.	7.00	513.	141.	47.	5.23
	HYDROGRAPH AT							

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+                          J2     1093.   5.33      349.      87.      29.     3.64
        2 COMBINED AT
+                          CJ2    1412.   6.83      711.     205.      68.     8.86
        ROUTED TO
+                        J2-K3    1402.   7.08      708.     205.      68.     8.86
        HYDROGRAPH AT
+                          K2B     309.   4.58       45.      11.       4.      .42
        ROUTED TO
+                       K2B-K3     172.   6.50       45.      11.       4.      .42
        HYDROGRAPH AT
+                          K3     520.   5.33      165.      41.      14.     1.64
        2 COMBINED AT
+                          CK3    495.   5.33      181.      46.      15.     2.05
        2 COMBINED AT
+                          E6RL   1446.   7.08      784.     226.      75.    10.92
        2 COMBINED AT
+                          E6R    2354.   7.92     1538.     455.     152.    29.20
        ROUTED TO
+                        E5-E6    2345.   8.42     1526.     455.     152.    29.20
        HYDROGRAPH AT
+                          E6     1228.   4.75      253.      63.      21.     2.04
        2 COMBINED AT
+                           E     2346.   8.42     1585.     491.     164.    31.24
        HYDROGRAPH AT
+                          G1      927.   4.67      160.      40.      13.     1.12

 *** NORMAL END OF HEC-1 ***
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1*************************************                    *************************************
 *                                   *                    *                                   *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                    *   U.S. ARMY CORPS OF ENGINEERS     *
 *              JUN   1998           *                    *   HYDROLOGIC ENGINEERING CENTER   *
 *            VERSION 4.1            *                    *         609 SECOND STREET         *
 *                                   *                    *      DAVIS, CALIFORNIA 95616      *
 *  RUN DATE   19APR06  TIME  15:33:04   *                    *          (916) 756-1104           *
 *                                   *                    *                                   *
 *************************************                    *************************************

X     X  XXXXXXX   XXXXX           X
X     X  X        X     X         XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX          XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                          PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
  2           ID    SUN VALLEY ADMP
  3           ID     - WHITE TANK WASH SUB-AREA
  4           ID     - ALTERNATIVE B2
  5           ID         small online detention basin at apex
  6           ID         with leveed downstream corridors
  7           ID
  8           ID   Alternative Description
  9           ID   The purpose of Alternative B is to capture the upstream flow at the
 10           ID   apex using online detention basins.  The presence of the detention
 11           ID   basins eliminates the downstream alluvial fan uncertainties by
 12           ID   controlling the flow from the apices to the outfall.  Alternative B2
 13           ID   is based on using a relatively smaller on-line detention basin at the
 14           ID   apex accompanied by larger leveed channel sections in the down fan
 15           ID   direction.
 16           ID
 17           ID
 18           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
 19           ID   JANUARY 2006
 20           ID
 21           ID   MODEL BASED UPON:
 22           ID
 23           ID  Buckeye/Sun Valley ADMS - May 2005
 24           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
 25           ID  basins E-K with Aluvial Fan updates
 26           ID  100-year 24-hour
 27           ID  Existing Conditions
 28           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
 29           ID  Rainfall Loss Method - Green & Ampt
 30           ID  Unit Hydrograph Method - FCDMC S-Graph
 31           ID  Channel Routing Method - Normal Depth
 32           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
 33           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
 34           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
              *DIAGRAM
 35           IT       5 01JAN94       0    2000
 36           IO       5
 37           IN      15 01JAN94       0
 38           JD    4.16    0.01
              * SCS TYPE II 24-hour distribution
 39           PC     0.0   0.002   0.005   0.008   0.011   0.014   0.017    0.02   0.023   0.026
 40           PC   0.029   0.032   0.035   0.038   0.041   0.044   0.048   0.052   0.056    0.06
 41           PC   0.064   0.068   0.072   0.076    0.08   0.085    0.09   0.095     0.1   0.105
 42           PC    0.11   0.115    0.12   0.126   0.133    0.14   0.147   0.155   0.163   0.172
 43           PC   0.181   0.191   0.203   0.218   0.236   0.257   0.283   0.387   0.663   0.707
 44           PC   0.735   0.758   0.776   0.791   0.804   0.815   0.825   0.834   0.842   0.849
 45           PC   0.856   0.863   0.869   0.875   0.881   0.887   0.893   0.898   0.903   0.908
 46           PC   0.913   0.918   0.922   0.926    0.93   0.934   0.938   0.942   0.946    0.95
 47           PC   0.953   0.956   0.959   0.962   0.965   0.968   0.971   0.974   0.977    0.98
 48           PC   0.983   0.986   0.989   0.992   0.995   0.998     1.0
 49           JD   3.952    10.0
 50           JD   3.819    20.0
 51           JD    3.69    40.0
 52           JD   3.565    80.0
              *

1                                          HEC-1 INPUT                                          PAGE  2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  53          KK      F1   BASIN
  54          KM    TOTAL FLOW TO APEX 39
  55          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
  56          KM   L=5.07      Lca=2.57      S=369.39      Kn=0.050      LAG=61.9
  57          KM   S-GRAPH TYPE=PHX MNT
  58          BA   3.103
  59          LG   0.297   0.329   4.244   0.378  12.997
  60          UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
  61          UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
  62          UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
  63          UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
  64          UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
  65          UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
              *

  66          KK    RRF1 STORAGE
  67          KM   PROPOSED DETENTION BASIN
  68          KM    ROUTE RUNOFF FROM F1 THROUGH PROPOSED DETENTION BASIN AT APEX 39
  69          KM    STRUCTURE ID:RRF1
  70          KM    DIMENSIONS: L=800ft, W=450ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 22.4 ac-ft
  71          RS       1    STOR       0
  72          SV     0.0     7.3    14.8    22.4    30.3    38.2    46.4    54.7    63.2    71.9
  73          SE     0.0     1.0     2.0     3.0     4.0     5.0     6.0     7.0     8.0     9.0
  74          SQ     0.0  1134.5  1604.4  1965.0  2269.0  2536.8  2779.0  3001.6  3208.9  3403.5
              *

  75          KK   F1-F2   ROUTE
  76          KM   PROPOSED CHANNEL
  77          KM    STRUCTURE ID(s): RRF110
  78          KM    Slope=(1493.3 - 1433.6) / 4725.1
  79          RS       3    FLOW      -1
  80          RC   0.045   0.045   0.045  4725.10.012648   105.0
  81          RX     0.0    15.0    15.0    15.0   235.0   235.0   235.0   250.0
  82          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

  83          KK      F2   BASIN
  84          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
  85          KM   L=3.88      Lca=1.80      S=161.60      Kn=0.050      LAG=57.0
  86          KM   S-GRAPH TYPE=PHX MNT
  87          BA   2.209
  88          LG    0.35    0.35   4.375   0.362   3.346
  89          UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
  90          UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
  91          UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
  92          UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
  93          UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
  94          UI   25.01   25.01   25.01     0.0
              *
1                                          HEC-1 INPUT                                          PAGE  3

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  95          KK     F3R COMBINE
  96          KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
  97          HC       2
              *

  98          KK    RRF2 STORAGE
  99          KM   PROPOSED DETENTION BASIN
 100          KM    ROUTE RUNOFF FROM F1 AND F2 THROUGH PROPOSED DETENTION BASIN AT F2
 101          KM    STRUCTURE ID:RRF2
 102          KM    DIMENSIONS: L=800ft, W=450ft, D=6ft, Sideslope (?H:1V)= 3,  Vol.= 36.6 ac-ft
 103          RS       1    STOR       0
 104          SV     0.0     7.0    14.1    28.9    44.4    60.5    68.9    77.4    81.7    86.0
 105          SE     0.0     1.0     2.0     4.0     6.0     8.0     9.0    10.0    10.5    11.0
 106          SQ     0.0  1134.5  1604.4  2269.0  2779.0  3208.9  3403.5  3587.6  3676.2  3762.7
              *

 107          KK  F2-E2C   ROUTE
 108          KM   PROPOSED CHANNEL
 109          KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
 110          KM    MODIFIED FOR STEP 2 OF ADMP
 111          KM    STRUCTURE ID(s): E4RB10, E4RB20
 112          KM    Slope=(1433.6 - 1368.3) / 5731.3
 113          RS       4    FLOW      -1
 114          RC   0.045   0.045   0.045  5731.30.011392   105.0
 115          RX     0.0    15.0    15.0    15.0   245.0   245.0   245.0   260.0
 116          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 117          KK      F3   BASIN
 118          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 119          KM   L=2.71      Lca=1.26      S=81.34      Kn=0.055      LAG=54.2
 120          KM   S-GRAPH TYPE=DES RNGLND
 121          BA   0.736
 122          LG    0.35    0.35   3.284    0.64     0.0
 123          UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
 124          UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
 125          UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
 126          UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
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 127          UI     0.0
              *

 128          KK     CF3 COMBINE
 129          KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
 130          HC       2
              *

 131          KK     E2C   BASIN
 132          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 133          KM   L=2.38      Lca=1.01      S=92.90      Kn=0.055      LAG=46.0
 134          KM   S-GRAPH TYPE=DES RNGLND
 135          BA   0.716
 136          LG    0.35     0.35   4.343   0.357     0.0
 137          UI     0.0    55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
 138          UI  498.61   439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
1                                              HEC-1 INPUT                                          PAGE  4

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 139          UI   84.51    59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
 140          UI   13.41    13.41   13.41   13.41     0.0
              *

 141          KK    CE2R COMBINE
 142          KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
 143          HC       2
              *

 144          KK    DE2C  DIVERT
 145          KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
 146          KM    STRUCTURE ID:DE2C
 147          KM    DIMENSIONS: L=1300ft, W=700ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 183.6 ac
 148          DT    DOUT
 149          DI     0.0    120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
 150          DI  1200.0   3000.0
 151          DQ     0.0      0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
 152          DQ   343.0   2143.0
              *

 153          KK  E2C-E3   ROUTE
 154          KM   PROPOSED CHANNEL
 155          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
 156          KM    STRUCTURE ID(s): E4RB30
 157          KM    Slope=(1368.3 - 1313.1) / 4724.8
 158          RS      13     FLOW      -1
 159          RC   0.045    0.045   0.045  4724.80.011682   104.5
 160          RX     0.0     13.5    13.5    13.5   133.5   133.5   133.5   147.0
 161          RY   104.5    100.0   100.0   100.0   100.0   100.0   100.0   104.5
              *

 162          KK      E1   BASIN
 163          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 164          KM   L=2.51      Lca=1.13      S=178.34      Kn=0.055      LAG=43.3
 165          KM   S-GRAPH TYPE=PHX MNT
 166          BA   0.956
 167          LG    0.35    0.378   5.377   0.222    0.69
 168          UI     0.0    74.86   77.94  239.17  368.29  486.24  570.86   714.2  832.85  536.73
 169          UI  451.19   405.28  360.54  317.72  278.78  233.78  192.26  176.85  160.99  130.76
 170          UI  107.56    95.43   81.98   76.82   57.39   57.39   44.31   36.63   36.63   36.63
 171          UI   23.53    14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35
 172          UI     0.0
              *

 173          KK  E1-E2B   ROUTE
 174          RS       5     FLOW     0.0     0.0
 175          RC    0.05    0.047   0.04610992.72   0.016     0.0
 176          RX     0.0     65.0   140.0   170.0   185.0   200.0   270.0   340.0
 177          RY    24.0     21.0    17.0    10.0    10.0    14.0    18.0    22.0
              *
1                                              HEC-1 INPUT                                          PAGE  5

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 178          KK     E2B   BASIN
 179          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 180          KM   L=2.08      Lca=1.07      S=87.98      Kn=0.055      LAG=45.2
 181          KM   S-GRAPH TYPE=DES RNGLND
 182          BA   0.466
 183          LG    0.35     0.38     5.6    0.21     0.0
 184          UI     0.0     32.1    32.1   94.97  150.03  204.82  250.49  285.24   306.5  304.84
 185          UI  285.73   244.25   203.0  165.28   137.3  113.17   92.95    75.5   62.33   52.17
 186          UI   43.31    34.02   28.77   21.97   21.97   16.14    7.81    7.81    7.81    7.81
 187          UI    7.81     7.81    7.81    7.81
              *

 188          KK    E3RB COMBINE
 189          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
 190          HC       2
              *

 191          KK  RRE3RB STORAGE
 192          KM   PROPOSED DETENTION BASIN
 193          KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 6
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194          KM    STRUCTURE ID:RRE3RB
195          KM    DIMENSIONS: L=600ft, W=260ft, D=6ft, Sideslope (?H:1V)= 3,  Vol.= 15.2 ac-ft
196          RS       1    STOR       0
197          SV     0.0     5.8     7.3     8.8    10.4    12.0    15.2    18.6    22.1    25.7
198          SE     0.0     2.0     2.5     3.0     3.5     4.0     5.0     6.0     7.0     8.0
199          SQ     0.0   668.5   747.4   818.8   884.4   945.4  1057.0  1157.9  1250.7  1337.0
             *

200          KK  E2B-E3   ROUTE
201          KM   PROPOSED CHANNEL
202          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
203          KM    STRUCTURE ID(s): E3RB10, E3RB20
204          KM    Slope=(1456.8 - 1313.1) / 10317.4
205          RS      12    FLOW      -1
206          RC   0.045   0.045   0.045 10317.40.013931   104.5
207          RX     0.0    13.5    13.5    13.5   233.5   233.5   233.5   247.0
208          RY   104.5   100.0   100.0   100.0   100.0   100.0   100.0   104.5
             *

209          KK   E3MID COMBINE
210          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
211          HC       2
             *

212          KK  E3E4RA   ROUTE
213          KM   PROPOSED CHANNEL
214          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
215          KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
216          KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
217          KM    STRUCTURE ID(s): E4RA10
218          KM    Slope=(1313.1 - 1230.3) / 10788.6
219          RS      12    FLOW      -1
220          RC   0.045   0.045   0.045 10788.6 0.00767   105.0
221          RX     0.0    15.0    15.0    15.0   295.0   295.0   295.0   310.0
1                                          HEC-1 INPUT                                          PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

222          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
             *

223          KK     E2A   BASIN
224          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
225          KM   L=2.90     Lca=1.20     S=100.83     Kn=0.055     LAG=52.4
226          KM   S-GRAPH TYPE=DES RNGLND
227          BA   0.797
228          LG    0.35    0.38     5.6    0.21     0.0
229          UI     0.0    51.6    51.6  110.43  196.83  277.44  347.94  413.76  460.03   489.1
230          UI  494.55   472.6  438.77  369.81  310.92  263.99  224.69  190.62  158.99  135.09
231          UI  112.23   97.29   80.97   70.86    54.7   53.12   35.32   35.32   35.32   21.96
232          UI   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56     0.0
             *

233          KK  E2A-E3   ROUTE
234          RS      13    FLOW     0.0     0.0
235          RC   0.052   0.046   0.05219626.03  0.0093     0.0
236          RX     0.0   133.0   173.0   213.0   223.0   263.0   303.0   403.0
237          RY    22.0    17.0    14.0    10.0    10.0    15.0    18.0    22.0
             *

238          KK      E3   BASIN
239          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
240          KM   L=3.87     Lca=1.99     S=49.65     Kn=0.050     LAG=74.5
241          KM   S-GRAPH TYPE=DES RNGLND
242          BA   2.488
243          LG    0.35    0.35   4.362   0.346     0.0
244          UI     0.0  111.69  111.69  111.69  226.88  361.12  481.81  599.56  708.99  795.91
245          UI  924.44  981.52 1023.08 1070.39 1070.39 1054.33 1012.16  958.83  843.16   765.0
246          UI  671.82  595.75  537.55  476.38  423.35  378.09  335.18  305.82   252.8  234.07
247          UI  210.57  188.36  171.26  154.61  118.38  118.38  115.87   76.46   76.46   76.46
248          UI   76.46   75.47   27.18   27.18   27.18   27.18   27.18   27.18   27.18   27.18
249          UI   27.18   27.18   27.18   27.18   27.18   27.18
             *

250          KK   E4RAR COMBINE
251          KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
252          HC       2
             *

253          KK    E4RA COMBINE
254          KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
255          HC       2
             *
             *  SPOT FOR POTENTIAL DETENTION BASIN AT START OF WHITE TANK WASH
             *

256          KK   E3-E4   ROUTE
257          KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
258          RS      14    FLOW     0.0     0.0
259          RC   0.056   0.049   0.05613854.98  0.0048     0.0
260          RX     0.0   570.0   650.0   690.0   705.0   735.0   810.0  1200.0
261          RY    21.0    14.0    13.0    10.0    10.0    12.5    14.5    21.0
             *
1                                          HEC-1 INPUT                                          PAGE  7
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 262          KK      E4   BASIN
 263          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 264          KM   L=5.36      Lca=2.81      S=38.26      Kn=0.050      LAG=101.9
 265          KM   S-GRAPH TYPE=DES RNGLND
 266          KO       0        0      0.0        1       22
 267          BA   3.042
 268          LG    0.35     0.35    3.816    0.439      0.0
 269          UI     0.0   100.41   100.41   100.41   100.41    158.4   288.69   358.15   433.82   515.05
 270          UI  586.72   661.74   710.91   802.48   849.78   890.67   905.99    962.3    962.3    962.3
 271          UI  958.07   920.61   904.77   855.38   781.14   712.32   671.29   604.26    557.2   512.12
 272          UI  469.45   435.76    392.7   363.69   334.37   307.94   277.85   264.88   224.23   220.83
 273          UI  189.31   189.31   167.81   153.97   153.97    127.9   106.43   106.43   106.43   101.85
 274          UI   68.74    68.74    68.74    68.74    68.74    68.74     56.9    24.44    24.44    24.44
 275          UI   24.44    24.44    24.44    24.44    24.44    24.44    24.44    24.44    24.44    24.44
 276          UI   24.44    24.44    24.44    24.44    24.44    24.44
              *

 277          KK    E5RR COMBINE
 278          KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
 279          HC       2
              *

 280          KK      H1   BASIN
 281          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 282          KM   L=2.41      Lca=1.09      S=64.59      Kn=0.055      LAG=51.2
 283          KM   S-GRAPH TYPE=DES RNGLND
 284          BA   1.066
 285          LG    0.35     0.35    2.733    0.945      0.0
 286          UI     0.0    70.38    70.38   156.67   277.53   386.09   481.01    579.0    629.6   674.43
 287          UI  672.95   639.66   573.48   484.85   407.01   343.97   290.32   244.62   205.27    171.4
 288          UI  143.72   125.14   107.91    82.11    74.59    59.78    48.17    48.17    44.03    17.13
 289          UI   17.13    17.13    17.13    17.13    17.13    17.13    17.13    17.13      0.0
              *

 290          KK   H1-H2   ROUTE
 291          KM    ROUTE RUNOFF FROM H1 TO E5R
 292          RS      21     FLOW      0.0      0.0
 293          RC   0.053     0.05   0.05321739.03   0.0082      0.0
 294          RX     0.0    330.0    430.0    465.0    495.0    530.0    630.0    960.0
 295          RY    17.0     14.0     12.0     10.0     10.0     12.0     14.0     17.0
              *

 296          KK      H2   BASIN
 297          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 298          KM   L=4.41      Lca=2.60      S=44.71      Kn=0.050      LAG=88.9
 299          KM   S-GRAPH TYPE=DES RNGLND
 300          BA     1.4
 301          LG    0.35     0.35    3.222    0.664      0.0
 302          UI     0.0    52.96    52.96    52.96    52.96   142.93   178.39    226.9   274.71   319.58
 303          UI  365.35    394.2   441.12   466.71    479.3   507.56   507.56   507.56   494.47   478.59
 304          UI  456.68   413.58   373.47   343.47   306.13   279.54   254.31   232.29   208.19   189.77
 305          UI  169.44   155.74   145.02   121.24   117.25    99.85    99.85    83.38    81.21    75.85
 306          UI   56.14    56.14    56.14    49.15    36.25    36.25    36.25    36.25    36.25     27.6
 307          UI   12.89    12.89    12.89    12.89    12.89    12.89    12.89    12.89    12.89    12.89
1                                              HEC-1 INPUT                                                    PAGE  8

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 308          UI   12.89    12.89    12.89    12.89    12.89    12.89      0.0
              *

 309          KK    E5RL COMBINE
 310          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
 311          HC       2
              *

 312          KK     E5R COMBINE
 313          KM    COMBINE ALL FLOWS AT E5R
 314          HC       2
              *

 315          KK   E4-E5   ROUTE
 316          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
 317          RS      14     FLOW      0.0      0.0
 318          RC    0.06     0.05   0.0615206.17   0.0051      0.0
 319          RX     0.0   1010.0   1080.0   1090.0   1110.0   1120.0   1190.0   2200.0
 320          RY    27.0     16.0     15.0     10.0     10.0     14.0     16.0     27.0
              *

 321          KK      E5   BASIN
 322          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 323          KM   L=3.01      Lca=1.41      S=28.56      Kn=0.050      LAG=65.8
 324          KM   S-GRAPH TYPE=DES RNGLND
 325          BA   1.308
 326          LG   0.347    0.344     3.94    0.429    0.968
 327          UI     0.0    66.73    66.73    66.73   187.33   261.54   342.37   416.83   480.54   556.36
 328          UI  598.07   622.96   639.46   636.14   605.78   574.36   496.51   443.91   383.22   336.88
 329          UI  298.49   258.94   227.11   198.14   176.39    149.0    129.8    120.7   102.31    94.82
 330          UI   70.72    70.72    61.39    45.68    45.68    45.68    45.68    18.08    16.24    16.24
 331          UI   16.24    16.24    16.24    16.24    16.24    16.24    16.24    16.24    16.24      0.0
              *
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KK    E6RR COMBINE
KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
KM    (WEST CORRIDOR U/S OF E6R)
HC       2
*

KK      K1   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=3.23      Lca=1.84      S=681.00      Kn=0.050      LAG=40.4
KM   S-GRAPH TYPE=PHX MNT
BA   1.543
LG   0.112   0.255   4.365   0.366  21.277
UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
*
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LINE  ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK  K1-K2A   ROUTE
KM    ROUTE RUNOFF FROM K1 TO APEX 38
RS      10    FLOW     0.0     0.0
RC    0.05   0.048    0.0519434.11   0.017     0.0
RX     0.0    20.0    55.0    85.0   235.0   259.0   289.0   309.0
RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
*

KK     K2A   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=5.29      Lca=2.72      S=126.78      Kn=0.055      LAG=87.2
KM   S-GRAPH TYPE=DES RNGLND
BA   1.949
LG   0.341   0.347   4.907   0.278   1.288
UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
UI   18.36   18.36   18.36   18.36     0.0
*

KK    K2BR COMBINE
KM    COMBINE FLOWS AT APEX 38
HC       2
*

KK  RRK2RB STORAGE
KM   PROPOSED DETENTION BASIN
KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 38
KM    STRUCTURE ID:RRK2RB
KM    DIMENSIONS: L=700ft, W=320ft, D=5ft, Sideslope (?H:1V)= 3,  Vol.= 17.9 ac-ft
RS       1    STOR       0
SV     0.0     2.1     4.3     6.4     8.7    13.2    17.9    22.7    43.3    60.2
SE     0.0     0.5     1.0     1.5     2.0     3.0     4.0     5.0     9.0    12.0
SQ     0.0   668.5   945.4  1157.9  1337.0  1637.5  1890.8  2114.0  2836.3  3275.0
*

KK  K2A-2B   ROUTE
KM   PROPOSED CHANNEL
KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
KM    MODIFIED FOR STEP 2 OF ADMP
KM    STRUCTURE ID(s): CJ110, CJ120
KM    Slope=(1437.6 - 1316.8) / 10052.6
RS       4    FLOW      -1
RC   0.045   0.045   0.045 10052.60.012015   105.0
RX     0.0    15.0    15.0    15.0   235.0   235.0   235.0   250.0
RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
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LINE  ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK      J1   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
KM   S-GRAPH TYPE=DES RNGLND
BA   1.734
LG    0.35    0.35    3.25   0.652     0.0
UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
UI   18.95   18.95   18.95   18.95   18.95   18.95
*

KK     CJ1 COMBINE
KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
```

```
 403          HC       2
              *

 404          KK     DJ1  DIVERT
 405          KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
 406          KM    STRUCTURE ID:DJ1
 407          KM    DIMENSIONS: L=1100ft, W=500ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 34.6 ac-f
 408          DT    DOUT
 409          DI     0.0   140.0   280.0   420.0   560.0   688.0   840.0   980.0  1120.0  1229.0
 410          DI  1400.0  3000.0
 411          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 412          DQ   171.0  1771.0
              *

 413          KK   J1-J2   ROUTE
 414          KM   PROPOSED CHANNEL
 415          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
 416          KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
 417          KM    Slope=(1316.8 - 1104.3) / 23082.2
 418          RS      16    FLOW      -1
 419          RC   0.045   0.045   0.045 23082.20.009207   105.0
 420          RX     0.0    15.0    15.0    15.0   215.0   215.0   215.0   230.0
 421          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 422          KK      J2   BASIN
 423          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 424          KM   L=5.18      Lca=2.51      S=45.01      Kn=0.050      LAG=93.2
 425          KM   S-GRAPH TYPE=DES RNGLND
 426          BA   3.638
 427          LG   0.349   0.348   3.621   0.496   0.281
 428          UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
 429          UI   857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
 430          UI  1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
 431          UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
 432          UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
 433          UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
1                                                HEC-1 INPUT                                          PAGE 11

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 434          UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
              *

 435          KK     CJ2 COMBINE
 436          KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
 437          HC       2
              *

 438          KK   J2-K3   ROUTE
 439          KM   PROPOSED CHANNEL
 440          KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
 441          KM    STRUCTURE ID(s): E6RL10
 442          KM    Slope=(1104.3 - 1084.9) / 3156.5
 443          RS       3    FLOW      -1
 444          RC   0.045   0.045   0.045  3156.50.006135   105.0
 445          RX     0.0    15.0    15.0    15.0   235.0   235.0   235.0   250.0
 446          RY   105.0   100.0   100.0   100.0   100.0   100.0   100.0   105.0
              *

 447          KK     K2B   BASIN
 448          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 449          KM   L=2.01      Lca=0.83      S=60.78      Kn=0.055      LAG=43.5
 450          KM   S-GRAPH TYPE=DES RNGLND
 451          BA   0.416
 452          LG    0.35    0.35   2.708   0.961     0.0
 453          UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
 454          UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
 455          UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
 456          UI    7.93    7.93     0.0
              *

 457          KK  K2B-K3   ROUTE
 458          KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
 459          RS      19    FLOW     0.0     0.0
 460          RC    0.05   0.048    0.0525950.11  0.0084     0.0
 461          RX     0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
 462          RY    20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
              *

 463          KK      K3   BASIN
 464          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 465          KM   L=4.92      Lca=2.65      S=44.16      Kn=0.050      LAG=93.6
 466          KM   S-GRAPH TYPE=DES RNGLND
 467          BA   1.636
 468          LG    0.35    0.35   3.421   0.582     0.0
 469          UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
 470          UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
 471          UI  528.98  508.31  466.83  418.22  391.32  351.35  318.32  291.61  266.72  243.82
 472          UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
 473          UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
 474          UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
 475          UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
              *
1                                                HEC-1 INPUT                                          PAGE 12
```

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 476          KK     CK3 COMBINE
 477          KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
 478          HC       2
              *

 479          KK    E6RL COMBINE
 480          KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
 481          HC       2
              *

 482          KK     E6R COMBINE
 483          KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
 484          HC       2
              *

 485          KK   E5-E6   ROUTE
 486          KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
 487          RS       4    FLOW     0.0     0.0
 488          RC   0.063   0.051   0.063  5105.8  0.0037     0.0
 489          RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
 490          RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
              *

 491          KK      E6   BASIN
 492          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 493          KM   L=3.04     Lca=1.06     S=34.17     Kn=0.050     LAG=57.1
 494          KM   S-GRAPH TYPE=DES RNGLND
 495          BA   2.038
 496          LG   0.343   0.336   4.356   0.367   0.711
 497          UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
 498          UI  1153.6 1153.67  1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
 499          UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
 500          UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
 501          UI    29.3    29.3     0.0
              *

 502          KK       E COMBINE
 503          KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
 504          HC       2
              *

 505          KK      G1   BASIN
 506          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 507          KM   L=2.38     Lca=1.08     S=33.76     Kn=0.045     LAG=47.1
 508          KM   S-GRAPH TYPE=DES RNGLND
 509          BA   1.119
 510          LG    0.35    0.35    4.68   0.299     0.0
 511          UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
 512          UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
 513          UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
 514          UI   19.51   19.51   19.51   19.51   19.51     0.0
 515          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    53          F1
                V
                V
    66        RRF1
                V
                V
    75       F1-F2
                .
                .
    83           .          F2
                 .           .
                 .           .
    95         F3R............
                V
                V
    98        RRF2
                V
                V
   107       F2-E2C
                .
                .
   117           .          F3
                 .           .
                 .           .
   128         CF3............
                .
                .
   131           .         E2C
                 .           .
                 .           .
   141        CE2R............
                .
```

```
148          .-------->    DOUT
144       DE2C
             V
             V
153      E2C-E3
             .
             .
162          .          E1
             .           V
             .           V
173          .      E1-E2B
             .           .
             .           .
178          .           .          E2B
             .           .           .
             .           .           .
188          .        E3RB............
             .           V
             .           V
191          .      RRE3RB
             .           V
             .           V
200          .      E2B-E3
             .           .
             .           .
209      E3MID............
             V
             V
212      E3E4RA
             .
             .
223          .         E2A
             .           V
             .           V
233          .      E2A-E3
             .           .
             .           .
238          .           .           E3
             .           .           .
             .           .           .
250          .       E4RAR............
             .           .
             .           .
253      E4RA............
             V
             V
256      E3-E4
             .
             .
262          .          E4
             .           .
             .           .
277      E5RR............
             .
             .
280          .          H1
             .           V
             .           V
290          .       H1-H2
             .           .
             .           .
296          .           .           H2
             .           .           .
             .           .           .
309          .        E5RL............
             .           .
             .           .
312       E5R............
             V
             V
315      E4-E5
             .
             .
321          .          E5
             .           .
             .           .
332      E6RR............
             .
             .
337          .          K1
             .           V
             .           V
347          .      K1-K2A
             .           .
             .           .
353          .           .          K2A
             .           .           .
             .           .           .
366          .        K2BR............
             .           V
             .           V
369          .      RRK2RB
             .           V
             .           V
```

```
378          .      K2A-2B
             .          .
             .          .
388          .          .          J1
             .          .           .
             .          .           .
400          .        CJ1............
             .          .
             .          .
408          .          .------->    DOUT
404          .        DJ1
             .          V
             .          V
413          .      J1-J2
             .          .
             .          .
422          .          .          J2
             .          .           .
             .          .           .
435          .        CJ2............
             .          V
             .          V
438          .      J2-K3
             .          .
             .          .
447          .          .         K2B
             .          .           V
             .          .           V
457          .          .      K2B-K3
             .          .           .
             .          .           .
463          .          .           .          K3
             .          .           .           .
             .          .           .           .
476          .          .         CK3............
             .          .           .
             .          .           .
479          .       E6RL............
             .          .
             .          .
482        E6R............
             V
             V
485      E5-E6
             .
             .
491          .          E6
             .           .
             .           .
502          E............
             .
             .
505          .          G1
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   19APR06  TIME  15:33:04  *
*                                      *
****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

STEP 2 HYDROLOGY FOR WHITE TANK WASH
SUN VALLEY ADMP
- WHITE TANK WASH SUB-AREA
- ALTERNATIVE B2
  small online detention basin at apex
  with leveed downstream corridors

Alternative Description
The purpose of Alternative B is to capture the upstream flow at the apex using online detention basins. The presence of the detention basins eliminates the downstream alluvial fan uncertainties by controlling the flow from the apices to the outfall. Alternative B2 is based on using a relatively smaller on-line detention basin at the apex accompanied by larger leveed channel sections in the down fan direction.

JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
JANUARY 2006

MODEL BASED UPON:

Buckeye/Sun Valley ADMS - May 2005
Michael Baker Jr., Inc. - Modeler: Jacob Lesue
basins E-K with Aluvial Fan updates
100-year 24-hour

```
                    Existing Conditions
                    Area 3 - Sub-basins E-K (Aluvial Fan updates)
                    Rainfall Loss Method - Green & Ampt
                    Unit Hydrograph Method - FCDMC S-Graph
                    Channel Routing Method - Normal Depth
                    Land Use - FCDMC GIS Data: mag_landuse (2000)
                    Soil Data - USDA SCS Soil Survey (1972 & 1981)
                    Units - L(mi)    Lca(mi)    S(ft/mi)    LAG(min)

36 IO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT          HYDROGRAPH TIME DATA
                      NMIN          5  MINUTES IN COMPUTATION INTERVAL
                     IDATE     1JAN94  STARTING DATE
                     ITIME       0000  STARTING TIME
                        NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE     7JAN94  ENDING DATE
                    NDTIME       2235  ENDING TIME
                     ICENT         19  CENTURY MARK

                COMPUTATION INTERVAL     .08 HOURS
                     TOTAL TIME BASE  166.58 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT

38 JD          INDEX STORM NO. 1
                      STRM       4.16  PRECIPITATION DEPTH
                      TRDA        .01  TRANSPOSITION DRAINAGE AREA

39 PI            PRECIPITATION PATTERN
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                    .00       .00       .00       .00       .00       .00       .00       .01       .00       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                    .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
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                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00

49 JD          INDEX STORM NO. 2
                      STRM       3.95  PRECIPITATION DEPTH
                      TRDA      10.00  TRANSPOSITION DRAINAGE AREA

 0 PI            PRECIPITATION PATTERN
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .01       .00       .01
                    .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                    .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00
50 JD        INDEX STORM NO. 3
                STRM        3.82  PRECIPITATION DEPTH
                TRDA       20.00  TRANSPOSITION DRAINAGE AREA

 0 PI         PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .01       .00       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00
51 JD        INDEX STORM NO. 4
                STRM        3.69  PRECIPITATION DEPTH
                TRDA       40.00  TRANSPOSITION DRAINAGE AREA

 0 PI         PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
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                .00       .00       .00       .00       .00       .00       .00       .00
52 JD        INDEX STORM NO. 5
                STRM        3.57  PRECIPITATION DEPTH
                TRDA       80.00  TRANSPOSITION DRAINAGE AREA

 0 PI         PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
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            *            *
262 KK      *     E4     *        BASIN
            *            *
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266 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          1  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .083  TIME INTERVAL IN HOURS

1
                                   RUNOFF SUMMARY
                          FLOW IN CUBIC FEET PER SECOND
                       TIME IN HOURS,  AREA IN SQUARE MILES
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	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	F1	1868.	12.83	433.	121.	40.	3.10		
+	ROUTED TO	RRF1	1683.	12.92	433.	121.	40.	3.10		
+	ROUTED TO	F1-F2	1634.	13.08	432.	121.	40.	3.10		
+	HYDROGRAPH AT	F2	1333.	12.75	266.	69.	23.	2.21		
+	2 COMBINED AT	F3R	2584.	12.83	691.	188.	63.	5.31		
+	ROUTED TO	RRF2	2302.	13.17	691.	188.	63.	5.31		
+	ROUTED TO	F2-E2C	2283.	13.33	689.	188.	63.	5.31		
+	HYDROGRAPH AT	F3	375.	12.75	69.	17.	6.	.74		
+	2 COMBINED AT	CF3	2442.	13.25	753.	205.	68.	6.05		
+	HYDROGRAPH AT	E2C	541.	12.58	88.	22.	7.	.72		
+	2 COMBINED AT	CE2R	2620.	13.17	836.	226.	75.	6.76		
+	DIVERSION TO	DOUT	1763.	13.17	360.	90.	30.	6.76		
+	HYDROGRAPH AT	DE2C	857.	12.50	476.	136.	45.	6.76		
+	ROUTED TO	E2C-E3	872.	12.75	476.	136.	45.	6.76		
+	HYDROGRAPH AT	E1	790.	12.50	125.	32.	11.	.96		

+	ROUTED TO	E1-E2B	687.	12.83	125.	32.	11.	.96
+	HYDROGRAPH AT	E2B	352.	12.58	57.	14.	5.	.47
+	2 COMBINED AT	E3RB	958.	12.83	181.	45.	15.	1.42
+	ROUTED TO	RRE3RB	844.	13.00	181.	45.	15.	1.42
+	ROUTED TO	E2B-E3	807.	13.50	180.	45.	15.	1.42
+	2 COMBINED AT	E3MID	1649.	13.50	651.	180.	60.	8.19
+	ROUTED TO	E3E4RA	1595.	14.08	635.	180.	60.	8.19
+	HYDROGRAPH AT	E2A	572.	12.67	105.	26.	9.	.80
+	ROUTED TO	E2A-E3	461.	13.67	105.	26.	9.	.80
+	HYDROGRAPH AT	E3	1130.	13.00	289.	72.	24.	2.49
+	2 COMBINED AT	E4RAR	1177.	13.42	389.	98.	33.	3.28
+	2 COMBINED AT	E4RA	2345.	13.92	985.	274.	91.	11.47
+	ROUTED TO	E3-E4	2147.	14.92	975.	274.	91.	11.47
+	HYDROGRAPH AT	E4	966.	13.42	328.	83.	28.	3.04
+	2 COMBINED AT	E5RR	2379.	14.92	1237.	349.	116.	14.51
+	HYDROGRAPH AT	H1	472.	12.75	82.	20.	7.	1.07
+	ROUTED TO	H1-H2	314.	14.33	80.	20.	7.	1.07
+	HYDROGRAPH AT	H2	432.	13.25	128.	32.	11.	1.40
+	2 COMBINED AT	E5RL	469.	14.25	202.	52.	17.	2.47
+	2 COMBINED AT	E5R	2648.	14.83	1409.	393.	131.	16.98
+	ROUTED TO	E4-E5	2494.	16.00	1402.	393.	131.	16.98
+	HYDROGRAPH AT	E5	645.	12.92	147.	37.	12.	1.31
+	2 COMBINED AT	E6RR	2493.	16.00	1483.	426.	142.	18.29
+	HYDROGRAPH AT	K1	1433.	12.50	254.	74.	25.	1.54
+	ROUTED TO	K1-K2A	1031.	13.25	254.	74.	25.	1.54
+	HYDROGRAPH AT	K2A	827.	13.25	245.	62.	21.	1.95
+	2 COMBINED AT	K2BR	1839.	13.25	495.	135.	45.	3.49
+	ROUTED TO	RRK2RB	1671.	13.42	495.	135.	45.	3.49
+	ROUTED TO	K2A-2B	1567.	13.92	489.	135.	45.	3.49
+	HYDROGRAPH AT	J1	633.	13.08	160.	40.	13.	1.73
+	2 COMBINED AT	CJ1	1835.	13.83	637.	173.	58.	5.23
+	DIVERSION TO	DOUT	606.	13.83	68.	17.	6.	5.23

+	HYDROGRAPH AT	DJ1	1229.	13.33	568.	156.	52.	5.23
+	ROUTED TO	J1-J2	1226.	14.92	541.	156.	52.	5.23
+	HYDROGRAPH AT	J2	1212.	13.33	379.	95.	32.	3.64
+	2 COMBINED AT	CJ2	1565.	14.58	860.	249.	83.	8.86
+	ROUTED TO	J2-K3	1553.	14.75	856.	249.	83.	8.86
+	HYDROGRAPH AT	K2B	217.	12.58	32.	8.	3.	.42
+	ROUTED TO	K2B-K3	110.	14.67	32.	8.	3.	.42
+	HYDROGRAPH AT	K3	507.	13.33	160.	40.	13.	1.64
+	2 COMBINED AT	CK3	506.	13.33	188.	48.	16.	2.05
+	2 COMBINED AT	E6RL	1776.	14.75	1025.	294.	98.	10.92
+	2 COMBINED AT	E6R	3496.	15.25	2374.	685.	229.	29.20
+	ROUTED TO	E5-E6	3480.	15.83	2355.	685.	229.	29.20
+	HYDROGRAPH AT	E6	1194.	12.75	237.	60.	20.	2.04
+	2 COMBINED AT	E	3480.	15.83	2475.	737.	247.	31.24
+	HYDROGRAPH AT	G1	819.	12.58	136.	34.	11.	1.12

*** NORMAL END OF HEC-1 ***

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1****************************************                                    ****************************************
 *                                      *                                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                    *    U.S. ARMY CORPS OF ENGINEERS      *
 *              JUN   1998              *                                    *    HYDROLOGIC ENGINEERING CENTER     *
 *            VERSION 4.1               *                                    *          609 SECOND STREET           *
 *                                      *                                    *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   19APR06  TIME  15:38:52  *                                    *           (916) 756-1104             *
 *                                      *                                    *                                      *
 ****************************************                                    ****************************************

                                        X     X  XXXXXXX   XXXXX           X
                                        X     X  X        X     X         XX
                                        X     X  X        X                X
                                        XXXXXXX  XXXX     X        XXXXX   X
                                        X     X  X        X                X
                                        X     X  X        X     X          X
                                        X     X  XXXXXXX   XXXXX         XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                                HEC-1 INPUT                                                    PAGE  1

  LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

    1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
    2           ID    SUN VALLEY ADMP
    3           ID     - WHITE TANK WASH SUB-AREA
    4           ID     - ALTERNATIVE B3
    5           ID
    6           ID   Alternative Description
    7           ID   The purpose of Alternative B is to capture the upstream flow at the
    8           ID   apex using online detention basins.  The presence of the detention
    9           ID   basins eliminates the downstream alluvial fan uncertainties by
   10           ID   controlling the flow from the apices to the outfall.  Alternative B3
   11           ID   is based on using a relatively larger on-line detention basin at the
   12           ID   apex accompanied by smaller excavated channel sections in the down fan
   13           ID   direction.  The excavated earthen channels are complemented with a
   14           ID   120-foot wide adjacent riparian preservation corridor.
   15           ID
   16           ID
   17           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
   18           ID   JANUARY 2006
   19           ID
   20           ID   MODEL BASED UPON:
   21           ID
   22           ID  Buckeye/Sun Valley ADMS - May 2005
   23           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
   24           ID  basins E-K with Aluvial Fan updates
   25           ID  100-year 6-hour
   26           ID  Existing Conditions
   27           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
   28           ID  Rainfall Loss Method - Green & Ampt
   29           ID  Unit Hydrograph Method - FCDMC S-Graph
   30           ID  Channel Routing Method - Normal Depth
   31           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
   32           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
   33           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
                *DIAGRAM
   34           IT       5 01JAN94       0    2000
   35           IO       5
   36           IN      15 01JAN94       0
   37           JD    3.23    0.01
                * 6-hour distribution, pattern 1.0
   38           PC     0.0   0.008   0.016   0.025   0.033   0.041    0.05   0.058   0.066   0.074
   39           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931    0.95
   40           PC   0.962   0.972   0.983   0.991     1.0
   41           IN      15 01JAN94       0
   42           JD   3.211     0.5
                * 6-hour distribution, pattern 1.0
   43           PC     0.0   0.008   0.016   0.025   0.033   0.041    0.05   0.058   0.066   0.074
   44           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931    0.95
   45           PC   0.962   0.972   0.983   0.991     1.0
   46           IN      15 01JAN94       0
   47           JD   3.188     1.0
                * 6-hour distribution, pattern 1.4
   48           PC     0.0  0.0084   0.016   0.025  0.0334  0.0414  0.0504  0.0584  0.0664  0.0748
   49           PC   0.087  0.0994  0.1188   0.148  0.2304  0.4067  0.7778  0.8813  0.9186  0.9452
   50           PC  0.9572  0.9684  0.9798  0.9898     1.0
   51           IN      15 01JAN94       0
1                                                HEC-1 INPUT                                                    PAGE  2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 52           JD   3.101     5.0
              * 6-hour distribution, pattern 2.3
 53           PC     0.0   0.011  0.0173  0.0267  0.0387   0.049  0.0593  0.0693  0.0797  0.0903
 54           PC   0.103  0.1173  0.1383  0.1827  0.2693   0.458   0.686  0.8233  0.8893  0.9293
 55           PC  0.9487   0.962  0.9743  0.9877     1.0
 56           IN      15 01JAN94       0
 57           JD   3.036    10.0
              * 6-hour distribution, pattern 2.7
 58           PC     0.0  0.0134  0.0189  0.0287  0.0443  0.0574  0.0694  0.0818  0.0949  0.1076
 59           PC  0.1223  0.1382  0.1604  0.2063  0.2902  0.4664  0.6764  0.8069  0.8765  0.9189
 60           PC  0.9471  0.9608  0.9735  0.9873     1.0
 61           IN      15 01JAN94       0
 62           JD   2.939    20.0
              * 6-hour distribution, pattern 3.1
 63           PC     0.0  0.0158   0.022  0.0329  0.0511  0.0663  0.0799  0.0948  0.1102  0.1246
 64           PC   0.141  0.1587  0.1828    0.23  0.3122  0.4758  0.6684  0.7929  0.8643  0.9087
 65           PC  0.9434   0.958  0.9718  0.9863     1.0
 66           IN      15 01JAN94       0
 67           JD   2.875    30.0
              * 6-hour distribution, pattern 3.4
 68           PC     0.0  0.0172  0.0256  0.0378  0.0565  0.0719  0.0868   0.103  0.1191  0.1342
 69           PC  0.1513  0.1702  0.1961  0.2439  0.3263  0.4824  0.6655  0.7875   0.858  0.9031
 70           PC   0.939  0.9544  0.9697  0.9851     1.0
 71           IN      15 01JAN94       0
 72           JD    2.81    40.0
              * 6-hour distribution, pattern 3.5
 73           PC     0.0  0.0182  0.0281  0.0413  0.0604  0.0759  0.0916  0.1088  0.1254   0.141
 74           PC  0.1586  0.1783  0.2056  0.2537  0.3362   0.487  0.6636  0.7836  0.8535  0.8991
 75           PC  0.9358  0.9519  0.9682  0.9843     1.0
 76           IN      15 01JAN94       0
 77           JD   2.584   100.0
              * 6-hour distribution, pattern 4.1
 78           PC     0.0  0.0212  0.0355  0.0515  0.0715  0.0877   0.106  0.1261  0.1443  0.1618
 79           PC  0.1812  0.2036  0.2347  0.2837   0.367   0.501  0.6559  0.7704  0.8392  0.8864
 80           PC  0.9256   0.944  0.9633  0.9817     1.0
              *

 81           KK      F1   BASIN
 82           KM    TOTAL FLOW TO APEX 39
 83           KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 84           KM   L=5.07     Lca=2.57     S=369.39     Kn=0.050     LAG=61.9
 85           KM   S-GRAPH TYPE=PHX MNT
 86           BA   3.103
 87           LG   0.297   0.329   4.244   0.378  12.997
 88           UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
 89           UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
 90           UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
 91           UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
 92           UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
 93           UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 94           KK    RRF1 STORAGE
 95           KM   PROPOSED DETENTION BASIN
 96           KM    ROUTE RUNOFF FROM F1 THROUGH PROPOSED DETENTION BASIN AT APEX 39
 97           KM    STRUCTURE ID:RRF1
 98           KM    DIMENSIONS: L=1200ft, W=750ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 181.8 ac
 99           RS       1    STOR       0
100           SV     0.0    17.0    34.3    51.9    69.7   106.0   143.4   181.8   221.2   261.7
101           SE     0.0     1.0     2.0     3.0     4.0     6.0     8.0    10.0    12.0    14.0
102           SQ     0.0    60.5    85.6   104.8   121.0   148.2   171.1   191.3   209.6   226.4
              *

103           KK   F1-F2   ROUTE
104           KM   PROPOSED CHANNEL
105           KM    STRUCTURE ID(s): RRF110
106           KM    Slope=(1493.3 - 1433.6) / 4725.1
107           RS       3    FLOW      -1
108           RC   0.045   0.045   0.045  4725.10.012648   103.0
109           RX     0.0     9.0    29.0    35.0    70.0    76.0    96.0   105.0
110           RY   103.0   100.0   100.0    98.0    98.0   100.0   100.0   103.0
              *

111           KK      F2   BASIN
112           KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
113           KM   L=3.88     Lca=1.80     S=161.60     Kn=0.050     LAG=57.0
114           KM   S-GRAPH TYPE=PHX MNT
115           BA   2.209
116           LG    0.35    0.35   4.375   0.362   3.346
117           UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
118           UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
119           UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
120           UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
121           UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
122           UI   25.01   25.01   25.01     0.0
              *

123           KK     F3R COMBINE
124           KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
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 125          HC       2
              *

 126          KK    RRF2 STORAGE
 127          KM   PROPOSED DETENTION BASIN
 128          KM    ROUTE RUNOFF FROM F1 AND F2 THROUGH PROPOSED DETENTION BASIN AT F2
 129          KM    STRUCTURE ID:RRF2
 130          KM    DIMENSIONS: L=1300ft, W=530ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 136.5 ac
 131          RS       1    STOR       0
 132          SV     0.0    12.6    25.4    51.7    79.0   107.2   136.5   151.4   166.7   182.1
 133          SE     0.0     1.0     2.0     4.0     6.0     8.0    10.0    11.0    12.0    13.0
 134          SQ     0.0    60.5    85.6   121.0   148.2   171.1   191.3   200.7   209.6   218.2
              *
1                                          HEC-1 INPUT                                          PAGE  4

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 135          KK  F2-E2C   ROUTE
 136          KM   PROPOSED CHANNEL
 137          KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
 138          KM    MODIFIED FOR STEP 2 OF ADMP
 139          KM    STRUCTURE ID(s): E4RB10, E4RB20
 140          KM    Slope=(1433.6 - 1368.3) / 5731.3
 141          RS       4    FLOW      -1
 142          RC   0.045   0.045   0.045  5731.30.011392   102.0
 143          RX     0.0     6.0    31.0    38.5    63.5    71.0    96.0   102.0
 144          RY   102.0   100.0   100.0    97.5    97.5   100.0   100.0   102.0
              *

 145          KK      F3   BASIN
 146          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 147          KM   L=2.71     Lca=1.26     S=81.34     Kn=0.055     LAG=54.2
 148          KM   S-GRAPH TYPE=DES RNGLND
 149          BA   0.736
 150          LG    0.35    0.35   3.284    0.64     0.0
 151          UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
 152          UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
 153          UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
 154          UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
 155          UI     0.0
              *

 156          KK     CF3 COMBINE
 157          KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
 158          HC       2
              *

 159          KK     E2C   BASIN
 160          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 161          KM   L=2.38     Lca=1.01     S=92.90     Kn=0.055     LAG=46.0
 162          KM   S-GRAPH TYPE=DES RNGLND
 163          BA   0.716
 164          LG    0.35    0.35   4.343   0.357     0.0
 165          UI     0.0   55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
 166          UI  498.61  439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
 167          UI   84.51   59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
 168          UI   13.41   13.41   13.41   13.41     0.0
              *

 169          KK    CE2R COMBINE
 170          KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
 171          HC       2
              *

 172          KK    DE2C  DIVERT
 173          KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
 174          KM    STRUCTURE ID:DE2C
 175          KM    DIMENSIONS: L=200ft, W=100ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 1 ac-ft
 176          DT    DOUT
 177          DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
 178          DI  1200.0  1179.7
1                                          HEC-1 INPUT                                          PAGE  5

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 179          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
 180          DQ   343.0   323.0
              *

 181          KK  E2C-E3   ROUTE
 182          KM   PROPOSED CHANNEL
 183          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
 184          KM    STRUCTURE ID(s): E4RB30
 185          KM    Slope=(1368.3 - 1313.1) / 4724.8
 186          RS      13    FLOW      -1
 187          RC   0.045   0.045   0.045  4724.80.011682   102.0
 188          RX     0.0     6.0    31.0    38.5    62.5    70.0   100.0   106.0
 189          RY   102.0   100.0   100.0    97.5    97.5   100.0   100.0   102.0
              *

 190          KK      E1   BASIN
 191          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 192          KM   L=2.51     Lca=1.13     S=178.34     Kn=0.055     LAG=43.3
 193          KM   S-GRAPH TYPE=PHX MNT
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 194          BA   0.956
 195          LG    0.35   0.378   5.377   0.222    0.69
 196          UI     0.0   74.86   77.94  239.17  368.29  486.24  570.86   714.2  832.85  536.73
 197          UI  451.19  405.28  360.54  317.72  278.78  233.78  192.26  176.85  160.99  130.76
 198          UI  107.56   95.43   81.98   76.82   57.39   57.39   44.31   36.63   36.63   36.63
 199          UI   23.53   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35
 200          UI     0.0
              *

 201          KK  E1-E2B   ROUTE
 202          RS       5    FLOW     0.0     0.0
 203          RC    0.05   0.047   0.04610992.72   0.016     0.0
 204          RX     0.0    65.0   140.0   170.0   185.0   200.0   270.0   340.0
 205          RY    24.0    21.0    17.0    10.0    10.0    14.0    18.0    22.0
              *

 206          KK     E2B   BASIN
 207          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 208          KM   L=2.08      Lca=1.07      S=87.98      Kn=0.055      LAG=45.2
 209          KM   S-GRAPH TYPE=DES RNGLND
 210          BA   0.466
 211          LG    0.35    0.38     5.6    0.21     0.0
 212          UI     0.0    32.1    32.1   94.97  150.03  204.82  250.49  285.24   306.5  304.84
 213          UI  285.73  244.25   203.0  165.28   137.3  113.17   92.95    75.5   62.33   52.17
 214          UI   43.31   34.02   28.77   21.97   21.97   16.14    7.81    7.81    7.81    7.81
 215          UI    7.81    7.81    7.81    7.81
              *

 216          KK    E3RB COMBINE
 217          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
 218          HC       2
              *
1                                        HEC-1 INPUT                                                PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 219          KK  RRE3RB STORAGE
 220          KM   PROPOSED DETENTION BASIN
 221          KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 6
 222          KM    STRUCTURE ID:RRE3RB
 223          KM    DIMENSIONS: L=1100ft, W=350ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 72.4 ac-
 224          RS       1     STOR       0
 225          SV     0.0      3.2      6.4      9.7     13.0     26.7     41.2     56.4     72.4     89.1
 226          SE     0.0      0.5      1.0      1.5      2.0      4.0      6.0      8.0     10.0     12.0
 227          SQ     0.0     42.8     60.5     74.1     85.6    121.0    148.2    171.1    191.3    209.6
              *

 228          KK  E2B-E3   ROUTE
 229          KM   PROPOSED CHANNEL
 230          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
 231          KM    STRUCTURE ID(s): E3RB10, E3RB20
 232          KM    Slope=(1456.8 - 1313.1) / 10317.4
 233          RS      12     FLOW      -1
 234          RC   0.045    0.045    0.045 10317.40.013931    102.5
 235          RX     0.0      7.5     32.5     38.5     58.5     64.5     89.5     97.0
 236          RY   102.5    100.0    100.0     98.0     98.0    100.0    100.0    102.5
              *

 237          KK   E3MID COMBINE
 238          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
 239          HC       2
              *

 240          KK  E3E4RA   ROUTE
 241          KM   PROPOSED CHANNEL
 242          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
 243          KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
 244          KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
 245          KM    STRUCTURE ID(s): E4RA10
 246          KM    Slope=(1313.1 - 1230.3) / 10788.6
 247          RS      12     FLOW      -1
 248          RC   0.045    0.045    0.045 10788.6 0.00767    103.0
 249          RX     0.0      9.0     34.0     43.0     83.0     92.0    117.0    126.0
 250          RY   103.0    100.0    100.0     97.0     97.0    100.0    100.0    103.0
              *

 251          KK     E2A   BASIN
 252          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 253          KM   L=2.90      Lca=1.20      S=100.83      Kn=0.055      LAG=52.4
 254          KM   S-GRAPH TYPE=DES RNGLND
 255          BA   0.797
 256          LG    0.35    0.38     5.6    0.21     0.0
 257          UI     0.0    51.6    51.6  110.43  196.83  277.44  347.94  413.76  460.03   489.1
 258          UI  494.55   472.6  438.77  369.81  310.92  263.99  224.69  190.62  158.99  135.09
 259          UI  112.23   97.29   80.97   70.86    54.7   53.12   35.32   35.32   35.32   21.96
 260          UI   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56     0.0
              *
1                                        HEC-1 INPUT                                                PAGE  7

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 261          KK  E2A-E3   ROUTE
 262          RS      13     FLOW     0.0     0.0
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263          RC   0.052   0.046   0.05219626.03  0.0093     0.0
264          RX     0.0   133.0   173.0   213.0   223.0   263.0   303.0   403.0
265          RY    22.0    17.0    14.0    10.0    10.0    15.0    18.0    22.0
             *

266          KK      E3   BASIN
267          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
268          KM   L=3.87      Lca=1.99      S=49.65      Kn=0.050      LAG=74.5
269          KM   S-GRAPH TYPE=DES RNGLND
270          BA   2.488
271          LG    0.35    0.35   4.362   0.346     0.0
272          UI     0.0  111.69  111.69  111.69  226.88  361.12  481.81  599.56  708.99  795.91
273          UI  924.44  981.52 1023.08 1070.39 1070.39 1054.33 1012.16  958.83  843.16   765.0
274          UI  671.82  595.75  537.55  476.38  423.35  378.09  335.18  305.82   252.8  234.07
275          UI  210.57  188.36  171.26  154.61  118.38  118.38  115.87   76.46   76.46   76.46
276          UI   76.46   75.47   27.18   27.18   27.18   27.18   27.18   27.18   27.18   27.18
277          UI   27.18   27.18   27.18   27.18   27.18   27.18
             *

278          KK   E4RAR COMBINE
279          KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
280          HC       2
             *

281          KK    E4RA COMBINE
282          KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
283          HC       2
             *
             *  SPOT FOR POTENTIAL DETENTION BASIN AT START OF WHITE TANK WASH
             *

284          KK   E3-E4   ROUTE
285          KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
286          RS      14    FLOW     0.0     0.0
287          RC   0.056   0.049   0.05613854.98  0.0048     0.0
288          RX     0.0   570.0   650.0   690.0   705.0   735.0   810.0  1200.0
289          RY    21.0    14.0    13.0    10.0    10.0    12.5    14.5    21.0
             *

290          KK      E4   BASIN
291          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
292          KM   L=5.36      Lca=2.81      S=38.26      Kn=0.050      LAG=101.9
293          KM   S-GRAPH TYPE=DES RNGLND
294          KO       0       0     0.0       1      22
295          BA   3.042
296          LG    0.35    0.35   3.816   0.439     0.0
297          UI     0.0  100.41  100.41  100.41  100.41   158.4  288.69  358.15  433.82  515.05
298          UI  586.72  661.74  710.91  802.48  849.78  890.67  905.99   962.3   962.3   962.3
299          UI  958.07  920.61  904.77  855.38  781.14  712.32  671.29  604.26   557.2  512.12
300          UI  469.45  435.76   392.7  363.69  334.37  307.94  277.85  264.88  224.23  220.83
301          UI  189.31  189.31  167.81  153.97  153.97   127.9  106.43  106.43  106.43  101.85
302          UI   68.74   68.74   68.74   68.74   68.74   68.74    56.9   24.44   24.44   24.44
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1 HEC-1 INPUT PAGE 8

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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

303          UI   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44
304          UI   24.44   24.44   24.44   24.44   24.44   24.44
             *

305          KK    E5RR COMBINE
306          KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
307          HC       2
             *

308          KK      H1   BASIN
309          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
310          KM   L=2.41      Lca=1.09      S=64.59      Kn=0.055      LAG=51.2
311          KM   S-GRAPH TYPE=DES RNGLND
312          BA   1.066
313          LG    0.35    0.35   2.733   0.945     0.0
314          UI     0.0   70.38   70.38  156.67  277.53  386.09  481.01   579.0   629.6  674.43
315          UI  672.95  639.66  573.48  484.85  407.01  343.97  290.32  244.62  205.27   171.4
316          UI  143.72  125.14  107.91   82.11   74.59   59.78   48.17   48.17   44.03   17.13
317          UI   17.13   17.13   17.13   17.13   17.13   17.13   17.13   17.13     0.0
             *

318          KK   H1-H2   ROUTE
319          KM    ROUTE RUNOFF FROM H1 TO E5R
320          RS      21    FLOW     0.0     0.0
321          RC   0.053    0.05   0.05321739.03  0.0082     0.0
322          RX     0.0   330.0   430.0   465.0   495.0   530.0   630.0   960.0
323          RY    17.0    14.0    12.0    10.0    10.0    12.0    14.0    17.0
             *

324          KK      H2   BASIN
325          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
326          KM   L=4.41      Lca=2.60      S=44.71      Kn=0.050      LAG=88.9
327          KM   S-GRAPH TYPE=DES RNGLND
328          BA     1.4
329          LG    0.35    0.35   3.222   0.664     0.0
330          UI     0.0   52.96   52.96   52.96   52.96  142.93  178.39   226.9  274.71  319.58
331          UI  365.35   394.2  441.12  466.71   479.3  507.56  507.56  507.56  494.47  478.59
332          UI  456.68  413.58  373.47  343.47  306.13  279.54  254.31  232.29  208.19  189.77
333          UI  169.44  155.74  145.02  121.24  117.25   99.85   99.85   83.38   81.21   75.85
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 334          UI   56.14   56.14   56.14   49.15   36.25   36.25   36.25   36.25   36.25    27.6
 335          UI   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89
 336          UI   12.89   12.89   12.89   12.89   12.89   12.89     0.0
              *

 337          KK    E5RL COMBINE
 338          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
 339          HC       2
              *

 340          KK     E5R COMBINE
 341          KM    COMBINE ALL FLOWS AT E5R
 342          HC       2
              *
1                                          HEC-1 INPUT                                                PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 343          KK   E4-E5   ROUTE
 344          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
 345          RS      14    FLOW     0.0     0.0
 346          RC    0.06    0.05    0.0615206.17  0.0051     0.0
 347          RX     0.0  1010.0  1080.0  1090.0  1110.0  1120.0  1190.0  2200.0
 348          RY    27.0    16.0    15.0    10.0    10.0    14.0    16.0    27.0
              *

 349          KK      E5   BASIN
 350          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 351          KM   L=3.01     Lca=1.41     S=28.56     Kn=0.050     LAG=65.8
 352          KM   S-GRAPH TYPE=DES RNGLND
 353          BA   1.308
 354          LG   0.347   0.344    3.94   0.429   0.968
 355          UI     0.0   66.73   66.73   66.73  187.33  261.54  342.37  416.83  480.54  556.36
 356          UI  598.07  622.96  639.46  636.14  605.78  574.36  496.51  443.91  383.22  336.88
 357          UI  298.49  258.94  227.11  198.14  176.39   149.0   129.8   120.7  102.31   94.82
 358          UI   70.72   70.72   61.39   45.68   45.68   45.68   45.68   18.08   16.24   16.24
 359          UI   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24     0.0
              *

 360          KK    E6RR COMBINE
 361          KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
 362          KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
 363          KM    (WEST CORRIDOR U/S OF E6R)
 364          HC       2
              *

 365          KK      K1   BASIN
 366          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 367          KM   L=3.23     Lca=1.84     S=681.00     Kn=0.050     LAG=40.4
 368          KM   S-GRAPH TYPE=PHX MNT
 369          BA   1.543
 370          LG   0.112   0.255   4.365   0.366  21.277
 371          UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
 372          UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
 373          UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
 374          UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
              *

 375          KK  K1-K2A   ROUTE
 376          KM    ROUTE RUNOFF FROM K1 TO APEX 38
 377          RS      10    FLOW     0.0     0.0
 378          RC    0.05   0.048    0.0519434.11   0.017     0.0
 379          RX     0.0    20.0    55.0    85.0   235.0   259.0   289.0   309.0
 380          RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
              *

 381          KK     K2A   BASIN
 382          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 383          KM   L=5.29     Lca=2.72     S=126.78     Kn=0.055     LAG=87.2
 384          KM   S-GRAPH TYPE=DES RNGLND
 385          BA   1.949
 386          LG   0.341   0.347   4.907   0.278   1.288
1                                          HEC-1 INPUT                                                PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 387          UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
 388          UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
 389          UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
 390          UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
 391          UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
 392          UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
 393          UI   18.36   18.36   18.36   18.36     0.0
              *

 394          KK    K2BR COMBINE
 395          KM    COMBINE FLOWS AT APEX 38
 396          HC       2
              *

 397          KK  RRK2RB STORAGE
 398          KM   PROPOSED DETENTION BASIN
 399          KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 38
 400          KM    STRUCTURE ID:RRK2RB
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401        KM    DIMENSIONS: L=2000ft, W=500ft, D=12ft, Sideslope (?H:1V)= 3,  Vol.= 219.5 ac
402        RS       1    STOR       0
403        SV     0.0    36.9    75.2   114.7   155.6   176.6   197.8   219.5   241.4   263.7
404        SE     0.0     2.0     4.0     6.0     8.0     9.0    10.0    11.0    12.0    13.0
405        SQ     0.0    85.6   121.0   148.2   171.1   181.5   191.3   200.7   209.6   218.2
           *

406        KK  K2A-2B   ROUTE
407        KM   PROPOSED CHANNEL
408        KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
409        KM    MODIFIED FOR STEP 2 OF ADMP
410        KM    STRUCTURE ID(s): CJ110, CJ120
411        KM    Slope=(1437.6 - 1316.8) / 10052.6
412        RS       4    FLOW      -1
413        RC   0.045   0.045   0.045 10052.60.012015   102.5
414        RX     0.0     7.5    27.5    32.0    52.0    56.5    76.5    84.0
415        RY   102.5   100.0   100.0    98.5    98.5   100.0   100.0   102.5
           *

416        KK      J1   BASIN
417        KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
418        KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
419        KM   S-GRAPH TYPE=DES RNGLND
420        BA   1.734
421        LG    0.35    0.35    3.25   0.652     0.0
422        UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
423        UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
424        UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
425        UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
426        UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
427        UI   18.95   18.95   18.95   18.95   18.95   18.95
           *
```



```
LINE       ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

428        KK     CJ1 COMBINE
429        KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
430        KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
431        HC       2
           *

432        KK   J1-J2   ROUTE
433        KM   PROPOSED CHANNEL
434        KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
435        KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
436        KM    Slope=(1316.8 - 1104.3) / 23082.2
437        RS      16    FLOW      -1
438        RC   0.045   0.045   0.045 23082.20.009207   103.0
439        RX     0.0     9.0    34.0    40.0    70.0    76.0   101.0   110.0
440        RY   103.0   100.0   100.0    98.0    98.0   100.0   100.0   103.0
           *

441        KK      J2   BASIN
442        KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
443        KM   L=5.18      Lca=2.51      S=45.01      Kn=0.050      LAG=93.2
444        KM   S-GRAPH TYPE=DES RNGLND
445        BA   3.638
446        LG   0.349   0.348   3.621   0.496   0.281
447        UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
448        UI  857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
449        UI  1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
450        UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
451        UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
452        UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
453        UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
           *

454        KK     CJ2 COMBINE
455        KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
456        HC       2
           *

457        KK   J2-K3   ROUTE
458        KM   PROPOSED CHANNEL
459        KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
460        KM    STRUCTURE ID(s): E6RL10
461        KM    Slope=(1104.3 - 1084.9) / 3156.5
462        RS       3    FLOW      -1
463        RC   0.045   0.045   0.045  3156.50.006135   104.0
464        RX     0.0    12.0    37.0    44.5    74.5    82.0   107.0   119.0
465        RY   104.0   100.0   100.0    97.5    97.5   100.0   100.0   104.0
           *

466        KK      K2B   BASIN
467        KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
468        KM   L=2.01      Lca=0.83      S=60.78      Kn=0.055      LAG=43.5
469        KM   S-GRAPH TYPE=DES RNGLND
470        BA   0.416
471        LG    0.35    0.35   2.708   0.961     0.0
```



```
LINE       ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
472          UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
473          UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
474          UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
475          UI    7.93    7.93     0.0
             *

476          KK  K2B-K3   ROUTE
477          KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
478          RS      19    FLOW     0.0     0.0
479          RC    0.05   0.048   0.0525950.11  0.0084     0.0
480          RX     0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
481          RY    20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
             *

482          KK      K3   BASIN
483          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
484          KM   L=4.92     Lca=2.65     S=44.16     Kn=0.050     LAG=93.6
485          KM   S-GRAPH TYPE=DES RNGLND
486          BA   1.636
487          LG    0.35    0.35   3.421   0.582     0.0
488          UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
489          UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
490          UI  528.98  508.31  466.83  418.22  391.32  351.35  318.32  291.61  266.72  243.82
491          UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
492          UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
493          UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
494          UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
             *

495          KK     CK3 COMBINE
496          KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
497          HC       2
             *

498          KK    E6RL COMBINE
499          KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
500          HC       2
             *

501          KK     E6R COMBINE
502          KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
503          HC       2
             *

504          KK   E5-E6   ROUTE
505          KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
506          RS       4    FLOW     0.0     0.0
507          RC   0.063   0.051   0.063  5105.8  0.0037     0.0
508          RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
509          RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
             *
```



```
       LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

510          KK      E6   BASIN
511          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
512          KM   L=3.04     Lca=1.06     S=34.17     Kn=0.050     LAG=57.1
513          KM   S-GRAPH TYPE=DES RNGLND
514          BA   2.038
515          LG   0.343   0.336   4.356   0.367   0.711
516          UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
517          UI  1153.6 1153.67  1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
518          UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
519          UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
520          UI    29.3    29.3     0.0
             *

521          KK       E COMBINE
522          KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
523          HC       2
             *

524          KK      G1   BASIN
525          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
526          KM   L=2.38     Lca=1.08     S=33.76     Kn=0.045     LAG=47.1
527          KM   S-GRAPH TYPE=DES RNGLND
528          BA   1.119
529          LG    0.35    0.35    4.68   0.299     0.0
530          UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
531          UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
532          UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
533          UI   19.51   19.51   19.51   19.51   19.51     0.0
534          ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

```
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   81          F1
                V
                V
```

```
 94        RRF1
              V
              V
103       F1-F2
              .
              .
111           .           F2
              .            .
              .            .
123         F3R............
              V
              V
126        RRF2
              V
              V
135      F2-E2C
              .
              .
145           .           F3
              .            .
              .            .
156         CF3............
              .
              .
159           .          E2C
              .            .
              .            .
169       CE2R............
              .
              .
176           .-------->    DOUT
172       DE2C
              V
              V
181      E2C-E3
              .
              .
190           .           E1
              .            V
              .            V
201           .       E1-E2B
              .            .
              .            .
206           .            .          E2B
              .            .            .
              .            .            .
216           .        E3RB............
              .            V
              .            V
219           .       RRE3RB
              .            V
              .            V
228           .       E2B-E3
              .            .
              .            .
237      E3MID............
              V
              V
240      E3E4RA
              .
              .
251           .          E2A
              .            V
              .            V
261           .       E2A-E3
              .            .
              .            .
266           .            .           E3
              .            .            .
              .            .            .
278           .       E4RAR............
              .            .
              .            .
281       E4RA............
              V
              V
284       E3-E4
              .
              .
290           .           E4
              .            .
              .            .
305       E5RR............
              .
              .
308           .           H1
              .            V
              .            V
318           .       H1-H2
              .            .
              .            .
324           .            .           H2
              .            .            .
              .            .            .
337           .        E5RL............
```

```
                .          .
                .          .
  340         E5R............
                V
                V
  343       E4-E5
                .
                .
  349           .          E5
                .          .
                .          .
  360        E6RR............
                .
                .
  365           .          K1
                .           V
                .           V
  375           .      K1-K2A
                .           .
                .           .
  381           .           .         K2A
                .           .           .
                .           .           .
  394           .        K2BR............
                .           V
                .           V
  397           .      RRK2RB
                .           V
                .           V
  406           .      K2A-2B
                .           .
                .           .
  416           .           .          J1
                .           .           .
                .           .           .
  428           .         CJ1............
                .           V
                .           V
  432           .       J1-J2
                .           .
                .           .
  441           .           .          J2
                .           .           .
                .           .           .
  454           .         CJ2............
                .           V
                .           V
  457           .       J2-K3
                .           .
                .           .
  466           .           .         K2B
                .           .           V
                .           .           V
  476           .           .      K2B-K3
                .           .           .
                .           .           .
  482           .           .           .          K3
                .           .           .           .
                .           .           .           .
  495           .           .         CK3............
                .           .           .
                .           .           .
  498           .        E6RL............
                .           .
                .           .
  501         E6R............
                V
                V
  504       E5-E6
                .
                .
  510           .          E6
                .           .
                .           .
  521           E............
                .
                .
  524           .          G1
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1****************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *              JUN   1998              *
 *           VERSION 4.1                *
 *                                      *
 *  RUN DATE   19APR06  TIME  15:38:52  *
 *                                      *
 ****************************************
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

STEP 2 HYDROLOGY FOR WHITE TANK WASH

```
SUN VALLEY ADMP
 - WHITE TANK WASH SUB-AREA
 - ALTERNATIVE B3

Alternative Description
The purpose of Alternative B is to capture the upstream flow at the
apex using online detention basins.  The presence of the detention
basins eliminates the downstream alluvial fan uncertainties by
controlling the flow from the apices to the outfall.  Alternative B3
is based on using a relatively larger on-line detention basin at the
apex accompanied by smaller excavated channel sections in the down fan
direction.  The excavated earthen channels are complemented with a
120-foot wide adjacent riparian preservation corridor.

JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
JANUARY 2006

MODEL BASED UPON:

Buckeye/Sun Valley ADMS - May 2005
Michael Baker Jr., Inc. - Modeler: Jacob Lesue
basins E-K with Aluvial Fan updates
100-year 6-hour
Existing Conditions
Area 3 - Sub-basins E-K (Aluvial Fan updates)
Rainfall Loss Method - Green & Ampt
Unit Hydrograph Method - FCDMC S-Graph
Channel Routing Method - Normal Depth
Land Use - FCDMC GIS Data: mag_landuse (2000)
Soil Data - USDA SCS Soil Survey (1972 & 1981)
Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)

35 IO        OUTPUT CONTROL VARIABLES
                IPRNT          5  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT        HYDROGRAPH TIME DATA
                NMIN          5  MINUTES IN COMPUTATION INTERVAL
               IDATE     1JAN94  STARTING DATE
               ITIME       0000  STARTING TIME
                  NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
              NDDATE     7JAN94  ENDING DATE
              NDTIME       2235  ENDING TIME
               ICENT         19  CENTURY MARK

          COMPUTATION INTERVAL     .08 HOURS
               TOTAL TIME BASE  166.58 HOURS

      ENGLISH UNITS
           DRAINAGE AREA          SQUARE MILES
           PRECIPITATION DEPTH    INCHES
           LENGTH, ELEVATION      FEET
           FLOW                   CUBIC FEET PER SECOND
           STORAGE VOLUME         ACRE-FEET
           SURFACE AREA           ACRES
           TEMPERATURE            DEGREES FAHRENHEIT

37 JD        INDEX STORM NO. 1
                STRM        3.23  PRECIPITATION DEPTH
                TRDA         .01  TRANSPOSITION DRAINAGE AREA

38 PI          PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

42 JD        INDEX STORM NO. 2
                STRM        3.21  PRECIPITATION DEPTH
                TRDA         .50  TRANSPOSITION DRAINAGE AREA

43 PI          PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

47 JD        INDEX STORM NO. 3
                STRM        3.19  PRECIPITATION DEPTH
                TRDA        1.00  TRANSPOSITION DRAINAGE AREA

48 PI          PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
```

```
                .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                .03       .03       .06       .06       .06       .12       .12       .12       .03       .03
                .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

52 JD        INDEX STORM NO. 4
                 STRM        3.10  PRECIPITATION DEPTH
                 TRDA        5.00  TRANSPOSITION DRAINAGE AREA

53 PI          PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                .03       .03       .06       .06       .06       .08       .08       .08       .05       .05
                .05       .02       .02       .02       .01       .01       .01       .01       .01       .01
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

57 JD        INDEX STORM NO. 5
                 STRM        3.04  PRECIPITATION DEPTH
                 TRDA       10.00  TRANSPOSITION DRAINAGE AREA

58 PI          PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
                .01       .01       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .06       .06       .06       .07       .07       .07       .04       .04
                .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

62 JD        INDEX STORM NO. 6
                 STRM        2.94  PRECIPITATION DEPTH
                 TRDA       20.00  TRANSPOSITION DRAINAGE AREA

63 PI          PRECIPITATION PATTERN
                .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                .01       .01       .01       .01       .01       .00       .00       .00       .00       .00
                .00       .01       .01       .01       .00       .00       .00       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

67 JD        INDEX STORM NO. 7
                 STRM        2.88  PRECIPITATION DEPTH
                 TRDA       30.00  TRANSPOSITION DRAINAGE AREA

68 PI          PRECIPITATION PATTERN
                .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                .01       .01       .01       .01       .01       .00       .00       .00       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .00
                .00       .00

72 JD        INDEX STORM NO. 8
                 STRM        2.81  PRECIPITATION DEPTH
                 TRDA       40.00  TRANSPOSITION DRAINAGE AREA

73 PI          PRECIPITATION PATTERN
                .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01

77 JD        INDEX STORM NO. 9
                 STRM        2.58  PRECIPITATION DEPTH
                 TRDA      100.00  TRANSPOSITION DRAINAGE AREA

78 PI          PRECIPITATION PATTERN
                .01       .01       .01       .00       .00       .00       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .04       .04       .04       .05       .05       .05       .04       .04
                .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
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            **************
            *            *
290 KK      *     E4     *        BASIN
            *            *
            **************

294 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          1  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .083  TIME INTERVAL IN HOURS

1
                                          RUNOFF SUMMARY
                                   FLOW IN CUBIC FEET PER SECOND
                                TIME IN HOURS,  AREA IN SQUARE MILES
```

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	F1	1773.	4.83	444.	113.	38.	3.10		
+	ROUTED TO	RRF1	187.	6.83	177.	110.	38.	3.10		
+	ROUTED TO	F1-F2	187.	7.08	176.	110.	38.	3.10		
+	HYDROGRAPH AT	F2	1306.	4.75	280.	70.	23.	2.21		
+	2 COMBINED AT	F3R	1140.	4.75	388.	163.	55.	5.31		
+	ROUTED TO	RRF2	179.	8.50	178.	151.	55.	5.31		
+	ROUTED TO	F2-E2C	179.	8.75	178.	151.	55.	5.31		
+	HYDROGRAPH AT	F3	454.	4.75	84.	21.	7.	.74		
+	2 COMBINED AT	CF3	326.	4.83	200.	159.	59.	6.05		
+	HYDROGRAPH AT	E2C	658.	4.58	108.	27.	9.	.72		
+	2 COMBINED AT	CE2R	707.	4.75	266.	175.	64.	6.76		
+	DIVERSION TO	DOUT	0.	.00	0.	0.	0.	6.76		
+	HYDROGRAPH AT	DE2C	707.	4.75	266.	175.	64.	6.76		
+	ROUTED TO	E2C-E3	703.	4.92	265.	175.	64.	6.76		
+	HYDROGRAPH AT	E1	894.	4.50	148.	37.	12.	.96		
+	ROUTED TO	E1-E2B	794.	4.83	148.	37.	12.	.96		
+	HYDROGRAPH AT	E2B	450.	4.58	72.	18.	6.	.47		
+	2 COMBINED AT	E3RB	1053.	4.83	205.	51.	17.	1.42		
+	ROUTED TO	RRE3RB	187.	6.00	156.	51.	17.	1.42		
+	ROUTED TO	E2B-E3	187.	6.50	156.	51.	17.	1.42		
+	2 COMBINED AT	E3MID	702.	5.08	385.	214.	77.	8.19		
+	ROUTED TO	E3E4RA	677.	5.50	374.	209.	75.	8.19		
+	HYDROGRAPH AT	E2A	680.	4.67	127.	32.	11.	.80		
	ROUTED TO									

+		E2A-E3	561.	5.67	126.	32.	11.	.80
+	HYDROGRAPH AT	E3	1149.	5.08	301.	75.	25.	2.49
+	2 COMBINED AT	E4RAR	1175.	5.42	393.	99.	33.	3.28
+	2 COMBINED AT	E4RA	1512.	5.50	630.	274.	97.	11.47
+	ROUTED TO	E3-E4	1395.	6.50	620.	272.	97.	11.47
+	HYDROGRAPH AT	E4	923.	5.42	319.	80.	27.	3.04
+	2 COMBINED AT	E5RR	1614.	6.42	763.	311.	111.	14.51
+	HYDROGRAPH AT	H1	497.	4.75	86.	22.	7.	1.07
+	ROUTED TO	H1-H2	331.	6.33	85.	22.	7.	1.07
+	HYDROGRAPH AT	H2	446.	5.25	134.	33.	11.	1.40
+	2 COMBINED AT	E5RL	389.	5.25	176.	45.	15.	2.47
+	2 COMBINED AT	E5R	1613.	6.42	810.	321.	114.	16.98
+	ROUTED TO	E4-E5	1536.	7.50	804.	319.	114.	16.98
+	HYDROGRAPH AT	E5	713.	4.92	165.	41.	14.	1.31
+	2 COMBINED AT	E6RR	1534.	7.50	841.	337.	121.	18.29
+	HYDROGRAPH AT	K1	1564.	4.50	291.	73.	24.	1.54
+	ROUTED TO	K1-K2A	1236.	5.25	289.	73.	24.	1.54
+	HYDROGRAPH AT	K2A	894.	5.25	269.	68.	23.	1.95
+	2 COMBINED AT	K2BR	1890.	5.25	517.	131.	44.	3.49
+	ROUTED TO	RRK2RB	194.	7.92	185.	123.	44.	3.49
+	ROUTED TO	K2A-2B	193.	8.58	184.	123.	44.	3.49
+	HYDROGRAPH AT	J1	626.	5.08	160.	40.	13.	1.73
+	2 COMBINED AT	CJ1	478.	5.08	256.	147.	52.	5.23
+	ROUTED TO	J1-J2	429.	6.50	248.	145.	52.	5.23
+	HYDROGRAPH AT	J2	1093.	5.33	349.	87.	29.	3.64
+	2 COMBINED AT	CJ2	911.	5.83	461.	201.	71.	8.86
+	ROUTED TO	J2-K3	900.	6.00	461.	201.	71.	8.86
+	HYDROGRAPH AT	K2B	309.	4.58	45.	11.	4.	.42
+	ROUTED TO	K2B-K3	172.	6.50	45.	11.	4.	.42
+	HYDROGRAPH AT	K3	520.	5.33	165.	41.	14.	1.64
+	2 COMBINED AT	CK3	495.	5.33	181.	46.	15.	2.05
+	2 COMBINED AT	E6RL	1141.	5.42	544.	220.	77.	10.92

	2 COMBINED AT							
+		E6R	1599.	7.33	1092.	459.	162.	29.20
	ROUTED TO							
+		E5-E6	1587.	7.75	1082.	458.	162.	29.20
	HYDROGRAPH AT							
+		E6	1228.	4.75	253.	63.	21.	2.04
	2 COMBINED AT							
+		E	1587.	7.67	1166.	491.	174.	31.24
	HYDROGRAPH AT							
+		G1	927.	4.67	160.	40.	13.	1.12

*** NORMAL END OF HEC-1 ***

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1****************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *              JUN   1998              *
 *           VERSION 4.1                *
 *                                      *
 *  RUN DATE   19APR06  TIME  15:38:54  *
 *                                      *
 ****************************************
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****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
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X     X  XXXXXXX   XXXXX            X
X     X  X        X     X          XX
X     X  X        X                X
XXXXXXX  XXXX     X        XXXXX   X
X     X  X        X                X
X     X  X        X     X          X
X     X  XXXXXXX   XXXXX           XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
1                                   HEC-1 INPUT                                          PAGE  1

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
  2           ID    SUN VALLEY ADMP
  3           ID     - WHITE TANK WASH SUB-AREA
  4           ID     - ALTERNATIVE B3
  5           ID
  6           ID   Alternative Description
  7           ID   The purpose of Alternative B is to capture the upstream flow at the
  8           ID   apex using online detention basins.  The presence of the detention
  9           ID   basins eliminates the downstream alluvial fan uncertainties by
 10           ID   controlling the flow from the apices to the outfall.  Alternative B3
 11           ID   is based on using a relatively larger on-line detention basin at the
 12           ID   apex accompanied by smaller excavated channel sections in the down fan
 13           ID   direction.  The excavated earthen channels are complemented with a
 14           ID   120-foot wide adjacent riparian preservation corridor.
 15           ID
 16           ID
 17           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
 18           ID   JANUARY 2006
 19           ID
 20           ID   MODEL BASED UPON:
 21           ID
 22           ID  Buckeye/Sun Valley ADMS - May 2005
 23           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
 24           ID  basins E-K with Aluvial Fan updates
 25           ID  100-year 24-hour
 26           ID  Existing Conditions
 27           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
 28           ID  Rainfall Loss Method - Green & Ampt
 29           ID  Unit Hydrograph Method - FCDMC S-Graph
 30           ID  Channel Routing Method - Normal Depth
 31           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
 32           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
 33           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
              *DIAGRAM
 34           IT       5 01JAN94       0    2000
 35           IO       5
 36           IN      15 01JAN94       0
 37           JD    4.16    0.01
              * SCS TYPE II 24-hour distribution
 38           PC     0.0   0.002   0.005   0.008   0.011   0.014   0.017    0.02   0.023   0.026
 39           PC   0.029   0.032   0.035   0.038   0.041   0.044   0.048   0.052   0.056    0.06
 40           PC   0.064   0.068   0.072   0.076    0.08   0.085    0.09   0.095     0.1   0.105
 41           PC    0.11   0.115    0.12   0.126   0.133    0.14   0.147   0.155   0.163   0.172
 42           PC   0.181   0.191   0.203   0.218   0.236   0.257   0.283   0.387   0.663   0.707
 43           PC   0.735   0.758   0.776   0.791   0.804   0.815   0.825   0.834   0.842   0.849
 44           PC   0.856   0.863   0.869   0.875   0.881   0.887   0.893   0.898   0.903   0.908
 45           PC   0.913   0.918   0.922   0.926    0.93   0.934   0.938   0.942   0.946    0.95
 46           PC   0.953   0.956   0.959   0.962   0.965   0.968   0.971   0.974   0.977    0.98
 47           PC   0.983   0.986   0.989   0.992   0.995   0.998     1.0
 48           JD   3.952    10.0
 49           JD   3.819    20.0
 50           JD    3.69    40.0
 51           JD   3.565    80.0
              *
1                                   HEC-1 INPUT                                          PAGE  2

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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KK      F1   BASIN
KM    TOTAL FLOW TO APEX 39
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=5.07     Lca=2.57     S=369.39     Kn=0.050     LAG=61.9
KM   S-GRAPH TYPE=PHX MNT
BA   3.103
LG   0.297   0.329   4.244   0.378  12.997
UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
*

KK    RRF1 STORAGE
KM   PROPOSED DETENTION BASIN
KM    ROUTE RUNOFF FROM F1 THROUGH PROPOSED DETENTION BASIN AT APEX 39
KM    STRUCTURE ID:RRF1
KM    DIMENSIONS: L=1200ft, W=750ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 181.8 ac
RS       1    STOR       0
SV     0.0    17.0    34.3    51.9    69.7   106.0   143.4   181.8   221.2   261.7
SE     0.0     1.0     2.0     3.0     4.0     6.0     8.0    10.0    12.0    14.0
SQ     0.0    60.5    85.6   104.8   121.0   148.2   171.1   191.3   209.6   226.4
*

KK   F1-F2   ROUTE
KM   PROPOSED CHANNEL
KM    STRUCTURE ID(s): RRF110
KM    Slope=(1493.3 - 1433.6) / 4725.1
RS       3    FLOW      -1
RC   0.045   0.045   0.045  4725.10.012648   103.0
RX     0.0     9.0    29.0    35.0    70.0    76.0    96.0   105.0
RY   103.0   100.0   100.0    98.0    98.0   100.0   100.0   103.0
*

KK      F2   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=3.88     Lca=1.80     S=161.60     Kn=0.050     LAG=57.0
KM   S-GRAPH TYPE=PHX MNT
BA   2.209
LG    0.35    0.35   4.375   0.362   3.346
UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
UI   25.01   25.01   25.01     0.0
*
```



```
LINE   ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK     F3R COMBINE
KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
HC       2
*

KK    RRF2 STORAGE
KM   PROPOSED DETENTION BASIN
KM    ROUTE RUNOFF FROM F1 AND F2 THROUGH PROPOSED DETENTION BASIN AT F2
KM    STRUCTURE ID:RRF2
KM    DIMENSIONS: L=1300ft, W=530ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 136.5 ac
RS       1    STOR       0
SV     0.0    12.6    25.4    51.7    79.0   107.2   136.5   151.4   166.7   182.1
SE     0.0     1.0     2.0     4.0     6.0     8.0    10.0    11.0    12.0    13.0
SQ     0.0    60.5    85.6   121.0   148.2   171.1   191.3   200.7   209.6   218.2
*

KK  F2-E2C   ROUTE
KM   PROPOSED CHANNEL
KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
KM    MODIFIED FOR STEP 2 OF ADMP
KM    STRUCTURE ID(s): E4RB10, E4RB20
KM    Slope=(1433.6 - 1368.3) / 5731.3
RS       4    FLOW      -1
RC   0.045   0.045   0.045  5731.30.011392   102.0
RX     0.0     6.0    31.0    38.5    63.5    71.0    96.0   102.0
RY   102.0   100.0   100.0    97.5    97.5   100.0   100.0   102.0
*

KK      F3   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=2.71     Lca=1.26     S=81.34     Kn=0.055     LAG=54.2
KM   S-GRAPH TYPE=DES RNGLND
BA   0.736
LG    0.35    0.35   3.284    0.64     0.0
UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
UI     0.0
```

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                 *
 127             KK     CF3 COMBINE
 128             KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
 129             HC       2
                 *

 130             KK     E2C   BASIN
 131             KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 132             KM   L=2.38      Lca=1.01      S=92.90      Kn=0.055      LAG=46.0
 133             KM   S-GRAPH TYPE=DES RNGLND
 134             BA   0.716
 135             LG    0.35    0.35   4.343   0.357     0.0
 136             UI     0.0   55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
 137             UI  498.61  439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
1                                              HEC-1 INPUT                                                PAGE  4

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 138             UI   84.51   59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
 139             UI   13.41   13.41   13.41   13.41     0.0
                 *

 140             KK    CE2R COMBINE
 141             KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
 142             HC       2
                 *

 143             KK    DE2C  DIVERT
 144             KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
 145             KM    STRUCTURE ID:DE2C
 146             KM    DIMENSIONS: L=200ft, W=100ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 1 ac-ft
 147             DT    DOUT
 148             DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
 149             DI  1200.0  1179.7
 150             DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
 151             DQ   343.0   323.0
                 *

 152             KK  E2C-E3   ROUTE
 153             KM   PROPOSED CHANNEL
 154             KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
 155             KM    STRUCTURE ID(s): E4RB30
 156             KM    Slope=(1368.3 - 1313.1) / 4724.8
 157             RS      13     FLOW      -1
 158             RC   0.045   0.045   0.045  4724.80.011682   102.0
 159             RX     0.0     6.0    31.0    38.5    62.5    70.0   100.0   106.0
 160             RY   102.0   100.0   100.0    97.5    97.5   100.0   100.0   102.0
                 *

 161             KK      E1   BASIN
 162             KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 163             KM   L=2.51      Lca=1.13      S=178.34      Kn=0.055      LAG=43.3
 164             KM   S-GRAPH TYPE=PHX MNT
 165             BA   0.956
 166             LG    0.35   0.378   5.377   0.222    0.69
 167             UI     0.0   74.86   77.94  239.17  368.29  486.24  570.86   714.2  832.85  536.73
 168             UI  451.19  405.28  360.54  317.72  278.78  233.78  192.26  176.85  160.99  130.76
 169             UI  107.56   95.43   81.98   76.82   57.39   57.39   44.31   36.63   36.63   36.63
 170             UI   23.53   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35
 171             UI     0.0
                 *

 172             KK  E1-E2B   ROUTE
 173             RS       5     FLOW     0.0     0.0
 174             RC    0.05   0.047   0.04610992.72   0.016     0.0
 175             RX     0.0    65.0   140.0   170.0   185.0   200.0   270.0   340.0
 176             RY    24.0    21.0    17.0    10.0    10.0    14.0    18.0    22.0
                 *
1                                              HEC-1 INPUT                                                PAGE  5

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 177             KK     E2B   BASIN
 178             KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 179             KM   L=2.08      Lca=1.07      S=87.98      Kn=0.055      LAG=45.2
 180             KM   S-GRAPH TYPE=DES RNGLND
 181             BA   0.466
 182             LG    0.35    0.38     5.6    0.21     0.0
 183             UI     0.0    32.1    32.1   94.97  150.03  204.82  250.49  285.24   306.5  304.84
 184             UI  285.73  244.25   203.0  165.28   137.3  113.17   92.95    75.5   62.33   52.17
 185             UI   43.31   34.02   28.77   21.97   21.97   16.14    7.81    7.81    7.81    7.81
 186             UI    7.81    7.81    7.81    7.81
                 *

 187             KK    E3RB COMBINE
 188             KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
 189             HC       2
                 *

 190             KK  RRE3RB STORAGE
 191             KM   PROPOSED DETENTION BASIN
 192             KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 6
 193             KM    STRUCTURE ID:RRE3RB
```

```
KM    DIMENSIONS: L=1100ft, W=350ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 72.4 ac-
RS       1    STOR       0
SV     0.0     3.2     6.4     9.7    13.0    26.7    41.2    56.4    72.4    89.1
SE     0.0     0.5     1.0     1.5     2.0     4.0     6.0     8.0    10.0    12.0
SQ     0.0    42.8    60.5    74.1    85.6   121.0   148.2   171.1   191.3   209.6
*

KK  E2B-E3   ROUTE
KM   PROPOSED CHANNEL
KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
KM    STRUCTURE ID(s): E3RB10, E3RB20
KM    Slope=(1456.8 - 1313.1) / 10317.4
RS      12    FLOW      -1
RC   0.045   0.045   0.045 10317.40.013931   102.5
RX     0.0     7.5    32.5    38.5    58.5    64.5    89.5    97.0
RY   102.5   100.0   100.0    98.0    98.0   100.0   100.0   102.5
*

KK   E3MID COMBINE
KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
HC       2
*

KK  E3E4RA   ROUTE
KM   PROPOSED CHANNEL
KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
KM    STRUCTURE ID(s): E4RA10
KM    Slope=(1313.1 - 1230.3) / 10788.6
RS      12    FLOW      -1
RC   0.045   0.045   0.045 10788.6 0.00767   103.0
RX     0.0     9.0    34.0    43.0    83.0    92.0   117.0   126.0
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

RY   103.0   100.0   100.0    97.0    97.0   100.0   100.0   103.0
*

KK     E2A   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=2.90      Lca=1.20      S=100.83      Kn=0.055      LAG=52.4
KM   S-GRAPH TYPE=DES RNGLND
BA   0.797
LG    0.35    0.38     5.6    0.21     0.0
UI     0.0    51.6    51.6  110.43  196.83  277.44  347.94  413.76  460.03   489.1
UI  494.55   472.6  438.77  369.81  310.92  263.99  224.69  190.62  158.99  135.09
UI  112.23   97.28   80.97   70.86    54.7   53.12   35.32   35.32   35.32   21.96
UI   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56     0.0
*

KK  E2A-E3   ROUTE
RS      13    FLOW     0.0     0.0
RC   0.052   0.046   0.05219626.03  0.0093     0.0
RX     0.0   133.0   173.0   213.0   223.0   263.0   303.0   403.0
RY    22.0    17.0    14.0    10.0    10.0    15.0    18.0    22.0
*

KK      E3   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=3.87      Lca=1.99      S=49.65      Kn=0.050      LAG=74.5
KM   S-GRAPH TYPE=DES RNGLND
BA   2.488
LG    0.35    0.35   4.362   0.346     0.0
UI     0.0  111.69  111.69  111.69  226.88  361.12  481.81  599.56  708.99  795.91
UI  924.44  981.52 1023.08 1070.39 1070.39 1054.33 1012.16  958.83  843.16   765.0
UI  671.82  595.75  537.55  476.38  423.35  378.09  335.18  305.82   252.8  234.07
UI  210.57  188.36  171.26  154.61  118.38  118.38  115.87   76.46   76.46   76.46
UI   76.46   75.47   27.18   27.18   27.18   27.18   27.18   27.18   27.18   27.18
UI   27.18   27.18   27.18   27.18   27.18   27.18
*

KK   E4RAR COMBINE
KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
HC       2
*

KK    E4RA COMBINE
KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
HC       2
*
*  SPOT FOR POTENTIAL DETENTION BASIN AT START OF WHITE TANK WASH
*

KK   E3-E4   ROUTE
KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
RS      14    FLOW     0.0     0.0
RC   0.056   0.049   0.05613854.98  0.0048     0.0
RX     0.0   570.0   650.0   690.0   705.0   735.0   810.0  1200.0
RY    21.0    14.0    13.0    10.0    10.0    12.5    14.5    21.0
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LINE      ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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261          KK      E4   BASIN
262          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
263          KM   L=5.36      Lca=2.81      S=38.26      Kn=0.050      LAG=101.9
264          KM   S-GRAPH TYPE=DES RNGLND
265          KO       0        0      0.0        1       22
266          BA   3.042
267          LG    0.35     0.35    3.816    0.439      0.0
268          UI     0.0   100.41   100.41   100.41   100.41    158.4   288.69   358.15   433.82   515.05
269          UI  586.72   661.74   710.91   802.48   849.78   890.67   905.99    962.3    962.3    962.3
270          UI  958.07   920.61   904.77   855.38   781.14   712.32   671.29   604.26    557.2   512.12
271          UI  469.45   435.76    392.7   363.69   334.37   307.94   277.85   264.88   224.23   220.83
272          UI  189.31   189.31   167.81   153.97   153.97    127.9   106.43   106.43   106.43   101.85
273          UI   68.74    68.74    68.74    68.74    68.74    68.74     56.9    24.44    24.44    24.44
274          UI   24.44    24.44    24.44    24.44    24.44    24.44    24.44    24.44    24.44    24.44
275          UI   24.44    24.44    24.44    24.44    24.44    24.44
             *

276          KK    E5RR COMBINE
277          KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
278          HC       2
             *

279          KK      H1   BASIN
280          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
281          KM   L=2.41      Lca=1.09      S=64.59      Kn=0.055      LAG=51.2
282          KM   S-GRAPH TYPE=DES RNGLND
283          BA   1.066
284          LG    0.35     0.35    2.733    0.945      0.0
285          UI     0.0    70.38    70.38   156.67   277.53   386.09   481.01    579.0    629.6   674.43
286          UI  672.95   639.66   573.48   484.85   407.01   343.97   290.32   244.62   205.27    171.4
287          UI  143.72   125.14   107.91    82.11    74.59    59.78    48.17    48.17    44.03    17.13
288          UI   17.13    17.13    17.13    17.13    17.13    17.13    17.13    17.13      0.0
             *

289          KK   H1-H2   ROUTE
290          KM    ROUTE RUNOFF FROM H1 TO E5R
291          RS       21     FLOW      0.0      0.0
292          RC    0.053     0.05   0.05321739.03   0.0082      0.0
293          RX      0.0    330.0    430.0    465.0    495.0    530.0    630.0    960.0
294          RY     17.0     14.0     12.0     10.0     10.0     12.0     14.0     17.0
             *

295          KK      H2   BASIN
296          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
297          KM   L=4.41      Lca=2.60      S=44.71      Kn=0.050      LAG=88.9
298          KM   S-GRAPH TYPE=DES RNGLND
299          BA     1.4
300          LG    0.35     0.35    3.222    0.664      0.0
301          UI     0.0    52.96    52.96    52.96    52.96   142.93   178.39    226.9   274.71   319.58
302          UI  365.35    394.2   441.12   466.71    479.3   507.56   507.56   507.56   494.47   478.59
303          UI  456.68   413.58   373.47   343.47   306.13   279.54   254.31   232.29   208.19   189.77
304          UI  169.44   155.74   145.02   121.24   117.25    99.85    99.85    83.38    81.21    75.85
305          UI   56.14    56.14    56.14    49.15    36.25    36.25    36.25    36.25    36.25     27.6
306          UI   12.89    12.89    12.89    12.89    12.89    12.89    12.89    12.89    12.89    12.89
1                                          HEC-1 INPUT                                                    PAGE  8

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

307          UI   12.89    12.89    12.89    12.89    12.89    12.89      0.0
             *

308          KK    E5RL COMBINE
309          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
310          HC       2
             *

311          KK     E5R COMBINE
312          KM    COMBINE ALL FLOWS AT E5R
313          HC       2
             *

314          KK   E4-E5   ROUTE
315          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
316          RS       14     FLOW      0.0      0.0
317          RC     0.06     0.05   0.0615206.17   0.0051      0.0
318          RX      0.0   1010.0   1080.0   1090.0   1110.0   1120.0   1190.0   2200.0
319          RY     27.0     16.0     15.0     10.0     10.0     14.0     16.0     27.0
             *

320          KK      E5   BASIN
321          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
322          KM   L=3.01      Lca=1.41      S=28.56      Kn=0.050      LAG=65.8
323          KM   S-GRAPH TYPE=DES RNGLND
324          BA   1.308
325          LG   0.347    0.344     3.94    0.429    0.968
326          UI     0.0    66.73    66.73    66.73   187.33   261.54   342.37   416.83   480.54   556.36
327          UI  598.07   622.96   639.46   636.14   605.78   574.36   496.51   443.91   383.22   336.88
328          UI  298.49   258.94   227.11   198.14   176.39    149.0    129.8    120.7   102.31    94.82
329          UI   70.72    70.72    61.39    45.68    45.68    45.68    45.68    18.08    16.24    16.24
330          UI   16.24    16.24    16.24    16.24    16.24    16.24    16.24    16.24    16.24      0.0
             *

331          KK    E6RR COMBINE
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KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
KM    (WEST CORRIDOR U/S OF E6R)
HC       2
*

KK      K1   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=3.23      Lca=1.84      S=681.00      Kn=0.050      LAG=40.4
KM   S-GRAPH TYPE=PHX MNT
BA   1.543
LG   0.112   0.255   4.365   0.366  21.277
UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
*
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK  K1-K2A   ROUTE
KM    ROUTE RUNOFF FROM K1 TO APEX 38
RS      10    FLOW     0.0     0.0
RC    0.05   0.048    0.0519434.11   0.017     0.0
RX     0.0    20.0    55.0    85.0   235.0   259.0   289.0   309.0
RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
*

KK     K2A   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=5.29      Lca=2.72      S=126.78      Kn=0.055      LAG=87.2
KM   S-GRAPH TYPE=DES RNGLND
BA   1.949
LG   0.341   0.347   4.907   0.278   1.288
UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
UI   18.36   18.36   18.36   18.36     0.0
*

KK    K2BR COMBINE
KM    COMBINE FLOWS AT APEX 38
HC       2
*

KK  RRK2RB STORAGE
KM   PROPOSED DETENTION BASIN
KM    ROUTE COMBINED RUNOFF THROUGH PROPOSED DETENTION BASIN AT APEX 38
KM    STRUCTURE ID:RRK2RB
KM    DIMENSIONS: L=2000ft, W=500ft, D=12ft, Sideslope (?H:1V)= 3,  Vol.= 219.5 ac
RS       1    STOR       0
SV     0.0    36.9    75.2   114.7   155.6   176.6   197.8   219.5   241.4   263.7
SE     0.0     2.0     4.0     6.0     8.0     9.0    10.0    11.0    12.0    13.0
SQ     0.0    85.6   121.0   148.2   171.1   181.5   191.3   200.7   209.6   218.2
*

KK  K2A-2B   ROUTE
KM   PROPOSED CHANNEL
KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
KM    MODIFIED FOR STEP 2 OF ADMP
KM    STRUCTURE ID(s): CJ110, CJ120
KM    Slope=(1437.6 - 1316.8) / 10052.6
RS       4    FLOW      -1
RC   0.045   0.045   0.045 10052.60.012015   102.5
RX     0.0     7.5    27.5    32.0    52.0    56.5    76.5    84.0
RY   102.5   100.0   100.0    98.5    98.5   100.0   100.0   102.5
*
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

KK      J1   BASIN
KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
KM   S-GRAPH TYPE=DES RNGLND
BA   1.734
LG    0.35    0.35    3.25   0.652     0.0
UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
UI   18.95   18.95   18.95   18.95   18.95   18.95
*

KK     CJ1 COMBINE
KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
HC       2
```

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                 *

403              KK   J1-J2   ROUTE
404              KM   PROPOSED CHANNEL
405              KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
406              KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
407              KM    Slope=(1316.8 - 1104.3) / 23082.2
408              RS      16     FLOW      -1
409              RC   0.045   0.045   0.045 23082.20.009207   103.0
410              RX     0.0     9.0    34.0    40.0    70.0    76.0   101.0   110.0
411              RY   103.0   100.0   100.0    98.0    98.0   100.0   100.0   103.0
                 *

412              KK      J2   BASIN
413              KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
414              KM   L=5.18      Lca=2.51      S=45.01      Kn=0.050      LAG=93.2
415              KM   S-GRAPH TYPE=DES RNGLND
416              BA   3.638
417              LG   0.349   0.348   3.621   0.496   0.281
418              UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
419              UI  857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
420              UI  1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
421              UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
422              UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
423              UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
424              UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
                 *

425              KK     CJ2 COMBINE
426              KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
427              HC       2
                 *
1                                          HEC-1 INPUT                                          PAGE 11

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

428              KK   J2-K3   ROUTE
429              KM   PROPOSED CHANNEL
430              KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
431              KM    STRUCTURE ID(s): E6RL10
432              KM    Slope=(1104.3 - 1084.9) / 3156.5
433              RS       3     FLOW      -1
434              RC   0.045   0.045   0.045  3156.50.006135   104.0
435              RX     0.0    12.0    37.0    44.5    74.5    82.0   107.0   119.0
436              RY   104.0   100.0   100.0    97.5    97.5   100.0   100.0   104.0
                 *

437              KK     K2B   BASIN
438              KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
439              KM   L=2.01      Lca=0.83      S=60.78      Kn=0.055      LAG=43.5
440              KM   S-GRAPH TYPE=DES RNGLND
441              BA   0.416
442              LG    0.35    0.35   2.708   0.961     0.0
443              UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
444              UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
445              UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
446              UI    7.93    7.93     0.0
                 *

447              KK  K2B-K3   ROUTE
448              KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
449              RS      19     FLOW     0.0     0.0
450              RC    0.05   0.048    0.0525950.11  0.0084     0.0
451              RX     0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
452              RY    20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
                 *

453              KK      K3   BASIN
454              KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
455              KM   L=4.92      Lca=2.65      S=44.16      Kn=0.050      LAG=93.6
456              KM   S-GRAPH TYPE=DES RNGLND
457              BA   1.636
458              LG    0.35    0.35   3.421   0.582     0.0
459              UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
460              UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
461              UI  528.98  508.31  466.83  418.22  391.32  351.35  318.32  291.61  266.72  243.82
462              UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
463              UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
464              UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
465              UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
                 *

466              KK     CK3 COMBINE
467              KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
468              HC       2
                 *
1                                          HEC-1 INPUT                                          PAGE 12

LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

469              KK    E6RL COMBINE
470              KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
471              HC       2
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                    *
472                 KK     E6R COMBINE
473                 KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
474                 HC       2
                    *

475                 KK   E5-E6   ROUTE
476                 KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
477                 RS       4    FLOW     0.0     0.0
478                 RC   0.063   0.051   0.063  5105.8  0.0037     0.0
479                 RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
480                 RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
                    *

481                 KK      E6   BASIN
482                 KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
483                 KM   L=3.04     Lca=1.06     S=34.17     Kn=0.050     LAG=57.1
484                 KM   S-GRAPH TYPE=DES RNGLND
485                 BA   2.038
486                 LG   0.343   0.336   4.356   0.367   0.711
487                 UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
488                 UI  1153.6 1153.67 1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
489                 UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
490                 UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
491                 UI    29.3    29.3     0.0
                    *

492                 KK       E COMBINE
493                 KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
494                 HC       2
                    *

495                 KK      G1   BASIN
496                 KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
497                 KM   L=2.38     Lca=1.08     S=33.76     Kn=0.045     LAG=47.1
498                 KM   S-GRAPH TYPE=DES RNGLND
499                 BA   1.119
500                 LG    0.35    0.35    4.68   0.299     0.0
501                 UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
502                 UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
503                 UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
504                 UI   19.51   19.51   19.51   19.51   19.51     0.0
505                 ZZ
```

1

```
            SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    52          F1
                 V
                 V
    65        RRF1
                 V
                 V
    74       F1-F2
                 .
                 .
    82            .          F2
                  .           .
                  .           .
    94         F3R............
                 V
                 V
    97        RRF2
                 V
                 V
   106       F2-E2C
                 .
                 .
   116            .          F3
                  .           .
                  .           .
   127         CF3............
                 .
                 .
   130            .         E2C
                  .           .
                  .           .
   140        CE2R............
                 .
                 .
   147            .-------->    DOUT
   143        DE2C
                 V
                 V
   152       E2C-E3
                 .
                 .
   161            .          E1
                  .           V
                  .           V
   172            .       E1-E2B
```

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                .           .
                .           .
177             .           .          E2B
                .           .            .
                .           .            .
187             .       E3RB.............
                .           V
                .           V
190             .     RRE3RB
                .           V
                .           V
199             .     E2B-E3
                .           .
                .           .
208         E3MID............
                V
                V
211        E3E4RA
                .
                .
222             .         E2A
                .           V
                .           V
232             .     E2A-E3
                .           .
                .           .
237             .           .           E3
                .           .            .
                .           .            .
249             .      E4RAR............
                .           .
                .           .
252          E4RA............
                V
                V
255         E3-E4
                .
                .
261             .          E4
                .           .
                .           .
276          E5RR............
                .
                .
279             .          H1
                .           V
                .           V
289             .       H1-H2
                .           .
                .           .
295             .           .           H2
                .           .            .
                .           .            .
308             .       E5RL.............
                .           .
                .           .
311           E5R............
                V
                V
314         E4-E5
                .
                .
320             .          E5
                .           .
                .           .
331          E6RR............
                .
                .
336             .          K1
                .           V
                .           V
346             .     K1-K2A
                .           .
                .           .
352             .           .          K2A
                .           .            .
                .           .            .
365             .       K2BR.............
                .           V
                .           V
368             .     RRK2RB
                .           V
                .           V
377             .     K2A-2B
                .           .
                .           .
387             .           .           J1
                .           .            .
                .           .            .
399             .        CJ1.............
                .           V
                .           V
403             .      J1-J2
                .           .
                .           .
```

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412          .          .          J2
             .          .           .
             .          .           .
425          .        CJ2............
             .          V
             .          V
428          .      J2-K3
             .          .
             .          .
437          .          .         K2B
             .          .           V
             .          .           V
447          .          .      K2B-K3
             .          .           .
             .          .           .
453          .          .           .          K3
             .          .           .           .
             .          .           .           .
466          .          .         CK3............
             .          .           .
             .          .           .
469          .       E6RL............
             .          .
             .          .
472        E6R............
             V
             V
475      E5-E6
             .
             .
481          .          E6
             .           .
             .           .
492          E............
             .
             .
495          .          G1
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   19APR06  TIME  15:38:54  *
*                                      *
****************************************
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```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

STEP 2 HYDROLOGY FOR WHITE TANK WASH
SUN VALLEY ADMP
- WHITE TANK WASH SUB-AREA
- ALTERNATIVE B3

Alternative Description
The purpose of Alternative B is to capture the upstream flow at the apex using online detention basins. The presence of the detention basins eliminates the downstream alluvial fan uncertainties by controlling the flow from the apices to the outfall. Alternative B3 is based on using a relatively larger on-line detention basin at the apex accompanied by smaller excavated channel sections in the down fan direction. The excavated earthen channels are complemented with a 120-foot wide adjacent riparian preservation corridor.

JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
JANUARY 2006

MODEL BASED UPON:

Buckeye/Sun Valley ADMS - May 2005
Michael Baker Jr., Inc. - Modeler: Jacob Lesue
basins E-K with Aluvial Fan updates
100-year 24-hour
Existing Conditions
Area 3 - Sub-basins E-K (Aluvial Fan updates)
Rainfall Loss Method - Green & Ampt
Unit Hydrograph Method - FCDMC S-Graph
Channel Routing Method - Normal Depth
Land Use - FCDMC GIS Data: mag_landuse (2000)
Soil Data - USDA SCS Soil Survey (1972 & 1981)
Units - L(mi) Lca(mi) S(ft/mi) LAG(min)

```
35 IO        OUTPUT CONTROL VARIABLES
                  IPRNT          5  PRINT CONTROL
                  IPLOT          0  PLOT CONTROL
                  QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT        HYDROGRAPH TIME DATA
                   NMIN          5  MINUTES IN COMPUTATION INTERVAL
                  IDATE     1JAN94  STARTING DATE
```

```
              ITIME        0000  STARTING TIME
                 NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
             NDDATE      7JAN94  ENDING DATE
             NDTIME        2235  ENDING TIME
             ICENT          19   CENTURY MARK

         COMPUTATION INTERVAL      .08 HOURS
              TOTAL TIME BASE  166.58 HOURS

    ENGLISH UNITS
         DRAINAGE AREA          SQUARE MILES
         PRECIPITATION DEPTH    INCHES
         LENGTH, ELEVATION      FEET
         FLOW                   CUBIC FEET PER SECOND
         STORAGE VOLUME         ACRE-FEET
         SURFACE AREA           ACRES
         TEMPERATURE            DEGREES FAHRENHEIT

37 JD        INDEX STORM NO. 1
                STRM        4.16  PRECIPITATION DEPTH
                TRDA         .01  TRANSPOSITION DRAINAGE AREA

38 PI          PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                .00       .00       .00       .00       .00       .00       .00       .00

48 JD        INDEX STORM NO. 2
                STRM        3.95  PRECIPITATION DEPTH
                TRDA       10.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
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49 JD        INDEX STORM NO. 3
                STRM        3.82  PRECIPITATION DEPTH
                TRDA       20.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
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50 JD INDEX STORM NO. 4
STRM 3.69 PRECIPITATION DEPTH
TRDA 40.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.00	.00	.00	.00
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51 JD INDEX STORM NO. 5
STRM 3.57 PRECIPITATION DEPTH
TRDA 80.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.00	.00	.00	.00
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

          **************
          *            *
 261 KK   *        E4  *        BASIN
          *            *
          **************

 265 KO          OUTPUT CONTROL VARIABLES
                      IPRNT          5  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
                      QSCAL         0.  HYDROGRAPH PLOT SCALE
                      IPNCH          1  PUNCH COMPUTED HYDROGRAPH
                       IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT       .083  TIME INTERVAL IN HOURS

1
                                                  RUNOFF SUMMARY
                                          FLOW IN CUBIC FEET PER SECOND
                                        TIME IN HOURS,  AREA IN SQUARE MILES

                                      PEAK   TIME OF     AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN     MAXIMUM     TIME OF
          OPERATION        STATION    FLOW    PEAK                                          AREA      STAGE     MAX STAGE
+                                                          6-HOUR     24-HOUR     72-HOUR

          HYDROGRAPH AT
+                             F1     1868.   12.83         433.        121.         40.      3.10

          ROUTED TO
+                           RRF1      185.   14.92         175.        114.         40.      3.10

          ROUTED TO
+                          F1-F2      184.   15.08         175.        114.         40.      3.10

          HYDROGRAPH AT
+                             F2     1333.   12.75         266.         69.         23.      2.21

          2 COMBINED AT
+                            F3R     1405.   12.75         415.        180.         63.      5.31

          ROUTED TO
+                           RRF2      187.   16.42         186.        162.         63.      5.31

          ROUTED TO
+                          F2-E2C     187.   16.75         186.        162.         63.      5.31

          HYDROGRAPH AT
+                             F3      375.   12.75          69.         17.          6.       .74

          2 COMBINED AT
+                            CF3      446.   12.83         227.        176.         68.      6.05

          HYDROGRAPH AT
+                            E2C      541.   12.58          88.         22.          7.       .72

          2 COMBINED AT
+                           CE2R      941.   12.67         307.        197.         75.      6.76

          DIVERSION TO
+                           DOUT       84.   12.67           3.          1.          0.      6.76

          HYDROGRAPH AT
+                           DE2C      857.   12.58         304.        196.         75.      6.76

          ROUTED TO
+                          E2C-E3     870.   12.75         304.        196.         75.      6.76

          HYDROGRAPH AT
+                             E1      790.   12.50         125.         32.         11.       .96

          ROUTED TO
+                          E1-E2B     687.   12.83         125.         32.         11.       .96

          HYDROGRAPH AT
+                            E2B      352.   12.58          57.         14.          5.       .47

          2 COMBINED AT
+                           E3RB      958.   12.83         181.         45.         15.      1.42

          ROUTED TO
+                          RRE3RB     175.   14.00         144.         45.         15.      1.42

          ROUTED TO
+                          E2B-E3     175.   14.42         143.         45.         15.      1.42

          2 COMBINED AT
+                          E3MID      871.   12.75         432.        240.         90.      8.19
```

+	ROUTED TO	E3E4RA	854.	13.42	427.	239.	90.	8.19
+	HYDROGRAPH AT	E2A	572.	12.67	105.	26.	9.	.80
+	ROUTED TO	E2A-E3	461.	13.67	105.	26.	9.	.80
+	HYDROGRAPH AT	E3	1130.	13.00	289.	72.	24.	2.49
+	2 COMBINED AT	E4RAR	1177.	13.42	389.	98.	33.	3.28
+	2 COMBINED AT	E4RA	1990.	13.42	766.	328.	120.	11.47
+	ROUTED TO	E3-E4	1837.	14.42	755.	326.	120.	11.47
+	HYDROGRAPH AT	E4	966.	13.42	328.	83.	28.	3.04
+	2 COMBINED AT	E5RR	2278.	14.25	1004.	394.	144.	14.51
+	HYDROGRAPH AT	H1	472.	12.75	82.	20.	7.	1.07
+	ROUTED TO	H1-H2	314.	14.33	80.	20.	7.	1.07
+	HYDROGRAPH AT	H2	432.	13.25	128.	32.	11.	1.40
+	2 COMBINED AT	E5RL	469.	14.25	202.	52.	17.	2.47
+	2 COMBINED AT	E5R	2672.	14.33	1176.	438.	159.	16.98
+	ROUTED TO	E4-E5	2450.	15.50	1169.	436.	159.	16.98
+	HYDROGRAPH AT	E5	645.	12.92	147.	37.	12.	1.31
+	2 COMBINED AT	E6RR	2450.	15.50	1243.	462.	169.	18.29
+	HYDROGRAPH AT	K1	1433.	12.50	254.	74.	25.	1.54
+	ROUTED TO	K1-K2A	1031.	13.25	254.	74.	25.	1.54
+	HYDROGRAPH AT	K2A	827.	13.25	245.	62.	21.	1.95
+	2 COMBINED AT	K2BR	1839.	13.25	495.	135.	45.	3.49
+	ROUTED TO	RRK2RB	190.	15.92	182.	125.	45.	3.49
+	ROUTED TO	K2A-2B	189.	16.67	181.	125.	45.	3.49
+	HYDROGRAPH AT	J1	633.	13.08	160.	40.	13.	1.73
+	2 COMBINED AT	CJ1	658.	13.08	296.	162.	58.	5.23
+	ROUTED TO	J1-J2	587.	14.25	289.	161.	58.	5.23
+	HYDROGRAPH AT	J2	1212.	13.33	379.	95.	32.	3.64
+	2 COMBINED AT	CJ2	1360.	13.58	620.	251.	89.	8.86
+	ROUTED TO	J2-K3	1346.	13.75	619.	251.	89.	8.86
+	HYDROGRAPH AT	K2B	217.	12.58	32.	8.	3.	.42
+	ROUTED TO	K2B-K3	110.	14.67	32.	8.	3.	.42
	HYDROGRAPH AT							

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+                          K3      507.  13.33       160.       40.       13.      1.64
        2 COMBINED AT
+                          CK3     506.  13.33       188.       48.       16.      2.05
        2 COMBINED AT
+                          E6RL   1754.  13.67       792.      295.      103.     10.92
        2 COMBINED AT
+                          E6R    2954.  15.33      1911.      716.      257.     29.20
        ROUTED TO
+                          E5-E6  2916.  15.75      1895.      715.      257.     29.20
        HYDROGRAPH AT
+                          E6     1194.  12.75       237.       60.       20.      2.04
        2 COMBINED AT
+                          E      2916.  15.75      2044.      764.      275.     31.24
        HYDROGRAPH AT
+                          G1      819.  12.58       136.       34.       11.      1.12

*** NORMAL END OF HEC-1 ***
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1****************************************                    ****************************************
 *                                      *                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *    U.S. ARMY CORPS OF ENGINEERS      *
 *              JUN   1998              *                    *    HYDROLOGIC ENGINEERING CENTER     *
 *            VERSION 4.1               *                    *          609 SECOND STREET           *
 *                                      *                    *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   19APR06  TIME  15:44:20  *                    *           (916) 756-1104             *
 *                                      *                    *                                      *
 ****************************************                    ****************************************

                                        X     X  XXXXXXX   XXXXX          X
                                        X     X  X        X     X        XX
                                        X     X  X        X               X
                                        XXXXXXX  XXXX     X        XXXXX  X
                                        X     X  X        X               X
                                        X     X  X        X     X         X
                                        X     X  XXXXXXX   XXXXX         XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                          PAGE  1

      LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

        1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
        2           ID    SUN VALLEY ADMP
        3           ID     - WHITE TANK WASH SUB-AREA
        4           ID     - ALTERNATIVE C
        5           ID         Concrete channels with sediment basins only
        6           ID
        7           ID   Alternative Description
        8           ID   Alternative C is based on the concept of an excavated concrete-lined
        9           ID   channel from the apex to the outfall, without providing any detention
       10           ID   basin is at the apex.  To address sedimentation associated with the
       11           ID   alluvial fan systems, sedimentation basins are provided throughout the
       12           ID   system.  The excavated concrete channels are complemented with a 120-foot
       13           ID   wide adjacent riparian preservation corridor.
       14           ID
       15           ID
       16           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
       17           ID   JANUARY 2006
       18           ID
       19           ID   MODEL BASED UPON:
       20           ID
       21           ID  Buckeye/Sun Valley ADMS - May 2005
       22           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
       23           ID  basins E-K with Aluvial Fan updates
       24           ID  100-year 6-hour
       25           ID  Existing Conditions
       26           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
       27           ID  Rainfall Loss Method - Green & Ampt
       28           ID  Unit Hydrograph Method - FCDMC S-Graph
       29           ID  Channel Routing Method - Normal Depth
       30           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
       31           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
       32           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
                    *DIAGRAM
       33           IT       5 01JAN94       0    2000
       34           IO       5
       35           IN      15 01JAN94       0
       36           JD    3.23    0.01
                    * 6-hour distribution, pattern 1.0
       37           PC     0.0   0.008   0.016   0.025   0.033   0.041    0.05   0.058   0.066   0.074
       38           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931    0.95
       39           PC   0.962   0.972   0.983   0.991     1.0
       40           IN      15 01JAN94       0
       41           JD   3.211     0.5
                    * 6-hour distribution, pattern 1.0
       42           PC     0.0   0.008   0.016   0.025   0.033   0.041    0.05   0.058   0.066   0.074
       43           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931    0.95
       44           PC   0.962   0.972   0.983   0.991     1.0
       45           IN      15 01JAN94       0
       46           JD   3.188     1.0
                    * 6-hour distribution, pattern 1.4
       47           PC     0.0  0.0084   0.016   0.025  0.0334  0.0414  0.0504  0.0584  0.0664  0.0748
       48           PC   0.087  0.0994  0.1188   0.148  0.2304  0.4067  0.7778  0.8813  0.9186  0.9452
       49           PC  0.9572  0.9684  0.9798  0.9898     1.0
       50           IN      15 01JAN94       0
       51           JD   3.101     5.0
                    * 6-hour distribution, pattern 2.3
1                                          HEC-1 INPUT                                          PAGE  2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 52           PC     0.0   0.011  0.0173  0.0267  0.0387   0.049  0.0593  0.0693  0.0797  0.0903
 53           PC   0.103  0.1173  0.1383  0.1827  0.2693   0.458   0.686  0.8233  0.8893  0.9293
 54           PC  0.9487   0.962  0.9743  0.9877     1.0
 55           IN      15 01JAN94       0
 56           JD   3.036    10.0
              * 6-hour distribution, pattern 2.7
 57           PC     0.0  0.0134  0.0189  0.0287  0.0443  0.0574  0.0694  0.0818  0.0949  0.1076
 58           PC  0.1223  0.1382  0.1604  0.2063  0.2902  0.4664  0.6764  0.8069  0.8765  0.9189
 59           PC  0.9471  0.9608  0.9735  0.9873     1.0
 60           IN      15 01JAN94       0
 61           JD   2.939    20.0
              * 6-hour distribution, pattern 3.1
 62           PC     0.0  0.0158   0.022  0.0329  0.0511  0.0663  0.0799  0.0948  0.1102  0.1246
 63           PC   0.141  0.1587  0.1828    0.23  0.3122  0.4758  0.6684  0.7929  0.8643  0.9087
 64           PC  0.9434   0.958  0.9718  0.9863     1.0
 65           IN      15 01JAN94       0
 66           JD   2.875    30.0
              * 6-hour distribution, pattern 3.4
 67           PC     0.0  0.0172  0.0256  0.0378  0.0565  0.0719  0.0868   0.103  0.1191  0.1342
 68           PC  0.1513  0.1702  0.1961  0.2439  0.3263  0.4824  0.6655  0.7875   0.858  0.9031
 69           PC   0.939  0.9544  0.9697  0.9851     1.0
 70           IN      15 01JAN94       0
 71           JD    2.81    40.0
              * 6-hour distribution, pattern 3.5
 72           PC     0.0  0.0182  0.0281  0.0413  0.0604  0.0759  0.0916  0.1088  0.1254   0.141
 73           PC  0.1586  0.1783  0.2056  0.2537  0.3362   0.487  0.6636  0.7836  0.8535  0.8991
 74           PC  0.9358  0.9519  0.9682  0.9843     1.0
 75           IN      15 01JAN94       0
 76           JD   2.584   100.0
              * 6-hour distribution, pattern 4.1
 77           PC     0.0  0.0212  0.0355  0.0515  0.0715  0.0877   0.106  0.1261  0.1443  0.1618
 78           PC  0.1812  0.2036  0.2347  0.2837   0.367   0.501  0.6559  0.7704  0.8392  0.8864
 79           PC  0.9256   0.944  0.9633  0.9817     1.0
              *

 80           KK      F1   BASIN
 81           KM    TOTAL FLOW TO APEX 39
 82           KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 83           KM   L=5.07      Lca=2.57      S=369.39      Kn=0.050      LAG=61.9
 84           KM   S-GRAPH TYPE=PHX MNT
 85           BA   3.103
 86           LG   0.297   0.329   4.244   0.378  12.997
 87           UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
 88           UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
 89           UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
 90           UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
 91           UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
 92           UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 93           KK   F1-F2   ROUTE
 94           KM   PROPOSED CHANNEL
 95           KM    STRUCTURE ID(s): RRF110
 96           KM    Slope=(1493.3 - 1433.6) / 4725.1
 97           RS       3    FLOW      -1
 98           RC    0.02    0.02    0.02  4725.10.012648   104.0
 99           RX     0.0    12.0    37.0    43.0    83.0    89.0   114.0   126.0
100           RY   104.0   100.0   100.0    98.0    98.0   100.0   100.0   104.0
              *

101           KK      F2   BASIN
102           KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
103           KM   L=3.88      Lca=1.80      S=161.60      Kn=0.050      LAG=57.0
104           KM   S-GRAPH TYPE=PHX MNT
105           BA   2.209
106           LG    0.35    0.35   4.375   0.362   3.346
107           UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
108           UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
109           UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
110           UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
111           UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
112           UI   25.01   25.01   25.01     0.0
              *

113           KK     F3R COMBINE
114           KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
115           HC       2
              *

116           KK  F2-E2C   ROUTE
117           KM   PROPOSED CHANNEL
118           KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
119           KM    MODIFIED FOR STEP 2 OF ADMP
120           KM    STRUCTURE ID(s): E4RB10, E4RB20
121           KM    Slope=(1433.6 - 1368.3) / 5731.3
122           RS       4    FLOW      -1
123           RC    0.02    0.02    0.02  5731.30.011392   103.5
124           RX     0.0    10.5    40.5    46.5   106.5   112.5   142.5   153.0
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125          RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
             *

126          KK      F3   BASIN
127          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
128          KM   L=2.71     Lca=1.26     S=81.34     Kn=0.055     LAG=54.2
129          KM   S-GRAPH TYPE=DES RNGLND
130          BA   0.736
131          LG    0.35    0.35   3.284    0.64     0.0
132          UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
133          UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
134          UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
135          UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
136          UI     0.0
             *
1                                          HEC-1 INPUT                                                PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

137          KK     CF3 COMBINE
138          KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
139          HC       2
             *

140          KK     E2C   BASIN
141          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
142          KM   L=2.38     Lca=1.01     S=92.90     Kn=0.055     LAG=46.0
143          KM   S-GRAPH TYPE=DES RNGLND
144          BA   0.716
145          LG    0.35    0.35   4.343   0.357     0.0
146          UI     0.0   55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
147          UI  498.61  439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
148          UI   84.51   59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
149          UI   13.41   13.41   13.41   13.41     0.0
             *

150          KK    CE2R COMBINE
151          KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
152          HC       2
             *

153          KK    DE2C  DIVERT
154          KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
155          KM    STRUCTURE ID:DE2C
156          KM    DIMENSIONS: L=1500ft, W=700ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 212.6 ac
157          DT    DOUT
158          DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
159          DI  2500.0  4000.0
160          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
161          DQ  1643.0  3143.0
             *

162          KK  E2C-E3   ROUTE
163          KM   PROPOSED CHANNEL
164          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
165          KM    STRUCTURE ID(s): E4RB30
166          KM    Slope=(1368.3 - 1313.1) / 4724.8
167          RS      13    FLOW      -1
168          RC    0.02    0.02    0.02  4724.80.011682   102.5
169          RX     0.0     7.5    27.5    33.5    48.5    54.5    74.5    82.0
170          RY   102.5   100.0   100.0    98.0    98.0   100.0   100.0   102.5
             *

171          KK      E1   BASIN
172          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
173          KM   L=2.51     Lca=1.13     S=178.34     Kn=0.055     LAG=43.3
174          KM   S-GRAPH TYPE=PHX MNT
175          BA   0.956
176          LG    0.35   0.378   5.377   0.222    0.69
177          UI     0.0   74.86   77.94  239.17  368.29  486.24  570.86   714.2  832.85  536.73
178          UI  451.19  405.28  360.54  317.72  278.78  233.78  192.26  176.85  160.99  130.76
179          UI  107.56   95.43   81.98   76.82   57.39   57.39   44.31   36.63   36.63   36.63
180          UI   23.53   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35
1                                          HEC-1 INPUT                                                PAGE  5

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

181          UI     0.0
             *

182          KK  E1-E2B   ROUTE
183          RS       5    FLOW     0.0     0.0
184          RC    0.05   0.047  0.04610992.72   0.016     0.0
185          RX     0.0    65.0   140.0   170.0   185.0   200.0   270.0   340.0
186          RY    24.0    21.0    17.0    10.0    10.0    14.0    18.0    22.0
             *

187          KK     E2B   BASIN
188          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
189          KM   L=2.08     Lca=1.07     S=87.98     Kn=0.055     LAG=45.2
190          KM   S-GRAPH TYPE=DES RNGLND
191          BA   0.466
192          LG    0.35    0.38     5.6    0.21     0.0
193          UI     0.0    32.1    32.1   94.97  150.03  204.82  250.49  285.24   306.5  304.84
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194          UI  285.73  244.25   203.0  165.28   137.3  113.17   92.95    75.5   62.33   52.17
195          UI   43.31   34.02   28.77   21.97   21.97   16.14    7.81    7.81    7.81    7.81
196          UI    7.81    7.81    7.81    7.81
             *

197          KK    E3RB COMBINE
198          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
199          HC       2
             *

200          KK  E2B-E3   ROUTE
201          KM   PROPOSED CHANNEL
202          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
203          KM    STRUCTURE ID(s): E3RB10, E3RB20
204          KM    Slope=(1456.8 - 1313.1) / 10317.4
205          RS      12    FLOW      -1
206          RC    0.02    0.02    0.02 10317.40.013931   103.5
207          RX     0.0    10.5    30.5    36.5    61.5    67.5    87.5    98.0
208          RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
             *

209          KK   E3MID COMBINE
210          KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
211          HC       2
             *

212          KK  E3E4RA   ROUTE
213          KM   PROPOSED CHANNEL
214          KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
215          KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
216          KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
217          KM    STRUCTURE ID(s): E4RA10
218          KM    Slope=(1313.1 - 1230.3) / 10788.6
219          RS      12    FLOW      -1
220          RC    0.02    0.02    0.02 10788.6 0.00767   104.0
221          RX     0.0    12.0    47.0    53.0    83.0    89.0   124.0   136.0
222          RY   104.0   100.0   100.0    98.0    98.0   100.0   100.0   104.0
             *
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1 HEC-1 INPUT PAGE 6

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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

223          KK     E2A   BASIN
224          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
225          KM   L=2.90     Lca=1.20     S=100.83     Kn=0.055     LAG=52.4
226          KM   S-GRAPH TYPE=DES RNGLND
227          BA   0.797
228          LG    0.35    0.38     5.6    0.21     0.0
229          UI     0.0    51.6    51.6  110.43  196.83  277.44  347.94  413.76  460.03   489.1
230          UI  494.55   472.6  438.77  369.81  310.92  263.99  224.69  190.62  158.99  135.09
231          UI  112.23   97.29   80.97   70.86    54.7   53.12   35.32   35.32   35.32   21.96
232          UI   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56     0.0
             *

233          KK  E2A-E3   ROUTE
234          RS      13    FLOW     0.0     0.0
235          RC   0.052   0.046   0.05219626.03  0.0093     0.0
236          RX     0.0   133.0   173.0   213.0   223.0   263.0   303.0   403.0
237          RY    22.0    17.0    14.0    10.0    10.0    15.0    18.0    22.0
             *

238          KK      E3   BASIN
239          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
240          KM   L=3.87     Lca=1.99     S=49.65     Kn=0.050     LAG=74.5
241          KM   S-GRAPH TYPE=DES RNGLND
242          BA   2.488
243          LG    0.35    0.35   4.362   0.346     0.0
244          UI     0.0  111.69  111.69  111.69  226.88  361.12  481.81  599.56  708.99  795.91
245          UI  924.44  981.52 1023.08 1070.39 1070.39 1054.33 1012.16  958.83  843.16   765.0
246          UI  671.82  595.75  537.55  476.38  423.35  378.09  335.18  305.82   252.8  234.07
247          UI  210.57  188.36  171.26  154.61  118.38  118.38  115.87   76.46   76.46   76.46
248          UI   76.46   75.47   27.18   27.18   27.18   27.18   27.18   27.18   27.18   27.18
249          UI   27.18   27.18   27.18   27.18   27.18   27.18
             *

250          KK   E4RAR COMBINE
251          KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
252          HC       2
             *

253          KK    E4RA COMBINE
254          KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
255          HC       2
             *
             *  SPOT FOR POTENTIAL DETENTION BASIN AT START OF WHITE TANK WASH
             *

256          KK   E3-E4   ROUTE
257          KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
258          RS      14    FLOW     0.0     0.0
259          RC   0.056   0.049   0.05613854.98  0.0048     0.0
260          RX     0.0   570.0   650.0   690.0   705.0   735.0   810.0  1200.0
261          RY    21.0    14.0    13.0    10.0    10.0    12.5    14.5    21.0
             *
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1                                          HEC-1 INPUT                                                          PAGE  7

      LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

       262          KK      E4   BASIN
       263          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
       264          KM   L=5.36      Lca=2.81      S=38.26      Kn=0.050      LAG=101.9
       265          KM   S-GRAPH TYPE=DES RNGLND
       266          KO       0        0     0.0        1       22
       267          BA   3.042
       268          LG    0.35     0.35   3.816    0.439     0.0
       269          UI     0.0   100.41  100.41   100.41  100.41   158.4  288.69  358.15  433.82  515.05
       270          UI  586.72   661.74  710.91   802.48  849.78  890.67  905.99   962.3   962.3   962.3
       271          UI  958.07   920.61  904.77   855.38  781.14  712.32  671.29  604.26   557.2  512.12
       272          UI  469.45   435.76   392.7   363.69  334.37  307.94  277.85  264.88  224.23  220.83
       273          UI  189.31   189.31  167.81   153.97  153.97   127.9  106.43  106.43  106.43  101.85
       274          UI   68.74    68.74   68.74    68.74   68.74   68.74    56.9   24.44   24.44   24.44
       275          UI   24.44    24.44   24.44    24.44   24.44   24.44   24.44   24.44   24.44   24.44
       276          UI   24.44    24.44   24.44    24.44   24.44   24.44
                    *

       277          KK    E5RR COMBINE
       278          KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
       279          HC       2
                    *

       280          KK      H1   BASIN
       281          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
       282          KM   L=2.41      Lca=1.09      S=64.59      Kn=0.055      LAG=51.2
       283          KM   S-GRAPH TYPE=DES RNGLND
       284          BA   1.066
       285          LG    0.35     0.35   2.733    0.945     0.0
       286          UI     0.0    70.38   70.38   156.67  277.53  386.09  481.01   579.0   629.6  674.43
       287          UI  672.95   639.66  573.48   484.85  407.01  343.97  290.32  244.62  205.27   171.4
       288          UI  143.72   125.14  107.91    82.11   74.59   59.78   48.17   48.17   44.03   17.13
       289          UI   17.13    17.13   17.13    17.13   17.13   17.13   17.13   17.13     0.0
                    *

       290          KK   H1-H2   ROUTE
       291          KM    ROUTE RUNOFF FROM H1 TO E5R
       292          RS      21     FLOW     0.0      0.0
       293          RC   0.053     0.05   0.05321739.03  0.0082     0.0
       294          RX     0.0    330.0   430.0    465.0   495.0   530.0   630.0   960.0
       295          RY    17.0     14.0    12.0     10.0    10.0    12.0    14.0    17.0
                    *

       296          KK      H2   BASIN
       297          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
       298          KM   L=4.41      Lca=2.60      S=44.71      Kn=0.050      LAG=88.9
       299          KM   S-GRAPH TYPE=DES RNGLND
       300          BA     1.4
       301          LG    0.35     0.35   3.222    0.664     0.0
       302          UI     0.0    52.96   52.96    52.96   52.96  142.93  178.39   226.9  274.71  319.58
       303          UI  365.35    394.2  441.12   466.71   479.3  507.56  507.56  507.56  494.47  478.59
       304          UI  456.68   413.58  373.47   343.47  306.13  279.54  254.31  232.29  208.19  189.77
       305          UI  169.44   155.74  145.02   121.24  117.25   99.85   99.85   83.38   81.21   75.85
       306          UI   56.14    56.14   56.14    49.15   36.25   36.25   36.25   36.25   36.25    27.6
       307          UI   12.89    12.89   12.89    12.89   12.89   12.89   12.89   12.89   12.89   12.89
1                                          HEC-1 INPUT                                                          PAGE  8

      LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

       308          UI   12.89    12.89   12.89    12.89   12.89   12.89     0.0
                    *

       309          KK    E5RL COMBINE
       310          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
       311          HC       2
                    *

       312          KK     E5R COMBINE
       313          KM    COMBINE ALL FLOWS AT E5R
       314          HC       2
                    *

       315          KK   E4-E5   ROUTE
       316          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
       317          RS      14     FLOW     0.0      0.0
       318          RC    0.06     0.05   0.0615206.17  0.0051     0.0
       319          RX     0.0   1010.0  1080.0   1090.0  1110.0  1120.0  1190.0  2200.0
       320          RY    27.0     16.0    15.0     10.0    10.0    14.0    16.0    27.0
                    *

       321          KK      E5   BASIN
       322          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
       323          KM   L=3.01      Lca=1.41      S=28.56      Kn=0.050      LAG=65.8
       324          KM   S-GRAPH TYPE=DES RNGLND
       325          BA   1.308
       326          LG   0.347    0.344    3.94    0.429   0.968
       327          UI     0.0    66.73   66.73    66.73  187.33  261.54  342.37  416.83  480.54  556.36
       328          UI  598.07   622.96  639.46   636.14  605.78  574.36  496.51  443.91  383.22  336.88
       329          UI  298.49   258.94  227.11   198.14  176.39   149.0   129.8   120.7  102.31   94.82
       330          UI   70.72    70.72   61.39    45.68   45.68   45.68   45.68   18.08   16.24   16.24
       331          UI   16.24    16.24   16.24    16.24   16.24   16.24   16.24   16.24   16.24     0.0
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                *
 332            KK    E6RR COMBINE
 333            KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
 334            KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
 335            KM    (WEST CORRIDOR U/S OF E6R)
 336            HC       2
                *

 337            KK      K1   BASIN
 338            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 339            KM   L=3.23      Lca=1.84      S=681.00      Kn=0.050      LAG=40.4
 340            KM   S-GRAPH TYPE=PHX MNT
 341            BA   1.543
 342            LG   0.112   0.255   4.365   0.366  21.277
 343            UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
 344            UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
 345            UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
 346            UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
                *
1                                          HEC-1 INPUT                                          PAGE  9

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 347            KK  K1-K2A   ROUTE
 348            KM    ROUTE RUNOFF FROM K1 TO APEX 38
 349            RS      10    FLOW     0.0     0.0
 350            RC    0.05   0.048   0.0519434.11   0.017     0.0
 351            RX     0.0    20.0    55.0    85.0   235.0   259.0   289.0   309.0
 352            RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
                *

 353            KK      K2A   BASIN
 354            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 355            KM   L=5.29      Lca=2.72      S=126.78      Kn=0.055      LAG=87.2
 356            KM   S-GRAPH TYPE=DES RNGLND
 357            BA   1.949
 358            LG   0.341   0.347   4.907   0.278   1.288
 359            UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
 360            UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
 361            UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
 362            UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
 363            UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
 364            UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
 365            UI   18.36   18.36   18.36   18.36     0.0
                *

 366            KK    K2BR COMBINE
 367            KM    COMBINE FLOWS AT APEX 38
 368            HC       2
                *

 369            KK  K2A-2B   ROUTE
 370            KM   PROPOSED CHANNEL
 371            KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
 372            KM    MODIFIED FOR STEP 2 OF ADMP
 373            KM    STRUCTURE ID(s): CJ110, CJ120
 374            KM    Slope=(1437.6 - 1316.8) / 10052.6
 375            RS       4    FLOW      -1
 376            RC    0.02    0.02    0.02 10052.60.012015   103.5
 377            RX     0.0    10.5    35.5    41.5    71.5    77.5   102.5   113.0
 378            RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
                *

 379            KK      J1   BASIN
 380            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 381            KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
 382            KM   S-GRAPH TYPE=DES RNGLND
 383            BA   1.734
 384            LG    0.35    0.35    3.25   0.652     0.0
 385            UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
 386            UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
 387            UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
 388            UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
 389            UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
 390            UI   18.95   18.95   18.95   18.95   18.95   18.95
                *
1                                          HEC-1 INPUT                                          PAGE 10

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 391            KK     CJ1 COMBINE
 392            KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
 393            KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
 394            HC       2
                *

 395            KK     DJ1  DIVERT
 396            KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
 397            KM    STRUCTURE ID:DJ1
 398            KM    DIMENSIONS: L=1500ft, W=600ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 57.1 ac-f
 399            DT    DOUT
 400            DI     0.0   140.0   280.0   420.0   560.0   688.0   840.0   980.0  1120.0  1229.0
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401          DI  1400.0  2500.0
402          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
403          DQ   171.0  1271.0
             *

404          KK   J1-J2   ROUTE
405          KM   PROPOSED CHANNEL
406          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
407          KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
408          KM    Slope=(1316.8 - 1104.3) / 23082.2
409          RS      16    FLOW      -1
410          RC    0.02    0.02    0.02 23082.20.009207   103.5
411          RX     0.0    10.5    40.5    46.5    76.5    82.5   112.5   123.0
412          RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
             *

413          KK      J2   BASIN
414          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
415          KM   L=5.18     Lca=2.51     S=45.01     Kn=0.050     LAG=93.2
416          KM   S-GRAPH TYPE=DES RNGLND
417          BA   3.638
418          LG   0.349   0.348   3.621   0.496   0.281
419          UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
420          UI  857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
421          UI  1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
422          UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
423          UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
424          UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
425          UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
             *

426          KK     CJ2 COMBINE
427          KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
428          HC       2
             *

429          KK   J2-K3   ROUTE
430          KM   PROPOSED CHANNEL
431          KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
432          KM    STRUCTURE ID(s): E6RL10
433          KM    Slope=(1104.3 - 1084.9) / 3156.5
434          RS       3    FLOW      -1
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

435          RC    0.02    0.02    0.02  3156.50.006135   103.5
436          RX     0.0    10.5    45.5    51.5    86.5    92.5   127.5   138.0
437          RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
             *

438          KK     K2B   BASIN
439          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
440          KM   L=2.01     Lca=0.83     S=60.78     Kn=0.055     LAG=43.5
441          KM   S-GRAPH TYPE=DES RNGLND
442          BA   0.416
443          LG    0.35    0.35   2.708   0.961     0.0
444          UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
445          UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
446          UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
447          UI    7.93    7.93     0.0
             *

448          KK  K2B-K3   ROUTE
449          KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
450          RS      19    FLOW     0.0     0.0
451          RC    0.05   0.048   0.0525950.11  0.0084     0.0
452          RX     0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
453          RY    20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
             *

454          KK      K3   BASIN
455          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
456          KM   L=4.92     Lca=2.65     S=44.16     Kn=0.050     LAG=93.6
457          KM   S-GRAPH TYPE=DES RNGLND
458          BA   1.636
459          LG    0.35    0.35   3.421   0.582     0.0
460          UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
461          UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
462          UI  528.98  508.31  466.83  418.22  391.32  351.35  318.32  291.61  266.72  243.82
463          UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
464          UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
465          UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
466          UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
             *

467          KK     CK3 COMBINE
468          KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
469          HC       2
             *

470          KK    E6RL COMBINE
471          KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
472          HC       2
             *
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1                                          HEC-1 INPUT                                                    PAGE 12

          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

           473          KK     E6R COMBINE
           474          KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
           475          HC       2
                        *

           476          KK   E5-E6   ROUTE
           477          KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
           478          RS       4    FLOW     0.0     0.0
           479          RC   0.063   0.051   0.063  5105.8  0.0037     0.0
           480          RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
           481          RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
                        *

           482          KK      E6   BASIN
           483          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
           484          KM   L=3.04      Lca=1.06      S=34.17      Kn=0.050      LAG=57.1
           485          KM   S-GRAPH TYPE=DES RNGLND
           486          BA   2.038
           487          LG   0.343   0.336   4.356   0.367   0.711
           488          UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
           489          UI  1153.6 1153.67  1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
           490          UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
           491          UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
           492          UI    29.3    29.3     0.0
                        *

           493          KK       E COMBINE
           494          KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
           495          HC       2
                        *

           496          KK      G1   BASIN
           497          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
           498          KM   L=2.38      Lca=1.08      S=33.76      Kn=0.045      LAG=47.1
           499          KM   S-GRAPH TYPE=DES RNGLND
           500          BA   1.119
           501          LG    0.35    0.35    4.68   0.299     0.0
           502          UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
           503          UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
           504          UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
           505          UI   19.51   19.51   19.51   19.51   19.51     0.0
           506          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    80          F1
                 V
                 V
    93       F1-F2
                 .
                 .
   101           .          F2
                 .           .
                 .           .
   113         F3R............
                 V
                 V
   116      F2-E2C
                 .
                 .
   126           .          F3
                 .           .
                 .           .
   137         CF3............
                 .
                 .
   140           .         E2C
                 .           .
                 .           .
   150        CE2R............
                 .
                 .
   157           .-------->    DOUT
   153        DE2C
                 V
                 V
   162      E2C-E3
                 .
                 .
   171           .          E1
                 .           V
                 .           V
   182           .      E1-E2B
                 .           .
                 .           .
   187           .           .         E2B
```

```
                .           .           .
                .           .           .
197             .        E3RB............
                .           V
                .           V
200             .      E2B-E3
                .           .
                .           .
209        E3MID............
               V
               V
212        E3E4RA
                .
                .
223             .         E2A
                .           V
                .           V
233             .      E2A-E3
                .           .
                .           .
238             .           .           E3
                .           .            .
                .           .            .
250             .       E4RAR............
                .           .
                .           .
253         E4RA............
               V
               V
256        E3-E4
                .
                .
262             .           E4
                .           .
                .           .
277         E5RR............
                .
                .
280             .           H1
                .           V
                .           V
290             .       H1-H2
                .           .
                .           .
296             .           .           H2
                .           .            .
                .           .            .
309             .        E5RL............
                .           .
                .           .
312          E5R............
               V
               V
315        E4-E5
                .
                .
321             .           E5
                .           .
                .           .
332         E6RR............
                .
                .
337             .           K1
                .           V
                .           V
347             .      K1-K2A
                .           .
                .           .
353             .           .          K2A
                .           .            .
                .           .            .
366             .        K2BR............
                .           V
                .           V
369             .      K2A-2B
                .           .
                .           .
379             .           .           J1
                .           .            .
                .           .            .
391             .         CJ1............
                .           .
                .           .
399             .           .-------->    DOUT
395             .         DJ1
                .           V
                .           V
404             .       J1-J2
                .           .
                .           .
413             .           .           J2
                .           .            .
                .           .            .
426             .         CJ2............
                .           V
```

```
                .          V
  429           .       J2-K3
                .          .
                .          .
  438           .          .        K2B
                .          .          V
                .          .          V
  448           .          .      K2B-K3
                .          .          .
                .          .          .
  454           .          .          .          K3
                .          .          .           .
                .          .          .           .
  467           .          .        CK3............
                .          .          .
                .          .          .
  470           .       E6RL............
                .          .
                .          .
  473        E6R............
               V
               V
  476      E5-E6
                .
                .
  482           .          E6
                .          .
                .          .
  493          E............
                .
                .
  496           .          G1
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1****************************************                    ****************************************
 *                                      *                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
 *              JUN   1998              *                    *   HYDROLOGIC ENGINEERING CENTER      *
 *           VERSION 4.1                *                    *         609 SECOND STREET            *
 *                                      *                    *      DAVIS, CALIFORNIA 95616         *
 *  RUN DATE   19APR06  TIME  15:44:20  *                    *          (916) 756-1104              *
 *                                      *                    *                                      *
 ****************************************                    ****************************************
```

STEP 2 HYDROLOGY FOR WHITE TANK WASH
SUN VALLEY ADMP
- WHITE TANK WASH SUB-AREA
- ALTERNATIVE C
  Concrete channels with sediment basins only

Alternative Description
Alternative C is based on the concept of an excavated concrete-lined channel from the apex to the outfall, without providing any detention basin is at the apex. To address sedimentation associated with the alluvial fan systems, sedimentation basins are provided throughout the system. The excavated concrete channels are complemented with a 120-foot wide adjacent riparian preservation corridor.

JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
JANUARY 2006

MODEL BASED UPON:

Buckeye/Sun Valley ADMS - May 2005
Michael Baker Jr., Inc. - Modeler: Jacob Lesue
basins E-K with Aluvial Fan updates
100-year 6-hour
Existing Conditions
Area 3 - Sub-basins E-K (Aluvial Fan updates)
Rainfall Loss Method - Green & Ampt
Unit Hydrograph Method - FCDMC S-Graph
Channel Routing Method - Normal Depth
Land Use - FCDMC GIS Data: mag_landuse (2000)
Soil Data - USDA SCS Soil Survey (1972 & 1981)
Units - L(mi) Lca(mi) S(ft/mi) LAG(min)

```
  34 IO          OUTPUT CONTROL VARIABLES
                       IPRNT          5  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL         0.  HYDROGRAPH PLOT SCALE

     IT          HYDROGRAPH TIME DATA
                        NMIN          5  MINUTES IN COMPUTATION INTERVAL
                       IDATE     1JAN94  STARTING DATE
                       ITIME       0000  STARTING TIME
                          NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                      NDDATE     7JAN94  ENDING DATE
                      NDTIME       2235  ENDING TIME
                       ICENT         19  CENTURY MARK
```

```
              COMPUTATION INTERVAL      .08 HOURS
                   TOTAL TIME BASE  166.58 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT

36 JD          INDEX STORM NO. 1
                    STRM        3.23  PRECIPITATION DEPTH
                    TRDA         .01  TRANSPOSITION DRAINAGE AREA

37 PI            PRECIPITATION PATTERN
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                    .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                    .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00

41 JD          INDEX STORM NO. 2
                    STRM        3.21  PRECIPITATION DEPTH
                    TRDA         .50  TRANSPOSITION DRAINAGE AREA

42 PI            PRECIPITATION PATTERN
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                    .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                    .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00

46 JD          INDEX STORM NO. 3
                    STRM        3.19  PRECIPITATION DEPTH
                    TRDA        1.00  TRANSPOSITION DRAINAGE AREA

47 PI            PRECIPITATION PATTERN
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                    .03       .03       .06       .06       .06       .12       .12       .12       .03       .03
                    .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00

51 JD          INDEX STORM NO. 4
                    STRM        3.10  PRECIPITATION DEPTH
                    TRDA        5.00  TRANSPOSITION DRAINAGE AREA

52 PI            PRECIPITATION PATTERN
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .01       .01       .01       .01       .01       .01       .03
                    .03       .03       .06       .06       .06       .08       .08       .08       .05       .05
                    .05       .02       .02       .02       .01       .01       .01       .01       .01       .01
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00

56 JD          INDEX STORM NO. 5
                    STRM        3.04  PRECIPITATION DEPTH
                    TRDA       10.00  TRANSPOSITION DRAINAGE AREA

57 PI            PRECIPITATION PATTERN
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
                    .01       .01       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                    .03       .03       .06       .06       .06       .07       .07       .07       .04       .04
                    .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00

61 JD          INDEX STORM NO. 6
                    STRM        2.94  PRECIPITATION DEPTH
                    TRDA       20.00  TRANSPOSITION DRAINAGE AREA

62 PI            PRECIPITATION PATTERN
                    .01       .01       .01       .00       .00       .00       .00       .00       .00       .01
                    .01       .01       .01       .01       .01       .00       .00       .00       .00       .00
                    .00       .01       .01       .01       .00       .00       .00       .01       .01       .01
                    .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                    .03       .03       .05       .05       .05       .06       .06       .06       .04       .04
                    .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                    .00       .00
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 66 JD          INDEX STORM NO. 7
                     STRM        2.88  PRECIPITATION DEPTH
                     TRDA       30.00  TRANSPOSITION DRAINAGE AREA

 67 PI            PRECIPITATION PATTERN
                     .01        .01        .01        .00        .00        .00        .00        .00        .00        .01
                     .01        .01        .01        .01        .01        .00        .00        .00        .01        .01
                     .01        .01        .01        .01        .01        .01        .01        .01        .01        .01
                     .01        .01        .01        .01        .01        .01        .02        .02        .02        .03
                     .03        .03        .05        .05        .05        .06        .06        .06        .04        .04
                     .04        .02        .02        .02        .02        .02        .02        .01        .01        .01
                     .01        .01        .01        .01        .01        .01        .01        .01        .01        .00
                     .00        .00

 71 JD          INDEX STORM NO. 8
                     STRM        2.81  PRECIPITATION DEPTH
                     TRDA       40.00  TRANSPOSITION DRAINAGE AREA

 72 PI            PRECIPITATION PATTERN
                     .01        .01        .01        .00        .00        .00        .00        .00        .00        .01
                     .01        .01        .01        .01        .01        .01        .01        .01        .01        .01
                     .01        .01        .01        .01        .01        .01        .01        .01        .01        .01
                     .01        .01        .01        .01        .01        .01        .02        .02        .02        .03
                     .03        .03        .05        .05        .05        .06        .06        .06        .04        .04
                     .04        .02        .02        .02        .02        .02        .02        .01        .01        .01
                     .01        .01        .01        .01        .01        .01        .01        .01        .01        .01
                     .01        .01

 76 JD          INDEX STORM NO. 9
                     STRM        2.58  PRECIPITATION DEPTH
                     TRDA      100.00  TRANSPOSITION DRAINAGE AREA

 77 PI            PRECIPITATION PATTERN
                     .01        .01        .01        .00        .00        .00        .01        .01        .01        .01
                     .01        .01        .01        .01        .01        .01        .01        .01        .01        .01
                     .01        .01        .01        .01        .01        .01        .01        .01        .01        .01
                     .01        .01        .01        .01        .01        .01        .02        .02        .02        .03
                     .03        .03        .04        .04        .04        .05        .05        .05        .04        .04
                     .04        .02        .02        .02        .02        .02        .02        .01        .01        .01
                     .01        .01        .01        .01        .01        .01        .01        .01        .01        .01
                     .01        .01


*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***


            **************
            *            *
 262 KK     *        E4  *        BASIN
            *            *
            **************

 266 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          1  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .083  TIME INTERVAL IN HOURS

1
                                                RUNOFF SUMMARY
                                          FLOW IN CUBIC FEET PER SECOND
                                       TIME IN HOURS,  AREA IN SQUARE MILES

                                        PEAK   TIME OF     AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN     MAXIMUM     TIME OF
          OPERATION        STATION      FLOW    PEAK                                           AREA      STAGE     MAX STAGE
+                                                          6-HOUR     24-HOUR     72-HOUR

          HYDROGRAPH AT
+                              F1      1773.    4.83        444.        113.         38.       3.10

          ROUTED TO
+                           F1-F2      1757.    4.92        443.        113.         38.       3.10

          HYDROGRAPH AT
+                              F2      1306.    4.75        280.         70.         23.       2.21

          2 COMBINED AT
+                             F3R      2582.    4.83        655.        166.         55.       5.31

          ROUTED TO
+                          F2-E2C      2568.    4.92        655.        166.         55.       5.31

          HYDROGRAPH AT
+                              F3       454.    4.75         84.         21.          7.        .74

          2 COMBINED AT
+                             CF3      2745.    4.92        692.        176.         59.       6.05

          HYDROGRAPH AT
```

+		E2C	658.	4.58	108.	27.	9.	.72
	2 COMBINED AT							
+		CE2R	3021.	4.83	755.	191.	64.	6.76
	DIVERSION TO							
+		DOUT	2164.	4.83	343.	86.	29.	6.76
	HYDROGRAPH AT							
+		DE2C	857.	4.25	411.	106.	35.	6.76
	ROUTED TO							
+		E2C-E3	908.	4.42	411.	106.	35.	6.76
	HYDROGRAPH AT							
+		E1	894.	4.50	148.	37.	12.	.96
	ROUTED TO							
+		E1-E2B	794.	4.83	148.	37.	12.	.96
	HYDROGRAPH AT							
+		E2B	450.	4.58	72.	18.	6.	.47
	2 COMBINED AT							
+		E3RB	1053.	4.83	205.	51.	17.	1.42
	ROUTED TO							
+		E2B-E3	1039.	5.00	205.	51.	17.	1.42
	2 COMBINED AT							
+		E3MID	1607.	5.08	571.	146.	49.	8.19
	ROUTED TO							
+		E3E4RA	1597.	5.33	571.	146.	49.	8.19
	HYDROGRAPH AT							
+		E2A	680.	4.67	127.	32.	11.	.80
	ROUTED TO							
+		E2A-E3	561.	5.67	126.	32.	11.	.80
	HYDROGRAPH AT							
+		E3	1149.	5.08	301.	75.	25.	2.49
	2 COMBINED AT							
+		E4RAR	1175.	5.42	393.	99.	33.	3.28
	2 COMBINED AT							
+		E4RA	2407.	5.33	869.	221.	74.	11.47
	ROUTED TO							
+		E3-E4	2288.	6.33	864.	221.	74.	11.47
	HYDROGRAPH AT							
+		E4	923.	5.42	319.	80.	27.	3.04
	2 COMBINED AT							
+		E5RR	2564.	6.25	1043.	269.	90.	14.51
	HYDROGRAPH AT							
+		H1	497.	4.75	86.	22.	7.	1.07
	ROUTED TO							
+		H1-H2	331.	6.33	85.	22.	7.	1.07
	HYDROGRAPH AT							
+		H2	446.	5.25	134.	33.	11.	1.40
	2 COMBINED AT							
+		E5RL	389.	5.25	176.	45.	15.	2.47
	2 COMBINED AT							
+		E5R	2577.	6.25	1091.	282.	94.	16.98
	ROUTED TO							
+		E4-E5	2413.	7.58	1084.	282.	94.	16.98
	HYDROGRAPH AT							
+		E5	713.	4.92	165.	41.	14.	1.31
	2 COMBINED AT							
+		E6RR	2410.	7.58	1142.	304.	101.	18.29
	HYDROGRAPH AT							
+		K1	1564.	4.50	291.	73.	24.	1.54
	ROUTED TO							
+		K1-K2A	1236.	5.25	289.	73.	24.	1.54
	HYDROGRAPH AT							
+		K2A	894.	5.25	269.	68.	23.	1.95
	2 COMBINED AT							
+		K2BR	1890.	5.25	517.	131.	44.	3.49

+	ROUTED TO	K2A-2B	1834.	5.50	517.	131.	44.	3.49
+	HYDROGRAPH AT	J1	626.	5.08	160.	40.	13.	1.73
+	2 COMBINED AT	CJ1	2065.	5.50	613.	155.	52.	5.23
+	DIVERSION TO	DOUT	836.	5.50	87.	22.	7.	5.23
+	HYDROGRAPH AT	DJ1	1229.	5.17	525.	133.	44.	5.23
+	ROUTED TO	J1-J2	1229.	5.92	522.	133.	44.	5.23
+	HYDROGRAPH AT	J2	1093.	5.33	349.	87.	29.	3.64
+	2 COMBINED AT	CJ2	1911.	5.75	776.	198.	66.	8.86
+	ROUTED TO	J2-K3	1904.	5.83	776.	198.	66.	8.86
+	HYDROGRAPH AT	K2B	309.	4.58	45.	11.	4.	.42
+	ROUTED TO	K2B-K3	172.	6.50	45.	11.	4.	.42
+	HYDROGRAPH AT	K3	520.	5.33	165.	41.	14.	1.64
+	2 COMBINED AT	CK3	495.	5.33	181.	46.	15.	2.05
+	2 COMBINED AT	E6RL	2073.	5.83	860.	220.	73.	10.92
+	2 COMBINED AT	E6R	2806.	6.83	1681.	443.	148.	29.20
+	ROUTED TO	E5-E6	2776.	7.17	1672.	443.	148.	29.20
+	HYDROGRAPH AT	E6	1228.	4.75	253.	63.	21.	2.04
+	2 COMBINED AT	E	2776.	7.17	1764.	475.	158.	31.24
+	HYDROGRAPH AT	G1	927.	4.67	160.	40.	13.	1.12

*** NORMAL END OF HEC-1 ***

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1****************************************                    ****************************************
 *                                      *                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
 *              JUN  1998               *                    *   HYDROLOGIC ENGINEERING CENTER      *
 *           VERSION 4.1                *                    *         609 SECOND STREET            *
 *                                      *                    *      DAVIS, CALIFORNIA 95616         *
 *  RUN DATE   19APR06  TIME  15:44:23  *                    *          (916) 756-1104              *
 *                                      *                    *                                      *
 ****************************************                    ****************************************

                                   X     X  XXXXXXX   XXXXX           X
                                   X     X  X        X     X         XX
                                   X     X  X        X                X
                                   XXXXXXX  XXXX     X        XXXXX   X
                                   X     X  X        X                X
                                   X     X  X        X     X          X
                                   X     X  XXXXXXX   XXXXX         XXX

THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                          HEC-1 INPUT                                          PAGE  1

  LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

    1           ID    STEP 2 HYDROLOGY FOR WHITE TANK WASH
    2           ID    SUN VALLEY ADMP
    3           ID     - WHITE TANK WASH SUB-AREA
    4           ID     - ALTERNATIVE C
    5           ID         Concrete channels with sediment basins only
    6           ID
    7           ID   Alternative Description
    8           ID   Alternative C is based on the concept of an excavated concrete-lined
    9           ID   channel from the apex to the outfall, without providing any detention
   10           ID   basin is at the apex.  To address sedimentation associated with the
   11           ID   alluvial fan systems, sedimentation basins are provided throughout the
   12           ID   system.  The excavated concrete channels are complemented with a 120-foot
   13           ID   wide adjacent riparian preservation corridor.
   14           ID
   15           ID
   16           ID    JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
   17           ID   JANUARY 2006
   18           ID
   19           ID   MODEL BASED UPON:
   20           ID
   21           ID  Buckeye/Sun Valley ADMS - May 2005
   22           ID  Michael Baker Jr., Inc. - Modeler: Jacob Lesue
   23           ID  basins E-K with Aluvial Fan updates
   24           ID  100-year 24-hour
   25           ID  Existing Conditions
   26           ID  Area 3 - Sub-basins E-K (Aluvial Fan updates)
   27           ID  Rainfall Loss Method - Green & Ampt
   28           ID  Unit Hydrograph Method - FCDMC S-Graph
   29           ID  Channel Routing Method - Normal Depth
   30           ID  Land Use - FCDMC GIS Data: mag_landuse (2000)
   31           ID  Soil Data - USDA SCS Soil Survey (1972 & 1981)
   32           ID  Units - L(mi)   Lca(mi)   S(ft/mi)   LAG(min)
                *DIAGRAM
   33           IT       5 01JAN94       0    2000
   34           IO       5
   35           IN      15 01JAN94       0
   36           JD    4.16    0.01
                * SCS TYPE II 24-hour distribution
   37           PC     0.0   0.002   0.005   0.008   0.011   0.014   0.017    0.02   0.023   0.026
   38           PC   0.029   0.032   0.035   0.038   0.041   0.044   0.048   0.052   0.056    0.06
   39           PC   0.064   0.068   0.072   0.076    0.08   0.085    0.09   0.095     0.1   0.105
   40           PC    0.11   0.115    0.12   0.126   0.133    0.14   0.147   0.155   0.163   0.172
   41           PC   0.181   0.191   0.203   0.218   0.236   0.257   0.283   0.387   0.663   0.707
   42           PC   0.735   0.758   0.776   0.791   0.804   0.815   0.825   0.834   0.842   0.849
   43           PC   0.856   0.863   0.869   0.875   0.881   0.887   0.893   0.898   0.903   0.908
   44           PC   0.913   0.918   0.922   0.926    0.93   0.934   0.938   0.942   0.946    0.95
   45           PC   0.953   0.956   0.959   0.962   0.965   0.968   0.971   0.974   0.977    0.98
   46           PC   0.983   0.986   0.989   0.992   0.995   0.998     1.0
   47           JD   3.952    10.0
   48           JD   3.819    20.0
   49           JD    3.69    40.0
   50           JD   3.565    80.0
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1                                          HEC-1 INPUT                                          PAGE  2

  LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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 51          KK      F1   BASIN
 52          KM    TOTAL FLOW TO APEX 39
 53          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 54          KM   L=5.07      Lca=2.57      S=369.39      Kn=0.050      LAG=61.9
 55          KM   S-GRAPH TYPE=PHX MNT
 56          BA   3.103
 57          LG   0.297   0.329   4.244   0.378  12.997
 58          UI     0.0  168.51  168.51  215.27  509.66  699.18  943.72 1090.63 1237.28 1359.21
 59          UI  1651.0 2027.63 1459.34 1157.38 1028.29  961.49  882.67  818.34   750.5  687.24
 60          UI  625.11  552.31  479.89  429.51  404.49  384.89  352.34  298.58  276.84  216.79
 61          UI  215.32  192.43  184.56  176.81  129.19  129.19  129.19  109.56   82.46   82.46
 62          UI   82.46   82.46   82.46   52.76    32.3    32.3    32.3    32.3    32.3    32.3
 63          UI    32.3    32.3    32.3    32.3    32.3    32.3    32.3    32.3     0.0
             *

 64          KK   F1-F2   ROUTE
 65          KM   PROPOSED CHANNEL
 66          KM    STRUCTURE ID(s): RRF110
 67          KM    Slope=(1493.3 - 1433.6) / 4725.1
 68          RS       3    FLOW      -1
 69          RC    0.02    0.02    0.02  4725.10.012648   104.0
 70          RX     0.0    12.0    37.0    43.0    83.0    89.0   114.0   126.0
 71          RY   104.0   100.0   100.0    98.0    98.0   100.0   100.0   104.0
             *

 72          KK      F2   BASIN
 73          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 74          KM   L=3.88      Lca=1.80      S=161.60      Kn=0.050      LAG=57.0
 75          KM   S-GRAPH TYPE=PHX MNT
 76          BA   2.209
 77          LG    0.35    0.35   4.375   0.362   3.346
 78          UI     0.0  130.48  130.48  222.96  433.41  610.23   794.3  912.18 1015.11 1202.18
 79          UI  1548.4 1176.04  896.54  790.99  735.01  667.95  615.82  555.86  511.22  447.69
 80          UI  388.02  337.31  314.94  297.77  272.83  224.19  203.12  166.73  162.35  142.91
 81          UI  142.91  109.04  100.04  100.04   86.65   63.85   63.85   63.85   63.85   63.39
 82          UI   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01   25.01
 83          UI   25.01   25.01   25.01     0.0
             *

 84          KK     F3R COMBINE
 85          KM    COMBINE RUNOFF FROM F2 WITH ROUTED FLOW FROM F1
 86          HC       2
             *

 87          KK  F2-E2C   ROUTE
 88          KM   PROPOSED CHANNEL
 89          KM    ROUTE COMBINED FLOW TO SUN VALLEY PARKWAY IN E2C
 90          KM    MODIFIED FOR STEP 2 OF ADMP
 91          KM    STRUCTURE ID(s): E4RB10, E4RB20
 92          KM    Slope=(1433.6 - 1368.3) / 5731.3
 93          RS       4    FLOW      -1
 94          RC    0.02    0.02    0.02  5731.30.011392   103.5
 95          RX     0.0    10.5    40.5    46.5   106.5   112.5   142.5   153.0
 96          RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
             *
1                                          HEC-1 INPUT                                                    PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 97          KK      F3   BASIN
 98          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 99          KM   L=2.71      Lca=1.26      S=81.34      Kn=0.055      LAG=54.2
100          KM   S-GRAPH TYPE=DES RNGLND
101          BA   0.736
102          LG    0.35    0.35   3.284    0.64     0.0
103          UI     0.0   45.89   45.89   90.29  163.16  236.62   300.0   352.3  401.58  427.19
104          UI  439.78  431.51  405.77  355.07  304.27  256.06  219.26  187.54  158.37  134.34
105          UI  113.67   96.02   85.11   70.36   60.22   48.64   46.52   31.41   31.41   31.41
106          UI    21.4   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17   11.17
107          UI     0.0
             *

108          KK     CF3 COMBINE
109          KM    COMBINE RUNOFF FROM F3 WITH ROUTED FLOW FROM F3R
110          HC       2
             *

111          KK     E2C   BASIN
112          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
113          KM   L=2.38      Lca=1.01      S=92.90      Kn=0.055      LAG=46.0
114          KM   S-GRAPH TYPE=DES RNGLND
115          BA   0.716
116          LG    0.35    0.35   4.343   0.357     0.0
117          UI     0.0   55.12   55.12  154.82  250.83  342.33  421.22  487.29  519.92  527.55
118          UI  498.61  439.15  363.83   300.5  250.15  205.65  169.32  139.69  114.34   97.44
119          UI   84.51   59.64   58.42   38.62   37.73   37.73   16.68   13.41   13.41   13.41
120          UI   13.41   13.41   13.41   13.41     0.0
             *

121          KK    CE2R COMBINE
122          KM    COMBINE FLOW AT SUN VALLEY PARKWAY (RUNOFF FROM EC2 WITH CF3)
123          HC       2
             *
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 124        KK    DE2C  DIVERT
 125        KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
 126        KM    STRUCTURE ID:DE2C
 127        KM    DIMENSIONS: L=1500ft, W=700ft, D=11ft, Sideslope (?H:1V)= 3,  Vol.= 212.6 ac
 128        DT    DOUT
 129        DI     0.0   120.0   240.0   360.0   480.0   600.0   610.0   840.0   857.0  1080.0
 130        DI  2500.0  4000.0
 131        DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   223.0
 132        DQ  1643.0  3143.0
            *

 133        KK  E2C-E3   ROUTE
 134        KM   PROPOSED CHANNEL
 135        KM    ROUTE FLOW FROM SUN VALLEY PARKWAY TO CONFLUENCE WITH E2B FLOWS
 136        KM    STRUCTURE ID(s): E4RB30
 137        KM    Slope=(1368.3 - 1313.1) / 4724.8
 138        RS      13    FLOW      -1
 139        RC    0.02    0.02    0.02  4724.80.011682   102.5
 140        RX     0.0     7.5    27.5    33.5    48.5    54.5    74.5    82.0
1                                        HEC-1 INPUT                                                    PAGE  4

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 141        RY   102.5   100.0   100.0    98.0    98.0   100.0   100.0   102.5
            *

 142        KK      E1   BASIN
 143        KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 144        KM   L=2.51      Lca=1.13      S=178.34      Kn=0.055      LAG=43.3
 145        KM   S-GRAPH TYPE=PHX MNT
 146        BA   0.956
 147        LG    0.35   0.378   5.377   0.222    0.69
 148        UI     0.0   74.86   77.94  239.17  368.29  486.24  570.86   714.2  832.85  536.73
 149        UI  451.19  405.28  360.54  317.72  278.78  233.78  192.26  176.85  160.99  130.76
 150        UI  107.56   95.43   81.98   76.82   57.39   57.39   44.31   36.63   36.63   36.63
 151        UI   23.53   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35   14.35
 152        UI     0.0
            *

 153        KK  E1-E2B   ROUTE
 154        RS       5    FLOW     0.0     0.0
 155        RC    0.05   0.047  0.04610992.72   0.016     0.0
 156        RX     0.0    65.0   140.0   170.0   185.0   200.0   270.0   340.0
 157        RY    24.0    21.0    17.0    10.0    10.0    14.0    18.0    22.0
            *

 158        KK     E2B   BASIN
 159        KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 160        KM   L=2.08      Lca=1.07      S=87.98      Kn=0.055      LAG=45.2
 161        KM   S-GRAPH TYPE=DES RNGLND
 162        BA   0.466
 163        LG    0.35    0.38     5.6    0.21     0.0
 164        UI     0.0    32.1    32.1   94.97  150.03  204.82  250.49  285.24   306.5  304.84
 165        UI  285.73  244.25   203.0  165.28   137.3  113.17   92.95    75.5   62.33   52.17
 166        UI   43.31   34.02   28.77   21.97   21.97   16.14    7.81    7.81    7.81    7.81
 167        UI    7.81    7.81    7.81    7.81
            *

 168        KK    E3RB COMBINE
 169        KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E1 AT SUN VALLEY PARKWAY
 170        HC       2
            *

 171        KK  E2B-E3   ROUTE
 172        KM   PROPOSED CHANNEL
 173        KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO CONFLUENCE WITH E2C FLOWS
 174        KM    STRUCTURE ID(s): E3RB10, E3RB20
 175        KM    Slope=(1456.8 - 1313.1) / 10317.4
 176        RS      12    FLOW      -1
 177        RC    0.02    0.02    0.02 10317.40.013931   103.5
 178        RX     0.0    10.5    30.5    36.5    61.5    67.5    87.5    98.0
 179        RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
            *
1                                        HEC-1 INPUT                                                    PAGE  5

LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 180        KK   E3MID COMBINE
 181        KM    COMBINE RUNOFF FROM E2B WITH ROUTED FLOW FROM E2C D/S OF SUN VALLEY PARKWAY
 182        HC       2
            *

 183        KK  E3E4RA   ROUTE
 184        KM   PROPOSED CHANNEL
 185        KM    ROUTE COMBINED FLOW THRU SUBBASIN E3 TO E4RA
 186        KM   ROUTE FLOW FROM CONFLUENCE D/S OF SUN VALLEY PARKWAY TO OUTLET OF E3 AT START
 187        KM   OF MAIN NORTH-SOUTH PART OF WHITE TANK WASH (CP E4RA)
 188        KM    STRUCTURE ID(s): E4RA10
 189        KM    Slope=(1313.1 - 1230.3) / 10788.6
 190        RS      12    FLOW      -1
 191        RC    0.02    0.02    0.02 10788.6 0.00767   104.0
 192        RX     0.0    12.0    47.0    53.0    83.0    89.0   124.0   136.0
 193        RY   104.0   100.0   100.0    98.0    98.0   100.0   100.0   104.0
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                *

 194            KK     E2A   BASIN
 195            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 196            KM   L=2.90      Lca=1.20      S=100.83      Kn=0.055      LAG=52.4
 197            KM   S-GRAPH TYPE=DES RNGLND
 198            BA   0.797
 199            LG    0.35    0.38     5.6    0.21     0.0
 200            UI     0.0    51.6    51.6  110.43  196.83  277.44  347.94  413.76  460.03   489.1
 201            UI  494.55   472.6  438.77  369.81  310.92  263.99  224.69  190.62  158.99  135.09
 202            UI  112.23   97.29   80.97   70.86    54.7   53.12   35.32   35.32   35.32   21.96
 203            UI   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56   12.56     0.0
                *

 204            KK  E2A-E3   ROUTE
 205            RS      13    FLOW     0.0     0.0
 206            RC   0.052   0.046   0.05219626.03  0.0093     0.0
 207            RX     0.0   133.0   173.0   213.0   223.0   263.0   303.0   403.0
 208            RY    22.0    17.0    14.0    10.0    10.0    15.0    18.0    22.0
                *

 209            KK      E3   BASIN
 210            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 211            KM   L=3.87      Lca=1.99      S=49.65      Kn=0.050      LAG=74.5
 212            KM   S-GRAPH TYPE=DES RNGLND
 213            BA   2.488
 214            LG    0.35    0.35   4.362   0.346     0.0
 215            UI     0.0  111.69  111.69  111.69  226.88  361.12  481.81  599.56  708.99  795.91
 216            UI  924.44  981.52 1023.08 1070.39 1070.39 1054.33 1012.16  958.83  843.16   765.0
 217            UI  671.82  595.75  537.55  476.38  423.35  378.09  335.18  305.82   252.8  234.07
 218            UI  210.57  188.36  171.26  154.61  118.38  118.38  115.87   76.46   76.46   76.46
 219            UI   76.46   75.47   27.18   27.18   27.18   27.18   27.18   27.18   27.18   27.18
 220            UI   27.18   27.18   27.18   27.18   27.18   27.18
                *
1                                          HEC-1 INPUT                                          PAGE  6

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 221            KK   E4RAR COMBINE
 222            KM    COMBINE RUNOFF FROM E3 WITH ROUTED FLOW FROM E2A
 223            HC       2
                *

 224            KK    E4RA COMBINE
 225            KM    COMBINE ALL FLOW AT E4RA ON WHITE TANK WASH
 226            HC       2
                *
                *  SPOT FOR POTENTIAL DETENTION BASIN AT START OF WHITE TANK WASH
                *

 227            KK   E3-E4   ROUTE
 228            KM    ROUTE FLOW FROM E4RA THROUGH SUBBASIN E4 TO E5R
 229            RS      14    FLOW     0.0     0.0
 230            RC   0.056   0.049   0.05613854.98  0.0048     0.0
 231            RX     0.0   570.0   650.0   690.0   705.0   735.0   810.0  1200.0
 232            RY    21.0    14.0    13.0    10.0    10.0    12.5    14.5    21.0
                *

 233            KK      E4   BASIN
 234            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 235            KM   L=5.36      Lca=2.81      S=38.26      Kn=0.050      LAG=101.9
 236            KM   S-GRAPH TYPE=DES RNGLND
 237            KO       0       0     0.0       1      22
 238            BA   3.042
 239            LG    0.35    0.35   3.816   0.439     0.0
 240            UI     0.0  100.41  100.41  100.41  100.41   158.4  288.69  358.15  433.82  515.05
 241            UI  586.72  661.74  710.91  802.48  849.78  890.67  905.99   962.3   962.3   962.3
 242            UI  958.07  920.61  904.77  855.38  781.14  712.32  671.29  604.26   557.2  512.12
 243            UI  469.45  435.76   392.7  363.69  334.37  307.94  277.85  264.88  224.23  220.83
 244            UI  189.31  189.31  167.81  153.97  153.97   127.9  106.43  106.43  106.43  101.85
 245            UI   68.74   68.74   68.74   68.74   68.74   68.74    56.9   24.44   24.44   24.44
 246            UI   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44   24.44
 247            UI   24.44   24.44   24.44   24.44   24.44   24.44
                *

 248            KK    E5RR COMBINE
 249            KM    COMBINE RUNOFF FROM E4 WITH ROUTED FLOW FROM E4RA
 250            HC       2
                *

 251            KK      H1   BASIN
 252            KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 253            KM   L=2.41      Lca=1.09      S=64.59      Kn=0.055      LAG=51.2
 254            KM   S-GRAPH TYPE=DES RNGLND
 255            BA   1.066
 256            LG    0.35    0.35   2.733   0.945     0.0
 257            UI     0.0   70.38   70.38  156.67  277.53  386.09  481.01   579.0   629.6  674.43
 258            UI  672.95  639.66  573.48  484.85  407.01  343.97  290.32  244.62  205.27   171.4
 259            UI  143.72  125.14  107.91   82.11   74.59   59.78   48.17   48.17   44.03   17.13
 260            UI   17.13   17.13   17.13   17.13   17.13   17.13   17.13   17.13     0.0
                *
1                                          HEC-1 INPUT                                          PAGE  7

LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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 261          KK   H1-H2   ROUTE
 262          KM    ROUTE RUNOFF FROM H1 TO E5R
 263          RS      21    FLOW     0.0     0.0
 264          RC   0.053    0.05   0.05321739.03  0.0082     0.0
 265          RX     0.0   330.0   430.0   465.0   495.0   530.0   630.0   960.0
 266          RY    17.0    14.0    12.0    10.0    10.0    12.0    14.0    17.0
              *

 267          KK      H2   BASIN
 268          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 269          KM   L=4.41     Lca=2.60     S=44.71     Kn=0.050     LAG=88.9
 270          KM   S-GRAPH TYPE=DES RNGLND
 271          BA     1.4
 272          LG    0.35    0.35   3.222   0.664     0.0
 273          UI     0.0   52.96   52.96   52.96   52.96  142.93  178.39   226.9  274.71  319.58
 274          UI  365.35   394.2  441.12  466.71   479.3  507.56  507.56  507.56  494.47  478.59
 275          UI  456.68  413.58  373.47  343.47  306.13  279.54  254.31  232.29  208.19  189.77
 276          UI  169.44  155.74  145.02  121.24  117.25   99.85   99.85   83.38   81.21   75.85
 277          UI   56.14   56.14   56.14   49.15   36.25   36.25   36.25   36.25   36.25    27.6
 278          UI   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89   12.89
 279          UI   12.89   12.89   12.89   12.89   12.89   12.89     0.0
              *

 280          KK    E5RL COMBINE
 281          KM    COMBINE RUNOFF FROM H2 WITH ROUTED FLOW FROM H1
 282          HC       2
              *

 283          KK     E5R COMBINE
 284          KM    COMBINE ALL FLOWS AT E5R
 285          HC       2
              *

 286          KK   E4-E5   ROUTE
 287          KM    ROUTE FLOW IN WHITE TANK WASH FROM E5R TO E6R
 288          RS      14    FLOW     0.0     0.0
 289          RC    0.06    0.05   0.0615206.17  0.0051     0.0
 290          RX     0.0  1010.0  1080.0  1090.0  1110.0  1120.0  1190.0  2200.0
 291          RY    27.0    16.0    15.0    10.0    10.0    14.0    16.0    27.0
              *

 292          KK      E5   BASIN
 293          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 294          KM   L=3.01     Lca=1.41     S=28.56     Kn=0.050     LAG=65.8
 295          KM   S-GRAPH TYPE=DES RNGLND
 296          BA   1.308
 297          LG   0.347   0.344    3.94   0.429   0.968
 298          UI     0.0   66.73   66.73   66.73  187.33  261.54  342.37  416.83  480.54  556.36
 299          UI  598.07  622.96  639.46  636.14  605.78  574.36  496.51  443.91  383.22  336.88
 300          UI  298.49  258.94  227.11  198.14  176.39   149.0   129.8   120.7  102.31   94.82
 301          UI   70.72   70.72   61.39   45.68   45.68   45.68   45.68   18.08   16.24   16.24
 302          UI   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24   16.24     0.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 303          KK    E6RR COMBINE
 304          KM    COMBINE RUNOFF FROM E5 WITH ROUTED FLOW FROM E5R
 305          KM   THIS IS THE TOTAL FLOW IN WHITE TANK WASH JUST UPSTREAM OF E6R
 306          KM    (WEST CORRIDOR U/S OF E6R)
 307          HC       2
              *

 308          KK      K1   BASIN
 309          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 310          KM   L=3.23     Lca=1.84     S=681.00     Kn=0.050     LAG=40.4
 311          KM   S-GRAPH TYPE=PHX MNT
 312          BA   1.543
 313          LG   0.112   0.255   4.365   0.366  21.277
 314          UI     0.0  129.88  168.84  442.11  706.31  896.38 1061.91 1457.77 1111.25  821.11
 315          UI  726.82  641.11  561.31  488.34  403.67  331.29  304.06  271.41  213.37  169.75
 316          UI  154.58  142.25  108.11   99.57   85.17   63.56   63.56   63.56   38.81   24.89
 317          UI   24.89   24.89   24.89   24.89   24.89   24.89   24.89     0.0
              *

 318          KK  K1-K2A   ROUTE
 319          KM    ROUTE RUNOFF FROM K1 TO APEX 38
 320          RS      10    FLOW     0.0     0.0
 321          RC    0.05   0.048   0.0519434.11   0.017     0.0
 322          RX     0.0    20.0    55.0    85.0   235.0   259.0   289.0   309.0
 323          RY    22.0    21.0    20.0    10.0    10.0    20.0    21.0    22.0
              *

 324          KK     K2A   BASIN
 325          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 326          KM   L=5.29     Lca=2.72     S=126.78     Kn=0.055     LAG=87.2
 327          KM   S-GRAPH TYPE=DES RNGLND
 328          BA   1.949
 329          LG   0.341   0.347   4.907   0.278   1.288
 330          UI     0.0   75.43   75.43   75.43   75.43  216.57  263.63  333.08  400.43  470.31
 331          UI  527.14  583.18  638.37  674.27  692.72  722.84  722.84  721.83  689.53  671.99
```

```
 332          UI  627.55  556.08  517.43  456.81  416.13  375.78  341.84  309.53  280.25  253.48
 333          UI  229.53  206.53  183.27  168.43  146.97   142.2  123.74  115.66  112.61   79.95
 334          UI   79.95   79.95   71.18   51.63   51.63   51.63   51.63   51.63   36.22   18.36
 335          UI   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36   18.36
 336          UI   18.36   18.36   18.36   18.36     0.0
              *

 337          KK    K2BR COMBINE
 338          KM    COMBINE FLOWS AT APEX 38
 339          HC       2
              *

 340          KK  K2A-2B   ROUTE
 341          KM   PROPOSED CHANNEL
 342          KM    ROUTE FLOW FROM APEX 38 THROUGH SUBBASIN J1 TO SUN VALLEY PARKWAY
 343          KM    MODIFIED FOR STEP 2 OF ADMP
 344          KM    STRUCTURE ID(s): CJ110, CJ120
 345          KM    Slope=(1437.6 - 1316.8) / 10052.6
 346          RS       4    FLOW      -1
1                                          HEC-1 INPUT                                                    PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 347          RC    0.02    0.02    0.02 10052.60.012015   103.5
 348          RX     0.0    10.5    35.5    41.5    71.5    77.5   102.5   113.0
 349          RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
              *

 350          KK      J1   BASIN
 351          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 352          KM   L=4.09      Lca=1.78      S=70.82      Kn=0.055      LAG=74.8
 353          KM   S-GRAPH TYPE=DES RNGLND
 354          BA   1.734
 355          LG    0.35    0.35    3.25   0.652     0.0
 356          UI     0.0   77.84   77.84   77.84  158.12  251.68   335.8  417.86  494.13  554.71
 357          UI  644.28  684.07  713.03   746.0   746.0  734.81  705.42  668.25  587.63  533.16
 358          UI  468.22   415.2  374.64  332.01  295.05  263.51  233.61  213.14  176.18  163.13
 359          UI  146.75  131.28  119.36  107.75   82.51   82.51   80.75   53.29   53.29   53.29
 360          UI   53.29    52.6   18.95   18.95   18.95   18.95   18.95   18.95   18.95   18.95
 361          UI   18.95   18.95   18.95   18.95   18.95   18.95
              *

 362          KK     CJ1 COMBINE
 363          KM    COMBINE RUNOFF FROM J1 WITH ROUTED FLOWS FROM APEX 38
 364          KM    THIS IS THE COMBINED FLOW AT SUN VALLEY PARKWAY
 365          HC       2
              *

 366          KK     DJ1  DIVERT
 367          KM   Proposed Offline Detention Basin AT SUN VALLEY PARKWAY
 368          KM    STRUCTURE ID:DJ1
 369          KM    DIMENSIONS: L=1500ft, W=600ft, D=4ft, Sideslope (?H:1V)= 3,  Vol.= 57.1 ac-f
 370          DT    DOUT
 371          DI     0.0   140.0   280.0   420.0   560.0   688.0   840.0   980.0  1120.0  1229.0
 372          DI  1400.0  2500.0
 373          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0
 374          DQ   171.0  1271.0
              *

 375          KK   J1-J2   ROUTE
 376          KM   PROPOSED CHANNEL
 377          KM    ROUTE FLOW FROM SUN VALLEY PARKWAY THROUGH SUBBASIN J2
 378          KM    STRUCTURE ID(s): CJ210, CJ220, CJ230
 379          KM    Slope=(1316.8 - 1104.3) / 23082.2
 380          RS      16    FLOW      -1
 381          RC    0.02    0.02    0.02 23082.20.009207   103.5
 382          RX     0.0    10.5    40.5    46.5    76.5    82.5   112.5   123.0
 383          RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
              *

 384          KK      J2   BASIN
 385          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 386          KM   L=5.18      Lca=2.51      S=45.01      Kn=0.050      LAG=93.2
 387          KM   S-GRAPH TYPE=DES RNGLND
 388          BA   3.638
 389          LG   0.349   0.348   3.621   0.496   0.281
 390          UI     0.0  131.71  131.71  131.71  131.71  310.01   410.2  529.51  653.09  756.38
 391          UI  857.33  932.04 1064.81 1131.31 1183.05 1211.21 1262.21 1262.21 1262.21 1218.54
1                                          HEC-1 INPUT                                                    PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 392          UI  1189.1 1123.19 1016.15  925.91  854.62  766.36  699.93  639.84  585.79  530.33
 393          UI  484.44   441.0  403.56  360.63  330.99  294.11  269.84   248.3  236.22  201.95
 394          UI  201.95  172.61   139.6   139.6   139.6  118.12   90.16   90.16   90.16   90.16
 395          UI   90.16   79.42   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06
 396          UI   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06   32.06     0.0
              *

 397          KK     CJ2 COMBINE
 398          KM    COMBINE RUNOFF FROM J2 WITH ROUTED FLOWS FROM CJ1
 399          HC       2
              *

 400          KK   J2-K3   ROUTE
```

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401          KM   PROPOSED CHANNEL
402          KM    ROUTE COMBINED FLOW FROM CJ2 TO E6R THROUGH SUBBASIN K3
403          KM    STRUCTURE ID(s): E6RL10
404          KM    Slope=(1104.3 - 1084.9) / 3156.5
405          RS       3    FLOW      -1
406          RC    0.02    0.02    0.02  3156.50.006135   103.5
407          RX     0.0    10.5    45.5    51.5    86.5    92.5   127.5   138.0
408          RY   103.5   100.0   100.0    98.0    98.0   100.0   100.0   103.5
             *

409          KK     K2B   BASIN
410          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
411          KM   L=2.01      Lca=0.83      S=60.78      Kn=0.055      LAG=43.5
412          KM   S-GRAPH TYPE=DES RNGLND
413          BA   0.416
414          LG    0.35    0.35   2.708   0.961     0.0
415          UI     0.0   32.57   33.92  104.78  161.25  216.88  267.55  297.02  312.16  302.35
416          UI  276.72  225.58  183.68  151.33  123.31   99.92    81.2   65.94    55.1   45.93
417          UI   34.52    29.7    22.3    22.3   15.04    7.93    7.93    7.93    7.93    7.93
418          UI    7.93    7.93     0.0
             *

419          KK  K2B-K3   ROUTE
420          KM    ROUTE RUNOFF FROM K2B THROUGH SUBBASIN K3 TO E6R
421          RS      19    FLOW     0.0     0.0
422          RC    0.05   0.048    0.0525950.11  0.0084     0.0
423          RX     0.0   390.0   490.0   502.0   520.0   532.0   632.0  1022.0
424          RY    20.0    14.5    11.5    10.0    10.0    11.5    14.5    20.0
             *

425          KK      K3   BASIN
426          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
427          KM   L=4.92      Lca=2.65      S=44.16      Kn=0.050      LAG=93.6
428          KM   S-GRAPH TYPE=DES RNGLND
429          BA   1.636
430          LG    0.35    0.35   3.421   0.582     0.0
431          UI     0.0    58.6    58.6    58.6    58.6  132.87  178.79  231.72  287.22  333.42
432          UI  374.63  416.06  465.04   498.4  523.32  535.26  561.57  561.57  561.57  546.52
433          UI  528.98  508.31  466.83  418.22  391.32  351.35  318.32  291.61  266.72  243.82
434          UI   222.2   205.3   179.7  166.92  157.94  130.85  127.83  110.47  110.47   92.85
435          UI   89.85   88.89   62.11   62.11   62.11   62.11    41.1   40.11   40.11   40.11
436          UI   40.11   40.11   23.61   14.26   14.26   14.26   14.26   14.26   14.26   14.26
1                                          HEC-1 INPUT                                                PAGE 11

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

437          UI   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26   14.26
             *

438          KK     CK3 COMBINE
439          KM    COMBINE RUNOFF FROM K3 WITH ROUTED FLOW FROM K2B
440          HC       2
             *

441          KK    E6RL COMBINE
442          KM    COMBINE FLOWS IN LEFT SIDE OF E6R (TOTAL FLOW IN EAST CORRIDOR U/S OF E6R)
443          HC       2
             *

444          KK     E6R COMBINE
445          KM    COMBINE ALL RUNOFF AT E6R (E6RL + E6RR)
446          HC       2
             *

447          KK   E5-E6   ROUTE
448          KM    ROUTE FLOW IN WHITE TANK WASH TO BUCKEYE FRS NO. 1
449          RS       4    FLOW     0.0     0.0
450          RC   0.063   0.051   0.063  5105.8  0.0037     0.0
451          RX     0.0   850.0   980.0   990.0  1030.0  1040.0  1230.0  2020.0
452          RY    25.0    13.0    13.0    10.0    10.0    12.0    12.0    25.0
             *

453          KK      E6   BASIN
454          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
455          KM   L=3.04      Lca=1.06      S=34.17      Kn=0.050      LAG=57.1
456          KM   S-GRAPH TYPE=DES RNGLND
457          BA   2.038
458          LG   0.343   0.336   4.356   0.367   0.711
459          UI     0.0  120.38  120.38   205.7  403.51   574.9  733.36  874.59  1019.0 1083.61
460          UI  1153.6 1153.67  1100.2 1038.99  882.77  767.24  653.83  562.64  487.32  412.46
461          UI  353.67  303.21  257.92  226.95  190.12   175.5  127.59  127.59   96.61    82.4
462          UI    82.4    82.4   36.99    29.3    29.3    29.3    29.3    29.3    29.3    29.3
463          UI    29.3    29.3     0.0
             *

464          KK       E COMBINE
465          KM     COMBINE TOTAL FLOWS INTO FRS NO. 1 FROM WHITE TANK WASH AT CP E
466          HC       2
             *

467          KK      G1   BASIN
468          KM   THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
469          KM   L=2.38      Lca=1.08      S=33.76      Kn=0.045      LAG=47.1
470          KM   S-GRAPH TYPE=DES RNGLND
471          BA   1.119
```

```
472          LG    0.35    0.35    4.68   0.299     0.0
473          UI     0.0   80.16   80.16  213.17  354.95   484.3  602.66  698.84  750.22  768.22
474          UI  735.63  666.98  553.71  458.04  381.89  318.75  263.34   222.2  176.93  151.12
475          UI  124.96  103.28   84.96   70.59   54.87   54.87   43.58   19.51   19.51   19.51
476          UI   19.51   19.51   19.51   19.51   19.51     0.0
477          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.     (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    51         F1
               V
               V
    64      F1-F2
               .
               .
    72         .          F2
               .           .
               .           .
    84        F3R...........
               V
               V
    87     F2-E2C
               .
               .
    97         .          F3
               .           .
               .           .
   108        CF3...........
               .
               .
   111         .         E2C
               .           .
               .           .
   121       CE2R...........
               .
               .
   128         .------->    DOUT
   124       DE2C
               V
               V
   133     E2C-E3
               .
               .
   142         .          E1
               .           V
               .           V
   153         .      E1-E2B
               .           .
               .           .
   158         .           .         E2B
               .           .           .
               .           .           .
   168         .        E3RB...........
               .           V
               .           V
   171         .      E2B-E3
               .           .
               .           .
   180      E3MID...........
               V
               V
   183     E3E4RA
               .
               .
   194         .         E2A
               .           V
               .           V
   204         .      E2A-E3
               .           .
               .           .
   209         .           .          E3
               .           .           .
               .           .           .
   221         .       E4RAR...........
               .           .
               .           .
   224       E4RA...........
               V
               V
   227      E3-E4
               .
               .
   233         .          E4
               .           .
               .           .
   248       E5RR...........
               .
               .
   251         .          H1
               .           V
               .           V
```

```
 261          .       H1-H2
              .           .
              .           .
 267          .           .          H2
              .           .           .
              .           .           .
 280          .        E5RL............
              .           .
              .           .
 283        E5R............
              V
              V
 286      E4-E5
              .
              .
 292          .          E5
              .           .
              .           .
 303       E6RR............
              .
              .
 308          .          K1
              .           V
              .           V
 318          .      K1-K2A
              .           .
              .           .
 324          .           .         K2A
              .           .           .
              .           .           .
 337          .       K2BR............
              .           V
              .           V
 340          .      K2A-2B
              .           .
              .           .
 350          .           .          J1
              .           .           .
              .           .           .
 362          .         CJ1............
              .           .
              .           .
 370          .           .-------->    DOUT
 366          .         DJ1
              .           V
              .           V
 375          .       J1-J2
              .           .
              .           .
 384          .           .          J2
              .           .           .
              .           .           .
 397          .         CJ2............
              .           V
              .           V
 400          .       J2-K3
              .           .
              .           .
 409          .           .         K2B
              .           .           V
              .           .           V
 419          .           .      K2B-K3
              .           .           .
              .           .           .
 425          .           .           .           K3
              .           .           .            .
              .           .           .            .
 438          .           .         CK3............
              .           .           .
              .           .           .
 441          .       E6RL............
              .           .
              .           .
 444        E6R............
              V
              V
 447      E5-E6
              .
              .
 453          .          E6
              .           .
              .           .
 464          E............
              .
              .
 467          .          G1
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   19APR06  TIME  15:44:23  *
```

```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
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*                                        *                                        *                                        *
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STEP 2 HYDROLOGY FOR WHITE TANK WASH
SUN VALLEY ADMP
 - WHITE TANK WASH SUB-AREA
 - ALTERNATIVE C
     Concrete channels with sediment basins only

Alternative Description
Alternative C is based on the concept of an excavated concrete-lined
channel from the apex to the outfall, without providing any detention
basin is at the apex.  To address sedimentation associated with the
alluvial fan systems, sedimentation basins are provided throughout the
system.  The excavated concrete channels are complemented with a 120-foot
wide adjacent riparian preservation corridor.


 JE FULLER/ HYDROLOGY & GEOMORPHOLOGY, INC.
JANUARY 2006

MODEL BASED UPON:

Buckeye/Sun Valley ADMS - May 2005
Michael Baker Jr., Inc. - Modeler: Jacob Lesue
basins E-K with Aluvial Fan updates
100-year 24-hour
Existing Conditions
Area 3 - Sub-basins E-K (Aluvial Fan updates)
Rainfall Loss Method - Green & Ampt
Unit Hydrograph Method - FCDMC S-Graph
Channel Routing Method - Normal Depth
Land Use - FCDMC GIS Data: mag_landuse (2000)
Soil Data - USDA SCS Soil Survey (1972 & 1981)
Units - L(mi)    Lca(mi)    S(ft/mi)    LAG(min)

34 IO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT          HYDROGRAPH TIME DATA
                      NMIN          5  MINUTES IN COMPUTATION INTERVAL
                     IDATE     1JAN94  STARTING DATE
                     ITIME       0000  STARTING TIME
                        NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE     7JAN94  ENDING DATE
                    NDTIME       2235  ENDING TIME
                     ICENT         19  CENTURY MARK

               COMPUTATION INTERVAL     .08 HOURS
                    TOTAL TIME BASE  166.58 HOURS

        ENGLISH UNITS
             DRAINAGE AREA          SQUARE MILES
             PRECIPITATION DEPTH    INCHES
             LENGTH, ELEVATION      FEET
             FLOW                   CUBIC FEET PER SECOND
             STORAGE VOLUME         ACRE-FEET
             SURFACE AREA           ACRES
             TEMPERATURE            DEGREES FAHRENHEIT

36 JD          INDEX STORM NO. 1
                      STRM       4.16  PRECIPITATION DEPTH
                      TRDA        .01  TRANSPOSITION DRAINAGE AREA

37 PI            PRECIPITATION PATTERN
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                     .00       .00       .00       .00       .00       .00       .00       .01       .00       .01
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                     .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
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                .00       .00       .00       .00       .00       .00       .00       .00

47 JD        INDEX STORM NO. 2
                STRM        3.95  PRECIPITATION DEPTH
                TRDA       10.00  TRANSPOSITION DRAINAGE AREA

 0 PI         PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .00       .00       .00       .00
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                .00       .00       .00       .00       .00       .00       .00       .00

48 JD        INDEX STORM NO. 3
                STRM        3.82  PRECIPITATION DEPTH
                TRDA       20.00  TRANSPOSITION DRAINAGE AREA

 0 PI         PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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                .01       .01       .01       .01       .01       .01       .01       .01       .03       .03
                .03       .09       .09       .09       .01       .01       .01       .01       .01       .01
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                .00       .00       .00       .00       .00       .00       .00       .00

49 JD        INDEX STORM NO. 4
                STRM        3.69  PRECIPITATION DEPTH
                TRDA       40.00  TRANSPOSITION DRAINAGE AREA

 0 PI         PRECIPITATION PATTERN
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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50 JD        INDEX STORM NO. 5
                STRM       3.57  PRECIPITATION DEPTH
                TRDA      80.00  TRANSPOSITION DRAINAGE AREA

 0 PI           PRECIPITATION PATTERN
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.00	.00	.00	.00
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          *            *
233 KK    *     E4     *        BASIN
          *            *
          **************

237 KO         OUTPUT CONTROL VARIABLES
                  IPRNT          5  PRINT CONTROL
                  IPLOT          0  PLOT CONTROL
                  QSCAL         0.  HYDROGRAPH PLOT SCALE
                  IPNCH          1  PUNCH COMPUTED HYDROGRAPH
                   IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                  ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                  ISAV2       2000  LAST ORDINATE PUNCHED OR SAVED
                 TIMINT       .083  TIME INTERVAL IN HOURS
```

1

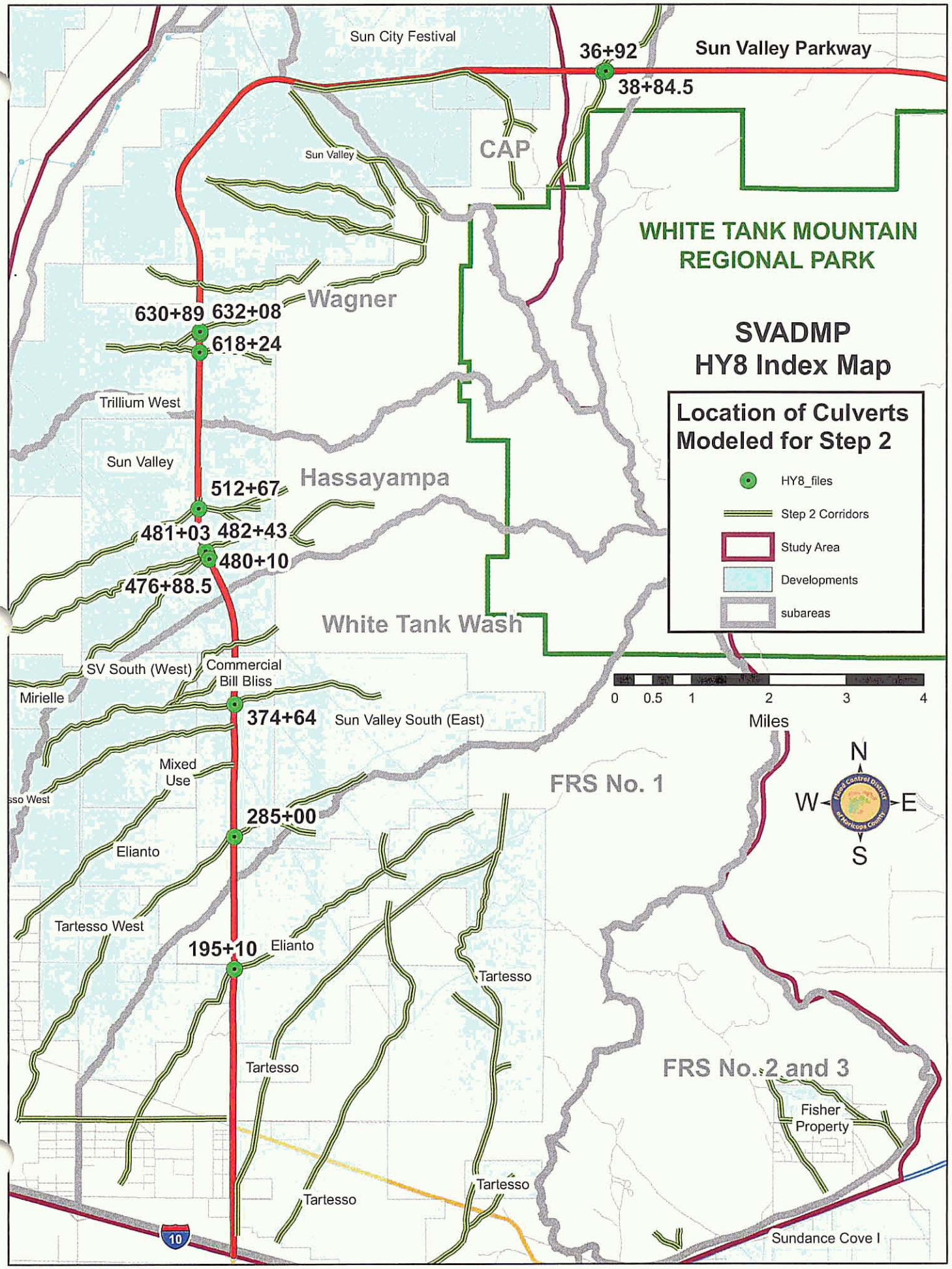
RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	F1	1868.	12.83	433.	121.	40.	3.10		
+	ROUTED TO	F1-F2	1841.	12.92	433.	121.	40.	3.10		
+	HYDROGRAPH AT	F2	1333.	12.75	266.	69.	23.	2.21		
+	2 COMBINED AT	F3R	3028.	12.83	693.	188.	63.	5.31		
+	ROUTED TO	F2-E2C	2997.	12.92	693.	188.	63.	5.31		

+	HYDROGRAPH AT	F3	375.	12.75	69.	17.	6.	.74
+	2 COMBINED AT	CF3	3324.	12.83	759.	205.	68.	6.05
+	HYDROGRAPH AT	E2C	541.	12.58	88.	22.	7.	.72
+	2 COMBINED AT	CE2R	3746.	12.83	843.	226.	75.	6.76
+	DIVERSION TO	DOUT	2889.	12.83	421.	105.	35.	6.76
+	HYDROGRAPH AT	DE2C	857.	12.25	421.	120.	40.	6.76
+	ROUTED TO	E2C-E3	911.	12.42	421.	120.	40.	6.76
+	HYDROGRAPH AT	E1	790.	12.50	125.	32.	11.	.96
+	ROUTED TO	E1-E2B	687.	12.83	125.	32.	11.	.96
+	HYDROGRAPH AT	E2B	352.	12.58	57.	14.	5.	.47
+	2 COMBINED AT	E3RB	958.	12.83	181.	45.	15.	1.42
+	ROUTED TO	E2B-E3	934.	13.00	181.	45.	15.	1.42
+	2 COMBINED AT	E3MID	1771.	13.08	598.	165.	55.	8.19
+	ROUTED TO	E3E4RA	1761.	13.25	598.	165.	55.	8.19
+	HYDROGRAPH AT	E2A	572.	12.67	105.	26.	9.	.80
+	ROUTED TO	E2A-E3	461.	13.67	105.	26.	9.	.80
+	HYDROGRAPH AT	E3	1130.	13.00	289.	72.	24.	2.49
+	2 COMBINED AT	E4RAR	1177.	13.42	389.	98.	33.	3.28
+	2 COMBINED AT	E4RA	2857.	13.25	972.	259.	86.	11.47
+	ROUTED TO	E3-E4	2661.	14.25	967.	258.	86.	11.47
+	HYDROGRAPH AT	E4	966.	13.42	328.	83.	28.	3.04
+	2 COMBINED AT	E5RR	3165.	14.17	1253.	333.	111.	14.51
+	HYDROGRAPH AT	H1	472.	12.75	82.	20.	7.	1.07
+	ROUTED TO	H1-H2	314.	14.33	80.	20.	7.	1.07
+	HYDROGRAPH AT	H2	432.	13.25	128.	32.	11.	1.40
+	2 COMBINED AT	E5RL	469.	14.25	202.	52.	17.	2.47
+	2 COMBINED AT	E5R	3527.	14.25	1427.	378.	126.	16.98
+	ROUTED TO	E4-E5	3256.	15.42	1421.	378.	126.	16.98
+	HYDROGRAPH AT	E5	645.	12.92	147.	37.	12.	1.31
+	2 COMBINED AT	E6RR	3256.	15.42	1521.	411.	137.	18.29
+	HYDROGRAPH AT	K1	1433.	12.50	254.	74.	25.	1.54
	ROUTED TO							

+		K1-K2A	1031.	13.25	254.	74.	25.	1.54
+	HYDROGRAPH AT	K2A	827.	13.25	245.	62.	21.	1.95
+	2 COMBINED AT	K2BR	1839.	13.25	495.	135.	45.	3.49
+	ROUTED TO	K2A-2B	1773.	13.50	495.	135.	45.	3.49
+	HYDROGRAPH AT	J1	633.	13.08	160.	40.	13.	1.73
+	2 COMBINED AT	CJ1	2247.	13.42	649.	173.	58.	5.23
+	DIVERSION TO	DOUT	1018.	13.42	109.	27.	9.	5.23
+	HYDROGRAPH AT	DJ1	1229.	12.92	540.	146.	49.	5.23
+	ROUTED TO	J1-J2	1230.	13.67	538.	146.	49.	5.23
+	HYDROGRAPH AT	J2	1212.	13.33	379.	95.	32.	3.64
+	2 COMBINED AT	CJ2	2326.	13.50	904.	240.	80.	8.86
+	ROUTED TO	J2-K3	2323.	13.58	904.	240.	80.	8.86
+	HYDROGRAPH AT	K2B	217.	12.58	32.	8.	3.	.42
+	ROUTED TO	K2B-K3	110.	14.67	32.	8.	3.	.42
+	HYDROGRAPH AT	K3	507.	13.33	160.	40.	13.	1.64
+	2 COMBINED AT	CK3	506.	13.33	188.	48.	16.	2.05
+	2 COMBINED AT	E6RL	2760.	13.58	1079.	284.	95.	10.92
+	2 COMBINED AT	E6R	4121.	15.08	2472.	661.	221.	29.20
+	ROUTED TO	E5-E6	4045.	15.50	2459.	661.	221.	29.20
+	HYDROGRAPH AT	E6	1194.	12.75	237.	60.	20.	2.04
+	2 COMBINED AT	E	4045.	15.42	2627.	713.	238.	31.24
+	HYDROGRAPH AT	G1	819.	12.58	136.	34.	11.	1.12

*** NORMAL END OF HEC-1 ***


SVADMP
HY8 Index Map
Location of Culverts Modeled for Step 2
HY8_files
Step 2 Corridors
Study Area
Developments
subareas
0 0.5 1 2 3 4
Miles
N
W
E
S
Sun City Festival
Sun Valley Parkway
36+92
38+84.5
CAP
Sun Valley
WHITE TANK MOUNTAIN REGIONAL PARK
Wagner
630+89
632+08
618+24
Trillium West
Sun Valley
Hassayampa
512+67
481+03
482+43
480+10
476+88.5
White Tank Wash
SV South (West)
Commercial
Bill Bliss
Mirielle
374+64
Sun Valley South (East)
Mixed Use
FRS No. 1
285+00
Elianto
Tartesso West
195+10
Elianto
Tartesso
FRS No. 2 and 3
Fisher Property
Sundance Cove I
10

CURRENT DATE: 10-20-2005
CURRENT TIME: 19:37:34

FILE DATE: 10-20-2005
FILE NAME: SVC37464

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	62.80	62.17	100.00	4 RCB	10.00	3.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVC37464 DATE: 10-20-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
62.80	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
63.80	120.0	120.0	0.0	0.0	0.0	0.0	0.0	0.00	1
64.39	240.0	240.0	0.0	0.0	0.0	0.0	0.0	0.00	1
64.89	360.0	360.0	0.0	0.0	0.0	0.0	0.0	0.00	1
65.34	480.0	480.0	0.0	0.0	0.0	0.0	0.0	0.00	1
65.78	600.0	600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
65.81	610.0	610.0	0.0	0.0	0.0	0.0	0.0	0.00	1
66.72	840.0	840.0	0.0	0.0	0.0	0.0	0.0	0.00	1
67.28	960.0	960.0	0.0	0.0	0.0	0.0	0.0	0.00	1
67.90	1080.0	1080.0	0.0	0.0	0.0	0.0	0.0	0.00	1
68.57	1200.0	1192.7	0.0	0.0	0.0	0.0	0.0	6.20	5
68.49	1179.7	1179.7	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVC37464 DATE: 10-20-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
62.80	0.000	0.00	0.00	0.00
63.80	0.000	120.00	0.00	0.00
64.39	0.000	240.00	0.00	0.00
64.89	0.000	360.00	0.00	0.00
65.34	0.000	480.00	0.00	0.00
65.78	0.000	600.00	0.00	0.00
65.81	0.000	610.00	0.00	0.00
66.72	0.000	840.00	0.00	0.00
67.28	0.000	960.00	0.00	0.00
67.90	0.000	1080.00	0.00	0.00
68.57	-0.003	1200.00	1.08	0.09

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 10-20-2005 FILE DATE: 10-20-2005
CURRENT TIME: 19:37:34 FILE NAME: SVC37464

PERFORMANCE CURVE FOR CULVERT 1 - 4(10.00 (ft) BY 3.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	62.80	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
120.00	63.80	1.00	1.00	1-S2n	0.50	0.66	0.51	0.87	5.87	3.74
240.00	64.39	1.59	1.59	1-S2n	0.78	1.04	0.80	1.32	7.50	4.83
360.00	64.89	2.09	2.09	1-S2n	1.02	1.36	0.96	1.68	9.35	5.60
480.00	65.34	2.54	2.54	1-S2n	1.23	1.65	1.29	1.99	9.32	6.20
600.00	65.78	2.98	2.98	1-S2n	1.42	1.92	1.50	2.26	9.97	6.70
610.00	65.81	3.01	3.01	5-S2n	1.44	1.94	1.52	2.29	10.05	6.74
840.00	66.72	3.92	3.92	5-S2n	1.78	2.40	1.91	2.76	11.01	7.52
960.00	67.28	4.48	4.48	5-S2n	1.94	2.62	2.10	2.98	11.42	7.87
1080.00	67.90	5.10	4.75	4-FFt	2.11	2.84	2.11	3.19	12.81	8.19
1192.72	68.56	5.76	5.44	4-S2n	2.25	3.00	2.46	3.39	12.12	8.48

El. inlet face invert 62.80 ft El. outlet invert 62.17 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	62.80 ft
OUTLET STATION	100.00 ft
OUTLET ELEVATION	62.17 ft
NUMBER OF BARRELS	4
SLOPE (V/H)	0.0063
CULVERT LENGTH ALONG SLOPE	100.00 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	10.00 ft
BARREL RISE	3.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (30-75 DEG. FLARE)
INLET DEPRESSION	NONE

CURRENT DATE: 10-20-2005
CURRENT TIME: 19:37:34

FILE DATE: 10-20-2005
FILE NAME: SVC37464

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	35.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.010
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	62.17 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	62.17 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	62.17	0.000	0.00	0.00	0.00
120.00	63.04	0.704	0.87	3.74	0.55
240.00	63.49	0.741	1.32	4.83	0.82
360.00	63.85	0.762	1.68	5.60	1.05
480.00	64.16	0.775	1.99	6.20	1.24
600.00	64.43	0.785	2.26	6.70	1.41
610.00	64.46	0.786	2.29	6.74	1.43
840.00	64.93	0.799	2.76	7.52	1.72
960.00	65.15	0.804	2.98	7.87	1.86
1080.00	65.36	0.808	3.19	8.19	1.99
1200.00	65.56	0.812	3.39	8.48	2.11

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	80.00 ft
CREST LENGTH	100.00 ft
OVERTOPPING CREST ELEVATION	68.49 ft

CURRENT DATE: 10-21-2005
CURRENT TIME: 08:11:53

FILE DATE: 10-21-2005
FILE NAME: SVP28500

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	8.56	7.96	135.00	4 RCB	10.00	4.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP28500 DATE: 10-21-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
8.56	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
9.67	140.0	140.0	0.0	0.0	0.0	0.0	0.0	0.00	1
10.32	280.0	280.0	0.0	0.0	0.0	0.0	0.0	0.00	1
10.88	420.0	420.0	0.0	0.0	0.0	0.0	0.0	0.00	1
11.37	560.0	560.0	0.0	0.0	0.0	0.0	0.0	0.00	1
11.79	688.0	688.0	0.0	0.0	0.0	0.0	0.0	0.00	1
12.27	840.0	840.0	0.0	0.0	0.0	0.0	0.0	0.00	1
12.71	980.0	980.0	0.0	0.0	0.0	0.0	0.0	0.00	1
13.17	1120.0	1120.0	0.0	0.0	0.0	0.0	0.0	0.00	1
13.67	1260.0	1260.0	0.0	0.0	0.0	0.0	0.0	0.00	1
14.23	1400.0	1389.7	0.0	0.0	0.0	0.0	0.0	8.65	3
14.08	1367.2	1367.2	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP28500 DATE: 10-21-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
8.56	0.000	0.00	0.00	0.00
9.67	0.000	140.00	0.00	0.00
10.32	0.000	280.00	0.00	0.00
10.88	0.000	420.00	0.00	0.00
11.37	0.000	560.00	0.00	0.00
11.79	0.000	688.00	0.00	0.00
12.27	0.000	840.00	0.00	0.00
12.71	0.000	980.00	0.00	0.00
13.17	0.000	1120.00	0.00	0.00
13.67	0.000	1260.00	0.00	0.00
14.23	-0.004	1400.00	1.66	0.12

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 10-21-2005 FILE DATE: 10-21-2005
CURRENT TIME: 08:11:53 FILE NAME: SVP28500

PERFORMANCE CURVE FOR CULVERT 1 - 4(10.00 (ft) BY 4.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	8.56	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
140.00	9.67	1.11	1.11	1-S2n	0.61	0.73	0.53	1.09	6.65	3.05
280.00	10.32	1.76	1.76	1-S2n	0.96	1.15	0.95	1.64	7.35	3.94
420.00	10.88	2.32	2.32	1-S2n	1.26	1.51	1.21	2.09	8.67	4.55
560.00	11.37	2.81	2.81	1-S2n	1.53	1.83	1.55	2.47	9.01	5.04
688.00	11.79	3.23	3.23	1-S2n	1.75	2.10	1.70	2.79	10.12	5.41
840.00	12.27	3.71	3.71	1-S2n	2.01	2.40	2.05	3.13	10.22	5.80
980.00	12.71	4.15	4.15	5-S2n	2.23	2.66	2.29	3.43	10.71	6.11
1120.00	13.17	4.61	4.61	5-S2n	2.44	2.90	2.50	3.70	11.18	6.38
1260.00	13.67	5.11	5.11	5-S2n	2.65	3.14	2.73	3.96	11.53	6.64
1389.69	14.23	5.61	5.67	4-FFt	2.84	3.35	4.00	4.21	8.69	6.87

El. inlet face invert 8.56 ft El. outlet invert 7.96 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	8.56 ft
OUTLET STATION	135.00 ft
OUTLET ELEVATION	7.96 ft
NUMBER OF BARRELS	4
SLOPE (V/H)	0.0044
CULVERT LENGTH ALONG SLOPE	135.00 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	10.00 ft
BARREL RISE	4.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (30-75 DEG. FLARE)
INLET DEPRESSION	NONE

CURRENT DATE: 10-21-2005
CURRENT TIME: 08:11:53

FILE DATE: 10-21-2005
FILE NAME: SVP28500

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	40.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.005
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	7.96 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	7.96 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	7.96	0.000	0.00	0.00	0.00
140.00	9.05	0.515	1.09	3.05	0.34
280.00	9.60	0.541	1.64	3.94	0.51
420.00	10.05	0.556	2.09	4.55	0.65
560.00	10.43	0.565	2.47	5.04	0.77
688.00	10.75	0.571	2.79	5.41	0.87
840.00	11.09	0.577	3.13	5.80	0.98
980.00	11.39	0.581	3.43	6.11	1.07
1120.00	11.66	0.585	3.70	6.38	1.15
1260.00	11.92	0.588	3.96	6.64	1.24
1400.00	12.17	0.590	4.21	6.87	1.31

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	14.08 ft

CURRENT DATE: 10-21-2005
CURRENT TIME: 09:48:42

FILE DATE: 10-21-2005
FILE NAME: SVP19510

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	33.92	33.44	140.00	6 RCB	10.00	4.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP19510 DATE: 10-21-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
33.92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
35.51	360.0	360.0	0.0	0.0	0.0	0.0	0.0	0.00	1
36.46	720.0	720.0	0.0	0.0	0.0	0.0	0.0	0.00	1
37.25	1080.0	1080.0	0.0	0.0	0.0	0.0	0.0	0.00	1
38.47	1440.0	1440.0	0.0	0.0	0.0	0.0	0.0	0.00	1
39.59	1800.0	1800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
39.65	1820.0	1820.0	0.0	0.0	0.0	0.0	0.0	0.00	1
41.47	2520.0	2264.7	0.0	0.0	0.0	0.0	0.0	255.75	3
42.21	2880.0	2400.1	0.0	0.0	0.0	0.0	0.0	480.38	3
42.89	3240.0	2513.1	0.0	0.0	0.0	0.0	0.0	726.08	3
43.53	3600.0	2615.2	0.0	0.0	0.0	0.0	0.0	987.04	3
40.05	1924.3	1924.3	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP19510 DATE: 10-21-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
33.92	0.000	0.00	0.00	0.00
35.51	0.000	360.00	0.00	0.00
36.46	0.000	720.00	0.00	0.00
37.25	0.000	1080.00	0.00	0.00
38.47	0.000	1440.00	0.00	0.00
39.59	0.000	1800.00	0.00	0.00
39.65	0.000	1820.00	0.00	0.00
41.47	0.001	2520.00	-0.42	-0.02
42.21	0.001	2880.00	-0.45	-0.02
42.89	-0.001	3240.00	0.86	0.03
43.53	0.003	3600.00	-2.27	-0.06

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 10-21-2005 FILE DATE: 10-21-2005
CURRENT TIME: 09:48:42 FILE NAME: SVP19510

PERFORMANCE CURVE FOR CULVERT 1 - 6(10.00 (ft) BY 4.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	33.92	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
360.00	35.51	1.59	1.59	1-S2n	0.95	1.04	0.84	1.79	7.14	3.76
720.00	36.46	2.54	2.54	1-S2n	1.50	1.65	1.45	2.69	8.27	4.82
1080.00	37.25	3.33	3.33	1-S2n	1.97	2.16	1.96	3.42	9.17	5.56
1440.00	38.47	4.09	4.55	4-FFt	2.40	2.62	4.00	4.04	6.00	6.13
1800.00	39.59	4.89	5.67	4-FFt	2.81	3.04	4.00	4.60	7.50	6.61
1820.00	39.65	4.94	5.73	4-FFt	2.83	3.06	4.00	4.63	7.58	6.63
2264.67	41.46	6.11	7.54	4-FFt	3.30	3.54	4.00	5.58	9.44	7.38
2400.07	42.21	6.51	8.29	4-FFt	3.44	3.68	4.00	6.02	10.00	7.71
2513.07	42.89	6.87	8.97	4-FFt	3.55	3.80	4.00	6.44	10.47	8.00
2615.23	43.53	7.21	9.61	4-FFt	4.00	3.90	4.00	6.84	10.90	8.27

El. inlet face invert 33.92 ft El. outlet invert 33.44 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	33.92 ft
OUTLET STATION	140.00 ft
OUTLET ELEVATION	33.44 ft
NUMBER OF BARRELS	6
SLOPE (V/H)	0.0034
CULVERT LENGTH ALONG SLOPE	140.00 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	10.00 ft
BARREL RISE	4.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (30-75 DEG. FLARE)
INLET DEPRESSION	NONE

CURRENT DATE: 10-21-2005
CURRENT TIME: 09:48:42

FILE DATE: 10-21-2005
FILE NAME: SVP19510

TAILWATER

******* REGULAR CHANNEL CROSS SECTION ****************

BOTTOM WIDTH	50.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.004
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	33.44 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	33.44 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	33.44	0.000	0.00	0.00	0.00
360.00	35.23	0.495	1.79	3.76	0.45
720.00	36.13	0.518	2.69	4.82	0.67
1080.00	36.86	0.530	3.42	5.56	0.85
1440.00	37.48	0.537	4.04	6.13	1.01
1800.00	38.04	0.543	4.60	6.61	1.15
1820.00	38.07	0.543	4.63	6.63	1.16
2520.00	39.02	0.551	5.58	7.38	1.39
2880.00	39.46	0.553	6.02	7.71	1.50
3240.00	39.88	0.556	6.44	8.00	1.61
3600.00	40.28	0.558	6.84	8.27	1.71

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	40.05 ft

CURRENT DATE: 10-24-2005
CURRENT TIME: 16:06:55

FILE DATE: 10-24-2005
FILE NAME: SVP3692

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	58.40	57.70	140.00	6 RCB	10.00	4.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP3692 DATE: 10-24-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
58.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
59.47	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
60.10	400.0	400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
60.64	600.0	600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
61.12	800.0	800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
61.56	1000.0	1000.0	0.0	0.0	0.0	0.0	0.0	0.00	1
61.77	1100.0	1100.0	0.0	0.0	0.0	0.0	0.0	0.00	1
62.40	1400.0	1400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
62.83	1600.0	1600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
63.29	1800.0	1800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
63.78	2000.0	2000.0	0.0	0.0	0.0	0.0	0.0	0.00	1
64.55	2278.1	2278.1	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP3692 DATE: 10-24-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
58.40	0.000	0.00	0.00	0.00
59.47	0.000	200.00	0.00	0.00
60.10	0.000	400.00	0.00	0.00
60.64	0.000	600.00	0.00	0.00
61.12	0.000	800.00	0.00	0.00
61.56	0.000	1000.00	0.00	0.00
61.77	0.000	1100.00	0.00	0.00
62.40	0.000	1400.00	0.00	0.00
62.83	0.000	1600.00	0.00	0.00
63.29	0.000	1800.00	0.00	0.00
63.78	0.000	2000.00	0.00	0.00

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 10-24-2005 FILE DATE: 10-24-2005
CURRENT TIME: 16:06:55 FILE NAME: SVP3692

PERFORMANCE CURVE FOR CULVERT 1 - 6(10.00 (ft) BY 4.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	58.40	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
200.00	59.47	1.07	1.07	1-S2n	0.57	0.70	0.50	0.69	6.63	3.57
400.00	60.10	1.70	1.70	1-S2n	0.90	1.12	0.82	1.04	8.17	4.68
600.00	60.64	2.24	2.24	1-S2n	1.18	1.46	1.19	1.33	8.39	5.47
800.00	61.12	2.72	2.72	1-S2n	1.41	1.77	1.45	1.58	9.21	6.11
1000.00	61.56	3.16	3.16	1-S2n	1.64	2.06	1.69	1.80	9.89	6.65
1100.00	61.77	3.37	3.37	1-S2n	1.75	2.19	1.81	1.90	10.14	6.89
1400.00	62.40	4.00	4.00	1-S2n	2.06	2.57	2.13	2.20	10.94	7.55
1600.00	62.83	4.43	4.43	5-S2n	2.26	2.81	2.35	2.38	11.34	7.93
1800.00	63.29	4.89	4.89	5-S2n	2.45	3.04	2.55	2.55	11.76	8.28
2000.00	63.78	5.38	5.38	5-S2n	2.64	3.26	2.75	2.72	12.11	8.61

El. inlet face invert 58.40 ft El. outlet invert 57.70 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

```
***** SITE DATA ***** CULVERT INVERT **************
      INLET STATION                          0.00 ft
      INLET ELEVATION                       58.40 ft
      OUTLET STATION                       140.00 ft
      OUTLET ELEVATION                      57.70 ft
      NUMBER OF BARRELS                     6
      SLOPE (V/H)                           0.0050
      CULVERT LENGTH ALONG SLOPE           140.00 ft

***** CULVERT DATA SUMMARY ************************
      BARREL SHAPE          BOX
      BARREL SPAN            10.00 ft
      BARREL RISE             4.00 ft
      BARREL MATERIAL       CONCRETE
      BARREL MANNING'S n    0.012
      INLET TYPE            CONVENTIONAL
      INLET EDGE AND WALL   SQUARE EDGE (30-75 DEG. FLARE)
      INLET DEPRESSION      NONE
```

CURRENT DATE: 10-24-2005
CURRENT TIME: 16:06:55

FILE DATE: 10-24-2005
FILE NAME: SVP3692

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	80.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.012
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	57.70 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	57.70 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	57.70	0.000	0.00	0.00	0.00
200.00	58.39	0.759	0.69	3.57	0.51
400.00	58.74	0.808	1.04	4.68	0.78
600.00	59.03	0.837	1.33	5.47	0.99
800.00	59.28	0.858	1.58	6.11	1.18
1000.00	59.50	0.873	1.80	6.65	1.35
1100.00	59.60	0.880	1.90	6.89	1.43
1400.00	59.90	0.897	2.20	7.55	1.65
1600.00	60.08	0.906	2.38	7.93	1.78
1800.00	60.25	0.914	2.55	8.28	1.91
2000.00	60.42	0.921	2.72	8.61	2.04

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	64.55 ft

CURRENT DATE: 10-24-2005
CURRENT TIME: 16:28:28

FILE DATE: 10-24-2005
FILE NAME: SVP3884

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	58.40	57.60	136.00	2 RCB	10.00	3.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP3884 DATE: 10-24-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
58.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
59.40	60.0	60.0	0.0	0.0	0.0	0.0	0.0	0.00	1
59.99	120.0	120.0	0.0	0.0	0.0	0.0	0.0	0.00	1
60.49	180.0	180.0	0.0	0.0	0.0	0.0	0.0	0.00	1
60.94	240.0	240.0	0.0	0.0	0.0	0.0	0.0	0.00	1
61.38	300.0	300.0	0.0	0.0	0.0	0.0	0.0	0.00	1
61.83	360.0	360.0	0.0	0.0	0.0	0.0	0.0	0.00	1
62.32	420.0	420.0	0.0	0.0	0.0	0.0	0.0	0.00	1
62.88	480.0	480.0	0.0	0.0	0.0	0.0	0.0	0.00	1
63.50	540.0	540.0	0.0	0.0	0.0	0.0	0.0	0.00	1
63.87	600.0	571.6	0.0	0.0	0.0	0.0	0.0	27.79	4
63.54	543.1	543.1	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP3884 DATE: 10-24-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
58.40	0.000	0.00	0.00	0.00
59.40	0.000	60.00	0.00	0.00
59.99	0.000	120.00	0.00	0.00
60.49	0.000	180.00	0.00	0.00
60.94	0.000	240.00	0.00	0.00
61.38	0.000	300.00	0.00	0.00
61.83	0.000	360.00	0.00	0.00
62.32	0.000	420.00	0.00	0.00
62.88	0.000	480.00	0.00	0.00
63.50	0.000	540.00	0.00	0.00
63.87	-0.002	600.00	0.62	0.10

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 10-24-2005 FILE DATE: 10-24-2005
CURRENT TIME: 16:28:28 FILE NAME: SVP3884

PERFORMANCE CURVE FOR CULVERT 1 - 2(10.00 (ft) BY 3.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	58.40	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
60.00	59.40	1.00	1.00	1-S2n	0.51	0.66	0.46	0.76	6.59	3.66
120.00	59.99	1.59	1.59	1-S2n	0.80	1.04	0.74	1.15	8.11	4.70
180.00	60.49	2.09	2.09	1-S2n	1.04	1.36	0.96	1.45	9.35	5.41
240.00	60.94	2.54	2.54	1-S2n	1.25	1.65	1.29	1.72	9.30	5.97
300.00	61.38	2.98	2.98	1-S2n	1.45	1.92	1.50	1.95	9.98	6.43
360.00	61.83	3.43	3.43	5-S2n	1.64	2.16	1.70	2.17	10.57	6.82
420.00	62.32	3.92	3.92	5-S2n	1.82	2.40	1.90	2.37	11.07	7.17
480.00	62.88	4.48	4.48	5-S2n	1.99	2.62	2.09	2.55	11.48	7.49
540.00	63.50	5.10	5.10	5-S2n	2.15	2.84	2.28	2.73	11.87	7.77
571.59	63.87	5.47	5.47	5-S2n	2.24	2.94	2.37	2.90	12.04	8.03

El. inlet face invert 58.40 ft El. outlet invert 57.60 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	58.40 ft
OUTLET STATION	136.00 ft
OUTLET ELEVATION	57.60 ft
NUMBER OF BARRELS	2
SLOPE (V/H)	0.0059
CULVERT LENGTH ALONG SLOPE	136.00 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	10.00 ft
BARREL RISE	3.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (30-75 DEG. FLARE)
INLET DEPRESSION	NONE

CURRENT DATE: 10-24-2005
CURRENT TIME: 16:28:28

FILE DATE: 10-24-2005
FILE NAME: SVP3884

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	20.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.012
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	57.60 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	57.60 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	57.60	0.000	0.00	0.00	0.00
60.00	58.36	0.740	0.76	3.66	0.57
120.00	58.74	0.774	1.15	4.70	0.86
180.00	59.05	0.791	1.45	5.41	1.09
240.00	59.32	0.802	1.72	5.97	1.29
300.00	59.55	0.810	1.95	6.43	1.46
360.00	59.77	0.816	2.17	6.82	1.62
420.00	59.97	0.821	2.37	7.17	1.77
480.00	60.15	0.825	2.55	7.49	1.91
540.00	60.33	0.829	2.73	7.77	2.04
600.00	60.50	0.831	2.90	8.03	2.17

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	63.54 ft

CURRENT DATE: 12-06-2005
CURRENT TIME: 12:14:19

FILE DATE: 12-06-2005
FILE NAME: SVP47688

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	12.90	11.50	137.01	1 RCB	6.00	3.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP47688 DATE: 12-06-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
12.90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
14.14	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.00	1
14.88	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.00	1
15.51	75.0	75.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.12	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.79	125.0	125.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.82	126.0	126.0	0.0	0.0	0.0	0.0	0.0	0.00	1
18.07	175.0	163.8	0.0	0.0	0.0	0.0	0.0	10.03	6
18.25	200.0	168.6	0.0	0.0	0.0	0.0	0.0	30.65	4
18.39	225.0	172.2	0.0	0.0	0.0	0.0	0.0	51.17	3
18.52	250.0	175.4	0.0	0.0	0.0	0.0	0.0	73.19	3
17.90	159.3	159.3	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP47688 DATE: 12-06-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
12.90	0.000	0.00	0.00	0.00
14.14	0.000	25.00	0.00	0.00
14.88	0.000	50.00	0.00	0.00
15.51	0.000	75.00	0.00	0.00
16.12	0.000	100.00	0.00	0.00
16.79	0.000	125.00	0.00	0.00
16.82	0.000	126.00	0.00	0.00
18.07	-0.006	175.00	1.15	0.66
18.25	-0.003	200.00	0.76	0.38
18.39	-0.007	225.00	1.68	0.75
18.52	-0.006	250.00	1.42	0.57

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 12-06-2005 FILE DATE: 12-06-2005
CURRENT TIME: 12:14:19 FILE NAME: SVP47688

PERFORMANCE CURVE FOR CULVERT 1 - 1(6.00 (ft) BY 3.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	12.90	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
25.00	14.14	1.24	1.24	1-S2n	0.55	0.82	0.55	0.47	7.64	3.12
50.00	14.88	1.98	1.98	1-S2n	0.86	1.29	0.79	0.71	10.49	4.02
75.00	15.51	2.61	2.61	1-S2n	1.13	1.70	1.18	0.91	10.62	4.65
100.00	16.12	3.22	3.22	5-S2n	1.38	2.06	1.45	1.07	11.53	5.14
125.00	16.79	3.89	3.89	5-S2n	1.61	2.38	1.71	1.22	12.15	5.55
126.00	16.82	3.92	3.92	5-S2n	1.62	2.40	1.73	1.23	12.16	5.56
163.82	18.06	5.16	5.16	5-S2n	1.95	2.86	2.10	1.48	13.03	6.21
168.59	18.25	5.35	5.35	5-S2n	1.99	2.91	2.14	1.60	13.12	6.49
172.16	18.39	5.49	5.49	5-S2n	2.02	2.95	2.17	1.72	13.21	6.74
175.39	18.51	5.61	5.61	5-S2n	2.05	2.99	2.21	1.82	13.23	6.98

El. inlet face invert 12.90 ft El. outlet invert 11.50 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

```
***** SITE DATA ***** CULVERT INVERT **************
      INLET STATION                          0.00 ft
      INLET ELEVATION                       12.90 ft
      OUTLET STATION                       137.00 ft
      OUTLET ELEVATION                      11.50 ft
      NUMBER OF BARRELS                      1
      SLOPE (V/H)                            0.0102
      CULVERT LENGTH ALONG SLOPE           137.01 ft

***** CULVERT DATA SUMMARY ************************
      BARREL SHAPE          BOX
      BARREL SPAN             6.00 ft
      BARREL RISE             3.00 ft
      BARREL MATERIAL       CONCRETE
      BARREL MANNING'S n    0.012
      INLET TYPE            CONVENTIONAL
      INLET EDGE AND WALL   SQUARE EDGE (30-75 DEG. FLARE)
      INLET DEPRESSION      NONE
```

CURRENT DATE: 12-06-2005
CURRENT TIME: 12:14:19

FILE DATE: 12-06-2005
FILE NAME: SVP47688

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	16.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.016
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	11.50 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	11.50 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	11.50	0.000	0.00	0.00	0.00
25.00	11.97	0.799	0.47	3.12	0.47
50.00	12.21	0.839	0.71	4.02	0.71
75.00	12.41	0.860	0.91	4.65	0.90
100.00	12.57	0.874	1.07	5.14	1.07
125.00	12.72	0.884	1.22	5.55	1.22
126.00	12.73	0.885	1.23	5.56	1.23
175.00	12.98	0.898	1.48	6.21	1.48
200.00	13.10	0.903	1.60	6.49	1.60
225.00	13.22	0.907	1.72	6.74	1.71
250.00	13.32	0.912	1.82	6.98	1.82

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	17.90 ft

CURRENT DATE: 12-06-2005
CURRENT TIME: 13:02:20

FILE DATE: 12-06-2005
FILE NAME: SVP48010

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	11.50	11.00	142.00	6 RCB	10.00	5.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP48010 DATE: 12-06-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
14.66	1000.0	1000.0	0.0	0.0	0.0	0.0	0.0	0.00	1
15.07	1200.0	1200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
15.46	1400.0	1400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
15.84	1600.0	1600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.21	1800.0	1800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.59	2000.0	2000.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.97	2200.0	2200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
17.37	2400.0	2400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
17.80	2600.0	2600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
18.24	2800.0	2800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
18.69	3000.0	2986.6	0.0	0.0	0.0	0.0	0.0	12.13	3
18.50	2907.3	2907.3	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP48010 DATE: 12-06-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
14.66	0.000	1000.00	0.00	0.00
15.07	0.000	1200.00	0.00	0.00
15.46	0.000	1400.00	0.00	0.00
15.84	0.000	1600.00	0.00	0.00
16.21	0.000	1800.00	0.00	0.00
16.59	0.000	2000.00	0.00	0.00
16.97	0.000	2200.00	0.00	0.00
17.37	0.000	2400.00	0.00	0.00
17.80	0.000	2600.00	0.00	0.00
18.24	0.000	2800.00	0.00	0.00
18.69	-0.002	3000.00	1.31	0.04

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 12-06-2005 FILE DATE: 12-06-2005
CURRENT TIME: 13:02:20 FILE NAME: SVP48010

PERFORMANCE CURVE FOR CULVERT 1 - 6(10.00 (ft) BY 5.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
1000.00	14.66	3.16	3.16	1-S2n	1.85	2.06	1.76	1.83	9.50	8.58
1200.00	15.07	3.57	3.57	1-S2n	2.10	2.32	2.02	2.04	9.90	9.18
1400.00	15.46	3.96	3.96	1-S2n	2.33	2.57	2.27	2.23	10.27	9.72
1600.00	15.84	4.34	4.34	1-S2n	2.56	2.81	2.58	2.42	10.35	10.20
1800.00	16.21	4.71	4.71	1-S2n	2.77	3.04	2.80	2.59	10.72	10.65
2000.00	16.59	5.09	5.09	5-S2n	2.99	3.26	3.01	2.76	11.06	11.06
2200.00	16.97	5.47	5.47	5-S2n	3.20	3.48	3.22	2.92	11.37	11.45
2400.00	17.37	5.87	5.87	5-S2n	3.40	3.68	3.43	3.07	11.66	11.81
2600.00	17.80	6.30	6.30	5-S2n	3.60	3.89	3.63	3.22	11.93	12.15
2800.00	18.24	6.74	6.74	5-S2n	3.80	4.08	3.83	3.36	12.18	12.47
2986.57	18.69	7.19	7.19	5-S2n	3.99	4.26	4.01	3.50	12.41	12.78

El. inlet face invert 11.50 ft El. outlet invert 11.00 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

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***** SITE DATA ***** CULVERT INVERT **************
      INLET STATION                          0.00 ft
      INLET ELEVATION                       11.50 ft
      OUTLET STATION                       142.00 ft
      OUTLET ELEVATION                      11.00 ft
      NUMBER OF BARRELS                     6
      SLOPE (V/H)                           0.0035
      CULVERT LENGTH ALONG SLOPE           142.00 ft

***** CULVERT DATA SUMMARY ************************
      BARREL SHAPE          BOX
      BARREL SPAN            10.00 ft
      BARREL RISE             5.00 ft
      BARREL MATERIAL       CONCRETE
      BARREL MANNING'S n    0.012
      INLET TYPE            CONVENTIONAL
      INLET EDGE AND WALL   SQUARE EDGE (30-75 DEG. FLARE)
      INLET DEPRESSION      NONE
```

CURRENT DATE: 12-06-2005 FILE DATE: 12-06-2005
CURRENT TIME: 13:02:20 FILE NAME: SVP48010

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	60.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.020
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	11.00 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	11.00 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
1000.00	12.83	1.118	1.83	8.58	2.28
1200.00	13.04	1.133	2.04	9.18	2.55
1400.00	13.23	1.146	2.23	9.72	2.79
1600.00	13.42	1.156	2.42	10.20	3.02
1800.00	13.59	1.165	2.59	10.65	3.24
2000.00	13.76	1.173	2.76	11.06	3.44
2200.00	13.92	1.181	2.92	11.45	3.64
2400.00	14.07	1.187	3.07	11.81	3.84
2600.00	14.22	1.193	3.22	12.15	4.02
2800.00	14.36	1.198	3.36	12.47	4.20
3000.00	14.50	1.203	3.50	12.78	4.37

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	18.50 ft

CURRENT DATE: 12-06-2005
CURRENT TIME: 13:11:11

FILE DATE: 12-06-2005
FILE NAME: SVP48103

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	11.50	11.00	143.00	6 RCB	10.00	5.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP48103 DATE: 12-06-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
14.66	1000.0	1000.0	0.0	0.0	0.0	0.0	0.0	0.00	1
15.07	1200.0	1200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
15.46	1400.0	1400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
15.84	1600.0	1600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.21	1800.0	1800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.59	2000.0	2000.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.97	2200.0	2200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
17.37	2400.0	2400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
17.80	2600.0	2600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
18.24	2800.0	2800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
18.69	3000.0	2988.0	0.0	0.0	0.0	0.0	0.0	9.46	3
18.55	2928.3	2928.3	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP48103 DATE: 12-06-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
14.66	0.000	1000.00	0.00	0.00
15.07	0.000	1200.00	0.00	0.00
15.46	0.000	1400.00	0.00	0.00
15.84	0.000	1600.00	0.00	0.00
16.21	0.000	1800.00	0.00	0.00
16.59	0.000	2000.00	0.00	0.00
16.97	0.000	2200.00	0.00	0.00
17.37	0.000	2400.00	0.00	0.00
17.80	0.000	2600.00	0.00	0.00
18.24	0.000	2800.00	0.00	0.00
18.69	-0.005	3000.00	2.58	0.09

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 12-06-2005
CURRENT TIME: 13:11:11

FILE DATE: 12-06-2005
FILE NAME: SVP48103

PERFORMANCE CURVE FOR CULVERT 1 - 6(10.00 (ft) BY 5.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
1000.00	14.66	3.16	3.16	1-S2n	1.85	2.06	1.76	1.83	9.50	8.58
1200.00	15.07	3.57	3.57	1-S2n	2.10	2.32	2.02	2.04	9.90	9.18
1400.00	15.46	3.96	3.96	1-S2n	2.33	2.57	2.27	2.23	10.27	9.72
1600.00	15.84	4.34	4.34	1-S2n	2.56	2.81	2.58	2.42	10.35	10.20
1800.00	16.21	4.71	4.71	1-S2n	2.77	3.04	2.80	2.59	10.72	10.65
2000.00	16.59	5.09	5.09	5-S2n	2.99	3.26	3.01	2.76	11.06	11.06
2200.00	16.97	5.47	5.47	5-S2n	3.20	3.48	3.22	2.92	11.37	11.45
2400.00	17.37	5.87	5.87	5-S2n	3.40	3.68	3.43	3.07	11.66	11.81
2600.00	17.80	6.30	6.30	5-S2n	3.60	3.89	3.63	3.22	11.93	12.15
2800.00	18.24	6.74	6.74	5-S2n	3.80	4.08	3.83	3.36	12.19	12.47
2987.96	18.69	7.19	7.19	5-S2n	3.99	4.26	4.01	3.50	12.41	12.78

El. inlet face invert 11.50 ft El. outlet invert 11.00 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	11.50 ft
OUTLET STATION	143.00 ft
OUTLET ELEVATION	11.00 ft
NUMBER OF BARRELS	6
SLOPE (V/H)	0.0035
CULVERT LENGTH ALONG SLOPE	143.00 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	10.00 ft
BARREL RISE	5.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (30-75 DEG. FLARE)
INLET DEPRESSION	NONE

CURRENT DATE: 12-06-2005
CURRENT TIME: 13:11:11

FILE DATE: 12-06-2005
FILE NAME: SVP48103

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	60.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.020
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	11.00 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	11.00 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
1000.00	12.83	1.118	1.83	8.58	2.28
1200.00	13.04	1.133	2.04	9.18	2.55
1400.00	13.23	1.146	2.23	9.72	2.79
1600.00	13.42	1.156	2.42	10.20	3.02
1800.00	13.59	1.165	2.59	10.65	3.24
2000.00	13.76	1.173	2.76	11.06	3.44
2200.00	13.92	1.181	2.92	11.45	3.64
2400.00	14.07	1.187	3.07	11.81	3.84
2600.00	14.22	1.193	3.22	12.15	4.02
2800.00	14.36	1.198	3.36	12.47	4.20
3000.00	14.50	1.203	3.50	12.78	4.37

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	60.00 ft
OVERTOPPING CREST ELEVATION	18.55 ft

CURRENT DATE: 12-06-2005
CURRENT TIME: 13:22:12

FILE DATE: 12-06-2005
FILE NAME: SVP48243

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	11.50	11.00	164.00	3 RCB	12.00	5.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP48243 DATE: 12-06-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
16.27	1100.0	1100.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.50	1172.0	1172.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.73	1244.0	1244.0	0.0	0.0	0.0	0.0	0.0	0.00	1
16.96	1316.0	1316.0	0.0	0.0	0.0	0.0	0.0	0.00	1
17.20	1388.0	1388.0	0.0	0.0	0.0	0.0	0.0	0.00	1
17.44	1460.0	1460.0	0.0	0.0	0.0	0.0	0.0	0.00	1
17.58	1500.0	1500.0	0.0	0.0	0.0	0.0	0.0	0.00	1
17.96	1604.0	1604.0	0.0	0.0	0.0	0.0	0.0	0.00	1
18.23	1676.0	1676.0	0.0	0.0	0.0	0.0	0.0	0.00	1
18.51	1748.0	1748.0	0.0	0.0	0.0	0.0	0.0	0.00	1
18.73	1820.0	1801.8	0.0	0.0	0.0	0.0	0.0	16.41	3
18.50	1817.1	1817.1	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP48243 DATE: 12-06-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
16.27	0.000	1100.00	0.00	0.00
16.50	0.000	1172.00	0.00	0.00
16.73	0.000	1244.00	0.00	0.00
16.96	0.000	1316.00	0.00	0.00
17.20	0.000	1388.00	0.00	0.00
17.44	0.000	1460.00	0.00	0.00
17.58	0.000	1500.00	0.00	0.00
17.96	0.000	1604.00	0.00	0.00
18.23	0.000	1676.00	0.00	0.00
18.51	0.000	1748.00	0.00	0.00
18.73	-0.004	1820.00	1.80	0.10

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 12-06-2005 FILE DATE: 12-06-2005
CURRENT TIME: 13:22:12 FILE NAME: SVP48243

PERFORMANCE CURVE FOR CULVERT 1 - 3(12.00 (ft) BY 5.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
1100.00	16.27	4.77	4.77	1-S2n	2.88	3.08	2.78	2.45	11.00	10.02
1172.00	16.50	5.00	5.00	1-S2n	3.01	3.21	2.91	2.54	11.18	10.24
1244.00	16.73	5.23	5.23	5-S2n	3.14	3.34	3.04	2.63	11.36	10.46
1316.00	16.96	5.46	5.46	5-S2n	3.26	3.47	3.17	2.72	11.53	10.66
1388.00	17.20	5.70	5.70	5-S2n	3.39	3.60	3.30	2.80	11.70	10.86
1460.00	17.44	5.94	5.94	5-S2n	3.51	3.72	3.42	2.89	11.86	11.05
1500.00	17.58	6.08	6.08	5-S2n	3.58	3.79	3.49	2.93	11.95	11.15
1604.00	17.96	6.46	6.46	5-S2n	3.75	3.96	3.66	3.05	12.18	11.41
1676.00	18.23	6.73	6.73	5-S2n	3.87	4.08	3.78	3.13	12.33	11.58
1748.00	18.51	7.01	7.01	5-S2n	3.99	4.19	3.89	3.20	12.47	11.75
1801.79	18.73	7.23	7.23	5-S2n	4.08	4.28	3.98	3.28	12.58	11.91

El. inlet face invert 11.50 ft El. outlet invert 11.00 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

```
***** SITE DATA ***** CULVERT INVERT **************
      INLET STATION                          0.00 ft
      INLET ELEVATION                       11.50 ft
      OUTLET STATION                       164.00 ft
      OUTLET ELEVATION                      11.00 ft
      NUMBER OF BARRELS                      3
      SLOPE (V/H)                            0.0030
      CULVERT LENGTH ALONG SLOPE           164.00 ft

***** CULVERT DATA SUMMARY ************************
      BARREL SHAPE          BOX
      BARREL SPAN            12.00 ft
      BARREL RISE             5.00 ft
      BARREL MATERIAL       CONCRETE
      BARREL MANNING'S n    0.012
      INLET TYPE            CONVENTIONAL
      INLET EDGE AND WALL   SQUARE EDGE (30-75 DEG. FLARE)
      INLET DEPRESSION      NONE
```

CURRENT DATE: 12-06-2005
CURRENT TIME: 13:22:12

FILE DATE: 12-06-2005
FILE NAME: SVP48243

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	40.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.020
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	11.00 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	11.00 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
1100.00	13.45	1.129	2.45	10.02	3.05
1172.00	13.54	1.133	2.54	10.24	3.17
1244.00	13.63	1.137	2.63	10.46	3.28
1316.00	13.72	1.140	2.72	10.66	3.39
1388.00	13.80	1.143	2.80	10.86	3.50
1460.00	13.89	1.146	2.89	11.05	3.60
1500.00	13.93	1.148	2.93	11.15	3.66
1604.00	14.05	1.152	3.05	11.41	3.81
1676.00	14.13	1.154	3.13	11.58	3.90
1748.00	14.20	1.157	3.20	11.75	4.00
1820.00	14.28	1.159	3.28	11.91	4.09

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	120.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	18.50 ft

CURRENT DATE: 11-21-2005
CURRENT TIME: 14:24:18

FILE DATE: 11-21-2005
FILE NAME: SVP51267

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	23.11	22.00	133.00	4 RCB	10.00	4.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP51267 DATE: 11-21-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
23.11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
24.51	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
25.34	400.0	400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
26.05	600.0	600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
26.69	800.0	800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
27.32	1000.0	1000.0	0.0	0.0	0.0	0.0	0.0	0.00	1
27.76	1132.0	1132.0	0.0	0.0	0.0	0.0	0.0	0.00	1
28.71	1400.0	1389.8	0.0	0.0	0.0	0.0	0.0	7.08	2
29.24	1600.0	1517.4	0.0	0.0	0.0	0.0	0.0	81.91	3
29.70	1800.0	1619.0	0.0	0.0	0.0	0.0	0.0	180.55	3
30.13	2000.0	1706.4	0.0	0.0	0.0	0.0	0.0	292.51	2
28.58	1357.2	1357.2	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP51267 DATE: 11-21-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
23.11	0.000	0.00	0.00	0.00
24.51	0.000	200.00	0.00	0.00
25.34	0.000	400.00	0.00	0.00
26.05	0.000	600.00	0.00	0.00
26.69	0.000	800.00	0.00	0.00
27.32	0.000	1000.00	0.00	0.00
27.76	0.000	1132.00	0.00	0.00
28.71	-0.009	1400.00	3.12	0.22
29.24	-0.002	1600.00	0.65	0.04
29.70	-0.001	1800.00	0.43	0.02
30.13	-0.002	2000.00	1.08	0.05

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 11-21-2005 FILE DATE: 11-21-2005
CURRENT TIME: 14:24:18 FILE NAME: SVP51267

PERFORMANCE CURVE FOR CULVERT 1 - 4(10.00 (ft) BY 4.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	23.11	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
200.00	24.51	1.40	1.40	1-S2n	0.63	0.92	0.65	1.08	7.70	6.79
400.00	25.34	2.23	2.23	1-S2n	0.99	1.46	1.03	1.63	9.69	8.68
600.00	26.05	2.94	2.94	1-S2n	1.29	1.92	1.38	2.07	10.90	9.97
800.00	26.69	3.58	3.58	1-S2n	1.57	2.32	1.69	2.44	11.83	10.97
1000.00	27.32	4.21	4.21	5-S2n	1.82	2.69	1.99	2.77	12.54	11.81
1132.00	27.76	4.65	4.65	5-S2n	1.98	2.93	2.18	2.98	13.01	12.29
1389.80	28.71	5.60	5.60	5-S2n	2.28	3.35	2.53	3.36	13.71	13.15
1517.44	29.24	6.13	6.13	5-S2n	2.42	3.56	2.71	3.62	14.02	13.71
1619.02	29.70	6.59	6.59	5-S2n	2.53	3.71	2.84	3.87	14.23	14.22
1706.40	30.12	7.01	6.08	4-FFt	2.62	3.85	2.62	4.10	16.26	14.69

El. inlet face invert 23.11 ft El. outlet invert 22.00 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

```
***** SITE DATA ***** CULVERT INVERT **************
      INLET STATION                          0.00 ft
      INLET ELEVATION                       23.11 ft
      OUTLET STATION                       133.00 ft
      OUTLET ELEVATION                      22.00 ft
      NUMBER OF BARRELS                      4
      SLOPE (V/H)                            0.0083
      CULVERT LENGTH ALONG SLOPE           133.00 ft

***** CULVERT DATA SUMMARY ************************
      BARREL SHAPE          BOX
      BARREL SPAN            10.00 ft
      BARREL RISE             4.00 ft
      BARREL MATERIAL       CONCRETE
      BARREL MANNING'S n    0.012
      INLET TYPE            CONVENTIONAL
      INLET EDGE AND WALL   SQUARE EDGE (30-75 DEG. FLARE)
      INLET DEPRESSION      NONE
```

CURRENT DATE: 11-21-2005 FILE DATE: 11-21-2005
CURRENT TIME: 14:24:18 FILE NAME: SVP51267

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	25.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.026
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	22.00 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	22.00 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	22.00	0.000	0.00	0.00	0.00
200.00	23.08	1.148	1.08	6.79	1.76
400.00	23.63	1.197	1.63	8.68	2.65
600.00	24.07	1.222	2.07	9.97	3.35
800.00	24.44	1.238	2.44	10.97	3.96
1000.00	24.77	1.250	2.77	11.81	4.50
1132.00	24.98	1.256	2.98	12.29	4.83
1400.00	25.36	1.265	3.36	13.15	5.45
1600.00	25.62	1.270	3.62	13.71	5.87
1800.00	25.87	1.275	3.87	14.22	6.27
2000.00	26.10	1.278	4.10	14.69	6.65

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	28.58 ft

CURRENT DATE: 10-24-2005
CURRENT TIME: 14:52:12

FILE DATE: 10-24-2005
FILE NAME: SVP61824

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	44.20	42.86	135.01	4 RCB	10.00	5.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP61824 DATE: 10-24-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
44.20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
45.60	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
46.42	400.0	400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
47.13	600.0	600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
47.76	800.0	800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
48.33	1000.0	1000.0	0.0	0.0	0.0	0.0	0.0	0.00	1
48.89	1200.0	1200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
49.46	1400.0	1400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
49.95	1565.0	1565.0	0.0	0.0	0.0	0.0	0.0	0.00	1
50.70	1800.0	1800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
51.33	2000.0	1978.0	0.0	0.0	0.0	0.0	0.0	20.57	3
51.06	1902.0	1902.0	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP61824 DATE: 10-24-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
44.20	0.000	0.00	0.00	0.00
45.60	0.000	200.00	0.00	0.00
46.42	0.000	400.00	0.00	0.00
47.13	0.000	600.00	0.00	0.00
47.76	0.000	800.00	0.00	0.00
48.33	0.000	1000.00	0.00	0.00
48.89	0.000	1200.00	0.00	0.00
49.46	0.000	1400.00	0.00	0.00
49.95	0.000	1565.00	0.00	0.00
50.70	0.000	1800.00	0.00	0.00
51.33	-0.003	2000.00	1.45	0.07

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 10-24-2005 FILE DATE: 10-24-2005
CURRENT TIME: 14:52:12 FILE NAME: SVP61824

PERFORMANCE CURVE FOR CULVERT 1 - 4(10.00 (ft) BY 5.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	44.20	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
200.00	45.60	1.40	1.40	1-S2n	0.59	0.92	0.52	0.74	9.60	12.68
400.00	46.42	2.22	2.22	1-S2n	0.94	1.46	0.98	1.11	10.18	16.28
600.00	47.13	2.93	2.93	1-S2n	1.22	1.92	1.31	1.40	11.49	18.75
800.00	47.76	3.56	3.56	1-S2n	1.48	2.32	1.61	1.66	12.42	20.68
1000.00	48.33	4.13	4.13	1-S2n	1.71	2.69	1.89	1.89	13.21	22.28
1200.00	48.89	4.69	4.69	1-S2n	1.94	3.04	2.18	2.10	13.75	23.65
1400.00	49.46	5.26	5.26	5-S2n	2.15	3.37	2.44	2.29	14.34	24.88
1565.00	49.95	5.75	5.75	5-S2n	2.32	3.63	2.66	2.44	14.71	25.79
1800.00	50.70	6.50	6.50	5-S2n	2.56	3.99	2.96	2.64	15.23	26.96
1977.97	51.32	7.12	7.12	5-S2n	2.73	4.24	3.14	2.80	15.73	27.87

El. inlet face invert 44.20 ft El. outlet invert 42.86 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

```
***** SITE DATA ***** CULVERT INVERT **************
      INLET STATION                          0.00 ft
      INLET ELEVATION                       44.20 ft
      OUTLET STATION                       135.00 ft
      OUTLET ELEVATION                      42.86 ft
      NUMBER OF BARRELS                      4
      SLOPE (V/H)                            0.0099
      CULVERT LENGTH ALONG SLOPE           135.01 ft

***** CULVERT DATA SUMMARY ************************
      BARREL SHAPE          BOX
      BARREL SPAN            10.00 ft
      BARREL RISE             5.00 ft
      BARREL MATERIAL       CONCRETE
      BARREL MANNING'S n    0.012
      INLET TYPE            CONVENTIONAL
      INLET EDGE AND WALL   SQUARE EDGE (30-75 DEG. FLARE)
      INLET DEPRESSION      NONE
```

CURRENT DATE: 10-24-2005
CURRENT TIME: 14:52:12

FILE DATE: 10-24-2005
FILE NAME: SVP61824

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	20.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.150
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	42.86 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	42.86 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	42.86	0.000	0.00	0.00	0.00
200.00	43.60	2.607	0.74	12.68	6.88
400.00	43.97	2.727	1.11	16.28	10.35
600.00	44.26	2.789	1.40	18.75	13.13
800.00	44.52	2.829	1.66	20.68	15.53
1000.00	44.75	2.857	1.89	22.28	17.67
1200.00	44.96	2.878	2.10	23.65	19.63
1400.00	45.15	2.898	2.29	24.88	21.43
1565.00	45.30	2.910	2.44	25.79	22.83
1800.00	45.50	2.924	2.64	26.96	24.72
2000.00	45.66	2.934	2.80	27.87	26.23

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	51.06 ft

CURRENT DATE: 10-24-2005
CURRENT TIME: 13:45:20

FILE DATE: 10-24-2005
FILE NAME: SVP63089

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	50.40	49.50	155.00	4 RCB	10.00	3.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP63089 DATE: 10-24-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
50.40	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
51.81	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
52.65	400.0	400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
53.38	600.0	600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
54.15	800.0	800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
54.64	910.0	910.0	0.0	0.0	0.0	0.0	0.0	0.00	1
56.03	1200.0	1171.0	0.0	0.0	0.0	0.0	0.0	26.07	4
56.64	1400.0	1266.2	0.0	0.0	0.0	0.0	0.0	133.12	3
57.15	1600.0	1340.9	0.0	0.0	0.0	0.0	0.0	258.65	3
57.61	1800.0	1404.8	0.0	0.0	0.0	0.0	0.0	394.71	3
58.04	2000.0	1462.0	0.0	0.0	0.0	0.0	0.0	537.73	3
55.72	1117.9	1117.9	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP63089 DATE: 10-24-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
50.40	0.000	0.00	0.00	0.00
51.81	0.000	200.00	0.00	0.00
52.65	0.000	400.00	0.00	0.00
53.38	0.000	600.00	0.00	0.00
54.15	0.000	800.00	0.00	0.00
54.64	0.000	910.00	0.00	0.00
56.03	-0.009	1200.00	2.96	0.25
56.64	-0.002	1400.00	0.70	0.05
57.15	-0.001	1600.00	0.40	0.03
57.61	-0.001	1800.00	0.52	0.03
58.04	-0.001	2000.00	0.28	0.01

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 10-24-2005 FILE DATE: 10-24-2005
CURRENT TIME: 13:45:20 FILE NAME: SVP63089

PERFORMANCE CURVE FOR CULVERT 1 - 4(10.00 (ft) BY 3.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	50.40	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
200.00	51.81	1.41	1.41	1-S2n	0.71	0.92	0.62	0.76	8.05	4.26
400.00	52.65	2.25	2.25	1-S2n	1.12	1.46	1.06	1.15	9.42	5.56
600.00	53.38	2.98	2.98	1-S2n	1.46	1.92	1.50	1.47	10.03	6.48
800.00	54.15	3.75	3.75	5-S2n	1.77	2.32	1.84	1.75	10.87	7.22
910.00	54.64	4.24	4.24	5-S2n	1.93	2.53	2.01	1.88	11.32	7.57
1170.97	56.03	5.63	5.63	5-S2n	2.29	2.99	2.41	2.22	12.14	8.38
1266.18	56.64	6.24	5.44	6-S2n	2.42	3.00	2.55	2.43	12.41	8.87
1340.95	57.15	6.75	5.85	6-S2n	2.51	3.00	2.67	2.63	12.56	9.31
1404.78	57.61	7.21	6.22	6-S2n	2.60	3.00	2.84	2.82	12.37	9.71
1461.99	58.04	7.64	6.56	4-S2n	2.67	3.00	2.90	3.00	12.60	10.09

El. inlet face invert 50.40 ft El. outlet invert 49.50 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

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***** SITE DATA ***** CULVERT INVERT **************
      INLET STATION                          0.00 ft
      INLET ELEVATION                       50.40 ft
      OUTLET STATION                       155.00 ft
      OUTLET ELEVATION                      49.50 ft
      NUMBER OF BARRELS                      4
      SLOPE (V/H)                            0.0058
      CULVERT LENGTH ALONG SLOPE           155.00 ft

***** CULVERT DATA SUMMARY ************************
      BARREL SHAPE          BOX
      BARREL SPAN            10.00 ft
      BARREL RISE             3.00 ft
      BARREL MATERIAL       CONCRETE
      BARREL MANNING'S n    0.012
      INLET TYPE            CONVENTIONAL
      INLET EDGE AND WALL   SQUARE EDGE (30-75 DEG. FLARE)
      INLET DEPRESSION      NONE
```

CURRENT DATE: 10-24-2005 FILE DATE: 10-24-2005
CURRENT TIME: 13:45:20 FILE NAME: SVP63089

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	60.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.015
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	49.50 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	49.50 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	49.50	0.000	0.00	0.00	0.00
200.00	50.26	0.859	0.76	4.26	0.71
400.00	50.65	0.911	1.15	5.56	1.08
600.00	50.97	0.941	1.47	6.48	1.38
800.00	51.25	0.963	1.75	7.22	1.63
910.00	51.38	0.972	1.88	7.57	1.76
1200.00	51.72	0.991	2.22	8.38	2.08
1400.00	51.93	1.002	2.43	8.87	2.28
1600.00	52.13	1.011	2.63	9.31	2.46
1800.00	52.32	1.019	2.82	9.71	2.64
2000.00	52.50	1.025	3.00	10.09	2.81

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	110.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	55.72 ft

CURRENT DATE: 10-24-2005
CURRENT TIME: 14:21:03

FILE DATE: 10-24-2005
FILE NAME: SVP63208

FHWA CULVERT ANALYSIS
HY-8, VERSION 6.1

CULV NO.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	49.54	49.27	135.00	3 RCB	12.00	5.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs) FILE: SVP63208 DATE: 10-24-2005

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
49.54	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
51.19	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
52.17	400.0	400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
52.98	600.0	600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
53.71	800.0	800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
54.08	910.0	910.0	0.0	0.0	0.0	0.0	0.0	0.00	1
55.01	1200.0	1200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
55.60	1400.0	1400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
56.16	1600.0	1600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
56.64	1800.0	1770.2	0.0	0.0	0.0	0.0	0.0	30.22	2
57.12	2000.0	1885.9	0.0	0.0	0.0	0.0	0.0	113.51	3
56.30	1648.9	1648.9	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SVP63208 DATE: 10-24-2005

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
49.54	0.000	0.00	0.00	0.00
51.19	0.000	200.00	0.00	0.00
52.17	0.000	400.00	0.00	0.00
52.98	0.000	600.00	0.00	0.00
53.71	0.000	800.00	0.00	0.00
54.08	0.000	910.00	0.00	0.00
55.01	0.000	1200.00	0.00	0.00
55.60	0.000	1400.00	0.00	0.00
56.16	0.000	1600.00	0.00	0.00
56.64	0.001	1800.00	-0.44	-0.02
57.12	-0.001	2000.00	0.55	0.03

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

CURRENT DATE: 10-24-2005 FILE DATE: 10-24-2005
CURRENT TIME: 14:21:03 FILE NAME: SVP63208

PERFORMANCE CURVE FOR CULVERT 1 - 3(12.00 (ft) BY 5.00 (ft)) RCB

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	49.54	0.00	0.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
200.00	51.19	1.51	1.65	3-M1t	1.06	0.99	1.28	1.28	4.35	5.69
400.00	52.17	2.40	2.63	3-M1t	1.67	1.57	1.92	1.92	5.80	7.24
600.00	52.98	3.16	3.44	3-M1t	2.19	2.06	2.42	2.42	6.88	8.30
800.00	53.71	3.84	4.17	3-M1t	2.66	2.49	2.86	2.86	7.78	9.12
910.00	54.08	4.19	4.54	3-M1t	2.91	2.71	3.07	3.07	8.23	9.51
1200.00	55.01	5.09	5.47	3-M1t	3.53	3.26	3.59	3.59	9.27	10.37
1400.00	55.60	5.74	6.06	3-M2t	3.93	3.62	3.92	3.92	9.93	10.88
1600.00	56.16	6.45	6.62	3-M2t	4.33	3.95	4.22	4.22	10.53	11.34
1770.22	56.64	7.10	7.09	3-M2t	5.00	4.23	4.51	4.51	10.92	11.75
1885.94	57.12	7.58	7.39	3-M2t	5.00	4.41	4.77	4.77	10.97	12.13

El. inlet face invert 49.54 ft El. outlet invert 49.27 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	49.54 ft
OUTLET STATION	135.00 ft
OUTLET ELEVATION	49.27 ft
NUMBER OF BARRELS	3
SLOPE (V/H)	0.0020
CULVERT LENGTH ALONG SLOPE	135.00 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	BOX
BARREL SPAN	12.00 ft
BARREL RISE	5.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE (30-75 DEG. FLARE)
INLET DEPRESSION	NONE

CURRENT DATE: 10-24-2005
CURRENT TIME: 14:21:03

FILE DATE: 10-24-2005
FILE NAME: SVP63208

TAILWATER

******* REGULAR CHANNEL CROSS SECTION **********

BOTTOM WIDTH	25.00 ft
SIDE SLOPE H/V (X:1)	2.0
CHANNEL SLOPE V/H (ft/ft)	0.015
MANNING'S n (.01-0.1)	0.035
CHANNEL INVERT ELEVATION	49.27 ft
CULVERT NO.1 OUTLET INVERT ELEVATION	49.27 ft

******* UNIFORM FLOW RATING CURVE FOR DOWNSTREAM CHANNEL

FLOW (cfs)	W.S.E. (ft)	FROUDE NUMBER	DEPTH (ft)	VEL. (f/s)	SHEAR (psf)
0.00	49.27	0.000	0.00	0.00	0.00
200.00	50.55	0.888	1.28	5.69	1.19
400.00	51.19	0.923	1.92	7.24	1.79
600.00	51.69	0.940	2.42	8.30	2.27
800.00	52.13	0.951	2.86	9.12	2.67
910.00	52.34	0.956	3.07	9.51	2.88
1200.00	52.86	0.964	3.59	10.37	3.36
1400.00	53.19	0.969	3.92	10.88	3.67
1600.00	53.49	0.972	4.22	11.34	3.95
1800.00	53.78	0.975	4.51	11.75	4.22
2000.00	54.04	0.978	4.77	12.13	4.47

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	100.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	56.30 ft