

ID	LINE	1	2	3	4	5	6	7	8	9	10
184	KK	SC311									
185	KM	Smith Creek 311 Runoff									
186	KD								22		
187	BA	0.1064									
188	PB	3									
189	LS	0	68								
190	UD	0.234									
191	KK	DP311									
192	KM	Combine RT305 SC307 SC309 and SC311									
193	KD								22		
194	HC	4									
195	KK	RT311									
196	KM	Tributary Route 311 to 315									
197	KD								22		
198	RK	2860 0.0448 0.0888							TRAP		2
199	KK	SC313									
200	KM	Smith Creek 313 Runoff									
201	KD								22		
202	BA	0.1520									
203	PB	3									
204	LS	0	67								
205	UD	0.352									
206	KK	SC315									
207	KM	Smith Creek 315 Runoff									
208	KD								22		
209	BA	0.0886									
210	PB	3									
211	LS	0	68								
212	UD	0.297									
213	KK	DP315									
214	KM	Combine RT311 SC313 and SC315									
215	KD								22		
216	HC	3									
217	KK	DP316									
218	KM	Combine RT220 and DP315									
219	KD								22		
220	HC	2									
221	KK	RT316									
222	KM	Smith Creek Route 316 to 401									
223	KD								22		
224	RK	2575 0.0361 0.120							TRAP	1	2

LINE	1	2	3	4	5	6	7	8	9	10
ID	1	2	3	4	5	6	7	8	9	10
314										
315										
316								22		
317								TRAP		2
318										
319										
320								22		
321										
322										
323										
324										
325										
326										
327								22		
328										
329										
330										
331										
332										
333										
334										
335								22		
336										
337										
338										
339								22		
340								TRAP		2
341										
342										
343								22		
344										
345										
346										
347										
348										
349										
350								22		
351										
352										
353										
354								22		
355								TRAP		2

LINE	1	2	3	4	5	6	7	8	9	10
356										
357										
358								22		
359										
360										
361										
362										
363										
364										
365								22		
366										
367										
368										
369								22		
370								TRAP		2
371										
372										
373								22		
374										
375										
376										
377										
378										
379										
380								22		
381										
382										
383										
384								22		
385										
386										
387										
388										
389										
390										
391								22		
392										
393										
394										
395								22		
396								TRAP	1	2

HEC1 S/N: 1343001909

HMVersion: 6.33

Data File: C:\WINNT\TEMP\vbh0034 TMP

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

MAXIMUM STAGE	TIME OF OPERATION MAX STAGE	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA
					6-HOUR	24-HOUR	72-HOUR	
	HYDROGRAPH AT	SC205	25.	6.00	5.	2	1.	0.10
	ROUTED TO	RT205	25.	6.00	5.	2.	1.	0.10
	HYDROGRAPH AT	SC207	28.	6.00	6.	2.	1.	0.12
	HYDROGRAPH AT	SC213	27.	6.00	6.	2.	1.	0.12
	3 COMBINED AT	DP213	79.	6.00	16.	6.	2.	0.34
	ROUTED TO	RT213	75.	6.00	16.	6.	2.	0.34
	HYDROGRAPH AT	SC209	19.	6.00	4.	2.	1.	0.14
	HYDROGRAPH AT	SC211	8.	6.00	2.	1.	0.	0.08
	HYDROGRAPH AT	SC215	15.	6.00	3.	1.	0.	0.06
	4 COMBINED AT	DP215	118.	6.00	25.	9.	3.	0.62
	ROUTED TO	RT215	107.	6.00	25.	9.	3.	0.62
	HYDROGRAPH AT	SC219	15.	6.00	4.	1.	0.	0.13
	2 COMBINED AT	DP219	122.	6.00	29.	10.	4.	0.75
	HYDROGRAPH AT	SC201	17.	6.00	4.	1	0.	0.12
	ROUTED TO	RT201	15.	6.00	4.	1	0.	0.12
	HYDROGRAPH AT	SC203	13.	6.00	3.	1.	0.	0.11
	2 COMBINED AT	DP203	28.	6.00	7.	3	1.	0.23
	ROUTED TO	RT203	25.	6.00	7.	3.	1.	0.23
	HYDROGRAPH AT	SC217	7.	5.75	2.	1	0.	0.05
	2 COMBINED AT	DP217	32.	6.00	8.	3	1.	0.29
	2 COMBINED AT	DP220	154.	6.00	37.	14	5.	1.03
	ROUTED TO	RT220	148.	6.00	37.	14	5.	1.03
	HYDROGRAPH AT	SC301	31.	6.00	6	2	1.	0.12

HYDROGRAPH AT	SC303	33.	6.00	6	2	1.	0.13
2 COMBINED AT	DP303	65	6.00	12	4	1.	0.25
ROUTED TO	RT303	63.	6.00	12	4	1.	0.25
HYDROGRAPH AT	SC305	16.	6.00	3	1	0.	0.06
2 COMBINED AT	DP305	79.	6.00	15.	5.	2.	0.31
ROUTED TO	RT305	74.	6.00	15.	5.	2.	0.31
HYDROGRAPH AT	SC307	21.	6.25	5.	2.	1.	0.11
HYDROGRAPH AT	SC309	29.	6.00	6.	2.	1.	0.12
HYDROGRAPH AT	SC311	27.	6.00	5.	2.	1.	0.11
4 COMBINED AT	DP311	150.	6.00	31.	11.	4.	0.65
ROUTED TO	RT311	131.	6.00	31.	11.	4.	0.65
HYDROGRAPH AT	SC313	33.	6.00	7.	2.	1.	0.15
HYDROGRAPH AT	SC315	23.	6.00	4	1	0.	0.09
3 COMBINED AT	DP315	187.	6.00	42.	15.	5.	0.89
2 COMBINED AT	DP316	335.	6.00	80.	29.	10.	1.92
ROUTED TO	RT316	312.	6.25	79.	29.	10.	1.92
HYDROGRAPH AT	SC401	35.	6.00	7.	3.	1.	0.15
2 COMBINED AT	DP401	340.	6.25	86.	31.	10.	2.08
ROUTED TO	RT401	338.	6.25	86.	31.	10.	2.08
HYDROGRAPH AT	SC403	25.	6.00	5.	2.	1.	0.10
HYDROGRAPH AT	SC405	18.	6.00	3	1.	0.	0.07
3 COMBINED AT	DP405	365.	6.25	94	34.	11.	2.25
ROUTED TO	RT405	359.	6.25	94.	34	11.	2.25
HYDROGRAPH AT	SC101	14.	6.00	3	1.	0.	0.09
ROUTED TO	RT101	12.	6.00	3	1	0.	0.09
HYDROGRAPH AT	SC103	30.	6.00	6.	2	1.	0.17
HYDROGRAPH AT							

		SC105A	20.	6.00	4.	1.	0.	0.07
	3 COMBINED AT	DP103	62.	6.00	13.	5.	2.	0.33
	ROUTED TO	RES106	49.	6.25	13.	5.	2.	0.33
7321.97	6.25							
	ROUTED TO	RT103	48.	6.25	13.	5.	2.	0.33
	HYDROGRAPH AT	SC105B	18.	6.00	4.	1.	0.	0.07
	2 COMBINED AT	DP105	61.	6.25	17.	6.	2.	0.40
	ROUTED TO	RT105A	59.	6.25	17.	6.	2.	0.40
	HYDROGRAPH AT	SC107A	39.	6.00	7.	2.	1.	0.14
	ROUTED TO	RES108	31.	6.00	7.	2.	1.	0.14
7342.79	6.00							
	2 COMBINED AT	DP107A	90.	6.25	24.	8.	3.	0.53
	ROUTED TO	RT105B	89.	6.25	24.	9.	3.	0.53
	HYDROGRAPH AT	SC107B	11.	6.00	2.	1.	0.	0.04
	2 COMBINED AT	DP107B	94.	6.25	26.	9.	3.	0.57
	ROUTED TO	RT107	92.	6.25	26.	9.	3.	0.57
	HYDROGRAPH AT	SC109	44.	6.00	9.	3.	1.	0.16
	2 COMBINED AT	DP109	123.	6.25	34.	12.	4.	0.74
	ROUTED TO	RT109	119.	6.25	34.	12.	4.	0.74
	HYDROGRAPH AT	SC111	47.	6.00	10.	3.	1.	0.19
	2 COMBINED AT	DP111	157.	6.25	43.	16.	5.	0.93
	HYDROGRAPH AT	SC407	35.	6.00	8.	3.	1.	0.17
	3 COMBINED AT	DP407	548.	6.25	146.	52.	18.	3.34
	ROUTED TO	RT407	532.	6.25	146.	53.	18.	3.34
	HYDROGRAPH AT	SC501	31.	6.00	6.	2.	1.	0.12
	HYDROGRAPH AT	SC503	30.	6.00	6.	2.	1.	0.12
	HYDROGRAPH AT	SC505	44.	6.00	9.	3.	1.	0.19
	3 COMBINED AT	DP505	105.	6.00	21.	7.	2.	0.43

2 COMBINED AT	DP506	608	6.25	167.	60	20	3.77
ROUTED TO	RT506	595	6.25	167	60	20	3.77
HYDROGRAPH AT	SC507	24	6.00	5	2	1	0.10
2 COMBINED AT	DP507	607	6.25	171.	62.	21.	3.87
ROUTED TO	RT507	583	6.25	171.	62.	21.	3.87
HYDROGRAPH AT	SC509	33	6.00	7	3	1.	0.15
2 COMBINED AT	DP509	612.	6.25	178.	64.	22.	4.02
ROUTED TO	RT509	581.	6.50	178.	64.	22.	4.02
HYDROGRAPH AT	SC511	23.	6.00	4.	2.	1.	0.09
2 COMBINED AT	DP511	590.	6.50	182.	66.	22.	4.11
ROUTED TO	RT511	589	6.50	182.	66.	22.	4.11
HYDROGRAPH AT	SC601	19.	5.75	3.	1.	0.	0.06
ROUTED TO	RT601	18.	6.00	3.	1.	0.	0.06
HYDROGRAPH AT	SC603	66.	6.00	12.	4.	1.	0.25
2 COMBINED AT	DP603	83	6.00	15.	5.	2.	0.31
2 COMBINED AT	DP604	619.	6.50	196.	71.	24.	4.43
ROUTED TO	RT604	618.	6.50	197.	72.	24.	4.43
HYDROGRAPH AT	SC607	24.	6.00	4.	2.	1.	0.08
HYDROGRAPH AT	SC609	39.	6.00	7.	3.	1.	0.14
3 COMBINED AT	DP609	642.	6.50	208.	76.	25.	4.65
ROUTED TO	RES610	641.	6.50	205.	75	25	4.65
6823.91			6.50				
HYDROGRAPH AT	SC605A	13.	6.00	2.	1.	0	0.05
ROUTED TO	RT605	13.	6.00	2.	1.	0.	0.05
HYDROGRAPH AT	SC605B	35.	6.00	6	2.	1	0.08
3 COMBINED AT	DP610	656.	6.50	212	78.	26.	4.78
ROUTED TO	RT610	652.	6.50	212.	78.	26	4.78

	HYDROGRAPH AT	SC611	46	5.75	6	2	1	0.11
	2 COMBINED AT	DP611	659.	6.50	217.	80	27.	4.89
	ROUTED TO	RES612	648.	6.50	215.	80	27.	4.89
6764.21	6.50							
	ROUTED TO	RT612	635.	6.75	215.	80.	27.	4.89
	HYDROGRAPH AT	SC613	35.	6.00	6.	2	1.	0.12
	ROUTED TO	RT618	34.	6.00	6.	2.	1.	0.12
	HYDROGRAPH AT	SC617A	8.	5.75	1.	0.	0.	0.01
	HYDROGRAPH AT	SC618	4	5.75	0.	0.	0.	0.01
	3 COMBINED AT	DP618	41.	6.00	8	3	1.	0.15
	HYDROGRAPH AT	SC615B	24.	5.75	3.	1.	0.	0.03
	ROUTED TO	RES614	8.	6.25	3.	1.	0.	0.03
6727.18	6.25							
	HYDROGRAPH AT	SC615A	31.	5.75	4.	1.	0.	0.06
	ROUTED TO	RES615	9.	6.25	4.	1.	0.	0.06
6727.50	6.25							
	HYDROGRAPH AT	SC617C	12.	5.75	2.	1.	0.	0.05
	5 COMBINED AT	DP613	662.	6.75	230.	86.	29.	5.17
	ROUTED TO	RT614	661.	6.75	230.	86.	29.	5.17
	HYDROGRAPH AT	SC617B	6.	5.75	1.	0.	0.	0.02
	2 COMBINED AT	DP617	662.	6.75	231.	86.	29.	5.19
	ROUTED TO	RT617	656.	6.75	231.	86.	29.	5.19
	HYDROGRAPH AT	SC701	83.	6.00	14.	4.	1.	0.07
	HYDROGRAPH AT	SC703	108	5.75	12.	4.	1.	0.13
	3 COMBINED AT	DP703	682.	6.75	254.	94.	32.	5.39
	ROUTED TO	RT703	671	6.75	253.	94	32.	5.39
	HYDROGRAPH AT	SC705	24	6.00	5.	2.	1.	0.09
	2 COMBINED AT							

DP705

678

6.75

258

96

32

5 48

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
 (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

VOLUME (IN)	ISTAQ	ELEMENT	DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	DT (MIN)	INTERPOLATED TO COMPUTATION INTERVAL	
								PEAK (CFS)	TIME TO PEAK (MIN)
0.63	RT205	MANE	1.53	25.01	361.82	0.63	15.00	24.55	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3242E+01 EXCESS=0.0000E+00 OUTFLOW=0.3242E+01 BASIN STORAGE= 0.6137E-09 PERCENT ERROR= 0.0									
0.61	RT213	MANE	0.89	78.80	362.18	0.61	15.00	75.25	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1115E+02 EXCESS=0.0000E+00 OUTFLOW=0.1115E+02 BASIN STORAGE= 0.2680E-08 PERCENT ERROR= 0.0									
0.55	RT215	MANE	1.76	116.95	363.39	0.55	15.00	106.55	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1798E+02 EXCESS=0.0000E+00 OUTFLOW=0.1797E+02 BASIN STORAGE= 0.1818E-07 PERCENT ERROR= 0.0									
0.43	RT201	MANE	1.57	17.03	362.72	0.43	15.00	15.44	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2807E+01 EXCESS=0.0000E+00 OUTFLOW=0.2807E+01 BASIN STORAGE= 0.9399E-09 PERCENT ERROR= 0.0									
0.40	RT203	MANE	2.03	27.87	363.92	0.40	15.00	25.46	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4988E+01 EXCESS=0.0000E+00 OUTFLOW=0.4988E+01 BASIN STORAGE= 0.7796E-08 PERCENT ERROR= 0.0									
0.49	RT220	MANE	0.62	154.03	361.35	0.49	15.00	148.25	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2698E+02 EXCESS=0.0000E+00 OUTFLOW=0.2699E+02 BASIN STORAGE= 0.1957E-07 PERCENT ERROR= 0.0									
0.63	RT303	MANE	0.86	64.04	361.56	0.63	15.00	62.61	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8341E+01 EXCESS=0.0000E+00 OUTFLOW=0.8342E+01 BASIN STORAGE= 0.1536E-09 PERCENT ERROR= 0.0									
0.63	RT305	MANE	1.58	77.52	362.28	0.63	15.00	73.76	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1047E+02 EXCESS=0.0000E+00 OUTFLOW=0.1048E+02 BASIN STORAGE= 0.3675E-08 PERCENT ERROR= 0.0									
0.63	RT311	MANE	2.48	148.41	364.63	0.63	15.00	130.68	360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2184E+02 EXCESS=0.0000E+00 OUTFLOW=0.2184E+02 BASIN STORAGE=
0.5873E-07 PERCENT ERROR= 0.0

0.55 RT316 MANE 2.35 330.44 364.70 0.55 15.00 311.91 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5663E+02 EXCESS=0.0000E+00 OUTFLOW=0.5661E+02 BASIN STORAGE=
0.4681E-06 PERCENT ERROR= 0.0

0.56 RT401 MANE 0.60 339.37 375.64 0.56 15.00 338.30 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6175E+02 EXCESS=0.0000E+00 OUTFLOW=0.6175E+02 BASIN STORAGE=
0.1736E-06 PERCENT ERROR= 0.0

0.57 RT405 MANE 1.76 362.46 377.38 0.56 15.00 359.00 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6749E+02 EXCESS=0.0000E+00 OUTFLOW=0.6748E+02 BASIN STORAGE=
0.7610E-06 PERCENT ERROR= 0.0

0.47 RT101 MANE 2.15 14.22 363.91 0.47 15.00 12.19 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2300E+01 EXCESS=0.0000E+00 OUTFLOW=0.2300E+01 BASIN STORAGE=
0.1952E-08 PERCENT ERROR= 0.0

0.54 RT103 MANE 0.88 49.27 376.77 0.54 15.00 47.74 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.9452E+01 EXCESS=0.0000E+00 OUTFLOW=0.9453E+01 BASIN STORAGE=
0.4212E-08 PERCENT ERROR= 0.0

0.56 RT105A MANE 1.07 60.30 377.45 0.56 15.00 59.46 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1192E+02 EXCESS=0.0000E+00 OUTFLOW=0.1192E+02 BASIN STORAGE=
0.8741E-08 PERCENT ERROR= 0.0

0.59 RT105B MANE 0.95 89.62 376.94 0.59 15.00 88.57 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1683E+02 EXCESS=0.0000E+00 OUTFLOW=0.1683E+02 BASIN STORAGE=
0.1456E-07 PERCENT ERROR= 0.0

0.60 RT107 MANE 1.86 93.99 379.03 0.60 15.00 91.81 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1823E+02 EXCESS=0.0000E+00 OUTFLOW=0.1823E+02 BASIN STORAGE=
0.7563E-07 PERCENT ERROR= 0.0

0.61 RT109 MANE 4.24 121.75 384.26 0.61 15.00 118.50 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2413E+02 EXCESS=0.0000E+00 OUTFLOW=0.2411E+02 BASIN STORAGE=
0.6139E-06 PERCENT ERROR= 0.1

0.59 RT407 MANE 1.20 544.27 376.83 0.58 15.00 532.48 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1041E+03 EXCESS=0.0000E+00 OUTFLOW=0.1041E+03 BASIN STORAGE=
0.1346E-05 PERCENT ERROR= 0.0

0.59 RT506 MANE 0.98 606.15 376.94 0.59 15.00 594.90 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1189E+03 EXCESS=0.0000E+00 OUTFLOW=0.1189E+03 BASIN STORAGE=
0.1709E-05 PERCENT ERROR= 0.0

0.59 RT507 MANE 1.40 606.75 377.78 0.59 15.00 583.13 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1224E+03 EXCESS=0.0000E+00 OUTFLOW=0.1224E+03 BASIN STORAGE=
0.3754E-05 PERCENT ERROR= 0.0

0.60 RT509 MANE 2.31 606.95 381.09 0.60 15.00 581.06 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1278E+03 EXCESS=0.0000E+00 OUTFLOW=0.1277E+03 BASIN STORAGE=
0.8741E-05 PERCENT ERROR= 0.0

0.60 RT511 MANE 0.43 589.67 390.44 0.60 15.00 589.30 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1308E+03 EXCESS=0.0000E+00 OUTFLOW=0.1308E+03 BASIN STORAGE=
0.2271E-05 PERCENT ERROR= 0.0

0.67 RT601 MANE 1.76 19.12 350.04 0.67 15.00 17.53 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2261E+01 EXCESS=0.0000E+00 OUTFLOW=0.2261E+01 BASIN STORAGE=
0.1563E-08 PERCENT ERROR= 0.0

0.60 RT604 MANE 1.09 618.36 390.32 0.60 15.00 618.25 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1416E+03 EXCESS=0.0000E+00 OUTFLOW=0.1416E+03 BASIN STORAGE=
0.6112E-05 PERCENT ERROR= 0.0

0.63 RT605 MANE 1.01 13.06 361.20 0.63 15.00 12.94 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1688E+01 EXCESS=0.0000E+00 OUTFLOW=0.1688E+01 BASIN STORAGE=
0.1351E-09 PERCENT ERROR= 0.0

0.61 RT610 MANE 2.25 654.15 393.22 0.61 15.00 651.79 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1555E+03 EXCESS=0.0000E+00 OUTFLOW=0.1555E+03 BASIN STORAGE=
0.2372E-04 PERCENT ERROR= 0.0

0.61 RT612 MANE 1.44 647.79 393.08 0.61 15.00 635.20 405.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1596E+03 EXCESS=0.0000E+00 OUTFLOW=0.1596E+03 BASIN STORAGE=
0.2253E-04 PERCENT ERROR= 0.0

0.67 RT618 MANE 0.42 34.75 360.55 0.67 15.00 34.39 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4404E+01 EXCESS=0.0000E+00 OUTFLOW=0.4404E+01 BASIN STORAGE=
0.2715E-10 PERCENT ERROR= 0.0

0.62 RT614 MANE 0.60 661.76 405.61 0.62 15.00 661.21 405.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1711E+03 EXCESS=0.0000E+00 OUTFLOW=0.1711E+03 BASIN STORAGE=
0.7309E-05 PERCENT ERROR= 0.0

0.62 RT617 MANE 1.67 660.41 407.79 0.62 15.00 655.87 405.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1720E+03 EXCESS=0.0000E+00 OUTFLOW=0.1720E+03 BASIN STORAGE=
0.3294E-04 PERCENT ERROR= 0.0

0.65 RT703 MANE 1.47 680.96 408.05 0.65 15.00 671.12 405.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1880E+03 EXCESS=0.0000E+00 OUTFLOW=0.1880E+03 BASIN STORAGE=
0.5213E-04 PERCENT ERROR= 0.0

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

50 year future-Alternate 1
HEC1 S/N: 1343001909 HMVersion: 6.33 Data File: C:\WINNT\TEMP\vlsh255C.TMP

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*****  
*****  
*  
*  
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *  
* U.S. ARMY CORPS OF ENGINEERS *  
* MAY 1991 *  
* HYDROLOGIC ENGINEERING CENTER *  
* VERSION 4.0.1E *  
* 609 SECOND STREET *  
* *  
* DAVIS, CALIFORNIA 95616 *  
* RUN DATE 06/19/2001 TIME 16:11:04 *  
* (916) 756-1104 *  
*  
*****  
*****
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X X XXXXXXXX XXXXX X  
X X X X X XX  
X X X X X  
XXXXXXXX XXXX X XXXXX X  
X X X X X  
X X X X X  
X X XXXXXXXX XXXXX XXX
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.....  
: Full Microcomputer Implementation :  
: by :  
: Haestad Methods, Inc. :  
: :  
.....  
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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

ID	LINE	1	2	3	4	5	6	7	8	9	10
	1	ID	Type	I/A	start						
	2	IT	15	0	0	288					
	3	ID	5								
	4	KK	SC205								
	5	KM	Smith Creek 205 Runoff								
	6	KD						22			
	7	BA	0.0970								
	8	PB	4								
	9	IN	15								
0.0165	10	PC	0.0005	0.0015	0.0030	0.0045	0.0060	0.0080	0.0100	0.0120	0.0143
0.0600	11	PC	0.0188	0.0210	0.0233	0.0255	0.0278	0.0320	0.0390	0.0460	0.0530
0.8000	12	PC	0.0750	0.1000	0.4000	0.7000	0.7250	0.7500	0.7650	0.7800	0.7900
0.8600	13	PC	0.8100	0.8200	0.8250	0.8300	0.8350	0.8400	0.8450	0.8500	0.8550
0.8975	14	PC	0.8638	0.8675	0.8713	0.8750	0.8788	0.8825	0.8863	0.8900	0.8938
0.9300	15	PC	0.9013	0.9050	0.9083	0.9115	0.9148	0.9180	0.9210	0.9240	0.9270
0.9550	16	PC	0.9325	0.9350	0.9375	0.9400	0.9425	0.9450	0.9475	0.9500	0.9525
0.9800	17	PC	0.9575	0.9600	0.9625	0.9650	0.9675	0.9700	0.9725	0.9750	0.9775
0.9925	18	PC	0.9813	0.9825	0.9838	0.9850	0.9863	0.9875	0.9888	0.9900	0.9913
	19	PC	0.9938	0.9950	0.9963	0.9975	0.9988	1.0000			
	20	LS	0	68							
	21	UD	0.257								
	22	KK	RT205								
	23	KM	Smith Creek Route 205 to 213								
	24	KD						22			
	25	RK	1530	0.0431	0.055			TRAP		2	
	26	KK	SC207								
	27	KM	Smith Creek 207 Runoff								
	28	KD						22			
	29	BA	0.12								
	30	PB	4								
	31	LS	0	68							
	32	UD	0.367								
	33	KK	SC213								
	34	KM	Smith Creek 213 Runoff								
	35	KD						22			
	36	BA	0.1243								
	37	PB	4								
	38	LS	0	67							
	39	UD	0.361								
	40	KK	DP213								
	41	KM	Combine RT205 SC207 and SC213								
	42	KD						22			
	43	HC	3								
	44	KK	RT213								
	45	KM	Smith Creek Route 213 to 215								
	46	KD						22			
	47	RK	1360	0.0493	0.055			TRAP		2	

LINE	1	2	3	4	5	6	7	8	9	10
ID										
95			KK	RT201						
96			KM	Tributary Route 201 to 203						
97			KD					22		
98			RK	1650	0.0509	0.055		TRAP		2
99			KK	SC203						
100			KM	Smith Creek 203 Runoff						
101			KD					22		
102			BA	0.1113						
103			PB	4						
104			LS	0	61					
105			UD	0.223						
106			KK	DP203						
107			KM	Combine RT201 and SC203						
108			KD					22		
109			HC	2						
110			KK	RT203						
111			KM	Tributary Route 203 to 217						
112			KD					22		
113			RK	2010	0.0557	0.0698		TRAP		2
114			KK	SC217						
115			KM	Smith Creek 217 Runoff						
116			KD					22		
117			BA	0.0547						
118			PB	4						
119			LS	0	62					
120			UD	0.211						
121			KK	DP217						
122			KM	Combine RT203 and SC217						
123			KD					22		
124			HC	2						
125			KK	DP220						
126			KM	Combine DP217 and DP219						
127			KD					22		
128			HC	2						
129			KK	RT220						
130			KM	Smith Creek Route 220 to 316						
131			KD					22		
132			RK	646	0.0313	0.0829		TRAP	1	2
133			KK	SC301						
134			KM	Smith Creek 301 Runoff						
135			KD					22		
136			BA	0.1196						
137			PB	4						
138			LS	0	68					
139			UD	0.279						

LINE	1	2	3	4	5	6	7	8	9	10
184	KK	SC311								
185	KM	Smith Creek 311 Runoff								
186	KD							22		
187	BA	0.1064								
188	PB	4								
189	LS	0	68							
190	UD	0.234								
191	KK	DP311								
192	KM	Combine RT305 SC307 SC309 and SC311								
193	KD							22		
194	HC	4								
195	KK	RT311								
196	KM	Tributary Route 311 to 315								
197	KD							22		
198	RK	2860	0.0448	0.0888				TRAP		2
199	KK	SC313								
200	KM	Smith Creek 313 Runoff								
201	KD							22		
202	BA	0.1520								
203	PB	4								
204	LS	0	67							
205	UD	0.352								
206	KK	SC315								
207	KM	Smith Creek 315 Runoff								
208	KD							22		
209	BA	0.0886								
210	PB	4								
211	LS	0	68							
212	UD	0.297								
213	KK	DP315								
214	KM	Combine RT311 SC313 and SC315								
215	KD							22		
216	HC	3								
217	KK	DP316								
218	KM	Combine RT220 and DP315								
219	KD							22		
220	HC	2								
221	KK	RT316								
222	KM	Smith Creek Route 316 to 401								
223	KD							22		
224	RK	2575	0.0361	0.120				TRAP	1	2

ID	LINE	1	2	3	4	5	6	7	8	9	10
269	KK										
270	KM										
271	KD								22		
272	RK			2050	0.0424	0.055			TRAP		2
273	KK										
274	KM										
275	KD								22		
276	BA			0.1670							
277	PB			4							
278	LS			0	65						
279	UD			0.348							
280	KK										
281	KM										
282	KD								22		
283	BA			0.0693							
284	PB			4							
285	LS			0	70						
286	UD			0.345							
287	KK										
288	KM										
289	KD								22		
290	HC			3							
291	KK										
292	KM										
293	KD								22		
294	RS			1	STOR	-1					
295	SA			0.43	0.54	0.65	0.80	0.94	1.00		
296	SE			7320	7322	7324	7326	7328	7330		
297	SG			0	50	80	100	190	250		
298	SE			7320	7322	7324	7326	7328	7330		
299	KK										
300	KM										
301	KD								22		
302	RK			1150	0.0478	0.055			TRAP		2
303	KK										
304	KM										
305	KD								22		
306	BA			0.0686							
307	PB			4							
308	LS			0	69						
309	UD			0.345							
310	KK										
311	KM										
312	KD								22		
313	HC			2							

LINE	1	2	3	4	5	6	7	8	9	10
314										
315										
316								22		
317								TRAP		2
318										
319										
320								22		
321										
322										
323										
324										
325										
326										
327								22		
328										
329										
330										
331										
332										
333										
334										
335								22		
336										
337										
338										
339								22		
340								TRAP		2
341										
342										
343								22		
344										
345										
346										
347										
348										
349										
350								22		
351										
352										
353										
354								22		
355								TRAP		2

ID	LINE	1	2	3	4	5	6	7	8	9	10
356	KK	SC109									
357	KM	Smith Creek 109 Runoff									
358	KD								22		
359	BA	0.1637									
360	PB	4									
361	LS	0	69								
362	UD	0.350									
363	KK	DP109									
364	KM	Combine RT107 and SC109									
365	KD								22		
366	HC	2									
367	KK	RT109									
368	KM	Tributary Route 109 to 111									
369	KD								22		
370	RK	3840	0.0453	0.120					TRAP		2
371	KK	SC111									
372	KM	Smith Creek 111 Runoff									
373	KD								22		
374	BA	0.1894									
375	PB	4									
376	LS	0	69								
377	UD	0.382									
378	KK	DP111									
379	KM	Combine RT109 and SC111									
380	KD								22		
381	HC	2									
382	KK	SC407									
383	KM	Smith Creek 407 Runoff									
384	KD								22		
385	BA	0.1685									
386	PB	4									
387	LS	0	68								
388	UD	0.423									
389	KK	DP407									
390	KM	Combine DP111 RT405 and SC407									
391	KD								22		
392	HC	3									
393	KK	RT407									
394	KM	SMITH CREEK ROUTE 407 TO 506									
395	KD								22		
396	RK	1105	0.0210	0.120					TRAP	1	2

LINE	1	2	3	4	5	6	7	8	9	10
ID	1	2	3	4	5	6	7	8	9	10
659										
660										
661										
662								22		
				2						
663										
664										
665								22		
666								TRAP	2	1
				1470	0	0061	0.085			
667										
668										
669								22		
670										
671										
672										
673										
				0.0722						
				4						
				0		92				
				0.360						
674										
675										
676								22		
677										
678										
679										
680										
				0.1305						
				4						
				0		77				
				0.092						
681										
682										
683								22		
684										
				3						
685										
686										
687								22		
688								TRAP	3	1
				2780	0.0338	0.0786				
689										
690										
691								22		
692										
693										
694										
695										
				0.0869						
				4						
				0		69				
				0.329						
696										
697										
698								22		
699										
700										
				2						

HEC1 S/N: 1343001909

HMVersion: 6.33

Data File: C:\WINNT\TEMP\vbh255C.TMP

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

MAXIMUM STAGE	TIME OF OPERATION MAX STAGE	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA
					6-HOUR	24-HOUR	72-HOUR	
	HYDROGRAPH AT	SC205	54.	6.00	9.	3.	1.	0.10
	ROUTED TO	RT205	53.	6.00	9.	3.	1.	0.10
	HYDROGRAPH AT	SC207	62.	6.00	12.	4.	1.	0.12
	HYDROGRAPH AT	SC213	60.	6.00	11.	4.	1.	0.12
	3 COMBINED AT	DP213	175.	6.00	32.	11.	4.	0.34
	ROUTED TO	RT213	169.	6.00	33.	11.	4.	0.34
	HYDROGRAPH AT	SC209	51.	6.00	10.	3.	1.	0.14
	HYDROGRAPH AT	SC211	24.	6.00	5.	2.	1.	0.08
	HYDROGRAPH AT	SC215	34.	5.75	6.	2.	1.	0.06
	4 COMBINED AT	DP215	275.	6.00	53.	18.	6.	0.62
	ROUTED TO	RT215	258.	6.00	54.	18.	6.	0.62
	HYDROGRAPH AT	SC219	43.	6.00	9.	3.	1.	0.13
	2 COMBINED AT	DP219	301.	6.00	62.	21.	7.	0.75
	HYDROGRAPH AT	SC201	46.	6.00	9.	3.	1.	0.12
	ROUTED TO	RT201	42.	6.00	9.	3.	1.	0.12
	HYDROGRAPH AT	SC203	37.	5.75	7.	2.	1.	0.11
	2 COMBINED AT	DP203	78.	6.00	16.	5.	2.	0.23
	ROUTED TO	RT203	74.	6.00	16.	5.	2.	0.23
	HYDROGRAPH AT	SC217	21.	5.75	4.	1.	0.	0.05
	2 COMBINED AT	DP217	93.	6.00	19.	7.	2.	0.29
	2 COMBINED AT	DP220	394.	6.00	82.	28.	9.	1.03
	ROUTED TO	RT220	384.	6.00	82.	28.	9.	1.03
	HYDROGRAPH AT	SC301	67.	6.00	12.	4.	1.	0.12

HYDROGRAPH AT	SC303	72	6.00	13.	4	1.	0.13
2 COMBINED AT	DP303	138	6.00	24.	9	3.	0.25
ROUTED TO	RT303	136.	6.00	24.	8.	3.	0.25
HYDROGRAPH AT	SC305	35	6.00	6.	2	1.	0.06
2 COMBINED AT	DP305	171.	6.00	30.	10.	3.	0.31
ROUTED TO	RT305	164.	6.00	31	10.	3.	0.31
HYDROGRAPH AT	SC307	45.	6.00	10.	4.	1.	0.11
HYDROGRAPH AT	SC309	64.	6.00	12.	4.	1.	0.12
HYDROGRAPH AT	SC311	60.	5.75	10.	3.	1.	0.11
4 COMBINED AT	DP311	330.	6.00	63.	21.	7.	0.65
ROUTED TO	RT311	303.	6.00	64.	21.	7.	0.65
HYDROGRAPH AT	SC313	75.	6.00	14.	5.	2.	0.15
HYDROGRAPH AT	SC315	49.	6.00	9.	3.	1.	0.09
3 COMBINED AT	DP315	427.	6.00	86.	29.	10.	0.89
2 COMBINED AT	DP316	811.	6.00	168	57.	19.	1.92
ROUTED TO	RT316	722.	6.00	168.	57.	19.	1.92
HYDROGRAPH AT	SC401	77.	6.00	15.	5.	2.	0.15
2 COMBINED AT	DP401	799.	6.00	183.	62.	21.	2.08
ROUTED TO	RT401	776	6.00	183.	62.	21.	2.08
HYDROGRAPH AT	SC403	55.	6.00	10	3.	1.	0.10
HYDROGRAPH AT	SC405	38	6.00	7.	2.	1.	0.07
3 COMBINED AT	DP405	868.	6.00	199	67.	23.	2.25
ROUTED TO	RT405	822	6.25	200	68.	23.	2.25
HYDROGRAPH AT	SC101	36	6.00	7	2	1.	0.09
ROUTED TO	RT101	33	6.00	7	2.	1.	0.09
HYDROGRAPH AT	SC103	72	6.00	14.	5.	2.	0.17
HYDROGRAPH AT							

		SC105A	42.	6.00	8.	2	1.	0.07
	3 COMBINED AT	DP103	147.	6.00	28	10.	3.	0.33
	ROUTED TO	RES106	89	6.25	28	10.	3.	0.33
7324.95	6.25							
	ROUTED TO	RT103	89.	6.50	28.	10.	3.	0.33
	HYDROGRAPH AT	SC105B	39.	6.00	7.	2.	1.	0.07
	2 COMBINED AT	DP105	114.	6.25	35.	12.	4.	0.40
	ROUTED TO	RT105A	113.	6.25	35.	12.	4.	0.40
	HYDROGRAPH AT	SC107A	81.	6.00	14.	5.	2.	0.14
	ROUTED TO	RES108	81.	6.00	14.	5.	2.	0.14
7344.38	6.00							
	2 COMBINED AT	DP107A	184.	6.00	49.	17.	6.	0.53
	ROUTED TO	RT105B	174.	6.00	49.	17.	6.	0.53
	HYDROGRAPH AT	SC107B	23.	6.00	4.	1.	0.	0.04
	2 COMBINED AT	DP107B	197.	6.00	53.	18.	6.	0.57
	ROUTED TO	RT107	183.	6.25	53.	18.	6.	0.57
	HYDROGRAPH AT	SC109	92.	6.00	17.	6.	2.	0.16
	2 COMBINED AT	DP109	268.	6.00	70.	24.	8.	0.74
	ROUTED TO	RT109	257.	6.25	69	23.	8.	0.74
	HYDROGRAPH AT	SC111	102.	6.00	19.	6.	2.	0.19
	2 COMBINED AT	DP111	335	6.25	88	30.	10.	0.93
	HYDROGRAPH AT	SC407	79.	6.00	16.	5.	2.	0.17
	3 COMBINED AT	DP407	1226.	6.25	304.	103.	34.	3.34
	ROUTED TO	RT407	1219.	6.25	305.	103.	35.	3.34
	HYDROGRAPH AT	SC501	67.	6.00	12.	4.	1.	0.12
	HYDROGRAPH AT	SC503	65.	6.00	12	4.	1.	0.12
	HYDROGRAPH AT	SC505	97.	6.00	19.	6.	2.	0.19
	3 COMBINED AT	DP505	229.	6.00	42.	14.	5.	0.43

2 COMBINED AT	DP506	1375.	6.25	347.	117.	39.	3.77
ROUTED TO	RT506	1369.	6.25	347.	118.	39.	3.77
HYDROGRAPH AT	SC507	55.	5.75	9.	3.	1.	0.10
2 COMBINED AT	DP507	1393.	6.25	356.	121.	40.	3.87
ROUTED TO	RT507	1378.	6.25	357.	121.	41.	3.87
HYDROGRAPH AT	SC509	73.	6.00	15.	5.	2.	0.15
2 COMBINED AT	DP509	1439.	6.25	371.	126.	42.	4.02
ROUTED TO	RT509	1394.	6.25	371.	126.	42.	4.02
HYDROGRAPH AT	SC511	50.	6.00	9.	3.	1.	0.09
2 COMBINED AT	DP511	1423.	6.25	380.	129.	43.	4.11
ROUTED TO	RT511	1409.	6.25	380.	129.	43.	4.11
HYDROGRAPH AT	SC601	42.	5.75	7.	2.	1.	0.06
ROUTED TO	RT601	36.	6.00	7.	2.	1.	0.06
HYDROGRAPH AT	SC603	140.	6.00	24.	8.	3.	0.25
2 COMBINED AT	DP603	176.	6.00	31.	10.	3.	0.31
2 COMBINED AT	DP604	1506.	6.25	411.	140.	47.	4.43
ROUTED TO	RT604	1480.	6.25	411.	140.	47.	4.43
HYDROGRAPH AT	SC607	50.	6.00	9.	3.	1.	0.08
HYDROGRAPH AT	SC609	81.	6.00	14.	5.	2.	0.14
3 COMBINED AT	DP609	1556.	6.25	434.	148.	49.	4.65
ROUTED TO	RES610	1538.	6.25	429.	147.	49.	4.65
6824.50	6.25						
HYDROGRAPH AT	SC605A	28.	6.00	5.	2.	1.	0.05
ROUTED TO	RT605	28.	6.00	5.	2.	1.	0.05
HYDROGRAPH AT	SC605B	64.	5.75	11.	3.	1.	0.08
3 COMBINED AT	DP610	1583.	6.25	444.	152.	51.	4.78
ROUTED TO	RT610	1527.	6.25	444.	153.	51.	4.78

	HYDROGRAPH AT	SC611	96.	5.75	11.	4.	1.	0.11
	2 COMBINED AT	DP611	1549	6.25	454.	156.	52.	4.89
	ROUTED TO	RES612	1532.	6.50	453.	156.	52.	4.89
6765.39	6.50							
	ROUTED TO	RT612	1527.	6.50	453.	157.	53.	4.89
	HYDROGRAPH AT	SC613	73.	6.00	13.	4.	1.	0.12
	ROUTED TO	RT618	72.	6.00	13.	4.	1.	0.12
	HYDROGRAPH AT	SC617A	16.	5.75	2.	1.	0.	0.01
	HYDROGRAPH AT	SC618	8.	5.75	1.	0.	0.	0.01
	3 COMBINED AT	DP618	84.	6.00	16.	5.	2.	0.15
	HYDROGRAPH AT	SC615B	43.	5.75	5.	2.	1.	0.03
	ROUTED TO	RES614	13.	6.25	5.	2.	1.	0.03
6729.58	6.25							
	HYDROGRAPH AT	SC615A	59	5.75	8.	2.	1.	0.06
	ROUTED TO	RES615	18.	6.25	8.	2.	1.	0.06
6729.23	6.25							
	HYDROGRAPH AT	SC617C	30.	5.75	4.	1.	0.	0.05
	5 COMBINED AT	DP613	1589.	6.50	482.	167.	56.	5.17
	ROUTED TO	RT614	1583.	6.50	483.	167.	56.	5.17
	HYDROGRAPH AT	SC617B	13.	5.75	2.	1.	0.	0.02
	2 COMBINED AT	DP617	1587.	6.50	485.	168.	56.	5.19
	ROUTED TO	RT617	1564	6.50	486.	168.	56.	5.19
	HYDROGRAPH AT	SC701	121.	6.00	20.	6.	2.	0.07
	HYDROGRAPH AT	SC703	189.	5.75	20.	6.	2.	0.13
	3 COMBINED AT	DP703	1622.	6.50	523.	181.	61.	5.39
	ROUTED TO	RT703	1596	6.50	522.	181.	61.	5.39
	HYDROGRAPH AT	SC705	51.	6.00	9.	3.	1.	0.09
	2 COMBINED AT							

BP705

1614

6.50

531.

184.

62.

5.48

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
(FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

VOLUME (IN)	ISTAQ	ELEMENT	DT (MIN)	PEAK (CFS)	TIME TO PEAK (MIN)	VOLUME (IN)	DT (MIN)	INTERPOLATED TO COMPUTATION INTERVAL	
								PEAK (CFS)	TIME TO PEAK (MIN)
1.21	RT205	MANE	1.25	53.35	362.21	1.21	15.00	52.97	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6234E+01 EXCESS=0.0000E+00 OUTFLOW=0.6235E+01 BASIN STORAGE= 0.6823E-09 PERCENT ERROR= 0.0									
1.19	RT213	MANE	0.81	174.53	361.65	1.19	15.00	169.14	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2157E+02 EXCESS=0.0000E+00 OUTFLOW=0.2158E+02 BASIN STORAGE= 0.2564E-08 PERCENT ERROR= 0.0									
1.09	RT215	MANE	1.34	274.29	362.58	1.09	15.00	257.54	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3573E+02 EXCESS=0.0000E+00 OUTFLOW=0.3573E+02 BASIN STORAGE= 0.1824E-07 PERCENT ERROR= 0.0									
0.92	RT201	MANE	1.30	45.01	363.07	0.92	15.00	42.40	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5952E+01 EXCESS=0.0000E+00 OUTFLOW=0.5952E+01 BASIN STORAGE= 0.6102E-09 PERCENT ERROR= 0.0									
0.87	RT203	MANE	1.63	77.63	363.47	0.87	15.00	74.38	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1080E+02 EXCESS=0.0000E+00 OUTFLOW=0.1080E+02 BASIN STORAGE= 0.5881E-08 PERCENT ERROR= 0.0									
1.01	RT220	MANE	0.58	391.10	360.89	1.00	15.00	383.84	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5525E+02 EXCESS=0.0000E+00 OUTFLOW=0.5525E+02 BASIN STORAGE= 0.1929E-07 PERCENT ERROR= 0.0									
1.21	RT303	MANE	0.68	137.43	361.44	1.21	15.00	135.79	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1604E+02 EXCESS=0.0000E+00 OUTFLOW=0.1604E+02 BASIN STORAGE= 0.1514E-09 PERCENT ERROR= 0.0									
1.22	RT305	MANE	1.39	168.95	362.51	1.21	15.00	163.66	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2014E+02 EXCESS=0.0000E+00 OUTFLOW=0.2014E+02 BASIN STORAGE= 0.3830E-08 PERCENT ERROR= 0.0									
1.21	RT311	MANE	2.07	328.24	364.10	1.21	15.00	302.76	360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4201E+02 EXCESS=0.0000E+00 OUTFLOW=0.4200E+02 BASIN STORAGE=
0.5631E-07 PERCENT ERROR= 0.0

1.10 RT316 MANE 1.93 797.95 365.01 1.10 15.00 722.04 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1125E+03 EXCESS=0.0000E+00 OUTFLOW=0.1124E+03 BASIN STORAGE=
0.4319E-06 PERCENT ERROR= 0.0

1.11 RT401 MANE 0.50 798.80 361.01 1.11 15.00 775.50 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1227E+03 EXCESS=0.0000E+00 OUTFLOW=0.1227E+03 BASIN STORAGE=
0.1722E-06 PERCENT ERROR= 0.0

1.12 RT405 MANE 1.31 865.60 363.23 1.12 15.00 822.04 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1337E+03 EXCESS=0.0000E+00 OUTFLOW=0.1338E+03 BASIN STORAGE=
0.7839E-06 PERCENT ERROR= 0.0

0.98 RT101 MANE 1.75 36.12 363.22 0.97 15.00 32.69 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4771E+01 EXCESS=0.0000E+00 OUTFLOW=0.4772E+01 BASIN STORAGE=
0.2332E-08 PERCENT ERROR= 0.0

1.08 RT103 MANE 0.88 89.45 376.93 1.08 15.00 88.76 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1887E+02 EXCESS=0.0000E+00 OUTFLOW=0.1887E+02 BASIN STORAGE=
0.4357E-08 PERCENT ERROR= 0.0

1.11 RT105A MANE 0.88 113.93 376.70 1.11 15.00 113.48 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2354E+02 EXCESS=0.0000E+00 OUTFLOW=0.2354E+02 BASIN STORAGE=
0.9400E-08 PERCENT ERROR= 0.0

1.16 RT105B MANE 0.71 183.30 361.35 1.15 15.00 174.09 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3282E+02 EXCESS=0.0000E+00 OUTFLOW=0.3282E+02 BASIN STORAGE=
0.1373E-07 PERCENT ERROR= 0.0

1.16 RT107 MANE 1.56 195.65 364.00 1.16 15.00 183.26 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3551E+02 EXCESS=0.0000E+00 OUTFLOW=0.3550E+02 BASIN STORAGE=
0.7782E-07 PERCENT ERROR= 0.0

1.18 RT109 MANE 3.43 265.18 369.00 1.18 15.00 256.51 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4665E+02 EXCESS=0.0000E+00 OUTFLOW=0.4659E+02 BASIN STORAGE=
0.8432E-06 PERCENT ERROR= 0.1

1.15 RT407 MANE 0.97 1222.27 376.56 1.15 15.00 1218.51 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2043E+03 EXCESS=0.0000E+00 OUTFLOW=0.2044E+03 BASIN STORAGE=
0.1208E-05 PERCENT ERROR= 0.0

1.16 RT506 MANE 0.84 1371.68 375.77 1.16 15.00 1368.95 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2328E+03 EXCESS=0.0000E+00 OUTFLOW=0.2328E+03 BASIN STORAGE=
0.1730E-05 PERCENT ERROR= 0.0

1.16 RT507 MANE 1.23 1386.71 376.57 1.16 15.00 1377.85 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2395E+03 EXCESS=0.0000E+00 OUTFLOW=0.2395E+03 BASIN STORAGE=
0.3781E-05 PERCENT ERROR= 0.0

1.17 RT509 MANE 1.85 1426.23 377.77 1.17 15.00 1393.75 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2499E+03 EXCESS=0.0000E+00 OUTFLOW=0.2499E+03 BASIN STORAGE=
0.9452E-05 PERCENT ERROR= 0.0

1.17 RT511 MANE 0.34 1422.21 375.70 1.17 15.00 1408.99 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2566E+03 EXCESS=0.0000E+00 OUTFLOW=0.2566E+03 BASIN STORAGE=
0.2267E-05 PERCENT ERROR= 0.0

1.28 RT601 MANE 1.53 41.85 348.83 1.27 15.00 36.06 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4276E+01 EXCESS=0.0000E+00 OUTFLOW=0.4277E+01 BASIN STORAGE=
0.1154E-08 PERCENT ERROR= 0.0

1.18 RT604 MANE 0.80 1500.70 376.28 1.17 15.00 1480.03 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2773E+03 EXCESS=0.0000E+00 OUTFLOW=0.2773E+03 BASIN STORAGE=
0.5885E-05 PERCENT ERROR= 0.0

1.21 RT605 MANE 0.75 27.76 360.87 1.21 15.00 27.68 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3245E+01 EXCESS=0.0000E+00 OUTFLOW=0.3246E+01 BASIN STORAGE=
0.1227E-09 PERCENT ERROR= 0.0

1.19 RT610 MANE 1.81 1572.09 377.96 1.19 15.00 1527.24 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3031E+03 EXCESS=0.0000E+00 OUTFLOW=0.3031E+03 BASIN STORAGE=
0.2259E-04 PERCENT ERROR= 0.0

1.20 RT612 MANE 1.27 1528.93 391.12 1.19 15.00 1526.63 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3111E+03 EXCESS=0.0000E+00 OUTFLOW=0.3112E+03 BASIN STORAGE=
0.2343E-04 PERCENT ERROR= 0.0

1.27 RT618 MANE 0.46 72.48 360.42 1.27 15.00 72.13 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8329E+01 EXCESS=0.0000E+00 OUTFLOW=0.8329E+01 BASIN STORAGE=
0.2698E-10 PERCENT ERROR= 0.0

1.21 RT614 MANE 0.50 1585.94 390.64 1.21 15.00 1583.21 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3326E+03 EXCESS=0.0000E+00 OUTFLOW=0.3326E+03 BASIN STORAGE=
0.7513E-05 PERCENT ERROR= 0.0

1.21 RT617 MANE 1.24 1585.21 392.51 1.21 15.00 1563.96 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3343E+03 EXCESS=0.0000E+00 OUTFLOW=0.3343E+03 BASIN STORAGE=
0.3512E-04 PERCENT ERROR= 0.0

1.25 RT703 MANE 1.26 1614.21 391.82 1.25 15.00 1595.53 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3595E+03 EXCESS=0.0000E+00 OUTFLOW=0.3595E+03 BASIN STORAGE=
0.5384E-04 PERCENT ERROR= 0.0

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

100 year future-Alternate 1
HEC1 S/N: 1343001909 HMVersion: 6.33 Data File: C:\WINNT\TEMP\~vbh0C57.TMP

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*****  
*****  
*  
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *  
* U. S. ARMY CORPS OF ENGINEERS *  
* MAY 1991 *  
* HYDROLOGIC ENGINEERING CENTER *  
* VERSION 4.0.1E *  
* 609 SECOND STREET *  
* *  
* DAVIS, CALIFORNIA 95616 *  
* RUN DATE 06/19/2001 TIME 16:10:37 *  
* (916) 756-1104 *  
* *  
*****  
*****
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X X XXXXXXX XXXX X  
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X X X X X  
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.....  
.....  
: Full Microcomputer Implementation :  
: by :  
: Haestad Methods, Inc. :  
: :  
.....  
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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, BSS:WRITE STAGE FREQUENCY,
BSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

ID	LINE	1	2	3	4	5	6	7	8	9	10
	1	ID	Type	IIA	storn						
	2	IT	15	0	0	298					
	3	ID	5								
	4	KK	SC205								
	5	KM	Smith Creek 205 Runoff								
	6	KD						22			
	7	BA	0.0970								
	8	PB	4.6								
	9	IN	15								
0.0165	10	PC	0.0005	0.0015	0.0030	0.0045	0.0060	0.0080	0.0100	0.0120	0.0143
0.0600	11	PC	0.0188	0.0210	0.0233	0.0255	0.0278	0.0320	0.0390	0.0460	0.0530
0.8000	12	PC	0.0750	0.1000	0.4000	0.7000	0.7250	0.7500	0.7650	0.7800	0.7900
0.8600	13	PC	0.8100	0.8200	0.8250	0.8300	0.8350	0.8400	0.8450	0.8500	0.8550
0.8975	14	PC	0.8638	0.8675	0.8713	0.8750	0.8788	0.8825	0.8863	0.8900	0.8938
0.9300	15	PC	0.9013	0.9050	0.9083	0.9115	0.9148	0.9180	0.9210	0.9240	0.9270
0.9550	16	PC	0.9325	0.9350	0.9375	0.9400	0.9425	0.9450	0.9475	0.9500	0.9525
0.9800	17	PC	0.9575	0.9600	0.9625	0.9650	0.9675	0.9700	0.9725	0.9750	0.9775
0.9925	18	PC	0.9813	0.9825	0.9838	0.9850	0.9863	0.9875	0.9888	0.9900	0.9913
	19	PC	0.9938	0.9950	0.9963	0.9975	0.9988	1.0000			
	20	LS	0	68							
	21	UD	0.257								
	22	KK	RT205								
	23	KM	Smith Creek Route 205 to 213								
	24	KD						22			
	25	RK	1530	0.0431	0.055			TRAP		2	
	26	KK	SC207								
	27	KM	Smith Creek 207 Runoff								
	28	KD						22			
	29	BA	0.12								
	30	PB	4.6								
	31	LS	0	68							
	32	UD	0.367								
	33	KK	SC213								
	34	KM	Smith Creek 213 Runoff								
	35	KD						22			
	36	BA	0.1243								
	37	PB	4.6								
	38	LS	0	67							
	39	UD	0.361								
	40	KK	DP213								
	41	KM	Combine RT205 SC207 and SC213								
	42	KD						22			
	43	HC	3								
	44	KK	RT213								
	45	KM	Smith Creek Route 213 to 215								
	46	KD						22			
	47	RK	1360	0.0493	0.055			TRAP		2	

LINE	1	2	3	4	5	6	7	8	9	10
ID	1	2	3	4	5	6	7	8	9	10
95			KK	RT201						
96			KM	Tributary Route 201 to 203						
97			KD					22		
98			RK	1650	0.0509	0.055		TRAP		2
99			KK	SC203						
100			KM	Smith Creek 203 Runoff						
101			KD					22		
102			BA	0.1113						
103			PB	4.6						
104			LS	0	61					
105			UD	0.223						
106			KK	DP203						
107			KM	Combine RT201 and SC203						
108			KD					22		
109			HC	2						
110			KK	RT203						
111			KM	Tributary Route 203 to 217						
112			KD					22		
113			RK	2010	0.0557	0.0698		TRAP		2
114			KK	SC217						
115			KM	Smith Creek 217 Runoff						
116			KD					22		
117			BA	0.0547						
118			PB	4.6						
119			LS	0	62					
120			UD	0.211						
121			KK	DP217						
122			KM	Combine RT203 and SC217						
123			KD					22		
124			HC	2						
125			KK	DP220						
126			KM	Combine DP217 and DP219						
127			KD					22		
128			HC	2						
129			KK	RT220						
130			KM	Smith Creek Route 220 to 316						
131			KD					22		
132			RK	646	0.0313	0.0829		TRAP	1	2
133			KK	SC301						
134			KM	Smith Creek 301 Runoff						
135			KD					22		
136			BA	0.1196						
137			PB	4.6						
138			LS	0	68					
139			UD	0.279						

LINE	1	2	3	4	5	6	7	8	9	10
ID	1	2	3	4	5	6	7	8	9	10
184										
185	KK		SC311							
186	KM		Smith Creek 311 Runoff							
187	KD							22		
188	BA		0.1064							
189	PB		4.6							
190	LS		0	68						
191	UD		0.234							
192	KK		DP311							
193	KM		Combine RT305 SC307 SC309 and SC311							
194	KD							22		
195	HC		4							
196	KK		RT311							
197	KM		Tributary Route 311 to 315							
198	KD							22		
199	RK		2860	0.0448	0.0888			TRAP		2
200	KK		SC313							
201	KM		Smith Creek 313 Runoff							
202	KD							22		
203	BA		0.1520							
204	PB		4.6							
205	LS		0	67						
206	UD		0.352							
207	KK		SC315							
208	KM		Smith Creek 315 Runoff							
209	KD							22		
210	BA		0.0886							
211	PB		4.6							
212	LS		0	68						
213	UD		0.297							
214	KK		DP315							
215	KM		Combine RT311 SC313 and SC315							
216	KD							22		
217	HC		3							
218	KK		DP316							
219	KM		Combine RT220 and DP315							
220	KD							22		
221	HC		2							
222	KK		RT316							
223	KM		Smith Creek Route 316 to 401							
224	KD							22		
225	RK		2575	0.0361	0.120			TRAP	1	2

LINE	1	2	3	4	5	6	7	8	9	10
ID	1	2	3	4	5	6	7	8	9	10
314										
315										
316									22	
317									TRAP	2
318										
319										
320									22	
321										
322										
323										
324										
325										
326										
327									22	
328										
329										
330										
331										
332										
333										
334										
335									22	
336										
337										
338										
339									22	
340									TRAP	2
341										
342										
343									22	
344										
345										
346										
347										
348										
349										
350									22	
351										
352										
353										
354									22	
355									TRAP	2

LINE	1	2	3	4	5	6	7	8	9	10
356	KK	SC109								
357	KM	Smith Creek 109 Runoff								
358	KD							22		
359	BA	0.1637								
360	PB	4.6								
361	LS	0	69							
362	UD	0.350								
363	KK	DP109								
364	KM	Combine RT107 and SC109								
365	KD							22		
366	HC	2								
367	KK	RT109								
368	KM	Tributary Route 109 to 111								
369	KD							22		
370	RK	3840	0.0453	0.120				TRAP		2
371	KK	SC111								
372	KM	Smith Creek 111 Runoff								
373	KD							22		
374	BA	0.1894								
375	PB	4.6								
376	LS	0	69							
377	UD	0.382								
378	KK	DP111								
379	KM	Combine RT109 and SC111								
380	KD							22		
381	HC	2								
382	KK	SC407								
383	KM	Smith Creek 407 Runoff								
384	KD							22		
385	BA	0.1685								
386	PB	4.6								
387	LS	0	68							
388	UD	0.423								
389	KK	DP407								
390	KM	Combine DP111 RT405 and SC407								
391	KD							22		
392	HC	3								
393	KK	RT407								
394	KM	SMITH CREEK ROUTE 407 TO 506								
395	KD							22		
396	RK	1105	0.0210	0.120				TRAP	1	2

HEC1 S/N: 1343001909

HMVersion: 6.33

Data File: C:\WINNT\TEMP\vbhDC57.TMP

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

MAXIMUM STAGE	TIME OF OPERATION MAX STAGE	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA
					6-HOUR	24-HOUR	72-HOUR	
	HYDROGRAPH AT	SC205	73.	6.00	13.	4.	1.	0.10
	ROUTED TO	RT205	73.	6.00	13.	4.	1.	0.10
	HYDROGRAPH AT	SC207	86.	6.00	16.	5.	2.	0.12
	HYDROGRAPH AT	SC213	85.	6.00	16.	5.	2.	0.12
	3 COMBINED AT	DP213	243.	6.00	44.	14.	5.	0.34
	ROUTED TO	RT213	236.	6.00	44.	15.	5.	0.34
	HYDROGRAPH AT	SC209	74.	6.00	14.	5.	2.	0.14
	HYDROGRAPH AT	SC211	35.	6.00	8.	3.	1.	0.08
	HYDROGRAPH AT	SC215	48.	5.75	8.	3.	1.	0.06
	4 COMBINED AT	DP215	389.	6.00	73.	24.	8.	0.62
	ROUTED TO	RT215	368.	6.00	73.	24.	8.	0.62
	HYDROGRAPH AT	SC219	64.	6.00	12.	4.	1.	0.13
	2 COMBINED AT	DP219	432.	6.00	86.	29.	10.	0.75
	HYDROGRAPH AT	SC201	67.	6.00	12.	4.	1.	0.12
	ROUTED TO	RT201	63.	6.00	12.	4.	1.	0.12
	HYDROGRAPH AT	SC203	57.	5.75	10.	3.	1.	0.11
	2 COMBINED AT	DP203	116.	6.00	22.	8.	3.	0.23
	ROUTED TO	RT203	111.	6.00	22.	8.	3.	0.23
	HYDROGRAPH AT	SC217	32.	5.75	5.	2.	1.	0.05
	2 COMBINED AT	DP217	139.	6.00	28.	9.	3.	0.29
	2 COMBINED AT	DP220	570.	6.00	113.	38.	13.	1.03
	ROUTED TO	RT220	559.	6.00	113.	38.	13.	1.03
	HYDROGRAPH AT	SC301	91.	6.00	16.	5.	2.	0.12

HYDROGRAPH AT	SC303	99.	6.00	17	6	2.	0.13
2 COMBINED AT	DP303	190.	6.00	33	11.	4.	0.25
ROUTED TO	RT303	187.	6.00	33	11.	4.	0.25
HYDROGRAPH AT	SC305	48	6.00	8.	3	1.	0.06
2 COMBINED AT	DP305	235	6.00	41.	13.	5.	0.31
ROUTED TO	RT305	227.	6.00	41.	14.	5.	0.31
HYDROGRAPH AT	SC307	64.	6.00	14.	5.	2.	0.11
HYDROGRAPH AT	SC309	89	6.00	16.	5.	2.	0.12
HYDROGRAPH AT	SC311	84.	5.75	14.	5.	2.	0.11
4 COMBINED AT	DP311	458.	6.00	86.	28.	9.	0.65
ROUTED TO	RT311	426.	6.00	86.	28.	9.	0.65
HYDROGRAPH AT	SC313	105.	6.00	19.	6.	2.	0.15
HYDROGRAPH AT	SC315	68.	6.00	12.	4.	1.	0.09
3 COMBINED AT	DP315	599.	6.00	117.	38.	13.	0.89
2 COMBINED AT	DP316	1158.	6.00	230.	76.	26.	1.92
ROUTED TO	RT316	1054.	6.00	231.	77.	26.	1.92
HYDROGRAPH AT	SC401	107.	6.00	20.	7.	2.	0.15
2 COMBINED AT	DP401	1162.	6.00	251.	83.	28.	2.08
ROUTED TO	RT401	1133.	6.00	251.	83.	28.	2.08
HYDROGRAPH AT	SC403	75.	6.00	13.	4	1.	0.10
HYDROGRAPH AT	SC405	51.	6.00	9.	3.	1.	0.07
3 COMBINED AT	DP405	1260.	6.00	273.	91.	30.	2.25
ROUTED TO	RT405	1164.	6.00	274	91.	30.	2.25
HYDROGRAPH AT	SC101	53.	6.00	10	3.	1.	0.09
ROUTED TO	RT101	48.	6.00	10.	3.	1.	0.09
HYDROGRAPH AT	SC103	103.	6.00	19	6.	2.	0.17
HYDROGRAPH AT							

		SC105A	57.	6.00	10.	3.	1	0.07
	3 COMBINED AT	DP103	208.	6.00	39.	13.	4	0.33
	ROUTED TO	RES106	136.	6.25	38.	13.	4	0.33
7326.79	6.25							
	ROUTED TO	RT103	132.	6.25	38.	13.	4.	0.33
	HYDROGRAPH AT	SC105B	53.	6.00	9.	3.	1.	0.07
	2 COMBINED AT	DP105	167.	6.25	48.	16.	5.	0.40
	ROUTED TO	RT105A	164.	6.25	48.	16.	5.	0.40
	HYDROGRAPH AT	SC107A	110.	6.00	19.	6.	2.	0.14
	ROUTED TO	RES108	128.	6.00	19.	6.	2.	0.14
7344.93	6.00							
	2 COMBINED AT	DP107A	263.	6.00	67.	22.	7	0.53
	ROUTED TO	RT105B	250.	6.00	67.	22.	7.	0.53
	HYDROGRAPH AT	SC107B	31.	6.00	5.	2.	1.	0.04
	2 COMBINED AT	DP107B	281.	6.00	72.	24.	8.	0.57
	ROUTED TO	RT107	255.	6.00	72.	24.	8.	0.57
	HYDROGRAPH AT	SC109	127.	6.00	23.	7.	2.	0.16
	2 COMBINED AT	DP109	382.	6.00	95.	31.	10.	0.74
	ROUTED TO	RT109	357.	6.25	94.	31.	10.	0.74
	HYDROGRAPH AT	SC111	140.	6.00	26.	9.	3	0.19
	2 COMBINED AT	DP111	463.	6.25	120.	40.	13.	0.93
	HYDROGRAPH AT	SC407	110.	6.00	22.	7.	2.	0.17
	3 COMBINED AT	DP407	1713.	6.00	416.	138.	46.	3.34
	ROUTED TO	RT407	1703.	6.25	417.	138.	46.	3.34
	HYDROGRAPH AT	SC501	93.	6.00	16.	5.	2	0.12
	HYDROGRAPH AT	SC503	89.	6.00	16.	5.	2	0.12
	HYDROGRAPH AT	SC505	135.	6.00	25.	8.	3	0.19
	3 COMBINED AT	DP505	317.	6.00	57.	19.	6	0.43

2 COMBINED AT	DP506	1926.	6 00	473.	157	52.	3 77
ROUTED TO	RT506	1916	6 25	474.	157	53.	3 77
HYDROGRAPH AT	SC507	77.	5 75	13.	4	1.	0 10
2 COMBINED AT	DP507	1948	6 25	487.	161	54.	3 87
ROUTED TO	RT507	1943.	6 25	487.	162.	54.	3 87
HYDROGRAPH AT	SC509	102.	6 00	20.	7	2.	0 15
2 COMBINED AT	DP509	2026.	6 25	507.	168.	56.	4 02
ROUTED TO	RT509	1992.	6 25	507.	169.	57.	4 02
HYDROGRAPH AT	SC511	69.	6 00	12.	4.	1.	0 09
2 COMBINED AT	DP511	2031.	6 25	519.	173.	58.	4 11
ROUTED TO	RT511	2018.	6 25	519.	173.	58.	4 11
HYDROGRAPH AT	SC601	59.	5 75	9.	3.	1.	0 06
ROUTED TO	RT601	50.	5 75	9.	3.	1.	0 06
HYDROGRAPH AT	SC603	192.	6 00	33.	11.	4.	0 25
2 COMBINED AT	DP603	241.	6 00	42.	14.	5.	0 31
2 COMBINED AT	DP604	2149.	6 25	561.	187	62.	4 43
ROUTED TO	RT604	2125.	6 25	562.	187.	63.	4 43
HYDROGRAPH AT	SC607	67.	6 00	12.	4.	1.	0 08
HYDROGRAPH AT	SC609	111.	6 00	19.	6.	2.	0 14
3 COMBINED AT	DP609	2227.	6 25	592.	197.	66.	4 65
ROUTED TO	RES610	2189.	6 25	587.	197.	66.	4 65
6824. 90			6 25				
HYDROGRAPH AT	SC605A	38.	6 00	7.	2.	1.	0 05
ROUTED TO	RT605	38.	6 00	7.	2	1.	0 05
HYDROGRAPH AT	SC605B	86.	5 75	14.	4.	1.	0 08
3 COMBINED AT	DP610	2248.	6 25	608.	203.	68.	4 78
ROUTED TO	RT610	2212.	6 25	608.	204.	68.	4 78

	HYDROGRAPH AT	SC611	131	5.75	15	5	2	0.11
	2 COMBINED AT	DP611	2240	6.25	622	209	70	4.89
	ROUTED TO	RES612	2248	6.25	618	209	70	4.89
6766.11	6.25							
	ROUTED TO	RT612	2144	6.50	620	209	70	4.89
	HYDROGRAPH AT	SC613	99	6.00	17	6	2	0.12
	ROUTED TO	RT618	98	6.00	17	6	2	0.12
	HYDROGRAPH AT	SC617A	21	5.75	2	1	0	0.01
	HYDROGRAPH AT	SC618	10	5.75	1	0	0	0.01
	3 COMBINED AT	DP618	113	6.00	21	7	2	0.15
	HYDROGRAPH AT	SC615B	55	5.75	6	2	1	0.03
	ROUTED TO	RES614	15	6.25	6	2	1	0.03
6731.71	6.25							
	HYDROGRAPH AT	SC615A	78	5.75	10	3	1	0.06
	ROUTED TO	RES615	27	6.25	10	3	1	0.06
6730.55	6.25							
	HYDROGRAPH AT	SC617C	42	5.75	5	2	1	0.05
	5 COMBINED AT	DP613	2248	6.25	660	223	75	5.17
	ROUTED TO	RT614	2225	6.50	661	223	75	5.17
	HYDROGRAPH AT	SC617B	19	5.75	3	1	0	0.02
	2 COMBINED AT	DP617	2230	6.50	664	224	75	5.19
	ROUTED TO	RT617	2228	6.50	663	224	75	5.19
	HYDROGRAPH AT	SC701	143	6.00	24	7	2	0.07
	HYDROGRAPH AT	SC703	241	5.75	26	8	3	0.13
	3 COMBINED AT	DP703	2298	6.50	711	240	80	5.39
	ROUTED TO	RT703	2287	6.50	711	240	81	5.39
	HYDROGRAPH AT	SC705	69	6.00	12	4	1	0.09
	2 COMBINED AT							

DP705

2312

6.50

723

244

82

5 48

SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
 (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)

VOLUME	INSTAQ	ELEMENT	DT	PEAK	TIME TO	VOLUME	DT	INTERPOLATED TO	
								COMPUTATION INTERVAL	PEAK
(IN)			(MIN)	(CFS)	(MIN)	(IN)	(MIN)	(CFS)	(MIN)
1.61	RT205	MANE	1.16	73.01	361.09	1.60	15.00	72.75	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8279E+01 EXCESS=0.0000E+00 OUTFLOW=0.8281E+01 BASIN STORAGE=0.6725E-09 PERCENT ERROR= 0.0									
1.58	RT213	MANE	0.68	241.83	361.58	1.58	15.00	236.06	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2872E+02 EXCESS=0.0000E+00 OUTFLOW=0.2872E+02 BASIN STORAGE=0.2629E-08 PERCENT ERROR= 0.0									
1.47	RT215	MANE	1.22	385.02	362.86	1.46	15.00	367.94	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4805E+02 EXCESS=0.0000E+00 OUTFLOW=0.4804E+02 BASIN STORAGE=0.1887E-07 PERCENT ERROR= 0.0									
1.27	RT201	MANE	1.16	66.37	362.28	1.26	15.00	62.68	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.8184E+01 EXCESS=0.0000E+00 OUTFLOW=0.8184E+01 BASIN STORAGE=0.9881E-09 PERCENT ERROR= 0.0									
1.21	RT203	MANE	1.41	115.46	362.70	1.20	15.00	111.38	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1496E+02 EXCESS=0.0000E+00 OUTFLOW=0.1496E+02 BASIN STORAGE=0.8667E-08 PERCENT ERROR= 0.0									
1.37	RT220	MANE	0.48	567.24	360.71	1.36	15.00	558.98	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.7512E+02 EXCESS=0.0000E+00 OUTFLOW=0.7512E+02 BASIN STORAGE=0.2030E-07 PERCENT ERROR= 0.0									
1.61	RT303	MANE	0.59	188.91	360.84	1.60	15.00	187.02	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2130E+02 EXCESS=0.0000E+00 OUTFLOW=0.2131E+02 BASIN STORAGE=0.1416E-09 PERCENT ERROR= 0.0									
1.61	RT305	MANE	1.24	232.62	362.59	1.61	15.00	227.13	360.00
CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2675E+02 EXCESS=0.0000E+00 OUTFLOW=0.2675E+02 BASIN STORAGE=0.5252E-08 PERCENT ERROR= 0.0									
1.61	RT311	MANE	1.92	450.82	364.28	1.61	15.00	426.45	360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5579E+02 EXCESS=0.0000E+00 OUTFLOW=0.5579E+02 BASIN STORAGE=
0.6001E-07 PERCENT ERROR= 0.0

1.48 RT316 MANE 1.73 1144.55 364.21 1.47 15.00 1054.22 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1512E+03 EXCESS=0.0000E+00 OUTFLOW=0.1512E+03 BASIN STORAGE=
0.5493E-06 PERCENT ERROR= 0.0

1.49 RT401 MANE 0.46 1158.37 361.17 1.49 15.00 1133.41 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1649E+03 EXCESS=0.0000E+00 OUTFLOW=0.1649E+03 BASIN STORAGE=
0.1798E-06 PERCENT ERROR= 0.0

1.51 RT405 MANE 1.35 1250.81 363.42 1.50 15.00 1164.23 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1795E+03 EXCESS=0.0000E+00 OUTFLOW=0.1795E+03 BASIN STORAGE=
0.8807E-06 PERCENT ERROR= 0.0

1.33 RT101 MANE 1.62 51.82 362.66 1.33 15.00 48.11 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6511E+01 EXCESS=0.0000E+00 OUTFLOW=0.6511E+01 BASIN STORAGE=
0.2091E-08 PERCENT ERROR= 0.0

1.45 RT103 MANE 0.69 135.62 376.48 1.45 15.00 131.83 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.2540E+02 EXCESS=0.0000E+00 OUTFLOW=0.2540E+02 BASIN STORAGE=
0.3720E-08 PERCENT ERROR= 0.0

1.49 RT105A MANE 0.89 166.29 376.47 1.49 15.00 164.43 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3156E+02 EXCESS=0.0000E+00 OUTFLOW=0.3156E+02 BASIN STORAGE=
0.8833E-08 PERCENT ERROR= 0.0

1.54 RT105B MANE 0.75 261.14 361.88 1.54 15.00 250.39 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4380E+02 EXCESS=0.0000E+00 OUTFLOW=0.4381E+02 BASIN STORAGE=
0.1490E-07 PERCENT ERROR= 0.0

1.55 RT107 MANE 1.40 280.11 363.29 1.55 15.00 255.27 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4738E+02 EXCESS=0.0000E+00 OUTFLOW=0.4737E+02 BASIN STORAGE=
0.7031E-07 PERCENT ERROR= 0.0

1.57 RT109 MANE 3.23 375.40 368.46 1.58 15.00 356.52 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.6211E+02 EXCESS=0.0000E+00 OUTFLOW=0.6205E+02 BASIN STORAGE=
0.8344E-06 PERCENT ERROR= 0.1

1.54 RT407 MANE 0.98 1711.68 362.86 1.53 15.00 1702.66 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 2734E+03 EXCESS=0 0000E+00 OUTFLOW=0 2734E+03 BASIN STORAGE=
0.1210E-05 PERCENT ERROR= 0.0

1.55 RT506 MANE 0.79 1924.92 362.19 1.55 15.00 1915.65 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 3113E+03 EXCESS=0.0000E+00 OUTFLOW=0 3112E+03 BASIN STORAGE=
0.1754E-05 PERCENT ERROR= 0.0

1.56 RT507 MANE 1.15 1943.71 376.42 1.55 15.00 1942.56 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3202E+03 EXCESS=0.0000E+00 OUTFLOW=0 3202E+03 BASIN STORAGE=
0.3789E-05 PERCENT ERROR= 0.0

1.56 RT509 MANE 1.66 2013.26 377.20 1.56 15.00 1991.98 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3341E+03 EXCESS=0.0000E+00 OUTFLOW=0.3340E+03 BASIN STORAGE=
0.9805E-05 PERCENT ERROR= 0.0

1.57 RT511 MANE 0.40 2026.87 375.75 1.56 15.00 2018.10 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3429E+03 EXCESS=0.0000E+00 OUTFLOW=0.3429E+03 BASIN STORAGE=
0.2243E-05 PERCENT ERROR= 0.0

1.69 RT601 MANE 1.45 58.44 348.00 1.67 15.00 50.32 345.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.5645E+01 EXCESS=0.0000E+00 OUTFLOW=0.5647E+01 BASIN STORAGE=
0.1270E-08 PERCENT ERROR= 0.0

1.57 RT604 MANE 0.84 2140.99 376.62 1.57 15.00 2125.38 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.3704E+03 EXCESS=0.0000E+00 OUTFLOW=0.3704E+03 BASIN STORAGE=
0.5837E-05 PERCENT ERROR= 0.0

1.61 RT605 MANE 0.70 37.92 360.83 1.60 15.00 37.89 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0 4310E+01 EXCESS=0.0000E+00 OUTFLOW=0.4311E+01 BASIN STORAGE=
0.1412E-09 PERCENT ERROR= 0.0

1.59 RT610 MANE 1.68 2240.97 378.49 1.59 15.00 2211.89 375.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4043E+03 EXCESS=0.0000E+00 OUTFLOW=0.4042E+03 BASIN STORAGE=
0.2349E-04 PERCENT ERROR= 0.0

1.60 RT612 MANE 1.07 2241.28 377.01 1.59 15.00 2143.59 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4154E+03 EXCESS=0.0000E+00 OUTFLOW=0.4154E+03 BASIN STORAGE=
0.2367E-04 PERCENT ERROR= 0.0

1.68 RT618 MANE 0.38 98.58 360.60 1.67 15.00 98.28 360.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.1100E+02 EXCESS=0.0000E+00 OUTFLOW=0.1099E+02 BASIN STORAGE=
0.2808E-10 PERCENT ERROR= 0.0

1.61 RT614 MANE 0.42 2247.54 376.04 1.61 15.00 2225.32 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4434E+03 EXCESS=0.0000E+00 OUTFLOW=0.4434E+03 BASIN STORAGE=
0.7378E-05 PERCENT ERROR= 0.0

1.61 RT617 MANE 1.24 2228.20 390.53 1.61 15.00 2227.86 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4457E+03 EXCESS=0.0000E+00 OUTFLOW=0.4457E+03 BASIN STORAGE=
0.3504E-04 PERCENT ERROR= 0.0

1.66 RT703 MANE 1.14 2291.97 390.98 1.66 15.00 2287.23 390.00

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.4768E+03 EXCESS=0.0000E+00 OUTFLOW=0.4768E+03 BASIN STORAGE=
0.5223E-04 PERCENT ERROR= 0.0

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

2 year future-Alternate 2
HEC1 S/N: 1343001909 HMVersion: 6.33 Data File: C:\WINNT\TEMP\vbh1626.TMP

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*****  
*  
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *  
* U.S. ARMY CORPS OF ENGINEERS *  
* MAY 1991 *  
* HYDROLOGIC ENGINEERING CENTER *  
* VERSION 4.0 1E *  
* 609 SECOND STREET *  
* *  
* DAVIS, CALIFORNIA 95616 *  
* RUN DATE 06/19/2001 TIME 16:15:17 *  
* (916) 756-1104 *  
* *  
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.....  
Full Microcomputer Implementation  
by  
Haestad Methods, Inc.  
.....  
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37 Brookside Road * Waterbury, Connecticut 06708 * (203) 755-1666

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

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIDR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.

THE DEFINITION OF -AMSK- 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

HEC-1 INPUT

PAGE 1

ID	LINE	1	2	3	4	5	6	7	8	9	10
	1	ID	Type	I/A	storm						
	2	IT	15	0		0	288				
	3	IQ	5								
	4	KK	SC205								
	5	KM	Smith Creek 205 Runoff								
	6	KD						22			
	7	BA	0.0970								
	8	PB	2								
	9	IN	15								
0.0165	10	PC	0.0005	0.0015	0.0030	0.0045	0.0060	0.0080	0.0100	0.0120	0.0143
0.0600	11	PC	0.0188	0.0210	0.0233	0.0255	0.0278	0.0320	0.0390	0.0460	0.0530
0.8000	12	PC	0.0750	0.1000	0.4000	0.7000	0.7250	0.7500	0.7650	0.7800	0.7900
0.8600	13	PC	0.8100	0.8200	0.8250	0.8300	0.8350	0.8400	0.8450	0.8500	0.8550
0.8975	14	PC	0.8638	0.8675	0.8713	0.8750	0.8788	0.8825	0.8863	0.8900	0.8938
0.9300	15	PC	0.9013	0.9050	0.9083	0.9115	0.9148	0.9180	0.9210	0.9240	0.9270
0.9550	16	PC	0.9325	0.9350	0.9375	0.9400	0.9425	0.9450	0.9475	0.9500	0.9525
0.9800	17	PC	0.9575	0.9600	0.9625	0.9650	0.9675	0.9700	0.9725	0.9750	0.9775
0.9925	18	PC	0.9813	0.9825	0.9838	0.9850	0.9863	0.9875	0.9888	0.9900	0.9913
	19	PC	0.9938	0.9950	0.9963	0.9975	0.9988	1.0000			
	20	LS	0	68							
	21	UD	0.257								
	22	KK	RT205								
	23	KM	Smith Creek Route 205 to 213								
	24	KD						22			
	25	RK	1530	0.0431	0.055			TRAP		2	
	26	KK	SC207								
	27	KM	Smith Creek 207 Runoff								
	28	KD						22			
	29	BA	0.12								
	30	PB	2								
	31	LS	0	68							
	32	UD	0.367								
	33	KK	SC213								
	34	KM	Smith Creek 213 Runoff								
	35	KD						22			
	36	BA	0.1243								
	37	PB	2								
	38	LS	0	67							
	39	UD	0.361								
	40	KK	DP213								
	41	KM	Combine RT205 SC207 and SC213								
	42	KD						22			
	43	HC	3								
	44	KK	RT213								
	45	KM	Smith Creek Route 213 to 215								
	46	KD						22			
	47	RK	1360	0.0493	0.055			TRAP		2	

LINE	1	2	3	4	5	6	7	8	9	10
184	KK	SC311								
185	KM	Smith Creek 311 Runoff								
186	KD							22		
187	BA	0.1064								
188	PB	2								
189	LS	0	68							
190	UD	0.234								
191	KK	DP311								
192	KM	Combine RT305 SC307 SC309 and SC311								
193	KD							22		
194	HC	4								
195	KK	RT311								
196	KM	Tributary Route 311 to 315								
197	KD							22		
198	RK	2860	0.0448	0.0888				TRAP		2
199	KK	SC313								
200	KM	Smith Creek 313 Runoff								
201	KD							22		
202	BA	0.1520								
203	PB	2								
204	LS	0	67							
205	UD	0.352								
206	KK	SC315								
207	KM	Smith Creek 315 Runoff								
208	KD							22		
209	BA	0.0886								
210	PB	2								
211	LS	0	68							
212	UD	0.297								
213	KK	DP315								
214	KM	Combine RT311 SC313 and SC315								
215	KD							22		
216	HC	3								
217	KK	DP316								
218	KM	Combine RT220 and DP315								
219	KD							22		
220	HC	2								
221	KK	RT316								
222	KM	Smith Creek Route 316 to 401								
223	KD							22		
224	RK	2575	0.0361	0.120				TRAP	1	2

LINE	ID.	1	2	3	4	5	6	7	8	9	10
314											
	KK										
315	KM										
316	KD								22		
317	RK	1000	0.0395	0.0727					TRAP		2
318	KK										
319	KM										
320	KD								22		
321	BA	0.1367									
322	PB	2									
323	LS	0	69								
324	UD	0.273									
325	KK										
326	KM										
327	KD								22		
328	RS	1	STDR	-1							
329	SV	0.0	0.20	0.68	1.35	2.32					
330	SE	7340	7342	7344	7346	7348					
331	SQ	0	20	48	220	822					
332	SE	7340	7342	7344	7346	7348					
333	KK										
334	KM										
335	KD								22		
336	HC	2									
337	KK										
338	KM										
339	KD								22		
340	RK	1000	0.0395	0.0727					TRAP		2
341	KK										
342	KM										
343	KD								22		
344	BA	0.0408									
345	PB	2									
346	LS	0	68								
347	UD	0.273									
348	KK										
349	KM										
350	KD								22		
351	HC	2									
352	KK										
353	KM										
354	KD								22		
355	RK	1420	0.0359	0.120					TRAP		2

ID	LINE	1	2	3	4	5	6	7	8	9	10
356	KK	SC109									
357	KM	Smith Creek 109 Runoff									
358	KD								22		
359	BA	0.1637									
360	PB	2									
361	LS	0	69								
362	UD	0.350									
363	KK	DP109									
364	KM	Combine RT107 and SC109									
365	KD								22		
366	HC	2									
367	KK	RT109									
368	KM	Tributary Route 109 to 111									
369	KD								22		
370	RK	3840	0.0453	0	120				TRAP		2
371	KK	SC111									
372	KM	Smith Creek 111 Runoff									
373	KD								22		
374	BA	0.1894									
375	PB	2									
376	LS	0	69								
377	UD	0.382									
378	KK	DP111									
379	KM	Combine RT109 and SC111									
380	KD								22		
381	HC	2									
382	KK	SC407									
383	KM	Smith Creek 407 Runoff									
384	KD								22		
385	BA	0.1685									
386	PB	2									
387	LS	0	68								
388	UD	0.423									
389	KK	DP407									
390	KM	Combine DP111 RT405 and SC407									
391	KD								22		
392	HC	3									
393	KK	RT407									
394	KM	SMITH CREEK ROUTE 407 TO 506									
395	KD								22		
396	RK	1105	0.0210	0	120				TRAP	1	2

ID	LINE	1	2	3	4	5	6	7	8	9	10
	523	KK	RES610								
	524	KM	Smith Creek Reservoir Route 610								
	525	KD							22		
	526	RS	1	STOR	-1						
	527	SA	2.2	2.7	3.3	3.8	4.4	5.1	5.8		
	528	SE	6822	6823	6824	6825	6826	6827	6828		
	529	SQ	0	11	701	2361	4843	10331	16010		
	530	KK	SC605A								
	531	KM	Smith Creek 605A Runoff								
	532	KD							22		
	533	BA	0.0505								
	534	PB	2								
	535	LS	0	68							
	536	UD	0.252								
	537	KK	RT605								
	538	KM	SMITH CREEK ROUTE 605 TO DP610								
	539	KD							22		
	540	RK	2000	0.03	0.013			TRAP	2	2	
	541	KK	SC605B								
	542	KM	SMITH CREEK 605B RUNOFF								
	543	KD							22		
	544	BA	0.0778								
	545	PB	2								
	546	LS	0	75							
	547	UD	0.252								
	548	KK	RES605								
	549	KM	SMITH CREEK RESEVOIR ROUTE 605								
	550	KD							22		
	551	RS	1	STOR	-1						
1.773	552	SV	0	0.099	0.218	0.36	0.526	0.718	0.937	1.185	1.463
	553	SV	2.117	2.496	2.912						
6827	554	SE	6818	6819	6820	6821	6822	6823	6824	6825	6826
	555	SE	6828	6829	6830						
176.76	556	SQ	0	5.18	19.37	40.40	65.78	92.88	119.23	143.30	162.05
	557	SQ	190.33	202.99	214.91						
6827	558	SE	6818	6819	6820	6821	6822	6823	6824	6825	6826
	559	SE	6828	6829	6830						
	560	KK	DP610								
	561	KM	COMBINE RES 610 RES 605 AND RT605								
	562	KD							22		
	563	HC	3								
	564	KK	RT610								
	565	KM	Smith Creek Route 610 to 611								
	566	KD							22		
	567	RK	3200	0.0226	0.090			TRAP	2	1	

ID	LINE	1	2	3	4	5	6	7	8	9	10
	615	UD	0	162							
	616	KK	RES617								
	617	KM	SMITH CREEK RESEVOIR ROUTE 617								
	618	KD							22		
	619	RS	1	STOR	-1						
	620	SV	0	0.5	1.0	1.5					
	621	SE	6740	6745	6748	6750					
	622	SQ	0	30	40	63					
	623	SE	6740	6745	6748	6750					
	624	KK	SC618								
	625	KM	SMITH CREEK 618 RUNOFF								
	626	KD							22		
	627	BA	0.007								
	628	PB	2								
	629	LS	0	73							
	630	UD	0.15								
	631	KK	RES618								
	632	KM	SMITH CREEK RESEVOIR 618								
	633	KD							22		
	634	RS	1	STOR	-1						
	635	SV	0	0.5	1.0						
	636	SE	6768	6770	6772						
	637	SQ	0	3	6						
	638	SE	6768	6770	6772						
	639	KK	DP618								
	640	KM	COMBINE RES 613 RES 618 AND RT618								
	641	KD							22		
	642	HC	3								
	643	KK	SC615B								
	644	KM	Smith Creek 615B Runoff								
	645	KD							22		
	646	BA	0.0313								
	647	PB	2								
	648	LS	0	78							
	649	UD	0.160								
	650	KK	RES614								
	651	KM	EXISTING POND 614								
	652	KD							22		
	653	RS	1	STOR	-1						
	654	SV	0	0.067	0.32	0.67	1.16	1.5			
	655	SE	6722	6724	6726	6728	6730	6732			
	656	SQ	0	4	6	10	13.3	20			
	657	SE	6722	6724	6726	6728	6730	6732			

ID	LINE	1	2	3	4	5	6	7	8	9	10
658	KK	SC615A									
659	KM	SMITH CREEK 615A									
660	KD								22		
661	BA	0.0567									
662	PB	2									
663	LS	0	74								
664	UD	0.18									
665	KK	RES615									
666	KM	SMITH CREEK RESEVOIR ROUTE 615									
667	KD								22		
668	RS	1	STDR	-1							
669	SV	0	1	2	2.5						
670	SE	6726	6728	6730	6732						
671	SQ	0	5	10	16.7						
672	SE	6724	6726	6728	6729						
673	KK	SC617C									
674	KM	SMITH CREEK 617C Runoff									
675	KD								22		
676	BA	.0482									
677	PB	2									
678	LS	0	65								
679	UD	.17									
680	KK	DP613									
681	KM	COMBINE DP 618 RES 615 RES 614 SC 617C AND RT 612									
682	KD								22		
683	HC	5									
684	KK	RT614									
685	KM	SMITH CREEK ROUTE 613 TO 617									
686	KD								22		
687	RK	1200	0.022	0.030				TRAP	2	4	
688	KK	SC617B									
689	KM	Smith Creek 617B Runoff									
690	KD								22		
691	BA	0.0215									
692	PB	2									
693	LS	0	69								
694	UD	0.228									
695	KK	DP617									
696	KM	Combine RT614 AND SC617B									
697	KD								22		
698	HC	2									
699	KK	RT617									
700	KM	Smith Creek Route 617 to 703									
701	KD								22		
702	RK	1470	0.0061	0.085				TRAP	2	1	

HEC1 S/N: 1343001909

HMVersion: 6.33

Data File: C:\WINNT\TEMP\vbh1626.TMP

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

MAXIMUM STAGE	TIME OF OPERATION MAX STAGE	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA
					6-HOUR	24-HOUR	72-HOUR	
	HYDROGRAPH AT	SC205	5.	6.00	1.	1.	0.	0.10
	ROUTED TO	RT205	5.	6.00	1.	1.	0.	0.10
	HYDROGRAPH AT	SC207	5.	6.00	2.	1.	0.	0.12
	HYDROGRAPH AT	SC213	4.	6.00	1.	1.	0.	0.12
	3 COMBINED AT	DP213	14.	6.00	4.	2.	1.	0.34
	ROUTED TO	RT213	13.	6.00	4.	2.	1.	0.34
	HYDROGRAPH AT	SC209	2.	6.25	1.	0.	0.	0.14
	HYDROGRAPH AT	SC211	1.	6.50	0.	0.	0.	0.08
	HYDROGRAPH AT	SC215	3.	6.00	1.	0.	0.	0.06
	4 COMBINED AT	DP215	18	6.00	6.	3.	1.	0.62
	ROUTED TO	RT215	17.	6.25	6.	3.	1.	0.62
	HYDROGRAPH AT	SC219	1.	6.50	1.	0.	0.	0.13
	2 COMBINED AT	DP219	18.	6.25	7.	3.	1.	0.75
	HYDROGRAPH AT	SC201	1.	6.25	1.	0.	0.	0.12
	ROUTED TO	RT201	1.	6.25	1.	0.	0.	0.12
	HYDROGRAPH AT	SC203	1.	6.25	0.	0.	0.	0.11
	2 COMBINED AT	DP203	2.	6.25	1.	1.	0.	0.23
	ROUTED TO	RT203	2.	6.50	1.	1.	0.	0.23
	HYDROGRAPH AT	SC217	0.	6.25	0.	0.	0.	0.05
	2 COMBINED AT	DP217	3.	6.50	1.	1.	0.	0.29
	2 COMBINED AT	DP220	21.	6.25	8.	4.	1.	1.03
	ROUTED TO	RT220	20.	6.25	8.	4.	1.	1.03
	HYDROGRAPH AT	SC301	6.	6.00	2.	1.	0.	0.12

HYDROGRAPH AT	SC303	6	6.00	2	1	0	0.13
2 COMBINED AT	DP303	13	6.00	3	1	0	0.25
ROUTED TO	RT303	12	6.00	3	1	0	0.25
HYDROGRAPH AT	SC305	3	6.00	1	0	0	0.06
2 COMBINED AT	DP305	15	6.00	4	2	1	0.31
ROUTED TO	RT305	13	6.00	4	2	1	0.31
HYDROGRAPH AT	SC307	4	6.25	1	1	0	0.11
HYDROGRAPH AT	SC309	6	6.00	2	1	0	0.12
HYDROGRAPH AT	SC311	5	6.00	1	1	0	0.11
4 COMBINED AT	DP311	28	6.00	8	3	1	0.65
ROUTED TO	RT311	27	6.25	8	3	1	0.65
HYDROGRAPH AT	SC313	6	6.00	2	1	0	0.15
HYDROGRAPH AT	SC315	4	6.00	1	0	0	0.09
3 COMBINED AT	DP315	35	6.25	11	5	2	0.89
2 COMBINED AT	DP316	55	6.25	19	8	3	1.92
ROUTED TO	RT316	51	6.50	19	8	3	1.92
HYDROGRAPH AT	SC401	7	6.00	2	1	0	0.15
2 COMBINED AT	DP401	56	6.25	21	9	3	2.08
ROUTED TO	RT401	55	6.50	21	9	3	2.08
HYDROGRAPH AT	SC403	5	6.00	1	1	0	0.10
HYDROGRAPH AT	SC405	4	6.00	1	0	0	0.07
3 COMBINED AT	DP405	60	6.50	23	10	3	2.25
ROUTED TO	RT405	60	6.50	23	10	3	2.25
HYDROGRAPH AT	SC101	1	6.25	1	0	0	0.09
ROUTED TO	RT101	1	6.25	1	0	0	0.09
HYDROGRAPH AT	SC103	4	6.00	1	1	0	0.17
HYDROGRAPH AT							

		SC105A	5	6 00	1.	0	0	0.07
	3 COMBINED AT	DP103	9	6 00	3.	1	0.	0.33
	ROUTED TO	RES106	8	6.25	3.	1.	0.	0.33
7320.31	6 25							
	ROUTED TO	RT103	8	6 50	3.	1.	0	0.33
	HYDROGRAPH AT	SC105B	4	6.00	1.	0	0.	0.07
	2 COMBINED AT	DP105	10.	6.25	4.	2.	1.	0.40
	ROUTED TO	RT105A	10.	6.50	4.	2.	1.	0.40
	HYDROGRAPH AT	SC107A	9.	6.00	2.	1.	0.	0.14
	ROUTED TO	RES108	7	6.00	2.	1.	0.	0.14
7340.73	6.00							
	2 COMBINED AT	DP107A	17.	6.25	6.	3.	1.	0.53
	ROUTED TO	RT105B	17.	6.25	6.	3.	1.	0.53
	HYDROGRAPH AT	SC107B	2.	6.00	1.	0.	0.	0.04
	2 COMBINED AT	DP107B	18.	6.25	7.	3.	1.	0.57
	ROUTED TO	RT107	17.	6.50	7.	3.	1.	0.57
	HYDROGRAPH AT	SC109	9.	6.00	2.	1.	0.	0.16
	2 COMBINED AT	DP109	24.	6.25	9.	4.	1.	0.74
	ROUTED TO	RT109	24	6.50	9.	4.	1	0.74
	HYDROGRAPH AT	SC111	10.	6 00	3.	1	0.	0.19
	2 COMBINED AT	DP111	30.	6.50	12.	5.	2.	0.93
	HYDROGRAPH AT	SC407	7.	6.25	2.	1	0.	0.17
	3 COMBINED AT	DP407	95.	6.50	36.	16.	5.	3.34
	ROUTED TO	RT407	93	6.50	36.	16.	5.	3.34
	HYDROGRAPH AT	SC501	6.	6 00	2.	1	0.	0.12
	HYDROGRAPH AT	SC503	6.	6.00	2.	1.	0.	0.12
	HYDROGRAPH AT	SC505	8	6 00	2.	1.	0.	0.19
	3 COMBINED AT	DP505	20	6 00	6.	2.	1.	0.43