Spook Hill ADMP Update

Flood Control District of Maricopa County

Appendix A
Volume 1

HEC-1 Modeling Input Data
& Output Files
Level III

Wood, Patel & Associates, Inc.
2051 West Northern Avenue
Suite 100
Phoenix, AZ 85021
Phone: (602) 335-8500
Fax: (602) 335-8580

Registered Professional Engineer (Civil)
Certificate No.
28615
RICHARD L.
HINER
Date Signed 9-20-02
ARIZONA U.S.A.

Spook Hill Area Drainage Master Plan Update

Flood Control District of Maricopa County

List of Appendices

Appendix A

Volume 1	HEC-1 Modeling Input Data & Output Files – Level III
Volume 2	SCS TR-20 Hydrology Analysis
Volume 3	TR-20 Hydrology Analysis
Volume 4	Design Alternative Analysis – Level I
Volume 5	Design Alternative Analysis – Level II
Volume 6	No-Action/Non-Structural Alternative Analysis
Volume 7	Conveyance Material Analysis
Volume 8	Hydraulics
Volume 9	Red Mountain Freeway Crude Cost Estimates

Appendix B

Volume 1	Level I – Hydrology (1999 – 03/10/2000)
Volume 2	Level I – Hydrology (03/10/2000 – 05/11/2000)
Volume 3	Level I – Hydrology (05/11/2000 – 06/19/2000)
Volume 4	Level I – Hydrology (06/19/2000 – 07/17/2000)
Volume 5	Level I – Hydrology (07/18/2000 – 07/27/2000)
Volume 6	Level I – Hydrology (12/06/2000)
Volume 7A	HEC-1 Modeling Output Files (Level II)
Volume 7B	HEC-1 Modeling Output Files (Level II)
Volume 7C	HEC-1 Modeling Output Files (Level II)

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Registered Professional Engineer (Civil)
CERTIFICATE NO.
28615
RICHARD L.
HINER
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ARIZONA U.S.A.

Spook Hill ADMP Level III Alternative Summary - Model Elements

HEC-1	Land Use Condition		Return Period		Rainfall Duration		Preferred Alternative	
File Name	Existing	Future	100-year	10-year	24-hour	6-hour	Yes	No
EC24BASE.DAT	X		X		X			X
EC06BASE.DAT	X		X			X		X
ET06BASE.DAT	X			X		X		X
FC24BASE.DAT		X	X		X			X
FC06BASE.DAT		X	X			X		X
FT06BASE.DAT		X		X		X		X
REC_EC24.DAT	X		X		X		X	
REC_EC06.DAT	X		X			X	X	
REC_ET06.DAT	X			X		X	X	
REC_FC24.DAT		X	X		X		X	
REC_FC06.DAT		X	X			X	X	
REC_FT06.DAT		X		X		X	X	

Spook Hill ADMP Level III Alternative Summary - Peak Flows I

HEC-1	Inflow to Apache Junction FRS			Outflow of Apache Junction FRS			Inflow to Signal Butte FRS (east)			Inflow to Signal Butte FRS (north)			Total Inflow to Signal Butte FRS			Outflow of Signal Butte FRS			Inflow to Spook Hill FRS			Outflow of Spook Hill FRS		
File Name	"C60" Q100 (cfs)	Tp (hr)	Volume (Ac-Ft)	"S60" Q100 (cfs)	Tp (hr)	Volume (Ac-Ft)	"C180" Q100 (cfs)	Tp (hr)	Volume (Ac-Ft)	"RR200" Q100 (cfs)	Tp (hr)	Volume (Ac-Ft)	"CC180" Q100 (cfs)	Tp (hr)	Volume (Ac-Ft)	"S180" Q100 (cfs)	Tp (hr)	Volume (Ac-Ft)	"CC455" Q100 (cfs)	Tp (hr)	Volume (Ac-Ft)	"S440" Q100 (cfs)	Tp (hr)	Volume (Ac-Ft)
EC24BASE.DAT	5444	12.37	387	130	14.23	313	7289	12.30	730	1330	12.83	176	7289	12.30	901	124	21.53	655	6241	12.53	1511	366	14.87	1244
FC24BASE.DAT	4599	12.33	428	101	14.73	353	7186	12.27	784	1343	12.83	176	7186	12.27	955	124	24.37	695	6191	12.33	1579	333	15.53	1311
REC_EC24.DAT	5444	12.37	387	130	14.23	313	7289	12.30	730	1330	12.83	176	7289	12.30	901	124	21.53	655	5835	12.23	1503	311	20.33	1236
REC_FC24.DAT	4599	12.33	428	101	14.73	353	7186	12.27	784	1343	12.83	176	7186	12.27	955	124	24.37	695	5280	12.23	1572	299	22.33	1304

TABLE 1
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin Physical Parameters

Basin ID	Area (mi^2)	Length (mi)	Kb	Slope (ft/mi)
10	0.690	2.00	0.044	165.0
20	1.167	2.50	0.040	88.0
40	2.227	3.08	0.036	189.0
60	1.751	4.19	0.038	209.6
80	1.493	2.69	0.039	229.8
100	0.488	1.94	0.046	108.0
120	2.197	3.07	0.037	239.0
140	0.598	1.61	0.044	149.0
150	0.407	1.50	0.047	314.6
160	0.365	2.10	0.047	129.0
180	1.014	2.42	0.041	140.0
190	0.918	1.91	0.042	315.0
200	0.530	1.58	0.045	305.6
210	0.792	1.84	0.043	315.0
220	0.473	1.92	0.046	315.0
240	1.408	3.50	0.039	298.6
260	0.263	0.81	0.049	68.0
280	0.319	0.77	0.048	84.0
300	0.289	0.78	0.049	103.0
305	0.702	2.50	0.044	116.0
310	0.538	2.70	0.045	283.5
320	0.945	2.20	0.042	132.0
340	1.416	2.40	0.042	160.0
350	0.997	2.22	0.041	315.0
355	0.676	3.00	0.044	284.0
360	0.880	2.10	0.047	124.0
370	0.672	1.90	0.044	203.5
380	0.849	2.20	0.050	114.0
385	0.527	2.30	0.045	303.0
390	0.248	0.70	0.050	299.4
395	0.199	1.30	0.051	219.2
400	0.652	1.64	0.052	110.0
415	0.609	2.58	0.044	298.5
420	0.868	1.91	0.042	120.0
440	0.080	0.40	0.039	315.0

TABLE 1
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin Physical Parameters

Basin ID	Area (mi^2)	Length (mi)	Kb	Slope (ft/mi)
441	0.010	0.28	0.069	315.0
442	0.100	0.83	0.055	274.2
443	0.080	0.71	0.050	315.0
444	0.040	0.33	0.034	315.0
445	0.190	0.82	0.036	315.0
446	0.040	0.46	0.061	303.9
447	0.090	0.49	0.056	221.0
448	0.045	0.36	0.042	315.0
449	0.050	0.40	0.054	315.0
450	0.070	0.85	0.057	210.5
451	0.025	0.57	0.063	175.0
452	0.040	0.43	0.055	315.0
453	0.060	0.58	0.058	138.0
454	0.180	1.23	0.051	163.0
455	1.111	1.70	0.041	146.0
456	0.260	0.94	0.045	315.0
457	0.190	1.01	0.045	308.8
458	0.190	0.76	0.048	299.0
459	0.030	0.35	0.052	251.6
460	0.140	0.62	0.058	194.0
461	0.120	0.83	0.052	181.0
462	0.301	0.97	0.045	297.7
480	0.731	1.21	0.042	165.0
500	0.930	2.77	0.042	286.8

TABLE 2
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Green & Ampt / Clark Parameters

Basin ID	IA	DTHETA	PSIF	XKSAT	RTIMP	Tc (hr)	R coeff. (hr)
10	0.35	0.32	7.60	0.09	15	0.421	0.305
20	0.35	0.39	5.80	0.19	1	0.646	0.434
40	0.34	0.34	4.90	0.28	5	0.496	0.265
60	0.33	0.35	5.80	0.19	9	0.596	0.476
80	0.33	0.33	5.60	0.21	4	0.433	0.257
100	0.32	0.29	5.10	0.26	3	0.533	0.471
120	0.33	0.28	6.80	0.13	11	0.429	0.227
140	0.31	0.28	4.20	0.44	5	0.421	0.278
150	0.35	0.36	5.10	0.26	7	0.296	0.221
160	0.34	0.33	4.15	0.44	1	0.587	0.659
180	0.35	0.35	4.15	0.43	0	0.571	0.400
190	0.35	0.39	5.80	0.19	8	0.321	0.185
200	0.35	0.39	5.70	0.20	10	0.300	0.201
210	0.35	0.36	6.80	0.13	4	0.313	0.189
220	0.35	0.35	7.00	0.12	5	0.333	0.282
240	0.35	0.37	5.30	0.23	2	0.467	0.356
260	0.30	0.19	6.60	0.17	15	0.363	0.217
280	0.30	0.25	5.30	0.29	15	0.329	0.168
300	0.32	0.29	4.20	0.48	11	0.325	0.177
305	0.34	0.34	4.55	0.35	6	0.642	0.576
310	0.35	0.35	3.91	0.48	0	0.483	0.520
320	0.31	0.30	4.60	0.35	14	0.508	0.339
340	0.28	0.28	4.15	0.52	21	0.512	0.291
350	0.35	0.35	4.55	0.34	4	0.363	0.227
355	0.34	0.34	4.45	0.37	4	0.488	0.502
360	0.26	0.27	4.10	0.56	20	0.575	0.390
370	0.34	0.32	4.65	0.33	8	0.404	0.284
380	0.26	0.25	4.15	0.58	18	0.658	0.480
385	0.34	0.36	5.60	0.22	13	0.383	0.358
390	0.30	0.25	4.70	0.38	18	0.204	0.106
395	0.33	0.32	4.90	0.30	10	0.333	0.338
400	0.28	0.25	4.15	0.56	12	0.554	0.364
415	0.32	0.29	4.50	0.40	15	0.421	0.401
420	0.31	0.27	4.15	0.51	11	0.504	0.315
440	0.19	0.38	6.40	0.14	13	0.129	0.077
441	0.30	0.25	5.60	0.22	5	0.150	0.225
442	0.30	0.27	3.29	0.77	5	0.258	0.264
443	0.25	0.19	8.00	0.08	10	0.196	0.194
444	0.13	0.35	4.45	0.32	1	0.112	0.084
445	0.17	0.32	3.47	0.59	3	0.192	0.130
446	0.27	0.25	4.50	0.40	19	0.183	0.189
447	0.25	0.27	3.35	0.87	30	0.208	0.145
448	0.17	0.31	4.20	0.39	11	0.133	0.102
449	0.26	0.28	3.50	0.64	6	0.167	0.134
450	0.34	0.35	3.63	0.57	4	0.296	0.383
451	0.34	0.34	3.29	0.75	3	0.271	0.453
452	0.26	0.28	3.70	0.55	9	0.171	0.166
453	0.29	0.30	3.29	0.82	18	0.275	0.284
454	0.30	0.31	3.78	0.56	14	0.379	0.395
455	0.27	0.28	3.70	0.64	24	0.421	0.204
456	0.30	0.38	5.60	0.20	12	0.217	0.139
457	0.27	0.33	3.95	0.46	6	0.237	0.195
458	0.29	0.33	5.80	0.19	6	0.204	0.131
459	0.22	0.30	3.33	0.71	8	0.162	0.157
460	0.25	0.26	3.74	0.69	27	0.242	0.160
461	0.27	0.25	4.25	0.45	21	0.271	0.250
462	0.30	0.33	5.30	0.24	12	0.225	0.137
480	0.27	0.27	3.58	0.73	27	0.325	0.148
500	0.35	0.40	6.00	0.17	9	0.421	0.333

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
10	63	266.68	60.4	0.14	25
	98	2.30	0.5	0.37	0
	44	169.50	38.4	0.03	0
	13	3.00	0.7	0.01	0
20	3	26.35	3.5	0.58	0
	13	9.20	1.2	0.01	0
	44	224.12	30.0	0.03	0
	61	49.01	6.6	0.15	0
	63	3.23	0.4	0.14	25
	98	419.41	56.1	0.37	0
	116	15.81	2.1	0.23	0
40	63	156.84	11.0	0.14	25
	44	185.29	13.0	0.03	0
	98	1002.32	70.3	0.37	0
	3	9.88	0.7	0.58	0
	116	46.24	3.2	0.23	0
	113	24.93	1.7	0.39	0
60	63	220.20	19.7	0.14	25
	44	286.20	25.5	0.03	0
	98	550.09	49.1	0.37	0
	3	40.27	3.6	0.58	0
	116	15.47	1.4	0.23	0
	68	8.37	0.7	0.63	0
80	63	49.93	5.2	0.14	25
	52	10.68	1.1	0.16	20
	45	57.06	6.0	0.03	0
	49	80.62	8.4	0.06	0
	68	12.88	1.3	0.63	0
	48	200.95	21.0	0.06	0
	113	95.71	10.0	0.39	0
	98	447.96	46.9	0.37	0
100	98	216.98	69.5	0.37	0
	44	7.98	2.6	0.03	0
	48	79.80	25.6	0.06	0
	3	7.50	2.4	0.58	0
120	3	45.95	3.3	0.58	0
	44	313.15	22.3	0.03	0
	49	175.31	12.5	0.06	0
	61	171.40	12.2	0.15	0
	63	498.81	35.5	0.14	25
	98	201.48	14.3	0.37	0
140	63	11.27	2.9	0.14	25
	98	371.20	97.1	0.37	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
150	61	70.00	26.9	0.15	0
	63	71.00	27.2	0.14	25
	98	119.57	45.9	0.37	0
160	3	1.00	0.4	0.58	0
	63	1.00	0.4	0.14	25
	98	221.75	94.9	0.37	0
	115	10.00	4.3	0.39	0
180	98	649.18	100.0	0.37	0
190	61	340.29	57.9	0.15	0
	63	185.00	31.5	0.14	25
	98	62.30	10.6	0.37	0
200	3	22.70	6.7	0.58	0
	44	42.80	12.6	0.03	0
	61	42.90	12.6	0.15	0
	63	130.10	38.3	0.14	25
	98	100.90	29.7	0.37	0
210	44	90.00	17.7	0.03	0
	47	6.10	1.2	0.11	0
	48	44.50	8.8	0.06	0
	61	254.91	50.3	0.15	0
	63	81.90	16.2	0.14	25
	98	29.70	5.9	0.37	0
220	44	126.65	41.8	0.03	0
	61	24.90	8.2	0.15	0
	63	55.00	18.2	0.14	25
	98	96.20	31.8	0.37	0
240	44	119.20	13.2	0.03	0
	47	1.40	0.2	0.11	0
	48	131.40	14.6	0.06	0
	61	93.60	10.4	0.15	0
	63	58.60	6.5	0.14	25
	68	207.68	23.1	0.63	0
	98	289.00	32.1	0.37	0
260	44	76.96	45.7	0.03	0
	98	72.90	43.3	0.37	0
	3	18.40	10.9	0.58	0
280	98	153.68	75.3	0.37	0
	44	50.30	24.7	0.03	0
300	63	6.10	3.3	0.14	25
	98	178.89	96.7	0.37	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
305	44	16.60	3.7	0.03	0
	61	29.70	6.6	0.15	0
	63	63.40	14.1	0.14	25
	68	36.30	8.1	0.63	0
	98	270.96	60.3	0.37	0
	115	3.20	0.7	0.39	0
	118	29.00	6.5	0.42	0
320	44	14.18	2.3	0.03	0
	61	47.93	7.9	0.15	0
	63	109.17	18.1	0.14	25
	68	22.27	3.7	0.63	0
	98	243.54	40.3	0.37	0
	115	96.98	16.0	0.39	0
	118	70.71	11.7	0.42	0
310	44	6.00	1.7	0.03	0
	61	16.00	4.6	0.15	0
	63	6.00	1.7	0.14	25
	68	105.54	30.6	0.63	0
	98	108.54	31.5	0.37	0
	118	102.53	29.8	0.42	0
340	3	10.50	1.2	0.58	0
	44	6.87	0.8	0.03	0
	61	23.50	2.6	0.15	0
	63	76.10	8.4	0.14	25
	68	166.70	18.4	0.63	0
	98	461.44	50.9	0.37	0
	113	3.34	0.4	0.39	0
	115	137.49	15.2	0.39	0
	118	20.38	2.2	0.42	0
350	61	123.99	19.4	0.15	0
	63	108.49	17.0	0.14	25
	68	57.67	9.0	0.63	0
	98	17.95	2.8	0.37	0
	101	6.68	1.0	0.28	0
	118	323.57	50.7	0.42	0
360	63	3.70	0.7	0.14	25
	68	8.80	1.6	0.63	0
	98	398.32	70.7	0.37	0
	113	79.60	14.1	0.39	0
	115	72.80	12.9	0.39	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
355	61	33.80	7.8	0.15	0
	63	46.50	10.8	0.14	25
	68	19.60	4.5	0.63	0
	90	171.53	39.7	0.39	0
	98	9.70	2.2	0.37	0
	101	43.50	10.1	0.28	0
	110	18.80	4.3	0.13	0
	115	9.10	2.1	0.39	0
	118	79.90	18.5	0.42	0
370	61	45.20	10.5	0.15	0
	63	77.00	17.9	0.14	25
	90	179.71	41.8	0.39	0
	98	1.00	0.2	0.37	0
	101	111.80	26.0	0.28	0
	110	5.40	1.3	0.13	0
	115	2.00	0.5	0.39	0
	118	8.00	1.9	0.42	0
380	63	14.08	2.6	0.14	25
	98	246.95	45.5	0.37	0
	110	8.03	1.5	0.13	0
	112	74.29	13.7	0.39	0
	113	113.82	21.0	0.39	0
	115	46.05	8.5	0.39	0
	118	40.04	7.4	0.42	0
385	61	111.00	32.9	0.15	0
	63	152.90	45.4	0.14	25
	90	72.70	21.6	0.39	0
	118	0.40	0.1	0.42	0
390	61	11.00	6.9	0.15	0
	63	18.00	11.4	0.14	25
	90	76.45	48.2	0.39	0
	101	29.00	18.3	0.28	0
	110	24.00	15.1	0.13	0
395	61	23.60	18.5	0.15	0
	63	25.60	20.1	0.14	25
	90	43.40	34.0	0.39	0
	101	34.00	26.6	0.28	0
	110	1.00	0.8	0.13	0
400	98	273.48	65.6	0.37	0
	110	4.24	1.0	0.13	0
	112	29.84	7.2	0.39	0
	113	21.53	5.2	0.39	0
	115	87.91	21.1	0.39	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
415	61	67.20	17.3	0.15	0
	63	92.90	23.9	0.14	25
	68	127.00	32.6	0.63	0
	90	98.40	25.3	0.39	0
	115	0.30	0.1	0.39	0
	118	3.70	0.9	0.42	0
420	68	101.24	18.2	0.63	0
	90	59.30	10.7	0.39	0
	98	236.31	42.5	0.37	0
	110	68.99	12.4	0.13	0
	118	89.81	16.2	0.42	0
440	63	26.30	51.4	0.14	25
	61	22.10	43.2	0.15	0
	44	2.80	5.5	0.03	0
441	68	3.80	59.4	0.63	0
	44	2.60	40.6	0.03	0
442	68	64.00	100.0	0.63	0
443	63	12.90	25.2	0.14	25
	68	6.90	13.5	0.63	0
	44	31.40	61.3	0.03	0
444	63	0.60	2.3	0.14	25
	61	12.10	47.3	0.15	0
	68	12.90	50.4	0.63	0
445	63	4.50	3.7	0.14	25
	61	6.70	5.5	0.15	0
	68	110.40	90.8	0.63	0
446	68	19.40	75.8	0.63	0
	44	6.20	24.2	0.03	0
447	68	52.00	90.3	0.63	0
	115	5.60	9.7	0.39	0
448	63	10.60	36.8	0.14	25
	68	18.20	63.2	0.63	0
449	63	3.10	9.7	0.14	25
	68	28.90	90.3	0.63	0
450	63	5.90	13.2	0.14	25
	68	33.40	74.6	0.63	0
	90	5.50	12.3	0.39	0
451	68	16.00	100.0	0.63	0
452	63	4.80	18.8	0.14	25
	68	20.80	81.3	0.63	0
453	68	38.40	100.0	0.63	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
454	63	6.80	5.9	0.14	25
	68	48.90	42.4	0.63	0
	90	59.50	51.6	0.39	0
455	63	25.00	3.5	0.14	25
	68	384.00	54.0	0.63	0
	115	268.00	37.7	0.39	0
	110	19.00	2.7	0.13	0
	98	10.00	1.4	0.37	0
	118	5.00	0.7	0.42	0
456	63	78.80	47.4	0.14	25
	61	62.00	37.3	0.15	0
	68	25.60	15.4	0.63	0
457	63	9.50	7.8	0.14	25
	61	26.10	21.5	0.15	0
	68	79.50	65.4	0.63	0
	115	6.50	5.3	0.39	0
458	63	21.40	17.6	0.14	25
	61	87.90	72.3	0.15	0
	68	2.10	1.7	0.63	0
	115	10.20	8.4	0.39	0
459	68	18.20	94.8	0.63	0
	115	1.00	5.2	0.39	0
460	68	29.80	33.2	0.63	0
	115	59.90	66.8	0.39	0
461	63	1.60	2.1	0.14	25
	68	1.60	2.1	0.63	0
	61	8.30	10.8	0.15	0
	115	65.30	85.0	0.39	0
462	63	20.00	10.4	0.14	25
	61	131.10	68.1	0.15	0
	68	39.40	20.5	0.63	0
	115	2.10	1.1	0.39	0
480	63	43.11	9.2	0.14	25
	68	348.53	74.5	0.63	0
	115	76.19	16.3	0.39	0
500	63	208.27	35.0	0.14	25
	61	368.91	62.0	0.15	0
	113	17.75	3.0	0.39	0

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
10	Desert	441.48	100.0	Dry	25	0
20	Desert	724.13	96.9	Dry	25	0
	V.L.D.R	12.52	1.7	Normal	30	5
	M.D.R.	10.48	1.4	Normal	50	30
40	Desert	1294.04	90.8	Dry	25	0
	V.L.D.R	94.31	6.6	Normal	30	5
	Comm	37.15	2.6	Normal	75	80
60	Desert	767.50	68.5	Dry	25	0
	V.L.D.R	318.50	28.4	Normal	30	5
	Comm	34.60	3.1	Normal	75	80
80	Desert	587.49	61.5	Dry	25	0
	V.L.D.R	368.30	38.5	Normal	30	5
100	Desert	121.20	38.8	Dry	25	0
	V.L.D.R	191.06	61.2	Normal	30	5
120	Desert	837.20	59.5	Dry	25	0
	V.L.D.R	568.90	40.5	Normal	30	5
140	Desert	109.00	28.5	Dry	25	0
	V.L.D.R	273.47	71.5	Normal	30	5
150	Desert	254.57	97.7	Dry	25	0
	V.L.D.R	6.00	2.3	Normal	30	5
160	Desert	187.75	80.3	Dry	25	0
	V.L.D.R	46.00	19.7	Normal	30	5
180	Desert	649.18	100.0	Dry	25	0
190	Desert	587.59	100.0	Dry	25	0
200	Desert	339.40	100.0	Dry	25	0
210	Desert	507.11	100.0	Dry	25	0
220	Desert	302.75	100.0	Dry	25	0
240	Desert	900.88	100.0	Dry	25	0
260	L.D.R.	168.26	100.0	Normal	50	15
280	L.D.R.	203.98	100.0	Normal	50	15
300	Desert	67.80	36.7	Dry	25	0
	L.D.R.	117.19	63.3	Normal	50	15
305	Desert	391.76	87.2	Dry	25	0
	L.D.R.	57.40	12.8	Normal	50	15
320	Desert	297.21	49.1	Dry	25	0
	V.L.D.R	101.00	16.7	Normal	30	5
	L.D.R.	82.37	13.6	Normal	50	15
	M.D.R.	121.00	20.0	Normal	50	30
	Comm	3.20	0.5	Normal	75	80
310	Desert	336.61	97.7	Dry	25	0
	V.L.D.R	8.00	2.3	Normal	30	5

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
340	Desert	247.90	27.4	Dry	25	0
	V.L.D.R	15.20	1.7	Normal	30	5
	L.D.R.	164.39	18.1	Normal	50	15
	M.D.R.	310.93	34.3	Normal	50	30
	M.F.R.	38.30	4.2	Normal	50	45
	Comm	40.00	4.4	Normal	75	80
	Park	89.60	9.9	Normal	90	0
350	Desert	638.35	100.0	Dry	25	0
360	Desert	127.30	22.6	Dry	25	0
	L.D.R.	148.62	26.4	Normal	50	15
	M.D.R.	81.10	14.4	Normal	50	30
	M.F.R.	59.20	10.5	Normal	50	45
	Comm	50.20	8.9	Normal	75	80
	Park	96.80	17.2	Normal	90	0
355	Desert	368.43	85.2	Dry	25	0
	V.L.D.R	33.00	7.6	Normal	30	5
	L.D.R.	31.00	7.2	Normal	50	15
370	Desert	307.11	71.4	Dry	25	0
	L.D.R.	123.00	28.6	Normal	50	15
380	L.D.R.	376.46	69.3	Normal	50	15
	Comm	43.90	8.1	Normal	75	80
	Park	122.90	22.6	Normal	90	0
385	Desert	296.00	87.8	Dry	25	0
	L.D.R.	41.00	12.2	Normal	50	15
390	L.D.R.	158.45	100.0	Normal	50	15
395	Desert	86.60	67.9	Dry	25	0
	L.D.R.	41.00	32.1	Normal	50	15
400	Desert	11.00	2.6	Dry	25	0
	L.D.R.	331.00	79.4	Normal	50	15
	Park	75.00	18.0	Normal	90	0
415	Desert	162.50	41.7	Dry	25	0
	L.D.R.	227.00	58.3	Normal	50	15
420	Desert	130.01	23.4	Dry	25	0
	L.D.R.	425.64	76.6	Normal	50	15
440	Desert	17.40	34.0	Dry	25	0
	OPEN	33.80	66.0	Dry	10	0
441	V.L.D.R	6.40	100.0	Normal	30	5
442	V.L.D.R	64.00	100.0	Normal	30	5
443	OPEN	13.30	26.0	Dry	10	0
	V.L.D.R	37.90	74.0	Normal	30	5
444	Desert	2.80	10.9	Dry	25	0
	OPEN	22.80	89.1	Dry	10	0

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
445	OPEN	76.50	62.9	Dry	10	0
	V.L.D.R	45.10	37.1	Normal	30	5
446	V.L.D.R	11.30	44.1	Normal	30	5
	M.D.R.	14.30	55.9	Normal	50	30
447	M.D.R.	57.60	100.0	Normal	50	30
448	OPEN	18.30	63.5	Dry	10	0
	V.L.D.R	10.50	36.5	Normal	30	5
449	OPEN	6.60	20.6	Dry	10	0
	V.L.D.R	25.40	79.4	Normal	30	5
450	Desert	42.00	93.8	Dry	25	0
	OPEN	1.50	3.3	Dry	10	0
	M.D.R.	1.30	2.9	Normal	50	30
451	Desert	14.60	91.3	Dry	25	0
	M.D.R.	1.40	8.8	Normal	50	30
452	OPEN	4.90	19.1	Dry	10	0
	V.L.D.R	20.70	80.9	Normal	30	5
453	Desert	15.90	41.4	Dry	25	0
	M.D.R.	22.50	58.6	Normal	50	30
454	Desert	62.50	54.3	Dry	25	0
	OPEN	3.10	2.7	Dry	10	0
	M.D.R.	49.60	43.1	Normal	50	30
455	Desert	179.30	25.2	Dry	25	0
	M.D.R.	522.80	73.5	Normal	50	30
	M.F.R.	4.30	0.6	Normal	50	45
	Comm	4.60	0.6	Normal	75	80
456	Desert	136.30	81.9	Dry	25	0
	OPEN	30.10	18.1	Dry	10	0
457	Desert	64.30	52.9	Dry	25	0
	OPEN	30.50	25.1	Dry	10	0
	V.L.D.R	13.30	10.9	Normal	30	5
	M.D.R.	13.50	11.1	Normal	50	30
458	Desert	50.30	41.4	Dry	25	0
	OPEN	17.10	14.1	Dry	10	0
	V.L.D.R	54.20	44.6	Normal	30	5
459	Desert	0.70	3.6	Dry	25	0
	OPEN	6.80	35.4	Dry	10	0
	V.L.D.R	7.80	40.6	Normal	30	5
	M.D.R.	3.90	20.3	Normal	50	30
460	M.D.R.	81.20	90.5	Normal	50	30
	Park	8.50	9.5	Normal	90	0

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
461	V.L.D.R	43.90	57.2	Normal	30	5
	M.D.R.	26.40	34.4	Normal	50	30
	Comm	6.50	8.5	Normal	75	80
462	Desert	109.40	56.8	Dry	25	0
	OPEN	11.10	5.8	Dry	10	0
	V.L.D.R	52.20	27.1	Normal	30	5
	M.D.R.	0.70	0.4	Normal	50	30
	Comm	19.20	10.0	Normal	75	80
480	Desert	25.70	5.5	Dry	25	0
	L.D.R.	216.50	46.3	Normal	50	15
	M.D.R.	171.00	36.6	Normal	50	30
	M.F.R.	23.40	5.0	Normal	50	45
	Comm	31.20	6.7	Normal	75	80
500	Desert	594.90	100.0	Dry	25	0

TABLE 5
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Rainfall Data

Area	ARF	Total Rainfall (inches)						
		2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
0	1.0000	1.550	2.110	2.480	3.000	3.410	3.810	4.740
10	0.9396	1.456	1.983	2.330	2.819	3.204	3.580	4.454
30	0.9003	1.395	1.900	2.233	2.701	3.070	3.430	4.267
60	0.8609	1.334	1.816	2.135	2.583	2.936	3.280	4.081
90	0.8451	1.310	1.783	2.096	2.535	2.882	3.220	4.006
120	0.8346	1.294	1.761	2.070	2.504	2.846	3.180	3.956
150	0.8241	1.277	1.739	2.044	2.472	2.810	3.140	3.906
300	0.8005	1.241	1.689	1.985	2.402	2.730	3.050	3.794
500	0.7795	1.208	1.645	1.933	2.339	2.658	2.970	3.695

TABLE 6
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Routing Parameters

HEC-1 Operation	Manning's "n" Left Overbank	Manning's "n" Main Channel	Manning's "n" Right Overbank	Length (ft)	Slope (ft/ft)	NSTPS
R10	0.045	0.030	0.045	8700	0.0210	4
R100	0.016	0.016	0.016	940	0.0050	1
R101	0.050	0.035	0.050	1450	0.0500	1
R103	0.050	0.035	0.050	900	0.0300	1
R106	0.050	0.035	0.050	3950	0.0330	2
R107	0.050	0.035	0.050	700	0.0516	2
R108	0.050	0.035	0.050	3200	0.1000	2
R109	0.019	0.019	0.019	3080	0.0500	1
R110	0.019	0.019	0.019	580	0.0291	1
R113	0.019	0.019	0.019	1300	0.0290	1
R115	0.019	0.019	0.019	2125	0.0290	1
R116	0.050	0.035	0.050	1300	0.0333	2
R118	0.019	0.019	0.019	1500	0.0240	1
R12	0.045	0.030	0.045	4500	0.0100	7
R120	0.025	0.016	0.025	2100	0.0050	1
R150	0.045	0.040	0.045	3100	0.0320	2
R152	0.045	0.030	0.045	5900	0.0190	3
R180	0.035	0.025	0.035	1600	0.0030	2
R190	0.045	0.030	0.045	4740	0.0300	2
R192	0.045	0.035	0.045	2200	0.0180	3
R20	0.016	0.016	0.016	990	0.0040	2
R200	0.035	0.025	0.035	650	0.0050	1
R210	0.045	0.030	0.045	5100	0.0220	2
R220	0.035	0.025	0.035	1250	0.0050	1
R240	0.035	0.025	0.035	1800	0.0050	3
R260	0.035	0.025	0.035	2300	0.0030	3
R280	0.035	0.025	0.035	2100	0.0030	3
R3	0.050	0.030	0.050	2750	0.0375	5
R30	0.050	0.035	0.050	1630	0.0500	1
R300	0.035	0.025	0.035	2500	0.0030	2
R305	0.016	0.016	0.016	6000	0.0146	3
R310	0.045	0.035	0.045	10050	0.0220	11
R350	0.045	0.035	0.045	5150	0.0250	7
R355	0.045	0.035	0.045	10100	0.0260	9
R370	0.045	0.035	0.045	10250	0.0230	11
R385	0.045	0.040	0.045	10250	0.0220	14
R390	0.045	0.045	0.045	8800	0.0200	15
R404	0.019	0.019	0.019	3540	0.0300	4
R415	0.045	0.030	0.045	4100	0.0240	1
R454	0.045	0.035	0.045	2200	0.0090	3
R455	0.035	0.025	0.035	7000	0.0002	15
R456	0.050	0.035	0.050	3800	0.0440	2
R462	0.025	0.025	0.025	1800	0.0050	1
R480	0.035	0.025	0.035	2800	0.0002	7
R52	0.050	0.035	0.050	2000	0.0500	3
R58	0.050	0.035	0.050	2370	0.0516	2
R60	0.016	0.016	0.016	2850	0.0120	3
R6364	0.050	0.035	0.050	4375	0.0333	5
R6566	0.050	0.035	0.050	2435	0.0282	3
R70	0.050	0.035	0.050	2250	0.0800	2
R80	0.025	0.016	0.025	1200	0.0030	1
RB1	0.050	0.035	0.050	1720	0.0500	3
RR200	0.035	0.025	0.035	3150	0.0050	3
RR350	0.045	0.035	0.045	6050	0.0250	7
RR385	0.045	0.040	0.045	5878	0.0240	11
RR462	0.055	0.050	0.055	4700	0.0500	3
RR60	0.016	0.016	0.016	3500	0.0050	3
RSPLIT	0.050	0.035	0.050	800	0.0500	1

TABLE 7
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Storage/Discharge/Elevation Relationships

Apache Junction FRS
Emergency Spillway Elevation = 1801.92 ft.
Principal Spillway Elevation = 1795.65 ft.

HEC-1 Operation S60
Sediment Volume = 100 ac-ft.

Storage (ac-ft)	0.00	46.80	73.71	130.00	170.70	322.23	584.06	812.88	1121.90
Discharge (cfs)	0.00	0.01	0.02	26.30	91.20	102.42	347.66	1650.00	7700.00
Elevation (ft)	794.09	795.15	795.65	796.65	797.29	799.29	801.92	803.87	806.15

Signal Butte FRS
Emergency Spillway Elevation = 1714.63 ft.
Principal Spillway Elevation = 1703.23 ft.

HEC-1 Operation S180
Sediment Volume = 247 ac-ft.

Storage (ac-ft)	0.00	172.10	244.35	482.24	871.30	1101.52	1294.09	1418.10	1578.77	1980.33
Discharge (cfs)	0.00	10.20	10.55	121.80	138.40	145.90	151.40	154.67	390.00	1950.00
Elevation (ft)	698.23	702.23	703.23	706.23	710.23	712.23	713.73	714.63	715.73	718.23

Spook Hill FRS
Emergency Spillway Elevation = 1583.86 ft.
Principal Spillway Elevation = 1579.36 ft.

HEC-1 Operation S440
Sediment Volume = 271 ac-ft.

Storage (ac-ft)	0.00	81.00	211.00	265.72	692.96	896.16	1120.00	1630.34	2230.90	3311.68
Discharge (cfs)	0.00	1.00	3.00	8.00	515.00	780.00	825.00	3184.70	7426.00	16007.30
Elevation (ft)	577.00	578.00	579.00	579.36	581.86	582.86	583.86	585.86	587.86	590.86

TABLE 8
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin On-site Retention Volumes

Basin ID	*Maximum Diversion Volume (ac-ft)*
320	12.27
340	78.1
360	35.6
380	5.7
390	3.5
400	5.6
420	8.65
442	3.3
453	3.6
455	74.1
480	16.5
456	4
457	5

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*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   24JUL02  TIME  16:06:01  *
*                                      *
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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   Existing Condition Base Model with Spook Hill FRS Storage Routing
  2           ID   Return Period = 100 Years, Rainfall Duration = 24 Hours
  3           ID   Original File Name: EC24BASE.DAT (Level 2)
  4           ID   Modified File Name: EC24BASE.DAT (Level 3), April 2002, SZ, Wood/Patel
              *
              *  Major Changes: Subbasin Areas and 100-Year 2-Hour Onsite Retention Volumes
              *  Updated
              *
  5           ID   METHODOLOGY
  6           ID   THE US CORPS OF ENGINEERS FLOW HYDROGRAPH PACKAGE HEC-1 DATED JUNE 1998 V4.1
  7           ID   SCS TYPE II RAINFALL DISTRIBUTION
  8           ID   CLARK UNIT HYDROGRAPH
  9           ID   GREEN AND AMPT INFILTRATION EQUATION USED FOR CALCULATING LOSSES
 10           ID   NORMAL DEPTH STORAGE CHANNEL ROUTING
              *
              *DIAGRAM
 11           IT       2                    2000
 12           IO       5
 13           IN      15
 14           JD    3.81    0.01
 15           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 16           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 17           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 18           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 19           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 20           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 21           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 22           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 23           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 24           PC    .983    .986    .989    .992    .995    .998   1.000
 25           JD   3.787    1.00
 26           JD   3.677    5.80
 27           JD   3.574   10.66
 28           JD   3.539   13.70
 29           JD   3.467   20.00
 30           JD   3.315   50.00
              * DDM   ***** Updated *****

 31           KK      10
 32           KM   SUB-BASIN 10
 33           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 34           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 35           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
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 36          BA    .690
 37          LG    .350    .320   7.600    .090  15.000
 38          UC    .421    .305
 39          UA       0       3       5       8      12      20      43      75      90      96
 40          UA     100
             * DDM   ***** Preserved *****
1                                     HEC-1 INPUT                                          PAGE  2

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


 41          KK     R10
 42          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 43          RS       4    FLOW      -1
 44          RC    .045     .03    .045    8700    .021
 45          RX       0       1       2      17      27      42      43      44
 46          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 47          KK     R12
 48          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 49          RS       7    FLOW      -1
 50          RC    .045     .03    .045    4500     .01
 51          RX       0       1      45    52.5    72.5      80     124     125
 52          RY       4     2.5     2.5       0       0     2.5     2.5       4
             * DDM   ***** Updated *****

 53          KK      20
 54          KM   SUB-BASIN 20
 55          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 56          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 57          KM     L = 2.50  Kb = .040  Adj. Slope =   88.0
 58          BA   1.167
 59          LG    .350    .390   5.800    .190   1.000
 60          UC    .646    .434
 61          UA       0       3       5       8      12      20      43      75      90      96
 62          UA     100
             * DDM   ***** Preserved *****

 63          KK     C20
 64          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 65          HC       2
             * DDM   ***** Preserved *****

 66          KK     R20
 67          KM        ROUTE FLOW INTO APACHE JUNCTION FRS
 68          RS       2    FLOW      -1
 69          RC    .016    .016    .016     990    .004
 70          RX       0       5       7    14.5    34.5      42      44      50
 71          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****

 72          KK      40
 73          KM   SUB-BASIN 40
 74          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 75          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 76          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 77          BA   2.227
 78          LG    .340    .340   4.900    .280   5.000
 79          UC    .496    .265
 80          UA       0       3       5       8      12      20      43      75      90      96
 81          UA     100
             * DDM   ***** Updated *****
1                                     HEC-1 INPUT                                          PAGE  3

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


 82          KK      60
 83          KM   SUB-BASIN 60
 84          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 85          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .989
 86          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 87          BA   1.751
 88          LG    .330    .350   5.800    .190   9.000
 89          UC    .596    .476
 90          UA       0       3       5       8      12      20      43      75      90      96
 91          UA     100
             * DDM   ***** Preserved *****

 92          KK     C60
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 93          KM     C60GRAPH COMBINATION FOR APACHE JUNCTION FRS
             *      1       2
 94          HC       3
             * DDM   ***** Preserved *****

 95          KK     S60
 96          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
 97          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
 98          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
 99          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
100          RS       1    STOR       0
101          SV       0   46.80   73.71   130.0  170.70  322.23  584.06  812.88  1121.9
102          SQ     0.0    0.01    0.02   26.30   91.20  102.42  347.66  1650.0  7700.0
103          SE  794.09  795.15  795.65  796.65  797.29  799.29  801.92  803.87  806.15
             * DDM   ***** Preserved *****

104          KK     R60
105          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
106          RS       3    FLOW      -1
107          RC    .016    .016    .016    2850    .012
108          RX       0       1       2     2.1     5.6     5.7       6       7
109          RY     4.5     3.5     3.5       0       0     3.5     3.5     4.5
             * DDM   ***** Preserved *****

110          KK    RR60
111          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
112          RS       3    FLOW      -1
113          RC    .016    .016    .016    3500    .005
114          RX       0       1       2     2.1     7.1     7.2       8       9
115          RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
             * DDM   ***** Updated *****

116          KK      80
117          KM   SUB-BASIN 80
118          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
119          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
120          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
121          BA   1.493
122          LG    .330    .330   5.600    .210   4.000
123          UC    .433    .257
124          UA       0       3       5       8      12      20      43      75      90      96
                                        HEC-1 INPUT                                          PAGE  4

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

125          UA     100
             * DDM   ***** Preserved *****

126          KK     C80
127          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
128          HC       2   1.493
             * DDM   ***** Preserved *****

129          KK     R80
130          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
131          RS       1    FLOW      -1
132          RC    .025    .016    .025    1200    .003
133          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
134          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

135          KK     100
136          KM   SUB-BASIN 100
137          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
138          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
139          KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
140          BA    .488
141          LG    .320    .290   5.100    .260   3.000
142          UC    .533    .471
143          UA       0       5      16      30      65      77      84      90      94      97
144          UA     100
             * DDM   ***** Preserved *****

145          KK    C100
146          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
147          HC       2
             * DDM   ***** Preserved *****

148          KK    R100
149          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
150          RS       1    FLOW      -1
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151          RC    .016    .016    .016     940    .005
152          RX       0       1       2     2.1    52.1    52.2      53      54
153          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

154          KK     120
155          KM   SUB-BASIN 120
156          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
157          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
158          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
159          BA   2.197
160          LG    .330    .280   6.800    .130  11.000
161          UC    .429    .227
162          UA       0       3       5       8      12      20      43      75      90      96
163          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  5

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

164          KK    C120
165          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
166          HC       2
             * DDM   ***** Preserved *****

167          KK    R120
168          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
169          RS       1    FLOW      -1
170          RC    .025    .016    .025    2100    .005
171          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
172          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

173          KK     140
174          KM   SUB-BASIN 140
175          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
176          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
177          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
178          BA    .598
179          LG    .310    .280   4.200    .440   5.000
180          UC    .421    .278
181          UA       0       5      16      30      65      77      84      90      94      97
182          UA     100
             * DDM   ***** Updated *****

183          KK     150
184          KM   SUB-BASIN 150
185          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
186          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
187          KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
188          BA    .407
189          LG    .350    .360   5.100    .260   7.000
190          UC    .296    .221
191          UA       0       3       5       8      12      20      43      75      90      96
192          UA     100
             * DDM   ***** Preserved *****

193          KK    R150
194          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
195          RS       2    FLOW      -1
196          RC    .045     .04    .045    3100    .032
197          RX       0       1       2      23      33      54      55      56
198          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

199          KK    R152
200          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
201          RS       3    FLOW      -1
202          RC    .045     .03    .045    5900    .019
203          RX       0       1       2       8      33      39      40      41
204          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  6

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

205          KK     160
206          KM   SUB-BASIN 160
207          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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208          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
209          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
210          BA    .365
211          LG    .340    .330   4.150    .440   1.000
212          UC    .587    .659
213          UA       0       3       5       8      12      20      43      75      90      96
214          UA     100
             * DDM   ***** Updated *****

215          KK     180
216          KM   SUB-BASIN 180
217          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
218          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
219          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
220          BA   1.014
221          LG    .350    .350   4.150    .430    .000
222          UC    .571    .400
223          UA       0       3       5       8      12      20      43      75      90      96
224          UA     100
             * DDM   ***** Preserved *****

225          KK    C180
226          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
227          HC       5
             *
             * DDM   ***** Updated *****

228          KK     210
229          KM   SUB-BASIN 210
230          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
231          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
232          KM     L = 1.84  Kb = .043  Adj. Slope =  315.0
233          BA    .792
234          LG    .350    .360   6.800    .130   4.000
235          UC    .313    .189
236          UA       0       3       5       8      12      20      43      75      90      96
237          UA     100
             * DDM   ***** Preserved *****

238          KK    R210
239          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
240          RS       2    FLOW      -1
241          RC    .045     .03    .045    5100    .022
242          RX       0       1       2      14      34      46      47      48
243          RY       4       4       4       0       0       4       4       4
             *
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE  7

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

244          KK     240
245          KM   SUB-BASIN 240
246          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
247          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
248          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
249          BA   1.408
250          LG    .350    .370   5.300    .230   2.000
251          UC    .467    .356
252          UA       0       3       5       8      12      20      43      75      90      96
253          UA     100
             * DDM   ***** Preserved *****

254          KK    C240

255          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
256          HC       2
             * DDM   ***** Preserved *****

257          KK    S240
258          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN: DIVERSION.
259          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
260          RS       1    STOR       0
261          SA    1.38    14.2    36.5
262          SE     1.7       5      11
263          SS       5      42       3     1.5
             * DDM   ***** Preserved *****

264          KK    R240
265          KM   ROUTE FLOW FROM SUB-BASIN 240 TO SUB-BASIN 220
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266          KM   PASS MOUNTAIN DIVERSION
267          RS       3    FLOW      -1
268          RC    .035    .025    .035    1800    .005
269          RX       0      15      30      39      69      81      96     111
270          RY     3.6     3.3       3       0       0       3       3       4
             *
             * DDM   ***** Updated *****

271          KK     220
272          KM   SUB-BASIN 220
273          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
274          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
275          KM     L = 1.92  Kb = .046  Adj. Slope =  315.0
276          BA    .473
277          LG    .350    .350   7.000    .120   5.000
278          UC    .333    .282
279          UA       0       3       5       8      12      20      43      75      90      96
280          UA     100
             * DDM   ***** Preserved *****

281          KK    C220
282          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
283          HC       2
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  8

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


284          KK    S220
285          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
286          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
287          RS       1    STOR       0
288          SA     .78     4.1    13.7
289          SE       1       3      10
290          SS       3      65       3     1.5
             * DDM   ***** Preserved *****

291          KK    R220
292          KM   ROUTE FLOW FROM SUB-BASIN 220 TO SUB-BASIN 200
293          KM   PASS MOUNTAIN DIVERSION
294          RS       1    FLOW      -1
295          RC    .035    .025    .035    1250    .005
296          RX       0      50     100     109     139     148     178     184
297          RY       5       4       3       0       0       3       3       5
             * DDM   ***** Updated *****

298          KK     190
299          KM   SUB-BASIN 190
300          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
301          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
302          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0

303          BA    .918
304          LG    .350    .390   5.800    .190   8.000
305          UC    .321    .185
306          UA       0       3       5       8      12      20      43      75      90      96
307          UA     100
             * DDM   ***** Preserved *****

308          KK    R190
309          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
310          RS       2    FLOW      -1
311          RC    .045     .03    .045    4740     .03
312          RX       0       1       2      17      37      52      53      54
313          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

314          KK    R192
315          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
316          RS       3    FLOW      -1
317          RC    .045    .035    .045    2200    .018
318          RX       0       1      50      59      79      88     137     138
319          RY     4.5       3       3       0       0       3       3     4.5
             * DDM   ***** Updated *****

320          KK     200
321          KM   SUB-BASIN 200
322          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
323          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
324          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
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 325          BA    .530
 326          LG    .350    .390   5.700    .200  10.000
 327          UC    .300    .201
1                                        HEC-1 INPUT                                                    PAGE  9

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

 328          UA       0       3       5       8      12      20      43      75      90      96
 329          UA     100
              * DDM   ***** Preserved *****

 330          KK    C200
 331          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
 332          HC       3
              * DDM   ***** Preserved *****

 333          KK    S200
 334          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
 335          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
 336          RS       1    STOR       0
 337          SA    2.56     3.1     9.4
 338          SE       0       3      10
 339          SS       3     112       3     1.5
              * DDM   ***** Preserved *****

 340          KK    R200
 341          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS
 342          RS       1    FLOW      -1
 343          RC    .035    .025    .035     650    .005
 344          RX       0       1       2      17     117     132     133     134
 345          RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****

 346          KK   SS200
 347          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
 348          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
 349          RS       1    STOR       0
 350          SA       8     9.2     9.2
 351          SE       0       7      10
 352          SS       7     251       3     1.5
              * DDM   ***** Preserved *****

 353          KK   RR200
 354          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS
 355          RS       3    FLOW      -1
 356          RC    .035    .025    .035    3150    .005
 357          RX       0       1       2      17     117     132     133     134
 358          RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****

 359          KK   CC180
 360          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
              *      1       2
 361          HC       2
              * DDM   ***** Preserved *****

 362          KK    S180
 363          KM   SIGNAL BUTTE FRS DATED 1/28/85
 364          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
 365          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
 366          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 247 ACRE-FEET
 367          RS       1    STOR       0
1                                        HEC-1 INPUT                                                    PAGE 10

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

 368          SV     0.0  172.10  244.35  482.24  871.30 1101.52 1294.09 1418.10 1578.77 1980.33
 369          SQ     0.0   10.20   10.55  121.80  138.40  145.90  151.40  154.67  390.00  1950.0
 370          SE  698.23  702.23  703.23  706.23  710.23  712.23  713.73  714.63  715.73  718.23
              * DDM   ***** Preserved *****

 371          KK    R180
 372          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
 373          KM   Routing length increased 100' from 1500' to 1600'    12/12/00
 374          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
 375          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
 376          RS       2    FLOW      -1
 377          RC    .035    .025    .035    1600    .003
 378          RX       0       1       2    22.6    38.6    59.2      60      61
 379          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
              * DDM   ***** Updated *****
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380          KK     260
381          KM   SUB-BASIN 260
382          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
383          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
384          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
385          BA    .263
386          LG    .300    .190   6.600    .170  15.000
387          UC    .363    .217
388          UA       0       5      16      30      65      77      84      90      94      97
389          UA     100
             * DDM   ***** Preserved *****

390          KK    C260
391          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
392          HC       2    .263
             * DDM   ***** Preserved *****


393          KK    R260
394          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
395          KM   Routing length unchanged     12/12/00
396          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
397          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
398          RS       3    FLOW      -1
399          RC    .035    .025    .035    2300    .003
400          RX       0       1       2    23.4    43.4    64.8      65      66
401          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

402          KK     280
403          KM   SUB-BASIN 280
404          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
405          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
406          KM     L =  .77  Kb = .048  Adj. Slope =   84.0
407          BA    .319
408          LG    .300    .250   5.300    .290  15.000
409          UC    .329    .168
410          UA       0       5      16      30      65      77      84      90      94      97
411          UA     100
             * DDM   ***** Preserved *****
                                        HEC-1 INPUT                                          PAGE 11

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


412          KK    C280
413          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
414          HC       2
             * DDM   ***** Preserved *****

415          KK    R280
416          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
417          KM   Routing length decreased 400' from 2500' to 2100'    12/12/00
418          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
419          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
420          RS       3    FLOW      -1
421          RC    .035    .025    .035    2100    .003
422          RX       0       1       2    23.4    43.4    64.8      65      66
423          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             *
             * DDM   ***** Updated *****

424          KK     300
425          KM   SUB-BASIN 300
426          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
427          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
428          KM     L =  .78  Kb = .049  Adj. Slope =  103.0
429          BA    .289
430          LG    .320    .290   4.200    .480  11.000
431          UC    .325    .177
432          UA       0       5      16      30      65      77      84      90      94      97
433          UA     100
             * DDM   ***** Preserved *****

434          KK    C300
435          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
436          HC       2
             * DDM   ***** Preserved *****

437          KK    R300
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438          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
439          KM   Routing length increased 300' from 2200' to 2500'    12/12/00
440          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
441          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
442          RS       2    FLOW      -1
443          RC    .035    .025    .035    2500    .003
444          RX       0       1       2    23.4    55.4    76.8      77      78
445          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             *
             * DDM   ***** Updated *****

446          KK     305

447          KM   SUB-BASIN 305
448          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
449          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
450          KM     L = 2.50  Kb = .044  Adj. Slope =  116.0
451          BA    .702
452          LG    .340    .340   4.550    .350   6.000
453          UC    .642    .576
1                                        HEC-1 INPUT                                                    PAGE 12

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

454          UA       0       5      16      30      65      77      84      90      94      97
455          UA     100
             * DDM   ***** Preserved *****

456          KK    C305
457          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 300 AND 305
458          HC       2
             * DDM   ***** Preserved *****

459          KK    R305
460          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
461          KM   Routing length decreased 50' from 6050' to 6000'     12/12/00
462          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
463          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
464          RS       3    FLOW      -1
465          RC    .016    .016    .016    6000   .0146
466          RX       0       1       2     2.1    16.1    16.2      17      18
467          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *      1       2
             * DDM   ***** Updated *****

468          KK     350
469          KM   SUB-BASIN 350
470          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
471          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
472          KM     L = 2.22  Kb = .041  Adj. Slope =  315.0
473          BA    .997
474          LG    .350    .350   4.550    .340   4.000
475          UC    .363    .227
476          UA       0       3       5       8      12      20      43      75      90      96
477          UA     100
             * DDM   ***** Preserved *****

478          KK    D350
479          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
480          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
481          DT   SF350
482          DI       0    5000
483          DQ       0    2500
             * DDM   ***** Preserved *****

484          KK    R350
485          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
486          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
487          RS       7    FLOW      -1
488          RC    .045    .035    .045    5150    .025
489          RX       0       1      40      46      56      62     102     103
490          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE 13

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

491          KK     310
492          KM   SUB-BASIN 310
493          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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494          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
495          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
496          BA    .538
497          LG    .350    .350   3.910    .480    .000
498          UC    .483    .520
499          UA       0       3       5       8      12      20      43      75      90      96
500          UA     100
             * DDM   ***** Preserved *****

501          KK    C310
502          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
503          HC       2    1.04
             * DDM   ***** Preserved *****

504          KK    R310
505          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
506          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
507          RS      11    FLOW      -1
508          RC    .045    .035    .045   10050    .022
509          RX       0       1      40      46      56      62     102     103
510          RY       3       2       2       0       0       2       2       3
             *
             * DDM   ***** Updated *****

511          KK     320
512          KM   SUB-BASIN 320
513          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
514          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
515          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
516          BA    .945
517          LG    .310    .300   4.600    .350  14.000
518          UC    .508    .339
519          UA       0       5      16      30      65      77      84      90      94      97
520          UA     100
             * DDM   ***** Preserved *****

521          KK    D320
522          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
523          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
524          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
525          KM        MAXIMUM VOLUME DIVERSION = 12.27acre-feet
             *      1
526          DT   BS320   12.27
527          DI       0   10000
528          DQ       0   10000
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 14

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


529          KK   RT320
530          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
531          DR   BS320
             * DDM   ***** Preserved *****

532          KK    S320
533          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
534          KM   12.27 ACRE-FEETx43560/36x3600=4.1cfs
             *      1
535          RS       1    STOR       0
536          SV       0     .01    12.3    18.0
537          SQ       0     3.0     4.2     6.0
             * DDM   ***** Preserved *****

538          KK    C320
539          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
540          HC       4
             * DDM   ***** Updated *****

541          KK     340
542          KM   SUB-BASIN 340
543          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
544          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
545          KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
546          BA   1.416
547          LG    .280    .280   4.150    .520  21.000
548          UC    .512    .291
549          UA       0       5      16      30      65      77      84      90      94      97
550          UA     100
             * DDM   ***** Preserved *****
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551          KK    D340
552          KM         DIVERT FLOW INTO ONLINE  DETENTION BASIN
553          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
554          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
555          KM         MAXIMUM VOLUME DIVERSION = 78.1 acre-feet
556          DT   BS340    78.1
557          DI        0   10000
558          DQ        0   10000
             * DDM   ***** Preserved *****

559          KK   RT340
560          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
561          DR   BS340
             * DDM   ***** Preserved *****

562          KK    S340
563          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
564          KM    78.1 ACRE-FEETx43560/36x3600=26.3cfs
             *      1
565          RS        1    STOR       0
566          SV        0     .01    78.1     100
567          SQ        0     3.0    26.3     250
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 15

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


568          KK    C340
569          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
570          HC        3
             * DDM   ***** Preserved *****

571          KK   RT350
572          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
573          DR   SF350
             * DDM   ***** Preserved *****

574          KK   RR350
575          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
576          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
577          RS        7    FLOW      -1
578          RC     .045    .035    .045    6050    .025
579          RX        0       1      40      46      56      62     102     103
580          RY        3       2       2       0       0       2       2       3
             *
             * DDM   ***** Updated *****

581          KK     355
582          KM   SUB-BASIN 355
583          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
584          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
585          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
586          BA    .676
587          LG    .340    .340   4.450    .370   4.000
588          UC    .488    .502
589          UA       0       3       5       8      12      20      43      75      90      96
590          UA     100
             * DDM   ***** Preserved *****

591          KK    C355
592          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
593          HC        2   1.161
             * DDM   ***** Preserved *****

594          KK    R355
595          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
596          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
597          RS        9    FLOW      -1
598          RC     .045    .035    .045   10100    .026
599          RX        0       1      40      46      56      62     102     103
600          RY        3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

601          KK     360
602          KM   SUB-BASIN 360
603          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
604          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
605          KM     L = 2.10  Kb = .047  Adj. Slope =  124.0
606          BA    .880
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 607          LG    .260    .270   4.100    .560  20.000
 608          UC    .575    .390
                                    HEC-1 INPUT                                                    PAGE 16

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

 609          UA       0       5      16      30      65      77      84      90      94      97
 610          UA     100
              * DDM   ***** Preserved *****

 611          KK    D360
 612          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 613          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
 614          KM        MAXIMUM VOLUME DIVERSION = 35.6 acre-feet
 615          DT   BS360    35.6
 616          DI       0   10000
 617          DQ       0   10000
              * DDM   ***** Preserved *****

 618          KK   RT360
 619          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 620          DR   BS360
              * DDM   ***** Preserved *****

 621          KK    S360
 622          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 623          KM    35.6 ACRE-FEETx43560/36x3600=12.0 cfs
 624          RS       1    STOR       0
 625          SV       0     .01    35.6      50
 626          SQ       0     3.0    12.0     120
              * DDM   ***** Preserved *****

 627          KK    C360
 628          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 629          HC       4
              *
              * DDM   ***** Updated *****

 630          KK     370
 631          KM   SUB-BASIN 370
 632          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 633          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 634          KM     L = 1.90  Kb = .044  Adj. Slope =  203.5
 635          BA    .672
 636          LG    .340    .320   4.650    .330   8.000
 637          UC    .404    .284
 638          UA       0       3       5       8      12      20      43      75      90      96
 639          UA     100
              *
              * DDM   ***** Updated *****

 640          KK     395
 641          KM   SUB-BASIN 395
 642          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 643          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 644          KM     L = 1.30  Kb = .051  Adj. Slope =  219.2
 645          BA    .199
 646          LG    .330    .320   4.900    .300  10.000
 647          UC    .333    .338
 648          UA       0       3       5       8      12      20      43      75      90      96
 649          UA     100
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                                    PAGE 17

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


 650          KK    C370
 651          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 652          HC       2
              * DDM   ***** Preserved *****

 653          KK    R370
 654          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 655          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
 656          RS      11    FLOW      -1
 657          RC    .045    .035    .045   10250    .023
 658          RX       0       1      40      46      56      62     102     103
 659          RY       4       2       2       0       0       2       2       4
              * DDM   ***** Updated *****
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660          KK     380
661          KM   SUB-BASIN 380
662          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
663          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
664          KM     L = 2.20  Kb = .050  Adj. Slope =  114.0
665          BA    .849
666          LG    .260    .250   4.150    .580  18.000
667          UC    .658    .480
668          UA       0       5      16      30      65      77      84      90      94      97
669          UA     100
             * DDM   ***** Preserved *****

670          KK    D380
671          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
672          KM   DETENTION/RETENTION BASINS LOCATED WITHIN MESA HIGHLANDS
673          KM        MAXIMUM VOLUME DIVERSION = 5.7 acre-feet
674          DT   BS380     5.7
675          DI       0   10000
676          DQ       0   10000
             * DDM   ***** Preserved *****

677          KK   RT380
678          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
679          DR   BS380
             * DDM   ***** Preserved *****

680          KK    S380
681          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
682          KM     5.7 ACRE-FEETx43560/36x3600=1.9cfs
683          RS       1    STOR       0
684          SV       0     .01     5.7      10
685          SQ       0     0.5     1.9      50
             * DDM   ***** Preserved *****

686          KK    C380
687          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
688          HC       4
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                        PAGE 18

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

689          KK     390
690          KM   SUB-BASIN 390
691          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
692          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
693          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
694          BA    .248
695          LG    .300    .250   4.700    .380  18.000
696          UC    .204    .106
697          UA       0       5      16      30      65      77      84      90      94      97
698          UA     100
             * DDM   ***** Preserved *****

699          KK    D390
700          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
701          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
702          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
             *      1
703          DT   BS390     3.5
704          DI       0   10000
705          DQ       0   10000
             * DDM   ***** Preserved *****

706          KK   RT390
707          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
708          DR   BS390
             * DDM   ***** Preserved *****

709          KK    S390
710          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
711          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
712          RS       1    STOR       0
713          SV       0     .01     3.5     5.0
714          SQ       0     0.2     1.2     2.5
             * DDM   ***** Preserved *****

715          KK    C390
716          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
717          HC       2
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                 * DDM   ***** Preserved *****

 718             KK    R390
 719             KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 720             KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
 721             RS      15    FLOW      -1
 722             RC    .045    .045    .045    8800    .020
 723             RX       0       1      40      46      56      62     102     103
 724             RY       3       2       2       0       0       2       2       3
                 * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE 19

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


 725             KK     400
 726             KM   SUB-BASIN 400
 727             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 728             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 729             KM     L = 1.64  Kb = .052  Adj. Slope =  110.0
 730             BA    .652
 731             LG    .280    .250   4.150    .560  12.000
 732             UC    .554    .364
 733             UA       0       5      16      30      65      77      84      90      94      97
 734             UA     100
                 * DDM   ***** Preserved *****

 735             KK    D400
 736             KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 737             KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
 738             KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
                 *      1
 739             DT   BS400     5.6
 740             DI       0   10000
 741             DQ       0   10000
                 * DDM   ***** Preserved *****

 742             KK   RT400
 743             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 744             DR   BS400
                 * DDM   ***** Preserved *****

 745             KK    S400
 746             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 747             KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
 748             RS       1    STOR       0
 749             SV       0     .01     5.6     8.0
 750             SQ       0       1       2     3.0
                 * DDM   ***** Preserved *****


 751             KK    C400
 752             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 753             HC       2
                 * DDM   ***** Preserved *****

 754             KK   CC400
 755             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 756             HC       3
                 * DDM   ***** Updated *****

 757             KK    `385
 758             KM   SUB-BASIN 385
 759             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 760             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 761             KM     L = 2.30  Kb = .045  Adj. Slope =  303.0
 762             BA    .527
 763             LG    .340    .360   5.600    .220  13.000
 764             UC    .383    .358
 765             UA       0       3       5       8      12      20      43      75      90      96
1                                          HEC-1 INPUT                                                    PAGE 20

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

 766             UA     100
                 * DDM   ***** Preserved *****

 767             KK    D385
 768             KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
 769             DT   SF385
 770             DI       0    5000
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771          DQ       0    3000
             * DDM   ***** Preserved *****

772          KK    R385
773          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
774          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
775          RS      14    FLOW      -1
776          RC    .045     .04    .045   10250    .022
777          RX       0       1      40      46      56      62     102     103
778          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

779          KK     420
780          KM   SUB-BASIN 420
781          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
782          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
783          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
784          BA    .868
785          LG    .310    .270   4.150    .510  11.000
786          UC    .504    .315
787          UA       0       5      16      30      65      77      84      90      94      97
788          UA     100
             * DDM   ***** Preserved *****

789          KK    D420
790          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
791          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
792          KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
             *      1
793          DT   BS420    8.65
794          DI       0   10000
795          DQ       0   10000
             * DDM   ***** Preserved *****

796          KK   RT420
797          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
798          DR   BS420

             * DDM   ***** Preserved *****

799          KK    S420
800          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
801          KM    8.65 ACRE-FEETx43560/36x3600=2.9cfs
802          RS       1    STOR       0
803          SV       0     .01    8.65    12.0
804          SQ       0     1.0     2.9     5.0
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 21

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

805          KK    C420
806          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
807          HC       3  1.0598
             * DDM   ***** Preserved *****

808          KK   CC420
809          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
810          HC       2
             * DDM   ***** Updated *****

811          KK     440
812          KM   SUB-BASIN 440
813          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
814          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
815          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
816          BA    .080
817          LG    .190    .380   6.400    .140  13.000
818          UC    .129    .077
819          UA       0       3       5       8      12      20      43      75      90      96
820          UA     100
             * DDM   ***** Preserved *****

821          KK    R70
822          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
823          RS       2    FLOW      -1
824          RC     .05    .035     .05    2250     .08
825          RX    1000    1025    1050    1070    1075    1095    1120    1145
826          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****
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827          KK     441
828          KM   SUB-BASIN 441
829          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
830          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
831          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
832          BA    .010
833          LG    .300    .250   5.600    .220   5.000
834          UC    .150    .225
835          UA       0       5      16      30      65      77      84      90      94      97
836          UA     100
             * DDM   ***** Preserved *****

837          KK    C108
838          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
839          HC       2
             * DDM   ***** Preserved *****

840          KK      D4
841          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
             *      1
842          DT   SPLIT
843          DI       0      14      40      82     120     154     180
844          DQ       0       7      20      41      60      77      90
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 22

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

845          KK    R108
846          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
847          RS       2    FLOW      -1
848          RC     .05    .035     .05    3200      .1
849          RX    1000    1025    1050    1070    1075    1095    1120    1145
850          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

851          KK     442
852          KM   SUB-BASIN 442
853          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
854          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
855          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
856          BA    .100
857          LG    .300    .270   3.290    .770   5.000
858          UC    .258    .264
859          UA       0       5      16      30      65      77      84      90      94      97
860          UA     100
             * DDM   ***** Preserved *****

861          KK     C67
862          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
863          HC       2
             * DDM   ***** Preserved *****

864          KK      D6
865          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
866          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
             *      1
867          DT  BASIN4     3.3
868          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
869          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
             * DDM   ***** Preserved *****

870          KK    RTD6
871          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
872          DR  BASIN4
             * DDM   ***** Preserved *****

873          KK     SD6
874          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
875          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
             *      1
876          RS       1    STOR       0
877          SV       0     .01     3.3     5.0
878          SQ       0     0.2     1.1     2.0
             * DDM   ***** Preserved *****

879          KK     CD6
880          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
881          HC       2
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                * DDM   ***** Updated *****
                                        HEC-1 INPUT                                                    PAGE 23

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


 882            KK     443
 883            KM   SUB-BASIN 443
 884            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 885            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 886            KM     L =  .71  Kb = .050  Adj. Slope =  315.0
 887            BA    .080
 888            LG    .250    .190   8.000    .080  10.000
 889            UC    .196    .194
 890            UA       0       5      16      30      65      77      84      90      94      97
 891            UA     100
                * DDM   ***** Preserved *****

 892            KK     D66
 893            KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
 894            KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
 895            DT   WSH66
 896            DI       0      78     100     200
 897            DQ       0      78      78      78
                * DDM   ***** Preserved *****

 898            KK    R113
 899            KM        ROUTE FLOW FROM C113 TO C114
 900            RS       1    FLOW      -1
 901            RC    .019    .019    .019    1300    .029
 902            RX    1000    1004    1008    1012    1018    1022    1026    1030
 903            RY      17   15.33   12.67      10      10   12.67   15.33      17
                * DDM   ***** Preserved *****

 904            KK    C114
 905            KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
 906            HC       2
                * DDM   ***** Updated *****

 907            KK     444
 908            KM   SUB-BASIN 444
 909            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 910            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 911            KM     L =  .33  Kb = .034  Adj. Slope =  315.0
 912            BA    .040
 913            LG    .130    .350   4.450    .320   1.000
 914            UC    .112    .084
 915            UA       0       3       5       8      12      20      43      75      90      96
 916            UA     100
                * DDM   ***** Preserved *****

 917            KK     R58
 918            KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
 919            RS       2    FLOW      -1
 920            RC     .05    .035     .05    2370   .0516
 921            RX    1000    1010    1020    1050    1055    1085    1095    1105
 922            RY      19      18      17      10      10      17      18      19
                * DDM   ***** Updated *****
1                                       HEC-1 INPUT                                                    PAGE 24

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


 923            KK     445
 924            KM   SUB-BASIN 445
 925            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 926            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 927            KM     L =  .82  Kb = .036  Adj. Slope =  315.0
 928            BA    .190
 929            LG    .170    .320   3.470    .590   3.000
 930            UC    .192    .130
 931            UA       0       5      16      30      65      77      84      90      94      97
 932            UA     100
                * DDM   ***** Preserved *****

 933            KK    C107
 934            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
 935            HC       2
                * DDM   ***** Preserved *****

 936            KK    R107
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937          KM        ROUTE FLOW FROM C107 TO C109
938          RS       2    FLOW      -1
939          RC     .05    .035     .05     700   .0516
940          RX    1000    1010    1020    1050    1055    1085    1095    1105
941          RY      19      18      17      10      10      17      18      19
             * DDM   ***** Preserved *****

942          KK    RTB2
943          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
             *      1
944          DR   SPLIT
             * DDM   ***** Preserved *****

945          KK  RSPLIT
946          KM        ROUTE FLOW FROM SPLIT TO C109
947          RS       1    FLOW      -1
948          RC     .05    .035     .05     800     .05
949          RX    1000    1025    1050    1070    1075    1095    1120    1145
950          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

951          KK     446
952          KM   SUB-BASIN 446
953          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
954          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
955          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
956          BA    .040
957          LG    .270    .250   4.500    .400  19.000
958          UC    .183    .189
959          UA       0       5      16      30      65      77      84      90      94      97
960          UA     100
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 25

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


961          KK    C109
962          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
963          HC       3
             * DDM   ***** Preserved *****

964          KK      D5
965          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
966          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
             *      1
967          DT  WSH404
968          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
969          DQ       0      35      35      35      35      35      35      35
             * DDM   ***** Preserved *****

970          KK    R109
971          KM        ROUTE FLOW FROM C109 TO C110
972          RS       1    FLOW      -1
973          RC    .019    .019    .019    3080     .05
974          RX    1000    1005    1010    1015    1025    1030    1035    1040
975          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
             * DDM   ***** Updated *****

976          KK     447
977          KM   SUB-BASIN 447
978          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
979          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
980          KM     L =  .49  Kb = .056  Adj. Slope =  221.0
981          BA    .090
982          LG    .250    .270   3.350    .870  30.000
983          UC    .208    .145
984          UA       0       5      16      30      65      77      84      90      94      97
985          UA     100
             * DDM   ***** Preserved *****

986          KK   RT404
987          KM        RETRIEVE DIVERTED FLOW FOR WASH 109
988          DR  WSH404
             * DDM   ***** Preserved *****

989          KK    R404
990          KM        ROUTE FLOW FROM C110 TO C110
991          RS       4    FLOW      -1
992          RC    .019    .019    .019    3540     .03
993          RX    1000    1012    1016    1020    1025    1029    1033    1045
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 994          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

 995          KK    C110
 996          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
 997          HC       3
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 26

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


 998          KK    R110
 999          KM        ROUTE FLOW FROM C110 TO C115
1000          RS       1    FLOW      -1
1001          RC    .019    .019    .019     580   .0291
1002          RX    1000    1012    1016    1020    1035    1039    1043    1055
1003          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1004          KK    C115
1005          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1006          HC       2
              * DDM   ***** Preserved *****

1007          KK    R115
1008          KM        ROUTE FLOW FROM C115 TO Sub 453
1009          RS       1    FLOW      -1
1010          RC    .019    .019    .019    2125    .029
1011          RX    1000    1012    1016    1020    1035    1039    1043    1055
1012          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****

1013          KK     448
1014          KM   SUB-BASIN 448
1015          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1016          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1017          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1018          BA    .045
1019          LG    .170    .310   4.200    .390  11.000
1020          UC    .133    .102
1021          UA       0       5      16      30      65      77      84      90      94      97
1022          UA     100
              * DDM   ***** Updated *****

1023          KK     449
1024          KM   SUB-BASIN 449
1025          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1026          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1027          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1028          BA    .050
1029          LG    .260    .280   3.500    .640   6.000
1030          UC    .167    .134
1031          UA       0       5      16      30      65      77      84      90      94      97
1032          UA     100
              * DDM   ***** Preserved *****

1033          KK   C6364
1034          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1035          HC       2
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 27

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


1036          KK   R6364
1037          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1038          RS       5    FLOW      -1
1039          RC     .05    .035     .05    4375   .0333
1040          RX    1000    1027    1053    1080    1090    1117    1143    1170
1041          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1042          KK     450
1043          KM   SUB-BASIN 450
1044          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1045          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1046          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1047          BA    .070
1048          LG    .340    .350   3.630    .570   4.000
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1049          UC    .296    .383
1050          UA       0       3       5       8      12      20      43      75      90      96
1051          UA     100
              * DDM   ***** Updated *****

1052          KK     451
1053          KM   SUB-BASIN 451
1054          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1055          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1056          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1057          BA    .025
1058          LG    .340    .340   3.290    .750   3.000
1059          UC    .271    .453
1060          UA       0       3       5       8      12      20      43      75      90      96
1061          UA     100
              * DDM   ***** Preserved *****

1062          KK    C451
1063          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451
1064          HC       2
              * DDM   ***** Preserved *****

1065          KK    RT66
1066          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1067          DR   WSH66
              * DDM   ***** Updated *****

1068          KK     452
1069          KM   SUB-BASIN 452
1070          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1071          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1072          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1073          BA    .040
1074          LG    .260    .280   3.700    .550   9.000
1075          UC    .171    .166
1076          UA       0       5      16      30      65      77      84      90      94      97
1077          UA     100
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 28

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

1078          KK   C6465
1079          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1080          HC       2
              * DDM   ***** Preserved *****

1081          KK   R6566
1082          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1083          RS       3    FLOW      -1
1084          RC     .05    .035     .05    2435   .0282
1085          RX    1000    1045    1090    1150    1160    1220    1265    1310
1086          RY      25      23      20      10      10      20      23      25
              * DDM   ***** Preserved *****

1087          KK    C116
1088          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1089          HC       3
              * DDM   ***** Preserved *****

1090          KK  BASIN5
1091          KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1092          KM        BASIN 5 FEET DEEP
1093          RS       1    ELEV       0
1094          SV       0     4.5     9.9
1095          SQ       0      69     190
1096          SE       0     2.5       5
              * DDM   ***** Preserved *****

1097          KK    R116
1098          KM   ROUTE FLOW FROM C116 TO C117
1099          RS       2    FLOW      -1
1100          RC     .05    .035     .05    1300   .0333
1101          RX    1000    1100    1200    1300    1320    1420    1520    1620
1102          RY      13      12      11      10      10      11      12      13
              * DDM   ***** Updated *****

1103          KK     453
1104          KM   SUB-BASIN 453
1105          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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1106          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1107          KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1108          BA    .060
1109          LG    .290    .300   3.290    .820  18.000
1110          UC    .275    .284
1111          UA       0       5      16      30      65      77      84      90      94      97
1112          UA     100
              * DDM   ***** Preserved *****

1113          KK    C117
1114          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1115          HC       2
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 29

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


1116          KK    C118
1117          KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1118          HC       2
              * DDM   ***** Preserved *****

1119          KK    R118
1120          KM        ROUTE FLOW FROM C118 TO  DIV7
1121          RS       1    FLOW      -1
1122          RC    .019    .019    .019    1500    .024
1123          RX    1000    1012    1016    1020    1035    1039    1043    1055
1124          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1125          KK      D7
1126          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1127          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
              *      1
1128          DT  BASIN6     3.6
1129          DI       0     363     487     563     645     844
1130          DQ       0       3      47      83     125     244
              * DDM   ***** Preserved *****

1131          KK    RTD7
1132          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1133          DR  BASIN6
              * DDM   ***** Preserved *****

1134          KK     SD7
1135          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1136          KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1137          RS       1    STOR       0
1138          SV       0     .01     3.6     5.0
1139          SQ       0     0.2     1.2     2.0
              * DDM   ***** Preserved *****

1140          KK     CD7
1141          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1142          HC       2
              * DDM   ***** Updated *****

1143          KK     454
1144          KM   SUB-BASIN 454
1145          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1146          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1147          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1148          BA    .180
1149          LG    .300    .310   3.780    .560  14.000
1150          UC    .379    .395
1151          UA       0       5      16      30      65      77      84      90      94      97
1152          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 30

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


1153          KK    C119
1154          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
              *      1       2
1155          HC       2
              * DDM   ***** Preserved *****

1156          KK    R454
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1157          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1158          KM   ROUTE FLOW FROM C119 TO 415C
1159          RS       3    FLOW      -1
1160          RC    .045    .035    .045    2200    .009
1161          RX       0      .5       1      33      42      67    67.5      68
1162          RY       5       4       4       0       0       6       6       6
              *
              * DDM   ***** Updated *****

1163          KK     415
1164          KM   SUB-BASIN 415
1165          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1166          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1167          KM     L = 2.58  Kb = .044  Adj. Slope =  298.5
1168          BA    .609
1169          LG    .320    .290   4.500    .400  15.000
1170          UC    .421    .401
1171          UA       0       5      16      30      65      77      84      90      94      97
1172          UA     100
              * DDM   ***** Preserved *****

1173          KK   RT385
1174          KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1175          DR   SF385
              * DDM   ***** Preserved *****

1176          KK   RR385
1177          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1178          KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1179          RS      11    FLOW      -1
1180          RC    .045     .04    .045    5878    .024
1181          RX       0       1      40      46      56      62     102     103
1182          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Preserved *****

1183          KK    C415
1184          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1185          HC       2  0.9252
              * DDM   ***** Preserved *****

1186          KK   CC415
1187          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1188          HC       2
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 31

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

1189          KK    R415
1190          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1191          KM   ROUTING OF FLOW FROM 415C TO 455C
1192          RS       1    FLOW      -1
1193          RC    .045     .03    .045    4100    .024
1194          RX       0      .5       1       8      16      23    23.5      24
1195          RY       8       8       8       0       0       8       8       8
              * DDM   ***** Updated *****

1196          KK     455
1197          KM   SUB-BASIN 455
1198          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1199          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1200          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1201          BA   1.111
1202          LG    .270    .280   3.700    .640  24.000
1203          UC    .421    .204
1204          UA       0       5      16      30      65      77      84      90      94      97
1205          UA     100
              * DDM   ***** Preserved *****

1206          KK    D455
1207          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1208          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1209          KM   FOR BASIN #: 30      34      43      47&58
1210          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *      1
1211          DT   BS455    74.1
1212          DI       0   10000
1213          DQ       0   10000
              * DDM   ***** Preserved *****
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1214          KK   RT455
1215          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1216          DR   BS455
              * DDM   ***** Preserved *****

1217          KK    S455
1218          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1219          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1220          RS       1    STOR       0
1221          SV       0     .01    74.1   100.0
1222          SQ       0     3.0      25    35.0
              * DDM   ***** Preserved *****

1223          KK    C455
1224          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1225          HC       2
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 32

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


1226          KK   CC455
1227          KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
              *      1       2
1228          HC       3
              * DDM   ***** Preserved *****

1229          KK    S440
1230          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1231          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1232          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1233          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 271 ACRE-FEET
1234          RS       1    STOR       0
1235          SV     0.0      81   211.0  265.72  692.96  896.16  1120.0 1630.34  2230.9 3311.68
1236          SQ     0.0     1.0     3.0     8.0  515.00  780.00  825.00  3184.7  7426.0 16007.3
1237          SE   577.0  578.00  579.00  579.36  581.86  582.86  583.86  585.86  587.86  590.86
              * DDM   ***** Preserved *****

1238          KK    R455
1239          KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 480
1240          RS      15    FLOW      -1
1241          RC    .035    .025    .035    7000   .0002
1242          RX       0       1       2      28      58      84      85      86
1243          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1244          KK     480
1245          KM   SUB-BASIN 480
1246          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1247          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1248          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1249          BA    .731
1250          LG    .270    .270   3.580    .730  27.000
1251          UC    .325    .148
1252          UA       0       5      16      30      65      77      84      90      94      97
1253          UA     100
              * DDM   ***** Preserved *****

1254          KK    D480
1255          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1256          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1257          KM   FOR BASIN #: 18 & 26
1258          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
              *      1
1259          DT   BS480    16.5
1260          DI       0   10000
1261          DQ       0   10000
              * DDM   ***** Preserved *****

1262          KK   RT480
1263          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1264          DR   BS480
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 33

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1265        KK    S480
1266        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1267        KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1268        RS       1    STOR       0
1269        SV       0     .01    16.5    25.0
1270        SQ       0     3.0     5.6     8.0
            * DDM   ***** Preserved *****

1271        KK    C480
1272        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1273        HC       2
            * DDM   ***** Preserved *****

1274        KK   CC480
1275        KM   HYDROGRAPH COMBINATION AT SUBBASIN 480
1276        HC       2   0.731
            * DDM   ***** Preserved *****

1277        KK    R480
1278        KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUBBASIN 462
1279        RS       7    FLOW      -1
1280        RC    .035    .025    .035    2800   .0002
1281        RX       0       1       2      28      58      84      85      86
1282        RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
            * DDM   ***** Updated *****

1283        KK     456
1284        KM   SUB-BASIN 456
1285        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1286        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1287        KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1288        BA    .260
1289        LG    .300    .380   5.600    .200  12.000
1290        UC    .217    .139
1291        UA       0       5      16      30      65      77      84      90      94      97
1292        UA     100
            * DDM   ***** Preserved *****

1293        KK      D1
1294        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1295        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1296        DT  BASIN1     4.0
1297        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1298        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1299        KK     CD2
1300        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1301        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1302        DT    WA30
1303        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1304        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 34

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

1305        KK    R456
1306        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1307        RS       2    FLOW      -1
1308        RC     .05    .035     .05    3800    .044
1309        RX    1000    1010    1020    1036    1041    1057    1067    1077
1310        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1311        KK     457
1312        KM   SUB-BASIN 457
1313        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1314        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1315        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1316        BA    .190
1317        LG    .270    .330   3.950    .460   6.000
1318        UC    .237    .195
1319        UA       0       5      16      30      65      77      84      90      94      97
1320        UA     100
            * DDM   ***** Preserved *****

1321        KK    C101
1322        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
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1323          HC       2
              * DDM   ***** Preserved *****

1324          KK      D3
1325          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1326          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
              *      1
1327          DT  BASIN2     5.0
1328          DI       0      36      70     110     180   313.5     402   500.9
1329          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****

1330          KK    RTD3
1331          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1332          DR  BASIN2
              * DDM   ***** Preserved *****

1333          KK     SD3
1334          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1335          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1336          RS       1    STOR       0
1337          SV       0     .01       5     8.0
1338          SQ       0     0.7     1.7     3.0
              * DDM   ***** Preserved *****

1339          KK     CD3
1340          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1341          HC       2
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                    PAGE 35

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


1342          KK    R101
1343          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1344          RS       1    FLOW      -1
1345          RC     .05    .035     .05    1450     .05
1346          RX    1000    1010    1020    1036    1041    1057    1067    1077
1347          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1348          KK     458
1349          KM   SUB-BASIN 458
1350          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1351          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1352          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1353          BA    .190
1354          LG    .290    .330   5.800    .190   6.000
1355          UC    .204    .131
1356          UA       0       5      16      30      65      77      84      90      94      97
1357          UA     100
              * DDM   ***** Preserved *****

1358          KK    C103
1359          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1360          HC       2
              * DDM   ***** Preserved *****

1361          KK    R103
1362          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1363          RS       1    FLOW      -1
1364          RC     .05    .035     .05     900     .03
1365          RX    1000    1010    1020    1030    1050    1060    1070    1080
1366          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1367          KK    RT30
1368          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1369          DR    WA30
              * DDM   ***** Preserved *****

1370          KK     R30
1371          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1372          RS       1    FLOW      -1
1373          RC     .05    .035     .05    1630     .05
1374          RX    1000    1010    1020    1036    1041    1057    1067    1077
1375          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1376          KK    RTB1
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1377          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1       2
1378          DR  BASIN1
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                                    PAGE 36

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


1379          KK      B1
1380          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1381          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
              *      1       2
1382          RS       1    ELEV       0
1383          SV              .7     1.4     2.3     2.7     4.0
1384          SQ       0       5      16      28    32.5      37
1385          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1386          KK     RB1
1387          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1388          RS       3    FLOW      -1
1389          RC     .05    .035     .05    1720     .05
1390          RX    1000    1010    1020    1036    1041    1057    1067    1077
1391          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1392          KK    CDIV
1393          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1394          HC       2     .12
              * DDM   ***** Updated *****

1395          KK     459
1396          KM   SUB-BASIN 459
1397          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1398          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1399          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1400          BA    .030
1401          LG    .220    .300   3.330    .710   8.000
1402          UC    .162    .157
1403          UA       0       5      16      30      65      77      84      90      94      97
1404          UA     100
              * DDM   ***** Preserved *****

1405          KK     C52
1406          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1407          HC       2
              * DDM   ***** Preserved *****

1408          KK     R52
1409          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1410          RS       3    FLOW      -1
1411          RC     .05    .035     .05    2000     .05
1412          RX    1000    1010    1020    1036    1041    1057    1067    1077
1413          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1414          KK     460
1415          KM   SUB-BASIN 460
1416          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1417          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1418          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1419          BA    .140
1                                   HEC-1 INPUT                                                    PAGE 37

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

1420          LG    .250    .260   3.740    .690  27.000
1421          UC    .242    .160
1422          UA       0       5      16      30      65      77      84      90      94      97
1423          UA     100
              * DDM   ***** Preserved *****

1424          KK    C102
1425          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1426          HC       2
              * DDM   ***** Preserved *****

1427          KK  BASIN3
1428          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1429          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
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1430          RS       1    ELEV       0
1431          SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
              *      0       0       0       0    1.14    3.25    5.52    9.23
1432          SQ       0      22      45    47.4      48      51      57      62      67      73
1433          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1434          KK      R3
1435          KM        ROUTE FLOW FROM C102 to C106
1436          RS       5    FLOW      -1
1437          RC     .05     .03     .05    2750   .0375
1438          RX    1000    1010    1020    1052    1086    1118    1128    1138
1439          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1440          KK     461
1441          KM   SUB-BASIN 461
1442          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1443          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1444          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1445          BA    .120
1446          LG    .270    .250   4.250    .450  21.000
1447          UC    .271    .250
1448          UA       0       5      16      30      65      77      84      90      94      97
1449          UA     100
              * DDM   ***** Preserved *****

1450          KK    C104
1451          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1452          HC       2
              * DDM   ***** Preserved *****

1453          KK    C106
1454          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1455          HC       2
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 38

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


1456          KK    R106
1457          KM        ROUTE FLOW FROM C106 TO C49
1458          RS       2    FLOW      -1
1459          RC     .05    .035     .05    3950    .033
1460          RX    1000    1010    1020    1030    1050    1060    1070    1080
1461          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1462          KK     462
1463          KM   SUB-BASIN 462
1464          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1465          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1466          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1467          BA    .301
1468          LG    .300    .330   5.300    .240  12.000
1469          UC    .225    .137
1470          UA       0       5      16      30      65      77      84      90      94      97
1471          UA     100
              * DDM   ***** Preserved *****

1472          KK     C56
1473          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1474          HC       2
              * DDM   ***** Preserved *****

1475          KK    C462
1476          KM        COMBINE HYDROGRAPHS AT SUBBASIN 462
              *      1
1477          HC       2    2.09
              * DDM   ***** Preserved *****

1478          KK    R462
1479          KM   ROUTE FLOW FROM SUB-BASIN 462 TO SUB-BASIN 500 (First Channel Reach)
1480          RS       1    FLOW      -1
1481          RC    .025    .025    .025    1800    .005
1482          RX       0       1      20      32      62      74      93      94
1483          RY      13      12      12       0       0      12      12      13
              *
              * DDM   ***** Preserved *****
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1484          KK   RR462
1485          KM   ROUTE FLOW FROM SUB-BASIN 462 TO SUB-BASIN 500 (Second Natural Wash Reach)
1486          RS       3    FLOW      -1
1487          RC    .055     .05    .055    4700     .05
1488          RX       0       1       2      28      58      84      85      86
1489          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE 39

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


1490          KK     500
1491          KM   SUB-BASIN 500
1492          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1493          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1494          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1495          BA    .930
1496          LG    .350    .400   6.000    .170   9.000
1497          UC    .421    .333
1498          UA       0       3       5       8      12      20      43      75      90      96
1499          UA     100
              * DDM   ***** Preserved *****

1500          KK    C500
1501          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1502          HC       2    3.02
1503          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   31          10
                V
                V
   41         R10
                V
                V
   47         R12
                .
                .
   53           .          20
                .           .
                .           .
   63         C20............
                V
                V
   66         R20
                .
                .
   72           .          40
                .           .
                .           .
   82           .           .          60
                .           .           .
                .           .           .
   92         C60........................
                V
                V
   95         S60
                V
                V
  104         R60
                V
                V
  110        RR60
                .
                .
  116           .          80
                .           .
                .           .
  126         C80............
                V
                V
  129         R80
                .
                .
```

```
135          .         100
             .           .
             .           .
145       C100............
             V
             V
148       R100
             .
             .
154          .         120
             .           .
             .           .
164       C120............
             V
             V
167       R120
             .
             .
173          .         140
             .           .
             .           .
183          .           .         150
             .           .           V
             .           .           V
193          .           .        R150
             .           .           V
             .           .           V
199          .           .        R152
             .           .           .
             .           .           .
205          .           .           .         160
             .           .           .           .
             .           .           .           .
215          .           .           .           .         180
             .           .           .           .           .
             .           .           .           .           .
225       C180.......................................................
             .
             .
228          .         210
             .           V
             .           V
238          .        R210
             .           .
             .           .
244          .           .         240
             .           .           .
             .           .           .
254          .        C240............
             .           V
             .           V
257          .        S240
             .           V
             .           V
264          .        R240
             .           .
             .           .
271          .           .         220
             .           .           .
             .           .           .
281          .        C220............
             .           V
             .           V
284          .        S220
             .           V
             .           V
291          .        R220
             .           .
             .           .
298          .           .         190
             .           .           V
             .           .           V
308          .           .        R190
             .           .           V
             .           .           V
314          .           .        R192
             .           .           .
             .           .           .
320          .           .           .         200
             .           .           .           .
             .           .           .           .
```

```
330          .        C200.......................
             .           V
             .           V
333          .        S200
             .           V
             .           V
340          .        R200
             .           V
             .           V
346          .       SS200
             .           V
             .           V
353          .       RR200
             .           .
             .           .
359      CC180............
             V
             V
362       S180
             V
             V
371       R180
             .
             .
380          .         260
             .           .
             .           .
390       C260............
             V
             V
393       R260
             .
             .
402          .         280
             .           .
             .           .
412       C280............
             V
             V
415       R280
             .
             .
424          .         300
             .           .
             .           .
434       C300............
             V
             V
437       R300
             .
             .
446          .         305
             .           .
             .           .
456       C305............
             V
             V
459       R305
             .
             .
468          .         350
             .           .
             .           .
481          .           .-------->   SP350
478          .        D350
             .           V
             .           V
484          .        R350
             .           .
             .           .
491          .           .         310
             .           .           .
             .           .           .
501          .        C310............
             .           V
             .           V
504          .        R310
             .           .
             .           .
511          .           .         320
             .           .           .
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526          .           .           .-------->   BS320
521          .           .       D320
             .           .           .
             .           .           .
531          .           .           .           .<-------   BS320
529          .           .           .      RT320
             .           .           .          V
             .           .           .          V
532          .           .           .       S320
             .           .           .           .
             .           .           .           .
538       C320.................................
             .
             .
541          .        340
             .           .
             .           .
556          .           .------->   BS340
551          .       D340
             .           .
             .           .
561          .           .           .<-------   BS340
559          .           .      RT340
             .           .           V
             .           .           V
562          .           .       S340
             .           .           .
             .           .           .
568       C340......................
             .
             .
573          .           .<-------   SF350
571          .      RT350
             .          V
             .          V
574          .      RR350
             .           .
             .           .
581          .           .       355
             .           .           .
             .           .           .
591          .       C355............
             .          V
             .          V
594          .       R355
             .           .
             .           .
601          .           .       360
             .           .           .
             .           .           .
615          .           .           .-------->   BS360
611          .           .       D360
             .           .           .
             .           .           .
620          .           .           .           .<-------   BS360
618          .           .           .      RT360
             .           .           .          V
             .           .           .          V
621          .           .           .       S360
             .           .           .           .
             .           .           .           .
627       C360.................................
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             .
630          .        370
             .           .
             .           .
640          .           .       395
             .           .           .
             .           .           .
650          .       C370............
             .          V
             .          V
653          .       R370
             .           .
             .           .
660          .           .       380
             .           .           .
             .           .           .
674          .           .           .-------->   BS380
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670          .            .        D380
             .            .           .
             .            .           .
679          .            .           .<-------   BS380
677          .            .       RT380
             .            .           V
             .            .           V
680          .            .        S380
             .            .           .
             .            .           .
686       C380.................................
             .
             .
689          .         390
             .           .
             .           .
703          .           .------->   BS390
699          .        D390
             .           .
             .           .
708          .            .           .<-------   BS390
706          .            .       RT390
             .            .           V
             .            .           V
709          .            .        S390
             .            .           .
             .            .           .
715          .        C390............
             .           V
             .           V
718          .        R390
             .           .
             .           .
725          .            .         400
             .            .           .
             .            .           .
739          .            .           .------->   BS400
735          .            .        D400
             .            .           .
             .            .           .
744          .            .           .<-------   BS400
742          .            .       RT400
             .            .           V
             .            .           V
745          .            .        S400
             .            .           .
             .            .           .
751          .            .        C400............
             .            .           .
             .            .           .
754       CC400........................
             .
             .
757          .         385
             .           .
             .           .
769          .           .------->   SF385
767          .        D385
             .           V
             .           V
772          .        R385
             .           .
             .           .
779          .            .         420
             .            .           .
             .            .           .
793          .            .           .------->   BS420
789          .            .        D420
             .            .           .
             .            .           .
798          .            .           .<-------   BS420
796          .            .       RT420
             .            .           V
             .            .           V
799          .            .        S420
             .            .           .
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805          .        C420........................
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808       CC420............
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811             .        440
                .         V
                .         V
821             .        R70
                .          .
                .          .
827             .          .        441
                .          .         .
                .          .         .
837             .       C108...........
                .          .
                .          .
842             .          .-------->   SPLIT
840             .         D4
                .          V
                .          V
845             .       R108
                .          .
                .          .
851             .          .        442
                .          .         .
                .          .         .
861             .        C67...........
                .          .
                .          .
867             .          .-------->  BASIN4
864             .         D6
                .          .
                .          .
872             .          .           .<-------  BASIN4
870             .          .       RTD6
                .          .          V
                .          .          V
873             .          .        SD6
                .          .         .
                .          .         .
879             .        CD6...........
                .          .
                .          .
882             .          .        443
                .          .         .
                .          .         .
895             .          .           .-------->   WSH66
892             .          .        D66
                .          .          V
                .          .          V
898             .          .       R113
                .          .         .
                .          .         .
904             .       C114...........
                .          .
                .          .
907             .          .        444
                .          .         V
                .          .         V
917             .          .        R58
                .          .         .
                .          .         .
923             .          .         .        445
                .          .         .         .
                .          .         .         .
933             .          .       C107...........
                .          .          V
                .          .          V
936             .          .       R107
                .          .         .
                .          .         .
944             .          .         .           .<-------   SPLIT
942             .          .         .       RTB2
                .          .         .          V
                .          .         .          V
945             .          .         .     RSPLIT
                .          .         .         .
                .          .         .         .
951             .          .         .         .        446
                .          .         .         .         .
                .          .         .         .         .
961             .          .       C109........................
                .          .         .
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967                 .-------> WSH404
964              D5
                  V
                  V
970            R109
976                     447
988                                  .<-------  WSH404
986                                RT404
                                      V
                                      V
989                                 R404
995            C110.......................
                  V
                  V
998            R110
1004        C115............
               V
               V
1007        R115
1013             448
1023                    449
1033         C6364............
                  V
                  V
1036         R6364
1042                    450
1052                                   451
1062                  C451............
1067                                 .<-------   WSH66
1065                               RT66
1068                                                452
1078                               C6465............
                                      V
                                      V
1081                               R6566
1087           C116.......................
                  V
                  V
1090         BASIN5
                  V
                  V
1097           R116
1103                    453
1113           C117............
1116        C118............
               V
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                .          V
1119            .       R118
                .          .
                .          .
1128            .          .-------> BASIN6
1125            .         D7
                .          .
                .          .
1133            .          .          .<-------  BASIN6
1131            .          .       RTD7
                .          .          V
                .          .          V
1134            .          .        SD7
                .          .          .
                .          .          .
1140            .        CD7............
                .          .
                .          .
1143            .          .        454
                .          .          .
                .          .          .
1153            .       C119............
                .          V
                .          V
1156            .       R454
                .          .
                .          .
1163            .          .        415
                .          .          .
                .          .          .
1175            .          .          .          .<-------   SF385
1173            .          .          .      RT385
                .          .          .          V
                .          .          .          V
1176            .          .          .      RR385
                .          .          .          .
                .          .          .          .
1183            .          .       C415............
                .          .          .
                .          .          .
1186            .      CC415............
                .          V
                .          V
1189            .       R415
                .          .
                .          .
1196            .          .        455
                .          .          .
                .          .          .
1211            .          .          .------->   BS455
1206            .          .       D455
                .          .          .
                .          .          .
1216            .          .          .          .<-------   BS455
1214            .          .          .      RT455
                .          .          .          V
                .          .          .          V
1217            .          .          .       S455
                .          .          .          .
                .          .          .          .
1223            .          .       C455............
                .          .          .
                .          .          .
1226       CC455........................
              V
              V
1229        S440
              V
              V
1238        R455
              .
              .
1244            .        480
                .          .
                .          .
1259            .          .------->   BS480
1254            .       D480
                .          .
                .          .
1264            .          .          .<-------   BS480
1262            .          .      RT480
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                .           .           V
                .           .           V
1265            .           .        S480
                .           .           .
                .           .           .
1271            .        C480............
                .           .
                .           .
1274         CC480............
                V
                V
1277         R480
                .
                .
1283            .         456
                .           .
                .           .
1296            .           .-------> BASIN1
1293            .          D1
                .           .
                .           .
1302            .           .------->    WA30
1299            .         CD2
                .           V
                .           V
1305            .        R456
                .           .
                .           .
1311            .           .         457
                .           .           .
                .           .           .
1321            .        C101............
                .           .
                .           .
1327            .           .-------> BASIN2
1324            .          D3
                .           .
                .           .
1332            .           .           .<-------  BASIN2
1330            .           .        RTD3
                .           .           V
                .           .           V
1333            .           .         SD3
                .           .           .
                .           .           .
1339            .         CD3............
                .           V
                .           V
1342            .        R101
                .           .
                .           .
1348            .           .         458
                .           .           .
                .           .           .
1358            .        C103............
                .           V
                .           V
1361            .        R103
                .           .
                .           .
1369            .           .           .<-------    WA30
1367            .           .        RT30
                .           .           V
                .           .           V
1370            .           .         R30
                .           .           .
                .           .           .
1378            .           .           .           .<-------  BASIN1
1376            .           .           .        RTB1
                .           .           .           V
                .           .           .           V
1379            .           .           .          B1
                .           .           .           V
                .           .           .           V
1386            .           .           .         RB1
                .           .           .           .
                .           .           .           .
1392            .           .        CDIV............
                .           .           .
                .           .           .
1395            .           .           .         459
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                .          .          .          .
                .          .          .          .
  1405          .          .        C52............
                .          .          V
                .          .          V
  1408          .          .        R52
                .          .          .
                .          .          .
  1414          .          .          .        460
                .          .          .          .
                .          .          .          .
  1424          .          .       C102............
                .          .          V
                .          .          V
  1427          .          .     BASIN3
                .          .          V
                .          .          V
  1434          .          .         R3
                .          .          .
                .          .          .
  1440          .          .          .        461
                .          .          .          .
                .          .          .          .
  1450          .          .       C104............
                .          .          .
                .          .          .
  1453          .       C106............
                .          V
                .          V
  1456          .       R106
                .          .
                .          .
  1462          .          .        462
                .          .          .
                .          .          .
  1472          .        C56............
                .          .
                .          .
  1475       C462............
                V
                V
  1478       R462
                V
                V
  1484      RR462
                .
                .
  1490          .        500
                .          .
                .          .
  1500       C500............
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1****************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *              JUN   1998              *
 *           VERSION 4.1                *
 *                                      *
 *  RUN DATE   24JUL02  TIME  16:06:01  *
 *                                      *
 ****************************************
```

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

```
Existing Condition Base Model with Spook Hill FRS Storage Routing
Return Period = 100 Years, Rainfall Duration = 24 Hours
Original File Name: EC24BASE.DAT (Level 2)
Modified File Name: EC24BASE.DAT (Level 3), April 2002, SZ, Wood/Patel
METHODOLOGY
THE US CORPS OF ENGINEERS FLOW HYDROGRAPH PACKAGE HEC-1 DATED JUNE 1998 V4.1
SCS TYPE II RAINFALL DISTRIBUTION
CLARK UNIT HYDROGRAPH
GREEN AND AMPT INFILTRATION EQUATION USED FOR CALCULATING LOSSES
NORMAL DEPTH STORAGE CHANNEL ROUTING

 12 IO          OUTPUT CONTROL VARIABLES
                      IPRNT          5  PRINT CONTROL
                      IPLOT          0  PLOT CONTROL
```

```
                  QSCAL          0.  HYDROGRAPH PLOT SCALE

   IT          HYDROGRAPH TIME DATA
                   NMIN          2  MINUTES IN COMPUTATION INTERVAL
                  IDATE     1    0  STARTING DATE
                  ITIME       0000  STARTING TIME
                     NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                 NDDATE     3    0  ENDING DATE
                 NDTIME       1838  ENDING TIME
                  ICENT         19  CENTURY MARK

              COMPUTATION INTERVAL     .03 HOURS
                   TOTAL TIME BASE   66.63 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

 14 JD         INDEX STORM NO. 1
                   STRM       3.81  PRECIPITATION DEPTH
                   TRDA        .01  TRANSPOSITION DRAINAGE AREA

 15 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      .01      .01      .01      .01      .01
                 .01      .01      .03      .04      .04      .04      .04      .04      .04      .04
                 .01      .01      .01      .01      .01      .01      .01      .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
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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       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                  .00       .00       .00       .00       .00       .00       .00       .00       .00       .00

 25 JD          INDEX STORM NO. 2
                       STRM        3.79  PRECIPITATION DEPTH
                       TRDA        1.00  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
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26 JD         INDEX STORM NO. 3
                   STRM         3.68  PRECIPITATION DEPTH
                   TRDA         5.80  TRANSPOSITION DRAINAGE AREA

 0 PI            PRECIPITATION PATTERN
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27 JD     INDEX STORM NO. 4
           STRM        3.57  PRECIPITATION DEPTH
           TRDA       10.66  TRANSPOSITION DRAINAGE AREA

 0 PI      PRECIPITATION PATTERN
          .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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 28 JD         INDEX STORM NO. 5
                    STRM      3.54  PRECIPITATION DEPTH
                    TRDA     13.70  TRANSPOSITION DRAINAGE AREA

  0 PI          PRECIPITATION PATTERN
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29 JD INDEX STORM NO. 6
STRM 3.47 PRECIPITATION DEPTH
TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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30 JD          INDEX STORM NO. 7
                  STRM        3.32  PRECIPITATION DEPTH
                  TRDA       50.00  TRANSPOSITION DRAINAGE AREA

 0 PI             PRECIPITATION PATTERN
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WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO
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
+                    10         968.   12.27         117.        32.         12.       .69
ROUTED TO
+                   R10         899.   12.40         117.        32.         12.       .69
ROUTED TO
+                   R12         840.   12.63         117.        32.         12.       .69
HYDROGRAPH AT
+                    20        1081.   12.43         142.        36.         13.      1.17
2 COMBINED AT
+                   C20        1709.   12.53         255.        67.         24.      1.86
ROUTED TO
+                   R20        1708.   12.57         255.        67.         24.      1.86
HYDROGRAPH AT
+                    40        2683.   12.30         264.        69.         25.      2.23
HYDROGRAPH AT
+                    60        1630.   12.40         240.        64.         23.      1.75
3 COMBINED AT
                   C60        5444.   12.37         736.       195.         70.      5.84
ROUTED TO
+                   S60         130.   14.23         116.       102.         52.      5.84
ROUTED TO
+                   R60         130.   14.27         116.       102.         52.      5.84
ROUTED TO
+                  RR60         130.   14.37         116.       102.         52.      5.84
HYDROGRAPH AT
+                    80        1986.   12.27         191.        49.         18.      1.49
2 COMBINED AT
+                   C80        1986.   12.27         298.       150.         72.      1.49
ROUTED TO
+                   R80        1963.   12.27         298.       150.         72.      1.49
HYDROGRAPH AT
+                   100         427.   12.20          61.        16.          6.       .49
2 COMBINED AT
+                  C100        2360.   12.27         353.       163.         77.      1.98
ROUTED TO
+                  R100        2351.   12.30         353.       163.         77.      1.98
HYDROGRAPH AT
+                   120        3339.   12.27         339.        92.         33.      2.20
2 COMBINED AT
+                  C120        5595.   12.27         670.       244.        108.      4.18
ROUTED TO
+                  R120        5521.   12.30         670.       244.        108.      4.18
HYDROGRAPH AT
                   140         665.   12.13          67.        18.          6.       .60
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	HYDROGRAPH AT	150	593.	12.17	51.	14.	5.	.41
+	ROUTED TO	R150	567.	12.23	51.	14.	5.	.41
+	ROUTED TO	R152	513.	12.33	51.	14.	5.	.41
+	HYDROGRAPH AT	160	224.	12.40	36.	9.	3.	.37
+	HYDROGRAPH AT	180	851.	12.37	98.	25.	9.	1.01
+	5 COMBINED AT	C180	7289.	12.30	891.	300.	128.	6.56
+	HYDROGRAPH AT	210	1322.	12.17	111.	29.	10.	.79
+	ROUTED TO	R210	1246.	12.23	111.	29.	10.	.79
+	HYDROGRAPH AT	240	1513.	12.30	167.	42.	15.	1.41
+	2 COMBINED AT	C240	2684.	12.27	273.	70.	25.	2.20
+	ROUTED TO	S240	799.	12.70	226.	59.	21.	2.20
+	ROUTED TO	R240	798.	12.77	225.	59.	21.	2.20
+	HYDROGRAPH AT	220	676.	12.20	68.	18.	6.	.47
+	2 COMBINED AT	C220	962.	12.60	288.	75.	27.	2.67
+	ROUTED TO	S220	900.	12.80	280.	73.	26.	2.67
+	ROUTED TO	R220	897.	12.83	280.	73.	26.	2.67
+	HYDROGRAPH AT	190	1471.	12.17	123.	33.	12.	.92
+	ROUTED TO	R190	1415.	12.23	123.	33.	12.	.92
+	ROUTED TO	R192	1359.	12.30	123.	33.	12.	.92
+	HYDROGRAPH AT	200	831.	12.17	72.	20.	7.	.53
+	3 COMBINED AT	C200	2254.	12.30	459.	122.	44.	4.12
+	ROUTED TO	S200	2135.	12.37	454.	119.	43.	4.12
+	ROUTED TO	R200	2127.	12.37	454.	119.	43.	4.12
+	ROUTED TO	SS200	1365.	12.73	333.	88.	32.	4.12
+	ROUTED TO	RR200	1330.	12.83	330.	88.	32.	4.12
+	2 COMBINED AT	CC180	7289.	12.30	1204.	385.	159.	10.68
	ROUTED TO	S180	124.	21.53	124.	124.	88.	10.68

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                ROUTED TO
                          R180      124.   21.60       124.       124.       88.     10.68
                HYDROGRAPH AT
+                          260      418.   12.10        43.        12.        4.       .26
                2 COMBINED AT
+                         C260      420.   12.10       144.       132.      102.       .26
                ROUTED TO
+                         R260      406.   12.20       144.       132.      101.       .26
                HYDROGRAPH AT
+                          280      527.   12.10        46.        13.        5.       .32
                2 COMBINED AT
+                         C280      882.   12.13       185.       142.      106.       .58
                ROUTED TO
+                         R280      860.   12.20       184.       142.      106.       .58
                HYDROGRAPH AT
+                          300      415.   12.10        34.        10.        3.       .29
                2 COMBINED AT
+                         C300     1215.   12.17       216.       150.      109.       .87
                ROUTED TO
+                         R300     1170.   12.23       215.       150.      109.       .87
                HYDROGRAPH AT
+                          305      476.   12.27        81.        22.        8.       .70
                2 COMBINED AT
+                         C305     1623.   12.23       291.       169.      115.      1.57
                ROUTED TO
+                         R305     1602.   12.30       291.       169.      115.      1.57
                HYDROGRAPH AT
                          350     1315.   12.20       112.        29.       11.      1.00
                DIVERSION TO
+                        SF350      658.   12.20        56.        15.        5.      1.00
                HYDROGRAPH AT
+                         D350      658.   12.20        56.        15.        5.      1.00
                ROUTED TO
+                         R350      593.   12.40        56.        15.        5.      1.00
                HYDROGRAPH AT
+                          310      381.   12.33        50.        13.        5.       .64
                2 COMBINED AT
+                         C310      950.   12.37       106.        27.       10.      1.04
                ROUTED TO
+                         R310      840.   12.73       106.        27.       10.      1.04
                HYDROGRAPH AT
+                          320      984.   12.20       126.        35.       13.       .94
                DIVERSION TO
+                        BS320      393.   11.97        21.         6.        2.       .94
                HYDROGRAPH AT
+                         D320      984.   12.20       112.        29.       11.       .94
                HYDROGRAPH AT
+                        RT320      393.   11.97        21.         6.        2.       .94
                ROUTED TO
+                         S320        4.   12.00         4.         4.        2.       .94
                4 COMBINED AT
+                         C320     2537.   12.30       499.       225.      134.      3.56
                HYDROGRAPH AT
                          340     1502.   12.17       191.        56.       20.      1.42
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	DIVERSION TO	BS340	1502.	12.17	148.	39.	14.	1.42
+	HYDROGRAPH AT	D340	567.	12.60	59.	17.	6.	1.42
+	HYDROGRAPH AT	RT340	1502.	12.17	148.	39.	14.	1.42
+	ROUTED TO	S340	25.	12.60	23.	19.	12.	1.42
+	3 COMBINED AT	C340	2535.	12.30	570.	258.	151.	4.97
+	HYDROGRAPH AT	RT350	658.	12.20	56.	15.	5.	1.00
+	ROUTED TO	RR350	570.	12.43	56.	15.	5.	1.00
+	HYDROGRAPH AT	355	546.	12.33	75.	19.	7.	.68
+	2 COMBINED AT	C355	1061.	12.40	130.	34.	12.	1.16
+	ROUTED TO	R355	966.	12.70	130.	34.	12.	1.16
+	HYDROGRAPH AT	360	773.	12.23	116.	34.	12.	.88
+	DIVERSION TO	BS360	773.	12.23	66.	18.	6.	.88
+	HYDROGRAPH AT	D360	614.	12.43	59.	16.	6.	.88
+	HYDROGRAPH AT	RT360	773.	12.23	66.	18.	6.	.88
+	ROUTED TO	S360	11.	12.43	10.	9.	6.	.88
+	4 COMBINED AT	C360	3474.	12.70	740.	308.	170.	7.01
+	HYDROGRAPH AT	370	817.	12.23	83.	22.	8.	.67
+	HYDROGRAPH AT	395	234.	12.20	26.	7.	3.	.20
+	2 COMBINED AT	C370	1046.	12.23	108.	29.	11.	.87
+	ROUTED TO	R370	904.	12.57	108.	29.	11.	.87
+	HYDROGRAPH AT	380	633.	12.27	109.	32.	11.	.85
+	DIVERSION TO	BS380	16.	10.77	8.	3.	1.	.85
+	HYDROGRAPH AT	D380	633.	12.27	108.	29.	10.	.85
+	HYDROGRAPH AT	RT380	16.	10.77	8.	3.	1.	.85
+	ROUTED TO	S380	2.	10.83	2.	1.	1.	.85
+	4 COMBINED AT	C380	4472.	12.70	921.	357.	187.	8.73
+	HYDROGRAPH AT	390	486.	12.03	35.	10.	4.	.25

	DIVERSION TO	BS390	103.	11.73	6.	2.	1.	.25
+	HYDROGRAPH AT	D390	486.	12.03	32.	8.	3.	.25
+	HYDROGRAPH AT	RT390	103.	11.73	6.	2.	1.	.25
+	ROUTED TO	S390	1.	11.80	1.	1.	1.	.25
+	2 COMBINED AT	C390	487.	12.03	33.	9.	4.	.25
+	ROUTED TO	R390	350.	12.50	32.	9.	4.	.25
+	HYDROGRAPH AT	400	578.	12.20	77.	22.	8.	.65
+	DIVERSION TO	BS400	140.	11.90	9.	3.	1.	.65
+	HYDROGRAPH AT	D400	578.	12.20	72.	19.	7.	.65
+	HYDROGRAPH AT	RT400	140.	11.90	9.	3.	1.	.65
+	ROUTED TO	S400	2.	11.97	2.	2.	1.	.65
+	2 COMBINED AT	C400	580.	12.20	74.	20.	8.	.65
+	3 COMBINED AT	CC400	4857.	12.70	1009.	381.	196.	9.63
+	HYDROGRAPH AT	385	613.	12.23	74.	20.	7.	.53
+	DIVERSION TO	SF385	368.	12.23	44.	12.	4.	.53
+	HYDROGRAPH AT	D385	245.	12.23	29.	8.	3.	.53
+	ROUTED TO	R385	209.	12.70	29.	8.	3.	.53
+	HYDROGRAPH AT	420	856.	12.17	102.	28.	10.	.87
+	DIVERSION TO	BS420	304.	11.93	15.	4.	2.	.87
+	HYDROGRAPH AT	D420	856.	12.17	93.	24.	9.	.87
+	HYDROGRAPH AT	RT420	304.	11.93	15.	4.	2.	.87
+	ROUTED TO	S420	3.	12.00	2.	2.	2.	.87
+	3 COMBINED AT	C420	863.	12.20	124.	34.	13.	1.06
+	2 COMBINED AT	CC420	5281.	12.50	1111.	409.	207.	10.69
+	HYDROGRAPH AT	440	184.	12.03	12.	3.	1.	.08
+	ROUTED TO	R70	181.	12.07	12.	3.	1.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01

	2 COMBINED AT	C108	197.	12.07	14.	4.	1.	.09
+	DIVERSION TO	SPLIT	98.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	D4	98.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	92.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	105.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	195.	12.10	16.	4.	2.	.19
+	DIVERSION TO	BASIN4	121.	12.10	6.	2.	1.	.19
+	HYDROGRAPH AT	D6	74.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	RTD6	121.	12.10	6.	2.	1.	.19
+	ROUTED TO	SD6	1.	12.47	1.	1.	0.	.19
+	2 COMBINED AT	CD6	74.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	443	151.	12.07	15.	4.	1.	.08
+	DIVERSION TO	WSH66	78.	11.87	12.	3.	1.	.08
+	HYDROGRAPH AT	D66	73.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	71.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	144.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	83.	12.03	5.	1.	0.	.04
+	ROUTED TO	R58	79.	12.07	5.	1.	0.	.04
+	HYDROGRAPH AT	445	307.	12.03	19.	5.	2.	.19
+	2 COMBINED AT	C107	382.	12.03	23.	6.	2.	.23
+	ROUTED TO	R107	382.	12.07	23.	6.	2.	.23
+	HYDROGRAPH AT	RTB2	98.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	98.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	66.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	545.	12.07	36.	10.	3.	.27
+	DIVERSION TO	WSH404	35.	11.70	8.	2.	1.	.27
+	HYDROGRAPH AT	D5	510.	12.07	28.	7.	3.	.27

	ROUTED TO	R109	493.	12.10	28.	7.	3.	.27
+	HYDROGRAPH AT	447	141.	12.07	12.	4.	1.	.09
+	HYDROGRAPH AT	RT404	35.	11.70	8.	2.	1.	.27
+	ROUTED TO	R404	35.	12.03	8.	2.	1.	.27
+	3 COMBINED AT	C110	666.	12.07	48.	13.	5.	.36
+	ROUTED TO	R110	663.	12.10	48.	13.	5.	.36
+	2 COMBINED AT	C115	805.	12.07	61.	17.	7.	.63
+	ROUTED TO	R115	799.	12.10	61.	17.	7.	.63
+	HYDROGRAPH AT	448	89.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	81.	12.03	5.	1.	0.	.05
+	2 COMBINED AT	C6364	170.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	145.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	63.	12.20	7.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	2 COMBINED AT	C451	80.	12.20	9.	2.	1.	.09
+	HYDROGRAPH AT	RT66	78.	11.87	12.	3.	1.	.08
+	HYDROGRAPH AT	452	63.	12.03	5.	1.	0.	.04
+	2 COMBINED AT	C6465	141.	12.03	17.	4.	2.	.04
+	ROUTED TO	R6566	137.	12.10	17.	4.	2.	.04
+	3 COMBINED AT	C116	357.	12.17	36.	10.	3.	.23
+	ROUTED TO	BASIN5	159.	12.47	36.	10.	3.	.23
+	ROUTED TO	R116	157.	12.53	36.	10.	3.	.23
+	HYDROGRAPH AT	453	63.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	177.	12.47	43.	12.	4.	.29
+	2 COMBINED AT	C118	892.	12.10	104.	29.	11.	.92
+	ROUTED TO	R118	887.	12.13	104.	29.	11.	.92
+	DIVERSION TO	BASIN6	270.	12.13	7.	2.	1.	.92

	HYDROGRAPH AT	D7	737.	12.20	97.	27.	10.	.92
+	HYDROGRAPH AT	RTD7	270.	12.13	7.	2.	1.	.92
+	ROUTED TO	SD7	1.	12.23	1.	1.	1.	.92
+	2 COMBINED AT	CD7	738.	12.20	97.	28.	11.	.92
+	HYDROGRAPH AT	454	162.	12.13	21.	6.	2.	.18
+	2 COMBINED AT	C119	885.	12.20	118.	34.	13.	1.10
+	ROUTED TO	R454	833.	12.27	118.	34.	13.	1.10
+	HYDROGRAPH AT	415	589.	12.17	80.	23.	8.	.61
+	HYDROGRAPH AT	RT385	368.	12.23	44.	12.	4.	.53
+	ROUTED TO	RR385	322.	12.57	44.	12.	4.	.53
+	2 COMBINED AT	C415	757.	12.23	124.	35.	13.	.93
+	2 COMBINED AT	CC415	1540.	12.27	238.	67.	25.	2.03
+	ROUTED TO	R415	1507.	12.30	238.	67.	25.	2.03
+	HYDROGRAPH AT	455	1418.	12.13	150.	45.	16.	1.11
+	DIVERSION TO	BS455	1418.	12.13	139.	37.	13.	1.11
+	HYDROGRAPH AT	D455	145.	12.80	24.	8.	3.	1.11
+	HYDROGRAPH AT	RT455	1418.	12.13	139.	37.	13.	1.11
+	ROUTED TO	S455	23.	12.80	22.	18.	11.	1.11
+	2 COMBINED AT	C455	169.	12.80	46.	26.	14.	1.11
+	3 COMBINED AT	CC455	6241.	12.53	1329.	482.	239.	13.83
+	ROUTED TO	S440	366.	14.87	355.	289.	175.	13.83
+	ROUTED TO	R455	366.	15.60	354.	288.	173.	13.83
+	HYDROGRAPH AT	480	1102.	12.10	100.	31.	11.	.73
+	DIVERSION TO	BS480	487.	11.90	27.	8.	3.	.73
+	HYDROGRAPH AT	D480	1102.	12.10	83.	23.	8.	.73
+	HYDROGRAPH AT	RT480	487.	11.90	27.	8.	3.	.73
+	ROUTED TO	S480	5.	11.97	5.	4.	3.	.73

	2 COMBINED AT	C480	1107.	12.10	88.	27.	11.	.73
+	2 COMBINED AT	CC480	1107.	12.10	452.	345.	208.	.73
+	ROUTED TO	R480	907.	12.33	452.	344.	207.	.73
+	HYDROGRAPH AT	456	483.	12.07	37.	10.	4.	.26
+	DIVERSION TO	BASIN1	193.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	D1	290.	12.07	29.	8.	3.	.26
+	DIVERSION TO	WA30	59.	12.07	10.	3.	1.	.26
+	HYDROGRAPH AT	CD2	231.	12.07	19.	5.	2.	.26
+	ROUTED TO	R456	218.	12.13	19.	5.	2.	.26
+	HYDROGRAPH AT	457	273.	12.07	21.	6.	2.	.19
+	2 COMBINED AT	C101	480.	12.10	40.	10.	4.	.45
+	DIVERSION TO	BASIN2	177.	12.10	8.	2.	1.	.45
+	HYDROGRAPH AT	D3	303.	12.10	32.	8.	3.	.45
+	HYDROGRAPH AT	RTD3	177.	12.10	8.	2.	1.	.45
+	ROUTED TO	SD3	1.	12.40	1.	1.	1.	.45
+	2 COMBINED AT	CD3	304.	12.10	33.	9.	4.	.45
+	ROUTED TO	R101	302.	12.10	33.	9.	4.	.45
+	HYDROGRAPH AT	458	366.	12.03	26.	7.	2.	.19
+	2 COMBINED AT	C103	655.	12.07	59.	16.	6.	.64
+	ROUTED TO	R103	651.	12.07	59.	16.	6.	.64
+	HYDROGRAPH AT	RT30	59.	12.07	10.	3.	1.	.26
+	ROUTED TO	R30	58.	12.10	10.	3.	1.	.26
+	HYDROGRAPH AT	RTB1	193.	12.07	8.	2.	1.	.26
+	ROUTED TO	B1	35.	12.20	8.	2.	1.	.26
+	ROUTED TO	RB1	35.	12.27	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	87.	12.20	18.	5.	2.	.12
+	HYDROGRAPH AT	459	45.	12.03	3.	1.	0.	.03

	2 COMBINED AT							
		C52	117.	12.10	21.	6.	2.	.15
	ROUTED TO							
+		R52	116.	12.17	21.	6.	2.	.15
	HYDROGRAPH AT							
+		460	221.	12.07	20.	6.	2.	.14
	2 COMBINED AT							
+		C102	323.	12.07	40.	12.	4.	.29
	ROUTED TO							
+		BASIN3	71.	12.63	40.	12.	4.	.29
	ROUTED TO							
+		R3	71.	12.77	40.	12.	4.	.29
	HYDROGRAPH AT							
+		461	165.	12.10	17.	5.	2.	.12
	2 COMBINED AT							
+		C104	220.	12.10	57.	17.	6.	.41
	2 COMBINED AT							
+		C106	866.	12.07	115.	33.	12.	1.05
	ROUTED TO							
+		R106	828.	12.13	115.	33.	12.	1.05
	HYDROGRAPH AT							
+		462	557.	12.07	42.	12.	4.	.30
	2 COMBINED AT							
+		C56	1306.	12.10	156.	44.	16.	1.35
	2 COMBINED AT							
+		C462	1633.	12.30	501.	370.	219.	2.09
	ROUTED TO							
		R462	1600.	12.33	500.	370.	219.	2.09
	ROUTED TO							
+		RR462	1563.	12.40	499.	370.	218.	2.09
	HYDROGRAPH AT							
+		500	1126.	12.27	128.	35.	12.	.93
	2 COMBINED AT							
+		C500	2472..	12.33	606.	396.	228.	3.02

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

TABLE 1
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin Physical Parameters

Basin ID	Area (mi^2)	Length (mi)	Kb	Slope (ft/mi)
10	0.690	2.00	0.044	165.0
20	1.167	2.50	0.040	88.0
40	2.227	3.08	0.036	189.0
60	1.751	4.19	0.038	209.6
80	1.493	2.69	0.039	229.8
100	0.488	1.94	0.045	108.0
120	2.197	3.07	0.037	239.0
140	0.598	1.61	0.044	149.0
150	0.407	1.50	0.047	314.6
160	0.365	2.10	0.047	129.0
180	1.014	2.42	0.041	140.0
190	0.918	1.91	0.042	315.0
200	0.530	1.58	0.045	305.6
210	0.792	1.84	0.043	315.0
220	0.473	1.92	0.046	315.0
240	1.408	3.50	0.039	298.6
260	0.263	0.81	0.046	68.0
280	0.319	0.77	0.048	84.0
300	0.289	0.78	0.049	103.0
305	0.702	2.50	0.044	116.0
310	0.538	2.70	0.045	283.5
320	0.945	2.20	0.042	132.0
340	1.416	2.40	0.042	160.0
350	0.997	2.22	0.041	315.0
355	0.676	3.00	0.044	284.0
360	0.880	2.10	0.044	124.0
370	0.672	1.90	0.044	203.5
380	0.849	2.20	0.050	114.0
385	0.527	2.30	0.045	303.0
390	0.248	0.70	0.050	299.4
395	0.199	1.30	0.051	219.2
400	0.652	1.64	0.052	110.0
415	0.609	2.58	0.044	298.5
420	0.868	1.91	0.042	120.0
440	0.080	0.40	0.039	315.0

TABLE 1
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin Physical Parameters

Basin ID	Area (mi^2)	Length (mi)	Kb	Slope (ft/mi)
441	0.010	0.28	0.069	315.0
442	0.100	0.83	0.055	274.2
443	0.080	0.71	0.050	315.0
444	0.040	0.33	0.034	315.0
445	0.190	0.82	0.036	315.0
446	0.040	0.46	0.061	303.9
447	0.090	0.49	0.056	221.0
448	0.045	0.36	0.042	315.0
449	0.050	0.40	0.054	315.0
450	0.070	0.85	0.057	210.5
451	0.025	0.57	0.063	175.0
452	0.040	0.43	0.055	315.0
453	0.060	0.58	0.058	138.0
454	0.180	1.23	0.051	163.0
455	1.111	1.70	0.041	146.0
456	0.260	0.94	0.045	315.0
457	0.190	1.01	0.045	308.8
458	0.190	0.76	0.048	299.0
459	0.030	0.35	0.052	251.6
460	0.140	0.62	0.058	194.0
461	0.120	0.83	0.052	181.0
462	0.301	0.97	0.045	297.7
480	0.731	1.21	0.042	165.0
500	0.930	2.77	0.042	286.8

TABLE 2
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Green & Ampt / Clark Parameters

Basin ID	IA	DTHETA	PSIF	XKSAT	RTIMP	Tc (hr)	R coeff. (hr)
10	0.35	0.31	7.60	0.09	16	0.421	0.305
20	0.31	0.29	5.80	0.22	11	0.629	0.422
40	0.32	0.30	4.90	0.31	11	0.492	0.262
60	0.32	0.34	5.80	0.19	10	0.592	0.472
80	0.32	0.30	5.60	0.22	7	0.429	0.254
100	0.30	0.25	5.10	0.28	9	0.517	0.455
120	0.33	0.28	6.80	0.13	12	0.429	0.227
140	0.31	0.28	4.20	0.44	5	0.421	0.278
150	0.35	0.36	5.10	0.26	7	0.296	0.221
160	0.34	0.33	4.15	0.44	1	0.587	0.659
180	0.35	0.35	4.15	0.43	0	0.571	0.400
190	0.35	0.39	5.80	0.19	8	0.321	0.185
200	0.35	0.39	5.70	0.20	10	0.300	0.201
210	0.35	0.36	6.80	0.13	4	0.313	0.189
220	0.35	0.35	7.00	0.12	5	0.333	0.282
240	0.35	0.37	5.30	0.23	2	0.467	0.356
260	0.28	0.21	6.60	0.16	11	0.350	0.209
280	0.30	0.25	5.30	0.29	15	0.329	0.168
300	0.30	0.25	4.20	0.52	16	0.321	0.174
305	0.34	0.34	4.55	0.35	6	0.642	0.576
310	0.35	0.35	3.91	0.48	0	0.483	0.520
320	0.29	0.26	4.60	0.36	17	0.500	0.333
340	0.26	0.25	4.15	0.55	25	0.504	0.286
350	0.35	0.35	4.55	0.34	4	0.363	0.227
355	0.34	0.34	4.45	0.37	4	0.488	0.502
360	0.26	0.25	4.10	0.57	23	0.538	0.362
370	0.34	0.32	4.65	0.33	8	0.404	0.284
380	0.26	0.25	4.15	0.58	18	0.658	0.480
385	0.34	0.36	5.60	0.22	13	0.383	0.358
390	0.30	0.25	4.70	0.38	18	0.204	0.106
395	0.31	0.26	4.90	0.34	18	0.329	0.334
400	0.28	0.25	4.15	0.56	12	0.554	0.364
415	0.31	0.28	4.50	0.41	17	0.421	0.401
420	0.30	0.27	4.15	0.51	16	0.496	0.309
440	0.19	0.38	6.40	0.14	13	0.129	0.077
441	0.30	0.25	5.60	0.22	5	0.150	0.225
442	0.30	0.27	3.29	0.77	5	0.258	0.264
443	0.25	0.19	8.00	0.08	10	0.196	0.194
444	0.13	0.35	4.45	0.32	1	0.112	0.084
445	0.17	0.32	3.47	0.59	3	0.192	0.130
446	0.27	0.25	4.50	0.40	19	0.183	0.189
447	0.25	0.27	3.35	0.87	30	0.208	0.145
448	0.17	0.31	4.20	0.39	11	0.133	0.102
449	0.26	0.28	3.50	0.64	6	0.167	0.134
450	0.34	0.35	3.63	0.57	4	0.296	0.383
451	0.34	0.34	3.29	0.75	3	0.271	0.453
452	0.26	0.28	3.70	0.55	9	0.171	0.166
453	0.29	0.30	3.29	0.82	18	0.275	0.284
454	0.30	0.31	3.78	0.56	14	0.379	0.395
455	0.27	0.28	3.70	0.64	24	0.421	0.204
456	0.30	0.38	5.60	0.20	12	0.217	0.139
457	0.27	0.33	3.95	0.46	6	0.237	0.195
458	0.29	0.33	5.80	0.19	6	0.204	0.131
459	0.22	0.30	3.33	0.71	8	0.162	0.157
460	0.25	0.26	3.74	0.69	27	0.242	0.160
461	0.27	0.25	4.25	0.45	21	0.271	0.250
462	0.30	0.33	5.30	0.24	12	0.225	0.137
480	0.27	0.27	3.58	0.73	27	0.325	0.148
500	0.35	0.40	6.00	0.17	9	0.421	0.333

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
10	63	266.68	60.4	0.14	25
	98	2.30	0.5	0.37	0
	44	169.50	38.4	0.03	0
	13	3.00	0.7	0.01	0
20	3	26.35	3.5	0.58	0
	13	9.20	1.2	0.01	0
	44	224.12	30.0	0.03	0
	61	49.01	6.6	0.15	0
	63	3.23	0.4	0.14	25
	98	419.41	56.1	0.37	0
	116	15.81	2.1	0.23	0
40	63	156.84	11.0	0.14	25
	44	185.29	13.0	0.03	0
	98	1002.32	70.3	0.37	0
	3	9.88	0.7	0.58	0
	116	46.24	3.2	0.23	0
	113	24.93	1.7	0.39	0
60	63	220.20	19.7	0.14	25
	44	286.20	25.5	0.03	0
	98	550.09	49.1	0.37	0
	3	40.27	3.6	0.58	0
	116	15.47	1.4	0.23	0
	68	8.37	0.7	0.63	0
80	63	49.93	5.2	0.14	25
	52	10.68	1.1	0.16	20
	45	57.06	6.0	0.03	0
	49	80.62	8.4	0.06	0
	68	12.88	1.3	0.63	0
	48	200.95	21.0	0.06	0
	113	95.71	10.0	0.39	0
	98	447.96	46.9	0.37	0
100	98	216.98	69.5	0.37	0
	44	7.98	2.6	0.03	0
	48	79.80	25.6	0.06	0
	3	7.50	2.4	0.58	0
120	3	45.95	3.3	0.58	0
	44	313.15	22.3	0.03	0
	49	175.31	12.5	0.06	0
	61	171.40	12.2	0.15	0
	63	498.81	35.5	0.14	25
	98	201.48	14.3	0.37	0
140	63	11.27	2.9	0.14	25
	98	371.20	97.1	0.37	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
150	61	70.00	26.9	0.15	0
	63	71.00	27.2	0.14	25
	98	119.57	45.9	0.37	0
160	3	1.00	0.4	0.58	0
	63	1.00	0.4	0.14	25
	98	221.75	94.9	0.37	0
	115	10.00	4.3	0.39	0
180	98	649.18	100.0	0.37	0
190	61	340.29	57.9	0.15	0
	63	185.00	31.5	0.14	25
	98	62.30	10.6	0.37	0
200	3	22.70	6.7	0.58	0
	44	42.80	12.6	0.03	0
	61	42.90	12.6	0.15	0
	63	130.10	38.3	0.14	25
	98	100.90	29.7	0.37	0
210	44	90.00	17.7	0.03	0
	47	6.10	1.2	0.11	0
	48	44.50	8.8	0.06	0
	61	254.90	50.3	0.15	0
	63	81.90	16.2	0.14	25
	98	29.70	5.9	0.37	0
220	44	126.65	41.8	0.03	0
	61	24.90	8.2	0.15	0
	63	55.00	18.2	0.14	25
	98	96.20	31.8	0.37	0
240	44	119.20	13.2	0.03	0
	47	1.40	0.2	0.11	0
	48	131.40	14.6	0.06	0
	61	93.60	10.4	0.15	0
	63	58.60	6.5	0.14	25
	68	207.68	23.1	0.63	0
	98	289.00	32.1	0.37	0
260	44	76.96	45.7	0.03	0
	98	72.90	43.3	0.37	0
	3	18.40	10.9	0.58	0
280	98	153.68	75.3	0.37	0
	44	50.30	24.7	0.03	0
300	63	6.10	3.3	0.14	25
	98	178.89	96.7	0.37	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
305	44	16.60	3.7	0.03	0
	61	29.70	6.6	0.15	0
	63	63.40	14.1	0.14	25
	68	36.30	8.1	0.63	0
	98	270.96	60.3	0.37	0
	115	3.20	0.7	0.39	0
	118	29.00	6.5	0.42	0
320	44	14.18	2.3	0.03	0
	61	47.93	7.9	0.15	0
	63	109.17	18.1	0.14	25
	68	22.27	3.7	0.63	0
	98	243.54	40.3	0.37	0
	115	96.98	16.0	0.39	0
	118	70.71	11.7	0.42	0
310	44	6.00	1.7	0.03	0
	61	16.00	4.6	0.15	0
	63	6.00	1.7	0.14	25
	68	105.54	30.6	0.63	0
	98	108.54	31.5	0.37	0
	118	102.53	29.8	0.42	0
340	3	10.50	1.2	0.58	0
	44	6.87	0.8	0.03	0
	61	23.50	2.6	0.15	0
	63	76.10	8.4	0.14	25
	68	166.70	18.4	0.63	0
	98	461.44	50.9	0.37	0
	113	3.34	0.4	0.39	0
	115	137.49	15.2	0.39	0
	118	20.38	2.2	0.42	0
350	61	123.99	19.4	0.15	0
	63	108.49	17.0	0.14	25
	68	57.67	9.0	0.63	0
	98	17.95	2.8	0.37	0
	101	6.68	1.0	0.28	0
	118	323.57	50.7	0.42	0
360	63	3.70	0.7	0.14	25
	68	8.80	1.6	0.63	0
	98	398.32	70.7	0.37	0
	113	79.60	14.1	0.39	0
	115	72.80	12.9	0.39	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
355	61	33.80	7.8	0.15	0
	63	46.50	10.8	0.14	25
	68	19.60	4.5	0.63	0
	90	171.53	39.7	0.39	0
	98	9.70	2.2	0.37	0
	101	43.50	10.1	0.28	0
	110	18.80	4.3	0.13	0
	115	9.10	2.1	0.39	0
	118	79.90	18.5	0.42	0
370	61	45.20	10.5	0.15	0
	63	77.00	17.9	0.14	25
	90	179.71	41.8	0.39	0
	98	1.00	0.2	0.37	0
	101	111.80	26.0	0.28	0
	110	5.40	1.3	0.13	0
	115	2.00	0.5	0.39	0
	118	8.00	1.9	0.42	0
380	63	14.08	2.6	0.14	25
	98	246.95	45.5	0.37	0
	110	8.03	1.5	0.13	0
	112	74.29	13.7	0.39	0
	113	113.82	21.0	0.39	0
	115	46.05	8.5	0.39	0
	118	40.04	7.4	0.42	0
385	61	111.00	32.9	0.15	0
	63	152.90	45.4	0.14	25
	90	72.70	21.6	0.39	0
	118	0.40	0.1	0.42	0
390	61	11.00	6.9	0.15	0
	63	18.00	11.4	0.14	25
	90	76.45	48.2	0.39	0
	101	29.00	18.3	0.28	0
	110	24.00	15.1	0.13	0
395	61	23.60	18.5	0.15	0
	63	25.60	20.1	0.14	25
	90	43.40	34.0	0.39	0
	101	34.00	26.6	0.28	0
	110	1.00	0.8	0.13	0
400	98	273.48	65.6	0.37	0
	110	4.24	1.0	0.13	0
	112	29.84	7.2	0.39	0
	113	21.53	5.2	0.39	0
	115	87.91	21.1	0.39	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
415	61	67.20	17.3	0.15	0
	63	92.90	23.9	0.14	25
	68	127.00	32.6	0.63	0
	90	98.40	25.3	0.39	0
	115	0.30	0.1	0.39	0
	118	3.70	0.9	0.42	0
420	68	101.24	18.2	0.63	0
	90	59.30	10.7	0.39	0
	98	236.31	42.5	0.37	0
	110	68.99	12.4	0.13	0
	118	89.81	16.2	0.42	0
440	63	26.30	51.4	0.14	25
	61	22.10	43.2	0.15	0
	44	2.80	5.5	0.03	0
441	68	3.80	59.4	0.63	0
	44	2.60	40.6	0.03	0
442	68	64.00	100.0	0.63	0
443	63	12.90	25.2	0.14	25
	68	6.90	13.5	0.63	0
	44	31.40	61.3	0.03	0
444	63	0.60	2.3	0.14	25
	61	12.10	47.3	0.15	0
	68	12.90	50.4	0.63	0
445	63	4.50	3.7	0.14	25
	61	6.70	5.5	0.15	0
	68	110.40	90.8	0.63	0
446	68	19.40	75.8	0.63	0
	44	6.20	24.2	0.03	0
447	68	52.00	90.3	0.63	0
	115	5.60	9.7	0.39	0
448	63	10.60	36.8	0.14	25
	68	18.20	63.2	0.63	0
449	63	3.10	9.7	0.14	25
	68	28.90	90.3	0.63	0
450	63	5.90	13.2	0.14	25
	68	33.40	74.6	0.63	0
	90	5.50	12.3	0.39	0
451	68	16.00	100.0	0.63	0
452	63	4.80	18.8	0.14	25
	68	20.80	81.3	0.63	0
453	68	38.40	100.0	0.63	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
454	63	6.80	5.9	0.14	25
	68	48.90	42.4	0.63	0
	90	59.50	51.6	0.39	0
455	63	25.00	3.5	0.14	25
	68	384.00	54.0	0.63	0
	115	268.00	37.7	0.39	0
	110	19.00	2.7	0.13	0
	98	10.00	1.4	0.37	0
	118	5.00	0.7	0.42	0
456	63	78.80	47.4	0.14	25
	61	62.00	37.3	0.15	0
	68	25.60	15.4	0.63	0
457	63	9.50	7.8	0.14	25
	61	26.10	21.5	0.15	0
	68	79.50	65.4	0.63	0
	115	6.50	5.3	0.39	0
458	63	21.40	17.6	0.14	25
	61	87.90	72.3	0.15	0
	68	2.10	1.7	0.63	0
	115	10.20	8.4	0.39	0
459	68	18.20	94.8	0.63	0
	115	1.00	5.2	0.39	0
460	68	29.80	33.2	0.63	0
	115	59.90	66.8	0.39	0
461	63	1.60	2.1	0.14	25
	68	1.60	2.1	0.63	0
	61	8.30	10.8	0.15	0
	115	65.30	85.0	0.39	0
462	63	20.00	10.4	0.14	25
	61	131.10	68.1	0.15	0
	68	39.40	20.5	0.63	0
	115	2.10	1.1	0.39	0
480	63	43.11	9.2	0.14	25
	68	348.53	74.5	0.63	0
	115	76.19	16.3	0.39	0
500	63	208.27	35.0	0.14	25
	61	368.91	62.0	0.15	0
	113	17.75	3.0	0.39	0

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
10	Desert	411.48	93.2	Dry	25	0
	L.D.R.	30.00	6.8	Normal	50	15
20	Desert	220.20	29.5	Dry	25	0
	V.L.D.R	12.52	1.7	Normal	30	5
	L.D.R.	503.93	67.4	Normal	50	15
	M.D.R.	10.48	1.4	Normal	50	30
40	Desert	746.40	52.4	Dry	25	0
	V.L.D.R	94.31	6.6	Normal	30	5
	L.D.R.	547.70	38.4	Normal	50	15
	Comm	37.15	2.6	Normal	75	80
60	Desert	698.40	62.3	Dry	25	0
	V.L.D.R	318.50	28.4	Normal	30	5
	L.D.R.	69.10	6.2	Normal	50	15
	Comm	34.60	3.1	Normal	75	80
80	Desert	401.60	42.0	Dry	25	0
	V.L.D.R	368.30	38.5	Normal	30	5
	L.D.R.	185.89	19.4	Normal	50	15
100	OPEN	5.70	1.8	Dry	10	0
	V.L.D.R	191.06	61.2	Normal	30	5
	L.D.R.	115.50	37.0	Normal	50	15
120	Desert	781.30	55.6	Dry	25	0
	V.L.D.R	568.90	40.5	Normal	30	5
	L.D.R.	55.90	4.0	Normal	50	15
140	Desert	109.00	28.5	Dry	25	0
	V.L.D.R	273.47	71.5	Normal	30	5
150	Desert	254.57	97.7	Dry	25	0
	V.L.D.R	6.00	2.3	Normal	30	5
160	Desert	187.75	80.3	Dry	25	0
	V.L.D.R	46.00	19.7	Normal	30	5
180	Desert	649.18	100.0	Dry	25	0
190	Desert	587.59	100.0	Dry	25	0
200	Desert	339.40	100.0	Dry	25	0
210	Desert	507.10	100.0	Dry	25	0
220	Desert	302.75	100.0	Dry	25	0
240	Desert	900.88	100.0	Dry	25	0
260	OPEN	19.00	11.3	Dry	10	0
	V.L.D.R	33.10	19.7	Normal	30	5
	L.D.R.	116.16	69.0	Normal	50	15
280	L.D.R.	203.98	100.0	Normal	50	15
300	L.D.R.	184.99	100.0	Normal	50	15
305	Desert	391.76	87.2	Dry	25	0

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
	L.D.R.	57.40	12.8	Normal	50	15
310	Desert	336.61	97.7	Dry	25	0
	V.L.D.R	8.00	2.3	Normal	30	5
320	Desert	71.60	11.8	Dry	25	0
	V.L.D.R	285.75	47.2	Normal	30	5
	L.D.R.	101.37	16.8	Normal	50	15
	M.D.R.	142.86	23.6	Normal	50	30
	Comm	3.20	0.5	Normal	75	80
340	Desert	19.50	2.2	Dry	25	0
	V.L.D.R	44.90	5.0	Normal	30	5
	L.D.R.	319.32	35.2	Normal	50	15
	M.D.R.	350.40	38.7	Normal	50	30
	M.F.R.	39.00	4.3	Normal	50	45
	Comm	43.60	4.8	Normal	75	80
	Park	89.60	9.9	Normal	90	0
350	Desert	638.35	100.0	Dry	25	0
355	Desert	368.43	85.2	Dry	25	0
	V.L.D.R	33.00	7.6	Normal	30	5
	L.D.R.	31.00	7.2	Normal	50	15
360	L.D.R.	341.50	60.6	Normal	50	15
	M.D.R.	82.62	14.7	Normal	50	30
	M.F.R.	33.70	6.0	Normal	50	45
	Comm	44.60	7.9	Normal	75	80
	Park	60.80	10.8	Normal	90	0
370	Desert	307.11	71.4	Dry	25	0
	L.D.R.	123.00	28.6	Normal	50	15
380	L.D.R.	376.46	69.3	Normal	50	15
	Comm	43.90	8.1	Normal	75	80
	Park	122.90	22.6	Normal	90	0
385	Desert	296.00	87.8	Dry	25	0
	L.D.R.	41.00	12.2	Normal	50	15
390	L.D.R.	158.45	100.0	Normal	50	15
395	Desert	15.20	11.9	Dry	25	0
	L.D.R.	112.40	88.1	Normal	50	15
400	Desert	11.00	2.6	Dry	25	0
	L.D.R.	331.00	79.4	Normal	50	15
	Park	75.00	18.0	Normal	90	0
415	Desert	99.25	25.5	Dry	25	0
	L.D.R.	290.25	74.5	Normal	50	15
420	Desert	88.71	16.0	Dry	25	0
	L.D.R.	425.64	76.6	Normal	50	15
	M.F.R.	28.10	5.1	Normal	50	45

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
	Comm	13.20	2.4	Normal	75	80
440	Desert	17.40	34.0	Dry	25	0
	OPEN	33.80	66.0	Dry	10	0
441	V.L.D.R	6.40	100.0	Normal	30	5
442	V.L.D.R	64.00	100.0	Normal	30	5
443	OPEN	13.30	26.0	Dry	10	0
	V.L.D.R	37.90	74.0	Normal	30	5
444	Desert	2.80	10.9	Dry	25	0
	OPEN	22.80	89.1	Dry	10	0
445	OPEN	76.50	62.9	Dry	10	0
	V.L.D.R	45.10	37.1	Normal	30	5
446	V.L.D.R	11.30	44.1	Normal	30	5
	M.D.R.	14.30	55.9	Normal	50	30
447	M.D.R.	57.60	100.0	Normal	50	30
448	OPEN	18.30	63.5	Dry	10	0
	V.L.D.R	10.50	36.5	Normal	30	5
449	OPEN	6.60	20.6	Dry	10	0
	V.L.D.R	25.40	79.4	Normal	30	5
450	Desert	42.00	93.8	Dry	25	0
	OPEN	1.50	3.3	Dry	10	0
	M.D.R.	1.30	2.9	Normal	50	30
451	Desert	14.60	91.3	Dry	25	0
	M.D.R.	1.40	8.8	Normal	50	30
452	OPEN	4.90	19.1	Dry	10	0
	V.L.D.R	20.70	80.9	Normal	30	5
453	Desert	15.90	41.4	Dry	25	0
	M.D.R.	22.50	58.6	Normal	50	30
454	Desert	62.50	54.3	Dry	25	0
	OPEN	3.10	2.7	Dry	10	0
	M.D.R.	49.60	43.1	Normal	50	30
455	Desert	179.30	25.2	Dry	25	0
	M.D.R.	522.80	73.5	Normal	50	30
	M.F.R.	4.30	0.6	Normal	50	45
	Comm	4.60	0.6	Normal	75	80
456	Desert	136.30	81.9	Dry	25	0
	OPEN	30.10	18.1	Dry	10	0
457	Desert	64.30	52.9	Dry	25	0
	OPEN	30.50	25.1	Dry	10	0
	V.L.D.R	13.30	10.9	Normal	30	5
	M.D.R.	13.50	11.1	Normal	50	30

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
458	Desert	50.30	41.4	Dry	25	0
	OPEN	17.10	14.1	Dry	10	0
	V.L.D.R	54.20	44.6	Normal	30	5
459	Desert	0.70	3.6	Dry	25	0
	OPEN	6.80	35.4	Dry	10	0
	V.L.D.R	7.80	40.6	Normal	30	5
	M.D.R.	3.90	20.3	Normal	50	30
460	M.D.R.	81.20	90.5	Normal	50	30
	Park	8.50	9.5	Normal	90	0
461	V.L.D.R	43.90	57.2	Normal	30	5
	M.D.R.	26.40	34.4	Normal	50	30
	Comm	6.50	8.5	Normal	75	80
462	Desert	109.40	56.8	Dry	25	0
	OPEN	11.10	5.8	Dry	10	0
	V.L.D.R	52.20	27.1	Normal	30	5
	M.D.R.	0.70	0.4	Normal	50	30
	Comm	19.20	10.0	Normal	75	80
480	Desert	25.70	5.5	Dry	25	0
	L.D.R.	216.50	46.3	Normal	50	15
	M.D.R.	171.00	36.6	Normal	50	30
	M.F.R.	23.40	5.0	Normal	50	45
	Comm	31.20	6.7	Normal	75	80
500	Desert	594.90	100.0	Dry	25	0

TABLE 5
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Rainfall Data

Area	ARF	Total Rainfall (inches)						
		2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
0	1.0000	1.550	2.110	2.480	3.000	3.410	3.810	4.740
10	0.9396	1.456	1.983	2.330	2.819	3.204	3.580	4.454
30	0.9003	1.395	1.900	2.233	2.701	3.070	3.430	4.267
60	0.8609	1.334	1.816	2.135	2.583	2.936	3.280	4.081
90	0.8451	1.310	1.783	2.096	2.535	2.882	3.220	4.006
120	0.8346	1.294	1.761	2.070	2.504	2.846	3.180	3.956
150	0.8241	1.277	1.739	2.044	2.472	2.810	3.140	3.906
300	0.8005	1.241	1.689	1.985	2.402	2.730	3.050	3.794
500	0.7795	1.208	1.645	1.933	2.339	2.658	2.970	3.695

TABLE 6
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Routing Parameters

HEC-1 Operation	Manning's "n" Left Overbank	Manning's "n" Main Channel	Manning's "n" Right Overbank	Length (ft)	Slope (ft/ft)	NSTPS
R10	0.045	0.030	0.045	8700	0.0210	4
R100	0.016	0.016	0.016	940	0.0040	1
R101	0.050	0.035	0.050	1450	0.0500	1
R103	0.050	0.035	0.050	900	0.0300	1
R106	0.050	0.035	0.050	3950	0.0330	2
R107	0.050	0.035	0.050	700	0.0516	2
R108	0.050	0.035	0.050	3200	0.1000	2
R109	0.019	0.019	0.019	3080	0.0500	1
R110	0.019	0.019	0.019	580	0.0291	1
R113	0.019	0.019	0.019	1300	0.0290	1
R115	0.019	0.019	0.019	2125	0.0290	1
R116	0.050	0.035	0.050	1300	0.0333	2
R118	0.019	0.019	0.019	1500	0.0240	1
R12	0.045	0.030	0.045	4500	0.0100	7
R120	0.025	0.016	0.025	2100	0.0050	2
R150	0.045	0.040	0.045	3100	0.0320	2
R152	0.045	0.030	0.045	5900	0.0190	3
R180	0.035	0.025	0.035	1600	0.0030	1
R190	0.045	0.030	0.045	4740	0.0300	2
R192	0.045	0.035	0.045	2200	0.0180	3
R20	0.016	0.016	0.016	990	0.0040	1
R200	0.035	0.025	0.035	650	0.0050	1
R210	0.045	0.030	0.045	5100	0.0220	2
R220	0.035	0.025	0.035	1250	0.0050	1
R240	0.035	0.025	0.035	1800	0.0050	1
R260	0.035	0.025	0.035	2300	0.0030	3
R280	0.035	0.025	0.035	2100	0.0030	3
R3	0.050	0.030	0.050	2750	0.0375	5
R30	0.050	0.035	0.050	1630	0.0500	1
R300	0.035	0.025	0.035	2500	0.0030	2
R305	0.016	0.016	0.016	6000	0.0146	3
R310	0.045	0.035	0.045	10050	0.0220	10
R350	0.045	0.035	0.045	5150	0.0250	6
R355	0.045	0.035	0.045	10100	0.0260	10
R370	0.045	0.035	0.045	10250	0.0230	11
R385	0.045	0.040	0.045	10250	0.0220	15
R390	0.045	0.045	0.045	8800	0.0200	15
R404	0.019	0.019	0.019	3540	0.0300	4
R415	0.045	0.030	0.045	4100	0.0240	1
R454	0.045	0.035	0.045	2200	0.0090	3
R455	0.035	0.025	0.035	7000	0.0002	15
R456	0.050	0.035	0.050	3800	0.0440	2
R462	0.025	0.025	0.025	1800	0.0050	1
R480	0.035	0.025	0.035	2800	0.0002	7
R52	0.050	0.035	0.050	2000	0.0500	3
R58	0.050	0.035	0.050	2370	0.0516	2
R60	0.016	0.016	0.016	2850	0.0120	2
R6364	0.050	0.035	0.050	4375	0.0333	5
R6566	0.050	0.035	0.050	2435	0.0282	3
R70	0.050	0.035	0.050	2250	0.0800	2
R80	0.025	0.016	0.025	1200	0.0030	2
RB1	0.050	0.035	0.050	1720	0.0500	3
RR200	0.035	0.025	0.035	3150	0.0050	4
RR350	0.045	0.035	0.045	6050	0.0250	8
RR385	0.045	0.040	0.045	5878	0.0240	11
RR462	0.055	0.050	0.055	4700	0.0500	3
RR60	0.016	0.016	0.016	3500	0.0050	3
RSPLIT	0.050	0.035	0.050	800	0.0500	1

TABLE 7
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Storage/Discharge/Elevation Relationships

Apache Junction FRS
Emergency Spillway Elevation = 1801.92 ft.
Principal Spillway Elevation = 1795.65 ft.

HEC-1 Operation S60
Sediment Volume = 100 ac-ft.

Storage (ac-ft)	0.00	46.80	73.71	130.00	170.70	322.23	584.06	812.88	1121.90
Discharge (cfs)	0.00	0.01	0.02	26.30	91.20	102.42	347.66	1650.00	7700.00
Elevation (ft)	794.09	795.15	795.65	796.65	797.29	799.29	801.92	803.87	806.15

Signal Butte FRS
Emergency Spillway Elevation = 1714.63 ft.
Principal Spillway Elevation = 1703.23 ft.

HEC-1 Operation S180
Sediment Volume = 247 ac-ft.

Storage (ac-ft)	0.00	172.10	244.35	482.24	871.30	1101.52	1294.09	1418.10	1578.77	1980.33
Discharge (cfs)	0.00	10.20	10.55	121.80	138.40	145.90	151.40	154.67	390.00	1950.00
Elevation (ft)	698.23	702.23	703.23	706.23	710.23	712.23	713.73	714.63	715.73	718.23

Spook Hill FRS
Emergency Spillway Elevation = 1583.86 ft.
Principal Spillway Elevation = 1579.36 ft.

HEC-1 Operation S440
Sediment Volume = 271 ac-ft.

Storage (ac-ft)	0.00	81.00	211.00	265.72	692.96	896.16	1120.00	1630.34	2230.90	3311.68
Discharge (cfs)	0.00	1.00	3.00	8.00	515.00	780.00	825.00	3184.70	7426.00	16007.30
Elevation (ft)	577.00	578.00	579.00	579.36	581.86	582.86	583.86	585.86	587.86	590.86

TABLE 8
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin On-site Retention Volumes

Basin ID	*Maximum Diversion Volume (ac-ft)*
20	47.8
40	39.1
60	4.6
80	18.9
100	10
120	5.7
140	5.9
160	1.2
320	24.4
340	109.7
360	49.5
380	14.5
390	3.5
400	7.2
420	11.2
442	3.3
453	3.6
455	74.1
480	16.5
456	4
457	5

```
****************************************
                                       *
   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   24JUL02  TIME  15:57:35  *
*                                      *
****************************************
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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

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1                                          HEC-1 INPUT                                                    PAGE  1

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

        1           ID   Future Condition Base Model with Spook Hill FRS Storage Routing
        2           ID   Return Period = 100 Years, Rainfall Duration = 24 Hours
        3           ID   Original File Name: FC24BASE.DAT (Level II), Wood/Patel, October 2001
        4           ID   Modified File Name: FC24BASE.DAT (Level III), Wood/Patel, April 2002
                    *
        5           ID   METHODOLOGY
        6           ID   THE US CORPS OF ENGINEERS FLOW HYDROGRAPH PACKAGE HEC-1 DATED JUNE 1998 V4.1
        7           ID   SCS TYPE II RAINFALL DISTRIBUTION
        8           ID   CLARK UNIT HYDROGRAPH
        9           ID   GREEN AND AMPT INFILTRATION EQUATION USED FOR CALCULATING LOSSES
       10           ID   NORMAL DEPTH STORAGE CHANNEL ROUTING
                    *
                    *DIAGRAM
       11           IT       2                    2000
       12           IO       5
       13           IN      15
       14           JD    3.81    0.01
       15           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
       16           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
       17           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
       18           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
       19           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
       20           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
       21           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
       22           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
       23           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
       24           PC    .983    .986    .989    .992    .995    .998   1.000
       25           JD   3.787    1.00
       26           JD   3.677    5.80
       27           JD   3.574   10.66
       28           JD   3.539   13.70
       29           JD   3.467   20.00
       30           JD   3.315   50.00
                    * DDM   ***** Updated *****

       31           KK      10
       32           KM   SUB-BASIN 10
       33           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
       34           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
       35           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
       36           BA    .690
       37           LG    .350    .310   7.600    .090  16.000
       38           UC    .421    .305
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 39          UA       0       3       5       8      12      20      43      75      90      96
 40          UA     100
             *
             * DDM   ***** Preserved *****

 41          KK     R10
 42          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 43          RS       4    FLOW      -1
 44          RC    .045     .03    .045    8700    .021
 45          RX       0       1       2      17      27      42      43      44
 46          RY       5       5       5       0       0       5       5       5

             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE  2

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


 47          KK     R12
 48          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 49          RS       7    FLOW      -1
 50          RC    .045     .03    .045    4500     .01
 51          RX       0       1      45    52.5    72.5      80     124     125
 52          RY       4     2.5     2.5       0       0     2.5     2.5       4
             * DDM   ***** Updated *****

 53          KK      20
 54          KM   SUB-BASIN 20
 55          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 56          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 57          KM     L = 2.50  Kb = .040  Adj. Slope =   88.0
 58          BA   1.167
 59          LG    .310    .290   5.800    .220  11.000
 60          UC    .629    .422
 61          UA       0       5      16      30      65      77      84      90      94      97
 62          UA     100
             * DDM   ***** Preserved *****

 63          KK     D20
 64          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
 65          KM        MAXIMUM VOLUME DIVERSION = 47.8 acre-feet
 66          DT    BS20    47.8
 67          DI       0   10000
 68          DQ       0   10000
             * DDM   ***** Preserved *****

 69          KK    RT20
 70          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 71          DR    BS20
             * DDM   ***** Preserved *****

 72          KK     S20
 73          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 74          KM   BLEEDOFF FLOW = 17 CFS
 75          RS       1    STOR       0
 76          SV       0     .01    47.8      70
 77          SQ       0     0.5    17.0      50
             * DDM   ***** Preserved *****

 78          KK     C20
 79          KM   HYDROGRAPH COMBINATION
 80          HC       3
             * DDM   ***** Preserved *****

 81          KK     R20
 82          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 83          RS       1    FLOW      -1
 84          RC    .016    .016    .016     990    .004
 85          RX       0       5       7    14.5    34.5      42      44      50
 86          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE  3

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


 87          KK      40
 88          KM   SUB-BASIN 40
 89          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 90          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 91          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
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 92          BA   2.227
 93          LG    .320    .300   4.900    .310  11.000
 94          UC    .492    .262
 95          UA       0       3       5       8      12      20      43      75      90      96
 96          UA     100
             * DDM   ***** Preserved *****

 97          KK     D40
 98          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
 99          KM        MAXIMUM VOLUME DIVERSION = 39.1 acre-feet
100          DT    BS40    39.1
101          DI       0   10000
102          DQ       0   10000
             * DDM   ***** Preserved *****

103          KK    RT40
104          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
105          DR    BS40
             * DDM   ***** Preserved *****

106          KK     S40
107          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
108          KM   BLEEDOFF FLOW = 14 CFS
109          RS       1    STOR       0
110          SV       0     .01    39.1     60
111          SQ       0     0.5    14.0     40
             * DDM   ***** Preserved *****

112          KK     C40
113          KM   HYDROGRAPH COMBINATION
114          HC       3
             * DDM   ***** Updated *****

115          KK      60
116          KM   SUB-BASIN 60
117          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
118          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .989
119          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
120          BA   1.751
121          LG    .320    .340   5.800    .190  10.000
122          UC    .592    .472
123          UA       0       3       5       8      12      20      43      75      90      96
124          UA     100
             *
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE  4

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


125          KK     D60
126          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
127          KM        MAXIMUM VOLUME DIVERSION = 4.60 acre-feet
128          DT    BS60     4.6
129          DI       0   10000
130          DQ       0   10000
             * DDM   ***** Preserved *****

131          KK    RT60
132          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
133          DR    BS60
             * DDM   ***** Preserved *****

134          KK    SB60
135          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
136          KM   BLEEDOFF FLOW = 2 CFS
137          RS       1    STOR       0
138          SV       0     .01     4.6     10
139          SQ       0     0.5     2.0     10
             * DDM   ***** Preserved *****

140          KK     C60
141          KM   HYDROGRAPH COMBINATION
142          HC       3
             *
             * DDM   ***** Preserved *****

143          KK     S60
144          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
145          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
146          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
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147          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
148          RS       1    STOR       0
149          SV       0   46.80   73.71   130.0  170.70  322.23  584.06  812.88  1121.9
150          SQ     0.0    0.01    0.02   26.30   91.20  102.42  347.66  1650.0  7700.0
151          SE  794.09  795.15  795.65  796.65  797.29  799.29  801.92  803.87  806.15
             * DDM   ***** Preserved *****

152          KK     R60
153          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
154          RS       2    FLOW      -1
155          RC    .016    .016    .016    2850    .012
156          RX       0       1       2     2.1     5.6     5.7       6       7
157          RY     4.5     3.5     3.5       0       0     3.5     3.5     4.5
             * DDM   ***** Preserved *****

158          KK    RR60
159          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
160          RS       3    FLOW      -1
161          RC    .016    .016    .016    3500    .005
162          RX       0       1       2     2.1     7.1     7.2       8       9
163          RY     4.5     3.5     3.5       0       0     3.5     3.5     4.5
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                    PAGE  5

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


164          KK      80
165          KM   SUB-BASIN 80
166          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
167          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
168          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
169          BA   1.493
170          LG    .320    .300   5.600    .220   7.000
171          UC    .429    .254
172          UA       0       5      16      30      65      77      84      90      94      97
173          UA     100
             * DDM   ***** Preserved *****

174          KK     D80
175          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
176          KM        MAXIMUM VOLUME DIVERSION = 18.9 acre-feet
177          DT    BS80    18.9
178          DI       0   10000
179          DQ       0   10000
             * DDM   ***** Preserved *****

180          KK    RT80
181          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
182          DR    BS80
             * DDM   ***** Preserved *****

183          KK     S80
184          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
185          KM   BLEEDOFF FLOW =  7 CFS
186          RS       1    STOR       0
187          SV       0     .01    18.9      30
188          SQ       0     1.0     7.0      20
             * DDM   ***** Preserved *****

189          KK     C80
190          KM   HYDROGRAPH COMBINATION
191          HC       2
             * DDM   ***** Preserved *****

192          KK    CC80
193          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
194          HC       2   1.493
             * DDM   ***** Preserved *****

195          KK     R80
196          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
197          RS       2    FLOW      -1
198          RC    .025    .016    .025    1200    .003
199          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
200          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                    PAGE  6

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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201          KK     100
202          KM   SUB-BASIN 100
203          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
204          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
205          KM     L = 1.94  Kb = .045  Adj. Slope =  108.0
206          BA    .488
207          LG    .300     .250   5.100     .280   9.000
208          UC    .517     .455
209          UA       0        5      16       30      65      77      84      90      94      97
210          UA     100
             * DDM   ***** Preserved *****

211          KK    D100
212          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
213          KM        MAXIMUM VOLUME DIVERSION = 10.0 acre-feet
214          DT   BS100    10.0
215          DI       0   10000
216          DQ       0   10000
             * DDM   ***** Preserved *****

217          KK   RT100
218          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
219          DR   BS100
             * DDM   ***** Preserved *****

220          KK    S100
221          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
222          KM   BLEEDOFF FLOW =  4 CFS
223          RS       1    STOR       0
224          SV       0     .01    10.0      20
225          SQ       0     1.0     4.0      10
             * DDM   ***** Preserved *****

226          KK    C100
227          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
228          HC       3
             * DDM   ***** Preserved *****

229          KK    R100
230          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
231          RS       1    FLOW      -1
232          RC    .016     .016    .016     940     .004
233          RX       0        1       2     2.1    52.1    52.2      53      54
234          RY     4.5      4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

235          KK     120
236          KM   SUB-BASIN 120
237          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
238          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
239          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
240          BA   2.197
241          LG    .330     .280   6.800     .130  12.000
242          UC    .429     .227
1                                        HEC-1 INPUT                                          PAGE  7

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

243          UA       0        3       5       8      12      20      43      75      90      96
244          UA     100
             * DDM   ***** Preserved *****

245          KK    D120
246          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
247          KM        MAXIMUM VOLUME DIVERSION = 5.7 acre-feet
248          DT   BS120     5.7
249          DI       0   10000
250          DQ       0   10000
             * DDM   ***** Preserved *****

251          KK   RT120
252          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
253          DR   BS120
             * DDM   ***** Preserved *****

254          KK    S120
255          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
256          KM   BLEEDOFF FLOW =  2 CFS
257          RS       1    STOR       0
258          SV       0     .01     5.7      15
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259          SQ       0     1.0     2.0     10
             * DDM   ***** Preserved *****

260          KK    C120
261          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
262          HC       3
             * DDM   ***** Preserved *****

263          KK    R120
264          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
265          RS       2    FLOW      -1
266          RC    .025    .016    .025    2100    .005
267          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
268          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

269          KK     140
270          KM   SUB-BASIN 140
271          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
272          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
273          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
274          BA    .598
275          LG    .310    .280   4.200    .440   5.000
276          UC    .421    .278
277          UA       0       5      16      30      65      77      84      90      94      97
278          UA     100
             *
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  8

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


279          KK    D140
280          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
281          KM        MAXIMUM VOLUME DIVERSION = 5.9 acre-feet
282          DT   BS140     5.9
283          DI       0   10000
284          DQ       0   10000
             * DDM   ***** Preserved *****

285          KK   RT140
286          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
287          DR   BS140
             * DDM   ***** Preserved *****

288          KK    S140
289          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
290          KM   BLEEDOFF FLOW =  2 CFS
291          RS       1    STOR       0
292          SV       0     .01     5.9      15
293          SQ       0     1.0     2.0      10
             *
             * DDM   ***** Preserved *****

294          KK    C140
295          KM   HYDROGRAPH COMBINATION
296          HC       3
             *
             * DDM   ***** Updated *****

297          KK     150
298          KM   SUB-BASIN 150
299          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
300          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
301          KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
302          BA    .407
303          LG    .350    .360   5.100    .260   7.000
304          UC    .296    .221
305          UA       0       3       5       8      12      20      43      75      90      96
306          UA     100
             * DDM   ***** Preserved *****

307          KK    R150
308          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
309          RS       2    FLOW      -1
310          RC    .045     .04    .045    3100    .032
311          RX       0       1       2      23      33      54      55      56
312          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****
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 313          KK    R152
 314          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
 315          RS       3    FLOW      -1
 316          RC    .045     .03    .045    5900    .019
 317          RX       0       1       2       8      33      39      40      41
 318          RY       2       2       2       0       0       2       2       2
              * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE  9

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


 319          KK     160
 320          KM   SUB-BASIN 160

 321          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 322          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 323          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
 324          BA    .365
 325          LG    .340    .330   4.150    .440   1.000
 326          UC    .587    .659
 327          UA       0       3       5       8      12      20      43      75      90      96
 328          UA     100
              *
              * DDM   ***** Preserved *****

 329          KK    D160
 330          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
 331          KM        MAXIMUM VOLUME DIVERSION = 1.2 acre-feet
 332          DT   BS160     1.2
 333          DI       0   10000
 334          DQ       0   10000
              * DDM   ***** Preserved *****

 335          KK   RT160
 336          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 337          DR   BS160
              * DDM   ***** Preserved *****

 338          KK    S160
 339          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 340          KM   BLEEDOFF FLOW =  1 CFS
 341          RS       1    STOR       0
 342          SV       0     .01     1.2     10
 343          SQ       0     0.5     1.0     10
              * DDM   ***** Preserved *****

 344          KK    C160
 345          KM   HYDROGRAPH COMBINATION
 346          HC       3
              *
              * DDM   ***** Updated *****

 347          KK     180
 348          KM   SUB-BASIN 180
 349          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 350          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
 351          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
 352          BA   1.014
 353          LG    .350    .350   4.150    .430    .000
 354          UC    .571    .400
 355          UA       0       3       5       8      12      20      43      75      90      96
 356          UA     100
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 10

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


 357          KK    C180
 358          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
 359          HC       3
              * DDM   ***** Updated *****

 360          KK     210
 361          KM   SUB-BASIN 210
 362          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 363          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
 364          KM     L = 1.84  Kb = .043  Adj. Slope =  315.0
 365          BA    .792
 366          LG    .350    .360   6.800    .130   4.000
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367          UC    .313    .189
368          UA       0       3       5       8      12      20      43      75      90      96
369          UA     100
             * DDM   ***** Preserved *****

370          KK    R210
371          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
372          RS       2    FLOW      -1
373          RC    .045     .03    .045    5100    .022
374          RX       0       1       2      14      34      46      47      48
375          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****

376          KK     240
377          KM   SUB-BASIN 240
378          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
379          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
380          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
381          BA   1.408
382          LG    .350    .370   5.300    .230   2.000
383          UC    .467    .356
384          UA       0       3       5       8      12      20      43      75      90      96
385          UA     100
             * DDM   ***** Preserved *****

386          KK    C240
387          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
388          HC       2
             * DDM   ***** Preserved *****

389          KK    S240
390          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
391          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
392          RS       1    STOR       0
393          SA    1.38    14.2    36.5
394          SE     1.7       5      11
395          SS       5      42       3     1.5
             * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 11

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

396          KK    R240
397          KM   ROUTE FLOW FROM SUB-BASIN 240 TO SUB-BASIN 220
398          KM   PASS MOUNTAIN DIVERSION
399          RS       1    FLOW      -1
400          RC    .035    .025    .035    1800    .005
401          RX       0      15      30      39      69      81      96     111
402          RY     3.6     3.3       3       0       0       3       3       4
             * DDM   ***** Updated *****

403          KK     220
404          KM   SUB-BASIN 220
405          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
406          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
407          KM     L = 1.92  Kb = .046  Adj. Slope =  315.0
408          BA    .473
409          LG    .350    .350   7.000    .120   5.000
410          UC    .333    .282
411          UA       0       3       5       8      12      20      43      75      90      96
412          UA     100
             * DDM   ***** Preserved *****

413          KK    C220
414          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
415          HC       2
             * DDM   ***** Preserved *****

416          KK   SW220
417          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
418          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
419          RS       1    STOR       0
420          SA     .78     4.1    13.7
421          SE       1       3      10
422          SS       3      65       3     1.5
             * DDM   ***** Preserved *****

423          KK    R220
424          KM   ROUTE FLOW FROM SUB-BASIN 220 TO SUB-BASIN 200
425          KM   PASS MOUNTAIN DIVERSION
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426          RS       1    FLOW      -1
427          RC    .035    .025    .035    1250    .005
428          RX       0      50     100     109     139     148     178     184
429          RY       5       4       3       0       0       3       3       5
             * DDM   ***** Updated *****

430          KK     190
431          KM   SUB-BASIN 190
432          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
433          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
434          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
435          BA    .918
436          LG    .350    .390   5.800    .190   8.000
437          UC    .321    .185
438          UA       0       3       5       8      12      20      43      75      90      96
439          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 12

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

440          KK    R190
441          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
442          RS       2    FLOW      -1
443          RC    .045     .03    .045    4740     .03
444          RX       0       1       2      17      37      52      53      54
445          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

446          KK    R192
447          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
448          RS       3    FLOW      -1
449          RC    .045    .035    .045    2200    .018
450          RX       0       1      50      59      79      88     137     138
451          RY     4.5       3       3       0       0       3       3     4.5
             * DDM   ***** Updated *****

452          KK     200
453          KM   SUB-BASIN 200
454          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
455          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
456          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
457          BA    .530
458          LG    .350    .390   5.700    .200  10.000
459          UC    .300    .201
460          UA       0       3       5       8      12      20      43      75      90      96
461          UA     100
             * DDM   ***** Preserved *****

462          KK    C200
463          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
464          HC       3
             * DDM   ***** Preserved *****


465          KK   SW200
466          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
467          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
468          RS       1    STOR       0
469          SA    2.56     3.1     9.4
470          SE       0       3      10
471          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

472          KK    R200
473          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS through storage
474          RS       1    FLOW      -1
475          RC    .035    .025    .035     650    .005
476          RX       0       1       2      17     117     132     133     134
477          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 13

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

478          KK   SS200
479          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
480          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
481          RS       1    STOR       0
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482          SA       8     9.2     9.2
483          SE       0       7      10
484          SS       7     251       3     1.5
             * DDM   ***** Preserved *****

485          KK   RR200
486          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS
487          RS       4    FLOW      -1
488          RC    .035    .025    .035    3150    .005
489          RX       0       1       2      17     117     132     133     134
490          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

491          KK   CC180
492          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
493          HC       2
             * DDM   ***** Preserved *****

494          KK    S180
495          KM   SIGNAL BUTTE FRS DATED 1/28/85
496          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
497          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
498          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 247 ACRE-FEET
499          RS       1    STOR       0
500          SV     0.0  172.10  244.35  482.24  871.30 1101.52 1294.09 1418.10 1578.77 1980.33
501          SQ     0.0   10.20   10.55  121.80  138.40  145.90  151.40  154.67  390.00  1950.0
502          SE  698.23  702.23  703.23  706.23  710.23  712.23  713.73  714.63  715.73  718.23
             * DDM   ***** Preserved *****

503          KK    R180
504          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
505          KM   Routing length increased 100' from 1500' to 1600'    12/12/00
506          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
507          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
508          RS       1    FLOW      -1
509          RC    .035    .025    .035    1600    .003
510          RX       0       1       2    22.6    38.6    59.2      60      61
511          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

512          KK     260
513          KM   SUB-BASIN 260
514          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
515          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
516          KM     L =  .81  Kb = .046  Adj. Slope =   68.0
517          BA    .263
518          LG    .280    .210   6.600    .160  11.000
519          UC    .350    .209
520          UA       0       5      16      30      65      77      84      90      94      97
521          UA     100
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 14

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

522          KK    C260
523          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
524          HC       2    .263
             * DDM   ***** Preserved *****

525          KK    R260
526          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
527          KM   Routing length unchanged     12/12/00
528          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
529          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
530          RS       3    FLOW      -1
531          RC    .035    .025    .035    2300    .003
532          RX       0       1       2    23.4    43.4    64.8      65      66
533          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

534          KK     280
535          KM   SUB-BASIN 280
536          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
537          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
538          KM     L =  .77  Kb = .048  Adj. Slope =   84.0
539          BA    .319
540          LG    .300    .250   5.300    .290  15.000
541          UC    .329    .168
542          UA       0       5      16      30      65      77      84      90      94      97
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543          UA     100
             * DDM   ***** Preserved *****

544          KK    C280
545          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
546          HC       2
             * DDM   ***** Preserved *****

547          KK    R280
548          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
549          KM   Routing length decreased 400' from 2500' to 2100'    12/12/00
550          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
551          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
552          RS       3    FLOW      -1
553          RC    .035    .025    .035    2100    .003
554          RX       0       1       2    23.4    43.4    64.8      65      66
555          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

556          KK     300
557          KM   SUB-BASIN 300
558          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
559          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
560          KM     L =  .78  Kb = .049  Adj. Slope =  103.0
561          BA    .289
562          LG    .300    .250   4.200    .520  16.000
563          UC    .321    .174
564          UA       0       5      16      30      65      77      84      90      94      97
565          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 15

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

566          KK    C300
567          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
568          HC       2
             * DDM   ***** Preserved *****

569          KK    R300
570          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
571          KM   Routing length increased 300' from 2200' to 2500'    12/12/00
572          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
573          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
574          RS       2    FLOW      -1
575          RC    .035    .025    .035    2500    .003
576          RX       0       1       2    23.4    55.4    76.8      77      78
577          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

578          KK     305
579          KM   SUB-BASIN 305
580          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
581          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
582          KM     L = 2.50  Kb = .044  Adj. Slope =  116.0
583          BA    .702
584          LG    .340    .340   4.550    .350   6.000
585          UC    .642    .576
586          UA       0       5      16      30      65      77      84      90      94      97
587          UA     100
             * DDM   ***** Preserved *****

588          KK    C305
589          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 300 AND 305
590          HC       2
             * DDM   ***** Preserved *****

591          KK    R305
592          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
593          KM   Routing length decreased 50' from 6050' to 6000'     12/12/00

594          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
595          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
596          RS       3    FLOW      -1
597          RC    .016    .016    .016    6000   .0146
598          RX       0       1       2     2.1    16.1    16.2      17      18
599          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             * DDM   ***** Updated *****
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600          KK     350
601          KM   SUB-BASIN 350
602          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
603          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
604          KM     L = 2.22  Kb = .041  Adj. Slope =  315.0
605          BA    .997
606          LG    .350    .350   4.550    .340   4.000
607          UC    .363    .227
608          UA       0       3       5       8      12      20      43      75      90      96
609          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 16

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


610          KK    D350
611          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
612          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
613          DT   SF350
614          DI       0    5000
615          DQ       0    2500
             * DDM   ***** Preserved *****

616          KK    R350
617          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
618          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
619          RS       6    FLOW      -1
620          RC    .045    .035    .045    5150    .025
621          RX       0       1      40      46      56      62     102     103
622          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

623          KK     310
624          KM   SUB-BASIN 310
625          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
626          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
627          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
628          BA    .538
629          LG    .350    .350   3.910    .480    .000
630          UC    .483    .520
631          UA       0       3       5       8      12      20      43      75      90      96
632          UA     100
             * DDM   ***** Preserved *****

633          KK    C310
634          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
635          HC       2  1.0365
             * DDM   ***** Preserved *****

636          KK    R310
637          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
638          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320
639          RS      10    FLOW      -1
640          RC    .045    .035    .045   10050    .022
641          RX       0       1      40      46      56      62     102     103
642          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

643          KK     320
644          KM   SUB-BASIN 320
645          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
646          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
647          KM     L = 2.20  Kb = .042  Adj. Slope =  132.0
648          BA    .945
649          LG    .290    .260   4.600    .360  17.000
650          UC    .500    .333
651          UA       0       5      16      30      65      77      84      90      94      97
652          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 17

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


653          KK    D320
654          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
655          KM        MAXIMUM VOLUME DIVERSION = 24.4 acre-feet
656          DT   BS320    24.4
657          DI       0   10000
658          DQ       0   10000
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                * DDM   ***** Preserved *****

659             KK   RT320
660             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
661             DR   BS320
                * DDM   ***** Preserved *****

662             KK    S320
663             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
664             KM   BLEEDOFF FLOW = 10 CFS
665             RS       1    STOR       0
666             SV       0     .01    24.4      40
667             SQ       0     1.0    10.0      20
                * DDM   ***** Preserved *****

668             KK    C320
669             KM   HYDROGRAPH COMBINATION
670             HC       4
                * DDM   ***** Updated *****

671             KK     340
672             KM   SUB-BASIN 340
673             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
674             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
675             KM     L = 2.40  Kb = .042  Adj. Slope =  160.0
676             BA   1.416
677             LG    .260    .250   4.150    .550  25.000
678             UC    .504    .286
679             UA       0       5      16      30      65      77      84      90      94      97
680             UA     100
                * DDM   ***** Preserved *****

681             KK    D340
682             KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
683             KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
684             KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
685             KM        MAXIMUM VOLUME DIVERSION = 109.7 acre-feet
686             DT   BS340   109.7
687             DI       0   10000
688             DQ       0   10000
                * DDM   ***** Preserved *****

689             KK   RT340
690             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
691             DR   BS340
                * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 18

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

692             KK    S340
693             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
694             KM   109.7ACRE-FEETx43560/36x3600= 36.9 cfs
695             RS       1    STOR       0
696             SV       0     .01   109.7     150
697             SQ       0     3.0    36.9     300
                * DDM   ***** Preserved *****

698             KK    C340
699             KM   HYDROGRAPH COMBINATION
700             HC       3
                * DDM   ***** Preserved *****

701             KK   RT350
702             KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
703             DR   SF350
                * DDM   ***** Preserved *****

704             KK   RR350
705             KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
706             KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
707             RS       8    FLOW      -1
708             RC    .045    .035    .045    6050    .025
709             RX       0       1      40      46      56      62     102     103
710             RY       3       2       2       0       0       2       2       3
                * DDM   ***** Updated *****

711             KK     355
712             KM   SUB-BASIN 355
713             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
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714          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
715          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
716          BA    .676
717          LG    .340     .340   4.450    .370   4.000
718          UC    .488     .502
719          UA       0       3       5       8      12      20      43      75      90      96
720          UA     100
             * DDM   ***** Preserved *****

721          KK    C355
722          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
723          HC       2  1.1745
             * DDM   ***** Preserved *****

724          KK    R355
725          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
726          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 360
727          RS      10    FLOW      -1
728          RC    .045     .035    .045   10100    .026
729          RX       0       1      40      46      56      62     102     103
730          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE 19

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


731          KK     360
732          KM   SUB-BASIN 360
733          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
734          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
735          KM     L = 2.10  Kb = .044  Adj. Slope =  124.0
736          BA    .880
737          LG    .260     .250   4.100    .570  23.000
738          UC    .538     .362
739          UA       0       5      16      30      65      77      84      90      94      97
740          UA     100
             * DDM   ***** Preserved *****

741          KK    D360
742          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
743          KM        MAXIMUM VOLUME DIVERSION = 49.5 acre-feet
744          DT   BS360    49.5
745          DI       0   10000
746          DQ       0   10000
             * DDM   ***** Preserved *****

747          KK   RT360
748          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
749          DR   BS360
             * DDM   ***** Preserved *****

750          KK    S360
751          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
752          KM   BLEEDOFF FLOW =16.6CFS
753          RS       1    STOR       0
754          SV       0     .01    49.5      70
755          SQ       0     3.0    16.6     150
             * DDM   ***** Preserved *****

756          KK    C360
757          KM   HYDROGRAPH COMBINATION
758          HC       4
             * DDM   ***** Updated *****

759          KK     370
760          KM   SUB-BASIN 370
761          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
762          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
763          KM     L = 1.90  Kb = .044  Adj. Slope =  203.5
764          BA    .672
765          LG    .340     .320   4.650    .330   8.000
766          UC    .404     .284
767          UA       0       3       5       8      12      20      43      75      90      96
768          UA     100
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE 20

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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769          KK     395
770          KM   SUB-BASIN 395
771          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
772          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
773          KM     L = 1.30  Kb = .051  Adj. Slope =  219.2
774          BA    .199
775          LG    .310    .260   4.900    .340  18.000
776          UC    .329    .334
777          UA       0       5      16      30      65      77      84      90      94      97
778          UA     100
             *
             * DDM   ***** Preserved *****

779          KK    C370
780          KM   HYDROGRAPH COMBINATION
781          HC       2
             * DDM   ***** Preserved *****

782          KK    R370
783          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
784          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
785          RS      11    FLOW      -1
786          RC    .045    .035    .045   10250    .023
787          RX       0       1      40      46      56      62     102     103
788          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****

789          KK     380
790          KM   SUB-BASIN 380
791          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
792          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
793          KM     L = 2.20  Kb = .050  Adj. Slope =  114.0
794          BA    .849
795          LG    .260    .250   4.150    .580  18.000
796          UC    .658    .480
797          UA       0       5      16      30      65      77      84      90      94      97
798          UA     100
             * DDM   ***** Preserved *****

799          KK    D380
800          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
801          KM   DETENTION/RETENTION BASINS LOCATED WITHIN MESA HIGHLANDS
802          KM        MAXIMUM VOLUME DIVERSION = 14.5 acre-feet
803          DT   BS380    14.5
804          DI       0   10000
805          DQ       0   10000
             * DDM   ***** Preserved *****

806          KK   RT380
807          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
808          DR   BS380
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 21

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


809          KK    S380
810          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
811          KM    14.5 ACRE-FEETx43560/36x3600=4.9cfs
812          RS       1    STOR       0
813          SV       0     .01    14.5      20
814          SQ       0     1.0     4.9      50
             * DDM   ***** Preserved *****

815          KK    C380
816          KM   HYDROGRAPH COMBINATION
817          HC       4
             * DDM   ***** Updated *****

818          KK     390
819          KM   SUB-BASIN 390
820          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
821          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
822          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
823          BA    .248
824          LG    .300    .250   4.700    .380  18.000
825          UC    .204    .106
826          UA       0       5      16      30      65      77      84      90      94      97
827          UA     100
             * DDM   ***** Preserved *****
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828          KK    D390
829          KM         DIVERT FLOW INTO ONLINE  DETENTION BASIN
830          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
831          KM         MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
832          DT   BS390     3.5
833          DI       0   10000
834          DQ       0   10000
             * DDM   ***** Preserved *****

835          KK   RT390
836          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
837          DR   BS390
             * DDM   ***** Preserved *****

838          KK    S390
839          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
840          KM     3.5 ACRE-FEETx43560/36x3600=2.0cfs
841          RS       1    STOR       0
842          SV       0     .01     3.5       6
843          SQ       0     0.2     2.0      10
             * DDM   ***** Preserved *****

844          KK    C390
845          KM   HYDROGRAPH COMBINATION
846          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 22

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


847          KK    R390
848          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
849          KM   FROM SUB-BASIN 390 TO SUB-BASIN 400
850          RS      15    FLOW      -1
851          RC    .045    .045    .045    8800    .020
852          RX       0       1      40      46      56      62     102     103
853          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

854          KK     400
855          KM   SUB-BASIN 400
856          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
857          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
858          KM     L = 1.64  Kb = .052  Adj. Slope =  110.0
859          BA    .652
860          LG    .280    .250   4.150    .560  12.000
861          UC    .554    .364
862          UA       0       5      16      30      65      77      84      90      94      97
863          UA     100
             * DDM   ***** Preserved *****

864          KK    D400
865          KM         DIVERT FLOW INTO ONLINE  DETENTION BASIN
866          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
867          KM         MAXIMUM VOLUME DIVERSION = 7.2 ACRE-FEET
868          DT   BS400     7.2
869          DI       0   10000
870          DQ       0   10000
             * DDM   ***** Preserved *****

871          KK   RT400
872          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
873          DR   BS400
             * DDM   ***** Preserved *****

874          KK    S400
875          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
876          KM     7.2 ACRE-FEETx43560/36x3600 = 3cfs
877          RS       1    STOR       0
878          SV       0     .01     7.2      10
879          SQ       0       1       3      10
             * DDM   ***** Preserved *****

880          KK    C400
881          KM   HYDROGRAPH COMBINATION
882          HC       2
             * DDM   ***** Preserved *****

883          KK   CC400
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884          KM   HYDROGRAPH COMBINATION
885          HC       3
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                                    PAGE 23

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


886          KK     385
887          KM   SUB-BASIN 385
888          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
889          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
890          KM     L = 2.30  Kb = .045  Adj. Slope =  303.0
891          BA    .527
892          LG    .340    .360   5.600    .220  13.000
893          UC    .383    .358
894          UA       0       3       5       8      12      20      43      75      90      96
895          UA     100
             * DDM   ***** Preserved *****

896          KK    D385
897          KM   DIVERT FLOW INTO SUB-BASINS 415 & 420
898          DT   SF385
899          DI       0    5000
900          DQ       0    3000
             * DDM   ***** Preserved *****

901          KK    R385
902          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
903          KM   ROUTING OF FLOW DIVERSION FROM SUB-BASIN 385 INTO SUB-BASIN 420
904          RS      15    FLOW      -1
905          RC    .045     .04    .045   10250    .022
906          RX       0       1      40      46      56      62     102     103
907          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

908          KK     420
909          KM   SUB-BASIN 420
910          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
911          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
912          KM     L = 1.91  Kb = .042  Adj. Slope =  120.0
913          BA    .868
914          LG    .300    .270   4.150    .510  16.000
915          UC    .496    .309
916          UA       0       5      16      30      65      77      84      90      94      97
917          UA     100
             * DDM   ***** Preserved *****

918          KK    D420
919          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
920          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
921          KM        MAXIMUM VOLUME DIVERSION = 11.2 acre-feet
922          DT   BS420    11.2
923          DI       0   10000
924          DQ       0   10000
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                                    PAGE 24

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


925          KK   RT420
926          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
927          DR   BS420
             * DDM   ***** Preserved *****

928          KK    S420
929          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
930          KM    11.2 ACRE-FEETx43560/36x3600= 4.cfs
931          RS       1    STOR       0
932          SV       0     .01    11.2      20
933          SQ       0     1.0     4.0      10
             * DDM   ***** Preserved *****

934          KK    C420
935          KM   HYDROGRAPH COMBINATION
936          HC       3  1.0778
             * DDM   ***** Preserved *****

937          KK   CC420
938          KM   HYDROGRAPH COMBINATION
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939          HC       2
             * DDM   ***** Updated *****

940          KK     440
941          KM   SUB-BASIN 440
942          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
943          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
944          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
945          BA    .080
946          LG    .190    .380   6.400    .140  13.000
947          UC    .129    .077
948          UA       0       3       5       8      12      20      43      75      90      96
949          UA     100
             * DDM   ***** Preserved *****

950          KK     R70
951          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
952          RS       2    FLOW      -1
953          RC     .05    .035     .05    2250     .08
954          RX    1000    1025    1050    1070    1075    1095    1120    1145
955          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

956          KK     441
957          KM   SUB-BASIN 441
958          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
959          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
960          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
961          BA    .010
962          LG    .300    .250   5.600    .220   5.000
963          UC    .150    .225
964          UA       0       5      16      30      65      77      84      90      94      97
965          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 25

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

966          KK    C108
967          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
968          HC       2
             * DDM   ***** Preserved *****

969          KK      D4
970          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
971          DT   SPLIT
972          DI       0      14      40      82     120     154     180
973          DQ       0       7      20      41      60      77      90
             * DDM   ***** Preserved *****

974          KK    R108
975          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
976          RS       2    FLOW      -1
977          RC     .05    .035     .05    3200      .1
978          RX    1000    1025    1050    1070    1075    1095    1120    1145
979          RY      30    22.9    15.7      10      10    15.7    22.9      30
             * DDM   ***** Updated *****

980          KK     442
981          KM   SUB-BASIN 442
982          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
983          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
984          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
985          BA    .100
986          LG    .300    .270   3.290    .770   5.000
987          UC    .258    .264
988          UA       0       5      16      30      65      77      84      90      94      97
989          UA     100
             * DDM   ***** Preserved *****

990          KK     C67
991          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
992          HC       2
             * DDM   ***** Preserved *****

993          KK      D6
994          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
995          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
996          DT  BASIN4     3.3
997          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
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 998          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
              * DDM   ***** Preserved *****

 999          KK    RTD6
1000          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1001          DR  BASIN4
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 26

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


1002          KK     SD6
1003          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1004          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
1005          RS       1    STOR       0
1006          SV       0     .01     3.3
1007          SQ       0     0.2     1.1
              * DDM   ***** Preserved *****

1008          KK     CD6
1009          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1010          HC       2
              * DDM   ***** Updated *****

1011          KK     443
1012          KM   SUB-BASIN 443
1013          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1014          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1015          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1016          BA    .080
1017          LG    .250    .190   8.000    .080  10.000
1018          UC    .196    .194
1019          UA       0       5      16      30      65      77      84      90      94      97
1020          UA     100
              * DDM   ***** Preserved *****

1021          KK     D66
1022          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1023          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1024          DT   WSH66
1025          DI       0      78     100     200
1026          DQ       0      78      78      78
              * DDM   ***** Preserved *****

1027          KK    R113
1028          KM        ROUTE FLOW FROM C113 TO C114
1029          RS       1    FLOW      -1
1030          RC    .019    .019    .019    1300    .029
1031          RX    1000    1004    1008    1012    1018    1022    1026    1030
1032          RY      17   15.33   12.67      10      10   12.67   15.33      17
              * DDM   ***** Preserved *****

1033          KK    C114
1034          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1035          HC       2
              * DDM   ***** Updated *****

1036          KK     444
1037          KM   SUB-BASIN 444
1038          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1039          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1040          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1041          BA    .040
1042          LG    .130    .350   4.450    .320   1.000
1043          UC    .112    .084
1                                        HEC-1 INPUT                                          PAGE 27

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

1044          UA       0       3       5       8      12      20      43      75      90      96
1045          UA     100
              * DDM   ***** Preserved *****

1046          KK     R58
1047          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1048          RS       2    FLOW      -1
1049          RC     .05    .035     .05    2370   .0516
1050          RX    1000    1010    1020    1050    1055    1085    1095    1105
1051          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Updated *****
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1052          KK     445
1053          KM   SUB-BASIN 445
1054          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1055          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1056          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1057          BA    .190
1058          LG    .170    .320   3.470    .590   3.000
1059          UC    .192    .130
1060          UA       0       5      16      30      65      77      84      90      94      97
1061          UA     100
              * DDM   ***** Preserved *****

1062          KK    C107
1063          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1064          HC       2
              * DDM   ***** Preserved *****

1065          KK    R107
1066          KM        ROUTE FLOW FROM C107 TO C109
1067          RS       2    FLOW      -1
1068          RC     .05    .035     .05     700   .0516
1069          RX    1000    1010    1020    1050    1055    1085    1095    1105
1070          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Preserved *****

1071          KK    RTB2
1072          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
1073          DR   SPLIT
              * DDM   ***** Preserved *****

1074          KK  RSPLIT
1075          KM        ROUTE FLOW FROM SPLIT TO C109
1076          RS       1    FLOW      -1
1077          RC     .05    .035     .05     800     .05
1078          RX    1000    1025    1050    1070    1075    1095    1120    1145
1079          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1080          KK     446
1081          KM   SUB-BASIN 446
1082          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1083          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1084          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1085          BA    .040
1086          LG    .270    .250   4.500    .400  19.000
1087          UC    .183    .189
1088          UA       0       5      16      30      65      77      84      90      94      97
1089          UA     100
              * DDM   ***** Preserved *****

1090          KK    C109
1091          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1092          HC       3
              * DDM   ***** Preserved *****

1093          KK      D5
1094          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1095          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
1096          DT  WSH404
1097          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1098          DQ       0      35      35      35      35      35      35      35
              * DDM   ***** Preserved *****

1099          KK    R109
1100          KM        ROUTE FLOW FROM C109 TO C110
1101          RS       1    FLOW      -1
1102          RC    .019    .019    .019    3080     .05
1103          RX    1000    1005    1010    1015    1025    1030    1035    1040
1104          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
              * DDM   ***** Updated *****

1105          KK     447
1106          KM   SUB-BASIN 447
1107          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1108          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1109          KM     L =  .49  Kb = .056  Adj. Slope =  221.0
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1110          BA    .090
1111          LG    .250    .270   3.350    .870  30.000
1112          UC    .208    .145
1113          UA       0       5      16      30      65      77      84      90      94      97
1114          UA     100
              * DDM   ***** Preserved *****

1115          KK   RT404
1116          KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1117          DR  WSH404
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 29

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


1118          KK    R404
1119          KM        ROUTE FLOW FROM C110 TO C110
1120          RS       4    FLOW      -1
1121          RC    .019    .019    .019    3540     .03
1122          RX    1000    1012    1016    1020    1025    1029    1033    1045
1123          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1124          KK    C110
1125          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1126          HC       3
              * DDM   ***** Preserved *****

1127          KK    R110
1128          KM        ROUTE FLOW FROM C110 TO C115
1129          RS       1    FLOW      -1
1130          RC    .019    .019    .019     580   .0291
1131          RX    1000    1012    1016    1020    1035    1039    1043    1055
1132          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1133          KK    C115
1134          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1135          HC       2
              * DDM   ***** Preserved *****

1136          KK    R115
1137          KM        ROUTE FLOW FROM C115 TO Sub 453
1138          RS       1    FLOW      -1
1139          RC    .019    .019    .019    2125    .029
1140          RX    1000    1012    1016    1020    1035    1039    1043    1055
1141          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****

1142          KK     448
1143          KM   SUB-BASIN 448
1144          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1145          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1146          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1147          BA    .045
1148          LG    .170    .310   4.200    .390  11.000
1149          UC    .133    .102
1150          UA       0       5      16      30      65      77      84      90      94      97
1151          UA     100
              * DDM   ***** Updated *****

1152          KK     449
1153          KM   SUB-BASIN 449
1154          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1155          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1156          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1157          BA    .050
1158          LG    .260    .280   3.500    .640   6.000
1159          UC    .167    .134
1                                        HEC-1 INPUT                                          PAGE 30

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

1160          UA       0       5      16      30      65      77      84      90      94      97
1161          UA     100
              * DDM   ***** Preserved *****

1162          KK   C6364
1163          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1164          HC       2
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                * DDM   ***** Preserved *****

1165            KK   R6364
1166            KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1167            RS       5    FLOW      -1
1168            RC     .05    .035     .05    4375   .0333
1169            RX    1000    1027    1053    1080    1090    1117    1143    1170
1170            RY      15   13.33   11.67      10      10   11.67   13.33      15
                * DDM   ***** Updated *****

1171            KK     450
1172            KM   SUB-BASIN 450
1173            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1174            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1175            KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1176            BA    .070
1177            LG    .340    .350   3.630    .570   4.000
1178            UC    .296    .383
1179            UA       0       3       5       8      12      20      43      75      90      96
1180            UA     100
                * DDM   ***** Updated *****

1181            KK     451
1182            KM   SUB-BASIN 451
1183            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1184            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1185            KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1186            BA    .025
1187            LG    .340    .340   3.290    .750   3.000
1188            UC    .271    .453
1189            UA       0       3       5       8      12      20      43      75      90      96
1190            UA     100
                * DDM   ***** Preserved *****

1191            KK    C451
1192            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451
1193            HC       2
                * DDM   ***** Preserved *****

1194            KK    RT66
1195            KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1196            DR   WSH66
                * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                    PAGE 31

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


1197            KK     452
1198            KM   SUB-BASIN 452
1199            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1200            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1201            KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1202            BA    .040
1203            LG    .260    .280   3.700    .550   9.000
1204            UC    .171    .166
1205            UA       0       5      16      30      65      77      84      90      94      97
1206            UA     100
                * DDM   ***** Preserved *****

1207            KK   C6465
1208            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1209            HC       2
                * DDM   ***** Preserved *****

1210            KK   R6566
1211            KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1212            RS       3    FLOW      -1
1213            RC     .05    .035     .05    2435   .0282
1214            RX    1000    1045    1090    1150    1160    1220    1265    1310
1215            RY      25      23      20      10      10      20      23      25
                * DDM   ***** Preserved *****

1216            KK    C116
1217            KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1218            HC       3
                * DDM   ***** Preserved *****

1219            KK  BASIN5
1220            KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1221            KM        BASIN 5 FEET DEEP
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1222          RS       1    ELEV       0
1223          SV       0     4.5     9.9
1224          SQ       0      69     190
1225          SE       0     2.5       5
              * DDM   ***** Preserved *****

1226          KK    R116
1227          KM   ROUTE FLOW FROM C116 TO C117
1228          RS       2    FLOW      -1
1229          RC     .05    .035     .05    1300   .0333
1230          RX    1000    1100    1200    1300    1320    1420    1520    1620
1231          RY      13      12      11      10      10      11      12      13
              * DDM   ***** Updated *****

1232          KK     453
1233          KM   SUB-BASIN 453
1234          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1235          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1236          KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1237          BA    .060
1238          LG    .290    .300   3.290    .820  18.000
1                                          HEC-1 INPUT                                                    PAGE 32

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

1239          UC    .275    .284
1240          UA       0       5      16      30      65      77      84      90      94      97
1241          UA     100
              * DDM   ***** Preserved *****

1242          KK    C117
1243          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1244          HC       2
              * DDM   ***** Preserved *****

1245          KK    C118
1246          KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1247          HC       2
              * DDM   ***** Preserved *****

1248          KK    R118
1249          KM        ROUTE FLOW FROM C118 TO  DIV7
1250          RS       1    FLOW      -1
1251          RC    .019    .019    .019    1500    .024
1252          RX    1000    1012    1016    1020    1035    1039    1043    1055
1253          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1254          KK      D7
1255          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1256          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM
1257          DT  BASIN6     3.6
1258          DI       0     363     487     563     645     844
1259          DQ       0       3      47      83     125     244
              * DDM   ***** Preserved *****

1260          KK    RTD7
1261          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1262          DR  BASIN6
              * DDM   ***** Preserved *****

1263          KK     SD7
1264          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1265          KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1266          RS       1    STOR       0
1267          SV       0     .01     3.6
1268          SQ       0     0.2     1.2
              * DDM   ***** Preserved *****

1269          KK     CD7
1270          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1271          HC       2
              * DDM   ***** Updated *****

1272          KK     454
1273          KM   SUB-BASIN 454
1274          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1275          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1276          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1277          BA    .180
                                           HEC-1 INPUT                                                    PAGE 33
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1278        LG    .300    .310   3.780    .560  14.000
1279        UC    .379    .395
1280        UA       0       5      16      30      65      77      84      90      94      97
1281        UA     100
            * DDM   ***** Preserved *****

1282        KK    C119
1283        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND C119
1284        HC       2
            * DDM   ***** Preserved *****

1285        KK    R454
1286        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1287        KM   ROUTE FLOW FROM C119 TO 415C
1288        RS       3    FLOW      -1
1289        RC    .045    .035    .045    2200    .009
1290        RX       0      .5       1      33      42      67    67.5      68
1291        RY       5       4       4       0       0       6       6       6
            * DDM   ***** Updated *****

1292        KK     415
1293        KM   SUB-BASIN 415
1294        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1295        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1296        KM     L = 2.58  Kb = .044  Adj. Slope =  298.5
1297        BA    .609
1298        LG    .310    .280   4.500    .410  17.000
1299        UC    .421    .401
1300        UA       0       5      16      30      65      77      84      90      94      97
1301        UA     100
            *
            * DDM   ***** Preserved *****

1302        KK   RT385
1303        KM   RETRIEVE FLOW FROM DIVERSION OF SUB-BASIN 385 INTO SUB-BASIN 415
1304        DR   SF385
            * DDM   ***** Preserved *****

1305        KK   RR385
1306        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1307        KM   ROUTING OF SPLIT FLOW FROM SUB-BASIN 385 TO SUB-BASIN 415
1308        RS      11    FLOW      -1
1309        RC    .045     .04    .045    5878    .024
1310        RX       0       1      40      46      56      62     102     103
1311        RY       3       2       2       0       0       2       2       3
            * DDM   ***** Preserved *****

1312        KK    C415
1313        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415 & SPLIT FLOW FROM 385
1314        HC       2  0.9252
            * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                        PAGE 34

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

1315        KK   CC415
1316        KM   HYDROGRAPH COMBINATION OF SUB-BASINS 415, R454 & SPLIT FLOW FROM 385
1317        HC       2
            * DDM   ***** Preserved *****

1318        KK    R415
1319        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1320        KM   ROUTING OF FLOW FROM 415C TO 455C
1321        RS       1    FLOW      -1
1322        RC    .045     .03    .045    4100    .024
1323        RX       0      .5       1       8      16      23    23.5      24
1324        RY       8       8       8       0       0       8       8       8
            * DDM   ***** Updated *****

1325        KK     455
1326        KM   SUB-BASIN 455
1327        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1328        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1329        KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1330        BA   1.111
1331        LG    .270    .280   3.700    .640  24.000
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1332          UC    .421    .204
1333          UA       0       5      16      30      65      77      84      90      94      97
1334          UA     100
              * DDM   ***** Preserved *****

1335          KK    D455
1336          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1337          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1338          KM   FOR BASIN #: 30      34      43      47&58
1339          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
1340          DT   BS455    74.1
1341          DI       0   10000
1342          DQ       0   10000
              * DDM   ***** Preserved *****

1343          KK   RT455
1344          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1345          DR   BS455
              * DDM   ***** Preserved *****

1346          KK    S455
1347          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1348          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1349          RS       1    STOR       0
1350          SV       0     .01    74.1     100
1351          SQ       0     3.0      25      50
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 35

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


1352          KK    C455
1353          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1354          HC       2
              * DDM   ***** Preserved *****

1355          KK   CC455
1356          KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
1357          HC       3
              * DDM   ***** Preserved *****

1358          KK    S440
1359          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1360          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1361          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1362          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 271 ACRE-FEET
1363          RS       1    STOR       0
1364          SV     0.0      81   211.0  265.72  692.96  896.16  1120.0 1630.34  2230.9 3311.68
1365          SQ     0.0     1.0     3.0     8.0  515.00  780.00  825.00  3184.7  7426.0 16007.3
1366          SE   577.0  578.00  579.00  579.36  581.86  582.86  583.86  585.86  587.86  590.86
              * DDM   ***** Preserved *****

1367          KK    R455
1368          KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 480
1369          RS      15    FLOW      -1
1370          RC    .035    .025    .035    7000   .0002
1371          RX       0       1       2      28      58      84      85      86
1372          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1373          KK     480
1374          KM   SUB-BASIN 480
1375          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1376          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1377          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1378          BA    .731
1379          LG    .270    .270   3.580    .730  27.000
1380          UC    .325    .148
1381          UA       0       5      16      30      65      77      84      90      94      97
1382          UA     100
              * DDM   ***** Preserved *****

1383          KK    D480
1384          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1385          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1386          KM   FOR BASIN #: 18 & 26
1387          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
1388          DT   BS480    16.5
1389          DI       0   10000
1390          DQ       0   10000
```

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                * DDM   ***** Preserved *****
                                        HEC-1 INPUT                                                    PAGE 36

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


1391            KK   RT480
1392            KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1393            DR   BS480
                * DDM   ***** Preserved *****

1394            KK    S480
1395            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1396            KM    16.5 ACRE-FEETx43560/36x3600= 6.cfs
1397            RS       1    STOR       0
1398            SV       0     .01    16.5      25
1399            SQ       0     1.0     6.0      10
                * DDM   ***** Preserved *****

1400            KK    C480
1401            KM   HYDROGRAPH COMBINATION
1402            HC       2
                * DDM   ***** Preserved *****

1403            KK   CC480
1404            KM   HYDROGRAPH COMBINATION AT SUBBASIN 480
1405            HC       2   0.731
                * DDM   ***** Preserved *****

1406            KK    R480
1407            KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUBBASIN 462
1408            RS       7    FLOW      -1
1409            RC    .035    .025    .035    2800   .0002
1410            RX       0       1       2      28      58      84      85      86
1411            RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
                * DDM   ***** Updated *****

1412            KK     456
1413            KM   SUB-BASIN 456
1414            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1415            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1416            KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1417            BA    .260
1418            LG    .300    .380   5.600    .200  12.000
1419            UC    .217    .139
1420            UA       0       5      16      30      65      77      84      90      94      97
1421            UA     100
                * DDM   ***** Preserved *****

1422            KK      D1
1423            KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1424            KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
1425            DT  BASIN1     4.0
1426            DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1427            DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
                * DDM   ***** Preserved *****
1                                       HEC-1 INPUT                                                    PAGE 37

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


1428            KK     CD2
1429            KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1430            KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1431            DT    WA30
1432            DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1433            DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
                * DDM   ***** Preserved *****

1434            KK    R456
1435            KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1436            RS       2    FLOW      -1
1437            RC     .05    .035     .05    3800    .044
1438            RX    1000    1010    1020    1036    1041    1057    1067    1077
1439            RY   14.88   14.44      14      10      10      14   14.44   14.88
                * DDM   ***** Updated *****

1440            KK     457
1441            KM   SUB-BASIN 457
1442            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1443            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
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1444          KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1445          BA    .190
1446          LG    .270    .330   3.950    .460   6.000
1447          UC    .237    .195
1448          UA       0       5      16      30      65      77      84      90      94      97
1449          UA     100
              * DDM   ***** Preserved *****

1450          KK    C101
1451          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1452          HC       2
              * DDM   ***** Preserved *****

1453          KK      D3
1454          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1455          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
1456          DT  BASIN2     5.0
1457          DI       0      36      70     110     180   313.5     402   500.9
1458          DQ       0       0       0       0       0    67.5     124   190.9
              * DDM   ***** Preserved *****

1459          KK    RTD3
1460          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1461          DR  BASIN2
              * DDM   ***** Preserved *****

1462          KK     SD3
1463          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1464          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1465          RS       1    STOR       0
1466          SV       0     .01       5
1467          SQ       0     0.7     1.7
              * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 38

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


1468          KK     CD3
1469          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1470          HC       2
              * DDM   ***** Preserved *****

1471          KK    R101
1472          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1473          RS       1    FLOW      -1
1474          RC     .05    .035     .05    1450     .05
1475          RX    1000    1010    1020    1036    1041    1057    1067    1077
1476          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1477          KK     458
1478          KM   SUB-BASIN 458
1479          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1480          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1481          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1482          BA    .190
1483          LG    .290    .330   5.800    .190   6.000
1484          UC    .204    .131
1485          UA       0       5      16      30      65      77      84      90      94      97
1486          UA     100
              * DDM   ***** Preserved *****

1487          KK    C103
1488          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1489          HC       2
              * DDM   ***** Preserved *****

1490          KK    R103
1491          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1492          RS       1    FLOW      -1
1493          RC     .05    .035     .05     900     .03
1494          RX    1000    1010    1020    1030    1050    1060    1070    1080
1495          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****

1496          KK    RT30
1497          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1498          DR    WA30
              * DDM   ***** Preserved *****
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```
1499        KK     R30
1500        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1501        RS       1    FLOW      -1
1502        RC     .05    .035     .05    1630     .05
1503        RX    1000    1010    1020    1036    1041    1057    1067    1077
1504        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 39

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


1505        KK    RTB1
1506        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
1507        DR  BASIN1
            * DDM   ***** Preserved *****

1508        KK      B1
1509        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1510        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
1511        RS       1    ELEV       0
1512        SV              .7     1.4     2.3     2.7     4.0
1513        SQ       0       5      16      28    32.5      37
1514        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1515        KK     RB1
1516        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1517        RS       3    FLOW      -1
1518        RC     .05    .035     .05    1720     .05
1519        RX    1000    1010    1020    1036    1041    1057    1067    1077
1520        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1521        KK    CDIV
1522        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1523        HC       2     .12
            * DDM   ***** Updated *****

1524        KK     459
1525        KM   SUB-BASIN 459
1526        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1527        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1528        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1529        BA    .030
1530        LG    .220    .300   3.330    .710   8.000
1531        UC    .162    .157
1532        UA       0       5      16      30      65      77      84      90      94      97
1533        UA     100
            * DDM   ***** Preserved *****

1534        KK     C52
1535        KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1536        HC       2
            * DDM   ***** Preserved *****


1537        KK     R52
1538        KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1539        RS       3    FLOW      -1
1540        RC     .05    .035     .05    2000     .05
1541        RX    1000    1010    1020    1036    1041    1057    1067    1077
1542        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE 40

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


1543        KK     460
1544        KM   SUB-BASIN 460
1545        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1546        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1547        KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1548        BA    .140
1549        LG    .250    .260   3.740    .690  27.000
1550        UC    .242    .160
1551        UA       0       5      16      30      65      77      84      90      94      97
1552        UA     100
            * DDM   ***** Preserved *****
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1553          KK    C102
1554          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1555          HC       2
              * DDM   ***** Preserved *****

1556          KK  BASIN3
1557          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1558          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1559          RS       1    ELEV       0
1560          SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
1561          SQ       0      22      45    47.4      48      51      57      62      67      73
1562          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1563          KK      R3
1564          KM        ROUTE FLOW FROM C102 to C106
1565          RS       5    FLOW      -1
1566          RC     .05     .03     .05    2750   .0375
1567          RX    1000    1010    1020    1052    1086    1118    1128    1138
1568          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1569          KK     461
1570          KM   SUB-BASIN 461
1571          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1572          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1573          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1574          BA    .120
1575          LG    .270    .250   4.250    .450  21.000
1576          UC    .271    .250
1577          UA       0       5      16      30      65      77      84      90      94      97
1578          UA     100
              * DDM   ***** Preserved *****

1579          KK    C104
1580          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1581          HC       2
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 41

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

1582          KK    C106
1583          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1584          HC       2
              * DDM   ***** Preserved *****

1585          KK    R106
1586          KM        ROUTE FLOW FROM C106 TO C49
1587          RS       2    FLOW      -1
1588          RC     .05    .035     .05    3950    .033
1589          RX    1000    1010    1020    1030    1050    1060    1070    1080
1590          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1591          KK     462
1592          KM   SUB-BASIN 462
1593          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1594          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1595          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1596          BA    .301
1597          LG    .300    .330   5.300    .240  12.000
1598          UC    .225    .137
1599          UA       0       5      16      30      65      77      84      90      94      97
1600          UA     100
              *
              * DDM   ***** Preserved *****

1601          KK     C56
1602          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 462 AND C106
1603          HC       2
              * DDM   ***** Preserved *****

1604          KK    C462
1605          KM        COMBINE HYDROGRAPHS AT SUBBASIN 462
1606          HC       2    2.09
              * DDM   ***** Preserved *****

1607          KK    R462
1608          KM   ROUTE FLOW FROM SUB-BASIN 462 TO SUB-BASIN 500 (First Channel Reach)
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1609          RS       1    FLOW      -1
1610          RC    .025    .025    .025    1800    .005
1611          RX       0       1      20      32      62      74      93      94
1612          RY      13      12      12       0       0      12      12      13
              * DDM   ***** Preserved *****

1613          KK   RR462
1614          KM   ROUTE FLOW FROM SUB-BASIN 462 TO SUB-BASIN 500 (Second Natural Wash Reach)
1615          RS       3    FLOW      -1
1616          RC    .055     .05    .055    4700     .05
1617          RX       0       1       2      28      58      84      85      86
1618          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE 42

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


1619          KK     500
1620          KM   SUB-BASIN 500
1621          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1622          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1623          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1624          BA    .930
1625          LG    .350    .400   6.000    .170   9.000
1626          UC    .421    .333
1627          UA       0       3       5       8      12      20      43      75      90      96
1628          UA     100
              * DDM   ***** Preserved *****

1629          KK    C500
1630          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1631          HC       2    3.02
1632          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   31          10
                V
                V
   41         R10
                V
                V
   47         R12
                .
                .
   53           .          20
                .           .
                .           .
   66           .           .------->    BS20
   63           .         D20
                .           .
                .           .
   71           .           .           .<-------    BS20
   69           .           .        RT20
                .           .           V
                .           .           V
   72           .           .         S20
                .           .           .
                .           .           .
   78         C20.......................
                V
                V
   81         R20
                .
                .
   87           .          40
                .           .
                .           .
  100           .           .------->    BS40
   97           .         D40
                .           .
                .           .
  105           .           .           .<-------    BS40
  103           .           .        RT40
                .           .           V
                .           .           V
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106          .           .         S40
             .           .           .
             .           .           .
112        C40.......................
             .
             .
115          .          60
             .           .
             .           .
128          .           .-------->    BS60
125          .         D60
             .           .
             .           .
133          .           .           .<--------    BS60
131          .           .        RT60
             .           .           V
             .           .           V
134          .           .        SB60
             .           .           .
             .           .           .
140        C60.......................
             V
             V
143        S60
             V
             V
152        R60
             V
             V
158       RR60
             .
             .
164          .          80
             .           .
             .           .
177          .           .-------->    BS80
174          .         D80
             .           .
             .           .
182          .           .           .<--------    BS80
180          .           .        RT80
             .           .           V
             .           .           V
183          .           .         S80
             .           .           .
             .           .           .
189          .         C80............
             .           .
             .           .
192       CC80............
             V
             V
195        R80
             .
             .
201          .         100
             .           .
             .           .
214          .           .-------->   BS100
211          .        D100
             .           .
             .           .
219          .           .           .<--------   BS100
217          .           .       RT100
             .           .           V
             .           .           V
220          .           .        S100
             .           .           .
             .           .           .
226       C100.......................
             V
             V
229       R100
             .
             .
235          .         120
             .           .
             .           .
248          .           .-------->   BS120
245          .        D120
             .           .
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                .           .
253             .           .           .<-------   BS120
251             .           .       RT120
                .           .           V
                .           .           V
254             .           .        S120
                .           .           .
                .           .           .
260          C120.......................
                V
                V
263          R120
                .
                .
269             .         140
                .           .
                .           .
282             .           .------->   BS140
279             .       D140
                .           .
                .           .
287             .           .           .<-------   BS140
285             .           .       RT140
                .           .           V
                .           .           V
288             .           .        S140
                .           .           .
                .           .           .
294          C140.......................
                .
                .
297             .         150
                .           V
                .           V
307             .       R150
                .           V
                .           V
313             .       R152
                .           .
                .           .
319             .           .         160
                .           .           .
                .           .           .
332             .           .           .------->   BS160
329             .           .        D160
                .           .           .
                .           .           .
337             .           .           .           .<-------   BS160
335             .           .           .       RT160
                .           .           .           V
                .           .           .           V
338             .           .           .        S160
                .           .           .           .
                .           .           .           .
344             .       C160.......................
                .           .
                .           .
347             .           .         180
                .           .           .
                .           .           .
357          C180.......................
                .
                .
360             .         210
                .           V
                .           V
370             .       R210
                .           .
                .           .
376             .           .         240
                .           .           .
                .           .           .
386             .       C240............
                .           V
                .           V
389             .       S240
                .           V
                .           V
396             .       R240
                .           .
                .           .
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403          .           .         220
             .           .           .
             .           .           .
413          .        C220............
             .           V
             .           V
416          .       SW220
             .           V
             .           V
423          .        R220
             .           .
             .           .
430          .           .         190
             .           .           V
             .           .           V
440          .           .        R190
             .           .           V
             .           .           V
446          .           .        R192
             .           .           .
             .           .           .
452          .           .           .         200
             .           .           .           .
             .           .           .           .
462          .        C200........................
             .           V
             .           V
465          .       SW200
             .           V
             .           V
472          .        R200
             .           V
             .           V
478          .       SS200
             .           V
             .           V
485          .       RR200
             .           .
             .           .
491       CC180............
             V
             V
494       S180
             V
             V
503       R180
             .
             .
512          .         260
             .           .
             .           .
522       C260............
             V
             V
525       R260
             .
             .
534          .         280
             .           .
             .           .
544       C280............
             V
             V
547       R280
             .
             .
556          .         300
             .           .
             .           .
566       C300............
             V
             V
569       R300
             .
             .
578          .         305
             .           .
             .           .
588       C305............
             V
             V
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591        R305
              .
              .
600           .         350
              .           .
              .           .
613           .           .-------->   SF350
610           .        D350
              .           V
              .           V
616           .        R350
              .           .
              .           .
623           .           .         310
              .           .           .
              .           .           .
633           .        C310............
              .           V
              .           V
636           .        R310
              .           .
              .           .
643           .           .         320
              .           .           .
              .           .           .
656           .           .           .-------->   BS320
653           .           .        D320
              .           .           .
              .           .           .
661           .           .           .           .<-------   BS320
659           .           .           .       RT320
              .           .           .           V
              .           .           .           V
662           .           .           .        S320
              .           .           .           .
              .           .           .           .
668        C320.................................
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              .
671           .         340
              .           .
              .           .
686           .           .-------->   BS340
681           .        D340
              .           .
              .           .
691           .           .           .<-------   BS340
689           .           .       RT340
              .           .           V
              .           .           V
692           .           .        S340
              .           .           .
              .           .           .
698        C340......................
              .
              .
703           .           .<-------   SF350
701           .       RT350
              .           V
              .           V
704           .       RR350
              .           .
              .           .
711           .           .         355
              .           .           .
              .           .           .
721           .        C355............
              .           V
              .           V
724           .        R355
              .           .
              .           .
731           .           .         360
              .           .           .
              .           .           .
744           .           .           .-------->   BS360
741           .           .        D360
              .           .           .
              .           .           .
749           .           .           .           .<-------   BS360
747           .           .           .       RT360
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                .          .          .          V
                .          .          .          V
750             .          .          .       S360
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756          C360.................................
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                .
759             .        370
                .          .
                .          .
769             .          .        395
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                .          .          .
779             .       C370............
                .          V
                .          V
782             .       R370
                .          .
                .          .
789             .          .        380
                .          .          .
                .          .          .
803             .          .          .-------->   BS380
799             .          .       D380     /
                .          .          .
                .          .          .
808             .          .          .          .<-------   BS380
806             .          .          .      RT380
                .          .          .          V
                .          .          .          V
809             .          .          .       S380
                .          .          .          .
                .          .          .          .
815          C380.................................
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                .
818             .        390
                .          .
                .          .
832             .          .-------->   BS390
828             .       D390
                .          .
                .          .
837             .          .          .<-------   BS390
835             .          .      RT390
                .          .          V
                .          .          V
838             .          .       S390
                .          .          .
                .          .          .
844             .       C390............
                .          V
                .          V
847             .       R390
                .          .
                .          .
854             .          .        400
                .          .          .
                .          .          .
868             .          .          .-------->   BS400
864             .          .       D400
                .          .          .
                .          .          .
873             .          .          .          .<-------   BS400
871             .          .          .      RT400
                .          .          .          V
                .          .          .          V
874             .          .          .       S400
                .          .          .          .
                .          .          .          .
880             .          .       C400............
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                .          .          .
883          CC400........................
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                .
886             .        385
                .          .
                .          .
898             .          .-------->   SF385
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896          .        D385
             .           V
             .           V
901          .        R385
             .           .
             .           .
908          .           .         420
             .           .           .
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922          .           .           .-------->   BS420
918          .           .        D420
             .           .           .
             .           .           .
927          .           .           .           .<-------   BS420
925          .           .           .       RT420
             .           .           .           V
             .           .           .           V
928          .           .           .        S420
             .           .           .           .
             .           .           .           .
934          .        C420.......................
             .           .
             .           .
937       CC420............
             .
             .
940          .         440
             .           V
             .           V
950          .         R70
             .           .
             .           .
956          .           .         441
             .           .           .
             .           .           .
966          .        C108............
             .           .
             .           .
971          .           .-------->   SPLIT
969          .          D4
             .           V
             .           V
974          .        R108
             .           .
             .           .
980          .           .         442
             .           .           .
             .           .           .
990          .         C67............
             .           .
             .           .
996          .           .-------->  BASIN4
993          .          D6
             .           .
             .           .
1001         .           .           .<-------  BASIN4
999          .           .        RTD6
             .           .           V
             .           .           V
1002         .           .         SD6
             .           .           .
             .           .           .
1008         .         CD6............
             .           .
             .           .
1011         .           .         443
             .           .           .
             .           .           .
1024         .           .           .-------->   WSH66
1021         .           .         D66
             .           .           V
             .           .           V
1027         .           .        R113
             .           .           .
             .           .           .
1033         .        C114............
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             .           .
1036         .           .         444
             .           .           V
             .           .           V
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1046          .           .        R58
              .           .          .
              .           .          .
1052          .           .          .        445
              .           .          .          .
              .           .          .          .
1062          .           .      C107............
              .           .         V
              .           .         V
1065          .           .      R107
              .           .          .
              .           .          .
1073          .           .          .          .<-------   SPLIT
1071          .           .          .      RTB2
              .           .          .         V
              .           .          .         V
1074          .           .          .    RSPLIT
              .           .          .          .
              .           .          .          .
1080          .           .          .          .        446
              .           .          .          .          .
              .           .          .          .          .
1090          .           .      C109........................
              .           .          .
              .           .          .
1096          .           .          .-------> WSH404
1093          .           .        D5
              .           .         V
              .           .         V
1099          .           .      R109
              .           .          .
              .           .          .
1105          .           .          .        447
              .           .          .          .
              .           .          .          .
1117          .           .          .          .          .<-------  WSH404
1115          .           .          .          .      RT404
              .           .          .          .         V
              .           .          .          .         V
1118          .           .          .          .       R404
              .           .          .          .          .
              .           .          .          .          .
1124          .           .      C110........................
              .           .         V
              .           .         V
1127          .           .      R110
              .           .          .
              .           .          .
1133          .       C115............
              .          V
              .          V
1136          .       R115
              .           .
              .           .
1142          .           .        448
              .           .          .
              .           .          .
1152          .           .          .        449
              .           .          .          .
              .           .          .          .
1162          .           .     C6364............
              .           .         V
              .           .         V
1165          .           .     R6364
              .           .          .
              .           .          .
1171          .           .          .        450
              .           .          .          .
              .           .          .          .
1181          .           .          .          .        451
              .           .          .          .          .
              .           .          .          .          .
1191          .           .          .      C451............
              .           .          .          .
              .           .          .          .
1196          .           .          .          .          .<-------   WSH66
1194          .           .          .          .       RT66
              .           .          .          .          .
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1197          .           .          .          .          .        452
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1207                                                  C6465............
                                                          V
                                                          V
1210                                                  R6566
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1216                        C116......................
                                V
                                V
1219                      BASIN5
                                V
                                V
1226                        R116
                                .
                                .
1232                                        453
                                              .
                                              .
1242                        C117............
                                .
                                .
1245                  C118............
                          V
                          V
1248                  R118
                          .
                          .
1257                      .-------> BASIN6
1254                    D7
                          .
                          .
1262                            .<-------  BASIN6
1260                        RTD7
                                V
                                V
1263                         SD7
                                .
                                .
1269                   CD7............
                          .
                          .
1272                         454
                                .
                                .
1282                  C119............
                          V
                          V
1285                  R454
                          .
                          .
1292                         415
                                .
                                .
1304                                          .<-------   SF385
1302                                    RT385
                                              V
                                              V
1305                                    RR385
                                              .
                                              .
1312                        C415............
                                .
                                .
1315                 CC415............
                          V
                          V
1318                  R415
                          .
                          .
1325                         455
                                .
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1340                            .------->   BS455
1335                        D455
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1345                                          .<-------   BS455
1343                                    RT455
                                              V
                                              V
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1346          .           .           .        S455
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              .           .           .           .
1352          .           .        C455............
              .           .           .
              .           .           .
1355      CC455........................
              V
              V
1358       S440
              V
              V
1367       R455
              .
              .
1373          .         480
              .           .
              .           .
1388          .           .-------->   BS480
1383          .        D480
              .           .
              .           .
1393          .           .           .<-------   BS480
1391          .           .       RT480
              .           .           V
              .           .           V
1394          .           .        S480
              .           .           .
              .           .           .
1400          .        C480............
              .           .
              .           .
1403      CC480............
              V
              V
1406       R480
              .
              .
1412          .         456
              .           .
              .           .
1425          .           .-------> BASIN1
1422          .          D1
              .           .
              .           .
1431          .           .-------->    WA30
1428          .         CD2
              .           V
              .           V
1434          .        R456
              .           .
              .           .
1440          .           .         457
              .           .           .
              .           .           .
1450          .        C101............
              .           .
              .           .
1456          .           .-------> BASIN2
1453          .          D3
              .           .
              .           .
1461          .           .           .<-------  BASIN2
1459          .           .        RTD3
              .           .           V
              .           .           V
1462          .           .         SD3
              .           .           .
              .           .           .
1468          .         CD3............
              .           V
              .           V
1471          .        R101
              .           .
              .           .
1477          .           .         458
              .           .           .
              .           .           .
1487          .        C103............
              .           V
              .           V
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1490          .        R103
              .           .
              .           .
1498          .           .          .<-------    WA30
1496          .           .       RT30
              .           .          V
              .           .          V
1499          .           .        R30
              .           .          .
              .           .          .
1507          .           .          .           .<-------  BASIN1
1505          .           .          .        RTB1
              .           .          .           V
              .           .          .           V
1508          .           .          .          B1
              .           .          .           V
              .           .          .           V
1515          .           .          .         RB1
              .           .          .           .
              .           .          .           .
1521          .           .       CDIV............
              .           .          .
              .           .          .
1524          .           .          .         459
              .           .          .           .
              .           .          .           .
1534          .           .        C52............
              .           .          V
              .           .          V
1537          .           .        R52
              .           .          .
              .           .          .
1543          .           .          .         460
              .           .          .           .
              .           .          .           .
1553          .           .       C102............
              .           .          V
              .           .          V
1556          .           .     BASIN3
              .           .          V
              .           .          V
1563          .           .         R3
              .           .          .
              .           .          .
1569          .           .          .         461
              .           .          .           .
              .           .          .           .
1579          .           .       C104............
              .           .          .
              .           .          .
1582          .        C106............
              .           V
              .           V
1585          .        R106
              .           .
              .           .
1591          .           .        462
              .           .          .
              .           .          .
1601          .         C56............
              .           .
              .           .
1604       C462............
              V
              V
1607       R462
              V
              V
1613      RR462
              .
              .
1619          .         500
              .           .
              .           .
1629       C500............
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

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1*****************************************                    *****************************************
                                         *                    *                                       *
   FLOOD HYDROGRAPH PACKAGE  (HEC-1)     *                    *    U.S. ARMY CORPS OF ENGINEERS       *
              JUN   1998                 *                    *    HYDROLOGIC ENGINEERING CENTER      *
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*          VERSION 4.1                  *                                          *          609 SECOND STREET          *
*                                       *                                          *       DAVIS, CALIFORNIA 95616       *
  RUN DATE   24JUL02  TIME  15:57:35    *                                          *           (916) 756-1104            *
*                                       *                                          *                                     *
*****************************************                                          *****************************************
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                    Future Condition Base Model with Spook Hill FRS Storage Routing
                    Return Period = 100 Years, Rainfall Duration = 24 Hours
                    Original File Name: FC24BASE.DAT (Level II), Wood/Patel, October 2001
                    Modified File Name: FC24BASE.DAT (Level III), Wood/Patel, April 2002
                    METHODOLOGY
                    THE US CORPS OF ENGINEERS FLOW HYDROGRAPH PACKAGE HEC-1 DATED JUNE 1998 V4.1
                    SCS TYPE II RAINFALL DISTRIBUTION
                    CLARK UNIT HYDROGRAPH
                    GREEN AND AMPT INFILTRATION EQUATION USED FOR CALCULATING LOSSES
                    NORMAL DEPTH STORAGE CHANNEL ROUTING

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

   IT          HYDROGRAPH TIME DATA
                      NMIN           2  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1    0  STARTING DATE
                     ITIME        0000  STARTING TIME
                        NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      3    0  ENDING DATE
                    NDTIME        1838  ENDING TIME
                    ICENT           19  CENTURY MARK

                 COMPUTATION INTERVAL      .03 HOURS
                      TOTAL TIME BASE   66.63 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

14 JD          INDEX STORM NO. 1
                      STRM        3.81  PRECIPITATION DEPTH
                      TRDA         .01  TRANSPOSITION DRAINAGE AREA

15 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      .03      .04      .04      .04      .04      .04      .04      .04
          .01      .01      .01      .01      .01      .01      .01      .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

25 JD     INDEX STORM NO. 2
             STRM         3.79  PRECIPITATION DEPTH
             TRDA         1.00  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
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26 JD        INDEX STORM NO. 3
                     STRM        3.68  PRECIPITATION DEPTH
                     TRDA        5.80  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
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 27 JD         INDEX STORM NO. 4
                 STRM        3.57  PRECIPITATION DEPTH
                 TRDA       10.66  TRANSPOSITION DRAINAGE AREA

  0 PI           PRECIPITATION PATTERN
             .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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  28 JD       INDEX STORM NO. 5
                 STRM       3.54  PRECIPITATION DEPTH
                 TRDA      13.70  TRANSPOSITION DRAINAGE AREA

   0 PI         PRECIPITATION PATTERN
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29 JD INDEX STORM NO. 6

STRM 3.47 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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30 JD INDEX STORM NO. 7
STRM 3.32 PRECIPITATION DEPTH
TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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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	10	972.	12.27	119.	33.	12.	.69		
+	ROUTED TO	R10	903.	12.40	119.	33.	12.	.69		
+	ROUTED TO	R12	845.	12.60	118.	33.	12.	.69		
+	HYDROGRAPH AT	20	1103.	12.23	165.	45.	16.	1.17		
+	DIVERSION TO	BS20	1103.	12.23	92.	24.	9.	1.17		
+	HYDROGRAPH AT	D20	839.	12.50	79.	21.	8.	1.17		
+	HYDROGRAPH AT	RT20	1103.	12.23	92.	24.	9.	1.17		
+	ROUTED TO	S20	16.	12.50	15.	12.	7.	1.17		
+	3 COMBINED AT	C20	1554.	12.57	207.	63.	26.	1.86		
+	ROUTED TO	R20	1554.	12.57	207.	63.	26.	1.86		
+	HYDROGRAPH AT	40	2753.	12.30	286.	79.	28.	2.23		
+	DIVERSION TO	BS40	1789.	12.13	72.	20.	7.	2.23		
+	HYDROGRAPH AT	D40	2753.	12.30	227.	59.	21.	2.23		
+	HYDROGRAPH AT	RT40	1789.	12.13	72.	20.	7.	2.23		

	ROUTED TO	S40	13.	12.20	12.	10.	6.	2.23
+	3 COMBINED AT	C40	3088.	12.33	437.	129.	52.	4.08
+	HYDROGRAPH AT	60	1654.	12.40	244.	66.	24.	1.75
+	DIVERSION TO	BS60	11.	9.17	7.	2.	1.	1.75
+	HYDROGRAPH AT	D60	1654.	12.40	244.	64.	23.	1.75
+	HYDROGRAPH AT	RT60	11.	9.17	7.	2.	1.	1.75
+	ROUTED TO	SB60	2.	9.33	2.	1.	1.	1.75
+	3 COMBINED AT	C60	4599.	12.33	665.	190.	75.	5.84
+	ROUTED TO	S60	101.	14.73	101.	98.	54.	5.84
+	ROUTED TO	R60	101.	14.83	101.	98.	54.	5.84
+	ROUTED TO	RR60	101.	14.87	101.	98.	54.	5.84
+	HYDROGRAPH AT	80	1951.	12.13	199.	53.	19.	1.49
+	DIVERSION TO	BS80	945.	11.93	35.	10.	3.	1.49
+	HYDROGRAPH AT	D80	1951.	12.13	170.	43.	16.	1.49
+	HYDROGRAPH AT	RT80	945.	11.93	35.	10.	3.	1.49
+	ROUTED TO	S80	7.	12.00	6.	5.	3.	1.49
+	2 COMBINED AT	C80	1958.	12.13	176.	48.	19.	1.49
+	2 COMBINED AT	CC80	1958.	12.13	264.	144.	75.	1.49
+	ROUTED TO	R80	1950.	12.17	264.	144.	75.	1.49
+	HYDROGRAPH AT	100	453.	12.20	66.	18.	6.	.49
+	DIVERSION TO	BS100	422.	12.13	19.	5.	2.	.49
+	HYDROGRAPH AT	D100	453.	12.20	50.	13.	5.	.49
+	HYDROGRAPH AT	RT100	422.	12.13	19.	5.	2.	.49
+	ROUTED TO	S100	4.	12.20	3.	3.	2.	.49
+	3 COMBINED AT	C100	2352.	12.20	314.	158.	81.	1.98
+	ROUTED TO	R100	2303.	12.23	313.	158.	81.	1.98
	HYDROGRAPH AT	120	3345.	12.27	342.	93.	34.	2.20

	DIVERSION TO	BS120	13.	7.50	10.	3.	1.	2.20
	HYDROGRAPH AT	D120	3345.	12.27	342.	90.	33.	2.20
+	HYDROGRAPH AT	RT120	13.	7.50	10.	3.	1.	2.20
+	ROUTED TO	S120	2.	8.00	2.	2.	1.	2.20
+	3 COMBINED AT	C120	5561.	12.23	633.	242.	112.	4.18
+	ROUTED TO	R120	5512.	12.27	633.	242.	112.	4.18
+	HYDROGRAPH AT	140	665.	12.13	67.	18.	6.	.60
+	DIVERSION TO	BS140	369.	11.97	11.	3.	1.	.60
+	HYDROGRAPH AT	D140	665.	12.13	58.	15.	5.	.60
+	HYDROGRAPH AT	RT140	369.	11.97	11.	3.	1.	.60
+	ROUTED TO	S140	2.	12.03	2.	2.	1.	.60
+	3 COMBINED AT	C140	6028.	12.27	687.	257.	118.	4.78
+	HYDROGRAPH AT	150	593.	12.17	51.	14.	5.	.41
+	ROUTED TO	R150	567.	12.23	51.	14.	5.	.41
+	ROUTED TO	R152	513.	12.33	51.	14.	5.	.41
+	HYDROGRAPH AT	160	224.	12.40	36.	9.	3.	.37
+	DIVERSION TO	BS160	82.	12.13	2.	1.	0.	.37
+	HYDROGRAPH AT	D160	224.	12.40	34.	9.	3.	.37
+	HYDROGRAPH AT	RT160	82.	12.13	2.	1.	0.	.37
+	ROUTED TO	S160	1.	12.20	1.	1.	0.	.37
+	3 COMBINED AT	C160	732.	12.37	86.	23.	8.	.77
+	HYDROGRAPH AT	180	851.	12.37	98.	25.	9.	1.01
+	3 COMBINED AT	C180	7186.	12.27	850.	298.	132.	6.56
+	HYDROGRAPH AT	210	1322.	12.17	111.	29.	10.	.79
+	ROUTED TO	R210	1246.	12.23	111.	29.	10.	.79
+	HYDROGRAPH AT	240	1513.	12.30	167.	42.	15.	1.41
+	2 COMBINED AT	C240	2684.	12.27	273.	70.	25.	2.20

	ROUTED TO	S240	799.	12.70	226.	59.	21.	2.20
+	ROUTED TO	R240	795.	12.77	225.	59.	21.	2.20
+	HYDROGRAPH AT	220	676.	12.20	68.	18.	6.	.47
+	2 COMBINED AT	C220	955.	12.60	288.	75.	27.	2.67
+	ROUTED TO	SW220	895.	12.80	280.	73.	26.	2.67
+	ROUTED TO	R220	893.	12.87	280.	73.	26.	2.67
+	HYDROGRAPH AT	190	1471.	12.17	123.	33.	12.	.92
+	ROUTED TO	R190	1415.	12.23	123.	33.	12.	.92
+	ROUTED TO	R192	1359.	12.30	123.	33.	12.	.92
+	HYDROGRAPH AT	200	831.	12.17	72.	20.	7.	.53
+	3 COMBINED AT	C200	2264.	12.30	459.	122.	44.	4.12
+	ROUTED TO	SW200	2144.	12.37	454.	119.	43.	4.12
+	ROUTED TO	R200	2135.	12.37	454.	119.	43.	4.12
+	ROUTED TO	SS200	1364.	12.73	333.	88.	32.	4.12
+	ROUTED TO	RR200	1343.	12.83	331.	88.	32.	4.12
+	2 COMBINED AT	CC180	7186.	12.27	1160.	382.	162.	10.68
+	ROUTED TO	S180	124.	24.37	124.	123.	89.	10.68
+	ROUTED TO	R180	124.	24.40	124.	123.	89.	10.68
+	HYDROGRAPH AT	260	427.	12.10	42.	11.	4.	.26
+	2 COMBINED AT	C260	428.	12.10	140.	130.	102.	.26
+	ROUTED TO	R260	411.	12.20	140.	130.	102.	.26
+	HYDROGRAPH AT	280	527.	12.10	46.	13.	5.	.32
+	2 COMBINED AT	C280	893.	12.13	181.	141.	107.	.58
+	ROUTED TO	R280	870.	12.20	180.	141.	106.	.58
+	HYDROGRAPH AT	300	428.	12.10	37.	11.	4.	.29
	2 COMBINED AT							

		C300	1235.	12.17	214.	149.	110.	.87
+	ROUTED TO	R300	1189.	12.23	213.	149.	110.	.87
+	HYDROGRAPH AT	305	476.	12.27	81.	22.	8.	.70
+	2 COMBINED AT	C305	1642.	12.23	289.	168.	116.	1.57
+	ROUTED TO	R305	1619.	12.30	289.	168.	116.	1.57
+	HYDROGRAPH AT	350	1315.	12.20	112.	29.	11.	1.00
+	DIVERSION TO	SF350	658.	12.20	56.	15.	5.	1.00
+	HYDROGRAPH AT	D350	658.	12.20	56.	15.	5.	1.00
+	ROUTED TO	R350	583.	12.40	56.	15.	5.	1.00
+	HYDROGRAPH AT	310	381.	12.33	50.	13.	5.	.54
+	2 COMBINED AT	C310	940.	12.37	106.	27.	10.	1.04
+	ROUTED TO	R310	827.	12.73	106.	27.	10.	1.04
+	HYDROGRAPH AT	320	1027.	12.17	133.	38.	14.	.94
	DIVERSION TO	BS320	928.	12.10	44.	12.	4.	.94
+	HYDROGRAPH AT	D320	1027.	12.17	98.	26.	9.	.94
+	HYDROGRAPH AT	RT320	928.	12.10	44.	12.	4.	.94
+	ROUTED TO	S320	9.	12.17	9.	7.	4.	.94
+	4 COMBINED AT	C320	2595.	12.30	487.	223.	136.	3.55
+	HYDROGRAPH AT	340	1561.	12.17	202.	61.	22.	1.42
+	DIVERSION TO	BS340	1561.	12.17	202.	55.	20.	1.42
+	HYDROGRAPH AT	D340	24.	14.70	16.	6.	2.	1.42
+	HYDROGRAPH AT	RT340	1561.	12.17	202.	55.	20.	1.42
+	ROUTED TO	S340	33.	14.43	32.	26.	16.	1.42
+	3 COMBINED AT	C340	2595.	12.30	517.	252.	153.	4.97
+	HYDROGRAPH AT	RT350	658.	12.20	56.	15.	5.	1.00
+	ROUTED TO	RR350	580.	12.43	56.	15.	5.	1.00
	HYDROGRAPH AT	355	546.	12.33	75.	19.	7.	.68

	2 COMBINED AT	C355	1069.	12.40	130.	34.	12.	1.17
+	ROUTED TO	R355	980.	12.70	130.	34.	12.	1.17
+	HYDROGRAPH AT	360	840.	12.20	122.	36.	13.	.88
+	DIVERSION TO	BS360	840.	12.20	93.	25.	9.	.88
+	HYDROGRAPH AT	D360	366.	12.67	40.	12.	4.	.88
+	HYDROGRAPH AT	RT360	840.	12.20	93.	25.	9.	.88
+	ROUTED TO	S360	15.	12.67	15.	12.	8.	.88
+	4 COMBINED AT	C360	2869.	12.73	673.	301.	173.	7.03
+	HYDROGRAPH AT	370	817.	12.23	83.	22.	8.	.67
+	HYDROGRAPH AT	395	236.	12.13	29.	8.	3.	.20
+	2 COMBINED AT	C370	1017.	12.23	111.	30.	11.	.87
+	ROUTED TO	R370	897.	12.53	111.	30.	11.	.87
+	HYDROGRAPH AT	380	633.	12.27	109.	32.	11.	.85
	DIVERSION TO	BS380	461.	12.10	25.	7.	3.	.85
+	HYDROGRAPH AT	D380	633.	12.27	92.	24.	9.	.85
+	HYDROGRAPH AT	RT380	461.	12.10	25.	7.	3.	.85
+	ROUTED TO	S380	4.	12.17	4.	3.	2.	.85
+	4 COMBINED AT	C380	3828.	12.63	848.	349.	190.	8.74
+	HYDROGRAPH AT	390	486.	12.03	35.	10.	4.	.25
+	DIVERSION TO	BS390	103.	11.73	6.	2.	1.	.25
+	HYDROGRAPH AT	D390	486.	12.03	32.	8.	3.	.25
+	HYDROGRAPH AT	RT390	103.	11.73	6.	2.	1.	.25
+	ROUTED TO	S390	2.	11.80	2.	1.	1.	.25
+	2 COMBINED AT	C390	488.	12.03	33.	9.	4.	.25
+	ROUTED TO	R390	350.	12.50	33.	9.	4.	.25
+	HYDROGRAPH AT	400	578.	12.20	77.	22.	8.	.65
	DIVERSION TO	BS400	240.	12.00	12.	4.	1.	.65

	HYDROGRAPH AT	D400	578.	12.20	69.	18.	6.	.65
+	HYDROGRAPH AT	RT400	240.	12.00	12.	4.	1.	.65
+	ROUTED TO	S400	3.	12.03	2.	2.	1.	.65
+	2 COMBINED AT	C400	581.	12.20	71.	20.	8.	.65
+	3 COMBINED AT	CC400	4322.	12.60	935.	373.	199.	9.64
+	HYDROGRAPH AT	385	613.	12.23	74.	20.	7.	.53
+	DIVERSION TO	SF385	368.	12.23	44.	12.	4.	.53
+	HYDROGRAPH AT	D385	245.	12.23	29.	8.	3.	.53
+	ROUTED TO	R385	210.	12.70	29.	8.	3.	.53
+	HYDROGRAPH AT	420	895.	12.17	111.	32.	11.	.87
+	DIVERSION TO	BS420	336.	11.93	19.	6.	2.	.87
+	HYDROGRAPH AT	D420	895.	12.17	99.	26.	9.	.87
+	HYDROGRAPH AT	RT420	336.	11.93	19.	6.	2.	.87
	ROUTED TO	S420	4.	12.00	3.	3.	2.	.87
+	3 COMBINED AT	C420	902.	12.17	132.	37.	14.	1.08
+	2 COMBINED AT	CC420	4922.	12.33	1045.	404.	211.	10.72
+	HYDROGRAPH AT	440	184.	12.03	12.	3.	1.	.08
+	ROUTED TO	R70	181.	12.07	12.	3.	1.	.08
+	HYDROGRAPH AT	441	16.	12.03	1.	0.	0.	.01
+	2 COMBINED AT	C108	197.	12.07	14.	4.	1.	.09
+	DIVERSION TO	SPLIT	98.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	D4	98.	12.07	7.	2.	1.	.09
+	ROUTED TO	R108	92.	12.13	7.	2.	1.	.09
+	HYDROGRAPH AT	442	105.	12.10	9.	2.	1.	.10
+	2 COMBINED AT	C67	195.	12.10	16.	4.	2.	.19
+	DIVERSION TO	BASIN4	121.	12.10	6.	2.	1.	.19
	HYDROGRAPH AT	D6	74.	12.10	10.	3.	1.	.19

	HYDROGRAPH AT	RTD6	121.	12.10	6.	2.	1.	.19
	ROUTED TO	SD6	1.	12.47	1.	1.	0.	.19
+	2 COMBINED AT	CD6	74.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	443	151.	12.07	15.	4.	1.	.08
+	DIVERSION TO	WSH66	78.	11.87	12.	3.	1.	.08
+	HYDROGRAPH AT	D66	73.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	71.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	144.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	83.	12.03	5.	1.	0.	.04
+	ROUTED TO	R58	79.	12.07	5.	1.	0.	.04
+	HYDROGRAPH AT	445	307.	12.03	19.	5.	2.	.19
+	2 COMBINED AT	C107	382.	12.03	23.	6.	2.	.23
+	ROUTED TO	R107	382.	12.07	23.	6.	2.	.23
	HYDROGRAPH AT	RTB2	98.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	98.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	66.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	545.	12.07	36.	10.	3.	.27
+	DIVERSION TO	WSH404	35.	11.70	8.	2.	1.	.27
+	HYDROGRAPH AT	D5	510.	12.07	28.	7.	3.	.27
+	ROUTED TO	R109	493.	12.10	28.	7.	3.	.27
+	HYDROGRAPH AT	447	141.	12.07	12.	4.	1.	.09
+	HYDROGRAPH AT	RT404	35.	11.70	8.	2.	1.	.27
+	ROUTED TO	R404	35.	12.03	8.	2.	1.	.27
+	3 COMBINED AT	C110	666.	12.07	48.	13.	5.	.36
+	ROUTED TO	R110	663.	12.10	48.	13.	5.	.36
+	2 COMBINED AT	C115	805.	12.07	61.	17.	7.	.63
	ROUTED TO	R115	799.	12.10	61.	17.	7.	.63

	HYDROGRAPH AT	448	89.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	81.	12.03	5.	1.	0.	.05
+	2 COMBINED AT	C6364	170.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	145.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	63.	12.20	7.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	2 COMBINED AT	C451	80.	12.20	9.	2.	1.	.09
+	HYDROGRAPH AT	RT66	78.	11.87	12.	3.	1.	.08
+	HYDROGRAPH AT	452	63.	12.03	5.	1.	0.	.04
+	2 COMBINED AT	C6465	141.	12.03	17.	4.	2.	.04
+	ROUTED TO	R6566	137.	12.10	17.	4.	2.	.04
+	3 COMBINED AT	C116	357.	12.17	36.	10.	3.	.23
+	ROUTED TO	BASIN5	159.	12.47	36.	10.	3.	.23
	ROUTED TO	R116	157.	12.53	36.	10.	3.	.23
+	HYDROGRAPH AT	453	63.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	177.	12.47	43.	12.	4.	.29
+	2 COMBINED AT	C118	892.	12.10	104.	29.	11.	.92
+	ROUTED TO	R118	887.	12.13	104.	29.	11.	.92
+	DIVERSION TO	BASIN6	270.	12.13	7.	2.	1.	.92
+	HYDROGRAPH AT	D7	737.	12.20	97.	27.	10.	.92
+	HYDROGRAPH AT	RTD7	270.	12.13	7.	2.	1.	.92
+	ROUTED TO	SD7	1.	12.23	1.	1.	1.	.92
+	2 COMBINED AT	CD7	738.	12.20	97.	28.	11.	.92
+	HYDROGRAPH AT	454	162.	12.13	21.	6.	2.	.18
+	2 COMBINED AT	C119	885.	12.20	118.	34.	13.	1.10
+	ROUTED TO	R454	833.	12.27	118.	34.	13.	1.10
	HYDROGRAPH AT	415	595.	12.17	82.	24.	9.	.61

	HYDROGRAPH AT	RT385	368.	12.23	44.	12.	4.	.53
+	ROUTED TO	RR385	322.	12.57	44.	12.	4.	.53
+	2 COMBINED AT	C415	763.	12.23	126.	36.	13.	.93
+	2 COMBINED AT	CC415	1546.	12.27	240.	68.	25.	2.03
+	ROUTED TO	R415	1513.	12.30	240.	68.	25.	2.03
+	HYDROGRAPH AT	455	1418.	12.13	150.	45.	16.	1.11
+	DIVERSION TO	BS455	1418.	12.13	139.	37.	13.	1.11
+	HYDROGRAPH AT	D455	145.	12.80	24.	8.	3.	1.11
+	HYDROGRAPH AT	RT455	1418.	12.13	139.	37.	13.	1.11
+	ROUTED TO	S455	23.	12.80	22.	18.	11.	1.11
+	2 COMBINED AT	C455	169.	12.80	46.	26.	14.	1.11
+	3 COMBINED AT	CC455	6191.	12.33	1265.	477.	243.	13.86
+	ROUTED TO	S440	333.	15.53	328.	281.	177.	13.86
	ROUTED TO	R455	333.	16.20	328.	281.	175.	13.86
+	HYDROGRAPH AT	480	1102.	12.10	100.	31.	11.	.73
+	DIVERSION TO	BS480	487.	11.90	27.	8.	3.	.73
+	HYDROGRAPH AT	D480	1102.	12.10	83.	23.	8.	.73
+	HYDROGRAPH AT	RT480	487.	11.90	27.	8.	3.	.73
+	ROUTED TO	S480	5.	11.97	5.	4.	3.	.73
+	2 COMBINED AT	C480	1107.	12.10	89.	27.	11.	.73
+	2 COMBINED AT	CC480	1108.	12.10	421.	337.	210.	.73
+	ROUTED TO	R480	907.	12.33	421.	335.	209.	.73
+	HYDROGRAPH AT	456	483.	12.07	37.	10.	4.	.26
+	DIVERSION TO	BASIN1	193.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	D1	290.	12.07	29.	8.	3.	.26
+	DIVERSION TO	WA30	59.	12.07	10.	3.	1.	.26
	HYDROGRAPH AT	CD2	231.	12.07	19.	5.	2.	.26

	ROUTED TO	R456	218.	12.13	19.	5.	2.	.26
	HYDROGRAPH AT							
+		457	273.	12.07	21.	6.	2.	.19
	2 COMBINED AT							
+		C101	480.	12.10	40.	10.	4.	.45
	DIVERSION TO							
+		BASIN2	177.	12.10	8.	2.	1.	.45
	HYDROGRAPH AT							
+		D3	303.	12.10	32.	8.	3.	.45
	HYDROGRAPH AT							
+		RTD3	177.	12.10	8.	2.	1.	.45
	ROUTED TO							
+		SD3	1.	12.40	1.	1.	1.	.45
	2 COMBINED AT							
+		CD3	304.	12.10	33.	9.	4.	.45
	ROUTED TO							
+		R101	302.	12.10	33.	9.	4.	.45
	HYDROGRAPH AT							
+		458	366.	12.03	26.	7.	2.	.19
	2 COMBINED AT							
+		C103	655.	12.07	59.	16.	6.	.64
	ROUTED TO							
+		R103	651.	12.07	59.	16.	6.	.64
	HYDROGRAPH AT							
		RT30	59.	12.07	10.	3.	1.	.26
	ROUTED TO							
+		R30	58.	12.10	10.	3.	1.	.26
	HYDROGRAPH AT							
+		RTB1	193.	12.07	8.	2.	1.	.26
	ROUTED TO							
+		B1	35.	12.20	8.	2.	1.	.26
	ROUTED TO							
+		RB1	35.	12.27	8.	2.	1.	.26
	2 COMBINED AT							
+		CDIV	87.	12.20	18.	5.	2.	.12
	HYDROGRAPH AT							
+		459	45.	12.03	3.	1.	0.	.03
	2 COMBINED AT							
+		C52	117.	12.10	21.	6.	2.	.15
	ROUTED TO							
+		R52	116.	12.17	21.	6.	2.	.15
	HYDROGRAPH AT							
+		460	221.	12.07	20.	6.	2.	.14
	2 COMBINED AT							
+		C102	323.	12.07	40.	12.	4.	.29
	ROUTED TO							
+		BASIN3	71.	12.63	40.	12.	4.	.29
	ROUTED TO							
+		R3	71.	12.77	40.	12.	4.	.29
	HYDROGRAPH AT							
		461	165.	12.10	17.	5.	2.	.12
	2 COMBINED AT							

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                          C104      220.  12.10        57.        17.        6.       .41
        2 COMBINED AT
+                         C106      866.  12.07       115.        33.       12.      1.05
        ROUTED TO
+                         R106      828.  12.13       115.        33.       12.      1.05
        HYDROGRAPH AT
+                          462      557.  12.07        42.        12.        4.       .30
        2 COMBINED AT
+                          C56     1306.  12.10       156.        44.       16.      1.35
        2 COMBINED AT
+                         C462     1633.  12.30       473.       362.      220.      2.09
        ROUTED TO
+                         R462     1600.  12.33       473.       361.      220.      2.09
        ROUTED TO
+                        RR462     1562.  12.40       471.       361.      220.      2.09
        HYDROGRAPH AT
+                          500     1126.  12.27       128.        35.       12.       .93
        2 COMBINED AT
+                         C500     2469.  12.33       580.       387.      229.      3.02

*** NORMAL END OF HEC-1 ***
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TABLE 1
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin Physical Parameters

Basin ID	Area (mi^2)	Length (mi)	Kb	Slope (ft/mi)
10	0.690	2.00	0.044	165.0
20	1.167	2.50	0.040	88.0
40	2.227	3.08	0.036	189.0
60	1.751	4.19	0.038	209.6
80	1.493	2.69	0.039	229.8
100	0.488	1.94	0.046	108.0
120	2.197	3.07	0.037	239.0
140	0.598	1.61	0.044	149.0
150	0.407	1.50	0.047	314.6
160	0.365	2.10	0.047	129.0
180	1.014	2.42	0.041	140.0
190	0.918	1.91	0.042	315.0
200	0.530	1.58	0.045	305.6
210	0.792	1.84	0.043	315.0
220	0.473	1.92	0.046	315.0
240	1.408	3.50	0.039	298.6
260	0.263	0.81	0.049	68.0
280	0.319	0.77	0.048	84.0
300	0.289	0.78	0.049	103.0
310	0.538	2.70	0.045	283.5
350	0.997	2.22	0.041	315.0
355	0.676	3.00	0.044	284.0
360	0.880	2.10	0.047	124.0
370	0.672	1.90	0.044	203.5
385	0.527	2.30	0.045	303.0
390	0.248	0.70	0.050	299.4
395	0.199	1.30	0.051	219.2
440	0.080	0.40	0.039	315.0
441	0.010	0.28	0.069	315.0
442	0.100	0.83	0.055	274.2
443	0.080	0.71	0.050	315.0
444	0.040	0.33	0.034	315.0
445	0.190	0.82	0.036	315.0
446	0.040	0.46	0.061	303.9
447	0.090	0.49	0.056	221.0
448	0.045	0.36	0.042	315.0
449	0.050	0.40	0.054	315.0

TABLE 1
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin Physical Parameters

Basin ID	Area (mi^2)	Length (mi)	Kb	Slope (ft/mi)
450	0.070	0.85	0.057	210.5
451	0.025	0.57	0.063	175.0
452	0.040	0.43	0.055	315.0
453	0.060	0.58	0.058	138.0
454	0.180	1.23	0.051	163.0
455	1.111	1.70	0.041	146.0
456	0.260	0.94	0.045	315.0
457	0.190	1.01	0.045	308.8
458	0.190	0.76	0.048	299.0
459	0.030	0.35	0.052	251.6
460	0.140	0.62	0.058	194.0
461	0.120	0.83	0.052	181.0
462	0.301	0.97	0.045	297.7
480	0.731	1.21	0.042	165.0
500	0.930	2.77	0.042	286.8
305A	0.316	0.98	0.048	82.0
305B	0.386	1.70	0.047	124.0
320A	0.270	1.07	0.049	93.0
320B1	0.454	1.13	0.046	106.0
320B2	0.220	1.08	0.050	120.0
340A1	1.089	1.80	0.045	117.0
340A2	0.037	0.48	0.047	297.9
340B	0.290	0.85	0.049	238.5
380A	0.261	0.66	0.076	91.0
380B1	0.369	1.61	0.047	124.0
380B2	0.096	0.55	0.055	136.0
380B3	0.123	0.69	0.054	138.0
400A	0.048	0.28	0.094	71.0
400B1	0.385	0.93	0.057	91.0
400B2	0.194	0.93	0.051	118.0
400B3	0.024	0.26	0.064	135.0
415A	0.280	1.21	0.049	140.0
415B	0.329	1.59	0.048	315.0
420A1	0.566	1.20	0.045	108.0
420A2	0.022	0.26	0.064	96.0
420B	0.279	1.00	0.049	150.0

TABLE 2
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Green & Ampt / Clark Parameters

Basin ID	IA	DTHETA	PSIF	XKSAT	RTIMP	Tc (hr)	R coeff. (hr)
10	0.35	0.32	7.60	0.09	15	0.421	0.305
20	0.35	0.39	5.80	0.19	1	0.646	0.434
40	0.34	0.34	4.90	0.28	5	0.496	0.265
60	0.33	0.35	5.80	0.19	9	0.596	0.476
80	0.33	0.33	5.60	0.21	4	0.433	0.257
100	0.32	0.29	5.10	0.26	3	0.533	0.471
120	0.33	0.28	6.80	0.13	11	0.429	0.227
140	0.31	0.28	4.20	0.44	5	0.421	0.278
150	0.35	0.36	5.10	0.26	7	0.296	0.221
160	0.34	0.33	4.15	0.44	1	0.587	0.659
180	0.35	0.35	4.15	0.43	0	0.571	0.400
190	0.35	0.39	5.80	0.19	8	0.321	0.185
200	0.35	0.39	5.70	0.20	10	0.300	0.201
210	0.35	0.36	6.80	0.13	4	0.313	0.189
220	0.35	0.35	7.00	0.12	5	0.333	0.282
240	0.35	0.37	5.30	0.23	2	0.467	0.356
260	0.30	0.19	6.60	0.17	15	0.363	0.217
280	0.30	0.25	5.30	0.29	15	0.329	0.168
300	0.32	0.29	4.20	0.48	11	0.325	0.177
310	0.35	0.35	3.91	0.48	0	0.483	0.520
350	0.35	0.35	4.55	0.34	4	0.363	0.227
355	0.34	0.34	4.45	0.37	4	0.488	0.502
360	0.26	0.27	4.10	0.56	20	0.575	0.390
370	0.34	0.32	4.65	0.33	8	0.404	0.284
385	0.34	0.36	5.60	0.22	13	0.383	0.358
390	0.30	0.25	4.70	0.38	18	0.204	0.106
395	0.33	0.32	4.90	0.30	10	0.333	0.338
440	0.19	0.38	6.40	0.14	13	0.129	0.077
441	0.30	0.25	5.60	0.22	5	0.150	0.225
442	0.30	0.27	3.29	0.77	5	0.258	0.264
443	0.25	0.19	8.00	0.08	10	0.196	0.194
444	0.13	0.35	4.45	0.32	1	0.112	0.084
445	0.17	0.32	3.47	0.59	3	0.192	0.130
446	0.27	0.25	4.50	0.40	19	0.183	0.189
447	0.25	0.27	3.35	0.87	30	0.208	0.145
448	0.17	0.31	4.20	0.39	11	0.133	0.102
449	0.26	0.28	3.50	0.64	6	0.167	0.134
450	0.34	0.35	3.63	0.57	4	0.296	0.383
451	0.34	0.34	3.29	0.75	3	0.271	0.453
452	0.26	0.28	3.70	0.55	9	0.171	0.166
453	0.29	0.30	3.29	0.82	18	0.275	0.284
454	0.30	0.31	3.78	0.56	14	0.379	0.395
455	0.27	0.28	3.70	0.64	24	0.421	0.204

TABLE 2
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Green & Ampt / Clark Parameters

Basin ID	IA	DTHETA	PSIF	XKSAT	RTIMP	Tc (hr)	R coeff. (hr)
456	0.30	0.38	5.60	0.20	12	0.217	0.139
457	0.27	0.33	3.95	0.46	6	0.237	0.195
458	0.29	0.33	5.80	0.19	6	0.204	0.131
459	0.22	0.30	3.33	0.71	8	0.162	0.157
460	0.25	0.26	3.74	0.69	27	0.242	0.160
461	0.27	0.25	4.25	0.45	21	0.271	0.250
462	0.30	0.33	5.30	0.24	12	0.225	0.137
480	0.27	0.27	3.58	0.73	27	0.325	0.148
500	0.35	0.40	6.00	0.17	9	0.421	0.333
305A	0.34	0.32	4.60	0.35	12	0.400	0.254
305B	0.35	0.35	4.50	0.35	0	0.492	0.443
320A	0.27	0.25	4.30	0.49	26	0.404	0.301
320B1	0.33	0.33	4.80	0.30	13	0.379	0.218
320B2	0.32	0.29	4.50	0.36	5	0.375	0.314
340A1	0.27	0.28	4.15	0.53	21	0.504	0.264
340A2	0.23	0.31	5.30	0.25	55	0.158	0.174
340B	0.32	0.28	4.00	0.52	13	0.246	0.139
380A	0.17	0.25	4.10	0.71	21	0.425	0.221
380B1	0.30	0.25	4.20	0.52	16	0.471	0.414
380B2	0.30	0.25	3.95	0.58	15	0.250	0.187
380B3	0.30	0.25	4.35	0.48	16	0.279	0.220
400A	0.25	0.29	4.00	0.64	0	0.317	0.211
400B1	0.28	0.25	4.10	0.59	12	0.433	0.238
400B2	0.30	0.25	4.15	0.53	0	0.363	0.288
400B3	0.30	0.25	4.50	0.43	0	0.183	0.161
415A	0.30	0.26	3.63	0.71	15	0.400	0.322
415B	0.34	0.34	5.30	0.24	14	0.308	0.274
420A1	0.32	0.28	4.25	0.47	10	0.400	0.214
420A2	0.35	0.35	4.15	0.43	0	0.208	0.194
420B	0.30	0.25	3.91	0.59	15	0.333	0.226

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
10	63	266.68	60.4	0.14	25
	98	2.30	0.5	0.37	0
	44	169.50	38.4	0.03	0
	13	3.00	0.7	0.01	0
20	3	26.35	3.5	0.58	0
	13	9.20	1.2	0.01	0
	44	224.12	30.0	0.03	0
	61	49.01	6.6	0.15	0
	63	3.23	0.4	0.14	25
	98	419.41	56.1	0.37	0
	116	15.81	2.1	0.23	0
40	63	156.84	11.0	0.14	25
	44	185.29	13.0	0.03	0
	98	1002.32	70.3	0.37	0
	3	9.88	0.7	0.58	0
	116	46.24	3.2	0.23	0
	113	24.93	1.7	0.39	0
60	63	220.20	19.7	0.14	25
	44	286.20	25.5	0.03	0
	98	550.09	49.1	0.37	0
	3	40.27	3.6	0.58	0
	116	15.47	1.4	0.23	0
	68	8.37	0.7	0.63	0
80	63	49.93	5.2	0.14	25
	52	10.68	1.1	0.16	20
	45	57.06	6.0	0.03	0
	49	80.62	8.4	0.06	0
	68	12.88	1.3	0.63	0
	48	200.95	21.0	0.06	0
	113	95.71	10.0	0.39	0
	98	447.96	46.9	0.37	0
100	98	216.98	69.5	0.37	0
	44	7.98	2.6	0.03	0
	48	79.80	25.6	0.06	0
	3	7.50	2.4	0.58	0
120	3	45.95	3.3	0.58	0
	44	313.15	22.3	0.03	0
	49	175.31	12.5	0.06	0
	61	171.40	12.2	0.15	0
	63	498.81	35.5	0.14	25
	98	201.48	14.3	0.37	0
140	63	11.27	2.9	0.14	25
	98	371.20	97.1	0.37	0
150	61	70.00	26.9	0.15	0
	63	71.00	27.2	0.14	25
	98	119.57	45.9	0.37	0
160	3	1.00	0.4	0.58	0
	63	1.00	0.4	0.14	25
	98	221.75	94.9	0.37	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
	115	10.00	4.3	0.39	0
180	98	649.18	100.0	0.37	0
190	61	340.29	57.9	0.15	0
	63	185.00	31.5	0.14	25
	98	62.30	10.6	0.37	0
200	3	22.70	6.7	0.58	0
	44	42.80	12.6	0.03	0
	61	42.90	12.6	0.15	0
	63	130.10	38.3	0.14	25
	98	100.90	29.7	0.37	0
210	44	90.00	17.7	0.03	0
	47	6.10	1.2	0.11	0
	48	44.50	8.8	0.06	0
	61	254.91	50.3	0.15	0
	63	81.90	16.2	0.14	25
	98	29.70	5.9	0.37	0
220	44	126.65	41.8	0.03	0
	61	24.90	8.2	0.15	0
	63	55.00	18.2	0.14	25
	98	96.20	31.8	0.37	0
240	44	119.20	13.2	0.03	0
	47	1.40	0.2	0.11	0
	48	131.40	14.6	0.06	0
	61	93.60	10.4	0.15	0
	63	58.60	6.5	0.14	25
	68	207.68	23.1	0.63	0
	98	289.00	32.1	0.37	0
260	44	76.96	45.7	0.03	0
	98	72.90	43.3	0.37	0
	3	18.40	10.9	0.58	0
280	98	153.68	75.3	0.37	0
	44	50.30	24.7	0.03	0
300	63	6.10	3.3	0.14	25
	98	178.89	96.7	0.37	0
305A	61	4.80	2.4	0.15	0
	63	63.40	31.4	0.14	25
	68	14.26	7.1	0.63	0
	98	89.53	44.3	0.37	0
	115	3.20	1.6	0.39	0
	118	26.94	13.3	0.42	0
305B	44	16.60	6.7	0.03	0
	61	24.90	10.1	0.15	0
	68	22.04	8.9	0.63	0
	98	181.43	73.4	0.37	0
	118	2.06	0.8	0.42	0
310	44	6.00	1.7	0.03	0
	61	16.00	4.6	0.15	0
	63	6.00	1.7	0.14	25
	68	105.54	30.6	0.63	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
	98	108.54	31.5	0.37	0
	118	102.53	29.8	0.42	0
320A	63	19.97	11.5	0.14	25
	98	83.84	48.4	0.37	0
	115	67.77	39.2	0.39	0
	118	1.47	0.8	0.42	0
320B1	61	30.56	10.5	0.15	0
	63	87.70	30.2	0.14	25
	98	153.74	52.9	0.37	0
	115	18.63	6.4	0.39	0
320B2	44	14.18	10.0	0.03	0
	61	17.37	12.3	0.15	0
	63	1.50	1.1	0.14	25
	68	22.27	15.8	0.63	0
	98	5.96	4.2	0.37	0
	115	10.58	7.5	0.39	0
	118	69.24	49.1	0.42	0
340A1	3	10.50	1.5	0.58	0
	44	6.87	1.0	0.03	0
	63	36.13	5.2	0.14	25
	68	65.19	9.4	0.63	0
	98	416.79	59.8	0.37	0
	113	3.34	0.5	0.39	0
	115	137.49	19.7	0.39	0
	118	20.38	2.9	0.42	0
340A2	63	15.67	65.7	0.14	25
	68	0.82	3.4	0.63	0
	98	7.35	30.8	0.37	0
340B	61	23.50	12.6	0.15	0
	63	24.30	13.1	0.14	25
	68	100.69	54.2	0.63	0
	98	37.30	20.1	0.37	0
350	63	108.49	17.0	0.14	25
	61	123.99	19.4	0.15	0
	118	323.57	50.7	0.42	0
	68	57.67	9.0	0.63	0
	98	17.95	2.8	0.37	0
	101	6.68	1.0	0.28	0
355	61	33.80	7.8	0.15	0
	63	46.50	10.8	0.14	25
	68	19.60	4.5	0.63	0
	90	171.53	39.7	0.39	0
	98	9.70	2.2	0.37	0
	101	43.50	10.1	0.28	0
	110	18.80	4.3	0.13	0
	115	9.10	2.1	0.39	0
	118	79.90	18.5	0.42	0
360	98	398.32	70.7	0.37	0
	63	3.70	0.7	0.14	25

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
	115	72.80	12.9	0.39	0
	68	8.80	1.6	0.63	0
	113	79.60	14.1	0.39	0
370	61	45.20	10.5	0.15	0
	63	77.00	17.9	0.14	25
	90	179.71	41.8	0.39	0
	98	1.00	0.2	0.37	0
	101	111.80	26.0	0.28	0
	110	5.40	1.3	0.13	0
	115	2.00	0.5	0.39	0
	118	8.00	1.9	0.42	0
380A	98	80.30	48.1	0.37	0
	112	62.80	37.6	0.39	0
	113	15.50	9.3	0.39	0
	115	8.20	4.9	0.39	0
380B1	63	9.47	4.0	0.14	25
	98	144.48	61.1	0.37	0
	110	0.67	0.3	0.13	0
	112	11.49	4.9	0.39	0
	113	11.52	4.9	0.39	0
	115	33.63	14.2	0.39	0
	118	25.04	10.6	0.42	0
380B2	113	45.27	73.6	0.39	0
	115	1.25	2.0	0.39	0
	118	15.00	24.4	0.42	0
380B3	63	4.61	5.9	0.14	25
	98	22.17	28.2	0.37	0
	110	7.36	9.4	0.13	0
	113	41.53	52.8	0.39	0
	115	2.97	3.8	0.39	0
385	61	111.00	32.9	0.15	0
	63	152.90	45.4	0.14	25
	90	72.70	21.6	0.39	0
	118	0.40	0.1	0.42	0
390	61	11.00	6.9	0.15	0
	63	18.00	11.4	0.14	25
	90	76.45	48.2	0.39	0
	101	29.00	18.3	0.28	0
	110	24.00	15.1	0.13	0
395	61	23.60	18.5	0.15	0
	63	25.60	20.1	0.14	25
	90	43.40	34.0	0.39	0
	101	34.00	26.6	0.28	0
	110	1.00	0.8	0.13	0
400A	98	2.40	7.8	0.37	0
	112	3.60	11.7	0.39	0
	115	24.90	80.6	0.39	0
400B1	98	160.64	65.1	0.37	0
	112	26.24	10.6	0.39	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
	115	59.81	24.2	0.39	0
400B2	98	100.43	81.0	0.37	0
	110	0.91	0.7	0.13	0
	113	19.47	15.7	0.39	0
	115	3.20	2.6	0.39	0
400B3	98	10.01	65.0	0.37	0
	110	3.33	21.6	0.13	0
	113	2.06	13.4	0.39	0
415A	61	1.20	0.7	0.15	0
	68	88.30	49.3	0.63	0
	90	86.00	48.0	0.39	0
	118	3.70	2.1	0.42	0
415B	61	66.00	31.4	0.15	0
	63	92.90	44.2	0.14	25
	68	38.70	18.4	0.63	0
	90	12.40	5.9	0.39	0
	115	0.30	0.1	0.39	0
420A1	68	21.34	5.9	0.63	0
	98	222.00	61.2	0.37	0
	110	41.29	11.4	0.13	0
	118	77.91	21.5	0.42	0
420A2	98	14.31	100.0	0.37	0
420B	68	79.90	44.7	0.63	0
	90	59.30	33.2	0.39	0
	110	27.70	15.5	0.13	0
	118	11.90	6.7	0.42	0
440	63	26.30	51.4	0.14	25
	61	22.10	43.2	0.15	0
	44	2.80	5.5	0.03	0
441	68	3.80	59.4	0.63	0
	44	2.60	40.6	0.03	0
442	68	64.00	100.0	0.63	0
443	63	12.90	25.2	0.14	25
	68	6.90	13.5	0.63	0
	44	31.40	61.3	0.03	0
444	63	0.60	2.3	0.14	25
	61	12.10	47.3	0.15	0
	68	12.90	50.4	0.63	0
445	63	4.50	3.7	0.14	25
	61	6.70	5.5	0.15	0
	68	110.40	90.8	0.63	0
446	68	19.40	75.8	0.63	0
	44	6.20	24.2	0.03	0
447	68	52.00	90.3	0.63	0
	115	5.60	9.7	0.39	0
448	63	10.60	36.8	0.14	25
	68	18.20	63.2	0.63	0
449	63	3.10	9.7	0.14	25
	68	28.90	90.3	0.63	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
450	63	5.90	13.2	0.14	25
	68	33.40	74.6	0.63	0
	90	5.50	12.3	0.39	0
451	68	16.00	100.0	0.63	0
452	63	4.80	18.8	0.14	25
	68	20.80	81.3	0.63	0
453	68	38.40	100.0	0.63	0
454	63	6.80	5.9	0.14	25
	68	48.90	42.4	0.63	0
	90	59.50	51.6	0.39	0
455	63	25.00	3.5	0.14	25
	68	384.00	54.0	0.63	0
	115	268.00	37.7	0.39	0
	110	19.00	2.7	0.13	0
	98	10.00	1.4	0.37	0
	118	5.00	0.7	0.42	0
456	63	78.80	47.4	0.14	25
	61	62.00	37.3	0.15	0
	68	25.60	15.4	0.63	0
457	63	9.50	7.8	0.14	25
	61	26.10	21.5	0.15	0
	68	79.50	65.4	0.63	0
	115	6.50	5.3	0.39	0
458	63	21.40	17.6	0.14	25
	61	87.90	72.3	0.15	0
	68	2.10	1.7	0.63	0
	115	10.20	8.4	0.39	0
459	68	18.20	94.8	0.63	0
	115	1.00	5.2	0.39	0
460	68	29.80	33.2	0.63	0
	115	59.90	66.8	0.39	0
461	63	1.60	2.1	0.14	25
	68	1.60	2.1	0.63	0
	61	8.30	10.8	0.15	0
	115	65.30	85.0	0.39	0
462	63	20.00	10.4	0.14	25
	61	131.10	68.1	0.15	0
	68	39.40	20.5	0.63	0
	115	2.10	1.1	0.39	0
480	63	43.11	9.2	0.14	25
	68	348.53	74.5	0.63	0
	115	76.19	16.3	0.39	0
500	63	208.27	35.0	0.14	25
	61	368.91	62.0	0.15	0
	113	17.75	3.0	0.39	0

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
10	Desert	441.48	100.0	Dry	25	0
20	Desert	724.13	96.9	Dry	25	0
	V.L.D.R	12.52	1.7	Normal	30	5
	M.D.R.	10.48	1.4	Normal	50	30
40	Desert	1294.04	90.8	Dry	25	0
	V.L.D.R	94.31	6.6	Normal	30	5
	Comm	37.15	2.6	Normal	75	80
60	Desert	767.50	68.5	Dry	25	0
	V.L.D.R	318.50	28.4	Normal	30	5
	Comm	34.60	3.1	Normal	75	80
80	Desert	587.49	61.5	Dry	25	0
	V.L.D.R	368.30	38.5	Normal	30	5
100	Desert	121.20	38.8	Dry	25	0
	V.L.D.R	191.06	61.2	Normal	30	5
120	Desert	837.20	59.5	Dry	25	0
	V.L.D.R	568.90	40.5	Normal	30	5
140	Desert	109.00	28.5	Dry	25	0
	V.L.D.R	273.47	71.5	Normal	30	5
150	Desert	254.57	97.7	Dry	25	0
	V.L.D.R	6.00	2.3	Normal	30	5
160	Desert	187.75	80.3	Dry	25	0
	V.L.D.R	46.00	19.7	Normal	30	5
180	Desert	649.18	100.0	Dry	25	0
190	Desert	587.59	100.0	Dry	25	0
200	Desert	339.40	100.0	Dry	25	0
210	Desert	507.11	100.0	Dry	25	0
220	Desert	302.75	100.0	Dry	25	0
240	Desert	900.88	100.0	Dry	25	0
260	L.D.R.	168.26	100.0	Normal	50	15
280	L.D.R.	203.98	100.0	Normal	50	15
300	Desert	67.80	36.7	Dry	25	0
	L.D.R.	117.19	63.3	Normal	50	15
305A	Desert	144.73	71.6	Dry	25	0
	L.D.R.	57.40	28.4	Normal	50	15
305B	Desert	247.03	100.0	Dry	25	0
310	Desert	336.61	97.7	Dry	25	0
	V.L.D.R	8.00	2.3	Normal	30	5
320A	L.D.R.	82.37	47.6	Normal	50	15
	M.D.R.	90.68	52.4	Normal	50	30
320B1	Desert	240.93	82.9	Dry	25	0
	M.D.R.	49.70	17.1	Normal	50	30

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
320B2	Desert	56.28	39.9	Dry	25	0
	V.L.D.R	81.62	57.8	Normal	30	5
	Comm	3.20	2.3	Normal	75	80
340A1	Desert	173.36	24.9	Dry	25	0
	V.L.D.R	15.20	2.2	Normal	30	5
	L.D.R.	40.80	5.9	Normal	50	15
	M.D.R.	310.93	44.6	Normal	50	30
	M.F.R.	38.30	5.5	Normal	50	45
	Comm	28.50	4.1	Normal	75	80
	Park	89.60	12.9	Normal	90	0
340A2	Desert	12.34	51.8	Dry	25	0
	Comm	11.50	48.2	Normal	75	80
340B	Desert	62.20	33.5	Dry	25	0
	L.D.R.	123.59	66.5	Normal	50	15
350	Desert	638.35	100.0	Dry	25	0
355	Desert	368.43	85.2	Dry	25	0
	V.L.D.R	33.00	7.6	Normal	30	5
	L.D.R.	31.00	7.2	Normal	50	15
360	Desert	127.30	22.6	Dry	25	0
	L.D.R.	148.62	26.4	Normal	50	15
	M.D.R.	81.10	14.4	Normal	50	30
	M.F.R.	59.20	10.5	Normal	50	45
	Comm	50.20	8.9	Normal	75	80
	Park	96.80	17.2	Normal	90	0
370	Desert	307.11	71.4	Dry	25	0
	L.D.R.	123.00	28.6	Normal	50	15
380A	Comm	43.90	26.3	Normal	75	80
	Park	122.90	73.7	Normal	90	0
380B1	L.D.R.	236.30	100.0	Normal	50	15
380B2	L.D.R.	61.52	100.0	Normal	50	15
380B3	L.D.R.	78.64	100.0	Normal	50	15
385	Desert	296.00	87.8	Dry	25	0
	L.D.R.	41.00	12.2	Normal	50	15
390	L.D.R.	158.45	100.0	Normal	50	15
395	Desert	86.60	67.9	Dry	25	0
	L.D.R.	41.00	32.1	Normal	50	15
400A	Desert	11.00	35.6	Dry	25	0
	Park	19.90	64.4	Normal	90	0
400B1	L.D.R.	191.59	77.7	Normal	50	15
	Park	55.10	22.3	Normal	90	0
400B2	L.D.R.	124.01	100.0	Normal	50	15
400B3	L.D.R.	15.40	100.0	Normal	50	15

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
415A	L.D.R.	179.20	100.0	Normal	50	15
415B	Desert	162.50	77.3	Dry	25	0
	L.D.R.	47.80	22.7	Normal	50	15
420A1	Desert	115.70	31.9	Dry	25	0
	L.D.R.	246.84	68.1	Normal	50	15
420A2	Desert	14.31	100.0	Dry	25	0
420B	L.D.R.	178.80	100.0	Normal	50	15
440	Desert	17.40	34.0	Dry	25	0
	OPEN	33.80	66.0	Dry	10	0
441	V.L.D.R	6.40	100.0	Normal	30	5
442	V.L.D.R	64.00	100.0	Normal	30	5
443	OPEN	13.30	26.0	Dry	10	0
	V.L.D.R	37.90	74.0	Normal	30	5
444	Desert	2.80	10.9	Dry	25	0
	OPEN	22.80	89.1	Dry	10	0
445	OPEN	76.50	62.9	Dry	10	0
	V.L.D.R	45.10	37.1	Normal	30	5
446	V.L.D.R	11.30	44.1	Normal	30	5
	M.D.R.	14.30	55.9	Normal	50	30
447	M.D.R.	57.60	100.0	Normal	50	30
448	OPEN	18.30	63.5	Dry	10	0
	V.L.D.R	10.50	36.5	Normal	30	5
449	OPEN	6.60	20.6	Dry	10	0
	V.L.D.R	25.40	79.4	Normal	30	5
450	Desert	42.00	93.8	Dry	25	0
	OPEN	1.50	3.3	Dry	10	0
	M.D.R.	1.30	2.9	Normal	50	30
451	Desert	14.60	91.3	Dry	25	0
	M.D.R.	1.40	8.8	Normal	50	30
452	OPEN	4.90	19.1	Dry	10	0
	V.L.D.R	20.70	80.9	Normal	30	5
453	Desert	15.90	41.4	Dry	25	0
	M.D.R.	22.50	58.6	Normal	50	30
454	Desert	62.50	54.3	Dry	25	0
	OPEN	3.10	2.7	Dry	10	0
	M.D.R.	49.60	43.1	Normal	50	30
455	Desert	179.30	25.2	Dry	25	0
	M.D.R.	522.80	73.5	Normal	50	30
	M.F.R.	4.30	0.6	Normal	50	45
	Comm	4.60	0.6	Normal	75	80

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
456	Desert	136.30	81.9	Dry	25	0
	OPEN	30.10	18.1	Dry	10	0
457	Desert	64.30	52.9	Dry	25	0
	OPEN	30.50	25.1	Dry	10	0
	V.L.D.R	13.30	10.9	Normal	30	5
	M.D.R.	13.50	11.1	Normal	50	30
458	Desert	50.30	41.4	Dry	25	0
	OPEN	17.10	14.1	Dry	10	0
	V.L.D.R	54.20	44.6	Normal	30	5
459	Desert	0.70	3.6	Dry	25	0
	OPEN	6.80	35.4	Dry	10	0
	V.L.D.R	7.80	40.6	Normal	30	5
	M.D.R.	3.90	20.3	Normal	50	30
460	M.D.R.	81.20	90.5	Normal	50	30
	Park	8.50	9.5	Normal	90	0
461	V.L.D.R	43.90	57.2	Normal	30	5
	M.D.R.	26.40	34.4	Normal	50	30
	Comm	6.50	8.5	Normal	75	80
462	Desert	109.40	56.8	Dry	25	0
	OPEN	11.10	5.8	Dry	10	0
	V.L.D.R	52.20	27.1	Normal	30	5
	M.D.R.	0.70	0.4	Normal	50	30
	Comm	19.20	10.0	Normal	75	80
480	Desert	25.70	5.5	Dry	25	0
	L.D.R.	216.50	46.3	Normal	50	15
	M.D.R.	171.00	36.6	Normal	50	30
	M.F.R.	23.40	5.0	Normal	50	45
	Comm	31.20	6.7	Normal	75	80
500	Desert	594.90	100.0	Dry	25	0

TABLE 5
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Rainfall Data

Area	ARF	Total Rainfall (inches)						
		2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
0	1.0000	1.550	2.110	2.480	3.000	3.410	3.810	4.740
10	0.9396	1.456	1.983	2.330	2.819	3.204	3.580	4.454
30	0.9003	1.395	1.900	2.233	2.701	3.070	3.430	4.267
60	0.8609	1.334	1.816	2.135	2.583	2.936	3.280	4.081
90	0.8451	1.310	1.783	2.096	2.535	2.882	3.220	4.006
120	0.8346	1.294	1.761	2.070	2.504	2.846	3.180	3.956
150	0.8241	1.277	1.739	2.044	2.472	2.810	3.140	3.906
300	0.8005	1.241	1.689	1.985	2.402	2.730	3.050	3.794
500	0.7795	1.208	1.645	1.933	2.339	2.658	2.970	3.695

TABLE 6
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Routing Parameters

HEC-1 Operation	Manning's "n" Left Overbank	Manning's "n" Main Channel	Manning's "n" Right Overbank	Length (ft)	Slope (ft/ft)	NSTPS
R10	0.045	0.030	0.045	8700	0.0210	4
R100	0.016	0.016	0.016	940	0.0050	1
R101	0.050	0.035	0.050	1450	0.0500	1
R103	0.050	0.035	0.050	900	0.0300	1
R106	0.050	0.035	0.050	3950	0.0330	2
R107	0.050	0.035	0.050	700	0.0516	2
R108	0.050	0.035	0.050	3200	0.1000	2
R109	0.019	0.019	0.019	3080	0.0500	1
R110	0.019	0.019	0.019	580	0.0291	1
R113	0.019	0.019	0.019	1300	0.0290	1
R115	0.019	0.019	0.019	2125	0.0290	1
R116	0.050	0.035	0.050	1300	0.0333	2
R118	0.019	0.019	0.019	1500	0.0240	1
R12	0.045	0.030	0.045	4500	0.0100	7
R120	0.025	0.016	0.025	2100	0.0050	1
R150	0.045	0.040	0.045	3100	0.0320	2
R152	0.045	0.030	0.045	5900	0.0190	3
R180	0.035	0.025	0.035	1600	0.0030	2
R190	0.045	0.030	0.045	4740	0.0300	2
R192	0.045	0.035	0.045	2200	0.0180	3
R20	0.016	0.016	0.016	990	0.0040	2
R200	0.035	0.025	0.035	650	0.0050	1
R210	0.045	0.030	0.045	5100	0.0220	2
R220	0.035	0.025	0.035	1250	0.0050	1
R240	0.035	0.025	0.035	1800	0.0050	3
R260	0.035	0.025	0.035	2300	0.0030	3
R280	0.035	0.025	0.035	2100	0.0030	3
R3	0.050	0.030	0.050	2750	0.0375	5
R30	0.050	0.035	0.050	1630	0.0500	1
R300	0.035	0.025	0.035	2500	0.0030	2
R305	0.016	0.016	0.016	4000	0.0146	2
R305B	0.045	0.035	0.045	1700	0.0160	3
R310	0.045	0.035	0.045	8550	0.0220	10
R320B	0.016	0.016	0.016	1500	0.0146	1
R320B2	0.045	0.035	0.045	1000	0.0160	2
R340A2	0.045	0.035	0.045	4500	0.0200	5
R340B	0.045	0.035	0.045	1500	0.0270	2
R350	0.045	0.035	0.045	5150	0.0250	7
R355	0.045	0.035	0.045	4000	0.0250	1
R370	0.045	0.035	0.045	2600	0.0230	3
R380B1	0.045	0.035	0.045	2600	0.0230	7

TABLE 6
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Routing Parameters

HEC-1 Operation	Manning's "n" Left Overbank	Manning's "n" Main Channel	Manning's "n" Right Overbank	Length (ft)	Slope (ft/ft)	NSTPS
R380B2	0.045	0.035	0.045	4000	0.0180	9
R380B3	0.045	0.035	0.045	2300	0.0220	3
R390	0.045	0.045	0.045	5500	0.0200	7
R400B2	0.045	0.035	0.045	1800	0.0180	3
R400B3	0.045	0.035	0.045	1500	0.0200	3
R404	0.019	0.019	0.019	3540	0.0300	6
R415A	0.045	0.030	0.045	4100	0.0240	2
R415B	0.045	0.030	0.045	2590	0.0240	3
R454	0.045	0.035	0.045	2200	0.0090	3
R455	0.035	0.025	0.035	7000	0.0002	15
R456	0.050	0.035	0.050	3800	0.0440	2
R462	0.025	0.025	0.025	1800	0.0050	1
R480	0.035	0.025	0.035	2800	0.0002	7
R52	0.050	0.035	0.050	2000	0.0500	3
R58	0.050	0.035	0.050	2370	0.0516	2
R60	0.016	0.016	0.016	2850	0.0120	3
R6364	0.050	0.035	0.050	4375	0.0333	5
R6566	0.050	0.035	0.050	2435	0.0282	3
R70	0.050	0.035	0.050	2250	0.0800	2
R80	0.025	0.016	0.025	1200	0.0030	1
RB1	0.050	0.035	0.050	1720	0.0500	3
RR200	0.035	0.025	0.035	3150	0.0050	3
RR350	0.045	0.035	0.045	6050	0.0250	7
RR462	0.055	0.050	0.055	4700	0.0500	3
RR60	0.016	0.016	0.016	3500	0.0050	3
RSPLIT	0.050	0.035	0.050	800	0.0500	1

TABLE 7
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Storage/Discharge/Elevation Relationships

Apache Junction FRS
Emergency Spillway Elevation = 1801.92 ft.
Principal Spillway Elevation = 1795.65 ft.

HEC-1 Operation S60
Sediment Volume = 100 ac-ft.

Storage (ac-ft)	0.00	46.80	73.71	130.00	170.70	322.23	584.06	812.88	1121.90
Discharge (cfs)	0.00	0.01	0.02	26.30	91.20	102.42	347.66	1650.00	7700.00
Elevation (ft)	794.09	795.15	795.65	796.65	797.29	799.29	801.92	803.87	806.15

Signal Butte FRS
Emergency Spillway Elevation = 1714.63 ft.
Principal Spillway Elevation = 1703.23 ft.

HEC-1 Operation S180
Sediment Volume = 247 ac-ft.

Storage (ac-ft)	0.00	172.10	244.35	482.24	871.30	1101.52	1294.09	1418.10	1578.77	1980.33
Discharge (cfs)	0.00	10.20	10.55	121.80	138.40	145.90	151.40	154.67	390.00	1950.00
Elevation (ft)	698.23	702.23	703.23	706.23	710.23	712.23	713.73	714.63	715.73	718.23

Spook Hill FRS
Emergency Spillway Elevation = 1583.86 ft.
Principal Spillway Elevation = 1579.36 ft.

HEC-1 Operation S440
Sediment Volume = 271 ac-ft.

Storage (ac-ft)	0.00	81.00	211.00	265.72	692.96	896.16	1120.00	1630.34	2230.90	3311.68
Discharge (cfs)	0.00	1.00	3.00	8.00	515.00	780.00	825.00	3184.70	7426.00	16007.30
Elevation (ft)	577.00	578.00	579.00	579.36	581.86	582.86	583.86	585.86	587.86	590.86

TABLE 8
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin On-site Retention Volumes

Basin ID	*Maximum Diversion Volume (ac-ft)*
360	35.60
390	3.50
442	3.30
453	3.60
455	74.10
456	4.00
457	5.00
480	16.50
320A	7.00
320B1	1.95
320B2	3.32
340A	62.50
340B	15.60
380B	5.70
400B	5.60
420A	8.65

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1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
* RUN DATE   20SEP02  TIME  07:41:07   *
*                                      *
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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

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1                                    HEC-1 INPUT                                    PAGE  1

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

  1           ID   Existing Condition Preferred Model with Spook Hill FRS Storage Routing
  2           ID   Return Period = 100 Years, Rainfall Duration = 24 Hours
  3           ID   Original File Name: RED2.DAT - Preferred Altenative
  4           ID   Modified File Name: REC_EC24.DAT, April 2002, Wood/Patel, SZ
              *
  5           ID   METHODOLOGY
  6           ID   THE US CORPS OF ENGINEERS FLOW HYDROGRAPH PACKAGE HEC-1 DATED JUNE 1998 V4.1
  7           ID   SCS TYPE II RAINFALL DISTRIBUTION
  8           ID   CLARK UNIT HYDROGRAPH
  9           ID   GREEN AND AMPT INFILTRATION EQUATION USED FOR CALCULATING LOSSES
 10           ID   NORMAL DEPTH STORAGE CHANNEL ROUTING
              *
              *DIAGRAM
 11           IT       2                    2000
 12           IO       5
 13           IN      15
 14           JD    3.81    0.01
 15           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 16           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 17           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 18           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 19           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 20           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 21           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 22           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 23           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 24           PC    .983    .986    .989    .992    .995    .998   1.000
 25           JD   3.787    1.00
 26           JD   3.677    5.80
 27           JD   3.574   10.66
 28           JD   3.539   13.70
 29           JD   3.467   20.00
 30           JD   3.315   50.00
              * DDM   ***** Updated *****

 31           KK      10
 32           KM   SUB-BASIN 10
 33           KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 34           KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 35           KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
 36           BA    .690
 37           LG    .350    .320   7.600    .090  15.000
 38           UC    .421    .305
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 39          UA       0       3       5       8      12      20      43      75      90      96
 40          UA     100
             * DDM   ***** Preserved *****

 41          KK     R10
 42          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 43          RS       4    FLOW      -1
 44          RC    .045     .03    .045    8700    .021
 45          RX       0       1       2      17      27      42      43      44
 46          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

1                                          HEC-1 INPUT                                          PAGE  2

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

 47          KK     R12
 48          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 49          RS       7    FLOW      -1
 50          RC    .045     .03    .045    4500     .01
 51          RX       0       1      45    52.5    72.5      80     124     125
 52          RY       4     2.5     2.5       0       0     2.5     2.5       4
             * DDM   ***** Updated *****

 53          KK      20
 54          KM   SUB-BASIN 20
 55          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 56          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 57          KM     L = 2.50  Kb = .040  Adj. Slope =   88.0
 58          BA   1.167
 59          LG    .350    .390   5.800    .190   1.000
 60          UC    .646    .434
 61          UA       0       3       5       8      12      20      43      75      90      96
 62          UA     100
             * DDM   ***** Preserved *****

 63          KK     C20
 64          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 10 AND 20
 65          HC       2
             * DDM   ***** Preserved *****

 66          KK     R20
 67          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 68          RS       2    FLOW      -1
 69          RC    .016    .016    .016     990    .004
 70          RX       0       5       7    14.5    34.5      42      44      50
 71          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****

 72          KK      40
 73          KM   SUB-BASIN 40
 74          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 75          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
 76          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 77          BA   2.227
 78          LG    .340    .340   4.900    .280   5.000
 79          UC    .496    .265
 80          UA       0       3       5       8      12      20      43      75      90      96
 81          UA     100
             * DDM   ***** Updated *****

 82          KK      60
 83          KM   SUB-BASIN 60
 84          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 85          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .989
 86          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
 87          BA   1.751
 88          LG    .330    .350   5.800    .190   9.000
 89          UC    .596    .476
 90          UA       0       3       5       8      12      20      43      75      90      96
1                                          HEC-1 INPUT                                          PAGE  3

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

 91          UA     100
             * DDM   ***** Preserved *****

 92          KK     C60
 93          KM     HYDROGRAPH COMBINATION FOR APACHE JUNCTION FRS
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                 *      1       2
  94             HC       3
                 * DDM   ***** Preserved *****

  95             KK     S60
  96             KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
  97             KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
  98             KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
  99             KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
 100             RS       1    STOR       0
 101             SV       0   46.80   73.71   130.0  170.70  322.23  584.06  812.88  1121.9
 102             SQ     0.0    0.01    0.02   26.30   91.20  102.42  347.66  1650.0  7700.0
 103             SE  794.09  795.15  795.65  796.65  797.29  799.29  801.92  803.87  806.15
                 * DDM   ***** Preserved *****

 104             KK     R60
 105             KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 106             RS       3    FLOW      -1
 107             RC    .016    .016    .016    2850    .012
 108             RX       0       1       2     2.1     5.6     5.7       6       7
 109             RY     4.5     3.5     3.5       0       0     3.5     3.5     4.5
                 * DDM   ***** Preserved *****

 110             KK    RR60
 111             KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
 112             RS       3    FLOW      -1
 113             RC    .016    .016    .016    3500    .005
 114             RX       0       1       2     2.1     7.1     7.2       8       9
 115             RY     3.5     3.5     3.5       0       0     3.5     3.5     3.5
                 * DDM   ***** Updated *****

 116             KK      80
 117             KM   SUB-BASIN 80
 118             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 119             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
 120             KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
 121             BA   1.493
 122             LG    .330    .330   5.600    .210   4.000
 123             UC    .433    .257
 124             UA       0       3       5       8      12      20      43      75      90      96
 125             UA     100
                 * DDM   ***** Preserved *****

 126             KK     C80
 127             KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
 128             HC       2   1.493
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE  4

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


 129             KK     R80
 130             KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
 131             RS       1    FLOW      -1
 132             RC    .025    .016    .025    1200    .003
 133             RX       0       2       6     6.1    41.1    41.2    56.2    58.2
 134             RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
                 * DDM   ***** Updated *****

 135             KK     100
 136             KM   SUB-BASIN 100
 137             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 138             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 139             KM     L = 1.94  Kb = .046  Adj. Slope =  108.0
 140             BA    .488
 141             LG    .320    .290   5.100    .260   3.000
 142             UC    .533    .471
 143             UA       0       5      16      30      65      77      84      90      94      97
 144             UA     100
                 * DDM   ***** Preserved *****

 145             KK    C100
 146             KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
 147             HC       2
                 * DDM   ***** Preserved *****

 148             KK    R100
 149             KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
 150             RS       1    FLOW      -1
 151             RC    .016    .016    .016     940    .005
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152          RX       0       1       2     2.1    52.1    52.2      53      54
153          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

154          KK     120
155          KM   SUB-BASIN 120
156          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
157          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
158          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
159          BA   2.197
160          LG    .330    .280   6.800    .130  11.000
161          UC    .429    .227
162          UA       0       3       5       8      12      20      43      75      90      96
163          UA     100
             * DDM   ***** Preserved *****

164          KK    C120
165          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
166          HC       2
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE  5

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


167          KK    R120
168          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
169          RS       1    FLOW      -1
170          RC    .025    .016    .025    2100    .005
171          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
172          RY       8       5       5       0       0       5       5       8
             * DDM   ***** Updated *****

173          KK     140
174          KM   SUB-BASIN 140
175          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
176          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
177          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
178          BA    .598
179          LG    .310    .280   4.200    .440   5.000
180          UC    .421    .278
181          UA       0       5      16      30      65      77      84      90      94      97
182          UA     100
             * DDM   ***** Updated *****

183          KK     150
184          KM   SUB-BASIN 150
185          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
186          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
187          KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
188          BA    .407
189          LG    .350    .360   5.100    .260   7.000
190          UC    .296    .221
191          UA       0       3       5       8      12      20      43      75      90      96
192          UA     100
             * DDM   ***** Preserved *****

193          KK    R150
194          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
195          RS       2    FLOW      -1
196          RC    .045     .04    .045    3100    .032
197          RX       0       1       2      23      33      54      55      56
198          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

199          KK    R152
200          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
201          RS       3    FLOW      -1
202          RC    .045     .03    .045    5900    .019
203          RX       0       1       2       8      33      39      40      41
204          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

205          KK     160
206          KM   SUB-BASIN 160
207          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
208          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
209          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
210          BA    .365
                                     HEC-1 INPUT                                    PAGE  6
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 211          LG    .340    .330   4.150    .440   1.000
 212          UC    .587    .659
 213          UA       0       3       5       8      12      20      43      75      90      96
 214          UA     100
              * DDM   ***** Updated *****

 215          KK     180
 216          KM   SUB-BASIN 180
 217          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 218          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
 219          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
 220          BA   1.014
 221          LG    .350    .350   4.150    .430    .000
 222          UC    .571    .400
 223          UA       0       3       5       8      12      20      43      75      90      96
 224          UA     100
              * DDM   ***** Preserved *****

 225          KK    C180
 226          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
 227          HC       5
              *

 228          KK     210
 229          KM   SUB-BASIN 210
 230          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 231          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
 232          KM     L = 1.84  Kb = .043  Adj. Slope =  315.0
 233          BA    .792
 234          LG    .350    .360   6.800    .130   4.000
 235          UC    .313    .189
 236          UA       0       3       5       8      12      20      43      75      90      96
 237          UA     100
              * DDM   ***** Preserved *****

 238          KK    R210
 239          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
 240          RS       2    FLOW      -1
 241          RC    .045     .03    .045    5100    .022
 242          RX       0       1       2      14      34      46      47      48
 243          RY       4       4       4       0       0       4       4       4
              *

 244          KK     240
 245          KM   SUB-BASIN 240
 246          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 247          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
 248          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
 249          BA   1.408
 250          LG    .350    .370   5.300    .230   2.000
 251          UC    .467    .356
 252          UA       0       3       5       8      12      20      43      75      90      96
 253          UA     100
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE  7

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

 254          KK    C240
 255          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 210
 256          HC       2
              * DDM   ***** Preserved *****

 257          KK    S240
 258          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
 259          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
 260          RS       1    STOR       0
 261          SA    1.38    14.2    36.5
 262          SE     1.7       5      11
 263          SS       5      42       3     1.5
              * DDM   ***** Preserved *****

 264          KK    R240
 265          KM   ROUTE FLOW FROM SUB-BASIN 240 TO SUB-BASIN 220
 266          KM   PASS MOUNTAIN DIVERSION
 267          RS       3    FLOW      -1
 268          RC    .035    .025    .035    1800    .005
 269          RX       0      15      30      39      69      81      96     111
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270          RY     3.6     3.3       3       0       0       3       3       4
             *

271          KK     220
272          KM   SUB-BASIN 220
273          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
274          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
275          KM     L = 1.92  Kb = .046  Adj. Slope =  315.0
276          BA    .473
277          LG    .350    .350   7.000    .120   5.000
278          UC    .333    .282
279          UA       0       3       5       8      12      20      43      75      90      96
280          UA     100
             * DDM   ***** Preserved *****

281          KK    C220
282          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
283          HC       2
             * DDM   ***** Preserved *****

284          KK    S220
285          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
286          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
287          RS       1    STOR       0
288          SA     .78     4.1    13.7
289          SE       1       3      10
290          SS       3      65       3     1.5
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  8

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

291          KK    R220
292          KM   ROUTE FLOW FROM SUB-BASIN 220 TO SUB-BASIN 200
293          KM   PASS MOUNTAIN DIVERSION
294          RS       1    FLOW      -1
295          RC    .035    .025    .035    1250    .005
296          RX       0      50     100     109     139     148     178     184
297          RY       5       4       3       0       0       3       3       5
             * DDM   ***** Updated *****

298          KK     190
299          KM   SUB-BASIN 190
300          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
301          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
302          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
303          BA    .918
304          LG    .350    .390   5.800    .190   8.000
305          UC    .321    .185
306          UA       0       3       5       8      12      20      43      75      90      96
307          UA     100
             * DDM   ***** Preserved *****

308          KK    R190
309          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
310          RS       2    FLOW      -1
311          RC    .045     .03    .045    4740     .03
312          RX       0       1       2      17      37      52      53      54
313          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

314          KK    R192
315          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
316          RS       3    FLOW      -1
317          RC    .045    .035    .045    2200    .018
318          RX       0       1      50      59      79      88     137     138
319          RY     4.5       3       3       0       0       3       3     4.5
             * DDM   ***** Updated *****

320          KK     200
321          KM   SUB-BASIN 200
322          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
323          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
324          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
325          BA    .530
326          LG    .350    .390   5.700    .200  10.000
327          UC    .300    .201
328          UA       0       3       5       8      12      20      43      75      90      96
329          UA     100
             * DDM   ***** Preserved *****
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1                                   HEC-1 INPUT                                                    PAGE  9

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

 330          KK    C200
 331          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
 332          HC       3
              * DDM   ***** Preserved *****

 333          KK    S200
 334          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
 335          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
 336          RS       1    STOR       0
 337          SA    2.56     3.1     9.4
 338          SE       0       3      10
 339          SS       3     112       3     1.5
              * DDM   ***** Preserved *****

 340          KK    R200
 341          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS through storage
 342          RS       1    FLOW      -1
 343          RC    .035    .025    .035     650    .005
 344          RX       0       1       2      17     117     132     133     134
 345          RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****

 346          KK   SS200
 347          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
 348          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
 349          RS       1    STOR       0
 350          SA       8     9.2     9.2
 351          SE       0       7      10
 352          SS       7     251       3     1.5
              * DDM   ***** Preserved *****

 353          KK   RR200
 354          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS
 355          RS       3    FLOW      -1
 356          RC    .035    .025    .035    3150    .005
 357          RX       0       1       2      17     117     132     133     134
 358          RY       5       5       5       0       0       5       5       5
              * DDM   ***** Preserved *****

 359          KK   CC180
 360          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
              *      1       2
 361          HC       2
              * DDM   ***** Preserved *****

 362          KK    S180
 363          KM   SIGNAL BUTTE FRS DATED 1/28/85
 364          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
 365          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
 366          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 247 ACRE-FEET
 367          RS       1    STOR       0
 368          SV     0.0  172.10  244.35  482.24  871.30 1101.52 1294.09 1418.10 1578.77 1980.33
 369          SQ     0.0   10.20   10.55  121.80  138.40  145.90  151.40  154.67  390.00  1950.0
 370          SE  698.23  702.23  703.23  706.23  710.23  712.23  713.73  714.63  715.73  718.23
              *
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                                    PAGE 10

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

 371          KK    R180
 372          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
 373          KM   Routing length increased 100' from 1500' to 1600'    12/12/00
 374          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
 375          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
 376          RS       2    FLOW      -1
 377          RC    .035    .025    .035    1600    .003
 378          RX       0       1       2    22.6    38.6    59.2      60      61
 379          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
              * DDM   ***** Updated *****

 380          KK     260
 381          KM   SUB-BASIN 260
 382          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 383          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
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384          KM     L =  .81  Kb = .049  Adj. Slope =   68.0
385          BA    .263
386          LG    .300    .190   6.600    .170  15.000
387          UC    .363    .217
388          UA       0       5      16      30      65      77      84      90      94      97
389          UA     100
             * DDM   ***** Preserved *****

390          KK    C260
391          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
392          HC       2    .263
             * DDM   ***** Preserved *****

393          KK    R260
394          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
395          KM   Routing length unchanged     12/12/00
396          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
397          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
398          RS       3    FLOW      -1
399          RC    .035    .025    .035    2300    .003
400          RX       0       1       2    23.4    43.4    64.8      65      66
401          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

402          KK     280
403          KM   SUB-BASIN 280
404          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
405          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
406          KM     L =  .77  Kb = .048  Adj. Slope =   84.0
407          BA    .319
408          LG    .300    .250   5.300    .290  15.000
409          UC    .329    .168
410          UA       0       5      16      30      65      77      84      90      94      97
411          UA     100
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 11

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

412          KK    C280
413          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
414          HC       2
             * DDM   ***** Preserved *****

415          KK    R280
416          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
417          KM   Routing length decreased 400' from 2500' to 2100'    12/12/00
418          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
419          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
420          RS       3    FLOW      -1
421          RC    .035    .025    .035    2100    .003
422          RX       0       1       2    23.4    43.4    64.8      65      66

423          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             *

424          KK     300
425          KM   SUB-BASIN 300
426          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
427          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
428          KM     L =  .78  Kb = .049  Adj. Slope =  103.0
429          BA    .289
430          LG    .320    .290   4.200    .480  11.000
431          UC    .325    .177
432          UA       0       5      16      30      65      77      84      90      94      97
433          UA     100
             * DDM   ***** Preserved *****

434          KK    C300
435          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
436          HC       2
             * DDM   ***** Preserved *****

437          KK    R300
438          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
439          KM   Routing length increased 300' from 2200' to 2500'    12/12/00
440          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
441          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
442          RS       2    FLOW      -1
443          RC    .035    .025    .035    2500    .003
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 444          RX       0       1       2    23.4    55.4    76.8      77      78
 445          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
              *

 446          KK    305A
 447          KM   SUB-BASIN 305A
 448          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 449          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 450          KM     L =  .98  Kb = .048  Adj. Slope =   82.0
 451          BA    .316
 452          LG    .340    .320   4.600    .350  12.000
 453          UC    .400    .254
 454          UA       0       5      16      30      65      77      84      90      94      97
 455          UA     100
              *
1                                          HEC-1 INPUT                                          PAGE 12

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

 456          KK    C305
 457          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 300 AND 305A
 458          HC       2
              * DDM   ***** Preserved *****

 459          KK    R305
 460          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
 461          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
 462          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
 463          RS       2    FLOW      -1
 464          RC    .016    .016    .016    4000   .0146
 465          RX       0       1       2     2.1    16.1    16.2      17      18
 466          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
              *

 467          KK   320B1
 468          KM   SUB-BASIN 320B1
 469          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 470          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 471          KM     L = 1.13  Kb = .046  Adj. Slope =  106.0
 472          BA    .454
 473          LG    .330    .330   4.800    .300  13.000
 474          UC    .379    .218
 475          UA       0       5      16      30      65      77      84      90      94      97
 476          UA     100
              *

 477          KK  D320B1
 478          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 479          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
 480          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
 481          KM        MAXIMUM VOLUME DIVERSION =  1.95acre-feet
 482          DT  B320B1    1.95
 483          DI       0   10000
 484          DQ       0   10000
              * DDM   ***** Preserved *****

 485          KK  T320B1
 486          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 487          DR  B320B1
              * DDM   ***** Preserved *****

 488          KK  S320B1
 489          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 490          KM   1.95 ACRE-FEETx43560/36x3600=1.cfs
              *      1
 491          RS       1    STOR       0
 492          SV       0     .01     2.0     4.0
 493          SQ       0     0.5     1.0     2.0
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 13

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

 494          KK  C320B1
 495          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 496          HC       3
              *

 497          KK     350
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498          KM   SUB-BASIN 350
499          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
500          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
501          KM     L = 2.22  Kb = .041  Adj. Slope =  315.0
502          BA    .997
503          LG    .350    .350   4.550    .340   4.000
504          UC    .363    .227
505          UA       0       3       5       8      12      20      43      75      90      96
506          UA     100
             * DDM   ***** Preserved *****

507          KK    D350
508          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
509          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
510          DT   SF350
511          DI       0    5000
512          DQ       0    2500
             * DDM   ***** Preserved *****

513          KK    R350
514          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
515          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
516          RS       7    FLOW      -1
517          RC    .045    .035    .045    5150    .025
518          RX       0       1      40      46      56      62     102     103
519          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****

520          KK     310
521          KM   SUB-BASIN 310
522          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
523          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
524          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
525          BA    .538
526          LG    .350    .350   3.910    .480    .000
527          UC    .483    .520
528          UA       0       3       5       8      12      20      43      75      90      96
529          UA     100
             * DDM   ***** Preserved *****

530          KK    C310
531          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
532          HC       2    1.04
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 14

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

533          KK    R310
534          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
535          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320B
536          RS      10    FLOW      -1
537          RC    .045    .035    .045    8550    .022
538          RX       0       1      40      46      56      62     102     103
539          RY       3       2       2       0       0       2       2       3
             *

540          KK    305B
541          KM   SUB-BASIN 305B
542          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
543          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
544          KM     L = 1.70  Kb = .047  Adj. Slope =  124.0
545          BA    .386
546          LG    .350    .350   4.500    .350    .000
547          UC    .492    .443
548          UA       0       3       5       8      12      20      43      75      90      96
549          UA     100
             *

550          KK   R305B
551          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
552          KM   ROUTING OF FLOW FROM SUB-BASINS 305B TO SUB-BASIN 320B2.
553          RS       3    FLOW      -1
554          RC    .045    .035    .045    1700    .016
555          RX       0       1      40      46      56      62     102     103
556          RY       3       2       2       0       0       2       2       3
             *

557          KK   320B2
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558          KM   SUB-BASIN 320B2
559          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
560          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
561          KM     L = 1.08  Kb = .050  Adj. Slope =  120.0
562          BA    .220
563          LG    .320    .290   4.500    .360   5.000
564          UC    .375    .314
565          UA       0       5      16      30      65      77      84      90      94      97
566          UA     100
             *

567          KK  D320B2
568          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
569          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
570          KM   SIERRA HEIGHTS        FALCON RIDGE    & MARBLE CREEK
571          KM        MAXIMUM VOLUME DIVERSION =  3.32acre-feet
572          DT  B320B2    3.32
573          DI       0   10000
574          DQ       0   10000
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 15

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

575          KK  T320B2
576          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
577          DR  B320B2
             * DDM   ***** Preserved *****

578          KK  S320B2
579          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
580          KM   3.32 ACRE-FEETx43560/36x3600=1.2cfs
581          RS       1    STOR       0
582          SV       0     .01     3.3     4.5
583          SQ       0     0.5     1.2     2.5
             *

584          KK  C320B2
585          KM    Combine R305B, R310 and 320B2
586          HC       4
             *

587          KK  R320B2
588          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
589          KM   ROUTING OF FLOW FROM SUB-BASINS 320B2 TO SUB-BASIN 340B.
590          RS       2    FLOW      -1
591          RC    .045    .035    .045    1000    .016
592          RX       0       1      40      46      56      62     102     103
593          RY       5       2       2       0       0       2       2       5
             *
             * DDM   ***** Updated *****

594          KK    340B
595          KM   SUB-BASIN 340B
596          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
597          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
598          KM     L =  .85  Kb = .049  Adj. Slope =  238.5
599          BA    .290
600          LG    .320    .280   4.000    .520  13.000
601          UC    .246    .139
602          UA       0       5      16      30      65      77      84      90      94      97
603          UA     100
             *
             * DDM   ***** Preserved *****

604          KK   D340B
605          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
606          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
607          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
608          KM        MAXIMUM VOLUME DIVERSION = 15.6 acre-feet
609          DT  BS340B    15.6
610          DI       0   10000
611          DQ       0   10000
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 16

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

612          KK  RT340B
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613          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
614          DR  BS340B
             * DDM   ***** Preserved *****

615          KK   S340B
616          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
617          KM    15.6 ACRE-FEETx43560/36x3600= 5.2cfs
618          RS       1    STOR       0
619          SV       0     .01    15.6      20
620          SQ       0     1.0     5.2      50
             * DDM   ***** Preserved *****

621          KK   C340B
622          KM   HYDROGRAPH COMBINATION
             * KO     1
623          HC       3
             *
             * DDM   ***** Preserved *****

624          KK  DD340B
625          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS 340B.
             * KO     1
626          DT   BS340
627          DI       0     200    1000    2000    5000
628          DQ       0       0     800    1800    4800
             * DDM   ***** Preserved *****

629          KK   RT340
630          KM   RETRIEVE FLOW FROM DIVERSION
631          DR   BS340
             * DDM   ***** Preserved *****

632          KK  SS340B
633          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
634          KM      55 ACRE-FEETx43560/36x3600 = 19cfs
635          RS       1    STOR       0
636          SV       0     .01      55      70
637          SQ       0     3.0      50     100
             *

638          KK  CD340B
639          KM   HYDROGRAPH COMBINATION
640          HC       2
             *

641          KK   RT350
642          KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
643          DR   SF350
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 17

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


644          KK   RR350
645          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
646          KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
647          RS       7    FLOW      -1
648          RC    .045    .035    .045    6050    .025
649          RX       0       1      40      46      56      62     102     103
650          RY       3       2       2       0       0       2       2       3
             *

651          KK     355
652          KM   SUB-BASIN 355
653          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
654          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
655          KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
656          BA    .676
657          LG    .340    .340   4.450    .370   4.000
658          UC    .488    .502
659          UA       0       3       5       8      12      20      43      75      90      96
660          UA     100
             * DDM   ***** Preserved *****

661          KK    C355
662          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
             * KO     1
663          HC       2   1.161
             *
             * DDM   ***** Preserved *****
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664          KK    D355
665          KM        DIVERT FLOW INTO OFFLINE BASIN
666          KM        MAXIMUM VOLUME DIVERSION = 18 acre-feet
667          DT   BS355
668          DI       0     100     450    1000    2000    5000
669          DQ       0       0       0     550    1550    4550
             *
             * DDM   ***** Preserved *****

670          KK   RT355
671          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
672          DR   BS355
             *
             * DDM   ***** Preserved *****

673          KK    S355
674          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
675          KM   18.0 ACRE-FEETx43560/36x3600= 6.0CFS
676          RS       1    STOR       0
677          SV       0     .01    18.0    25.0
678          SQ       0     2.0      40      50
             *
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 18

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


679          KK   CC355
680          KM   HYDROGRAPH COMBINATION
681          HC       2
             *
             * DDM   ***** Preserved *****

682          KK    R355
683          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
684          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 340B
685          RS       1    FLOW      -1
686          RC    .045    .035    .045    4000    .025
687          RX       0       1      40      46      56      62     102     103

688          RY       3       2       2       0       0       2       2       3
             *
             * DDM   ***** Preserved *****

689          KK  CC340B
690          KM   HYDROGRAPH COMBINATION
691          HC       2
             * DDM   ***** Preserved *****

692          KK   R340B
693          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
694          KM   ROUTING OF FLOW FROM SUB-BASIN 340B TO SUB-BASIN 340A2.
695          RS       2    FLOW      -1
696          RC    .045    .035    .045    1500    .027
697          RX       0       1      40      46      56      62     102     103
698          RY       3       2       2       0       0       2       2       3
             *
             * DDM   ***** Updated *****

699          KK   340A2
700          KM   SUB-BASIN 340A2
701          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
702          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
703          KM     L =  .48  Kb = .047  Adj. Slope =  297.9
704          BA    .037
705          LG    .230    .310   5.300    .250  55.000
706          UC    .158    .174
707          UA       0       5      16      30      65      77      84      90      94      97
708          UA     100
             *
             * DDM   ***** Preserved *****

709          KK  C340A2
710          KM   HYDROGRAPH COMBINATION
711          HC       2
             *
             * DDM   ***** Preserved *****
                                     HEC-1 INPUT                                          PAGE 19
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 712          KK  R340A2
 713          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 714          KM   ROUTING OF FLOW FROM SUB-BASIN 340A2 TO SUB-BASIN 320B.
 715          RS       5    FLOW      -1
 716          RC    .045    .035    .045    4500    .020
 717          RX       0       1      40      46      56      62     102     103
 718          RY       3       2       2       0       0       2       2       3
              *
              * DDM   ***** Preserved *****

 719          KK  CC320B
 720          KM   HYDROGRAPH COMBINATION
 721          HC       2
              *
              * DDM   ***** Preserved *****

 722          KK   R320B
 723          KM   Routing Flow from 320B1 to 320A
 724          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
 725          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
 726          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
 727          RS       1    FLOW      -1
 728          RC    .016    .016    .016    1500   .0146
 729          RX       0       1       2     2.1    16.1    16.2      17      18
 730          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
              *

 731          KK    320A
 732          KM   SUB-BASIN 320A
 733          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 734          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 735          KM     L = 1.07  Kb = .049  Adj. Slope =   93.0
 736          BA    .270
 737          LG    .270    .250   4.300    .490  26.000
 738          UC    .404    .301
 739          UA       0       5      16      30      65      77      84      90      94      97
 740          UA     100
              *

 741          KK   D320A
 742          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 743          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
 744          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
 745          KM        MAXIMUM VOLUME DIVERSION =  7.0 acre-feet
              *      1
 746          DT  BS320A     7.0
 747          DI       0   10000
 748          DQ       0   10000
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 20

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

 749          KK  RT320A
 750          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 751          DR  BS320A
              * DDM   ***** Preserved *****

 752          KK   S320A
 753          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 754          KM     7.0 ACRE-FEETx43560/36x3600= 2.4cfs
              *      1
 755          RS       1    STOR       0
 756          SV       0     .01     7.0      10
 757          SQ       0     1.0     2.4     3.5
              * DDM   ***** Preserved *****

 758          KK    C320
 759          KM   HYDROGRAPH COMBINATION
 760          HC       3
              *
              * DDM   ***** Updated *****

 761          KK   340A1
 762          KM   SUB-BASIN 340A1
 763          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 764          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
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765          KM     L = 1.80  Kb = .045  Adj. Slope =  117.0
766          BA   1.089
767          LG    .270    .280   4.150    .530  21.000
768          UC    .504    .264
769          UA       0       5      16      30      65      77      84      90      94      97
770          UA     100
             *
             * DDM   ***** Preserved *****

771          KK  D340A1
772          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
773          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
774          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
775          KM        MAXIMUM VOLUME DIVERSION = 62.5 acre-feet
776          DT  BS340A    62.5
777          DI       0   10000
778          DQ       0   10000
             * DDM   ***** Preserved *****

779          KK  RT340A
780          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
781          DR  BS340A
             * DDM   ***** Preserved *****

782          KK  S340A1
783          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
784          KM    62.5 ACRE-FEETx43560/36x3600=21. cfs
785          RS       1    STOR       0
786          SV       0     .01    62.5      80
787          SQ       0     3.0    21.0     200
             *
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 21

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


788          KK  C340A1
789          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
790          HC       2
             *
             * DDM   ***** Preserved *****

791          KK    C340
792          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
793          HC       2
             *
             * DDM   ***** Updated *****

794          KK     360
795          KM   SUB-BASIN 360
796          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
797          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
798          KM     L = 2.10  Kb = .047  Adj. Slope =  124.0
799          BA    .880
800          LG    .260    .270   4.100    .560  20.000
801          UC    .575    .390
802          UA       0       5      16      30      65      77      84      90      94      97
803          UA     100
             * DDM   ***** Preserved *****

804          KK    D360
805          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
806          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
807          KM        MAXIMUM VOLUME DIVERSION = 35.6 acre-feet
808          DT   BS360    35.6
809          DI       0   10000
810          DQ       0   10000
             * DDM   ***** Preserved *****

811          KK   RT360
812          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
813          DR   BS360
             * DDM   ***** Preserved *****

814          KK    S360
815          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
816          KM    35.6 ACRE-FEETx43560/36x3600=12.cfs
817          RS       1    STOR       0
818          SV       0     .01    35.6    50.0
819          SQ       0     3.0    12.0   120.0
```

```
                 * DDM   ***** Preserved *****

820              KK    C360
821              KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
822              HC       3
                 *
                 * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE 22

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


823              KK    380A
824              KM   SUB-BASIN 380A
825              KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
826              KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
827              KM     L =  .66  Kb = .076  Adj. Slope =   91.0
828              BA    .261
829              LG    .170    .250   4.100    .710  21.000

830              UC    .425    .221
831              UA       0       3       5       8      12      20      43      75      90      96
832              UA     100
                 *
                 * DDM   ***** Preserved *****

833              KK   C380A
834              KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
835              HC       2
                 *
                 * DDM   ***** Updated *****

836              KK    400A
837              KM   SUB-BASIN 400A
838              KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
839              KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
840              KM     L =  .28  Kb = .094  Adj. Slope =   71.0
841              BA    .048
842              LG    .250    .290   4.000    .640    .000
843              UC    .317    .211
844              UA       0       3       5       8      12      20      43      75      90      96
845              UA     100
                 *
                 * DDM   ***** Preserved *****

846              KK   C400A
847              KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
848              HC       2
                 *
                 * DDM   ***** Updated *****

849              KK   380B1
850              KM   SUB-BASIN 380B1
851              KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
852              KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
853              KM     L = 1.61  Kb = .047  Adj. Slope =  124.0
854              BA    .369
855              LG    .300    .250   4.200    .520  16.000
856              UC    .471    .414
857              UA       0       5      16      30      65      77      84      90      94      97
858              UA     100
                 *
                 * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 23

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


859              KK  D380B1
860              KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
861              KM   DETENTION/RETENTION BASINS LOCATED WITHIN MESA HIGHLANDS
862              KM        MAXIMUM VOLUME DIVERSION = 5.7 acre-feet
863              DT  BS380B     5.7
864              DI       0   10000
865              DQ       0   10000
                 *
                 * DDM   ***** Preserved *****

866              KK  RT380B
867              KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
868              DR  BS380B
```

```
                *
                * DDM   ***** Preserved *****

 869            KK  S380B1
 870            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 871            KM     5.7 ACRE-FEETx43560/36x3600=1.9cfs
 872            RS       1    STOR       0
 873            SV       0     .01     5.7    10.0
 874            SQ       0     0.5     1.9    20.0
                *
                * DDM   ***** Preserved *****

 875            KK  C380B1
 876            KM   HYDROGRAPH COMBINATION
                * KO     1
 877            HC       2
                *
                * DDM   ***** Preserved *****

 878            KK  R380B1
 879            KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 880            KM   ROUTING OF FLOW FROM SUB-BASINS 380B1 TO SUB-BASIN 400B1.
 881            RS       7    FLOW      -1
 882            RC    .045    .035    .045    2600    .023
 883            RX       0       1      40      46      56      62     102     103
 884            RY       3       2       2       0       0       2       2       3
                *
                * DDM   ***** Updated *****

 885            KK   400B1
 886            KM   SUB-BASIN 400B1
 887            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 888            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 889            KM     L =  .93  Kb = .057  Adj. Slope =   91.0
 890            BA    .385
 891            LG    .280    .250   4.100    .590  12.000
 892            UC    .433    .238
 893            UA       0       5      16      30      65      77      84      90      94      97
 894            UA     100
                *
                * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 24

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


 895            KK  D400B1
 896            KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 897            KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
 898            KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
                *      1
 899            DT  BS400B     5.6
 900            DI       0   10000
 901            DQ       0   10000
                * DDM   ***** Preserved *****

 902            KK  RT400B
 903            KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 904            DR  BS400B
                * DDM   ***** Preserved *****

 905            KK  S400B1
 906            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 907            KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
 908            RS       1    STOR       0
 909            SV       0     .01     5.6
 910            SQ       0       1       2
                * DDM   ***** Preserved *****

 911            KK  C400B1
 912            KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 913            HC       2
                * DDM   ***** Preserved *****

 914            KK  CC400B
 915            KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
 916            HC       3
                *
                * DDM   ***** Updated *****

 917            KK   420A2
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918          KM   SUB-BASIN 420A2
919          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
920          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
921          KM     L =  .26  Kb = .064  Adj. Slope =   96.0
922          BA    .022
923          LG    .350    .350   4.150    .430    .000
924          UC    .208    .194
925          UA       0       5      16      30      65      77      84      90      94      97
926          UA     100
             *
             * DDM   ***** Preserved *****

927          KK  C400A2
928          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
929          HC       2
             *
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 25

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

930          KK   400B3
931          KM   SUB-BASIN 400B3
932          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
933          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
934          KM     L =  .26  Kb = .064  Adj. Slope =  135.0
935          BA    .024
936          LG    .300    .250   4.500    .430    .000
937          UC    .183    .161
938          UA       0       5      16      30      65      77      84      90      94      97
939          UA     100
             *
             * DDM   ***** Preserved *****

940          KK  R400B3
941          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
942          KM   ROUTING OF FLOW FROM 400B3 TO 380B3
943          RS       3    FLOW      -1
944          RC    .045    .035    .045    1500    .020
945          RX       0       1      40      46      56      62     102     103
946          RY       3       2       2       0       0       2       2       3
             *
             * DDM   ***** Updated *****

947          KK   380B3
948          KM   SUB-BASIN 380B3
949          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
950          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
951          KM     L =  .69  Kb = .054  Adj. Slope =  138.0
952          BA    .123
953          LG    .300    .250   4.350    .480  16.000
954          UC    .279    .220
955          UA       0       5      16      30      65      77      84      90      94      97
956          UA     100
             *
             * DDM   ***** Preserved *****

957          KK  C380B3
958          KM   HYDROGRAPH COMBINATION
             * KO     1
959          HC       2
             *
             * DDM   ***** Preserved *****

960          KK  R380B3
961          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
962          KM   ROUTING OF FLOW FROM SUB-BASINS 380B3 TO SUB-BASIN 380B2.
963          RS       3    FLOW      -1
964          RC    .045    .035    .045    2300    .022
965          RX       0       1      40      46      56      62     102     103
966          RY       3       2       2       0       0       2       2       3
             *
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE 26

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

967          KK   380B2
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968          KM   SUB-BASIN 380B2
969          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
970          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
971          KM     L =  .55  Kb = .055  Adj. Slope =  136.0
972          BA    .096
973          LG    .300    .250   3.950    .580  15.000
974          UC    .250    .187
975          UA       0       5      16      30      65      77      84      90      94      97
976          UA     100
             *
             * DDM   ***** Preserved *****

977          KK  C380B2
978          KM   HYDROGRAPH COMBINATION
             * KO      1
979          HC       2
             *
             * DDM   ***** Preserved *****

980          KK  R380B2
981          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
982          KM   ROUTING OF FLOW FROM SUB-BASINS 380B2 TO SUB-BASIN 400B2.
983          RS       9    FLOW      -1
984          RC    .045    .035    .045    4000    .018
985          RX       0       1      40      46      56      62     102     103
986          RY       3       2       2       0       0       2       2       3
             *
             * DDM   ***** Updated *****

987          KK   400B2
988          KM   SUB-BASIN 400B2
989          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
990          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
991          KM     L =  .93  Kb = .051  Adj. Slope =  118.0
992          BA    .194
993          LG    .300    .250   4.150    .530    .000
994          UC    .363    .288
995          UA       0       5      16      30      65      77      84      90      94      97
996          UA     100
             *
             * DDM   ***** Preserved *****

997          KK  C400B2
998          KM   HYDROGRAPH COMBINATION
             * KO      1
999          HC       2
             *
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                          PAGE 27

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


1000         KK  R400B2
1001         KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1002         KM   ROUTING OF FLOW FROM SUB-BASINS 400B2 TO SUB-BASIN 420A1.
1003         RS       3    FLOW      -1
1004         RC    .045    .035    .045    1800    .018
1005         RX       0       1      40      46      56      62     102     103
1006         RY       3       2       2       0       0       2       2       3
             *
             * DDM   ***** Updated *****

1007         KK   420A1
1008         KM   SUB-BASIN 420A1
1009         KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1010         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1011         KM     L = 1.20  Kb = .045  Adj. Slope =  108.0
1012         BA    .566
1013         LG    .320    .280   4.250    .470  10.000
1014         UC    .400    .214
1015         UA       0       5      16      30      65      77      84      90      94      97
1016         UA     100
             *
             * DDM   ***** Preserved *****

1017         KK  D420A1
1018         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1019         KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
1020         KM        MAXIMUM VOLUME DIVERSION = 8.65 acre-feet
```

```
                 *      1
1021             DT  BS420A    8.65
1022             DI       0   10000
1023             DQ       0   10000
                 * DDM   ***** Preserved *****

1024             KK  RT420A
1025             KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1026             DR  BS420A
                 * DDM   ***** Preserved *****

1027             KK  S420A1
1028             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1029             KM    8.65 ACRE-FEETx43560/36x3600= 3cfs
1030             RS       1    STOR       0
1031             SV       0     .01    8.65      10
1032             SQ       0     1.0     3.0       5
                 * DDM   ***** Preserved *****

1033             KK   C420A
1034             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1035             HC       4
                 *
                 * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                    PAGE 28

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


1036             KK     370
1037             KM   SUB-BASIN 370
1038             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1039             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1040             KM     L = 1.90  Kb = .044  Adj. Slope =  203.5
1041             BA    .672
1042             LG    .340    .320   4.650    .330   8.000
1043             UC    .404    .284
1044             UA       0       3       5       8      12      20      43      75      90      96
1045             UA     100
                 *

1046             KK     395
1047             KM   SUB-BASIN 395
1048             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1049             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1050             KM     L = 1.30  Kb = .051  Adj. Slope =  219.2
1051             BA    .199
1052             LG    .330    .320   4.900    .300  10.000
1053             UC    .333    .338
1054             UA       0       3       5       8      12      20      43      75      90      96
1055             UA     100
                 * DDM   ***** Preserved *****

1056             KK    C370
1057             KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
                 * KO      1
1058             HC       2
                 * DDM   ***** Preserved *****

1059             KK    D370
1060             KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
1061             KM   370 AND 395.
                 * KO      1
1062             DT   BS370
1063             DI       0     140    5000
1064             DQ       0       0    4860
                 * DDM   ***** Preserved *****

1065             KK   RT370
1066             KM   RETRIEVE FLOW FROM DIVERSION
1067             DR   BS370
                 * DDM   ***** Preserved *****

1068             KK    S370
1069             KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1070             KM      32 ACRE-FEETx43560/36x3600 = 11cfs
1071             RS       1    STOR       0
1072             SV       0     .01      32      40
1073             SQ       0       4      11      40
                 * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 29
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1074          KK   CC370
1075          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1076          HC       2
              * DDM   ***** Preserved *****

1077          KK    R370
1078          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1079          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
1080          RS       3    FLOW      -1
1081          RC    .045    .035    .045    2600    .023
1082          RX       0       1      40      46      56      62     102     103
1083          RY       3       2       2       0       0       2       2       3
              *
              * DDM   ***** Updated *****

1084          KK     385
1085          KM   SUB-BASIN 385
1086          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1087          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1088          KM     L = 2.30  Kb = .045  Adj. Slope =  303.0
1089          BA    .527
1090          LG    .340    .360   5.600    .220  13.000
1091          UC    .383    .358
1092          UA       0       3       5       8      12      20      43      75      90      96
1093          UA     100
              * DDM   ***** Updated *****

1094          KK    415B
1095          KM   SUB-BASIN 415B
1096          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1097          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1098          KM     L = 1.59  Kb = .048  Adj. Slope =  315.0
1099          BA    .329
1100          LG    .340    .340   5.300    .240  14.000
1101          UC    .308    .274
1102          UA       0       5      16      30      65      77      84      90      94      97
1103          UA     100
              * DDM   ***** Preserved *****

1104          KK   C415B
1105          KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
              * KO     1
1106          HC       2
              *

1107          KK   D415B

1108          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1109          KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 32 AC-FT @ 5' DEPTH.
1110          DT  BS415B
1111          DI       0     150    5000
1112          DQ       0       0    4850
              *
1                                   HEC-1 INPUT                                    PAGE 30

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

1113          KK  RT415B
1114          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1115          DR  BS415B
              *

1116          KK   S415B
1117          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1118          KM      32 ACRE-FEETx43560/36x3600 = 11cfs
1119          RS       1    STOR       0
1120          SV       0     .01      32      40
1121          SQ       0       5      11      60
              * DDM   ***** Preserved *****

1122          KK  CC415B
1123          KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1124          HC       2
              * DDM   ***** Preserved *****

1125          KK   R415B
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1126          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1127          KM   ROUTING OF FLOW FROM 415C TO 415B
1128          RS       3    FLOW      -1
1129          RC    .045     .03    .045    2590    .024
1130          RX       0       1      40      46      56      62     102     103
1131          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1132          KK     390
1133          KM   SUB-BASIN 390
1134          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1135          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1136          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
1137          BA    .248
1138          LG    .300    .250   4.700    .380  18.000
1139          UC    .204    .106
1140          UA       0       5      16      30      65      77      84      90      94      97
1141          UA     100
              * DDM   ***** Preserved *****

1142          KK    D390
1143          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1144          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
1145          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
              *      1
1146          DT   BS390     3.5
1147          DI       0   10000
1148          DQ       0   10000
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 31

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


1149          KK   RT390
1150          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1151          DR   BS390
              * DDM   ***** Preserved *****

1152          KK    S390
1153          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1154          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
1155          RS       1    STOR       0
1156          SV       0     .01     3.5
1157          SQ       0     0.5     1.2
              * DDM   ***** Preserved *****

1158          KK    C390
1159          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1160          HC       4
              * DDM   ***** Preserved *****

1161          KK    R390
1162          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1163          KM   FROM SUB-BASIN 390 TO SUB-BASIN 420B
1164          RS       7    FLOW      -1
1165          RC    .045    .045    .045    5500    .020
1166          RX       0       1      40      46      56      62     102     103
1167          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1168          KK    420B
1169          KM   SUB-BASIN 420B
1170          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1171          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1172          KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
1173          BA    .279
1174          LG    .300    .250   3.910    .590  15.000
1175          UC    .333    .226
1176          UA       0       5      16      30      65      77      84      90      94      97
1177          UA     100
              * DDM   ***** Preserved *****

1178          KK   C420B
1179          KM   HYDROGRAPH COMBINATION
              * KO     1
1180          HC       2
              *
              * DDM   ***** Updated *****

1181          KK     440
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1182          KM   SUB-BASIN 440
1183          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1184          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1185          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1186          BA    .080
1187          LG    .190    .380   6.400    .140  13.000
1188          UC    .129    .077
1                                        HEC-1 INPUT                                          PAGE 32

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

1189          UA       0       3       5       8      12      20      43      75      90      96
1190          UA     100
              * DDM   ***** Preserved *****

1191          KK     R70
1192          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1193          RS       2    FLOW      -1
1194          RC     .05    .035     .05    2250     .08
1195          RX    1000    1025    1050    1070    1075    1095    1120    1145
1196          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1197          KK     441
1198          KM   SUB-BASIN 441
1199          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1200          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1201          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1202          BA    .010
1203          LG    .300    .250   5.600    .220   5.000
1204          UC    .150    .225
1205          UA       0       5      16      30      65      77      84      90      94      97
1206          UA     100
              * DDM   ***** Preserved *****

1207          KK    C108
1208          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
1209          HC       2
              * DDM   ***** Preserved *****

1210          KK      D4
1211          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
              *      1
1212          DT   SPLIT
1213          DI       0      14      40      82     120     154     180
1214          DQ       0       7      20      41      60      77      90
              * DDM   ***** Preserved *****

1215          KK    R108
1216          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1217          RS       2    FLOW      -1
1218          RC     .05    .035     .05    3200      .1
1219          RX    1000    1025    1050    1070    1075    1095    1120    1145
1220          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1221          KK     442
1222          KM   SUB-BASIN 442
1223          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1224          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1225          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1226          BA    .100
1227          LG    .300    .270   3.290    .770   5.000
1228          UC    .258    .264
1229          UA       0       5      16      30      65      77      84      90      94      97
1230          UA     100
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 33

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

1231          KK     C67
1232          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1233          HC       2
              * DDM   ***** Preserved *****

1234          KK      D6
1235          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1236          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
              *      1
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1237          DT  BASIN4     3.3
1238          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1239          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
              * DDM   ***** Preserved *****

1240          KK    RTD6
1241          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1242          DR  BASIN4
              * DDM   ***** Preserved *****

1243          KK     SD6
1244          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1245          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
              *      1
1246          RS       1    STOR       0
1247          SV       0     .01     3.3
1248          SQ       0     0.2     1.1
              * DDM   ***** Preserved *****

1249          KK     CD6
1250          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1251          HC       2
              * DDM   ***** Updated *****

1252          KK     443
1253          KM   SUB-BASIN 443
1254          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1255          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1256          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1257          BA    .080
1258          LG    .250    .190   8.000    .080  10.000
1259          UC    .196    .194
1260          UA       0       5      16      30      65      77      84      90      94      97
1261          UA     100
              * DDM   ***** Preserved *****

1262          KK     D66
1263          KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1264          KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1265          DT   WSH66
1266          DI       0      78     100     200
1267          DQ       0      78      78      78
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                        PAGE 34

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

1268          KK    R113
1269          KM        ROUTE FLOW FROM C113 TO C114
1270          RS       1    FLOW      -1
1271          RC    .019    .019    .019    1300    .029
1272          RX    1000    1004    1008    1012    1018    1022    1026    1030
1273          RY      17   15.33   12.67      10      10   12.67   15.33      17
              * DDM   ***** Preserved *****

1274          KK    C114
1275          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1276          HC       2
              * DDM   ***** Updated *****

1277          KK     444
1278          KM   SUB-BASIN 444
1279          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1280          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1281          KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1282          BA    .040
1283          LG    .130    .350   4.450    .320   1.000
1284          UC    .112    .084
1285          UA       0       3       5       8      12      20      43      75      90      96
1286          UA     100
              * DDM   ***** Preserved *****

1287          KK     R58
1288          KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1289          RS       2    FLOW      -1
1290          RC     .05    .035     .05    2370   .0516
1291          RX    1000    1010    1020    1050    1055    1085    1095    1105
1292          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Updated *****
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1293          KK     445
1294          KM   SUB-BASIN 445
1295          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1296          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1297          KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1298          BA    .190
1299          LG    .170    .320   3.470    .590   3.000
1300          UC    .192    .130
1301          UA       0       5      16      30      65      77      84      90      94      97
1302          UA     100
              * DDM   ***** Preserved *****

1303          KK    C107
1304          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1305          HC       2
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 35

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


1306          KK    R107
1307          KM        ROUTE FLOW FROM C107 TO C109
1308          RS       2    FLOW      -1
1309          RC     .05    .035     .05     700   .0516
1310          RX    1000    1010    1020    1050    1055    1085    1095    1105
1311          RY      19      18      17      10      10      17      18      19
              * DDM   ***** Preserved *****

1312          KK    RTB2
1313          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
              *      1
1314          DR   SPLIT
              * DDM   ***** Preserved *****

1315          KK  RSPLIT
1316          KM        ROUTE FLOW FROM SPLIT TO C109
1317          RS       1    FLOW      -1
1318          RC     .05    .035     .05     800     .05
1319          RX    1000    1025    1050    1070    1075    1095    1120    1145
1320          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1321          KK     446
1322          KM   SUB-BASIN 446
1323          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1324          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1325          KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1326          BA    .040
1327          LG    .270    .250   4.500    .400  19.000
1328          UC    .183    .189
1329          UA       0       5      16      30      65      77      84      90      94      97
1330          UA     100
              * DDM   ***** Preserved *****

1331          KK    C109
1332          KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1333          HC       3
              * DDM   ***** Preserved *****

1334          KK      D5
1335          KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1336          KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
              *      1
1337          DT  WSH404
1338          DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1339          DQ       0      35      35      35      35      35      35      35
              * DDM   ***** Preserved *****

1340          KK    R109
1341          KM        ROUTE FLOW FROM C109 TO C110
1342          RS       1    FLOW      -1
1343          RC    .019    .019    .019    3080     .05
1344          RX    1000    1005    1010    1015    1025    1030    1035    1040
1345          RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
              * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE 36

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1346          KK     447
1347          KM   SUB-BASIN 447
1348          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1349          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1350          KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1351          BA    .090
1352          LG    .250    .270   3.350    .870  30.000
1353          UC    .208    .145
1354          UA       0       5      16      30      65      77      84      90      94      97
1355          UA     100
              * DDM   ***** Preserved *****

1356          KK   RT404
1357          KM        RETRIEVE DIVERTED FLOW FOR WASH 109

1358          DR  WSH404
              * DDM   ***** Preserved *****

1359          KK    R404
1360          KM        ROUTE FLOW FROM C110 TO C110
1361          RS       6    FLOW      -1
1362          RC    .019    .019    .019    3540     .03
1363          RX    1000    1012    1016    1020    1025    1029    1033    1045
1364          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1365          KK    C110
1366          KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1367          HC       3
              * DDM   ***** Preserved *****

1368          KK    R110
1369          KM        ROUTE FLOW FROM C110 TO C115
1370          RS       1    FLOW      -1
1371          RC    .019    .019    .019     580   .0291
1372          RX    1000    1012    1016    1020    1035    1039    1043    1055
1373          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1374          KK    C115
1375          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1376          HC       2
              * DDM   ***** Preserved *****

1377          KK    R115
1378          KM        ROUTE FLOW FROM C115 TO Sub 453
1379          RS       1    FLOW      -1
1380          RC    .019    .019    .019    2125    .029
1381          RX    1000    1012    1016    1020    1035    1039    1043    1055
1382          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                    PAGE 37

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


1383          KK     448
1384          KM   SUB-BASIN 448
1385          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1386          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1387          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1388          BA    .045
1389          LG    .170    .310   4.200    .390  11.000
1390          UC    .133    .102
1391          UA       0       5      16      30      65      77      84      90      94      97
1392          UA     100
              * DDM   ***** Updated *****

1393          KK     449
1394          KM   SUB-BASIN 449
1395          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1396          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1397          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1398          BA    .050
1399          LG    .260    .280   3.500    .640   6.000

1400          UC    .167    .134
1401          UA       0       5      16      30      65      77      84      90      94      97
1402          UA     100
              * DDM   ***** Preserved *****
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1403          KK   C6364
1404          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1405          HC       2
              * DDM   ***** Preserved *****

1406          KK   R6364
1407          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1408          RS       5    FLOW      -1
1409          RC     .05    .035     .05    4375   .0333
1410          RX    1000    1027    1053    1080    1090    1117    1143    1170
1411          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1412          KK     450
1413          KM   SUB-BASIN 450
1414          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1415          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1416          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1417          BA    .070
1418          LG    .340    .350   3.630    .570   4.000
1419          UC    .296    .383
1420          UA       0       3       5       8      12      20      43      75      90      96
1421          UA     100
              * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                          PAGE 38

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


1422          KK     451
1423          KM   SUB-BASIN 451
1424          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1425          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1426          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1427          BA    .025
1428          LG    .340    .340   3.290    .750   3.000
1429          UC    .271    .453
1430          UA       0       3       5       8      12      20      43      75      90      96
1431          UA     100
              * DDM   ***** Preserved *****

1432          KK    C451
1433          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451
1434          HC       2
              * DDM   ***** Preserved *****

1435          KK    RT66
1436          KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1437          DR   WSH66
              * DDM   ***** Updated *****

1438          KK     452
1439          KM   SUB-BASIN 452
1440          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1441          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000

1442          KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1443          BA    .040
1444          LG    .260    .280   3.700    .550   9.000
1445          UC    .171    .166
1446          UA       0       5      16      30      65      77      84      90      94      97
1447          UA     100
              * DDM   ***** Preserved *****


1448          KK   C6465
1449          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1450          HC       2
              * DDM   ***** Preserved *****

1451          KK   R6566
1452          KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1453          RS       3    FLOW      -1
1454          RC     .05    .035     .05    2435   .0282
1455          RX    1000    1045    1090    1150    1160    1220    1265    1310
1456          RY      25      23      20      10      10      20      23      25
              * DDM   ***** Preserved *****

1457          KK    C116
1458          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1459          HC       3
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                 * DDM   ***** Preserved *****
                                          HEC-1 INPUT                                                    PAGE 39
LINE             ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1460             KK  BASIN5
1461             KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1462             KM        BASIN 5 FEET DEEP
1463             RS       1    ELEV       0
1464             SV       0     4.5     9.9
1465             SQ       0      69     190
1466             SE       0     2.5       5
                 * DDM   ***** Preserved *****

1467             KK    R116
1468             KM   ROUTE FLOW FROM C116 TO C117
1469             RS       2    FLOW      -1
1470             RC     .05    .035     .05    1300   .0333
1471             RX    1000    1100    1200    1300    1320    1420    1520    1620
1472             RY      13      12      11      10      10      11      12      13
                 * DDM   ***** Updated *****

1473             KK     453
1474             KM   SUB-BASIN 453
1475             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1476             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1477             KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1478             BA    .060
1479             LG    .290    .300   3.290    .820  18.000
1480             UC    .275    .284
1481             UA       0       5      16      30      65      77      84      90      94      97
1482             UA     100
                 * DDM   ***** Preserved *****

1483             KK    C117

1484             KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1485             HC       2
                 * DDM   ***** Preserved *****

1486             KK    C118
1487             KM   COMBINE HYDROGRAPHS FROM R115 AND C117
1488             HC       2
                 * DDM   ***** Preserved *****

1489             KK    R118
1490             KM        ROUTE FLOW FROM C118 TO  DIV7
                 * KO     1
1491             RS       1    FLOW      -1
1492             RC    .019    .019    .019    1500    .024
1493             RX    1000    1012    1016    1020    1035    1039    1043    1055
1494             RY      15      12      11      10      10      11      12      15
                 * DDM   ***** Preserved *****

1495             KK      D7
1496             KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1497             KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM, Vol = 3.6 A-F
                 * KO     1
1498             DT  BASIN6     3.6
1499             DI       0     363     487     563     645     900
1                                         HEC-1 INPUT                                                    PAGE 40

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

1500             DQ       0       2      10      15      25     260
                 * DDM   ***** Preserved *****

1501             KK    RTD7
1502             KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1503             DR  BASIN6
                 * DDM   ***** Preserved *****

1504             KK     SD7
1505             KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1506             KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1507             RS       1    STOR       0
1508             SV       0     .01     3.6     4.0
1509             SQ       0     0.2     1.2     1.5
                 * DDM   ***** Preserved *****
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1510        KK     CD7
1511        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1512        HC       2
            * DDM   ***** Updated *****

1513        KK     454
1514        KM   SUB-BASIN 454
1515        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1516        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1517        KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1518        BA    .180
1519        LG    .300    .310   3.780    .560  14.000
1520        UC    .379    .395
1521        UA       0       5      16      30      65      77      84      90      94      97
1522        UA     100
            *
            * DDM   ***** Preserved *****

1523        KK    C454
1524        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND CDIV7
            *      1       2
1525        HC       2
            * DDM   ***** Preserved *****

1526        KK    R454
1527        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1528        KM   ROUTE FLOW FROM C454 TO 415C
1529        RS       3    FLOW      -1
1530        RC    .045    .035    .045    2200    .009
1531        RX       0      .5       1      33      42      67    67.5      68
1532        RY       5       4       4       0       0       6       6       6
            *
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1533        KK    415A
1534        KM   SUB-BASIN 415A
1535        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1536        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1537        KM     L = 1.21  Kb = .049  Adj. Slope =  140.0
1538        BA    .280
1539        LG    .300    .260   3.630    .710  15.000
1540        UC    .400    .322
1541        UA       0       5      16      30      65      77      84      90      94      97
1542        UA     100
            * DDM   ***** Preserved *****

1543        KK   C415A
1544        KM        COMBINE HYDROGRAPHS FROM R454 and 415A
            * KO     1
1545        HC       2
            *

1546        KK  CC415A
1547        KM   HYDROGRAPH COMBINATION OF C415A and CC420B
1548        HC       2
            *

1549        KK   D420B
1550        KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1551        KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 8.0 AC-FT @ 8' DEPTH.
            * KO     1
1552        DT  BS420B
1553        DI       0    1500    5000
1554        DQ       0       0    3500
            *

1555        KK  RT420B
1556        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1557        DR  BS420B

1558        KK   S420B
1559        KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1560        KM     8.0 ACRE-FEETx43560/36x3600 = 1.5 cfs
1561        RS       1    STOR       0
1562        SV       0     .01     8.0      20
1563        SQ       0     0.5      30      55
            *
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1564          KK  CC420B
1565          KM   HYDROGRAPH COMBINATION at D/S of the Basin "H"
              * KO      1
1566          HC       2
              *
1                                        HEC-1 INPUT                                                    PAGE 42

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


1567          KK   R415A
1568          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1569          KM   ROUTING OF FLOW FROM C415A TO 455C
1570          RS       2    FLOW      -1
1571          RC    .045     .03    .045    4100    .024
1572          RX       0      .5       1       8      16      23    23.5      24
1573          RY       8       8       8       0       0       8       8       8
              *
              * DDM   ***** Updated *****

1574          KK     455
1575          KM   SUB-BASIN 455
1576          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1577          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1578          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1579          BA   1.111
1580          LG    .270    .280   3.700    .640  24.000
1581          UC    .421    .204
1582          UA       0       5      16      30      65      77      84      90      94      97
1583          UA     100
              * DDM   ***** Preserved *****

1584          KK    D455
1585          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1586          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1587          KM   FOR BASIN #: 30      34      43      47&58
1588          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
              *      1
1589          DT   BS455    74.1
1590          DI       0   10000
1591          DQ       0   10000
              * DDM   ***** Preserved *****

1592          KK   RT455
1593          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1594          DR   BS455
              * DDM   ***** Preserved *****

1595          KK    S455
1596          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1597          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1598          RS       1    STOR       0
1599          SV       0     .01    74.1
1600          SQ       0     3.0      25
              * DDM   ***** Preserved *****

1601          KK    C455
1602          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1603          HC       2
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 43

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


1604          KK   CC455
1605          KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
              *      1       2
1606          HC       3
              * DDM   ***** Preserved *****

1607          KK    S440
1608          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1609          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1610          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1611          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 271 ACRE-FEET
1612          RS       1    STOR       0
1613          SV     0.0      81   211.0  265.72  692.96  896.16  1120.0 1630.34  2230.9 3311.68
1614          SQ     0.0     1.0     3.0     8.0  515.00  780.00  825.00  3184.7  7426.0 16007.3
1615          SE   577.0  578.00  579.00  579.36  581.86  582.86  583.86  585.86  587.86  590.86
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                * DDM   ***** Preserved *****

1616            KK    R455
1617            KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 480
1618            RS      15    FLOW      -1
1619            RC    .035    .025    .035    7000   .0002
1620            RX       0       1       2      28      58      84      85      86
1621            RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
                * DDM   ***** Updated *****

1622            KK     480
1623            KM   SUB-BASIN 480
1624            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1625            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1626            KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1627            BA    .731
1628            LG    .270    .270   3.580    .730  27.000
1629            UC    .325    .148
1630            UA       0       5      16      30      65      77      84      90      94      97
1631            UA     100
                * DDM   ***** Preserved *****

1632            KK    D480
1633            KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1634            KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1635            KM   FOR BASIN #: 18 & 26
1636            KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
                *      1
1637            DT   BS480    16.5
1638            DI       0   10000
1639            DQ       0   10000
                * DDM   ***** Preserved *****

1640            KK   RT480
1641            KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1642            DR   BS480
                * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 44

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


1643            KK    S480
1644            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1645            KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1646            RS       1    STOR       0
1647            SV       0     .01    16.5
1648            SQ       0     3.0     5.6
                * DDM   ***** Preserved *****

1649            KK    C480
1650            KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1651            HC       2
                * DDM   ***** Preserved *****

1652            KK   CC480
1653            KM   HYDROGRAPH COMBINATION AT SUBBASIN 480
1654            HC       2   0.731
                * DDM   ***** Preserved *****

1655            KK    R480
1656            KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUBBASIN 462
1657            RS       7    FLOW      -1
1658            RC    .035    .025    .035    2800   .0002
1659            RX       0       1       2      28      58      84      85      86
1660            RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
                * DDM   ***** Updated *****

1661            KK     456
1662            KM   SUB-BASIN 456
1663            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1664            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1665            KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1666            BA    .260
1667            LG    .300    .380   5.600    .200  12.000
1668            UC    .217    .139
1669            UA       0       5      16      30      65      77      84      90      94      97
1670            UA     100
                * DDM   ***** Preserved *****

1671            KK      D1
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1672        KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1673        KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
            *      1
1674        DT  BASIN1     4.0
1675        DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1676        DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
            * DDM   ***** Preserved *****

1677        KK     CD2
1678        KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1679        KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1680        DT    WA30
1681        DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1682        DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
            * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 45

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


1683        KK    R456
1684        KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1685        RS       2    FLOW      -1
1686        RC     .05    .035     .05    3800    .044
1687        RX    1000    1010    1020    1036    1041    1057    1067    1077
1688        RY   14.88   14.44      14      10      10      14   14.44   14.88
            * DDM   ***** Updated *****

1689        KK     457
1690        KM   SUB-BASIN 457
1691        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1692        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1693        KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1694        BA    .190
1695        LG    .270    .330   3.950    .460   6.000
1696        UC    .237    .195
1697        UA       0       5      16      30      65      77      84      90      94      97
1698        UA     100
            * DDM   ***** Preserved *****

1699        KK    C101
1700        KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1701        HC       2
            * DDM   ***** Preserved *****

1702        KK      D3
1703        KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1704        KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
            *      1
1705        DT  BASIN2     5.0
1706        DI       0      36      70     110     180   313.5     402   500.9
1707        DQ       0       0       0       0       0    67.5     124   190.9
            * DDM   ***** Preserved *****

1708        KK    RTD3
1709        KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1710        DR  BASIN2
            * DDM   ***** Preserved *****

1711        KK     SD3
1712        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1713        KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1714        RS       1    STOR       0
1715        SV       0     .01       5
1716        SQ       0     0.7     1.7
            * DDM   ***** Preserved *****

1717        KK     CD3
1718        KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1719        HC       2
            * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 46

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


1720        KK    R101
1721        KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1722        RS       1    FLOW      -1
1723        RC     .05    .035     .05    1450     .05
1724        RX    1000    1010    1020    1036    1041    1057    1067    1077
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1725        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Updated *****

1726        KK     458
1727        KM   SUB-BASIN 458
1728        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1729        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1730        KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1731        BA    .190
1732        LG    .290    .330   5.800    .190   6.000
1733        UC    .204    .131
1734        UA       0       5      16      30      65      77      84      90      94      97
1735        UA     100
            * DDM   ***** Preserved *****

1736        KK    C103
1737        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1738        HC       2
            * DDM   ***** Preserved *****

1739        KK    R103
1740        KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1741        RS       1    FLOW      -1
1742        RC     .05    .035     .05     900     .03
1743        RX    1000    1010    1020    1030    1050    1060    1070    1080
1744        RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
            * DDM   ***** Preserved *****

1745        KK    RT30
1746        KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1747        DR    WA30
            * DDM   ***** Preserved *****

1748        KK     R30
1749        KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1750        RS       1    FLOW      -1
1751        RC     .05    .035     .05    1630     .05
1752        RX    1000    1010    1020    1036    1041    1057    1067    1077
1753        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1754        KK    RTB1
1755        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
            *      1       2
1756        DR  BASIN1
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1757        KK      B1
1758        KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1759        KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
            *      1       2
1760        RS       1    ELEV       0
1761        SV              .7     1.4     2.3     2.7     4.0
1762        SQ       0       5      16      28    32.5      37
1763        SE       0       1       2       3     3.5       4
            * DDM   ***** Preserved *****

1764        KK     RB1
1765        KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1766        RS       3    FLOW      -1
1767        RC     .05    .035     .05    1720     .05
1768        RX    1000    1010    1020    1036    1041    1057    1067    1077
1769        RY      15    14.5      14      10      10      14    14.5      15
            * DDM   ***** Preserved *****

1770        KK    CDIV
1771        KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1772        HC       2     .12
            * DDM   ***** Updated *****

1773        KK     459
1774        KM   SUB-BASIN 459
1775        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1776        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1777        KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1778        BA    .030
1779        LG    .220    .300   3.330    .710   8.000
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1780          UC    .162    .157
1781          UA       0       5      16      30      65      77      84      90      94      97
1782          UA     100
              * DDM   ***** Preserved *****

1783          KK     C52
1784          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1785          HC       2
              * DDM   ***** Preserved *****

1786          KK     R52
1787          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1788          RS       3    FLOW      -1
1789          RC     .05    .035     .05    2000     .05
1790          RX    1000    1010    1020    1036    1041    1057    1067    1077
1791          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1792          KK     460
1793          KM   SUB-BASIN 460
1794          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1795          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1796          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1797          BA    .140
1                                        HEC-1 INPUT                                          PAGE 48

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

1798          LG    .250    .260   3.740    .690  27.000
1799          UC    .242    .160
1800          UA       0       5      16      30      65      77      84      90      94      97
1801          UA     100
              * DDM   ***** Preserved *****

1802          KK    C102
1803          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1804          HC       2
              * DDM   ***** Preserved *****

1805          KK  BASIN3
1806          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1807          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1808          RS       1    ELEV       0
1809          SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
              *      0       0       0       0    1.14    3.25    5.52    9.23
1810          SQ       0      22      45    47.4      48      51      57      62      67      73
1811          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1812          KK      R3
1813          KM        ROUTE FLOW FROM C102 to C106
1814          RS       5    FLOW      -1
1815          RC     .05     .03     .05    2750   .0375
1816          RX    1000    1010    1020    1052    1086    1118    1128    1138
1817          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

1818          KK     461
1819          KM   SUB-BASIN 461
1820          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1821          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1822          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
1823          BA    .120
1824          LG    .270    .250   4.250    .450  21.000
1825          UC    .271    .250
1826          UA       0       5      16      30      65      77      84      90      94      97
1827          UA     100
              * DDM   ***** Preserved *****

1828          KK    C104
1829          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
1830          HC       2
              * DDM   ***** Preserved *****

1831          KK    C106
1832          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
1833          HC       2
              * DDM   ***** Preserved *****
                                         HEC-1 INPUT                                          PAGE 49

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1834          KK    R106
1835          KM        ROUTE FLOW FROM C106 TO C49
1836          RS       2    FLOW      -1
1837          RC     .05    .035     .05    3950    .033
1838          RX    1000    1010    1020    1030    1050    1060    1070    1080
1839          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

1840          KK     462
1841          KM   SUB-BASIN 462
1842          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1843          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1844          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
1845          BA    .301
1846          LG    .300    .330   5.300    .240  12.000
1847          UC    .225    .137
1848          UA       0       5      16      30      65      77      84      90      94      97
1849          UA     100
              * DDM   ***** Preserved *****

1850          KK     C56
1851          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
              *      1       2
1852          HC       2
              * DDM   ***** Preserved *****

1853          KK    C462
1854          KM        COMBINE HYDROGRAPHS AT SUBBASIN 462
              *      1
1855          HC       2    2.09
              * DDM   ***** Preserved *****

1856          KK    R462
1857          KM   ROUTE FLOW FROM SUB-BASIN 462 TO SUB-BASIN 500 (First Channel Reach)
1858          RS       1    FLOW      -1
1859          RC    .025    .025    .025    1800    .005
1860          RX       0       1      20      32      62      74      93      94
1861          RY      13      12      12       0       0      12      12      13
              *
              * DDM   ***** Preserved *****

1862          KK   RR462
1863          KM   ROUTE FLOW FROM SUB-BASIN 462 TO SUB-BASIN 500 (Second Natural Wash Reach)
1864          RS       3    FLOW      -1
1865          RC    .055     .05    .055    4700     .05
1866          RX       0       1       2      28      58      84      85      86
1867          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                          PAGE 50

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


1868          KK     500
1869          KM   SUB-BASIN 500
1870          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1871          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
1872          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
1873          BA    .930
1874          LG    .350    .400   6.000    .170   9.000
1875          UC    .421    .333
1876          UA       0       3       5       8      12      20      43      75      90      96
1877          UA     100
              * DDM   ***** Preserved *****

1878          KK    C500
1879          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
1880          HC       2    3.02
1881          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   31          10
                V
                V
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 41        R10
             V
             V
 47        R12
             .
             .
 53          .          20
             .           .
             .           .
 63        C20............
             V
             V
 66        R20
             .
             .
 72          .          40
             .           .
             .           .
 82          .           .          60
             .           .           .
             .           .           .
 92        C60........................
             V
             V
 95        S60
             V
             V
104        R60
             V
             V
110       RR60
             .
             .
116          .          80
             .           .
             .           .
126        C80............
             V
             V
129        R80
             .
             .
135          .         100
             .           .
             .           .
145       C100............
             V
             V
148       R100
             .
             .
154          .         120
             .           .
             .           .
164       C120............
             V
             V
167       R120
             .
             .
173          .         140
             .           .
             .           .
183          .           .        150
             .           .          V
             .           .          V
193          .           .       R150
             .           .          V
             .           .          V
199          .           .       R152
             .           .          .
             .           .          .
205          .           .          .        160
             .           .          .          .
             .           .          .          .
215          .           .          .          .        180
             .           .          .          .          .
             .           .          .          .          .
225       C180.............................................
             .
             .
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228          .        210
             .          V
             .          V
238          .       R210
             .          .
             .          .
244          .          .        240
             .          .          .
             .          .          .
254          .       C240............
             .          V
             .          V
257          .       S240
             .          V
             .          V
264          .       R240
             .          .
             .          .
271          .          .        220
             .          .          .
             .          .          .
281          .       C220............
             .          V
             .          V
284          .       S220
             .          V
             .          V
291          .       R220
             .          .
             .          .
298          .          .        190
             .          .          V
             .          .          V
308          .          .       R190
             .          .          V
             .          .          V
314          .          .       R192
             .          .          .
             .          .          .
320          .          .          .        200
             .          .          .          .
             .          .          .          .
330          .       C200......................
             .          V
             .          V
333          .       S200
             .          V
             .          V
340          .       R200
             .          V
             .          V
346          .      SS200
             .          V
             .          V
353          .      RR200
             .          .
             .          .
359       CC180............
             V
             V
362       S180
             V
             V
371       R180
             .
             .
380          .       260
             .          .
             .          .
390       C260............
             V
             V
393       R260
             .
             .
402          .       280
             .          .
             .          .
412       C280............
             V
             V
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415        R280
              .
              .
424           .         300
              .           .
              .           .
434        C300............
              V
              V
437        R300
              .
              .
446           .        305A
              .           .
              .           .
456        C305............
              V
              V
459        R305
              .
              .
467           .       320B1
              .           .
              .           .
482           .           .-------> B320B1
477           .      D320B1
              .           .
              .           .
487           .           .          .<-------  B320B1
485           .           .     T320B1
              .           .          V
              .           .          V
488           .           .     S320B1
              .           .          .
              .           .          .
494      C320B1......................
              .
              .
497           .         350
              .           .
              .           .
510           .           .-------> SF350
507           .        D350
              .           V
              .           V
513           .        R350
              .           .
              .           .
520           .           .        310
              .           .          .
              .           .          .
530           .        C310............
              .           V
              .           V
533           .        R310
              .           .
              .           .
540           .           .       305B
              .           .          V
              .           .          V
550           .           .      R305B
              .           .          .
              .           .          .
557           .           .          .      320B2
              .           .          .          .
              .           .          .          .
572           .           .          .          .-------> B320B2
567           .           .          .     D320B2
              .           .          .          .
              .           .          .          .
577           .           .          .          .          .<-------  B320B2
575           .           .          .          .     T320B2
              .           .          .          .          V
              .           .          .          .          V
578           .           .          .          .     S320B2
              .           .          .          .          .
              .           .          .          .          .
584           .      C320B2...................................
              .           V
              .           V
587           .      R320B2
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                .           .
                .           .
594             .           .        340B
                .           .           .
                .           .           .
609             .           .           .-------> BS340B
604             .           .       D340B
                .           .           .
                .           .           .
614             .           .           .          .<-------  BS340B
612             .           .           .      RT340B
                .           .           .          V
                .           .           .          V
615             .           .           .      S340B
                .           .           .           .
                .           .           .           .
621             .      C340B.......................
                .           .
                .           .
626             .           .-------> BS340
624             .     DD340B
                .           .
                .           .
631             .           .           .<-------  BS340
629             .           .       RT340
                .           .           V
                .           .           V
632             .           .      SS340B
                .           .           .
                .           .           .
638             .     CD340B............
                .           .
                .           .
643             .           .           .<-------  SF350
641             .           .       RT350
                .           .           V
                .           .           V
644             .           .       RR350
                .           .           .
                .           .           .
651             .           .           .        355
                .           .           .           .
                .           .           .           .
661             .           .       C355............
                .           .           .
                .           .           .
667             .           .           .-------> BS355
664             .           .       D355
                .           .           .
                .           .           .
672             .           .           .          .<-------  BS355
670             .           .           .      RT355
                .           .           .          V
                .           .           .          V
673             .           .           .      S355
                .           .           .           .
                .           .           .           .
679             .           .      CC355............
                .           .           V
                .           .           V
682             .           .       R355
                .           .           .
                .           .           .
689             .     CC340B............
                .          V
                .          V
692             .      R340B
                .           .
                .           .
699             .           .      340A2
                .           .           .
                .           .           .
709             .     C340A2............
                .          V
                .          V
712             .     R340A2
                .           .
                .           .
719       CC320B............
               V
               V
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722        R320B
               .
               .
731            .        320A
               .           .
               .           .
746            .           .-------> BS320A
741            .       D320A
               .           .
               .           .
751            .           .          .<-------- BS320A
749            .           .      RT320A
               .           .          V
               .           .          V
752            .           .      S320A
               .           .          .
               .           .          .
758        C320.......................
               .
               .
761            .       340A1
               .           .
               .           .
776            .           .-------> BS340A
771            .      D340A1
               .           .
               .           .
781            .           .          .<-------- BS340A
779            .           .      RT340A
               .           .          V
               .           .          V
782            .           .      S340A1
               .           .          .
               .           .          .
788            .      C340A1............
               .           .
               .           .
791        C340............
               .
               .
794            .         360
               .           .
               .           .
808            .           .-------> BS360
804            .        D360
               .           .
               .           .
813            .           .          .<-------- BS360
811            .           .      RT360
               .           .          V
               .           .          V
814            .           .      S360
               .           .          .
               .           .          .
820        C360.......................
               .
               .
823            .        380A
               .           .
               .           .
833       C380A............
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               .
836            .        400A
               .           .
               .           .
846       C400A............
               .
               .
849            .       380B1
               .           .
               .           .
863            .           .-------> BS380B
859            .      D380B1
               .           .
               .           .
868            .           .          .<-------- BS380B
866            .           .      RT380B
               .           .          V
               .           .          V
869            .           .      S380B1
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                .           .           .
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  875           .     C380B1............
                .          V
                .          V
  878           .     R380B1
                .           .
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  885           .           .      400B1
                .           .           .
                .           .           .
  899           .           .           .-------> BS400B
  895           .           .     D400B1
                .           .           .
                .           .           .
  904           .           .           .          .<-------  BS400B
  902           .           .           .     RT400B
                .           .           .          V
                .           .           .          V
  905           .           .           .     S400B1
                .           .           .           .
                .           .           .           .
  911           .           .     C400B1............
                .           .           .
                .           .           .
  914     CC400B........................
                .
                .
  917           .      420A2
                .           .
                .           .
  927     C400A2............
                .
                .
  930           .      400B3
                .          V
                .          V
  940           .     R400B3
                .           .
                .           .
  947           .           .      380B3
                .           .           .
                .           .           .
  957           .     C380B3............
                .          V
                .          V
  960           .     R380B3
                .           .
                .           .
  967           .           .      380B2
                .           .           .
                .           .           .
  977           .     C380B2............
                .          V
                .          V
  980           .     R380B2
                .           .
                .           .
  987           .           .      400B2
                .           .           .
                .           .           .
  997           .     C400B2............
                .          V
                .          V
 1000           .     R400B2
                .           .
                .           .
 1007           .           .      420A1
                .           .           .
                .           .           .
 1021           .           .           .-------> BS420A
 1017           .           .     D420A1
                .           .           .
                .           .           .
 1026           .           .           .          .<-------  BS420A
 1024           .           .           .     RT420A
                .           .           .          V
                .           .           .          V
 1027           .           .           .     S420A1
                .           .           .           .
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1033        C420A.................................
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1036            .         370
                .           .
                .           .
1046            .           .         395
                .           .           .
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1056            .        C370............
                .           .
                .           .
1062            .           .-------->   BS370
1059            .        D370
                .           .
                .           .
1067            .           .           .<-------   BS370
1065            .           .       RT370
                .           .           V
                .           .           V
1068            .           .        S370
                .           .           .
                .           .           .
1074            .       CC370............
                .           V
                .           V
1077            .        R370
                .           .
                .           .
1084            .           .         385
                .           .           .
                .           .           .
1094            .           .           .        415B
                .           .           .           .
                .           .           .           .
1104            .           .       C415B............
                .           .           .
                .           .           .
1110            .           .           .-------->  BS415B
1107            .           .       D415B
                .           .           .
                .           .           .
1115            .           .           .           .<-------  BS415B
1113            .           .           .      RT415B
                .           .           .           V
                .           .           .           V
1116            .           .           .      S415B
                .           .           .           .
                .           .           .           .
1122            .           .      CC415B............
                .           .           V
                .           .           V
1125            .           .       R415B
                .           .           .
                .           .           .
1132            .           .           .         390
                .           .           .           .
                .           .           .           .
1146            .           .           .           .-------->   BS390
1142            .           .           .        D390
                .           .           .           .
                .           .           .           .
1151            .           .           .           .           .<-------   BS390
1149            .           .           .           .       RT390
                .           .           .           .           V
                .           .           .           .           V
1152            .           .           .           .        S390
                .           .           .           .           .
                .           .           .           .           .
1158            .       C390.................................
                .           V
                .           V
1161            .       R390
                .           .
                .           .
1168            .           .       420B
                .           .           .
                .           .           .
1178            .       C420B............
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1181          .          .        440
              .          .         V
              .          .         V
1191          .          .        R70
              .          .          .
              .          .          .
1197          .          .          .          441
              .          .          .            .
              .          .          .            .
1207          .          .       C108............
              .          .          .
              .          .          .
1212          .          .          .-------->   SPLIT
1210          .          .         D4
              .          .         V
              .          .         V
1215          .          .       R108
              .          .          .
              .          .          .
1221          .          .          .          442
              .          .          .            .
              .          .          .            .
1231          .          .        C67............
              .          .          .
              .          .          .
1237          .          .          .-------->  BASIN4
1234          .          .         D6
              .          .          .
              .          .          .
1242          .          .          .            .<-------  BASIN4
1240          .          .          .        RTD6
              .          .          .           V
              .          .          .           V
1243          .          .          .         SD6
              .          .          .            .
              .          .          .            .
1249          .          .       CD6............
              .          .          .
              .          .          .
1252          .          .          .         443
              .          .          .            .
              .          .          .            .
1265          .          .          .            .-------->   WSH66
1262          .          .          .         D66
              .          .          .           V
              .          .          .           V
1268          .          .          .        R113
              .          .          .            .
              .          .          .            .
1274          .          .       C114............
              .          .          .
              .          .          .
1277          .          .          .         444
              .          .          .           V
              .          .          .           V
1287          .          .          .         R58
              .          .          .            .
              .          .          .            .
1293          .          .          .            .         445
              .          .          .            .           .
              .          .          .            .           .
1303          .          .          .        C107............
              .          .          .           V
              .          .          .           V
1306          .          .          .        R107
              .          .          .            .
              .          .          .            .
1314          .          .          .            .           .<-------   SPLIT
1312          .          .          .            .        RTB2
              .          .          .            .           V
              .          .          .            .           V
1315          .          .          .            .      RSPLIT
              .          .          .            .           .
              .          .          .            .           .
1321          .          .          .            .           .         446
              .          .          .            .           .           .
              .          .          .            .           .           .
1331          .          .          .        C109........................
              .          .          .            .
              .          .          .            .
1337          .          .          .            .-------->  WSH404
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1334                D5
                     V
                     V
1340            R109
                     .
                     .
1346                 .          447
                     .            .
                     .            .
1358                 .            .          .<-------  WSH404
1356                 .            .      RT404
                     .            .          V
                     .            .          V
1359                 .            .       R404
                     .            .          .
                     .            .          .
1365            C110.......................
                     V
                     V
1368            R110
                     .
                     .
1374        C115............
                 V
                 V
1377        R115
                 .
                 .
1383                448
                     .
                     .
1393                 .          449
                     .            .
                     .            .
1403        C6364............
                     V
                     V
1406        R6364
                     .
                     .
1412                 .          450
                     .            .
                     .            .
1422                 .            .          451
                     .            .            .
                     .            .            .
1432                 .        C451............
                     .            .
                     .            .
1437                 .            .          .<-------  WSH66
1435                 .            .      RT66
                     .            .            .
                     .            .            .
1438                 .            .            .          452
                     .            .            .            .
                     .            .            .            .
1448                 .            .      C6465............
                     .            .          V
                     .            .          V
1451                 .            .      R6566
                     .            .            .
                     .            .            .
1457            C116.......................
                     V
                     V
1460            BASIN5
                     V
                     V
1467            R116
                     .
                     .
1473                 .          453
                     .            .
                     .            .
1483        C117............
                     .
                     .
1486        C118............
                 V
                 V
1489        R118
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                .          .          .
                .          .          .
1498            .          .          .-------> BASIN6
1495            .          .        D7
                .          .          .
                .          .          .
1503            .          .          .          .<------- BASIN6
1501            .          .          .       RTD7
                .          .          .          V
                .          .          .          V
1504            .          .          .        SD7
                .          .          .          .
                .          .          .          .
1510            .          .       CD7............
                .          .          .
                .          .          .
1513            .          .          .        454
                .          .          .          .
                .          .          .          .
1523            .          .      C454............
                .          .         V
                .          .         V
1526            .          .      R454
                .          .          .
                .          .          .
1533            .          .          .       415A
                .          .          .          .
                .          .          .          .
1543            .          .     C415A............
                .          .          .
                .          .          .
1546            .     CC415A............
                .          .
                .          .
1552            .          .-------> BS420B
1549            .      D420B
                .          .
                .          .
1557            .          .          .<------- BS420B
1555            .          .    RT420B
                .          .         V
                .          .         V
1558            .          .     S420B
                .          .          .
                .          .          .
1564            .     CC420B............
                .         V
                .         V
1567            .      R415A
                .          .
                .          .
1574            .          .       455
                .          .          .
                .          .          .
1589            .          .          .-------> BS455
1584            .          .     D455
                .          .          .
                .          .          .
1594            .          .          .          .<------- BS455
1592            .          .          .     RT455
                .          .          .         V
                .          .          .         V
1595            .          .          .      S455
                .          .          .          .
                .          .          .          .
1601            .          .     C455............
                .          .          .
                .          .          .
1604       CC455........................
               V
               V
1607        S440
               V
               V
1616        R455
               .
               .
1622            .       480
                .          .
                .          .
1637            .          .-------> BS480
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1632          .        D480
              .           .
              .           .
1642          .           .           .<-------   BS480
1640          .           .       RT480
              .           .           V
              .           .           V
1643          .           .        S480
              .           .           .
              .           .           .
1649          .        C480............
              .           .
              .           .
1652       CC480............
              V
              V
1655       R480
              .
              .
1661          .         456
              .           .
              .           .
1674          .           .-------> BASIN1
1671          .          D1
              .           .
              .           .
1680          .           .------->    WA30
1677          .         CD2
              .           V
              .           V
1683          .        R456
              .           .
              .           .
1689          .           .         457
              .           .           .
              .           .           .
1699          .        C101............
              .           .
              .           .
1705          .           .-------> BASIN2
1702          .          D3
              .           .
              .           .
1710          .           .           .<-------  BASIN2
1708          .           .       RTD3
              .           .          V
              .           .          V
1711          .           .        SD3
              .           .           .
              .           .           .
1717          .         CD3............
              .           V
              .           V
1720          .        R101
              .           .
              .           .
1726          .           .         458
              .           .           .
              .           .           .
1736          .        C103............
              .           V
              .           V
1739          .        R103
              .           .
              .           .
1747          .           .           .<-------    WA30
1745          .           .       RT30
              .           .          V
              .           .          V
1748          .           .        R30
              .           .           .
              .           .           .
1756          .           .           .           .<-------  BASIN1
1754          .           .           .       RTB1
              .           .           .          V
              .           .           .          V
1757          .           .           .         B1
              .           .           .          V
              .           .           .          V
1764          .           .           .        RB1
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 1770            .            .        CDIV............
                 .            .           .
                 .            .           .
 1773            .            .           .          459
                 .            .           .            .
                 .            .           .            .
 1783            .            .         C52............
                 .            .           V
                 .            .           V
 1786            .            .         R52
                 .            .           .
                 .            .           .
 1792            .            .           .          460
                 .            .           .            .
                 .            .           .            .
 1802            .            .        C102............
                 .            .           V
                 .            .           V
 1805            .            .      BASIN3
                 .            .           V
                 .            .           V
 1812            .            .          R3
                 .            .           .
                 .            .           .
 1818            .            .           .          461
                 .            .           .            .
                 .            .           .            .
 1828            .            .        C104............
                 .            .           .
                 .            .           .
 1831            .         C106............
                 .            V
                 .            V
 1834            .         R106
                 .            .
                 .            .
 1840            .            .         462
                 .            .           .
                 .            .           .
 1850            .          C56............
                 .            .
                 .            .
 1853         C462............
                 V
                 V
 1856         R462
                 V
                 V
 1862        RR462
                 .
                 .
 1868            .          500
                 .            .
                 .            .
 1878         C500............
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```
(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************
 *                                       *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
 *              JUN   1998               *
 *           VERSION 4.1                 *
 *                                       *
 *  RUN DATE   20SEP02  TIME  07:41:07   *
 *                                       *
 *****************************************
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```
*****************************************
*                                       *
*    U.S. ARMY CORPS OF ENGINEERS       *
*    HYDROLOGIC ENGINEERING CENTER      *
*          609 SECOND STREET            *
*       DAVIS, CALIFORNIA 95616         *
*           (916) 756-1104              *
*                                       *
*****************************************
```

Existing Condition Preferred Model with Spook Hill FRS Storage Routing
Return Period = 100 Years, Rainfall Duration = 24 Hours
Original File Name: RED2.DAT - Preferred Altenative
Modified File Name: REC_EC24.DAT, April 2002, Wood/Patel, SZ
METHODOLOGY
THE US CORPS OF ENGINEERS FLOW HYDROGRAPH PACKAGE HEC-1 DATED JUNE 1998 V4.1
SCS TYPE II RAINFALL DISTRIBUTION
CLARK UNIT HYDROGRAPH
GREEN AND AMPT INFILTRATION EQUATION USED FOR CALCULATING LOSSES

```
                          NORMAL DEPTH STORAGE CHANNEL ROUTING

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

    IT          HYDROGRAPH TIME DATA
                      NMIN           2  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1    0  STARTING DATE
                     ITIME        0000  STARTING TIME
                        NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      3    0  ENDING DATE
                    NDTIME        1838  ENDING TIME
                     ICENT          19  CENTURY MARK

                  COMPUTATION INTERVAL     .03 HOURS
                       TOTAL TIME BASE   66.63 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

 14 JD          INDEX STORM NO. 1
                      STRM        3.81  PRECIPITATION DEPTH
                      TRDA         .01  TRANSPOSITION DRAINAGE AREA

 15 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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25 JD         INDEX STORM NO. 2
                STRM         3.79  PRECIPITATION DEPTH
                TRDA         1.00  TRANSPOSITION DRAINAGE AREA

 0 PI           PRECIPITATION PATTERN
            .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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26 JD        INDEX STORM NO. 3
                  STRM        3.68  PRECIPITATION DEPTH
                  TRDA        5.80  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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 27 JD        INDEX STORM NO. 4
                STRM        3.57  PRECIPITATION DEPTH
                TRDA       10.66  TRANSPOSITION DRAINAGE AREA

  0 PI          PRECIPITATION PATTERN
          .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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28 JD         INDEX STORM NO. 5
                 STRM         3.54  PRECIPITATION DEPTH
                 TRDA        13.70  TRANSPOSITION DRAINAGE AREA

0 PI            PRECIPITATION PATTERN
              .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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 29 JD          INDEX STORM NO. 6
                       STRM        3.47   PRECIPITATION DEPTH
                       TRDA       20.00   TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
                    .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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30 JD          INDEX STORM NO. 7
                  STRM       3.32  PRECIPITATION DEPTH
                  TRDA      50.00  TRANSPOSITION DRAINAGE AREA

 0 PI            PRECIPITATION PATTERN
          .00     .00     .00     .00     .00     .00     .00     .00     .00     .00
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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	10	968.	12.27	117.	32.	12.	.69		
+	ROUTED TO	R10	899.	12.40	117.	32.	12.	.69		
+	ROUTED TO	R12	840.	12.63	117.	32.	12.	.69		
+	HYDROGRAPH AT	20	1081.	12.43	142.	36.	13.	1.17		
+	2 COMBINED AT	C20	1709.	12.53	255.	67.	24.	1.86		
+	ROUTED TO	R20	1708.	12.57	255.	67.	24.	1.86		
+	HYDROGRAPH AT	40	2683.	12.30	264.	69.	25.	2.23		
+	HYDROGRAPH AT	60	1630.	12.40	240.	64.	23.	1.75		
+	3 COMBINED AT	C60	5444.	12.37	736.	195.	70.	5.84		
+	ROUTED TO	S60	130.	14.23	116.	102.	52.	5.84		
+	ROUTED TO	R60	130.	14.27	116.	102.	52.	5.84		
+	ROUTED TO	RR60	130.	14.37	116.	102.	52.	5.84		
+	HYDROGRAPH AT	80	1986.	12.27	191.	49.	18.	1.49		
+	2 COMBINED AT	C80	1986.	12.27	298.	150.	72.	1.49		
+	ROUTED TO	R80	1963.	12.27	298.	150.	72.	1.49		
+	HYDROGRAPH AT	100	427.	12.20	61.	16.	6.	.49		
+	2 COMBINED AT	C100	2360.	12.27	353.	163.	77.	1.98		
+	ROUTED TO	R100	2351.	12.30	353.	163.	77.	1.98		
+	HYDROGRAPH AT	120	3339.	12.27	339.	92.	33.	2.20		
+	2 COMBINED AT	C120	5595.	12.27	670.	244.	108.	4.18		
	ROUTED TO									

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+                    R120     5521.  12.30      670.     244.     108.     4.18
     HYDROGRAPH AT
+                    140       665.  12.13       67.      18.       6.      .60
     HYDROGRAPH AT
+                    150       593.  12.17       51.      14.       5.      .41
     ROUTED TO
+                    R150      567.  12.23       51.      14.       5.      .41
     ROUTED TO
+                    R152      513.  12.33       51.      14.       5.      .41
     HYDROGRAPH AT
+                    160       224.  12.40       36.       9.       3.      .37
     HYDROGRAPH AT
+                    180       851.  12.37       98.      25.       9.     1.01
     5 COMBINED AT
+                    C180     7289.  12.30      891.     300.     128.     6.56
     HYDROGRAPH AT
+                    210      1322.  12.17      111.      29.      10.      .79
     ROUTED TO
+                    R210     1246.  12.23      111.      29.      10.      .79
     HYDROGRAPH AT
+                    240      1513.  12.30      167.      42.      15.     1.41
     2 COMBINED AT
+                    C240     2684.  12.27      273.      70.      25.     2.20
     ROUTED TO
+                    S240      799.  12.70      226.      59.      21.     2.20
     ROUTED TO
+                    R240      798.  12.77      225.      59.      21.     2.20
     HYDROGRAPH AT
+                    220       676.  12.20       68.      18.       6.      .47
     2 COMBINED AT
+                    C220      962.  12.60      288.      75.      27.     2.67
     ROUTED TO
+                    S220      900.  12.80      280.      73.      26.     2.67
     ROUTED TO
+                    R220      897.  12.83      280.      73.      26.     2.67
     HYDROGRAPH AT
+                    190      1471.  12.17      123.      33.      12.      .92
     ROUTED TO
+                    R190     1415.  12.23      123.      33.      12.      .92
     ROUTED TO
+                    R192     1359.  12.30      123.      33.      12.      .92
     HYDROGRAPH AT
+                    200       831.  12.17       72.      20.       7.      .53
     3 COMBINED AT
+                    C200     2254.  12.30      459.     122.      44.     4.12
     ROUTED TO
+                    S200     2135.  12.37      454.     119.      43.     4.12
     ROUTED TO
+                    R200     2127.  12.37      454.     119.      43.     4.12
     ROUTED TO
+                    SS200    1365.  12.73      333.      88.      32.     4.12
     ROUTED TO
+                    RR200    1330.  12.83      330.      88.      32.     4.12
     2 COMBINED AT
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+                    CC180     7289.   12.30      1204.      385.      159.     10.68
     ROUTED TO
+                     S180      124.   21.53       124.      124.       88.     10.68
     ROUTED TO
+                     R180      124.   21.60       124.      124.       88.     10.68
     HYDROGRAPH AT
+                      260      418.   12.10        43.       12.        4.       .26
     2 COMBINED AT
+                     C260      420.   12.10       144.      132.      102.       .26
     ROUTED TO
+                     R260      406.   12.20       144.      132.      101.       .26
     HYDROGRAPH AT
+                      280      527.   12.10        46.       13.        5.       .32
     2 COMBINED AT
+                     C280      882.   12.13       185.      142.      106.       .58
     ROUTED TO
+                     R280      860.   12.20       184.      142.      106.       .58
     HYDROGRAPH AT
+                      300      415.   12.10        34.       10.        3.       .29
     2 COMBINED AT
+                     C300     1215.   12.17       216.      150.      109.       .87
     ROUTED TO
+                     R300     1170.   12.23       215.      150.      109.       .87
     HYDROGRAPH AT
+                     305A      394.   12.13        41.       11.        4.       .32
     2 COMBINED AT
+                     C305     1513.   12.20       252.      160.      112.      1.19
     ROUTED TO
+                     R305     1498.   12.23       251.      160.      112.      1.19
     HYDROGRAPH AT
+                    320B1      630.   12.13        61.       17.        6.       .45
     DIVERSION TO
+                   B320B1        5.    9.83         3.        1.        0.       .45
     HYDROGRAPH AT
+                   D320B1      630.   12.13        61.       16.        6.       .45
     HYDROGRAPH AT
+                   T320B1        5.    9.83         3.        1.        0.       .45
     ROUTED TO
+                   S320B1        1.    9.90         1.        1.        0.       .45
     3 COMBINED AT
+                   C320B1     1993.   12.20       306.      174.      117.      1.64
     HYDROGRAPH AT
+                      350     1315.   12.20       112.       29.       11.      1.00
     DIVERSION TO
+                    SF350      658.   12.20        56.       15.        5.      1.00
     HYDROGRAPH AT
+                     D350      658.   12.20        56.       15.        5.      1.00
     ROUTED TO
+                     R350      593.   12.40        56.       15.        5.      1.00
     HYDROGRAPH AT
+                      310      381.   12.33        50.       13.        5.       .54
     2 COMBINED AT
                     C310      950.   12.37       106.       27.       10.      1.04
     ROUTED TO
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+                    R310      865.  12.67      106.      27.      10.      1.04
     HYDROGRAPH AT
+                    305B      333.  12.33       40.      10.       4.       .39
     ROUTED TO
+                   R305B      317.  12.43       40.      10.       4.       .39
     HYDROGRAPH AT
+                   320B2      247.  12.13       26.       7.       2.       .22
     DIVERSION TO
+                  B320B2      199.  12.03        6.       2.       1.       .22
     HYDROGRAPH AT
+                  D320B2      247.  12.13       20.       5.       2.       .22
     HYDROGRAPH AT
+                  T320B2      199.  12.03        6.       2.       1.       .22
     ROUTED TO
+                  S320B2        1.  12.07        1.       1.       1.       .22
     4 COMBINED AT
+                  C320B2     1147.  12.63      165.      42.      16.      1.65
     ROUTED TO
+                  R320B2     1141.  12.67      165.      42.      16.      1.65
     HYDROGRAPH AT
+                   340B      475.  12.07       35.      10.       4.       .29
     DIVERSION TO
+                  BS340B      475.  12.07       30.       8.       3.       .29
     HYDROGRAPH AT
+                   D340B      117.  12.33        7.       2.       1.       .29
     HYDROGRAPH AT
+                  RT340B      475.  12.07       30.       8.       3.       .29
     ROUTED TO
+                   S340B        5.  12.33        5.       4.       3.       .29
     3 COMBINED AT
+                   C340B     1157.  12.67      174.      48.      19.      1.94
     DIVERSION TO
+                   BS340      957.  12.67      106.      26.      10.      1.94
     HYDROGRAPH AT
+                  DD340B      200.  12.13       69.      21.       9.      1.94
     HYDROGRAPH AT
+                   RT340      957.  12.67      106.      26.      10.      1.94
     ROUTED TO
+                  SS340B       45.  13.40       38.      23.      10.      1.94
     2 COMBINED AT
+                  CD340B      245.  13.40      104.      44.      19.      1.94
     HYDROGRAPH AT
+                   RT350      658.  12.20       56.      15.       5.      1.00
     ROUTED TO
+                   RR350      570.  12.43       56.      15.       5.      1.00
     HYDROGRAPH AT
+                    355      546.  12.33       75.      19.       7.       .68
     2 COMBINED AT
+                    C355     1061.  12.40      130.      34.      12.      1.16
     DIVERSION TO
+                   BS355      611.  12.40       40.      10.       4.      1.16
     HYDROGRAPH AT
+                    D355      450.  12.13       90.      24.       9.      1.16
     HYDROGRAPH AT
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+                    RT355      611.  12.40      40.      10.      4.      1.16
     ROUTED TO
+                     S355       40.  12.77      27.      10.      4.      1.16
     2 COMBINED AT
+                    CC355      490.  12.77     115.      34.     12.      1.16
     ROUTED TO
+                     R355      478.  12.77     115.      34.     12.      1.16
     2 COMBINED AT
+                   CC340B      704.  12.77     215.      75.     30.      3.10
     ROUTED TO
+                    R340B      701.  12.80     214.      75.     30.      3.10
     HYDROGRAPH AT
+                    340A2       72.  12.03       8.       3.      1.       .04
     2 COMBINED AT
+                   C340A2      706.  12.80     220.      77.     31.      3.13
     ROUTED TO
+                   R340A2      700.  12.93     220.      77.     31.      3.13
     2 COMBINED AT
+                   CC320B     2165.  12.23     515.     248.    145.      4.77
     ROUTED TO
+                    R320B     2159.  12.23     515.     248.    145.      4.77
     HYDROGRAPH AT
+                     320A      317.  12.13      40.      12.      4.       .27
     DIVERSION TO
+                   BS320A      224.  12.00      12.       4.      1.       .27
     HYDROGRAPH AT
+                    D320A      317.  12.13      32.       9.      3.       .27
     HYDROGRAPH AT
+                   RT320A      224.  12.00      12.       4.      1.       .27
     ROUTED TO
+                    S320A        2.  12.07       2.       2.      1.       .27
     3 COMBINED AT
+                     C320     2434.  12.23     547.     257.    149.      5.04
     HYDROGRAPH AT
+                    340A1     1221.  12.17     147.      43.     16.      1.09
     DIVERSION TO
+                   BS340A     1221.  12.17     118.      32.     11.      1.09
     HYDROGRAPH AT
+                   D340A1      458.  12.57      41.      12.      4.      1.09
     HYDROGRAPH AT
+                   RT340A     1221.  12.17     118.      32.     11.      1.09
     ROUTED TO
+                   S340A1       20.  12.60      18.      15.     10.      1.09
     2 COMBINED AT
+                   C340A1      478.  12.57      59.      27.     14.      1.09
     2 COMBINED AT
+                     C340     2434.  12.23     594.     282.    161.      6.13
     HYDROGRAPH AT
+                      360      773.  12.23     116.      34.     12.       .88
     DIVERSION TO
+                    BS360      773.  12.23      66.      18.      6.       .88
     HYDROGRAPH AT
+                     D360      614.  12.43      59.      16.      6.       .88
     HYDROGRAPH AT
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+                    RT360      773.  12.23      66.      18.      6.      .88
     ROUTED TO
+                     S360       11.  12.43      10.       9.      6.      .88
     3 COMBINED AT
+                     C360     2434.  12.23     655.     304.    172.     7.01
     HYDROGRAPH AT
+                     380A      322.  12.27      33.      10.      4.      .26
     2 COMBINED AT
+                    C380A     2707.  12.23     676.     309.    173.     7.28
     HYDROGRAPH AT
+                     400A       56.  12.20       4.       1.      0.      .05
     2 COMBINED AT
+                    C400A     2755.  12.23     679.     310.    173.     7.32
     HYDROGRAPH AT
+                    380B1      329.  12.20      47.      14.      5.      .37
     DIVERSION TO
+                   BS380B      196.  12.00      10.       3.      1.      .37
     HYDROGRAPH AT
+                   D380B1      329.  12.20      41.      11.      4.      .37
     HYDROGRAPH AT
+                   RT380B      196.  12.00      10.       3.      1.      .37
     ROUTED TO
+                   S380B1        2.  12.07       2.       1.      1.      .37
     2 COMBINED AT
+                   C380B1      331.  12.20      42.      12.      5.      .37
     ROUTED TO
+                   R380B1      320.  12.33      42.      12.      5.      .37
     HYDROGRAPH AT
+                    400B1      440.  12.13      45.      13.      5.      .38
     DIVERSION TO
+                   BS400B      239.  11.97      10.       3.      1.      .38
     HYDROGRAPH AT
+                   D400B1      440.  12.13      37.      10.      3.      .38
     HYDROGRAPH AT
+                   RT400B      239.  11.97      10.       3.      1.      .38
     ROUTED TO
+                   S400B1        2.  12.03       2.       2.      1.      .38
     2 COMBINED AT
+                   C400B1      442.  12.13      39.      11.      5.      .38
     3 COMBINED AT
+                   CC400B     3377.  12.23     747.     330.    181.    8.08
     HYDROGRAPH AT
+                    420A2       31.  12.07       2.       1.      0.      .02
     2 COMBINED AT
+                   C400A2     3391.  12.23     749.     330.    181.    8.10
     HYDROGRAPH AT
+                    400B3       39.  12.03       3.       1.      0.      .02
     ROUTED TO
+                   R400B3       37.  12.10       3.       1.      0.      .02
     HYDROGRAPH AT
+                    380B3      171.  12.10      16.       5.      2.      .12
     2 COMBINED AT
+                   C380B3      208.  12.10      19.       5.      2.      .15
     ROUTED TO
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+                    R380B3     201.  12.17      19.      5.      2.     .15
     HYDROGRAPH AT
+                     380B2     140.  12.07      12.      3.      1.     .10
     2 COMBINED AT
+                    C380B2     324.  12.10      30.      9.      3.     .24
     ROUTED TO
+                    R380B2     291.  12.37      30.      9.      3.     .24
     HYDROGRAPH AT
+                     400B2     205.  12.13      19.      5.      2.     .19
     2 COMBINED AT
+                    C400B2     424.  12.23      49.     13.      5.     .44
     ROUTED TO
+                    R400B2     422.  12.33      49.     13.      5.     .44
     HYDROGRAPH AT
+                     420A1     720.  12.13      67.     18.      7.     .57
     DIVERSION TO
+                    BS420A     432.  11.97      16.      4.      2.     .57
     HYDROGRAPH AT
+                    D420A1     720.  12.13      54.     14.      5.     .57
     HYDROGRAPH AT
+                    RT420A     432.  11.97      16.      4.      2.     .57
     ROUTED TO
+                    S420A1       3.  12.03       3.      2.      2.     .57
     4 COMBINED AT
+                     C420A    4284.  12.23     836.    354.    189.    9.10
     HYDROGRAPH AT
+                       370     817.  12.23      83.     22.      8.     .67
     HYDROGRAPH AT
+                       395     234.  12.20      26.      7.      3.     .20
     2 COMBINED AT
+                      C370    1046.  12.23     108.     29.     11.     .87
     DIVERSION TO
+                     BS370     906.  12.23      68.     17.      6.     .87
     HYDROGRAPH AT
+                      D370     140.  11.87      40.     12.      4.     .87
     HYDROGRAPH AT
+                     RT370     906.  12.23      68.     17.      6.     .87
     ROUTED TO
+                      S370      15.  12.90      11.      9.      6.     .87
     2 COMBINED AT
+                     CC370     155.  12.90      49.     20.     10.     .87
     ROUTED TO
+                      R370     154.  12.90      49.     20.     10.     .87
     HYDROGRAPH AT
+                       385     613.  12.23      74.     20.      7.     .53
     HYDROGRAPH AT
+                      415B     443.  12.10      46.     13.      5.     .33
     2 COMBINED AT
+                     C415B     973.  12.20     120.     33.     12.     .86
     DIVERSION TO
+                    BS415B     823.  12.20      71.     18.      6.     .86
     HYDROGRAPH AT
+                     D415B     150.  11.80      49.     16.      6.     .86
     HYDROGRAPH AT
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+                    RT415B     823.  12.20      71.      18.      6.      .86
      ROUTED TO
+                     S415B      25.  12.90      13.      10.      6.      .86
      2 COMBINED AT
+                    CC415B     175.  12.90      59.      23.     12.      .86
      ROUTED TO
+                     R415B     175.  12.93      59.      23.     12.      .86
      HYDROGRAPH AT
+                       390     486.  12.03      35.      10.      4.      .25
      DIVERSION TO
+                     BS390     103.  11.73       6.       2.      1.      .25
      HYDROGRAPH AT
+                       D390    486.  12.03      32.       8.      3.      .25
      HYDROGRAPH AT
+                     RT390     103.  11.73       6.       2.      1.      .25
      ROUTED TO
+                      S390       1.  11.80       1.       1.      1.      .25
      4 COMBINED AT
+                      C390     778.  12.03     138.      51.     26.     1.97
      ROUTED TO
+                      R390     699.  12.23     138.      51.     26.     1.97
      HYDROGRAPH AT
+                      420B     356.  12.10      34.      10.      4.      .28
      2 COMBINED AT
+                     C420B     974.  12.20     170.      60.     29.     2.25
      HYDROGRAPH AT
+                       440     184.  12.03      12.       3.      1.      .08
      ROUTED TO
+                       R70     181.  12.07      12.       3.      1.      .08
      HYDROGRAPH AT
+                       441      16.  12.03       1.       0.      0.      .01
      2 COMBINED AT
+                      C108     197.  12.07      14.       4.      1.      .09
      DIVERSION TO
+                     SPLIT      98.  12.07       7.       2.      1.      .09
      HYDROGRAPH AT
+                        D4      98.  12.07       7.       2.      1.      .09
      ROUTED TO
+                      R108      92.  12.13       7.       2.      1.      .09
      HYDROGRAPH AT
+                       442     105.  12.10       9.       2.      1.      .10
      2 COMBINED AT
+                       C67     195.  12.10      16.       4.      2.      .19
      DIVERSION TO
+                     BASIN4     121.  12.10       6.       2.      1.      .19
      HYDROGRAPH AT
+                        D6      74.  12.10      10.       3.      1.      .19
      HYDROGRAPH AT
+                      RTD6     121.  12.10       6.       2.      1.      .19
      ROUTED TO
+                       SD6       1.  12.47       1.       1.      0.      .19
      2 COMBINED AT
+                       CD6      74.  12.10      10.       3.      1.      .19
      HYDROGRAPH AT
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+                    443      151.  12.07      15.      4.      1.      .08
     DIVERSION TO
+                  WSH66       78.  11.87      12.      3.      1.      .08
     HYDROGRAPH AT
+                    D66       73.  12.07       3.      1.      0.      .08
     ROUTED TO
+                   R113       71.  12.07       3.      1.      0.      .08
     2 COMBINED AT
+                   C114      144.  12.07      13.      4.      2.      .27
     HYDROGRAPH AT
+                    444       83.  12.03       5.      1.      0.      .04
     ROUTED TO
+                    R58       79.  12.07       5.      1.      0.      .04
     HYDROGRAPH AT
+                    445      307.  12.03      19.      5.      2.      .19
     2 COMBINED AT
+                   C107      382.  12.03      23.      6.      2.      .23
     ROUTED TO
+                   R107      382.  12.07      23.      6.      2.      .23
     HYDROGRAPH AT
+                   RTB2       98.  12.07       7.      2.      1.      .09
     ROUTED TO
+                 RSPLIT       98.  12.07       7.      2.      1.      .09
     HYDROGRAPH AT
+                    446       66.  12.03       6.      2.      1.      .04
     3 COMBINED AT
+                   C109      545.  12.07      36.     10.      3.      .27
     DIVERSION TO
+                 WSH404       35.  11.70       8.      2.      1.      .27
     HYDROGRAPH AT
+                     D5      510.  12.07      28.      7.      3.      .27
     ROUTED TO
+                   R109      493.  12.10      28.      7.      3.      .27
     HYDROGRAPH AT
+                    447      141.  12.07      12.      4.      1.      .09
     HYDROGRAPH AT
+                  RT404       35.  11.70       8.      2.      1.      .27
     ROUTED TO
+                   R404       35.  11.83       8.      2.      1.      .27
     3 COMBINED AT
+                   C110      666.  12.07      48.     13.      5.      .36
     ROUTED TO
+                   R110      663.  12.10      48.     13.      5.      .36
     2 COMBINED AT
+                   C115      805.  12.07      61.     17.      7.      .63
     ROUTED TO
+                   R115      799.  12.10      61.     17.      7.      .63
     HYDROGRAPH AT
+                    448       89.  12.03       6.      2.      1.      .05
     HYDROGRAPH AT
+                    449       81.  12.03       5.      1.      0.      .05
     2 COMBINED AT
+                  C6364      170.  12.03      11.      3.      1.      .09
     ROUTED TO
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+		R6364	145.	12.17	11.	3.	1.	.09
	HYDROGRAPH AT							
+		450	63.	12.20	7.	2.	1.	.07
	HYDROGRAPH AT							
+		451	18.	12.17	2.	1.	0.	.03
	2 COMBINED AT							
+		C451	80.	12.20	9.	2.	1.	.09
	HYDROGRAPH AT							
+		RT66	78.	11.87	12.	3.	1.	.08
	HYDROGRAPH AT							
+		452	63.	12.03	5.	1.	0.	.04
	2 COMBINED AT							
+		C6465	141.	12.03	17.	4.	2.	.04
	ROUTED TO							
+		R6566	137.	12.10	17.	4.	2.	.04
	3 COMBINED AT							
+		C116	357.	12.17	36.	10.	3.	.23
	ROUTED TO							
+		BASIN5	159.	12.47	36.	10.	3.	.23
	ROUTED TO							
+		R116	157.	12.53	36.	10.	3.	.23
	HYDROGRAPH AT							
+		453	63.	12.10	7.	2.	1.	.06
	2 COMBINED AT							
+		C117	177.	12.47	43.	12.	4.	.29
	2 COMBINED AT							
+		C118	892.	12.10	104.	29.	11.	.92
	ROUTED TO							
+		R118	887.	12.13	104.	29.	11.	.92
	DIVERSION TO							
+		BASIN6	248.	12.13	7.	2.	1.	.92
	HYDROGRAPH AT							
+		D7	639.	12.13	97.	27.	10.	.92
	HYDROGRAPH AT							
+		RTD7	248.	12.13	7.	2.	1.	.92
	ROUTED TO							
+		SD7	1.	12.67	1.	1.	1.	.92
	2 COMBINED AT							
+		CD7	640.	12.13	97.	28.	11.	.92
	HYDROGRAPH AT							
+		454	162.	12.13	21.	6.	2.	.18
	2 COMBINED AT							
+		C454	801.	12.13	118.	34.	13.	1.10
	ROUTED TO							
+		R454	793.	12.23	118.	34.	13.	1.10
	HYDROGRAPH AT							
+		415A	267.	12.17	32.	9.	3.	.28
	2 COMBINED AT							
+		C415A	1046.	12.20	149.	43.	16.	1.38
	2 COMBINED AT							
+		CC415A	1996.	12.20	313.	99.	44.	3.63
	DIVERSION TO							
+		BS420B	496.	12.20	16.	4.	1.	3.63
	HYDROGRAPH AT							

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+                    D420B    1500.  12.10     297.     96.     43.    3.63
     HYDROGRAPH AT
+                   RT420B     496.  12.20      16.      4.      1.    3.63
     ROUTED TO
+                    S420B      28.  12.40      13.      4.      1.    3.63
     2 COMBINED AT
+                   CC420B    1528.  12.37     309.     99.     44.    3.63
     ROUTED TO
+                    R415A    1525.  12.37     309.     99.     44.    3.63
     HYDROGRAPH AT
+                      455    1418.  12.13     150.     45.     16.    1.11
     DIVERSION TO
+                    BS455    1418.  12.13     139.     37.     13.    1.11
     HYDROGRAPH AT
+                     D455     145.  12.80      24.      8.      3.    1.11
     HYDROGRAPH AT
+                    RT455    1418.  12.13     139.     37.     13.    1.11
     ROUTED TO
+                     S455      23.  12.80      22.     18.     11.    1.11
     2 COMBINED AT
+                     C455     169.  12.80      46.     26.     14.    1.11
     3 COMBINED AT
+                    CC455    5680.  12.23    1127.    459.    238.   13.85
     ROUTED TO
+                     S440     294.  20.33     292.    266.    173.   13.85
     ROUTED TO
+                     R455     294.  21.10     292.    265.    170.   13.85
     HYDROGRAPH AT
+                      480    1102.  12.10     100.     31.     11.     .73
     DIVERSION TO
+                    BS480     487.  11.90      27.      8.      3.     .73
     HYDROGRAPH AT
+                     D480    1102.  12.10      83.     23.      8.     .73
     HYDROGRAPH AT
+                    RT480     487.  11.90      27.      8.      3.     .73
     ROUTED TO
+                     S480       5.  11.97       5.      4.      3.     .73
     2 COMBINED AT
+                     C480    1107.  12.10      88.     27.     11.     .73
     2 COMBINED AT
+                    CC480    1107.  12.10     358.    313.    205.     .73
     ROUTED TO
+                     R480     907.  12.33     358.    313.    204.     .73
     HYDROGRAPH AT
+                      456     483.  12.07      37.     10.      4.     .26
     DIVERSION TO
+                   BASIN1     193.  12.07       8.      2.      1.     .26
     HYDROGRAPH AT
+                       D1     290.  12.07      29.      8.      3.     .26
     DIVERSION TO
+                     WA30      59.  12.07      10.      3.      1.     .26
     HYDROGRAPH AT
+                      CD2     231.  12.07      19.      5.      2.     .26
     ROUTED TO
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+                    R456     218.  12.13      19.      5.      2.     .26
     HYDROGRAPH AT
+                     457     273.  12.07      21.      6.      2.     .19
     2 COMBINED AT
+                    C101     480.  12.10      40.     10.      4.     .45
     DIVERSION TO
+                  BASIN2     177.  12.10       8.      2.      1.     .45
     HYDROGRAPH AT
+                      D3     303.  12.10      32.      8.      3.     .45
     HYDROGRAPH AT
+                    RTD3     177.  12.10       8.      2.      1.     .45
     ROUTED TO
+                     SD3       1.  12.40       1.      1.      1.     .45
     2 COMBINED AT
+                     CD3     304.  12.10      33.      9.      4.     .45
     ROUTED TO
+                    R101     302.  12.10      33.      9.      4.     .45
     HYDROGRAPH AT
+                     458     366.  12.03      26.      7.      2.     .19
     2 COMBINED AT
+                    C103     655.  12.07      59.     16.      6.     .64
     ROUTED TO
+                    R103     651.  12.07      59.     16.      6.     .64
     HYDROGRAPH AT
+                    RT30      59.  12.07      10.      3.      1.     .26
     ROUTED TO
+                     R30      58.  12.10      10.      3.      1.     .26
     HYDROGRAPH AT
+                    RTB1     193.  12.07       8.      2.      1.     .26
     ROUTED TO
+                      B1      35.  12.20       8.      2.      1.     .26
     ROUTED TO
+                     RB1      35.  12.27       8.      2.      1.     .26
     2 COMBINED AT
+                    CDIV      87.  12.20      18.      5.      2.     .12
     HYDROGRAPH AT
+                     459      45.  12.03       3.      1.      0.     .03
     2 COMBINED AT
+                     C52     117.  12.10      21.      6.      2.     .15
     ROUTED TO
+                     R52     116.  12.17      21.      6.      2.     .15
     HYDROGRAPH AT
+                     460     221.  12.07      20.      6.      2.     .14
     2 COMBINED AT
+                    C102     323.  12.07      40.     12.      4.     .29
     ROUTED TO
+                  BASIN3      71.  12.63      40.     12.      4.     .29
     ROUTED TO
+                      R3      71.  12.77      40.     12.      4.     .29
     HYDROGRAPH AT
+                     461     165.  12.10      17.      5.      2.     .12
     2 COMBINED AT
+                    C104     220.  12.10      57.     17.      6.     .41
     2 COMBINED AT
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+                    C106      866.  12.07      115.      33.      12.     1.05
        ROUTED TO
+                    R106      828.  12.13      115.      33.      12.     1.05
        HYDROGRAPH AT
+                     462      557.  12.07       42.      12.       4.      .30
        2 COMBINED AT
+                     C56     1306.  12.10      156.      44.      16.     1.35
        2 COMBINED AT
+                    C462     1633.  12.30      414.     338.     215.     2.09
        ROUTED TO
+                    R462     1600.  12.33      413.     338.     215.     2.09
        ROUTED TO
+                   RR462     1563.  12.40      412.     338.     215.     2.09
        HYDROGRAPH AT
+                     500     1126.  12.27      128.      35.      12.      .93
        2 COMBINED AT
+                    C500     2472.  12.33      522.     364.     225.     3.02

*** NORMAL END OF HEC-1 ***
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TABLE 1
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin Physical Parameters

Basin ID	Area (mi^2)	Length (mi)	Kb	Slope (ft/mi)
10	0.690	2.00	0.044	165.0
20	1.167	2.50	0.040	88.0
40	2.227	3.08	0.036	189.0
60	1.751	4.19	0.038	209.6
80	1.493	2.69	0.039	229.8
100	0.488	1.94	0.045	108.0
120	2.197	3.07	0.037	239.0
140	0.598	1.61	0.044	149.0
150	0.407	1.50	0.047	314.6
160	0.365	2.10	0.047	129.0
180	1.014	2.42	0.041	140.0
190	0.918	1.91	0.042	315.0
200	0.530	1.58	0.045	305.6
210	0.792	1.84	0.043	315.0
220	0.473	1.92	0.046	315.0
240	1.408	3.50	0.039	298.6
260	0.263	0.81	0.046	68.0
280	0.319	0.77	0.048	84.0
300	0.289	0.78	0.049	103.0
310	0.538	2.70	0.045	283.5
350	0.997	2.22	0.041	315.0
355	0.676	3.00	0.044	284.0
360	0.880	2.10	0.044	124.0
370	0.672	1.90	0.044	203.5
385	0.527	2.30	0.045	303.0
390	0.248	0.70	0.050	299.4
395	0.199	1.30	0.051	219.2
440	0.080	0.40	0.039	315.0
441	0.010	0.28	0.069	315.0
442	0.100	0.83	0.055	274.2
443	0.080	0.71	0.050	315.0
444	0.040	0.33	0.034	315.0
445	0.190	0.82	0.036	315.0
446	0.040	0.46	0.061	303.9
447	0.090	0.49	0.056	221.0
448	0.045	0.36	0.042	315.0
449	0.050	0.40	0.054	315.0

TABLE 1
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin Physical Parameters

Basin ID	Area (mi^2)	Length (mi)	Kb	Slope (ft/mi)
450	0.070	0.85	0.057	210.5
451	0.025	0.57	0.063	175.0
452	0.040	0.43	0.055	315.0
453	0.060	0.58	0.058	138.0
454	0.180	1.23	0.051	163.0
455	1.111	1.70	0.041	146.0
456	0.260	0.94	0.045	315.0
457	0.190	1.01	0.045	308.8
458	0.190	0.76	0.048	299.0
459	0.030	0.35	0.052	251.6
460	0.140	0.62	0.058	194.0
461	0.120	0.83	0.052	181.0
462	0.301	0.97	0.045	297.7
480	0.731	1.21	0.042	165.0
500	0.930	2.77	0.042	286.8
305A	0.316	0.98	0.048	82.0
305B	0.386	1.70	0.047	124.0
320A	0.270	1.07	0.049	93.0
320B1	0.454	1.13	0.046	106.0
320B2	0.220	1.08	0.050	120.0
340A1	1.089	1.80	0.045	117.0
340A2	0.037	0.48	0.047	297.9
340B	0.290	0.85	0.049	238.5
380A	0.261	0.66	0.076	91.0
380B1	0.369	1.61	0.047	124.0
380B2	0.096	0.55	0.055	136.0
380B3	0.123	0.69	0.054	138.0
400A	0.048	0.28	0.094	71.0
400B1	0.385	0.93	0.057	91.0
400B2	0.194	0.93	0.051	118.0
400B3	0.024	0.26	0.064	135.0
415A	0.280	1.21	0.049	140.0
415B	0.329	1.59	0.048	315.0
420A1	0.566	1.20	0.044	108.0
420A2	0.022	0.26	0.064	96.0
420B	0.279	1.00	0.049	150.0

TABLE 2
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Green & Ampt / Clark Parameters

Basin ID	IA	DTHETA	PSIF	XKSAT	RTIMP	Tc (hr)	R coeff. (hr)
10	0.35	0.31	7.60	0.09	16	0.421	0.305
20	0.31	0.29	5.80	0.22	11	0.629	0.422
40	0.32	0.30	4.90	0.31	11	0.492	0.262
60	0.32	0.34	5.80	0.19	10	0.592	0.472
80	0.32	0.30	5.60	0.22	7	0.429	0.254
100	0.30	0.25	5.10	0.28	9	0.517	0.455
120	0.33	0.28	6.80	0.13	12	0.429	0.227
140	0.31	0.28	4.20	0.44	5	0.421	0.278
150	0.35	0.36	5.10	0.26	7	0.296	0.221
160	0.34	0.33	4.15	0.44	1	0.587	0.659
180	0.35	0.35	4.15	0.43	0	0.571	0.400
190	0.35	0.39	5.80	0.19	8	0.321	0.185
200	0.35	0.39	5.70	0.20	10	0.300	0.201
210	0.35	0.36	6.80	0.13	4	0.313	0.189
220	0.35	0.35	7.00	0.12	5	0.333	0.282
240	0.35	0.37	5.30	0.23	2	0.467	0.356
260	0.28	0.21	6.60	0.16	11	0.350	0.209
280	0.30	0.25	5.30	0.29	15	0.329	0.168
300	0.30	0.25	4.20	0.52	16	0.321	0.174
310	0.35	0.35	3.91	0.48	0	0.483	0.520
350	0.35	0.35	4.55	0.34	4	0.363	0.227
355	0.34	0.34	4.45	0.37	4	0.488	0.502
360	0.26	0.25	4.10	0.57	23	0.538	0.362
370	0.34	0.32	4.65	0.33	8	0.404	0.284
385	0.34	0.36	5.60	0.22	13	0.383	0.358
390	0.30	0.25	4.70	0.38	18	0.204	0.106
395	0.31	0.26	4.90	0.34	18	0.329	0.334
440	0.19	0.38	6.40	0.14	13	0.129	0.077
441	0.30	0.25	5.60	0.22	5	0.150	0.225
442	0.30	0.27	3.29	0.77	5	0.258	0.264
443	0.25	0.19	8.00	0.08	10	0.196	0.194
444	0.13	0.35	4.45	0.32	1	0.112	0.084
445	0.17	0.32	3.47	0.59	3	0.192	0.130
446	0.27	0.25	4.50	0.40	19	0.183	0.189
447	0.25	0.27	3.35	0.87	30	0.208	0.145
448	0.17	0.31	4.20	0.39	11	0.133	0.102
449	0.26	0.28	3.50	0.64	6	0.167	0.134
450	0.34	0.35	3.63	0.57	4	0.296	0.383
451	0.34	0.34	3.29	0.75	3	0.271	0.453
452	0.26	0.28	3.70	0.55	9	0.171	0.166
453	0.29	0.30	3.29	0.82	18	0.275	0.284
454	0.30	0.31	3.78	0.56	14	0.379	0.395
455	0.27	0.28	3.70	0.64	24	0.421	0.204

TABLE 2
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Green & Ampt / Clark Parameters

Basin ID	IA	DTHETA	PSIF	XKSAT	RTIMP	Tc (hr)	R coeff. (hr)
456	0.30	0.38	5.60	0.20	12	0.217	0.139
457	0.27	0.33	3.95	0.46	6	0.237	0.195
458	0.29	0.33	5.80	0.19	6	0.204	0.131
459	0.22	0.30	3.33	0.71	8	0.162	0.157
460	0.25	0.26	3.74	0.69	27	0.242	0.160
461	0.27	0.25	4.25	0.45	21	0.271	0.250
462	0.30	0.33	5.30	0.24	12	0.225	0.137
480	0.27	0.27	3.58	0.73	27	0.325	0.148
500	0.35	0.40	6.00	0.17	9	0.421	0.333
305A	0.34	0.32	4.60	0.35	12	0.400	0.254
305B	0.35	0.35	4.50	0.35	0	0.492	0.443
320A	0.28	0.25	4.30	0.49	25	0.404	0.301
320B1	0.30	0.26	4.80	0.31	17	0.375	0.215
320B2	0.30	0.27	4.50	0.38	9	0.375	0.314
340A1	0.25	0.25	4.15	0.56	24	0.500	0.261
340A2	0.23	0.31	5.30	0.25	55	0.158	0.174
340B	0.28	0.25	4.00	0.56	23	0.242	0.136
380A	0.17	0.25	4.10	0.71	21	0.425	0.221
380B1	0.30	0.25	4.20	0.52	16	0.471	0.414
380B2	0.30	0.25	3.95	0.58	15	0.250	0.187
380B3	0.30	0.25	4.35	0.48	16	0.279	0.220
400A	0.25	0.29	4.00	0.64	0	0.317	0.211
400B1	0.28	0.25	4.10	0.59	12	0.433	0.238
400B2	0.30	0.25	4.15	0.53	0	0.363	0.288
400B3	0.30	0.25	4.50	0.43	0	0.183	0.161
415A	0.30	0.26	3.63	0.71	15	0.400	0.322
415B	0.32	0.31	5.30	0.26	19	0.308	0.274
420A1	0.30	0.27	4.25	0.48	17	0.387	0.207
420A2	0.35	0.35	4.15	0.43	0	0.208	0.194
420B	0.30	0.25	3.91	0.59	15	0.333	0.226

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
10	63	266.68	60.4	0.14	25
	98	2.30	0.5	0.37	0
	44	169.50	38.4	0.03	0
	13	3.00	0.7	0.01	0
20	3	26.35	3.5	0.58	0
	13	9.20	1.2	0.01	0
	44	224.12	30.0	0.03	0
	61	49.01	6.6	0.15	0
	63	3.23	0.4	0.14	25
	98	419.41	56.1	0.37	0
	116	15.81	2.1	0.23	0
40	63	156.84	11.0	0.14	25
	44	185.29	13.0	0.03	0
	98	1002.32	70.3	0.37	0
	3	9.88	0.7	0.58	0
	116	46.24	3.2	0.23	0
	113	24.93	1.7	0.39	0
60	63	220.20	19.7	0.14	25
	44	286.20	25.5	0.03	0
	98	550.09	49.1	0.37	0
	3	40.27	3.6	0.58	0
	116	15.47	1.4	0.23	0
	68	8.37	0.7	0.63	0
80	63	49.93	5.2	0.14	25
	52	10.68	1.1	0.16	20
	45	57.06	6.0	0.03	0
	49	80.62	8.4	0.06	0
	68	12.88	1.3	0.63	0
	48	200.95	21.0	0.06	0
	113	95.71	10.0	0.39	0
	98	447.96	46.9	0.37	0
100	98	216.98	69.5	0.37	0
	44	7.98	2.6	0.03	0
	48	79.80	25.6	0.06	0
	3	7.50	2.4	0.58	0
120	3	45.95	3.3	0.58	0
	44	313.15	22.3	0.03	0
	49	175.31	12.5	0.06	0
	61	171.40	12.2	0.15	0
	63	498.81	35.5	0.14	25
	98	201.48	14.3	0.37	0
140	63	11.27	2.9	0.14	25
	98	371.20	97.1	0.37	0
150	61	70.00	26.9	0.15	0
	63	71.00	27.2	0.14	25
	98	119.57	45.9	0.37	0
160	3	1.00	0.4	0.58	0
	63	1.00	0.4	0.14	25
	98	221.75	94.9	0.37	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
	115	10.00	4.3	0.39	0
180	98	649.18	100.0	0.37	0
190	61	340.29	57.9	0.15	0
	63	185.00	31.5	0.14	25
	98	62.30	10.6	0.37	0
200	3	22.70	6.7	0.58	0
	44	42.80	12.6	0.03	0
	61	42.90	12.6	0.15	0
	63	130.10	38.3	0.14	25
	98	100.90	29.7	0.37	0
210	44	90.00	17.7	0.03	0
	47	6.10	1.2	0.11	0
	48	44.50	8.8	0.06	0
	61	254.91	50.3	0.15	0
	63	81.90	16.2	0.14	25
	98	29.70	5.9	0.37	0
220	44	126.65	41.8	0.03	0
	61	24.90	8.2	0.15	0
	63	55.00	18.2	0.14	25
	98	96.20	31.8	0.37	0
240	44	119.20	13.2	0.03	0
	47	1.40	0.2	0.11	0
	48	131.40	14.6	0.06	0
	61	93.60	10.4	0.15	0
	63	58.60	6.5	0.14	25
	68	207.68	23.1	0.63	0
	98	289.00	32.1	0.37	0
260	44	76.96	45.7	0.03	0
	98	72.90	43.3	0.37	0
	3	18.40	10.9	0.58	0
280	98	153.68	75.3	0.37	0
	44	50.30	24.7	0.03	0
300	63	6.10	3.3	0.14	25
	98	178.89	96.7	0.37	0
305A	61	4.80	2.4	0.15	0
	63	63.40	31.4	0.14	25
	68	14.26	7.1	0.63	0
	98	89.53	44.3	0.37	0
	115	3.20	1.6	0.39	0
	118	26.94	13.3	0.42	0
305B	44	16.60	6.7	0.03	0
	61	24.90	10.1	0.15	0
	68	22.04	8.9	0.63	0
	98	181.43	73.4	0.37	0
	118	2.06	0.8	0.42	0
310	44	6.00	1.7	0.03	0
	61	16.00	4.6	0.15	0
	63	6.00	1.7	0.14	25
	68	105.54	30.6	0.63	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
	98	108.54	31.5	0.37	0
	118	102.53	29.8	0.42	0
320A	63	19.97	11.5	0.14	25
	98	83.84	48.4	0.37	0
	115	67.77	39.2	0.39	0
	118	1.47	0.8	0.42	0
320B1	61	30.56	10.5	0.15	0
	63	87.70	30.2	0.14	25
	98	153.74	52.9	0.37	0
	115	18.63	6.4	0.39	0
320B2	44	14.18	10.0	0.03	0
	61	17.37	12.3	0.15	0
	63	1.50	1.1	0.14	25
	68	22.27	15.8	0.63	0
	98	5.96	4.2	0.37	0
	115	10.58	7.5	0.39	0
	118	69.24	49.1	0.42	0
340A1	3	10.50	1.5	0.58	0
	44	6.87	1.0	0.03	0
	63	36.13	5.2	0.14	25
	68	65.19	9.4	0.63	0
	98	416.79	59.8	0.37	0
	113	3.34	0.5	0.39	0
	115	137.49	19.7	0.39	0
	118	20.38	2.9	0.42	0
340A2	63	15.67	65.7	0.14	25
	68	0.82	3.4	0.63	0
	98	7.35	30.8	0.37	0
340B	61	23.50	12.6	0.15	0
	63	24.30	13.1	0.14	25
	68	100.69	54.2	0.63	0
	98	37.30	20.1	0.37	0
350	63	108.49	17.0	0.14	25
	61	123.99	19.4	0.15	0
	118	323.57	50.7	0.42	0
	68	57.67	9.0	0.63	0
	98	17.95	2.8	0.37	0
	101	6.68	1.0	0.28	0
355	61	33.80	7.8	0.15	0
	63	46.50	10.8	0.14	25
	68	19.60	4.5	0.63	0
	90	171.53	39.7	0.39	0
	98	9.70	2.2	0.37	0
	101	43.50	10.1	0.28	0
	110	18.80	4.3	0.13	0
	115	9.10	2.1	0.39	0
	118	79.90	18.5	0.42	0
360	98	398.32	70.7	0.37	0
	63	3.70	0.7	0.14	25

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
	115	72.80	12.9	0.39	0
	68	8.80	1.6	0.63	0
	113	79.60	14.1	0.39	0
370	61	45.20	10.5	0.15	0
	63	77.00	17.9	0.14	25
	90	179.71	41.8	0.39	0
	98	1.00	0.2	0.37	0
	101	111.80	26.0	0.28	0
	110	5.40	1.3	0.13	0
	115	2.00	0.5	0.39	0
	118	8.00	1.9	0.42	0
380A	98	80.30	48.1	0.37	0
	112	62.80	37.6	0.39	0
	113	15.50	9.3	0.39	0
	115	8.20	4.9	0.39	0
380B1	63	9.47	4.0	0.14	25
	98	144.48	61.1	0.37	0
	110	0.67	0.3	0.13	0
	112	11.49	4.9	0.39	0
	113	11.52	4.9	0.39	0
	115	33.63	14.2	0.39	0
	118	25.04	10.6	0.42	0
380B2	113	45.27	73.6	0.39	0
	115	1.25	2.0	0.39	0
	118	15.00	24.4	0.42	0
380B3	63	4.61	5.9	0.14	25
	98	22.17	28.2	0.37	0
	110	7.36	9.4	0.13	0
	113	41.53	52.8	0.39	0
	115	2.97	3.8	0.39	0
385	61	111.00	32.9	0.15	0
	63	152.90	45.4	0.14	25
	90	72.70	21.6	0.39	0
	118	0.40	0.1	0.42	0
390	61	11.00	6.9	0.15	0
	63	18.00	11.4	0.14	25
	90	76.45	48.2	0.39	0
	101	29.00	18.3	0.28	0
	110	24.00	15.1	0.13	0
395	61	23.60	18.5	0.15	0
	63	25.60	20.1	0.14	25
	90	43.40	34.0	0.39	0
	101	34.00	26.6	0.28	0
	110	1.00	0.8	0.13	0
400A	98	2.40	7.8	0.37	0
	112	3.60	11.7	0.39	0
	115	24.90	80.6	0.39	0
400B1	98	160.64	65.1	0.37	0
	112	26.24	10.6	0.39	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
	115	59.81	24.2	0.39	0
400B2	98	100.43	81.0	0.37	0
	110	0.91	0.7	0.13	0
	113	19.47	15.7	0.39	0
	115	3.20	2.6	0.39	0
400B3	98	10.01	65.0	0.37	0
	110	3.33	21.6	0.13	0
	113	2.06	13.4	0.39	0
415A	61	1.20	0.7	0.15	0
	68	88.30	49.3	0.63	0
	90	86.00	48.0	0.39	0
	118	3.70	2.1	0.42	0
415B	61	66.00	31.4	0.15	0
	63	92.90	44.2	0.14	25
	68	38.70	18.4	0.63	0
	90	12.40	5.9	0.39	0
	115	0.30	0.1	0.39	0
420A1	68	21.34	5.9	0.63	0
	98	222.00	61.2	0.37	0
	110	41.29	11.4	0.13	0
	118	77.91	21.5	0.42	0
420A2	98	14.31	100.0	0.37	0
420B	68	79.90	44.7	0.63	0
	90	59.30	33.2	0.39	0
	110	27.70	15.5	0.13	0
	118	11.90	6.7	0.42	0
440	63	26.30	51.4	0.14	25
	61	22.10	43.2	0.15	0
	44	2.80	5.5	0.03	0
441	68	3.80	59.4	0.63	0
	44	2.60	40.6	0.03	0
442	68	64.00	100.0	0.63	0
443	63	12.90	25.2	0.14	25
	68	6.90	13.5	0.63	0
	44	31.40	61.3	0.03	0
444	63	0.60	2.3	0.14	25
	61	12.10	47.3	0.15	0
	68	12.90	50.4	0.63	0
445	63	4.50	3.7	0.14	25
	61	6.70	5.5	0.15	0
	68	110.40	90.8	0.63	0
446	68	19.40	75.8	0.63	0
	44	6.20	24.2	0.03	0
447	68	52.00	90.3	0.63	0
	115	5.60	9.7	0.39	0
448	63	10.60	36.8	0.14	25
	68	18.20	63.2	0.63	0
449	63	3.10	9.7	0.14	25
	68	28.90	90.3	0.63	0

TABLE 3
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Soil Data

Basin ID	Map Unit	Area (ac)	Area Percent	XKSAT	Rock Percent
450	63	5.90	13.2	0.14	25
	68	33.40	74.6	0.63	0
	90	5.50	12.3	0.39	0
451	68	16.00	100.0	0.63	0
452	63	4.80	18.8	0.14	25
	68	20.80	81.3	0.63	0
453	68	38.40	100.0	0.63	0
454	63	6.80	5.9	0.14	25
	68	48.90	42.4	0.63	0
	90	59.50	51.6	0.39	0
455	63	25.00	3.5	0.14	25
	68	384.00	54.0	0.63	0
	115	268.00	37.7	0.39	0
	110	19.00	2.7	0.13	0
	98	10.00	1.4	0.37	0
	118	5.00	0.7	0.42	0
456	63	78.80	47.4	0.14	25
	61	62.00	37.3	0.15	0
	68	25.60	15.4	0.63	0
457	63	9.50	7.8	0.14	25
	61	26.10	21.5	0.15	0
	68	79.50	65.4	0.63	0
	115	6.50	5.3	0.39	0
458	63	21.40	17.6	0.14	25
	61	87.90	72.3	0.15	0
	68	2.10	1.7	0.63	0
	115	10.20	8.4	0.39	0
459	68	18.20	94.8	0.63	0
	115	1.00	5.2	0.39	0
460	68	29.80	33.2	0.63	0
	115	59.90	66.8	0.39	0
461	63	1.60	2.1	0.14	25
	68	1.60	2.1	0.63	0
	61	8.30	10.8	0.15	0
	115	65.30	85.0	0.39	0
462	63	20.00	10.4	0.14	25
	61	131.10	68.1	0.15	0
	68	39.40	20.5	0.63	0
	115	2.10	1.1	0.39	0
480	63	43.11	9.2	0.14	25
	68	348.53	74.5	0.63	0
	115	76.19	16.3	0.39	0
500	63	208.27	35.0	0.14	25
	61	368.91	62.0	0.15	0
	113	17.75	3.0	0.39	0

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
10	Desert	411.48	93.2	Dry	25	0
	L.D.R.	30.00	6.8	Normal	50	15
20	Desert	220.20	29.5	Dry	25	0
	V.L.D.R	12.52	1.7	Normal	30	5
	L.D.R.	503.93	67.4	Normal	50	15
	M.D.R.	10.48	1.4	Normal	50	30
40	Desert	746.40	52.4	Dry	25	0
	V.L.D.R	94.31	6.6	Normal	30	5
	L.D.R.	547.70	38.4	Normal	50	15
	Comm	37.15	2.6	Normal	75	80
60	Desert	698.40	62.3	Dry	25	0
	V.L.D.R	318.50	28.4	Normal	30	5
	L.D.R.	69.10	6.2	Normal	50	15
	Comm	34.60	3.1	Normal	75	80
80	Desert	401.60	42.0	Dry	25	0
	V.L.D.R	368.30	38.5	Normal	30	5
	L.D.R.	185.89	19.4	Normal	50	15
100	OPEN	5.70	1.8	Dry	10	0
	V.L.D.R	191.06	61.2	Normal	30	5
	L.D.R.	115.50	37.0	Normal	50	15
120	Desert	781.30	55.6	Dry	25	0
	V.L.D.R	568.90	40.5	Normal	30	5
	L.D.R.	55.90	4.0	Normal	50	15
140	Desert	109.00	28.5	Dry	25	0
	V.L.D.R	273.47	71.5	Normal	30	5
150	Desert	254.57	97.7	Dry	25	0
	V.L.D.R	6.00	2.3	Normal	30	5
160	Desert	187.75	80.3	Dry	25	0
	V.L.D.R	46.00	19.7	Normal	30	5
180	Desert	649.18	100.0	Dry	25	0
190	Desert	587.59	100.0	Dry	25	0
200	Desert	339.40	100.0	Dry	25	0
210	Desert	507.11	100.0	Dry	25	0
220	Desert	302.75	100.0	Dry	25	0
240	Desert	900.88	100.0	Dry	25	0
260	OPEN	19.00	11.3	Dry	10	0
	V.L.D.R	33.10	19.7	Normal	30	5
	L.D.R.	116.16	69.0	Normal	50	15
280	L.D.R.	203.98	100.0	Normal	50	15
300	L.D.R.	184.99	100.0	Normal	50	15
305A	Desert	144.73	71.6	Dry	25	0

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
	L.D.R.	57.40	28.4	Normal	50	15
305B	Desert	247.03	100.0	Dry	25	0
310	Desert	336.61	97.7	Dry	25	0
	V.L.D.R	8.00	2.3	Normal	30	5
320A	Desert	6.80	3.9	Dry	25	0
	L.D.R.	82.37	47.6	Normal	50	15
	M.D.R.	83.88	48.5	Normal	50	30
320B1	Desert	36.80	12.7	Dry	25	0
	V.L.D.R	204.13	70.2	Normal	30	5
	M.D.R.	49.70	17.1	Normal	50	30
320B2	Desert	28.00	19.8	Dry	25	0
	V.L.D.R	81.62	57.8	Normal	30	5
	L.D.R.	19.00	13.5	Normal	50	15
	M.D.R.	9.28	6.6	Normal	50	30
	Comm	3.20	2.3	Normal	75	80
340A1	Desert	7.16	1.0	Dry	25	0
	V.L.D.R	44.90	6.4	Normal	30	5
	L.D.R.	195.73	28.1	Normal	50	15
	M.D.R.	288.20	41.4	Normal	50	30
	M.F.R.	39.00	5.6	Normal	50	45
	Comm	32.10	4.6	Normal	75	80
	Park	89.60	12.9	Normal	90	0
340A2	Desert	12.34	51.8	Dry	25	0
	Comm	11.50	48.2	Normal	75	80
340B	L.D.R.	123.59	66.5	Normal	50	15
	M.D.R.	62.20	33.5	Normal	50	30
350	Desert	638.35	100.0	Dry	25	0
355	Desert	368.43	85.2	Dry	25	0
	V.L.D.R	33.00	7.6	Normal	30	5
	L.D.R.	31.00	7.2	Normal	50	15
360	L.D.R.	341.50	60.6	Normal	50	15
	M.D.R.	82.62	14.7	Normal	50	30
	M.F.R.	33.70	6.0	Normal	50	45
	Comm	44.60	7.9	Normal	75	80
	Park	60.80	10.8	Normal	90	0
370	Desert	307.11	71.4	Dry	25	0
	L.D.R.	123.00	28.6	Normal	50	15
380A	Comm	43.90	26.3	Normal	75	80
	Park	122.90	73.7	Normal	90	0
380B1	L.D.R.	236.30	100.0	Normal	50	15
380B2	L.D.R.	61.52	100.0	Normal	50	15
380B3	L.D.R.	78.64	100.0	Normal	50	15

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
385	Desert	296.00	87.8	Dry	25	0
	L.D.R.	41.00	12.2	Normal	50	15
390	L.D.R.	158.45	100.0	Normal	50	15
395	Desert	15.20	11.9	Dry	25	0
	L.D.R.	112.40	88.1	Normal	50	15
400A	Desert	11.00	35.6	Dry	25	0
	Park	19.90	64.4	Normal	90	0
400B1	L.D.R.	191.59	77.7	Normal	50	15
	Park	55.10	22.3	Normal	90	0
400B2	L.D.R.	124.01	100.0	Normal	50	15
400B3	L.D.R.	15.40	100.0	Normal	50	15
415A	L.D.R.	179.20	100.0	Normal	50	15
415B	Desert	99.25	47.2	Dry	25	0
	L.D.R.	111.05	52.8	Normal	50	15
420A1	Desert	74.40	20.5	Dry	25	0
	L.D.R.	246.84	68.1	Normal	50	15
	M.F.R.	28.10	7.8	Normal	50	45
	Comm	13.20	3.6	Normal	75	80
420A2	Desert	14.31	100.0	Dry	25	0
420B	L.D.R.	178.80	100.0	Normal	50	15
440	Desert	17.40	34.0	Dry	25	0
	OPEN	33.80	66.0	Dry	10	0
441	V.L.D.R	6.40	100.0	Normal	30	5
442	V.L.D.R	64.00	100.0	Normal	30	5
443	OPEN	13.30	26.0	Dry	10	0
	V.L.D.R	37.90	74.0	Normal	30	5
444	Desert	2.80	10.9	Dry	25	0
	OPEN	22.80	89.1	Dry	10	0
445	OPEN	76.50	62.9	Dry	10	0
	V.L.D.R	45.10	37.1	Normal	30	5
446	V.L.D.R	11.30	44.1	Normal	30	5
	M.D.R.	14.30	55.9	Normal	50	30
447	M.D.R.	57.60	100.0	Normal	50	30
448	OPEN	18.30	63.5	Dry	10	0
	V.L.D.R	10.50	36.5	Normal	30	5
449	OPEN	6.60	20.6	Dry	10	0
	V.L.D.R	25.40	79.4	Normal	30	5
450	Desert	42.00	93.8	Dry	25	0
	OPEN	1.50	3.3	Dry	10	0
	M.D.R.	1.30	2.9	Normal	50	30

TABLE 4
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Land Use Data

Basin ID	Land Use	Area (ac)	Area Percent	DTHETA Description	Vegetative Cover %	Percent Impervious
451	Desert	14.60	91.3	Dry	25	0
	M.D.R.	1.40	8.8	Normal	50	30
452	OPEN	4.90	19.1	Dry	10	0
	V.L.D.R	20.70	80.9	Normal	30	5
453	Desert	15.90	41.4	Dry	25	0
	M.D.R.	22.50	58.6	Normal	50	30
454	Desert	62.50	54.3	Dry	25	0
	OPEN	3.10	2.7	Dry	10	0
	M.D.R.	49.60	43.1	Normal	50	30
455	Desert	179.30	25.2	Dry	25	0
	M.D.R.	522.80	73.5	Normal	50	30
	M.F.R.	4.30	0.6	Normal	50	45
	Comm	4.60	0.6	Normal	75	80
456	Desert	136.30	81.9	Dry	25	0
	OPEN	30.10	18.1	Dry	10	0
457	Desert	64.30	52.9	Dry	25	0
	OPEN	30.50	25.1	Dry	10	0
	V.L.D.R	13.30	10.9	Normal	30	5
	M.D.R.	13.50	11.1	Normal	50	30
458	Desert	50.30	41.4	Dry	25	0
	OPEN	17.10	14.1	Dry	10	0
	V.L.D.R	54.20	44.6	Normal	30	5
459	Desert	0.70	3.6	Dry	25	0
	OPEN	6.80	35.4	Dry	10	0
	V.L.D.R	7.80	40.6	Normal	30	5
	M.D.R.	3.90	20.3	Normal	50	30
460	M.D.R.	81.20	90.5	Normal	50	30
	Park	8.50	9.5	Normal	90	0
461	V.L.D.R	43.90	57.2	Normal	30	5
	M.D.R.	26.40	34.4	Normal	50	30
	Comm	6.50	8.5	Normal	75	80
462	Desert	109.40	56.8	Dry	25	0
	OPEN	11.10	5.8	Dry	10	0
	V.L.D.R	52.20	27.1	Normal	30	5
	M.D.R.	0.70	0.4	Normal	50	30
	Comm	19.20	10.0	Normal	75	80
480	Desert	25.70	5.5	Dry	25	0
	L.D.R.	216.50	46.3	Normal	50	15
	M.D.R.	171.00	36.6	Normal	50	30
	M.F.R.	23.40	5.0	Normal	50	45
	Comm	31.20	6.7	Normal	75	80
500	Desert	594.90	100.0	Dry	25	0

TABLE 5
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Rainfall Data

Area	ARF	Total Rainfall (inches)						
		2-yr	5-yr	10-yr	25-yr	50-yr	100-yr	500-yr
0	1.0000	1.550	2.110	2.480	3.000	3.410	3.810	4.740
10	0.9396	1.456	1.983	2.330	2.819	3.204	3.580	4.454
30	0.9003	1.395	1.900	2.233	2.701	3.070	3.430	4.267
60	0.8609	1.334	1.816	2.135	2.583	2.936	3.280	4.081
90	0.8451	1.310	1.783	2.096	2.535	2.882	3.220	4.006
120	0.8346	1.294	1.761	2.070	2.504	2.846	3.180	3.956
150	0.8241	1.277	1.739	2.044	2.472	2.810	3.140	3.906
300	0.8005	1.241	1.689	1.985	2.402	2.730	3.050	3.794
500	0.7795	1.208	1.645	1.933	2.339	2.658	2.970	3.695

TABLE 6
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Routing Parameters

HEC-1 Operation	Manning's "n" Left Overbank	Manning's "n" Main Channel	Manning's "n" Right Overbank	Length (ft)	Slope (ft/ft)	NSTPS
R10	0.045	0.030	0.045	8700	0.0210	4
R100	0.016	0.016	0.016	940	0.0040	1
R101	0.050	0.035	0.050	1450	0.0500	1
R103	0.050	0.035	0.050	900	0.0300	1
R106	0.050	0.035	0.050	3950	0.0330	2
R107	0.050	0.035	0.050	700	0.0516	2
R108	0.050	0.035	0.050	3200	0.1000	2
R109	0.019	0.019	0.019	3080	0.0500	1
R110	0.019	0.019	0.019	580	0.0291	1
R113	0.019	0.019	0.019	1300	0.0290	1
R115	0.019	0.019	0.019	2125	0.0290	1
R116	0.050	0.035	0.050	1300	0.0333	2
R118	0.019	0.019	0.019	1500	0.0240	1
R12	0.045	0.030	0.045	4500	0.0100	7
R120	0.025	0.016	0.025	2100	0.0050	2
R150	0.045	0.040	0.045	3100	0.0320	2
R152	0.045	0.030	0.045	5900	0.0190	3
R180	0.035	0.025	0.035	1600	0.0030	1
R190	0.045	0.030	0.045	4740	0.0300	2
R192	0.045	0.035	0.045	2200	0.0180	3
R20	0.016	0.016	0.016	990	0.0040	1
R200	0.035	0.025	0.035	650	0.0050	1
R210	0.045	0.030	0.045	5100	0.0220	2
R220	0.035	0.025	0.035	1250	0.0050	1
R240	0.035	0.025	0.035	1800	0.0050	1
R260	0.035	0.025	0.035	2300	0.0030	3
R280	0.035	0.025	0.035	2100	0.0030	3
R3	0.050	0.030	0.050	2750	0.0375	5
R30	0.050	0.035	0.050	1630	0.0500	1
R300	0.035	0.025	0.035	2500	0.0030	2
R305	0.016	0.016	0.016	4000	0.0146	2
R305B	0.045	0.035	0.045	1700	0.0160	3
R310	0.045	0.035	0.045	8550	0.0220	10
R320B	0.016	0.016	0.016	1500	0.0146	1
R320B2	0.045	0.035	0.045	1000	0.0160	2
R340A2	0.045	0.035	0.045	4500	0.0200	5
R340B	0.045	0.035	0.045	1500	0.0270	2
R350	0.045	0.035	0.045	5150	0.0250	7
R355	0.045	0.035	0.045	4000	0.0250	1
R370	0.045	0.035	0.045	2600	0.0230	3
R380B1	0.045	0.035	0.045	2600	0.0230	7

TABLE 6
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Routing Parameters

HEC-1 Operation	Manning's "n" Left Overbank	Manning's "n" Main Channel	Manning's "n" Right Overbank	Length (ft)	Slope (ft/ft)	NSTPS
R380B2	0.045	0.035	0.045	4000	0.0180	9
R380B3	0.045	0.035	0.045	2300	0.0220	3
R390	0.045	0.045	0.045	5500	0.0200	7
R400B2	0.045	0.035	0.045	1800	0.0180	3
R400B3	0.045	0.035	0.045	1500	0.0200	3
R404	0.019	0.019	0.019	3540	0.0300	6
R415A	0.045	0.030	0.045	4100	0.0240	2
R415B	0.045	0.030	0.045	2590	0.0240	3
R454	0.045	0.035	0.045	2200	0.0090	3
R455	0.035	0.025	0.035	7000	0.0002	15
R456	0.050	0.035	0.050	3800	0.0440	2
R462	0.025	0.025	0.025	1800	0.0050	1
R480	0.035	0.025	0.035	2800	0.0002	7
R52	0.050	0.035	0.050	2000	0.0500	3
R58	0.050	0.035	0.050	2370	0.0516	2
R60	0.016	0.016	0.016	2850	0.0120	2
R6364	0.050	0.035	0.050	4375	0.0333	5
R6566	0.050	0.035	0.050	2435	0.0282	3
R70	0.050	0.035	0.050	2250	0.0800	2
R80	0.025	0.016	0.025	1200	0.0030	2
RB1	0.050	0.035	0.050	1720	0.0500	3
RR200	0.035	0.025	0.035	3150	0.0050	4
RR350	0.045	0.035	0.045	6050	0.0250	7
RR462	0.055	0.050	0.055	4700	0.0500	3
RR60	0.016	0.016	0.016	3500	0.0050	3
RSPLIT	0.050	0.035	0.050	800	0.0500	1

TABLE 7
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Storage/Discharge/Elevation Relationships

Apache Junction FRS
Emergency Spillway Elevation = 1801.92 ft.
Principal Spillway Elevation = 1795.65 ft.

HEC-1 Operation S60
Sediment Volume = 100 ac-ft.

Storage (ac-ft)	0.00	46.80	73.71	130.00	170.70	322.23	584.06	812.88	1121.90
Discharge (cfs)	0.00	0.01	0.02	26.30	91.20	102.42	347.66	1650.00	7700.00
Elevation (ft)	794.09	795.15	795.65	796.65	797.29	799.29	801.92	803.87	806.15

Signal Butte FRS
Emergency Spillway Elevation = 1714.63 ft.
Principal Spillway Elevation = 1703.23 ft.

HEC-1 Operation S180
Sediment Volume = 247 ac-ft.

Storage (ac-ft)	0.00	172.10	244.35	482.24	871.30	1101.52	1294.09	1418.10	1578.77	1980.33
Discharge (cfs)	0.00	10.20	10.55	121.80	138.40	145.90	151.40	154.67	390.00	1950.00
Elevation (ft)	698.23	702.23	703.23	706.23	710.23	712.23	713.73	714.63	715.73	718.23

Spook Hill FRS
Emergency Spillway Elevation = 1583.86 ft.
Principal Spillway Elevation = 1579.36 ft.

HEC-1 Operation S440
Sediment Volume = 271 ac-ft.

Storage (ac-ft)	0.00	81.00	211.00	265.72	692.96	896.16	1120.00	1630.34	2230.90	3311.68
Discharge (cfs)	0.00	1.00	3.00	8.00	515.00	780.00	825.00	3184.70	7426.00	16007.30
Elevation (ft)	577.00	578.00	579.00	579.36	581.86	582.86	583.86	585.86	587.86	590.86

TABLE 8
SPOOK HILL ADMP UPDATE
Summary of HEC-1 Sub-basin On-site Retention Volumes

Basin ID	*Maximum Diversion Volume (ac-ft)*
20	47.80
40	39.10
60	4.60
80	18.90
100	10.00
120	5.70
140	5.90
160	1.20
360	49.50
390	3.50
442	3.30
453	3.60
455	74.10
456	4.00
457	5.00
480	16.50
320A	11.80
320B1	9.30
320B2	3.32
340A1	91.90
340A2	2.20
340B	15.60
380B1	10.50
380B2	4.00
400B1	5.60
400B3	1.60
420A1	11.20

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1*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*              JUN   1998               *
*            VERSION 4.1                *
*                                       *
*  RUN DATE   20SEP02  TIME  08:30:30   *
*                                       *
*****************************************
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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

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1                                   HEC-1 INPUT                                                    PAGE  1

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

   1          ID   Spook Hill ADMP Update
   2          ID   Future Condition Preferred Model with Spook Hill FRS Storage Routing
   3          ID   Return Period = 100 Years, Rainfall Duration = 24 Hours
   4          ID   Original File Name: REC_EC24.DAT, Wood/Patel, March 2002
   5          ID   Modified File Name: REC_FC24.DAT, Wood/Patel, April 2002, SZ
              *
   6          ID   METHODOLOGY
   7          ID   THE US CORPS OF ENGINEERS FLOW HYDROGRAPH PACKAGE HEC-1 DATED JUNE 1998 V4.1
   8          ID   SCS TYPE II RAINFALL DISTRIBUTION
   9          ID   CLARK UNIT HYDROGRAPH
  10          ID   GREEN AND AMPT INFILTRATION EQUATION USED FOR CALCULATING LOSSES
  11          ID   NORMAL DEPTH STORAGE CHANNEL ROUTING
              *
              *DIAGRAM
  12          IT       2                    2000
  13          IO       5
  14          IN      15
  15          JD    3.81    0.01
  16          PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
  17          PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
  18          PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
  19          PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
  20          PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
  21          PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
  22          PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
  23          PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
  24          PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
  25          PC    .983    .986    .989    .992    .995    .998   1.000
  26          JD   3.787    1.00
  27          JD   3.677    5.80
  28          JD   3.574   10.66
  29          JD   3.539   13.70
  30          JD   3.467   20.00
  31          JD   3.315   50.00
              *
              * DDM   ***** Updated *****

  32          KK      10
  33          KM   SUB-BASIN 10
  34          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
  35          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
  36          KM     L = 2.00  Kb = .044  Adj. Slope =  165.0
  37          BA    .690
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 38          LG    .350    .310   7.600    .090  16.000
 39          UC    .421    .305
 40          UA       0       3       5       8      12      20      43      75      90      96
 41          UA     100
             *
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  2

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


 42          KK     R10
 43          KM   ROUTING OF FLOW FROM SUB-BASIN 10 TO R12
 44          RS       4    FLOW      -1
 45          RC    .045     .03    .045    8700    .021
 46          RX       0       1       2      17      27      42      43      44
 47          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

 48          KK     R12
 49          KM   ROUTING OF FLOW FROM R12 TO SUB-BASIN 20
 50          RS       7    FLOW      -1
 51          RC    .045     .03    .045    4500     .01
 52          RX       0       1      45    52.5    72.5      80     124     125
 53          RY       4     2.5     2.5       0       0     2.5     2.5       4
             * DDM   ***** Updated *****

 54          KK      20
 55          KM   SUB-BASIN 20
 56          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 57          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
 58          KM     L = 2.50  Kb = .040  Adj. Slope =   88.0
 59          BA   1.167
 60          LG    .310    .290   5.800    .220  11.000
 61          UC    .629    .422
 62          UA       0       5      16      30      65      77      84      90      94      97
 63          UA     100
             * DDM   ***** Preserved *****

 64          KK     D20
 65          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
 66          KM        MAXIMUM VOLUME DIVERSION = 47.8 acre-feet
 67          DT    BS20    47.8
 68          DI       0   10000
 69          DQ       0   10000
             * DDM   ***** Preserved *****

 70          KK    RT20
 71          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 72          DR    BS20
             * DDM   ***** Preserved *****

 73          KK     S20
 74          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 75          KM   BLEEDOFF FLOW = 17 CFS
 76          RS       1    STOR       0
 77          SV       0     .01    47.8     70
 78          SQ       0     0.5    17.0     50
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE  3

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


 79          KK     C20
 80          KM   HYDROGRAPH COMBINATION
 81          HC       3
             * DDM   ***** Preserved *****

 82          KK     R20
 83          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 84          RS       1    FLOW      -1
 85          RC    .016    .016    .016     990    .004
 86          RX       0       5       7    14.5    34.5      42      44      50
 87          RY       4       2       2       0       0       2       2       4
             * DDM   ***** Updated *****

 88          KK      40
 89          KM   SUB-BASIN 40
 90          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 91          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
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 92          KM     L = 3.08  Kb = .036  Adj. Slope =  189.0
 93          BA   2.227
 94          LG    .320    .300   4.900    .310  11.000
 95          UC    .492    .262
 96          UA       0       3       5       8      12      20      43      75      90      96
 97          UA     100
             * DDM   ***** Preserved *****

 98          KK     D40
 99          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
100          KM        MAXIMUM VOLUME DIVERSION = 39.1 acre-feet
101          DT    BS40    39.1
102          DI       0   10000
103          DQ       0   10000
             * DDM   ***** Preserved *****

104          KK    RT40
105          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
106          DR    BS40
             * DDM   ***** Preserved *****

107          KK     S40
108          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
109          KM   BLEEDOFF FLOW = 14 CFS
110          RS       1    STOR       0
111          SV       0     .01    39.1     60
112          SQ       0     0.5    14.0     40
             * DDM   ***** Preserved *****

113          KK     C40
114          KM   HYDROGRAPH COMBINATION
115          HC       3
             * DDM   ***** Updated *****
1                                    HEC-1 INPUT                                          PAGE  4

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


116          KK      60
117          KM   SUB-BASIN 60
118          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
119          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .989
120          KM     L = 4.19  Kb = .038  Adj. Slope =  209.6
121          BA   1.751
122          LG    .320    .340   5.800    .190  10.000
123          UC    .592    .472
124          UA       0       3       5       8      12      20      43      75      90      96
125          UA     100
             *
             * DDM   ***** Preserved *****

126          KK     D60
127          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
128          KM        MAXIMUM VOLUME DIVERSION = 4.60 acre-feet
129          DT    BS60     4.6
130          DI       0   10000
131          DQ       0   10000
             * DDM   ***** Preserved *****

132          KK    RT60
133          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
134          DR    BS60
             * DDM   ***** Preserved *****

135          KK    SB60
136          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
137          KM   BLEEDOFF FLOW = 2 CFS
138          RS       1    STOR       0
139          SV       0     .01     4.6     10
140          SQ       0     0.5     2.0     10
             * DDM   ***** Preserved *****

141          KK     C60
142          KM   HYDROGRAPH COMBINATION
143          HC       3
             *
             * DDM   ***** Preserved *****

144          KK     S60
145          KM   APACHE JUNCTION FRS AS-BUILT PLANS 12/19/88
146          KM   OUTLET PIPE=30"RCP; L=136.6'; INLET INV.=1783.5; OUTLET INV.=1783
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 147          KM   EMERGENCY SPILLWAY ELEV.=1799.77'; PRINCIPLE SPILLWAY ELEV.=1793.5'
 148          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 100 ACRE-FEET
 149          RS       1    STOR       0
 150          SV       0   46.80   73.71   130.0  170.70  322.23  584.06  812.88  1121.9
 151          SQ     0.0    0.01    0.02   26.30   91.20  102.42  347.66  1650.0  7700.0
 152          SE  794.09  795.15  795.65  796.65  797.29  799.29  801.92  803.87  806.15
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE  5

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


 153          KK     R60
 154          KM        ROUTE FLOW THROUGH BULLDOG FLOODWAY FROM APACHE JUNCTION FRS
 155          RS       2    FLOW      -1
 156          RC    .016    .016    .016    2850    .012
 157          RX       0       1       2     2.1     5.6     5.7       6       7
 158          RY     4.5     3.5     3.5       0       0     3.5     3.5     4.5
              * DDM   ***** Preserved *****

 159          KK    RR60
 160          KM   ROUTE FLOW FROM BULLDOG FLOODWAY TO SUB-BASIN 80
 161          RS       3    FLOW      -1
 162          RC    .016    .016    .016    3500    .005
 163          RX       0       1       2     2.1     7.1     7.2       8       9
 164          RY     4.5     3.5     3.5       0       0     3.5     3.5     4.5
              * DDM   ***** Updated *****

 165          KK      80
 166          KM   SUB-BASIN 80
 167          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 168          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .991
 169          KM     L = 2.69  Kb = .039  Adj. Slope =  229.8
 170          BA   1.493
 171          LG    .320    .300   5.600    .220   7.000
 172          UC    .429    .254
 173          UA       0       5      16      30      65      77      84      90      94      97
 174          UA     100
              * DDM   ***** Preserved *****

 175          KK     D80
 176          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
 177          KM        MAXIMUM VOLUME DIVERSION = 18.9 acre-feet
 178          DT    BS80    18.9
 179          DI       0   10000
 180          DQ       0   10000
              * DDM   ***** Preserved *****

 181          KK    RT80
 182          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 183          DR    BS80
              * DDM   ***** Preserved *****

 184          KK     S80
 185          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 186          KM   BLEEDOFF FLOW =  7 CFS
 187          RS       1    STOR       0
 188          SV       0     .01    18.9     30
 189          SQ       0     1.0     7.0     20
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE  6

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


 190          KK     C80
 191          KM   HYDROGRAPH COMBINATION

 192          HC       2
              * DDM   ***** Preserved *****

 193          KK    CC80
 194          KM   HYDROGRAPH COMBINATION FOR FLOW FROM APACHE JUNCTION FRS & SUB-BASIN 80
 195          HC       2   1.493
              * DDM   ***** Preserved *****

 196          KK     R80
 197          KM   ROUTE FLOW FROM SUB-BASIN 80 TO SUB-BASIN 100
 198          RS       2    FLOW      -1
 199          RC    .025    .016    .025    1200    .003
 200          RX       0       2       6     6.1    41.1    41.2    56.2    58.2
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201          RY     5.5     4.5     4.5       0       0     4.5     4.5     5.5
             * DDM   ***** Updated *****

202          KK     100
203          KM   SUB-BASIN 100
204          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
205          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
206          KM     L = 1.94  Kb = .045  Adj. Slope =  108.0
207          BA    .488
208          LG    .300    .250   5.100    .280   9.000
209          UC    .517    .455
210          UA       0       5      16      30      65      77      84      90      94      97
211          UA     100
             * DDM   ***** Preserved *****

212          KK    D100
213          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
214          KM        MAXIMUM VOLUME DIVERSION = 10.0 acre-feet
215          DT   BS100    10.0
216          DI       0   10000
217          DQ       0   10000
             * DDM   ***** Preserved *****

218          KK   RT100
219          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
220          DR   BS100
             * DDM   ***** Preserved *****

221          KK    S100
222          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
223          KM   BLEEDOFF FLOW =  4 CFS
224          RS       1    STOR       0
225          SV       0     .01    10.0     20
226          SQ       0     1.0     4.0     10
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE  7

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


227          KK    C100
228          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 80 & 100
229          HC       3
             * DDM   ***** Preserved *****

230          KK    R100
231          KM   ROUTE FLOW FROM SUB-BASIN 100 TO SUB-BASIN 120
232          RS       1    FLOW      -1
233          RC    .016    .016    .016     940    .004
234          RX       0       1       2     2.1    52.1    52.2      53      54
235          RY     4.5     4.5     4.5       0       0     4.5     4.5     4.5
             * DDM   ***** Updated *****

236          KK     120
237          KM   SUB-BASIN 120
238          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
239          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .987
240          KM     L = 3.07  Kb = .037  Adj. Slope =  239.0
241          BA   2.197
242          LG    .330    .280   6.800    .130  12.000
243          UC    .429    .227
244          UA       0       3       5       8      12      20      43      75      90      96
245          UA     100
             * DDM   ***** Preserved *****

246          KK    D120
247          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
248          KM        MAXIMUM VOLUME DIVERSION = 5.7 acre-feet
249          DT   BS120     5.7
250          DI       0   10000
251          DQ       0   10000
             * DDM   ***** Preserved *****

252          KK   RT120
253          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
254          DR   BS120
             * DDM   ***** Preserved *****

255          KK    S120
256          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
257          KM   BLEEDOFF FLOW =  2 CFS
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 258          RS       1    STOR       0
 259          SV       0     .01     5.7     15
 260          SQ       0     1.0     2.0     10
              * DDM   ***** Preserved *****

 261          KK    C120
 262          KM   HYDROGRAPH COMBINATION FOR FLOW FROM SUB-BASIN 100 & 120
 263          HC       3
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE  8

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


 264          KK    R120
 265          KM   ROUTE FLOW FROM SUB-BASIN 120 TO SIGNAL BUTTE FRS
 266          RS       2    FLOW      -1
 267          RC    .025    .016    .025    2100    .005
 268          RX       0       6      10    10.1    60.1    60.2    74.2    80.2
 269          RY       8       5       5       0       0       5       5       8
              * DDM   ***** Updated *****

 270          KK     140
 271          KM   SUB-BASIN 140
 272          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 273          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 274          KM     L = 1.61  Kb = .044  Adj. Slope =  149.0
 275          BA    .598
 276          LG    .310    .280   4.200    .440   5.000
 277          UC    .421    .278
 278          UA       0       5      16      30      65      77      84      90      94      97
 279          UA     100
              *
              * DDM   ***** Preserved *****

 280          KK    D140
 281          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
 282          KM        MAXIMUM VOLUME DIVERSION = 5.9 acre-feet
 283          DT   BS140     5.9
 284          DI       0   10000
 285          DQ       0   10000
              * DDM   ***** Preserved *****

 286          KK   RT140
 287          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 288          DR   BS140
              * DDM   ***** Preserved *****

 289          KK    S140
 290          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 291          KM   BLEEDOFF FLOW =  2 CFS
 292          RS       1    STOR       0
 293          SV       0     .01     5.9     15
 294          SQ       0     1.0     2.0     10
              *
              * DDM   ***** Preserved *****

 295          KK    C140
 296          KM   HYDROGRAPH COMBINATION
 297          HC       3
              *
              * DDM   ***** Updated *****
1                                   HEC-1 INPUT                                          PAGE  9

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


 298          KK     150
 299          KM   SUB-BASIN 150
 300          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 301          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 302          KM     L = 1.50  Kb = .047  Adj. Slope =  314.6
 303          BA    .407
 304          LG    .350    .360   5.100    .260   7.000
 305          UC    .296    .221
 306          UA       0       3       5       8      12      20      43      75      90      96
 307          UA     100
              * DDM   ***** Preserved *****

 308          KK    R150
 309          KM   ROUTING OF FLOW FROM SUB-BASIN 150 TO R152
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310          RS       2    FLOW      -1
311          RC    .045     .04    .045    3100    .032
312          RX       0       1       2      23      33      54      55      56
313          RY       7       7       7       0       0       7       7       7
             * DDM   ***** Preserved *****

314          KK    R152
315          KM   ROUTING OF FLOW FROM R152 TO SUB-BASIN 160
316          RS       3    FLOW      -1
317          RC    .045     .03    .045    5900    .019
318          RX       0       1       2       8      33      39      40      41
319          RY       2       2       2       0       0       2       2       2
             * DDM   ***** Updated *****

320          KK     160
321          KM   SUB-BASIN 160
322          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
323          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
324          KM     L = 2.10  Kb = .047  Adj. Slope =  129.0
325          BA    .365
326          LG    .340    .330   4.150    .440   1.000

327          UC    .587    .659
328          UA       0       3       5       8      12      20      43      75      90      96
329          UA     100
             *
             * DDM   ***** Preserved *****

330          KK    D160
331          KM        100-YEAR 2-HOUR ONSITE RETENTION BASIN
332          KM        MAXIMUM VOLUME DIVERSION = 1.2 acre-feet
333          DT   BS160     1.2
334          DI       0   10000
335          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

336          KK   RT160
337          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
338          DR   BS160
             * DDM   ***** Preserved *****

339          KK    S160
340          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
341          KM   BLEEDOFF FLOW =  1 CFS
342          RS       1    STOR       0
343          SV       0     .01     1.2     10
344          SQ       0     0.5     1.0     10
             * DDM   ***** Preserved *****

345          KK    C160
346          KM   HYDROGRAPH COMBINATION
347          HC       3
             *
             * DDM   ***** Updated *****

348          KK     180
349          KM   SUB-BASIN 180
350          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
351          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
352          KM     L = 2.42  Kb = .041  Adj. Slope =  140.0
353          BA   1.014
354          LG    .350    .350   4.150    .430    .000
355          UC    .571    .400
356          UA       0       3       5       8      12      20      43      75      90      96
357          UA     100
             * DDM   ***** Preserved *****

358          KK    C180
359          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
360          HC       3
             * DDM   ***** Updated *****

361          KK     210
362          KM   SUB-BASIN 210
363          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
364          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
365          KM     L = 1.84  Kb = .043  Adj. Slope =  315.0
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366          BA    .792
367          LG    .350    .360   6.800    .130   4.000
368          UC    .313    .189
369          UA       0       3       5       8      12      20      43      75      90      96
370          UA     100
             * DDM   ***** Preserved *****

371          KK    R210
372          KM   ROUTING OF FLOW FROM SUB-BASIN 210 TO SUB-BASIN 220
373          RS       2    FLOW      -1
374          RC    .045     .03    .045    5100    .022
375          RX       0       1       2      14      34      46      47      48
376          RY       4       4       4       0       0       4       4       4
             * DDM   ***** Updated *****
1                                          HEC-1 INPUT                                                    PAGE 11

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


377          KK     240
378          KM   SUB-BASIN 240
379          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
380          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .992
381          KM     L = 3.50  Kb = .039  Adj. Slope =  298.6
382          BA   1.408
383          LG    .350    .370   5.300    .230   2.000
384          UC    .467    .356
385          UA       0       3       5       8      12      20      43      75      90      96
386          UA     100
             * DDM   ***** Preserved *****

387          KK    C240
388          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
389          HC       2
             * DDM   ***** Preserved *****

390          KK    S240
391          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
392          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
393          RS       1    STOR       0
394          SA    1.38    14.2    36.5
395          SE     1.7       5      11
396          SS       5      42       3     1.5
             * DDM   ***** Preserved *****

397          KK    R240
398          KM   ROUTE FLOW FROM SUB-BASIN 240 TO SUB-BASIN 220
399          KM   PASS MOUNTAIN DIVERSION
400          RS       1    FLOW      -1
401          RC    .035    .025    .035    1800    .005
402          RX       0      15      30      39      69      81      96     111
403          RY     3.6     3.3       3       0       0       3       3       4
             * DDM   ***** Updated *****

404          KK     220
405          KM   SUB-BASIN 220
406          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
407          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
408          KM     L = 1.92  Kb = .046  Adj. Slope =  315.0
409          BA    .473
410          LG    .350    .350   7.000    .120   5.000
411          UC    .333    .282
412          UA       0       3       5       8      12      20      43      75      90      96
413          UA     100
             * DDM   ***** Preserved *****

414          KK    C220
415          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 240 & 220
416          HC       2
             * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                                    PAGE 12

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


417          KK   SW220
418          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
419          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
420          RS       1    STOR       0
421          SA     .78     4.1    13.7
422          SE       1       3      10
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423          SS       3      65       3     1.5
             * DDM   ***** Preserved *****

424          KK    R220
425          KM   ROUTE FLOW FROM SUB-BASIN 220 TO SUB-BASIN 200
426          KM   PASS MOUNTAIN DIVERSION
427          RS       1    FLOW      -1
428          RC    .035    .025    .035    1250    .005
429          RX       0      50     100     109     139     148     178     184
430          RY       5       4       3       0       0       3       3       5
             * DDM   ***** Updated *****

431          KK     190
432          KM   SUB-BASIN 190
433          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
434          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
435          KM     L = 1.91  Kb = .042  Adj. Slope =  315.0
436          BA    .918
437          LG    .350    .390   5.800    .190   8.000
438          UC    .321    .185
439          UA       0       3       5       8      12      20      43      75      90      96
440          UA     100
             * DDM   ***** Preserved *****

441          KK    R190
442          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
443          RS       2    FLOW      -1
444          RC    .045     .03    .045    4740     .03
445          RX       0       1       2      17      37      52      53      54
446          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

447          KK    R192
448          KM   ROUTING OF FLOW FROM SUB-BASIN 190 TO SUB-BASIN 200
449          RS       3    FLOW      -1
450          RC    .045    .035    .045    2200    .018
451          RX       0       1      50      59      79      88     137     138
452          RY     4.5       3       3       0       0       3       3     4.5
             * DDM   ***** Updated *****

453          KK     200
454          KM   SUB-BASIN 200
455          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
456          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
457          KM     L = 1.58  Kb = .045  Adj. Slope =  305.6
458          BA    .530
459          LG    .350    .390   5.700    .200  10.000
460          UC    .300    .201
1                                        HEC-1 INPUT                                                PAGE 13

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

461          UA       0       3       5       8      12      20      43      75      90      96
462          UA     100
             * DDM   ***** Preserved *****

463          KK    C200
464          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 220 & 200
465          HC       3
             * DDM   ***** Preserved *****

466          KK   SW200
467          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
468          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
469          RS       1    STOR       0
470          SA    2.56     3.1     9.4
471          SE       0       3      10
472          SS       3     112       3     1.5
             * DDM   ***** Preserved *****

473          KK    R200
474          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS through storage
475          RS       1    FLOW      -1
476          RC    .035    .025    .035     650    .005
477          RX       0       1       2      17     117     132     133     134
478          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

479          KK   SS200
480          KM    WEIR GEOMETRY OBTAINED FROM AS-BUILT PLANS @ PASS MTN. DIVERSION.
481          KM   WEIR STORAGE DATA OBTAINED FROM 2' CONTOUR MAPPING.
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482          RS       1    STOR       0
483          SA       8     9.2     9.2
484          SE       0       7      10
485          SS       7     251       3     1.5
             * DDM   ***** Preserved *****

486          KK   RR200
487          KM   ROUTE FLOW FROM SUB-BASIN 200 TO SIGNAL BUTTE FRS
488          RS       4    FLOW      -1
489          RC    .035    .025    .035    3150    .005
490          RX       0       1       2      17     117     132     133     134
491          RY       5       5       5       0       0       5       5       5
             * DDM   ***** Preserved *****

492          KK   CC180
493          KM   HYDROGRAPH COMBINATION FOR SIGNAL BUTTE FRS
494          HC       2
             * DDM   ***** Preserved *****

495          KK    S180
496          KM   SIGNAL BUTTE FRS DATED 1/28/85
497          KM   OUTLET PIPE=36"RCP; L= 147';  INLET INV.=1690; OUTLET INV.=1687
498          KM   EMERGENCY SPILLWAY ELEV.=1712.4; PRINCIPLE SPILLWAY ELEV.=1701
499          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 247 ACRE-FEET
500          RS       1    STOR       0
501          SV     0.0  172.10  244.35  482.24  871.30 1101.52 1294.09 1418.10 1578.77 1980.33
1                                        HEC-1 INPUT                                          PAGE 14

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

502          SQ     0.0   10.20   10.55  121.80  138.40  145.90  151.40  154.67  390.00  1950.0
503          SE  698.23  702.23  703.23  706.23  710.23  712.23  713.73  714.63  715.73  718.23
             * DDM   ***** Preserved *****

504          KK    R180
505          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
506          KM   Routing length increased 100' from 1500' to 1600'    12/12/00
507          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
508          KM   ROUTE FLOW FROM SIGNAL BUTTE FRS TO SUB-BASIN 260
509          RS       1    FLOW      -1
510          RC    .035    .025    .035    1600    .003
511          RX       0       1       2    22.6    38.6    59.2      60      61
512          RY     9.3     9.3     9.3       0       0     9.3     9.3     9.3
             * DDM   ***** Updated *****

513          KK     260
514          KM   SUB-BASIN 260
515          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
516          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
517          KM     L =  .81  Kb = .046  Adj. Slope =   68.0
518          BA    .263
519          LG    .280    .210   6.600    .160  11.000
520          UC    .350    .209
521          UA       0       5      16      30      65      77      84      90      94      97
522          UA     100
             * DDM   ***** Preserved *****

523          KK    C260
524          KM   HYDROGRAPH COMBINATION FOR OUTFLOW OF SIGNAL BUTTE FRS & SUB-BASIN 260
525          HC       2    .263
             * DDM   ***** Preserved *****

526          KK    R260
527          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
528          KM   Routing length unchanged     12/12/00
529          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
530          KM   ROUTE FLOW FROM SUB-BASIN 260 TO SUB-BASIN 280
531          RS       3    FLOW      -1
532          RC    .035    .025    .035    2300    .003
533          RX       0       1       2    23.4    43.4    64.8      65      66
534          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

535          KK     280
536          KM   SUB-BASIN 280
537          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
538          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
539          KM     L =  .77  Kb = .048  Adj. Slope =   84.0
540          BA    .319
541          LG    .300    .250   5.300    .290  15.000
542          UC    .329    .168
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543          UA       0       5      16      30      65      77      84      90      94      97
544          UA     100
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 15

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


545          KK    C280
546          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 260 & SUB-BASIN 280
547          HC       2
             * DDM   ***** Preserved *****

548          KK    R280
549          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
550          KM   Routing length decreased 400' from 2500' to 2100'    12/12/00
551          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
552          KM   ROUTE FLOW FROM SUB-BASIN 280 TO SUB-BASIN 300
553          RS       3    FLOW      -1
554          RC    .035    .025    .035    2100    .003
555          RX       0       1       2    23.4    43.4    64.8      65      66
556          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             * DDM   ***** Updated *****

557          KK     300
558          KM   SUB-BASIN 300
559          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
560          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
561          KM     L =  .78  Kb = .049  Adj. Slope =  103.0
562          BA    .289
563          LG    .300    .250   4.200    .520  16.000
564          UC    .321    .174
565          UA       0       5      16      30      65      77      84      90      94      97
566          UA     100
             * DDM   ***** Preserved *****

567          KK    C300
568          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 280 & 300
569          HC       2
             *
             * DDM   ***** Preserved *****

570          KK    R300
571          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
572          KM   Routing length increased 300' from 2200' to 2500'    12/12/00
573          KM   CHANNEL GEOMETRY FOR SIGNAL BUTTE FRS OBTAINED FROM AS-BUILT PLANS.
574          KM   ROUTE FLOW FROM SUB-BASIN 300 TO START OF FLOODWAY CONCRETE CHANNEL
575          RS       2    FLOW      -1
576          RC    .035    .025    .035    2500    .003
577          RX       0       1       2    23.4    55.4    76.8      77      78
578          RY     9.7     9.7     9.7       0       0     9.7     9.7     9.7
             *
             * DDM   ***** Updated *****

579          KK    305A
580          KM   SUB-BASIN 305A
581          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
582          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
583          KM     L =  .98  Kb = .048  Adj. Slope =   82.0
584          BA    .316
585          LG    .340    .320   4.600    .350  12.000
586          UC    .400    .254
1                                        HEC-1 INPUT                                          PAGE 16

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

587          UA       0       5      16      30      65      77      84      90      94      97
588          UA     100
             *
             * DDM   ***** Preserved *****

589          KK    C305
590          KM   HYDROGRAPH COMBINATION OF SUB-BASIN 300 AND 305A
591          HC       2
             * DDM   ***** Preserved *****

592          KK    R305
593          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
594          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
595          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
596          RS       2    FLOW      -1
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597          RC    .016    .016    .016    4000   .0146
598          RX       0       1       2     2.1    16.1    16.2      17      18
599          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *
             * DDM   ***** Updated *****

600          KK   320B1
601          KM   SUB-BASIN 320B1
602          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
603          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
604          KM     L = 1.13  Kb = .046  Adj. Slope =  106.0
605          BA    .454
606          LG    .300    .260   4.800    .310  17.000
607          UC    .375    .215
608          UA       0       5      16      30      65      77      84      90      94      97
609          UA     100
             *
             * DDM   ***** Preserved *****

610          KK  D320B1
611          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
612          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
613          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
614          KM        MAXIMUM VOLUME DIVERSION =  9.3 acre-feet
615          DT  B320B1    9.30
616          DI       0   10000
617          DQ       0   10000
             * DDM   ***** Preserved *****

618          KK  T320B1
619          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
620          DR  B320B1
             * DDM   ***** Preserved *****

621          KK  S320B1
622          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
623          KM   9.30 ACRE-FEETx43560/36x3600=4.cfs
624          RS       1    STOR       0
625          SV       0     .01     9.3    15.0
626          SQ       0     0.5     4.0    50.0
             * DDM   ***** Preserved *****
1                                    HEC-1 INPUT                                    PAGE 17

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


627          KK  C320B1
628          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
629          HC       3
             *
             * DDM   ***** Updated *****

630          KK     350
631          KM   SUB-BASIN 350
632          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
633          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
634          KM     L = 2.22  Kb = .041  Adj. Slope =  315.0
635          BA    .997
636          LG    .350    .350   4.550    .340   4.000
637          UC    .363    .227
638          UA       0       3       5       8      12      20      43      75      90      96
639          UA     100
             * DDM   ***** Preserved *****

640          KK    D350
641          KM   DIVERT FLOW FROM SUB-BASIN 350. FOR MODELING PURPOSES THE SPLIT FLOW WILL
642          KM   BE ROUTED BETWEEN SUB-BASINS 355 & 310. THE MAIN FLOW WILL ROUTED TO 310
643          DT   SF350
644          DI       0    5000
645          DQ       0    2500
             * DDM   ***** Preserved *****

646          KK    R350
647          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING
648          KM   ROUTING OF MAIN FLOW FROM DIVERSION OF SUB-BASIN 350 TO SUB-BASIN 310
649          RS       7    FLOW      -1
650          RC    .045    .035    .045    5150    .025
651          RX       0       1      40      46      56      62     102     103
652          RY       3       2       2       0       0       2       2       3
             * DDM   ***** Updated *****
```

```
 653          KK     310
 654          KM   SUB-BASIN 310
 655          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 656          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
 657          KM     L = 2.70  Kb = .045  Adj. Slope =  283.5
 658          BA    .538
 659          LG    .350    .350   3.910    .480    .000
 660          UC    .483    .520
 661          UA       0       3       5       8      12      20      43      75      90      96
 662          UA     100
              * DDM   ***** Preserved *****

 663          KK    C310
 664          KM   HYDROGRAPH COMBINATION OF SUB-BASINS 350 & 310
 665          HC       2    1.04
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 18

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


 666          KK    R310
 667          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 668          KM   ROUTING OF FLOW FROM SUB-BASIN 310 TO 320B
 669          RS      10    FLOW      -1
 670          RC    .045    .035    .045    8550    .022
 671          RX       0       1      40      46      56      62     102     103
 672          RY       3       2       2       0       0       2       2       3
              *
              * DDM   ***** Updated *****

 673          KK    305B
 674          KM   SUB-BASIN 305B
 675          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 676          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
 677          KM     L = 1.70  Kb = .047  Adj. Slope =  124.0
 678          BA    .386
 679          LG    .350    .350   4.500    .350    .000
 680          UC    .492    .443
 681          UA       0       3       5       8      12      20      43      75      90      96
 682          UA     100
              *
              * DDM   ***** Preserved *****

 683          KK   R305B
 684          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 685          KM   ROUTING OF FLOW FROM SUB-BASINS 305B TO SUB-BASIN 320B2.
 686          RS       3    FLOW      -1
 687          RC    .045    .035    .045    1700    .016
 688          RX       0       1      40      46      56      62     102     103
 689          RY       3       2       2       0       0       2       2       3
              *
              * DDM   ***** Updated *****

 690          KK   320B2
 691          KM   SUB-BASIN 320B2
 692          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 693          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
 694          KM     L = 1.08  Kb = .050  Adj. Slope =  120.0
 695          BA    .220
 696          LG    .300    .270   4.500    .380   9.000
 697          UC    .375    .314
 698          UA       0       5      16      30      65      77      84      90      94      97
 699          UA     100
              *
              * DDM   ***** Preserved *****

 700          KK  D320B2
 701          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 702          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
 703          KM   SIERRA HEIGHTS       FALCON RIDGE    & MARBLE CREEK
 704          KM        MAXIMUM VOLUME DIVERSION =  3.32acre-feet
 705          DT  B320B2    3.32
 706          DI       0   10000
 707          DQ       0   10000
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 19

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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708          KK  T320B2
709          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
710          DR  B320B2
             * DDM   ***** Preserved *****

711          KK  S320B2
712          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
713          KM   3.32 ACRE-FEETx43560/36x3600=1.2cfs
714          RS       1    STOR       0
715          SV       0     .01     3.3     5.0
716          SQ       0     0.5     1.2    15.0
             *
             * DDM   ***** Preserved *****

717          KK  C320B2
718          KM    Combine R305B, R310 and 320B2
719          HC       4
             *
             * DDM   ***** Preserved *****

720          KK  R320B2
721          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
722          KM   ROUTING OF FLOW FROM SUB-BASINS 320B2 TO SUB-BASIN 340B.
723          RS       2    FLOW      -1
724          RC    .045    .035    .045    1000    .016
725          RX       0       1      40      46      56      62     102     103
726          RY       5       2       2       0       0       2       2       5
             *
             * DDM   ***** Updated *****

727          KK    340B
728          KM   SUB-BASIN 340B
729          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
730          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
731          KM     L =  .85  Kb = .049  Adj. Slope =  238.5
732          BA    .290
733          LG    .280    .250   4.000    .560  23.000
734          UC    .242    .136
735          UA       0       5      16      30      65      77      84      90      94      97
736          UA     100
             *
             * DDM   ***** Preserved *****

737          KK   D340B
738          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
739          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
740          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
741          KM        MAXIMUM VOLUME DIVERSION = 15.6 acre-feet
742          DT  BS340B    15.6
743          DI       0   10000
744          DQ       0   10000
             * DDM   ***** Preserved *****
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

745          KK  RT340B
746          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
747          DR  BS340B
             * DDM   ***** Preserved *****

748          KK   S340B
749          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
750          KM    15.6 ACRE-FEETx43560/36x3600= 5.2cfs
751          RS       1    STOR       0
752          SV       0     .01    15.6      20
753          SQ       0     1.0     5.2      50
             * DDM   ***** Preserved *****

754          KK   C340B
755          KM   HYDROGRAPH COMBINATION
756          HC       3
             *
             * DDM   ***** Preserved *****

757          KK  DD340B
758          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS 340B.
759          DT   BS340
760          DI       0     200    1000    2000    5000
761          DQ       0       0     800    1800    4800
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                * DDM   ***** Preserved *****

 762            KK   RT340
 763            KM   RETRIEVE FLOW FROM DIVERSION
 764            DR   BS340
                * DDM   ***** Preserved *****

 765            KK  SS340B
 766            KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
 767            KM      55 ACRE-FEETx43560/36x3600 = 19cfs
 768            RS       1    STOR       0
 769            SV       0     .01      55      60
 770            SQ       0     3.0      50     100
                *

 771            KK  CD340B
 772            KM   HYDROGRAPH COMBINATION
 773            HC       2
                * DDM   ***** Preserved *****

 774            KK   RT350
 775            KM   RETRIEVE SPLIT FLOW FROM DIVERSION OF SUB-BASIN 350
 776            DR   SP350
                * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 21

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


 777            KK   RR350
 778            KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 779            KM   ROUTING OF FLOW FROM SPLIT OF SUB-BASIN 350 TO 355
 780            RS       7    FLOW      -1
 781            RC    .045    .035    .045    6050    .025
 782            RX       0       1      40      46      56      62     102     103
 783            RY       3       2       2       0       0       2       2       3
                *
                * DDM   ***** Updated *****

 784            KK     355
 785            KM   SUB-BASIN 355
 786            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 787            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
 788            KM     L = 3.00  Kb = .044  Adj. Slope =  284.0
 789            BA    .676
 790            LG    .340    .340   4.450    .370   4.000
 791            UC    .488    .502
 792            UA       0       3       5       8      12      20      43      75      90      96
 793            UA     100
                * DDM   ***** Preserved *****

 794            KK    C355
 795            KM   HYDROGRAPH COMBINATION OF SUB-BASIN 355 AND THE SPLIT FLOW FROM SUB-BASIN 350
 796            HC       2  1.1745
                *
                * DDM   ***** Preserved *****

 797            KK    D355
 798            KM        DIVERT FLOW INTO OFFLINE BASIN
 799            KM        MAXIMUM VOLUME DIVERSION = 18 acre-feet
 800            DT   BS355
 801            DI       0     100     450    1000    2000    5000
 802            DQ       0       0       0     550    1550    4550
                *
                * DDM   ***** Preserved *****

 803            KK   RT355
 804            KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
 805            DR   BS355
                *
                * DDM   ***** Preserved *****

 806            KK    S355
 807            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 808            KM   18.0 ACRE-FEETx43560/36x3600= 6.0CFS
 809            RS       1    STOR       0
 810            SV       0     .01    18.0    25.0
 811            SQ       0     2.0      40      50
                *
                * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 22
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 812          KK   CC355
 813          KM   HYDROGRAPH COMBINATION
 814          HC       2
              *
              * DDM   ***** Preserved *****

 815          KK    R355
 816          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 817          KM   ROUTING OF FLOW FROM SUB-BASIN 355 TO SUB-BASIN 340B

 818          RS       1    FLOW      -1
 819          RC    .045    .035    .045    4000    .025
 820          RX       0       1      40      46      56      62     102     103
 821          RY       3       2       2       0       0       2       2       3
              *
              * DDM   ***** Preserved *****

 822          KK  CC340B
 823          KM   HYDROGRAPH COMBINATION
 824          HC       2
              * DDM   ***** Preserved *****

 825          KK   R340B
 826          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
 827          KM   ROUTING OF FLOW FROM SUB-BASIN 340B TO SUB-BASIN 340A2.
 828          RS       2    FLOW      -1
 829          RC    .045    .035    .045    1500    .027
 830          RX       0       1      40      46      56      62     102     103
 831          RY       3       2       2       0       0       2       2       3
              *
              * DDM   ***** Updated *****

 832          KK   340A2
 833          KM   SUB-BASIN 340A2
 834          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
 835          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
 836          KM     L =  .48  Kb = .047  Adj. Slope =  297.9
 837          BA    .037
 838          LG    .230    .310   5.300    .250  55.000
 839          UC    .158    .174
 840          UA       0       5      16      30      65      77      84      90      94      97
 841          UA     100
              *
              * DDM   ***** Preserved *****

 842          KK  D340A2
 843          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
 844          KM        MAXIMUM VOLUME DIVERSION = 2.2 acre-feet
 845          DT  B340A2     2.2
 846          DI       0   10000
 847          DQ       0   10000
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 23

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

 848          KK  T340A2
 849          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
 850          DR  B340A2
              * DDM   ***** Preserved *****

 851          KK  S340A2
 852          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
 853          KM    2.20 ACRE-FEETx43560/36x3600= 1.0cfs
 854          RS       1    STOR       0
 855          SV       0     .01     2.2     5.0
 856          SQ       0     0.5     1.0    10.0
              * DDM   ***** Preserved *****

 857          KK  C340A2
 858          KM   HYDROGRAPH COMBINATION
 859          HC       3
              *
              * DDM   ***** Preserved *****

 860          KK  R340A2
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861          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
862          KM   ROUTING OF FLOW FROM SUB-BASIN 340A2 TO SUB-BASIN 320B.
863          RS       5    FLOW      -1
864          RC    .045    .035    .045    4500    .020
865          RX       0       1      40      46      56      62     102     103
866          RY       3       2       2       0       0       2       2       3
             *
             * DDM   ***** Preserved *****

867          KK  CC320B
868          KM   HYDROGRAPH COMBINATION
869          HC       2
             *
             * DDM   ***** Preserved *****

870          KK   R320B
871          KM   Routing Flow from 320B1 to 320A
872          KM   Routing length updated using Signal Butte Floodway plans dated March 1983
873          KM   CHANNEL GEOMETRY FOR SPOOK HILL FRS OBTAINED FROM AS-BUILTS PLANS.
874          KM   CONTINUE TO ROUTE FLOW WITHIN CONCRETE CHANNEL TO SPOOK HILL FRS
875          RS       1    FLOW      -1
876          RC    .016    .016    .016    1500   .0146
877          RX       0       1       2     2.1    16.1    16.2      17      18
878          RY     7.5     7.5     7.5       0       0     7.5     7.5     7.5
             *
             * DDM   ***** Updated *****

879          KK    320A
880          KM   SUB-BASIN 320A
881          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
882          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
883          KM     L = 1.07  Kb = .049  Adj. Slope =   93.0

884          BA    .270
885          LG    .280    .250   4.300    .490  25.000
1                                        HEC-1 INPUT                                                    PAGE 24

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

886          UC    .404    .301
887          UA       0       5      16      30      65      77      84      90      94      97
888          UA     100
             *
             * DDM   ***** Preserved *****

889          KK   D320A
890          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
891          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
892          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
893          KM        MAXIMUM VOLUME DIVERSION = 11.8 acre-feet
894          DT  BS320A    11.8
895          DI       0   10000
896          DQ       0   10000
             * DDM   ***** Preserved *****

897          KK  RT320A
898          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
899          DR  BS320A
             * DDM   ***** Preserved *****

900          KK   S320A
901          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
902          KM    11.8 ACRE-FEETx43560/36x3600= 4.0cfs
903          RS       1    STOR       0
904          SV       0     .01    11.8      20
905          SQ       0     1.0     4.0    40.0
             * DDM   ***** Preserved *****

906          KK    C320
907          KM   HYDROGRAPH COMBINATION
908          HC       3
             *
             * DDM   ***** Updated *****

909          KK   340A1
910          KM   SUB-BASIN 340A1
911          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
912          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
913          KM     L = 1.80  Kb = .045  Adj. Slope =  117.0
914          BA   1.089
915          LG    .250    .250   4.150    .560  24.000
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916          UC    .500    .261
917          UA       0       5      16      30      65      77      84      90      94      97
918          UA     100
             *
             * DDM   ***** Preserved *****

919          KK  D340A1
920          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
921          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THREE SUBDIVISIONS
922          KM   GRANDVIEW ESTATES    BOULDER MOUNTAIN & 33% OF MESA HIGHLANDS
923          KM        MAXIMUM VOLUME DIVERSION = 91.9 acre-feet
924          DT  B340A1    91.9
925          DI       0   10000
1                                        HEC-1 INPUT                                          PAGE 25

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

926          DQ       0   10000
             * DDM   ***** Preserved *****

927          KK  T340A1
928          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
929          DR  B340A1
             * DDM   ***** Preserved *****

930          KK  S340A1
931          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
932          KM    91.9 ACRE-FEETx43560/36x3600=30.9cfs
933          RS       1    STOR       0
934          SV       0     .01    91.9     120
935          SQ       0     3.0    20.9     300
             *
             * DDM   ***** Preserved *****

936          KK  C340A1
937          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
938          HC       2
             *
             * DDM   ***** Preserved *****

939          KK    C340
940          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
941          HC       2
             *
             * DDM   ***** Updated *****

942          KK     360
943          KM   SUB-BASIN 360
944          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
945          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .995
946          KM     L = 2.10  Kb = .044  Adj. Slope =  124.0
947          BA    .880
948          LG    .260    .250   4.100    .570  23.000
949          UC    .538    .362
950          UA       0       5      16      30      65      77      84      90      94      97
951          UA     100
             * DDM   ***** Preserved *****

952          KK    D360
953          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
954          KM   DETENTION/RETENTION BASINS LOCATED WITHIN 33% OF MESA HIGHLANDS
955          KM        MAXIMUM VOLUME DIVERSION = 49.5 acre-feet
956          DT   BS360    49.5
957          DI       0   10000
958          DQ       0   10000
             * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                          PAGE 26

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

959          KK   RT360
960          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
961          DR   BS360
             * DDM   ***** Preserved *****

962          KK    S360
963          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
964          KM    49.5 ACRE-FEETx43560/36x3600=16.6 cfs
965          RS       1    STOR       0
966          SV       0     .01    49.5      70
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967          SQ       0     3.0    16.6     150
             * DDM   ***** Preserved *****

968          KK    C360
969          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
970          HC       3
             *
             * DDM   ***** Updated *****

971          KK    380A
972          KM   SUB-BASIN 380A
973          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
974          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
975          KM     L =  .66  Kb = .076  Adj. Slope =   91.0
976          BA    .261
977          LG    .170    .250   4.100    .710  21.000
978          UC    .425    .221
979          UA       0       3       5       8      12      20      43      75      90      96
980          UA     100
             *
             * DDM   ***** Preserved *****

981          KK   C380A
982          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
983          HC       2
             *
             * DDM   ***** Updated *****

984          KK    400A
985          KM   SUB-BASIN 400A
986          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
987          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
988          KM     L =  .28  Kb = .094  Adj. Slope =   71.0
989          BA    .048
990          LG    .250    .290   4.000    .640    .000
991          UC    .317    .211
992          UA       0       3       5       8      12      20      43      75      90      96
993          UA     100
             *
             * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 27

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

994          KK   C400A
995          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
996          HC       2
             *
             * DDM   ***** Updated *****

997          KK   380B1
998          KM   SUB-BASIN 380B1
999          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1000         KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1001         KM     L = 1.61  Kb = .047  Adj. Slope =  124.0
1002         BA    .369
1003         LG    .300    .250   4.200    .520  16.000
1004         UC    .471    .414
1005         UA       0       5      16      30      65      77      84      90      94      97
1006         UA     100
             *
             * DDM   ***** Preserved *****

1007         KK  D380B1
1008         KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1009         KM   DETENTION/RETENTION BASINS LOCATED WITHIN MESA HIGHLANDS
1010         KM        MAXIMUM VOLUME DIVERSION = 10.5 acre-feet
1011         DT  B380B1    10.5
1012         DI       0   10000
1013         DQ       0   10000
             *
             * DDM   ***** Preserved *****

1014         KK  T380B1
1015         KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1016         DR  B380B1
             *
             * DDM   ***** Preserved *****

1017         KK  S380B1
```

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1018          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1019          KM    10.5 ACRE-FEETx43560/36x3600=3.5cfs
1020          RS       1    STOR       0
1021          SV       0     .01    10.5    20.0
1022          SQ       0     1.0     3.5    50.0
              *
              * DDM   ***** Preserved *****

1023          KK  C380B1
1024          KM   HYDROGRAPH COMBINATION
1025          HC       2
              *
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 28

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


1026          KK  R380B1
1027          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1028          KM   ROUTING OF FLOW FROM SUB-BASINS 380B1 TO SUB-BASIN 400B1.
1029          RS       7    FLOW      -1
1030          RC    .045    .035    .045    2600    .023
1031          RX       0       1      40      46      56      62     102     103
1032          RY       3       2       2       0       0       2       2       3
              *
              * DDM   ***** Updated *****

1033          KK   400B1
1034          KM   SUB-BASIN 400B1
1035          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1036          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1037          KM     L =  .93  Kb = .057  Adj. Slope =   91.0
1038          BA    .385
1039          LG    .280    .250   4.100    .590  12.000
1040          UC    .433    .238
1041          UA       0       5      16      30      65      77      84      90      94      97
1042          UA     100
              *
              * DDM   ***** Preserved *****

1043          KK  D400B1
1044          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1045          KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
1046          KM        MAXIMUM VOLUME DIVERSION = 5.6 ACRE-FEET
1047          DT  B400B1     5.6
1048          DI       0   10000
1049          DQ       0   10000
              * DDM   ***** Preserved *****

1050          KK  T400B1
1051          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1052          DR  B400B1
              * DDM   ***** Preserved *****

1053          KK  S400B1
1054          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1055          KM     5.6 ACRE-FEETx43560/36x3600 = 2 cfs
1056          RS       1    STOR       0
1057          SV       0     .01     5.6    10.0
1058          SQ       0       1       2    20.0
              * DDM   ***** Preserved *****

1059          KK  C400B1
1060          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1061          HC       2
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 29

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


1062          KK  CC400B
1063          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1064          HC       3
              *
              * DDM   ***** Updated *****

1065          KK   420A2
1066          KM   SUB-BASIN 420A2
1067          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
```

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1068        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1069        KM     L =  .26  Kb = .064  Adj. Slope =   96.0
1070        BA    .022
1071        LG    .350    .350   4.150    .430    .000
1072        UC    .208    .194
1073        UA       0       5      16      30      65      77      84      90      94      97
1074        UA     100
            *
            * DDM   ***** Preserved *****

1075        KK  C400A2
1076        KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1077        HC       2
            *
            * DDM   ***** Updated *****

1078        KK   400B3
1079        KM   SUB-BASIN 400B3
1080        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1081        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1082        KM     L =  .26  Kb = .064  Adj. Slope =  135.0
1083        BA    .024
1084        LG    .300    .250   4.500    .430    .000
1085        UC    .183    .161
1086        UA       0       5      16      30      65      77      84      90      94      97
1087        UA     100
            *
            * DDM   ***** Preserved *****

1088        KK  D400B3
1089        KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1090        KM   DETENTION/RETENTION BASIN LOCATED WITHIN SAGUARO VISTA SUBDIVISION
1091        KM        MAXIMUM VOLUME DIVERSION = 1.6 ACRE-FEET
1092        DT  B400B3     1.6
1093        DI       0   10000
1094        DQ       0   10000
            * DDM   ***** Preserved *****

1095        KK  T400B3
1096        KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1097        DR  B400B3
            * DDM   ***** Preserved *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1098        KK  S400B3
1099        KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1100        KM     1.6 ACRE-FEETx43560/36x3600 = 1 cfs
1101        RS       1    STOR       0
1102        SV       0     .01     1.6     5.0
1103        SQ       0       1       1    10.0
            * DDM   ***** Preserved *****

1104        KK  C400B3
1105        KM   HYDROGRAPH COMBINATION
1106        HC       2
            * DDM   ***** Preserved *****

1107        KK  R400B3
1108        KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1109        KM   ROUTING OF FLOW FROM 400B3 TO 380B3
1110        RS       3    FLOW      -1
1111        RC    .045    .035    .045    1500    .020
1112        RX       0       1      40      46      56      62     102     103
1113        RY       3       2       2       0       0       2       2       3
            *
            * DDM   ***** Updated *****

1114        KK   380B3
1115        KM   SUB-BASIN 380B3
1116        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1117        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1118        KM     L =  .69  Kb = .054  Adj. Slope =  138.0
1119        BA    .123
1120        LG    .300    .250   4.350    .480  16.000
1121        UC    .279    .220
1122        UA       0       5      16      30      65      77      84      90      94      97
1123        UA     100
            *
```

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                * DDM   ***** Preserved *****

1124            KK  D380B3
1125            KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1126            KM        MAXIMUM VOLUME DIVERSION = 4.0 acre-feet
1127            DT  B380B3     4.0
1128            DI       0   10000
1129            DQ       0   10000
                *
                * DDM   ***** Preserved *****

1130            KK  T380B3
1131            KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1132            DR  B380B3
                *
                * DDM   ***** Preserved *****
1                                       HEC-1 INPUT                                                    PAGE 31

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


1133            KK  S380B3
1134            KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1135            KM     4.0 ACRE-FEETx43560/36x3600= 2.cfs
1136            RS       1    STOR       0
1137            SV       0     .01     4.0     6.0
1138            SQ       0     0.5     2.0    20.0
                *
                * DDM   ***** Preserved *****

1139            KK  C380B3
1140            KM   HYDROGRAPH COMBINATION
1141            HC       3
                *
                * DDM   ***** Preserved *****

1142            KK  R380B3
1143            KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1144            KM   ROUTING OF FLOW FROM SUB-BASINS 380B3 TO SUB-BASIN 380B2.
1145            RS       3    FLOW      -1
1146            RC    .045    .035    .045    2300    .022
1147            RX       0       1      40      46      56      62     102     103
1148            RY       3       2       2       0       0       2       2       3
                *
                * DDM   ***** Updated *****

1149            KK   380B2
1150            KM   SUB-BASIN 380B2
1151            KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1152            KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1153            KM     L =  .55  Kb = .055  Adj. Slope =  136.0
1154            BA    .096
1155            LG    .300    .250   3.950    .580  15.000
1156            UC    .250    .187
1157            UA       0       5      16      30      65      77      84      90      94      97
1158            UA     100
                *
                * DDM   ***** Preserved *****

1159            KK  C380B2
1160            KM   HYDROGRAPH COMBINATION
1161            HC       2
                *
                * DDM   ***** Preserved *****

1162            KK  R380B2
1163            KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1164            KM   ROUTING OF FLOW FROM SUB-BASINS 380B2 TO SUB-BASIN 400B2.
1165            RS       9    FLOW      -1
1166            RC    .045    .035    .045    4000    .018
1167            RX       0       1      40      46      56      62     102     103
1168            RY       3       2       2       0       0       2       2       3
                *
                * DDM   ***** Updated *****
1                                       HEC-1 INPUT                                                    PAGE 32

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


1169            KK   400B2
1170            KM   SUB-BASIN 400B2
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1171          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1172          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1173          KM     L =  .93  Kb = .051  Adj. Slope =  118.0
1174          BA    .194
1175          LG    .300    .250   4.150    .530    .000
1176          UC    .363    .288
1177          UA       0       5      16      30      65      77      84      90      94      97
1178          UA     100
              *
              * DDM   ***** Preserved *****

1179          KK  C400B2
1180          KM   HYDROGRAPH COMBINATION
1181          HC       2
              *
              * DDM   ***** Preserved *****

1182          KK  R400B2
1183          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1184          KM   ROUTING OF FLOW FROM SUB-BASINS 400B2 TO SUB-BASIN 420A1.
1185          RS       3    FLOW      -1
1186          RC    .045    .035    .045    1800    .018
1187          RX       0       1      40      46      56      62     102     103
1188          RY       3       2       2       0       0       2       2       3
              *
              * DDM   ***** Updated *****

1189          KK   420A1
1190          KM   SUB-BASIN 420A1
1191          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1192          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1193          KM     L = 1.20  Kb = .044  Adj. Slope =  108.0
1194          BA    .566
1195          LG    .300    .270   4.250    .480  17.000
1196          UC    .387    .207
1197          UA       0       5      16      30      65      77      84      90      94      97
1198          UA     100
              *
              * DDM   ***** Preserved *****

1199          KK  D420A1
1200          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1201          KM   DETENTION/RETENTION BASINS LOCATED WITHIN GRAY FOX SUBDIVISION
1202          KM        MAXIMUM VOLUME DIVERSION = 11.2 acre-feet
1203          DT  B420A1    11.2
1204          DI       0   10000
1205          DQ       0   10000
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 33

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


1206          KK  T420A1
1207          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN

1208          DR  B420A1
              * DDM   ***** Preserved *****

1209          KK  S420A1
1210          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1211          KM    11.2 ACRE-FEETx43560/36x3600= 4cfs
1212          RS       1    STOR       0
1213          SV       0     .01    11.2      20
1214          SQ       0     1.0     4.0      40
              * DDM   ***** Preserved *****

1215          KK   C420A
1216          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1217          HC       4
              *
              * DDM   ***** Updated *****

1218          KK     370
1219          KM   SUB-BASIN 370
1220          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1221          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1222          KM     L = 1.90  Kb = .044  Adj. Slope =  203.5
1223          BA    .672
1224          LG    .340    .320   4.650    .330   8.000
1225          UC    .404    .284
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1226          UA       0       3       5       8      12      20      43      75      90      96
1227          UA     100
              *
              * DDM   ***** Updated *****

1228          KK     395
1229          KM   SUB-BASIN 395
1230          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1231          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1232          KM     L = 1.30  Kb = .051  Adj. Slope =  219.2
1233          BA    .199
1234          LG    .310    .260   4.900    .340  18.000
1235          UC    .329    .334
1236          UA       0       5      16      30      65      77      84      90      94      97
1237          UA     100
              * DDM   ***** Preserved *****

1238          KK    C370
1239          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1240          HC       2
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 34

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


1241          KK    D370
1242          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN LOCATED WITHIN SUB-BASINS
1243          KM   370 AND 395.
1244          DT   BS370
1245          DI       0     140    5000
1246          DQ       0       0    4860
              * DDM   ***** Preserved *****

1247          KK   RT370
1248          KM   RETRIEVE FLOW FROM DIVERSION
1249          DR   BS370
              * DDM   ***** Preserved *****

1250          KK    S370
1251          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1252          KM      32 ACRE-FEETx43560/36x3600 = 11cfs
1253          RS       1    STOR       0
1254          SV       0     .01      32      40
1255          SQ       0       4      35      40
              * DDM   ***** Preserved *****

1256          KK   CC370
1257          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1258          HC       2
              * DDM   ***** Preserved *****


1259          KK    R370
1260          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1261          KM   ROUTING OF FLOW FROM SUB-BASINS 370 AND 395 TO SUB-BASIN 380.
1262          RS       3    FLOW      -1
1263          RC    .045    .035    .045    2600    .023
1264          RX       0       1      40      46      56      62     102     103
1265          RY       3       2       2       0       0       2       2       3
              *
              * DDM   ***** Updated *****

1266          KK     385
1267          KM   SUB-BASIN 385
1268          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1269          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .997
1270          KM     L = 2.30  Kb = .045  Adj. Slope =  303.0
1271          BA    .527
1272          LG    .340    .360   5.600    .220  13.000
1273          UC    .383    .358
1274          UA       0       3       5       8      12      20      43      75      90      96
1275          UA     100
              * DDM   ***** Updated *****

1276          KK    415B
1277          KM   SUB-BASIN 415B
1278          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1279          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1280          KM     L = 1.59  Kb = .048  Adj. Slope =  315.0
1281          BA    .329
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1                                    HEC-1 INPUT                                                    PAGE 35

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

1282          LG    .320    .310   5.300    .260  19.000
1283          UC    .308    .274
1284          UA       0       5      16      30      65      77      84      90      94      97
1285          UA     100
              * DDM   ***** Preserved *****

1286          KK   C415B
1287          KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1288          HC       2
              *
              * DDM   ***** Preserved *****

1289          KK   D415B
1290          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1291          KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 32 AC-FT @ 5' DEPTH.
1292          DT  BS415B
1293          DI       0     150    5000
1294          DQ       0       0    4850
              *
              * DDM   ***** Preserved *****

1295          KK  RT415B
1296          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1297          DR  BS415B
              *
              * DDM   ***** Preserved *****

1298          KK   S415B
1299          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1300          KM      32 ACRE-FEETx43560/36x3600 = 11cfs
1301          RS       1    STOR       0
1302          SV       0     .01      32      40
1303          SQ       0       5      50      60
              * DDM   ***** Preserved *****

1304          KK  CC415B
1305          KM   HYDROGRAPH COMBINATION OF 415 DIVERSION.
1306          HC       2
              * DDM   ***** Preserved *****

1307          KK   R415B
1308          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1309          KM   ROUTING OF FLOW FROM 415C TO 415B

1310          RS       3    FLOW      -1
1311          RC    .045     .03    .045    2590    .024
1312          RX       0       1      40      46      56      62     102     103
1313          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1314          KK     390
1315          KM   SUB-BASIN 390
1316          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1317          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1318          KM     L =  .70  Kb = .050  Adj. Slope =  299.4
1319          BA    .248
1                                    HEC-1 INPUT                                                    PAGE 36

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

1320          LG    .300    .250   4.700    .380  18.000
1321          UC    .204    .106
1322          UA       0       5      16      30      65      77      84      90      94      97
1323          UA     100
              * DDM   ***** Preserved *****

1324          KK    D390
1325          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1326          KM   DETENTION/RETENTION BASINS LOCATED WITHIN THUNDER MOUNTAIN ESTATES
1327          KM        MAXIMUM VOLUME DIVERSION  = 3.5 acre-feet
1328          DT   BS390     3.5
1329          DI       0   10000
1330          DQ       0   10000
              * DDM   ***** Preserved *****

1331          KK   RT390
1332          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
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```
1333          DR   BS390
              * DDM   ***** Preserved *****

1334          KK    S390
1335          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1336          KM     3.5 ACRE-FEETx43560/36x3600=1.2cfs
1337          RS       1    STOR       0
1338          SV       0     .01     3.5     6.0
1339          SQ       0     0.5     1.2    20.0
              * DDM   ***** Preserved *****

1340          KK    C390
1341          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1342          HC       4
              * DDM   ***** Preserved *****

1343          KK    R390
1344          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1345          KM   FROM SUB-BASIN 390 TO SUB-BASIN 420B
1346          RS       7    FLOW      -1
1347          RC    .045    .045    .045    5500    .020
1348          RX       0       1      40      46      56      62     102     103
1349          RY       3       2       2       0       0       2       2       3
              * DDM   ***** Updated *****

1350          KK    420B
1351          KM   SUB-BASIN 420B

1352          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1353          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1354          KM     L = 1.00  Kb = .049  Adj. Slope =  150.0
1355          BA    .279
1356          LG    .300    .250   3.910    .590  15.000
1357          UC    .333    .226
1358          UA       0       5      16      30      65      77      84      90      94      97
1359          UA     100
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 37

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


1360          KK   C420B
1361          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1362          HC       2
              *

1363          KK     440
1364          KM   SUB-BASIN 440
1365          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1366          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1367          KM     L =  .40  Kb = .039  Adj. Slope =  315.0
1368          BA    .080
1369          LG    .190    .380   6.400    .140  13.000
1370          UC    .129    .077
1371          UA       0       3       5       8      12      20      43      75      90      96
1372          UA     100
              * DDM   ***** Preserved *****

1373          KK     R70
1374          KM   ROUTE FLOW FROM SUB-BASIN 440 TO C108
1375          RS       2    FLOW      -1
1376          RC     .05    .035     .05    2250     .08
1377          RX    1000    1025    1050    1070    1075    1095    1120    1145
1378          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1379          KK     441
1380          KM   SUB-BASIN 441
1381          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1382          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1383          KM     L =  .28  Kb = .069  Adj. Slope =  315.0
1384          BA    .010
1385          LG    .300    .250   5.600    .220   5.000
1386          UC    .150    .225
1387          UA       0       5      16      30      65      77      84      90      94      97
1388          UA     100
              * DDM   ***** Preserved *****

1389          KK    C108
1390          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 440 & 441
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1391          HC       2
              * DDM   ***** Preserved *****

1392          KK      D4
1393          KM        SPLIT FLOW WITH TWO 42 INCH PIPES TO WEST AND SOUTH
1394          DT   SPLIT
1395          DI       0      14      40      82     120     154     180
1396          DQ       0       7      20      41      60      77      90
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                PAGE 38

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


1397          KK    R108
1398          KM        ROUTE FLOW FROM SUB-BASIN C108 TO C67
1399          RS       2    FLOW      -1
1400          RC     .05    .035     .05    3200      .1
1401          RX    1000    1025    1050    1070    1075    1095    1120    1145
1402          RY      30    22.9    15.7      10      10    15.7    22.9      30
              * DDM   ***** Updated *****

1403          KK     442
1404          KM   SUB-BASIN 442
1405          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1406          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1407          KM     L =  .83  Kb = .055  Adj. Slope =  274.2
1408          BA    .100
1409          LG    .300    .270   3.290    .770   5.000
1410          UC    .258    .264
1411          UA       0       5      16      30      65      77      84      90      94      97
1412          UA     100
              * DDM   ***** Preserved *****

1413          KK     C67
1414          KM   COMBINE FLOW FROM SUB-BASIN 442 & DIV4
1415          HC       2
              * DDM   ***** Preserved *****

1416          KK      D6
1417          KM        OFFLINE BASIN WITH 25 FOOT WEIR SET AT 2.5 FEET ABOVE BOTTOM OF CHANNEL
1418          KM        FLOW CONTINUES BEYOND BASIN THROUGH 2-30" PIPES
1419          DT  BASIN4     3.3
1420          DI       0      10      32      44    79.9   132.5     198   272.9   356.8
1421          DQ       0       0       0       0    23.9    67.5     124   190.9   266.8
              * DDM   ***** Preserved *****

1422          KK    RTD6
1423          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1424          DR  BASIN4
              * DDM   ***** Preserved *****

1425          KK     SD6
1426          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1427          KM     3.3 ACRE-FEETx43560/36x3600=1.1cfs
1428          RS       1    STOR       0
1429          SV       0     .01     3.3
1430          SQ       0     0.2     1.1
              * DDM   ***** Preserved *****

1431          KK     CD6
1432          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1433          HC       2
              * DDM   ***** Updated *****
1                                        HEC-1 INPUT                                                PAGE 39

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


1434          KK     443
1435          KM   SUB-BASIN 443
1436          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1437          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1438          KM     L =  .71  Kb = .050  Adj. Slope =  315.0
1439          BA    .080
1440          LG    .250    .190   8.000    .080  10.000
1441          UC    .196    .194
1442          UA       0       5      16      30      65      77      84      90      94      97
1443          UA     100
              * DDM   ***** Preserved *****
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1444        KK     D66
1445        KM        DIVERT FLOW INTO 3 NATURAL WASHES WITH ONE 24" PIPE IN EACH WASH.
1446        KM        EACH PIPE CAPACITY BASED ON 4 FEET OF HEAD
1447        DT   WSH66
1448        DI       0      78     100     200
1449        DQ       0      78      78      78
            * DDM   ***** Preserved *****

1450        KK    R113
1451        KM        ROUTE FLOW FROM C113 TO C114
1452        RS       1    FLOW      -1
1453        RC    .019    .019    .019    1300    .029
1454        RX    1000    1004    1008    1012    1018    1022    1026    1030
1455        RY      17   15.33   12.67      10      10   12.67   15.33      17
            * DDM   ***** Preserved *****

1456        KK    C114
1457        KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 67 AND C113
1458        HC       2
            * DDM   ***** Updated *****

1459        KK     444
1460        KM   SUB-BASIN 444
1461        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1462        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1463        KM     L =  .33  Kb = .034  Adj. Slope =  315.0
1464        BA    .040
1465        LG    .130    .350   4.450    .320   1.000
1466        UC    .112    .084
1467        UA       0       3       5       8      12      20      43      75      90      96
1468        UA     100
            * DDM   ***** Preserved *****

1469        KK     R58
1470        KM   ROUTE FLOW FROM SUB-BASIN 444 TO C107
1471        RS       2    FLOW      -1
1472        RC     .05    .035     .05    2370   .0516
1473        RX    1000    1010    1020    1050    1055    1085    1095    1105
1474        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Updated *****
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1475        KK     445
1476        KM   SUB-BASIN 445
1477        KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1478        KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1479        KM     L =  .82  Kb = .036  Adj. Slope =  315.0
1480        BA    .190
1481        LG    .170    .320   3.470    .590   3.000
1482        UC    .192    .130
1483        UA       0       5      16      30      65      77      84      90      94      97
1484        UA     100
            * DDM   ***** Preserved *****

1485        KK    C107
1486        KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 444 & 445
1487        HC       2
            * DDM   ***** Preserved *****

1488        KK    R107
1489        KM        ROUTE FLOW FROM C107 TO C109
1490        RS       2    FLOW      -1
1491        RC     .05    .035     .05     700   .0516
1492        RX    1000    1010    1020    1050    1055    1085    1095    1105
1493        RY      19      18      17      10      10      17      18      19
            * DDM   ***** Preserved *****

1494        KK    RTB2
1495        KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
1496        DR   SPLIT
            * DDM   ***** Preserved *****

1497        KK  RSPLIT
1498        KM        ROUTE FLOW FROM SPLIT TO C109
1499        RS       1    FLOW      -1
1500        RC     .05    .035     .05     800     .05
1501        RX    1000    1025    1050    1070    1075    1095    1120    1145
1502        RY      30    22.9    15.7      10      10    15.7    22.9      30
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                 * DDM   ***** Updated *****

1503             KK     446
1504             KM   SUB-BASIN 446
1505             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1506             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1507             KM     L =  .46  Kb = .061  Adj. Slope =  303.9
1508             BA    .040
1509             LG    .270    .250   4.500    .400  19.000
1510             UC    .183    .189
1511             UA       0       5      16      30      65      77      84      90      94      97
1512             UA     100
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 41

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


1513             KK    C109
1514             KM        COMBINE HYDROGRAPHS FROM COMBINES C107 AND C108
1515             HC       3
                 * DDM   ***** Preserved *****

1516             KK      D5
1517             KM        DIVERT FLOW INTO WASHES TOWARDS WEST
1518             KM        DIVERSION THROUGH 36" PIPE WITH 3 FEET OF HEAD
1519             DT  WSH404
1520             DI       0    40.7    71.2   121.6     190     276   379.4   500.6
1521             DQ       0      35      35      35      35      35      35      35
                 * DDM   ***** Preserved *****

1522             KK    R109
1523             KM        ROUTE FLOW FROM C109 TO C110
1524             RS       1    FLOW      -1
1525             RC    .019    .019    .019    3080     .05
1526             RX    1000    1005    1010    1015    1025    1030    1035    1040
1527             RY   13.75    12.5   11.25      10      10   11.25    12.5   13.75
                 * DDM   ***** Updated *****

1528             KK     447
1529             KM   SUB-BASIN 447
1530             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1531             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1532             KM     L =  .49  Kb = .056  Adj. Slope =  221.0
1533             BA    .090
1534             LG    .250    .270   3.350    .870  30.000
1535             UC    .208    .145
1536             UA       0       5      16      30      65      77      84      90      94      97
1537             UA     100
                 * DDM   ***** Preserved *****

1538             KK   RT404
1539             KM        RETRIEVE DIVERTED FLOW FOR WASH 109
1540             DR  WSH404
                 * DDM   ***** Preserved *****

1541             KK    R404
1542             KM        ROUTE FLOW FROM C110 TO C110
1543             RS       6    FLOW      -1
1544             RC    .019    .019    .019    3540     .03
1545             RX    1000    1012    1016    1020    1025    1029    1033    1045
1546             RY      15      12      11      10      10      11      12      15
                 * DDM   ***** Preserved *****

1547             KK    C110
1548             KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 447 AND R404
1549             HC       3
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 42

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


1550             KK    R110
1551             KM        ROUTE FLOW FROM C110 TO C115
1552             RS       1    FLOW      -1
1553             RC    .019    .019    .019     580   .0291
1554             RX    1000    1012    1016    1020    1035    1039    1043    1055
1555             RY      15      12      11      10      10      11      12      15
                 * DDM   ***** Preserved *****
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1556          KK    C115
1557          KM        COMBINE HYDROGRAPHS FROM C114 AND C110
1558          HC       2
              * DDM   ***** Preserved *****

1559          KK    R115
1560          KM        ROUTE FLOW FROM C115 TO Sub 453
1561          RS       1    FLOW      -1
1562          RC    .019    .019    .019    2125    .029
1563          RX    1000    1012    1016    1020    1035    1039    1043    1055
1564          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Updated *****

1565          KK     448
1566          KM   SUB-BASIN 448
1567          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1568          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1569          KM     L =  .36  Kb = .042  Adj. Slope =  315.0
1570          BA    .045
1571          LG    .170    .310   4.200    .390  11.000
1572          UC    .133    .102
1573          UA       0       5      16      30      65      77      84      90      94      97
1574          UA     100
              * DDM   ***** Updated *****

1575          KK     449
1576          KM   SUB-BASIN 449
1577          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1578          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1579          KM     L =  .40  Kb = .054  Adj. Slope =  315.0
1580          BA    .050
1581          LG    .260    .280   3.500    .640   6.000
1582          UC    .167    .134
1583          UA       0       5      16      30      65      77      84      90      94      97
1584          UA     100
              * DDM   ***** Preserved *****

1585          KK   C6364
1586          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 448 & 449
1587          HC       2
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 43

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


1588          KK   R6364
1589          KM   ROUTE FLOW FROM C116 AND SUB-BASINS 448 AND 449
1590          RS       5    FLOW      -1
1591          RC     .05    .035     .05    4375   .0333
1592          RX    1000    1027    1053    1080    1090    1117    1143    1170
1593          RY      15   13.33   11.67      10      10   11.67   13.33      15
              * DDM   ***** Updated *****

1594          KK     450
1595          KM   SUB-BASIN 450
1596          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1597          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1598          KM     L =  .85  Kb = .057  Adj. Slope =  210.5
1599          BA    .070
1600          LG    .340    .350   3.630    .570   4.000
1601          UC    .296    .383
1602          UA       0       3       5       8      12      20      43      75      90      96
1603          UA     100
              * DDM   ***** Updated *****

1604          KK     451
1605          KM   SUB-BASIN 451
1606          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1607          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1608          KM     L =  .57  Kb = .063  Adj. Slope =  175.0
1609          BA    .025
1610          LG    .340    .340   3.290    .750   3.000
1611          UC    .271    .453
1612          UA       0       3       5       8      12      20      43      75      90      96
1613          UA     100
              * DDM   ***** Preserved *****

1614          KK    C451
1615          KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451
1616          HC       2
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                 * DDM   ***** Preserved *****

1617             KK    RT66
1618             KM        RETRIEVE DIVERTED FLOW FROM SUB-BASIN 66
1619             DR   WSH66
                 * DDM   ***** Updated *****

1620             KK     452
1621             KM   SUB-BASIN 452
1622             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1623             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1624             KM     L =  .43  Kb = .055  Adj. Slope =  315.0
1625             BA    .040
1626             LG    .260    .280   3.700    .550   9.000
1627             UC    .171    .166
1628             UA       0       5      16      30      65      77      84      90      94      97
1629             UA     100
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 44

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


1630             KK   C6465
1631             KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 443 AND 452
1632             HC       2
                 * DDM   ***** Preserved *****

1633             KK   R6566
1634             KM        ROUTE FLOW FROM DIVERSIONS 65 AND 66 TO C116
1635             RS       3    FLOW      -1
1636             RC     .05    .035     .05    2435   .0282
1637             RX    1000    1045    1090    1150    1160    1220    1265    1310
1638             RY      25      23      20      10      10      20      23      25
                 * DDM   ***** Preserved *****

1639             KK    C116
1640             KM   COMBINE HYDROGRAPHS FROM SUB-BASINS 450 & 451 AND R6364 & R6465
1641             HC       3
                 * DDM   ***** Preserved *****

1642             KK  BASIN5
1643             KM        RESERVOIR WITHIN PARCEL 31      2-48 INCH PIPES AT OUTFALL
1644             KM        BASIN 5 FEET DEEP
1645             RS       1    ELEV       0
1646             SV       0     4.5     9.9
1647             SQ       0      69     190
1648             SE       0     2.5       5
                 * DDM   ***** Preserved *****

1649             KK    R116
1650             KM   ROUTE FLOW FROM C116 TO C117
1651             RS       2    FLOW      -1
1652             RC     .05    .035     .05    1300   .0333
1653             RX    1000    1100    1200    1300    1320    1420    1520    1620
1654             RY      13      12      11      10      10      11      12      13
                 * DDM   ***** Updated *****

1655             KK     453
1656             KM   SUB-BASIN 453
1657             KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1658             KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1659             KM     L =  .58  Kb = .058  Adj. Slope =  138.0
1660             BA    .060
1661             LG    .290    .300   3.290    .820  18.000
1662             UC    .275    .284
1663             UA       0       5      16      30      65      77      84      90      94      97
1664             UA     100
                 * DDM   ***** Preserved *****

1665             KK    C117
1666             KM   COMBINE HYDROGRAPHS FROM SUB-BASIN 453 AND R116
1667             HC       2
                 * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 45

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


1668             KK    C118
1669             KM   COMBINE HYDROGRAPHS FROM R115 AND C117
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1670          HC       2
              * DDM   ***** Preserved *****

1671          KK    R118
1672          KM        ROUTE FLOW FROM C118 TO  DIV7
1673          RS       1    FLOW      -1
1674          RC    .019    .019    .019    1500    .024
1675          RX    1000    1012    1016    1020    1035    1039    1043    1055
1676          RY      15      12      11      10      10      11      12      15
              * DDM   ***** Preserved *****

1677          KK      D7
1678          KM        OFFLINE BASIN AT NORTH MOUNTAIN RIDGE   FLOWS ENTER BASIN OVER
1679          KM        30' WEIR SET AT 5.3' ABOVE THE CHANNEL BOTTOM, Vol = 3.6 A-F
1680          DT  BASIN6     3.6
1681          DI       0     363     487     563     645     900
1682          DQ       0       2      10      15      25     260
              * DDM   ***** Preserved *****

1683          KK    RTD7
1684          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1685          DR  BASIN6
              * DDM   ***** Preserved *****

1686          KK     SD7
1687          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1688          KM     3.6 ACRE-FEETx43560/36x3600=1.2cfs
1689          RS       1    STOR       0
1690          SV       0     .01     3.6     4.0
1691          SQ       0     0.2     1.2     1.5
              * DDM   ***** Preserved *****

1692          KK     CD7
1693          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1694          HC       2
              * DDM   ***** Updated *****

1695          KK     454
1696          KM   SUB-BASIN 454
1697          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1698          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1699          KM     L = 1.23  Kb = .051  Adj. Slope =  163.0
1700          BA    .180
1701          LG    .300    .310   3.780    .560  14.000
1702          UC    .379    .395
1703          UA       0       5      16      30      65      77      84      90      94      97
1704          UA     100
              *
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 46

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


1705          KK    C454
1706          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 454 AND CDIV7
1707          HC       2
              * DDM   ***** Preserved *****

1708          KK    R454
1709          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1710          KM   ROUTE FLOW FROM C454 TO 415C
1711          RS       3    FLOW      -1
1712          RC    .045    .035    .045    2200    .009
1713          RX       0      .5       1      33      42      67    67.5      68
1714          RY       5       4       4       0       0       6       6       6
              *
              * DDM   ***** Updated *****

1715          KK    415A
1716          KM   SUB-BASIN 415A
1717          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1718          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1719          KM     L = 1.21  Kb = .049  Adj. Slope =  140.0
1720          BA    .280
1721          LG    .300    .260   3.630    .710  15.000
1722          UC    .400    .322
1723          UA       0       5      16      30      65      77      84      90      94      97
1724          UA     100
              * DDM   ***** Preserved *****
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1725          KK   C415A
1726          KM        COMBINE HYDROGRAPHS FROM R454 AND 415A
1727          HC       2
              *
              * DDM   ***** Preserved *****

1728          KK  CC415A
1729          KM        COMBINE HYDROGRAPHS FROM CC420B AND 415A
1730          HC       2
              *

1731          KK   D420B
1732          KM   DIVERT FLOW INTO OFFLINE DETENTION BASIN
1733          KM   MAXIMUM STORAGE VOLUME FOR DIVERSION = 8.0 AC-FT @ 5' DEPTH.
1734          DT  BS420B
1735          DI       0    1500    5000
1736          DQ       0       0    3500
              *
              * DDM   ***** Preserved *****

1737          KK  RT420B
1738          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1739          DR  BS420B
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                          PAGE 47

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


1740          KK   S420B
1741          KM   RETRIEVE FLOW INTO OFFLINE BASIN AND BLEED OFF WITHIN 36 HOURS.
1742          KM     8.0 ACRE-FEETx43560/36x3600 = 2.7 cfs
1743          RS       1    STOR       0
1744          SV       0     0.1     8.0      20
1745          SQ       0       1      30      55
              *
              * DDM   ***** Preserved *****

1746          KK  CC420B
1747          KM   HYDROGRAPH COMBINATION at D/S of the Basin "H"
1748          HC       2
              *
              * DDM   ***** Preserved *****

1749          KK   R415A
1750          KM   CHANNEL GEOMETRY OBTAINED FROM 2' CONTOUR MAPPING.
1751          KM   ROUTING OF FLOW FROM C415A TO 455C
1752          RS       2    FLOW      -1
1753          RC    .045     .03    .045    4100    .024
1754          RX       0      .5       1       8      16      23    23.5      24
1755          RY       8       8       8       0       0       8       8       8
              *
              * DDM   ***** Updated *****

1756          KK     455
1757          KM   SUB-BASIN 455
1758          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1759          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .993
1760          KM     L = 1.70  Kb = .041  Adj. Slope =  146.0
1761          BA   1.111
1762          LG    .270    .280   3.700    .640  24.000
1763          UC    .421    .204

1764          UA       0       5      16      30      65      77      84      90      94      97
1765          UA     100
              * DDM   ***** Preserved *****

1766          KK    D455
1767          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1768          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1769          KM   FOR BASIN #: 30      34      43      47&58
1770          KM        MAXIMUM VOLUME DIVERSION = 74.1 acre-feet
1771          DT   BS455    74.1
1772          DI       0   10000
1773          DQ       0   10000
              * DDM   ***** Preserved *****

1774          KK   RT455
1775          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1776          DR   BS455
              * DDM   ***** Preserved *****
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1                                   HEC-1 INPUT                                                    PAGE 48

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

1777          KK    S455
1778          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1779          KM    74.1 ACRE-FEETx43560/36x3600=25cfs
1780          RS       1    STOR       0
1781          SV       0     .01    74.1   100.0
1782          SQ       0     3.0     .25   250.0
              * DDM   ***** Preserved *****

1783          KK    C455
1784          KM   HYDROGRAPH COMBINATION FOR SUB-BASIN 455 AND DIVERTED BASIN STORAGE OF 455
1785          HC       2
              * DDM   ***** Preserved *****

1786          KK   CC455
1787          KM  HYDROGRAPH COMBINATION OF 420C, R415 AND C455
1788          HC       3
              * DDM   ***** Preserved *****

1789          KK    S440
1790          KM   SPOOK HILL FRS PLANS DATED 6/15/77
1791          KM   OUTLET PIPE=7'x7.5'RCBC; L=70 INLET INV.=1566; OUTLET INV.=1566
1792          KM   EMERGENCY SPILLWAY ELEV.=1582; PRINCIPLE SPILLWAY ELEV.=1577.5
1793          KM   STORAGE VOLUME BELOW PRINCIPLE SPILLWAY FOR SEDIMENT = 271 ACRE-FEET
1794          RS       1    STOR       0
1795          SV     0.0      81   211.0  265.72  692.96  896.16  1120.0 1630.34  2230.9 3311.68
1796          SQ     0.0     1.0     3.0     8.0  515.00  780.00  825.00  3184.7  7426.0 16007.3
1797          SE   577.0  578.00  579.00  579.36  581.86  582.86  583.86  585.86  587.86  590.86
              * DDM   ***** Preserved *****

1798          KK    R455
1799          KM   ROUTE FLOW FROM SPOOK HILL FRS TO SUB-BASIN 480
1800          RS      15    FLOW      -1
1801          RC    .035    .025    .035    7000   .0002
1802          RX       0       1       2      28      58      84      85      86
1803          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1804          KK     480
1805          KM   SUB-BASIN 480
1806          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1807          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .996
1808          KM     L = 1.21  Kb = .042  Adj. Slope =  165.0
1809          BA    .731
1810          LG    .270    .270   3.580    .730  27.000
1811          UC    .325    .148
1812          UA       0       5      16      30      65      77      84      90      94      97
1813          UA     100
              * DDM   ***** Preserved *****
1                                   HEC-1 INPUT                                                    PAGE 49

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

1814          KK    D480
1815          KM        DIVERT FLOW INTO ONLINE  DETENTION BASIN
1816          KM   DETENTION/RETENTION BASINS LOCATED WITHIN LAS SENDAS ADDENDUM III
1817          KM   FOR BASIN #: 18 & 26
1818          KM        MAXIMUM VOLUME DIVERSION = 16.5 acre-feet
1819          DT   BS480    16.5
1820          DI       0   10000
1821          DQ       0   10000
              * DDM   ***** Preserved *****

1822          KK   RT480
1823          KM   RETRIEVE FLOW FROM DIVERSION INTO ONLINE BASIN
1824          DR   BS480
              * DDM   ***** Preserved *****

1825          KK    S480
1826          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1827          KM    16.5 ACRE-FEETx43560/36x3600=5.5cfs
1828          RS       1    STOR       0
1829          SV       0     .01    16.5    30.0
1830          SQ       0     3.0     5.6    50.0
              * DDM   ***** Preserved *****
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1831          KK    C480
1832          KM   HYDROGRAPH COMBINATION FOR SPOOK HILL FRS
1833          HC       2
              * DDM   ***** Preserved *****

1834          KK   CC480
1835          KM   HYDROGRAPH COMBINATION AT SUBBASIN 480
1836          HC       2   0.731
              * DDM   ***** Preserved *****

1837          KK    R480
1838          KM   ROUTE FLOW FROM SUB-BASIN 480 TO SUBBASIN 462
1839          RS       7    FLOW      -1
1840          RC    .035    .025    .035    2800   .0002
1841          RX       0       1       2      28      58      84      85      86
1842          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****

1843          KK     456
1844          KM   SUB-BASIN 456
1845          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1846          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
1847          KM     L =  .94  Kb = .045  Adj. Slope =  315.0
1848          BA    .260
1849          LG    .300    .380   5.600    .200  12.000
1850          UC    .217    .139
1851          UA       0       5      16      30      65      77      84      90      94      97
1852          UA     100
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 50

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


1853          KK      D1
1854          KM        DIVERT FLOW INTO OFFLINE DETENTION BASIN
1855          KM        WEIR FOR BASIN SET AT 4 FEET ABOVE CHANNEL BOTTOM
1856          DT  BASIN1     4.0
1857          DI       0    11.1   127.9   234.4   577.7   789.9  1025.5  1280.9  1555.7
1858          DQ       0       0       0    47.7     248   381.8   533.6   701.5     884
              * DDM   ***** Preserved *****

1859          KK     CD2
1860          KM        SPLIT OUT FLOW FOR WASHES THAT FLOW TO THE SOUTH FROM
1861          KM        WASHES THAT DRAIN TO THE WES, SOUTHERN WASHES FED BY 30" & 24" PIPE
1862          DT    WA30
1863          DI       0    11.1   127.9   189.6   329.7     408   491.9   579.4   671.7
1864          DQ       0    11.1    38.4    48.2      63    69.5      76      81      86
              * DDM   ***** Preserved *****

1865          KK    R456
1866          KM        ROUTE FLOW FROM SUB-BASIN 51 TO C101
1867          RS       2    FLOW      -1
1868          RC     .05    .035     .05    3800    .044
1869          RX    1000    1010    1020    1036    1041    1057    1067    1077
1870          RY   14.88   14.44      14      10      10      14   14.44   14.88
              * DDM   ***** Updated *****

1871          KK     457
1872          KM   SUB-BASIN 457
1873          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1874          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1875          KM     L = 1.01  Kb = .045  Adj. Slope =  308.8
1876          BA    .190
1877          LG    .270    .330   3.950    .460   6.000
1878          UC    .237    .195
1879          UA       0       5      16      30      65      77      84      90      94      97
1880          UA     100
              * DDM   ***** Preserved *****

1881          KK    C101
1882          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 50 AND 51
1883          HC       2
              * DDM   ***** Preserved *****

1884          KK      D3
1885          KM        RESERVOIR AT THE EDGE OF THE PROPERTY   FLOW FROM CHANNEL
1886          KM        DIVERTED  INTO OFFLINE BASIN A 25' WEIR SET AT ELEVATION 1808 FT
1887          DT  BASIN2     5.0
1888          DI       0      36      70     110     180   313.5     402   500.9
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1889          DQ       0       0       0       0       0    67.5     124   190.9

              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 51

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


1890          KK    RTD3
1891          KM   RETRIEVE FLOW FROM DIVERSION INTO OFFLINE BASIN
1892          DR  BASIN2
              * DDM   ***** Preserved *****

1893          KK     SD3
1894          KM   RETRIEVE FLOW INTO FICTICIOUS BASIN AND BLEED OFF WITHIN 36 HOURS.
1895          KM     5.0 ACRE-FEETx43560/36x3600=1.7cfs
1896          RS       1    STOR       0
1897          SV       0     .01       5
1898          SQ       0     0.7     1.7
              * DDM   ***** Preserved *****

1899          KK     CD3
1900          KM   HYDROGRAPH COMBINATION FOR OFFLINE BASIN BLEEDOFF
1901          HC       2
              * DDM   ***** Preserved *****

1902          KK    R101
1903          KM        ROUTE FLOW FROM SUBBASIN C101 TO C103
1904          RS       1    FLOW      -1
1905          RC     .05    .035     .05    1450     .05
1906          RX    1000    1010    1020    1036    1041    1057    1067    1077
1907          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1908          KK     458
1909          KM   SUB-BASIN 458
1910          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1911          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1912          KM     L =  .76  Kb = .048  Adj. Slope =  299.0
1913          BA    .190
1914          LG    .290    .330   5.800    .190   6.000
1915          UC    .204    .131
1916          UA       0       5      16      30      65      77      84      90      94      97
1917          UA     100
              * DDM   ***** Preserved *****

1918          KK    C103
1919          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 55 AND C101
1920          HC       2
              * DDM   ***** Preserved *****

1921          KK    R103
1922          KM        ROUTE FLOW FROM SUBBASIN C103 TO C106
1923          RS       1    FLOW      -1
1924          RC     .05    .035     .05     900     .03
1925          RX    1000    1010    1020    1030    1050    1060    1070    1080
1926          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 52

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


1927          KK    RT30
1928          KM        RETRIEVE DIVERTED FLOW FOR WASH BELOW 30 INCH PIPE
1929          DR    WA30
              * DDM   ***** Preserved *****

1930          KK     R30
1931          KM        ROUTE FLOW FROM WASH DIVERSION TO COMBINE C52
1932          RS       1    FLOW      -1
1933          RC     .05    .035     .05    1630     .05
1934          RX    1000    1010    1020    1036    1041    1057    1067    1077
1935          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1936          KK    RTB1
1937          KM        RETRIEVE DIVERTED FLOW FROM BASIN 1
1938          DR  BASIN1
              * DDM   ***** Preserved *****
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1939          KK      B1
1940          KM        ROUTE FLOW THROUGH OFFLINE DETENTION BASIN
1941          KM        FLOW OUTLETS THROUGH A 30 INCH OUTLET PIPE
1942          RS       1    ELEV       0
1943          SV              .7     1.4     2.3     2.7     4.0
1944          SQ       0       5      16      28    32.5      37
1945          SE       0       1       2       3     3.5       4
              * DDM   ***** Preserved *****

1946          KK     RB1
1947          KM        ROUTE FLOW FROM BASIN DIVERSION TO COMBINE C52
1948          RS       3    FLOW      -1
1949          RC     .05    .035     .05    1720     .05
1950          RX    1000    1010    1020    1036    1041    1057    1067    1077
1951          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Preserved *****

1952          KK    CDIV
1953          KM        COMBINE FLOWS FROM WA30 AND BASIN 1
1954          HC       2     .12
              * DDM   ***** Updated *****

1955          KK     459
1956          KM   SUB-BASIN 459
1957          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1958          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF 1.000
1959          KM     L =  .35  Kb = .052  Adj. Slope =  251.6
1960          BA    .030
1961          LG    .220    .300   3.330    .710   8.000
1962          UC    .162    .157
1963          UA       0       5      16      30      65      77      84      90      94      97
1964          UA     100
              * DDM   ***** Preserved *****
1                                          HEC-1 INPUT                                          PAGE 53

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

1965          KK     C52
1966          KM        COMBINE FLOWS FROM SUB-BASIN 52 WA30 AND BASIN 1
1967          HC       2
              * DDM   ***** Preserved *****

1968          KK     R52
1969          KM        ROUTE FLOW FROM SUBBASIN 52 TO C102
1970          RS       3    FLOW      -1
1971          RC     .05    .035     .05    2000     .05
1972          RX    1000    1010    1020    1036    1041    1057    1067    1077
1973          RY      15    14.5      14      10      10      14    14.5      15
              * DDM   ***** Updated *****

1974          KK     460
1975          KM   SUB-BASIN 460
1976          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
1977          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
1978          KM     L =  .62  Kb = .058  Adj. Slope =  194.0
1979          BA    .140
1980          LG    .250    .260   3.740    .690  27.000
1981          UC    .242    .160
1982          UA       0       5      16      30      65      77      84      90      94      97
1983          UA     100
              * DDM   ***** Preserved *****

1984          KK    C102
1985          KM        COMBINE HYDROGRAPHS FROM SUB-BASINS 52 AND 53
1986          HC       2
              * DDM   ***** Preserved *****

1987          KK  BASIN3
1988          KM        RESERVOIR AT CLUBHOUSE LOCATION 1-30 INCH PIPE AT OUTFALL
1989          KM        BOTTOM OF BASIN AT 6 FEET ABOVE 1795 ELEVATION
1990          RS       1    ELEV       0
1991          SA       0       0       0       0     .34    1.59    1.81    1.96    2.13     2.3
1992          SQ       0      22      45    47.4      48      51      57      62      67      73
1993          SE    1795  1797.5    1800  1800.4  1800.5    1801    1802    1803    1804  1805.5
              * DDM   ***** Preserved *****

1994          KK      R3
1995          KM        ROUTE FLOW FROM C102 to C106
1996          RS       5    FLOW      -1
1997          RC     .05     .03     .05    2750   .0375
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1998          RX    1000    1010    1020    1052    1086    1118    1128    1138
1999          RY    19.2    18.4      18      10      10      18    18.4    19.2
              * DDM   ***** Updated *****

2000          KK     461
2001          KM   SUB-BASIN 461
2002          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
2003          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .999
2004          KM     L =  .83  Kb = .052  Adj. Slope =  181.0
2005          BA    .120
2006          LG    .270    .250   4.250    .450  21.000
1                                        HEC-1 INPUT                                                    PAGE 54

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

2007          UC    .271    .250
2008          UA       0       5      16      30      65      77      84      90      94      97
2009          UA     100
              * DDM   ***** Preserved *****

2010          KK    C104
2011          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 54 AND R102
2012          HC       2
              * DDM   ***** Preserved *****

2013          KK    C106
2014          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN C103 AND C104
2015          HC       2
              * DDM   ***** Preserved *****

2016          KK    R106
2017          KM        ROUTE FLOW FROM C106 TO C49
2018          RS       2    FLOW      -1
2019          RC     .05    .035     .05    3950    .033
2020          RX    1000    1010    1020    1030    1050    1060    1070    1080
2021          RY   13.16   12.83    12.5      10      10    12.5   12.83   13.16
              * DDM   ***** Updated *****

2022          KK     462
2023          KM   SUB-BASIN 462
2024          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
2025          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .998
2026          KM     L =  .97  Kb = .045  Adj. Slope =  297.7
2027          BA    .301
2028          LG    .300    .330   5.300    .240  12.000
2029          UC    .225    .137
2030          UA       0       5      16      30      65      77      84      90      94      97
2031          UA     100
              * DDM   ***** Preserved *****

2032          KK     C56
2033          KM        COMBINE HYDROGRAPHS FROM SUB-BASIN 56 AND C106
2034          HC       2
              * DDM   ***** Preserved *****

2035          KK    C462
2036          KM        COMBINE HYDROGRAPHS AT SUBBASIN 462
2037          HC       2    2.09
              * DDM   ***** Preserved *****

2038          KK    R462
2039          KM   ROUTE FLOW FROM SUB-BASIN 462 TO SUB-BASIN 500 (First Channel Reach)
2040          RS       1    FLOW      -1
2041          RC    .025    .025    .025    1800    .005
2042          RX       0       1      20      32      62      74      93      94
2043          RY      13      12      12       0       0      12      12      13
              *
              * DDM   ***** Preserved *****
1                                        HEC-1 INPUT                                                    PAGE 55

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

2044          KK   RR462
2045          KM   ROUTE FLOW FROM SUB-BASIN 462 TO SUB-BASIN 500 (Second Natural Wash Reach)
2046          RS       3    FLOW      -1
2047          RC    .055     .05    .055    4700     .05
2048          RX       0       1       2      28      58      84      85      86
2049          RY    13.5    13.5    13.5       0       0    13.5    13.5    13.5
              * DDM   ***** Updated *****
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2050          KK     500
2051          KM   SUB-BASIN 500
2052          KM   24-HOUR SCS TYPE II RAINFALL WAS USED TO FIND TC & R FOR THIS BASIN
2053          KM   THIS BASIN USED RAINFALL REDUCTION FACTOR OF  .994
2054          KM     L = 2.77  Kb = .042  Adj. Slope =  286.8
2055          BA    .930
2056          LG    .350    .400   6.000    .170   9.000
2057          UC    .421    .333
2058          UA       0       3       5       8      12      20      43      75      90      96
2059          UA     100
              * DDM   ***** Preserved *****

2060          KK    C500
2061          KM   HYDROGRAPH COMBINATION FOR THE ENTIRE WATERSHED AT THE SALT RIVER
2062          HC       2    3.02
2063          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

    32          10
                 V
                 V
    42         R10
                 V
                 V
    48         R12
                 .
                 .
    54           .          20
                 .           .
                 .           .
    67           .           .------->    BS20
    64           .         D20
                 .           .
                 .           .
    72           .           .           .<-------    BS20
    70           .           .        RT20
                 .           .           V
                 .           .           V
    73           .           .         S20
                 .           .           .
                 .           .           .
    79         C20.......................
                 V
                 V
    82         R20
                 .
                 .
    88           .          40
                 .           .
                 .           .
   101           .           .------->    BS40
    98           .         D40
                 .           .
                 .           .
   106           .           .           .<-------    BS40
   104           .           .        RT40
                 .           .           V
                 .           .           V
   107           .           .         S40
                 .           .           .
                 .           .           .
   113         C40.......................
                 .
                 .
   116           .          60
                 .           .
                 .           .
   129           .           .------->    BS60
   126           .         D60
                 .           .
                 .           .
   134           .           .           .<-------    BS60
   132           .           .        RT60
                 .           .           V
                 .           .           V
   135           .           .        SB60
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                .          .          .
                .          .          .
141           C60.......................
                V
                V
144           S60
                V
                V
153           R60
                V
                V
159          RR60
                .
                .
165             .         80
                .          .
                .          .
178             .          .-------->    BS80
175             .        D80
                .          .
                .          .
183             .          .          .<-------    BS80
181             .          .       RT80
                .          .          V
                .          .          V
184             .          .        S80
                .          .          .
                .          .          .
190             .        C80............
                .          .
                .          .
193          CC80............
                V
                V
196           R80
                .
                .
202             .        100
                .          .
                .          .
215             .          .-------->   BS100
212             .       D100
                .          .
                .          .
220             .          .          .<-------   BS100
218             .          .      RT100
                .          .          V
                .          .          V
221             .          .       S100
                .          .          .
                .          .          .
227          C100.......................
                V
                V
230          R100
                .
                .
236             .        120
                .          .
                .          .
249             .          .-------->   BS120
246             .       D120
                .          .
                .          .
254             .          .          .<-------   BS120
252             .          .      RT120
                .          .          V
                .          .          V
255             .          .       S120
                .          .          .
                .          .          .
261          C120.......................
                V
                V
264          R120
                .
                .
270             .        140
                .          .
                .          .
283             .          .-------->   BS140
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280          .        D140
             .           .
             .           .
288          .           .          .<-------   BS140
286          .           .      RT140
             .           .          V
             .           .          V
289          .           .       S140
             .           .           .
             .           .           .
295       C140.......................
             .
             .
298          .         150
             .           V
             .           V
308          .        R150
             .           V
             .           V
314          .        R152
             .           .
             .           .
320          .           .        160
             .           .          .
             .           .          .
333          .           .          .------->   BS160
330          .           .       D160
             .           .          .
             .           .          .
338          .           .          .           .<-------   BS160
336          .           .          .       RT160
             .           .          .           V
             .           .          .           V
339          .           .          .        S160
             .           .          .           .
             .           .          .           .
345          .        C160.......................
             .           .
             .           .
348          .           .        180
             .           .          .
             .           .          .
358       C180.......................
             .
             .
361          .         210
             .           V
             .           V
371          .        R210
             .           .
             .           .
377          .           .        240
             .           .          .
             .           .          .
387          .        C240............
             .           V
             .           V
390          .        S240
             .           V
             .           V
397          .        R240
             .           .
             .           .
404          .           .        220
             .           .          .
             .           .          .
414          .        C220............
             .           V
             .           V
417          .       SW220
             .           V
             .           V
424          .        R220
             .           .
             .           .
431          .           .        190
             .           .          V
             .           .          V
441          .           .       R190
             .           .          V
             .           .          V
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447          .           .        R192
             .           .           .
             .           .           .
453          .           .           .         200
             .           .           .           .
             .           .           .           .
463          .        C200.......................
             .           V
             .           V
466          .       SW200
             .           V
             .           V
473          .        R200
             .           V
             .           V
479          .       SS200
             .           V
             .           V
486          .       RR200
             .           .
             .           .
492       CC180............
             V
             V
495       S180
             V
             V
504       R180
             .
             .
513          .         260
             .           .
             .           .
523       C260............
             V
             V
526       R260
             .
             .
535          .         280
             .           .
             .           .
545       C280............
             V
             V
548       R280
             .
             .
557          .         300
             .           .
             .           .
567       C300............
             V
             V
570       R300
             .
             .
579          .        305A
             .           .
             .           .
589       C305............
             V
             V
592       R305
             .
             .
600          .       320B1
             .           .
             .           .
615          .           .-------> B320B1
610          .      D320B1
             .           .
             .           .
620          .           .          .<-------  B320B1
618          .           .     T320B1
             .           .          V
             .           .          V
621          .           .     S320B1
             .           .           .
             .           .           .
627       C320B1........................
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                .
                .
630             .        350
                .          .
                .          .
643             .          .-------->   SF350
640             .      D350
                .          V
                .          V
646             .      R350
                .          .
                .          .
653             .          .        310
                .          .          .
                .          .          .
663             .      C310............
                .          V
                .          V
666             .      R310
                .          .
                .          .
673             .          .       305B
                .          .          V
                .          .          V
683             .          .      R305B
                .          .          .
                .          .          .
690             .          .          .       320B2
                .          .          .          .

                .          .          .          .
705             .          .          .          .-------->  B320B2
700             .          .          .     D320B2
                .          ..         .          .
                .          .          .          .
710             .          .          .          .          .<-------  B320B2
708             .          .          .          .     T320B2
                .          .          .          .          V
                .          .          .          .          V
711             .          .          .          .     S320B2
                .          .          .          .          .
                .          .          .          .          .
717             .     C320B2.................................
                .          V
                .          V
720             .     R320B2
                .          .
                .          .
727             .          .       340B
                .          .          .
                .          .          .
742             .          .          .-------->  BS340B
737             .          .      D340B
                .          .          .
                .          .          .
747             .          .          .          .<-------  BS340B
745             .          .          .     RT340B
                .          .          .          V
                .          .          .          V
748             .          .          .      S340B
                .          .          .          .
                .          .          .          .
754             .      C340B......................
                .          .
                .          .
759             .          .-------->   BS340
757             .     DD340B
                .          .
                .          .
764             .          .          .<-------   BS340
762             .          .      RT340
                .          .          V
                .          .          V
765             .          .     SS340B
                .          .          .
                .          .          .
771             .     CD340B............
                .          .
                .          .
776             .          .          .<-------   SF350
774             .          .      RT350
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                .           .           V
                .           .           V
777             .           .       RR350
                .           .           .
                .           .           .
784             .           .           .        355
                .           .           .          .
                .           .           .          .
794             .           .       C355............
                .           .           .
                .           .           .
800             .           .           .-------->   BS355
797             .           .       D355
                .           .           .
                .           .           .
805             .           .           .          .<-------   BS355
803             .           .           .      RT355
                .           .           .          V
                .           .           .          V
806             .           .           .       S355
                .           .           .          .
                .           .           .          .
812             .           .       CC355............
                .           .           V
                .           .           V
815             .           .       R355
                .           .           .
                .           .           .
822             .      CC340B............
                .           V
                .           V
825             .       R340B

                .           .
                .           .
832             .           .       340A2
                .           .           .
                .           .           .
845             .           .           .-------->  B340A2

842             .           .      D340A2
                .           .           .
                .           .           .
850             .           .           .          .<-------  B340A2
848             .           .           .      T340A2
                .           .           .          V
                .           .           .          V
851             .           .           .      S340A2
                .           .           .          .
                .           .           .          .
857             .      C340A2........................
                .           V
                .           V
860             .      R340A2
                .           .
                .           .
867        CC320B............
                V
                V
870         R320B
                .
                .
879             .        320A
                .           .
                .           .
894             .           .-------->  BS320A
889             .       D320A
                .           .
                .           .
899             .           .           .<-------  BS320A
897             .           .      RT320A
                .           .           V
                .           .           V
900             .           .       S320A
                .           .           .
                .           .           .
906          C320........................
                .
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909             .       340A1
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                .           .
                .           .
 924            .           .-------> B340A1
 919            .      D340A1
                .           .
                .           .
 929            .           .          .<-------  B340A1
 927            .           .     T340A1
                .           .          V
                .           .          V
 930            .           .     S340A1
                .           .          .
                .           .          .
 936            .      C340A1............
                .           .
                .           .
 939        C340............
                .
                .
 942            .        360
                .           .
                .           .
 956            .           .-------> BS360
 952            .       D360
                .           .
                .           .
 961            .           .          .<-------  BS360
 959            .           .      RT360
                .           .          V
                .           .          V
 962            .           .      S360
                .           .          .
                .           .          .
 968        C360........................
                .
                .
 971            .       380A
                .           .
                .           .
 981       C380A............
                .
                .
 984            .       400A
                .           .
                .           .
 994       C400A............
                .
                .
 997            .      380B1
                .           .

                .           .
1011            .           .-------> B380B1
1007            .      D380B1
                .           .
                .           .
1016            .           .          .<-------  B380B1
1014            .           .     T380B1
                .           .          V
                .           .          V
1017            .           .     S380B1
                .           .          .
                .           .          .
1023            .      C380B1............
                .          V
                .          V
1026            .      R380B1
                .           .
                .           .
1033            .           .      400B1
                .           .          .
                .           .          .
1047            .           .          .-------> B400B1
1043            .           .     D400B1
                .           .          .
                .           .          .
1052            .           .          .          .<-------  B400B1
1050            .           .          .     T400B1
                .           .          .          V
                .           .          .          V
1053            .           .          .     S400B1
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                .          .          .          .
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1059            .          .     C400B1...........
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1062       CC400B......................
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                .
1065            .      420A2
                .          .
                .          .
1075       C400A2...........

                .
                .
1078            .      400B3
                .          .
                .          .
1092            .          .-------> B400B3
1088            .     D400B3
                .          .
                .          .
1097            .          .          .<-------  B400B3
1095            .          .     T400B3
                .          .          V
                .          .          V
1098            .          .     S400B3
                .          .          .
                .          .          .
1104            .     C400B3...........
                .          V
                .          V
1107            .     R400B3
                .          .
                .          .
1114            .          .      380B3
                .          .          .
                .          .          .
1127            .          .          .-------> B380B3
1124            .          .     D380B3
                .          .          .
                .          .          .
1132            .          .          .          .<-------  B380B3
1130            .          .          .     T380B3
                .          .          .          V
                .          .          .          V
1133            .          .          .     S380B3
                .          .          .          .
                .          .          .          .
1139            .     C380B3......................
                .          V
                .          V
1142            .     R380B3
                .          .
                .          .
1149            .          .      380B2
                .          .          .
                .          .          .
1159            .     C380B2...........
                .          V
                .          V
1162            .     R380B2
                .          .
                .          .
1169            .          .      400B2
                .          .          .
                .          .          .
1179            .     C400B2...........
                .          V
                .          V
1182            .     R400B2
                .          .
                .          .
1189            .          .      420A1
                .          .          .
                .          .          .

1203            .          .          .-------> B420A1
1199            .          .     D420A1
                .          .          .
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                .          .          .
1208            .          .          .          .<-------  B420A1
1206            .          .          .     T420A1
                .          .          .          V
                .          .          .          V
1209            .          .          .     S420A1
                .          .          .          .
                .          .          .          .
1215      C420A.................................
                .
                .
1218            .        370
                .          .
                .          .
1228            .          .        395
                .          .          .
                .          .          .
1238            .      C370............
                .          .
                .          .
1244            .          .------->  BS370
1241            .      D370
                .          .
                .          .
1249            .          .          .<-------  BS370
1247            .          .      RT370

                .          .          V
                .          .          V
1250            .          .      S370
                .          .          .
                .          .          .
1256            .     CC370............
                .         V
                .         V
1259            .      R370
                .          .
                .          .
1266            .          .        385
                .          .          .

                .          .          .
1276            .          .          .       415B
                .          .          .          .
                .          .          .          .
1286            .          .      C415B............
                .          .          .
                .          .          .
1292            .          .          .------->  BS415B
1289            .          .      D415B
                .          .          .
                .          .          .
1297            .          .          .          .<-------  BS415B
1295            .          .          .     RT415B
                .          .          .          V
                .          .          .          V
1298            .          .          .      S415B
                .          .          .          .
                .          .          .          .
1304            .          .     CC415B............
                .          .          V
                .          .          V
1307            .          .      R415B
                .          .          .
                .          .          .
1314            .          .          .        390
                .          .          .          .
                .          .          .          .
1328            .          .          .          .------->  BS390
1324            .          .          .       D390
                .          .          .          .
                .          .          .          .
1333            .          .          .          .          .<-------  BS390
1331            .          .          .          .     RT390

                .          .          .          .          V
                .          .          .          .          V
1334            .          .          .          .       S390
                .          .          .          .          .
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1340            .      C390.................................
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                 .          V
                 .          V
1343             .       R390
                 .          .
                 .          .
1350             .          .        420B
                 .          .          .
                 .          .          .
1360             .      C420B...........
                 .          .
                 .          .
1363             .          .         440
                 .          .           V
                 .          .           V
1373             .          .         R70
                 .          .           .
                 .          .           .
1379             .          .           .         441
                 .          .           .           .
                 .          .           .           .
1389             .          .       C108...........
                 .          .           .
                 .          .           .
1394             .          .           .-------->   SPLIT
1392             .          .          D4
                 .          .           V
                 .          .           V
1397             .          .       R108
                 .          .           .
                 .          .           .
1403             .          .           .         442
                 .          .           .           .
                 .          .           .           .
1413             .          .         C67...........
                 .          .           .
                 .          .           .
1419             .          .           .-------->  BASIN4
1416             .          .          D6
                 .          .           .
                 .          .           .
1424             .          .           .           .<-------  BASIN4
1422             .          .           .       RTD6
                 .          .           .          V
                 .          .           .          V
1425             .          .           .         SD6
                 .          .           .           .
                 .          .           .           .
1431             .          .         CD6...........
                 .          .           .
                 .          .           .
1434             .          .           .         443
                 .          .           .           .
                 .          .           .           .
1447             .          .           .           .-------->   WSH66
1444             .          .           .         D66
                 .          .           .          V
                 .          .           .          V
1450             .          .           .       R113
                 .          .           .           .
                 .          .           .           .
1456             .          .       C114...........
                 .          .           .
                 .          .           .
1459             .          .           .         444
                 .          .           .          V
                 .          .           .          V
1469             .          .           .         R58
                 .          .           .           .
                 .          .           .           .
1475             .          .           .           .         445
                 .          .           .           .           .
                 .          .           .           .           .
1485             .          .           .       C107...........
                 .          .           .          V
                 .          .           .          V
1488             .          .           .       R107
                 .          .           .           .
                 .          .           .           .
1496             .          .           .           .           .<-------   SPLIT
1494             .          .           .           .       RTB2
                 .          .           .           .          V
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                                                  V
1497                                           RSPLIT
                                                   .
                                                   .

1503                                               .        446
                                                   .          .
                                                   .          .
1513                                       C109.......................
                                                   .
                                                   .
1519                                               .-------> WSH404
1516                                         D5
                                             V
                                             V
1522                                       R109
                                                   .
                                                   .
1528                                               .        447
                                                   .          .
                                                   .          .
1540                                               .          .          .<-------  WSH404
1538                                               .          .      RT404
                                                   .          .          V
                                                   .          .          V
1541                                               .          .       R404
                                                   .          .          .
                                                   .          .          .
1547                                       C110.......................
                                             V
                                             V
1550                                       R110
                                                   .
                                                   .
1556                                   C115............
                                         V
                                         V
1559                                   R115
                                                   .
                                                   .
1565                                         448
                                                   .
                                                   .
1575                                               .        449
                                                   .          .

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1585                                       C6364............
                                             V
                                             V
1588                                       R6364
                                                   .
                                                   .
1594                                               .        450
                                                   .          .
                                                   .          .
1604                                               .          .        451
                                                   .          .          .
                                                   .          .          .
1614                                               .      C451............
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                                                   .          .
1619                                               .          .          .<-------   WSH66
1617                                               .          .       RT66
                                                   .          .          .
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1620                                               .          .          .        452
                                                   .          .          .          .
                                                   .          .          .          .
1630                                               .          .      C6465............
                                                   .          .          V
                                                   .          .          V
1633                                               .          .      R6566
                                                   .          .          .
                                                   .          .          .
1639                                       C116.......................
                                             V
                                             V
1642                                     BASIN5
                                             V
                                             V
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1649          .           .           .        R116
              .           .           .           .
              .           .           .           .
1655          .           .           .           .         453
              .           .           .           .           .
              .           .           .           .           .
1665          .           .           .        C117............
              .           .           .           .
              .           .           .           .
1668          .           .        C118............
              .           .           V
              .           .           V
1671          .           .        R118
              .           .           .
              .           .           .
1680          .           .           .-------> BASIN6
1677          .           .          D7
              .           .           .
              .           .           .
1685          .           .           .           .<-------  BASIN6
1683          .           .           .        RTD7
              .           .           .           V
              .           .           .           V
1686          .           .           .         SD7
              .           .           .           .
              .           .           .           .
1692          .           .         CD7............
              .           .           .
              .           .           .
1695          .           .           .         454
              .           .           .           .
              .           .           .           .
1705          .           .        C454............
              .           .           V
              .           .           V
1708          .           .        R454
              .           .           .
              .           .           .
1715          .           .           .        415A
              .           .           .           .
              .           .           .           .
1725          .           .       C415A............
              .           .           .
              .           .           .
1728          .      CC415A............
              .           .
              .           .
1734          .           .-------> BS420B
1731          .       D420B
              .           .
              .           .

1739          .           .           .<-------  BS420B
1737          .           .      RT420B
              .           .           V
              .           .           V
1740          .           .       S420B
              .           .           .
              .           .           .
1746          .      CC420B............
              .           V
              .           V
1749          .       R415A
              .           .
              .           .
1756          .           .         455
              .           .           .
              .           .           .
1771          .           .           .-------> BS455
1766          .           .        D455
              .           .           .
              .           .           .
1776          .           .           .           .<-------  BS455
1774          .           .           .       RT455
              .           .           .           V
              .           .           .           V
1777          .           .           .        S455
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              .           .           .           .
1783          .           .        C455............
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                .           .           .
1786        CC455.......................
                V
                V
1789         S440
                V
                V
1798         R455
                .
                .
1804            .         480
                .           .
                .           .
1819            .           .-------->   BS480
1814            .        D480
                .           .
                .           .
1824            .           .           .<--------   BS480
1822            .           .       RT480
                .           .           V
                .           .           V
1825            .           .        S480
                .           .           .
                .           .           .
1831            .        C480............
                .           .
                .           .
1834        CC480............
                V
                V
1837         R480
                .
                .
1843            .         456
                .           .
                .           .
1856            .           .-------->  BASIN1
1853            .          D1
                .           .
                .           .
1862            .           .-------->    WA30
1859            .         CD2
                .           V
                .           V
1865            .        R456
                .           .
                .           .
1871            .           .         457
                .           .           .
                .           .           .
1881            .        C101............
                .           .
                .           .
1887            .           .-------->  BASIN2
1884            .          D3
                .           .
                .           .
1892            .           .           .<--------  BASIN2
1890            .           .        RTD3
                .           .           V
                .           .           V
1893            .           .         SD3
                .           .           .
                .           .           .
1899            .         CD3............
                .           V
                .           V
1902            .        R101
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1908            .           .         458
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                .           .           .
1918            .        C103............
                .           V
                .           V
1921            .        R103
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                .           .
1929            .           .           .<--------    WA30
1927            .           .        RT30
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                 .          .          V
                 .          .          V
 1930            .          .        R30
                 .          .          .
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 1938            .          .          .          .<-------  BASIN1
 1936            .          .          .       RTB1
                 .          .          .          V
                 .          .          .          V
 1939            .          .          .         B1
                 .          .          .          V
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 1946            .          .          .        RB1
                 .          .          .          .
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 1952            .          .       CDIV...........
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                 .          .          .
 1955            .          .          .        459
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 1965            .          .        C52...........
                 .          .          V
                 .          .          V
 1968            .          .        R52
                 .          .          .
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 1974            .          .          .        460
                 .          .          .          .
                 .          .          .          .
 1984            .          .       C102...........
                 .          .          V
                 .          .          V
 1987            .          .     BASIN3
                 .          .          V
                 .          .          V
 1994            .          .         R3
                 .          .          .
                 .          .          .
 2000            .          .          .        461
                 .          .          .          .
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 2010            .          .       C104...........
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                 .          .          .
 2013            .       C106...........
                 .          V
                 .          V
 2016            .       R106

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                 .          .
 2022            .          .        462
                 .          .          .
                 .          .          .
 2032            .        C56...........
                 .          .
                 .          .
 2035       C462...........
               V
               V
 2038       R462
               V
               V
 2044      RR462
               .
               .
 2050            .        500
                 .          .
                 .          .
 2060       C500...........
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 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************
 *                                       *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
 *              JUN   1998               *
 *           VERSION 4.1                 *
 *                                       *
 *  RUN DATE   20SEP02  TIME  08:30:30   *
 *                                       *
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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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                    Spook Hill ADMP Update
                    Future Condition Preferred Model with Spook Hill FRS Storage Routing
                    Return Period = 100 Years, Rainfall Duration = 24 Hours
                    Original File Name: REC_EC24.DAT, Wood/Patel, March 2002
                    Modified File Name: REC_FC24.DAT, Wood/Patel, April 2002, SZ
                    METHODOLOGY
                    THE US CORPS OF ENGINEERS FLOW HYDROGRAPH PACKAGE HEC-1 DATED JUNE 1998 V4.1
                    SCS TYPE II RAINFALL DISTRIBUTION
                    CLARK UNIT HYDROGRAPH
                    GREEN AND AMPT INFILTRATION EQUATION USED FOR CALCULATING LOSSES
                    NORMAL DEPTH STORAGE CHANNEL ROUTING

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

   IT          HYDROGRAPH TIME DATA
                      NMIN           2  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1    0  STARTING DATE
                     ITIME        0000  STARTING TIME
                        NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      3    0  ENDING DATE
                    NDTIME        1838  ENDING TIME
                     ICENT          19  CENTURY MARK

               COMPUTATION INTERVAL     .03 HOURS
                    TOTAL TIME BASE   66.63 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

15 JD          INDEX STORM NO. 1
                      STRM        3.81  PRECIPITATION DEPTH
                      TRDA         .01  TRANSPOSITION DRAINAGE AREA

16 PI            PRECIPITATION PATTERN
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26 JD INDEX STORM NO. 2

STRM 3.79 PRECIPITATION DEPTH

TRDA 1.00 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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27 JD     INDEX STORM NO. 3
               STRM        3.68  PRECIPITATION DEPTH
               TRDA        5.80  TRANSPOSITION DRAINAGE AREA

 0 PI      PRECIPITATION PATTERN
          .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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  28 JD            INDEX STORM NO. 4
                          STRM        3.57  PRECIPITATION DEPTH
                          TRDA       10.66  TRANSPOSITION DRAINAGE AREA

   0 PI              PRECIPITATION PATTERN
                      .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
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 29 JD        INDEX STORM NO. 5
                  STRM        3.54  PRECIPITATION DEPTH
                  TRDA       13.70  TRANSPOSITION DRAINAGE AREA

  0 PI          PRECIPITATION PATTERN
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30 JD INDEX STORM NO. 6

STRM 3.47 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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 31 JD         INDEX STORM NO. 7
                 STRM         3.32   PRECIPITATION DEPTH
                 TRDA        50.00   TRANSPOSITION DRAINAGE AREA

  0 PI           PRECIPITATION PATTERN
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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	10	972.	12.27	119.	33.	12.	.69		
+	ROUTED TO	R10	903.	12.40	119.	33.	12.	.69		
+	ROUTED TO	R12	845.	12.60	118.	33.	12.	.69		
+	HYDROGRAPH AT	20	1103.	12.23	165.	45.	16.	1.17		
+	DIVERSION TO	BS20	1103.	12.23	92.	24.	9.	1.17		
+	HYDROGRAPH AT	D20	839.	12.50	79.	21.	8.	1.17		
+	HYDROGRAPH AT	RT20	1103.	12.23	92.	24.	9.	1.17		
+	ROUTED TO	S20	16.	12.50	15.	12.	7.	1.17		
+	3 COMBINED AT	C20	1554.	12.57	207.	63.	26.	1.86		
+	ROUTED TO	R20	1554.	12.57	207.	63.	26.	1.86		
+	HYDROGRAPH AT	40	2753.	12.30	286.	79.	28.	2.23		
+	DIVERSION TO	BS40	1789.	12.13	72.	20.	7.	2.23		
+	HYDROGRAPH AT	D40	2753.	12.30	227.	59.	21.	2.23		
+	HYDROGRAPH AT	RT40	1789.	12.13	72.	20.	7.	2.23		
+	ROUTED TO	S40	13.	12.20	12.	10.	6.	2.23		

+	3 COMBINED AT	C40	3088.	12.33	437.	129.	52.	4.08
+	HYDROGRAPH AT	60	1654.	12.40	244.	66.	24.	1.75
+	DIVERSION TO	BS60	11.	9.17	7.	2.	1.	1.75
+	HYDROGRAPH AT	D60	1654.	12.40	244.	64.	23.	1.75
+	HYDROGRAPH AT	RT60	11.	9.17	7.	2.	1.	1.75
+	ROUTED TO	SB60	2.	9.33	2.	1.	1.	1.75
+	3 COMBINED AT	C60	4599.	12.33	665.	190.	75.	5.84
+	ROUTED TO	S60	101.	14.73	101.	98.	54.	5.84
+	ROUTED TO	R60	101.	14.83	101.	98.	54.	5.84
+	ROUTED TO	RR60	101.	14.87	101.	98.	54.	5.84
+	HYDROGRAPH AT	80	1951.	12.13	199.	53.	19.	1.49
+	DIVERSION TO	BS80	945.	11.93	35.	10.	3.	1.49
+	HYDROGRAPH AT	D80	1951.	12.13	170.	43.	16.	1.49
+	HYDROGRAPH AT	RT80	945.	11.93	35.	10.	3.	1.49
+	ROUTED TO	S80	7.	12.00	6.	5.	3.	1.49
+	2 COMBINED AT	C80	1958.	12.13	176.	48.	19.	1.49
+	2 COMBINED AT	CC80	1958.	12.13	264.	144.	75.	1.49
+	ROUTED TO	R80	1950.	12.17	264.	144.	75.	1.49
+	HYDROGRAPH AT	100	453.	12.20	66.	18.	6.	.49
+	DIVERSION TO	BS100	422.	12.13	19.	5.	2.	.49
+	HYDROGRAPH AT	D100	453.	12.20	50.	13.	5.	.49
+	HYDROGRAPH AT	RT100	422.	12.13	19.	5.	2.	.49
+	ROUTED TO	S100	4.	12.20	3.	3.	2.	.49
+	3 COMBINED AT	C100	2352.	12.20	314.	158.	81.	1.98
+	ROUTED TO	R100	2303.	12.23	313.	158.	81.	1.98
+	HYDROGRAPH AT	120	3345.	12.27	342.	93.	34.	2.20
+	DIVERSION TO	BS120	13.	7.50	10.	3.	1.	2.20

+	HYDROGRAPH AT	D120	3345.	12.27	342.	90.	33.	2.20
+	HYDROGRAPH AT	RT120	13.	7.50	10.	3.	1.	2.20
+	ROUTED TO	S120	2.	8.00	2.	2.	1.	2.20
+	3 COMBINED AT	C120	5561.	12.23	633.	242.	112.	4.18
+	ROUTED TO	R120	5512.	12.27	633.	242.	112.	4.18
+	HYDROGRAPH AT	140	665.	12.13	67.	18.	6.	.60
+	DIVERSION TO	BS140	369.	11.97	11.	3.	1.	.60
+	HYDROGRAPH AT	D140	665.	12.13	58.	15.	5.	.60
+	HYDROGRAPH AT	RT140	369.	11.97	11.	3.	1.	.60
+	ROUTED TO	S140	2.	12.03	2.	2.	1.	.60
+	3 COMBINED AT	C140	6028.	12.27	687.	257.	118.	4.78
+	HYDROGRAPH AT	150	593.	12.17	51.	14.	5.	.41
+	ROUTED TO	R150	567.	12.23	51.	14.	5.	.41
+	ROUTED TO	R152	513.	12.33	51.	14.	5.	.41
+	HYDROGRAPH AT	160	224.	12.40	36.	9.	3.	.37
+	DIVERSION TO	BS160	82.	12.13	2.	1.	0.	.37
+	HYDROGRAPH AT	D160	224.	12.40	34.	9.	3.	.37
+	HYDROGRAPH AT	RT160	82.	12.13	2.	1.	0.	.37
+	ROUTED TO	S160	1.	12.20	1.	1.	0.	.37
+	3 COMBINED AT	C160	732.	12.37	86.	23.	8.	.77
+	HYDROGRAPH AT	180	851.	12.37	98.	25.	9.	1.01
+	3 COMBINED AT	C180	7186.	12.27	850.	298.	132.	6.56
+	HYDROGRAPH AT	210	1322.	12.17	111.	29.	10.	.79
+	ROUTED TO	R210	1246.	12.23	111.	29.	10.	.79
+	HYDROGRAPH AT	240	1513.	12.30	167.	42.	15.	1.41
+	2 COMBINED AT	C240	2684.	12.27	273.	70.	25.	2.20
+	ROUTED TO	S240	799.	12.70	226.	59.	21.	2.20

	ROUTED TO							
+		R240	795.	12.77	225.	59.	21.	2.20
	HYDROGRAPH AT							
+		220	676.	12.20	68.	18.	6.	.47
	2 COMBINED AT							
+		C220	955.	12.60	288.	75.	27.	2.67
	ROUTED TO							
+		SW220	895.	12.80	280.	73.	26.	2.67
	ROUTED TO							
+		R220	893.	12.87	280.	73.	26.	2.67
	HYDROGRAPH AT							
+		190	1471.	12.17	123.	33.	12.	.92
	ROUTED TO							
+		R190	1415.	12.23	123.	33.	12.	.92
	ROUTED TO							
+		R192	1359.	12.30	123.	33.	12.	.92
	HYDROGRAPH AT							
+		200	831.	12.17	72.	20.	7.	.53
	3 COMBINED AT							
+		C200	2264.	12.30	459.	122.	44.	4.12
	ROUTED TO							
+		SW200	2144.	12.37	454.	119.	43.	4.12
	ROUTED TO							
+		R200	2135.	12.37	454.	119.	43.	4.12
	ROUTED TO							
+		SS200	1364.	12.73	333.	88.	32.	4.12
	ROUTED TO							
+		RR200	1343.	12.83	331.	88.	32.	4.12
	2 COMBINED AT							
+		CC180	7186.	12.27	1160.	382.	162.	10.68
	ROUTED TO							
+		S180	124.	24.37	124.	123.	89.	10.68
	ROUTED TO							
+		R180	124.	24.40	124.	123.	89.	10.68
	HYDROGRAPH AT							
+		260	427.	12.10	42.	11.	4.	.26
	2 COMBINED AT							
+		C260	428.	12.10	140.	130.	102.	.26
	ROUTED TO							
+		R260	411.	12.20	140.	130.	102.	.26
	HYDROGRAPH AT							
+		280	527.	12.10	46.	13.	5.	.32
	2 COMBINED AT							
+		C280	893.	12.13	181.	141.	107.	.58
	ROUTED TO							
+		R280	870.	12.20	180.	141.	106.	.58
	HYDROGRAPH AT							
+		300	428.	12.10	37.	11.	4.	.29
	2 COMBINED AT							
+		C300	1235.	12.17	214.	149.	110.	.87
	ROUTED TO							
+		R300	1189.	12.23	213.	149.	110.	.87
	HYDROGRAPH AT							
+		305A	394.	12.13	41.	11.	4.	.32

	2 COMBINED AT							
+		C305	1534.	12.20	250.	159.	113.	1.19
	ROUTED TO							
+		R305	1520.	12.23	250.	158.	113.	1.19
	HYDROGRAPH AT							
+		320B1	659.	12.13	66.	19.	7.	.45
	DIVERSION TO							
+		B320B1	364.	11.93	16.	5.	2.	.45
	HYDROGRAPH AT							
+		D320B1	659.	12.13	54.	14.	5.	.45
	HYDROGRAPH AT							
+		T320B1	364.	11.93	16.	5.	2.	.45
	ROUTED TO							
+		S320B1	4.	12.00	3.	3.	2.	.45
	3 COMBINED AT							
+		C320B1	2042.	12.20	304.	174.	119.	1.64
	HYDROGRAPH AT							
+		350	1315.	12.20	112.	29.	11.	1.00
	DIVERSION TO							
+		SF350	658.	12.20	56.	15.	5.	1.00
	HYDROGRAPH AT							
+		D350	658.	12.20	56.	15.	5.	1.00
	ROUTED TO							
+		R350	593.	12.40	56.	15.	5.	1.00
	HYDROGRAPH AT							
+		310	381.	12.33	50.	13.	5.	.54
	2 COMBINED AT							
+		C310	950.	12.37	106.	27.	10.	1.04
	ROUTED TO							
+		R310	865.	12.67	106.	27.	10.	1.04
	HYDROGRAPH AT							
+		305B	333.	12.33	40.	10.	4.	.39
	ROUTED TO							
+		R305B	317.	12.43	40.	10.	4.	.39
	HYDROGRAPH AT							
+		320B2	251.	12.13	27.	7.	3.	.22
	DIVERSION TO							
+		B320B2	177.	12.00	6.	2.	1.	.22
	HYDROGRAPH AT							
+		D320B2	251.	12.13	22.	6.	2.	.22
	HYDROGRAPH AT							
+		T320B2	177.	12.00	6.	2.	1.	.22
	ROUTED TO							
+		S320B2	1.	12.03	1.	1.	1.	.22
	4 COMBINED AT							
+		C320B2	1150.	12.63	167.	43.	16.	1.65
	ROUTED TO							
+		R320B2	1144.	12.67	167.	43.	16.	1.65
	HYDROGRAPH AT							
+		340B	497.	12.07	41.	12.	4.	.29
	DIVERSION TO							
+		BS340B	497.	12.07	29.	8.	3.	.29
	HYDROGRAPH AT							
+		D340B	286.	12.20	15.	4.	2.	.29

+	HYDROGRAPH AT	RT340B	497.	12.07	29.	8.	3.	.29
+	ROUTED TO	S340B	5.	12.20	5.	4.	3.	.29
+	3 COMBINED AT	C340B	1166.	12.67	185.	50.	20.	1.94
+	DIVERSION TO	BS340	966.	12.67	113.	28.	10.	1.94
+	HYDROGRAPH AT	DD340B	200.	12.10	71.	22.	10.	1.94
+	HYDROGRAPH AT	RT340	966.	12.67	113.	28.	10.	1.94
+	ROUTED TO	SS340B	48.	13.40	41.	24.	10.	1.94
+	2 COMBINED AT	CD340B	248.	13.40	109.	46.	20.	1.94
+	HYDROGRAPH AT	RT350	658.	12.20	56.	15.	5.	1.00
+	ROUTED TO	RR350	570.	12.43	56.	15.	5.	1.00
+	HYDROGRAPH AT	355	546.	12.33	75.	19.	7.	.68
+	2 COMBINED AT	C355	1061.	12.40	130.	34.	12.	1.17
+	DIVERSION TO	BS355	611.	12.40	40.	10.	4.	1.17
+	HYDROGRAPH AT	D355	450.	12.13	90.	24.	9.	1.17
+	HYDROGRAPH AT	RT355	611.	12.40	40.	10.	4.	1.17
+	ROUTED TO	S355	40.	12.77	26.	10.	4.	1.17
+	2 COMBINED AT	CC355	490.	12.77	115.	34.	12.	1.17
+	ROUTED TO	R355	478.	12.77	115.	34.	12.	1.17
+	2 COMBINED AT	CC340B	707.	12.77	220.	78.	31.	3.11
+	ROUTED TO	R340B	703.	12.80	219.	78.	31.	3.11
+	HYDROGRAPH AT	340A2	72.	12.03	8.	3.	1.	.04
+	DIVERSION TO	B340A2	64.	11.97	4.	1.	0.	.04
+	HYDROGRAPH AT	D340A2	72.	12.03	5.	1.	1.	.04
+	HYDROGRAPH AT	T340A2	64.	11.97	4.	1.	0.	.04
+	ROUTED TO	S340A2	1.	12.03	1.	1.	0.	.04
+	3 COMBINED AT	C340A2	710.	12.80	225.	80.	32.	3.15
+	ROUTED TO	R340A2	703.	12.93	225.	80.	32.	3.15

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                2 COMBINED AT
+                          CC320B     2211.   12.23       517.       251.       148.      4.79
                ROUTED TO
+                           R320B     2204.   12.23       517.       251.       148.      4.79

                HYDROGRAPH AT
+                            320A      315.   12.13        40.        12.         4.       .27
                DIVERSION TO
+                          BS320A      315.   12.13        22.         6.         2.       .27
                HYDROGRAPH AT
+                            D320A     267.   12.27        22.         6.         2.       .27
                HYDROGRAPH AT
+                          RT320A      315.   12.13        22.         6.         2.       .27
                ROUTED TO
+                            S320A       4.   12.27         3.         3.         2.       .27
                3 COMBINED AT
+                             C320     2378.   12.30       539.       259.       151.      5.06
                HYDROGRAPH AT
+                           340A1     1254.   12.17       154.        46.        17.      1.09
                DIVERSION TO
+                          B340A1     1254.   12.17       154.        46.        17.      1.09
                HYDROGRAPH AT
+                          D340A1        0.     .00         0.         0.         0.      1.09
                HYDROGRAPH AT
+                          T340A1     1254.   12.17       154.        46.        17.      1.09
                ROUTED TO
+                          S340A1       18.   15.30        18.        16.        12.      1.09
                2 COMBINED AT
+                          C340A1       18.   15.30        18.        16.        12.      1.09
                2 COMBINED AT
+                             C340     2378.   12.30       553.       273.       162.      6.15
                HYDROGRAPH AT
+                             360      840.   12.20       122.        36.        13.       .88
                DIVERSION TO
+                           BS360      840.   12.20        93.        25.         9.       .88
                HYDROGRAPH AT
+                             D360     366.   12.67        40.        12.         4.       .88
                HYDROGRAPH AT
+                           RT360      840.   12.20        93.        25.         9.       .88
                ROUTED TO
+                             S360      15.   12.67        15.        12.         8.       .88
                3 COMBINED AT
+                             C360     2378.   12.30       597.       294.       172.      7.03
                HYDROGRAPH AT
+                             380A     322.   12.27        33.        10.         4.       .26
                2 COMBINED AT
+                           C380A     2639.   12.30       619.       300.       174.      7.29
                HYDROGRAPH AT
+                             400A      56.   12.20         4.         1.         0.       .05
                2 COMBINED AT
+                           C400A     2676.   12.30       622.       300.       174.      7.34
                HYDROGRAPH AT
+                           380B1      329.   12.20        47.        14.         5.       .37
                DIVERSION TO
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+                    B380B1     329.  12.20      19.       5.       2.      .37
      HYDROGRAPH AT
+                    D380B1     312.  12.27      31.       8.       3.      .37
      HYDROGRAPH AT
+                    T380B1     329.  12.20      19.       5.       2.      .37
      ROUTED TO
+                    S380B1       3.  12.27       3.       3.       2.      .37
      2 COMBINED AT
+                    C380B1     315.  12.27      34.      11.       5.      .37
      ROUTED TO
+                    R380B1     288.  12.43      34.      11.       5.      .37
      HYDROGRAPH AT
+                     400B1     440.  12.13      45.      13.       5.      .38
      DIVERSION TO
+                    B400B1     239.  11.97      10.       3.       1.      .38
      HYDROGRAPH AT
+                    D400B1     440.  12.13      37.      10.       3.      .38
      HYDROGRAPH AT
+                    T400B1     239.  11.97      10.       3.       1.      .38
      ROUTED TO
+                    S400B1       2.  12.03       2.       2.       1.      .38
      2 COMBINED AT
+                    C400B1     442.  12.13      39.      11.       5.      .38
      3 COMBINED AT
+                    CC400B    2976.  12.30     682.     319.     181.     8.09
      HYDROGRAPH AT
+                     420A2      31.  12.07       2.       1.       0.      .02
      2 COMBINED AT
+                    C400A2    2986.  12.30     684.     319.     182.     8.11
      HYDROGRAPH AT
+                     400B3      39.  12.03       3.       1.       0.      .02
      DIVERSION TO
+                    B400B3      39.  12.03       3.       1.       0.      .02
      HYDROGRAPH AT
+                    D400B3       0.    .00       0.       0.       0.      .02
      HYDROGRAPH AT
+                    T400B3      39.  12.03       3.       1.       0.      .02
      ROUTED TO
+                    S400B3       1.  11.67       1.       1.       0.      .02
      2 COMBINED AT
+                    C400B3       1.  11.67       1.       1.       0.      .02
      ROUTED TO
+                    R400B3       1.  12.67       1.       1.       0.      .02
      HYDROGRAPH AT
+                     380B3     171.  12.10      16.       5.       2.      .12
      DIVERSION TO
+                    B380B3     170.  12.07       7.       2.       1.      .12
      HYDROGRAPH AT
+                    D380B3     162.  12.13      10.       3.       1.      .12
      HYDROGRAPH AT
+                    T380B3     170.  12.07       7.       2.       1.      .12
      ROUTED TO
+                    S380B3       2.  12.13       2.       1.       1.      .12
      3 COMBINED AT
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+                    C380B3     165.   12.13      12.      5.      2.      .15
     ROUTED TO
+                    R380B3     138.   12.23      12.      4.      2.      .15
     HYDROGRAPH AT
+                     380B2     140.   12.07      12.      3.      1.      .10
     2 COMBINED AT
+                    C380B2     220.   12.23      23.      8.      3.      .24
     ROUTED TO
+                    R380B2     205.   12.37      23.      8.      3.      .24
     HYDROGRAPH AT
+                     400B2     205.   12.13      19.      5.      2.      .19
     2 COMBINED AT
+                    C400B2     332.   12.33      42.     12.      5.      .44
     ROUTED TO
+                    R400B2     325.   12.40      42.     12.      5.      .44
     HYDROGRAPH AT
+                     420A1     759.   12.13      74.     21.      8.      .57
     DIVERSION TO
+                    B420A1     477.   11.97      20.      6.      2.      .57
     HYDROGRAPH AT
+                    D420A1     759.   12.13      60.     16.      6.      .57
     HYDROGRAPH AT
+                    T420A1     477.   11.97      20.      6.      2.      .57
     ROUTED TO
+                    S420A1       4.   12.03       3.      3.      2.      .57
     4 COMBINED AT
+                     C420A    3713.   12.23     772.    345.    191.     9.12
     HYDROGRAPH AT
+                       370     817.   12.23      83.     22.      8.      .67
     HYDROGRAPH AT
+                       395     236.   12.13      29.      8.      3.      .20
     2 COMBINED AT
+                      C370    1017.   12.23     111.     30.     11.      .87
     DIVERSION TO
+                     BS370     877.   12.23      69.     17.      6.      .87
     HYDROGRAPH AT
+                      D370     140.   11.83      42.     13.      5.      .87
     HYDROGRAPH AT
+                     RT370     877.   12.23      69.     17.      6.      .87
     ROUTED TO
+                      S370      35.   12.83      29.     16.      6.      .87
     2 COMBINED AT
+                     CC370     175.   12.83      67.     28.     11.      .87
     ROUTED TO
+                      R370     175.   12.90      67.     28.     11.      .87
     HYDROGRAPH AT
+                       385     613.   12.23      74.     20.      7.      .53
     HYDROGRAPH AT
+                      415B     449.   12.10      49.     14.      5.      .33
     2 COMBINED AT
+                     C415B     979.   12.20     123.     35.     12.      .86
     DIVERSION TO
+                    BS415B     829.   12.20      72.     18.      7.      .86
     HYDROGRAPH AT
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+                    D415B     150.  11.80      50.      16.      6.      .86
      HYDROGRAPH AT
+                   RT415B     829.  12.20      72.      18.      7.      .86
      ROUTED TO
+                    S415B      51.  12.83      39.      18.      7.      .86
      2 COMBINED AT
+                   CC415B     201.  12.83      85.      33.     12.      .86
      ROUTED TO
+                    R415B     201.  12.90      84.      33.     12.      .86
      HYDROGRAPH AT
+                      390     486.  12.03      35.      10.      4.      .25
      DIVERSION TO
+                    BS390     103.  11.73       6.       2.      1.      .25
      HYDROGRAPH AT
+                     D390     486.  12.03      32.       8.      3.      .25
      HYDROGRAPH AT
+                    RT390     103.  11.73       6.       2.      1.      .25
      ROUTED TO
+                     S390       1.  11.80       1.       1.      1.      .25
      4 COMBINED AT
+                     C390     783.  12.03     182.      69.     27.     1.97
      ROUTED TO
+                     R390     710.  12.23     181.      68.     27.     1.97
      HYDROGRAPH AT
+                     420B     356.  12.10      34.      10.      4.      .28
      2 COMBINED AT
+                    C420B     988.  12.20     212.      77.     30.     2.25
      HYDROGRAPH AT
+                      440     184.  12.03      12.       3.      1.      .08
      ROUTED TO
+                      R70     181.  12.07      12.       3.      1.      .08
      HYDROGRAPH AT
+                      441      16.  12.03       1.       0.      0.      .01
      2 COMBINED AT
+                     C108     197.  12.07      14.       4.      1.      .09
      DIVERSION TO
+                    SPLIT      98.  12.07       7.       2.      1.      .09
      HYDROGRAPH AT
+                       D4      98.  12.07       7.       2.      1.      .09
      ROUTED TO
+                     R108      92.  12.13       7.       2.      1.      .09
      HYDROGRAPH AT
+                      442     105.  12.10       9.       2.      1.      .10
      2 COMBINED AT
+                      C67     195.  12.10      16.       4.      2.      .19
      DIVERSION TO
+                    BASIN4     121.  12.10       6.       2.      1.      .19
      HYDROGRAPH AT
+                       D6      74.  12.10      10.       3.      1.      .19
      HYDROGRAPH AT
+                     RTD6     121.  12.10       6.       2.      1.      .19
      ROUTED TO
+                      SD6       1.  12.47       1.       1.      0.      .19
      2 COMBINED AT
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+		CD6	74.	12.10	10.	3.	1.	.19
+	HYDROGRAPH AT	443	151.	12.07	15.	4.	1.	.08
+	DIVERSION TO	WSH66	78.	11.87	12.	3.	1.	.08
+	HYDROGRAPH AT	D66	73.	12.07	3.	1.	0.	.08
+	ROUTED TO	R113	71.	12.07	3.	1.	0.	.08
+	2 COMBINED AT	C114	144.	12.07	13.	4.	2.	.27
+	HYDROGRAPH AT	444	83.	12.03	5.	1.	0.	.04
+	ROUTED TO	R58	79.	12.07	5.	1.	0.	.04
+	HYDROGRAPH AT	445	307.	12.03	19.	5.	2.	.19
+	2 COMBINED AT	C107	382.	12.03	23.	6.	2.	.23
+	ROUTED TO	R107	382.	12.07	23.	6.	2.	.23
+	HYDROGRAPH AT	RTB2	98.	12.07	7.	2.	1.	.09
+	ROUTED TO	RSPLIT	98.	12.07	7.	2.	1.	.09
+	HYDROGRAPH AT	446	66.	12.03	6.	2.	1.	.04
+	3 COMBINED AT	C109	545.	12.07	36.	10.	3.	.27
+	DIVERSION TO	WSH404	35.	11.70	8.	2.	1.	.27
+	HYDROGRAPH AT	D5	510.	12.07	28.	7.	3.	.27
+	ROUTED TO	R109	493.	12.10	28.	7.	3.	.27
+	HYDROGRAPH AT	447	141.	12.07	12.	4.	1.	.09
+	HYDROGRAPH AT	RT404	35.	11.70	8.	2.	1.	.27
+	ROUTED TO	R404	35.	11.83	8.	2.	1.	.27
+	3 COMBINED AT	C110	666.	12.07	48.	13.	5.	.36
+	ROUTED TO	R110	663.	12.10	48.	13.	5.	.36
+	2 COMBINED AT	C115	805.	12.07	61.	17.	7.	.63
+	ROUTED TO	R115	799.	12.10	61.	17.	7.	.63
+	HYDROGRAPH AT	448	89.	12.03	6.	2.	1.	.05
+	HYDROGRAPH AT	449	81.	12.03	5.	1.	0.	.05

+	2 COMBINED AT	C6364	170.	12.03	11.	3.	1.	.09
+	ROUTED TO	R6364	145.	12.17	11.	3.	1.	.09
+	HYDROGRAPH AT	450	63.	12.20	7.	2.	1.	.07
+	HYDROGRAPH AT	451	18.	12.17	2.	1.	0.	.03
+	2 COMBINED AT	C451	80.	12.20	9.	2.	1.	.09
+	HYDROGRAPH AT	RT66	78.	11.87	12.	3.	1.	.08
+	HYDROGRAPH AT	452	63.	12.03	5.	1.	0.	.04
+	2 COMBINED AT	C6465	141.	12.03	17.	4.	2.	.04
+	ROUTED TO	R6566	137.	12.10	17.	4.	2.	.04
+	3 COMBINED AT	C116	357.	12.17	36.	10.	3.	.23
+	ROUTED TO	BASIN5	159.	12.47	36.	10.	3.	.23
+	ROUTED TO	R116	157.	12.53	36.	10.	3.	.23
+	HYDROGRAPH AT	453	63.	12.10	7.	2.	1.	.06
+	2 COMBINED AT	C117	177.	12.47	43.	12.	4.	.29
+	2 COMBINED AT	C118	892.	12.10	104.	29.	11.	.92
+	ROUTED TO	R118	887.	12.13	104.	29.	11.	.92
+	DIVERSION TO	BASIN6	248.	12.13	7.	2.	1.	.92
+	HYDROGRAPH AT	D7	639.	12.13	97.	27.	10.	.92
+	HYDROGRAPH AT	RTD7	248.	12.13	7.	2.	1.	.92
+	ROUTED TO	SD7	1.	12.67	1.	1.	1.	.92
+	2 COMBINED AT	CD7	640.	12.13	97.	28.	11.	.92
+	HYDROGRAPH AT	454	162.	12.13	21.	6.	2.	.18
+	2 COMBINED AT	C454	801.	12.13	118.	34.	13.	1.10
+	ROUTED TO	R454	793.	12.23	118.	34.	13.	1.10
+	HYDROGRAPH AT	415A	267.	12.17	32.	9.	3.	.28
+	2 COMBINED AT	C415A	1046.	12.20	149.	43.	16.	1.38
+	2 COMBINED AT	CC415A	2010.	12.20	354.	117.	45.	3.63

+	DIVERSION TO	BS420B	510.	12.20	17.	4.	2.	3.63
+	HYDROGRAPH AT	D420B	1500.	12.10	337.	113.	44.	3.63
+	HYDROGRAPH AT	RT420B	510.	12.20	17.	4.	2.	3.63
+	ROUTED TO	S420B	29.	12.40	14.	4.	2.	3.63
+	2 COMBINED AT	CC420B	1529.	12.37	351.	117.	45.	3.63
+	ROUTED TO	R415A	1527.	12.37	351.	117.	45.	3.63
+	HYDROGRAPH AT	455	1418.	12.13	150.	45.	16.	1.11
+	DIVERSION TO	BS455	1418.	12.13	139.	37.	13.	1.11
+	HYDROGRAPH AT	D455	145.	12.80	24.	8.	3.	1.11
+	HYDROGRAPH AT	RT455	1418.	12.13	139.	37.	13.	1.11
+	ROUTED TO	S455	23.	12.80	22.	18.	11.	1.11
+	2 COMBINED AT	C455	169.	12.80	46.	26.	14.	1.11
+	3 COMBINED AT	CC455	5125.	12.23	1104.	464.	240.	13.86
+	ROUTED TO	S440	300.	22.43	298.	270.	175.	13.86
+	ROUTED TO	R455	300.	23.17	298.	270.	172.	13.86
+	HYDROGRAPH AT	480	1102.	12.10	100.	31.	11.	.73
+	DIVERSION TO	BS480	487.	11.90	27.	8.	3.	.73
+	HYDROGRAPH AT	D480	1102.	12.10	83.	23.	8.	.73
+	HYDROGRAPH AT	RT480	487.	11.90	27.	8.	3.	.73
+	ROUTED TO	S480	5.	11.97	5.	4.	3.	.73
+	2 COMBINED AT	C480	1107.	12.10	88.	27.	11.	.73
+	2 COMBINED AT	CC480	1107.	12.10	357.	317.	207.	.73
+	ROUTED TO	R480	907.	12.33	357.	317.	205.	.73
+	HYDROGRAPH AT	456	483.	12.07	37.	10.	4.	.26
+	DIVERSION TO	BASIN1	193.	12.07	8.	2.	1.	.26
+	HYDROGRAPH AT	D1	290.	12.07	29.	8.	3.	.26
+	DIVERSION TO	WA30	59.	12.07	10.	3.	1.	.26

+	HYDROGRAPH AT	CD2	231.	12.07	19.	5.	2.	.26
+	ROUTED TO	R456	218.	12.13	19.	5.	2.	.26
+	HYDROGRAPH AT	457	273.	12.07	21.	6.	2.	.19
+	2 COMBINED AT	C101	480.	12.10	40.	10.	4.	.45
+	DIVERSION TO	BASIN2	177.	12.10	8.	2.	1.	.45
+	HYDROGRAPH AT	D3	303.	12.10	32.	8.	3.	.45
+	HYDROGRAPH AT	RTD3	177.	12.10	8.	2.	1.	.45
+	ROUTED TO	SD3	1.	12.40	1.	1.	1.	.45
+	2 COMBINED AT	CD3	304.	12.10	33.	9.	4.	.45
+	ROUTED TO	R101	302.	12.10	33.	9.	4.	.45
+	HYDROGRAPH AT	458	366.	12.03	26.	7.	2.	.19
+	2 COMBINED AT	C103	655.	12.07	59.	16.	6.	.64
+	ROUTED TO	R103	651.	12.07	59.	16.	6.	.64
+	HYDROGRAPH AT	RT30	59.	12.07	10.	3.	1.	.26
+	ROUTED TO	R30	58.	12.10	10.	3.	1.	.26
+	HYDROGRAPH AT	RTB1	193.	12.07	8.	2.	1.	.26
+	ROUTED TO	B1	35.	12.20	8.	2.	1.	.26
+	ROUTED TO	RB1	35.	12.27	8.	2.	1.	.26
+	2 COMBINED AT	CDIV	87.	12.20	18.	5.	2.	.12
+	HYDROGRAPH AT	459	45.	12.03	3.	1.	0.	.03
+	2 COMBINED AT	C52	117.	12.10	21.	6.	2.	.15
+	ROUTED TO	R52	116.	12.17	21.	6.	2.	.15
+	HYDROGRAPH AT	460	221.	12.07	20.	6.	2.	.14
+	2 COMBINED AT	C102	323.	12.07	40.	12.	4.	.29
+	ROUTED TO	BASIN3	71.	12.63	40.	12.	4.	.29
+	ROUTED TO	R3	71.	12.77	40.	12.	4.	.29
+	HYDROGRAPH AT	461	165.	12.10	17.	5.	2.	.12

	2 COMBINED AT							
+		C104	220.	12.10	57.	17.	6.	.41
	2 COMBINED AT							
+		C106	866.	12.07	115.	33.	12.	1.05
	ROUTED TO							
+		R106	828.	12.13	115.	33.	12.	1.05
	HYDROGRAPH AT							
+		462	557.	12.07	42.	12.	4.	.30
	2 COMBINED AT							
+		C56	1306.	12.10	156.	44.	16.	1.35
	2 COMBINED AT							
+		C462	1633.	12.30	395.	340.	217.	2.09
	ROUTED TO							
+		R462	1600.	12.33	395.	340.	217.	2.09
	ROUTED TO							
+		RR462	1563.	12.40	393.	340.	217.	2.09
	HYDROGRAPH AT							
+		500	1126.	12.27	128.	35.	12.	.93
	2 COMBINED AT							
+		C500	2472.	12.33	504.	366.	226.	3.02

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