

UpSac_5F

T1 USBR Demonstrati on Project- Tri ni ty System
 T2 Temperature Analysis
 T3 Tri ni ty, Lewi ston and Whi skeytown Reservoir s / Clear Creek
 J1 0 1 5 3 4 2 0 0
 J2 0 1.0 0 0 0 0 0 0
 J3 4 0 0 -1 24 0 1

J8340.11 320.11 240.11 220.11 200.11

C CP number and output code for DSS output controlled by JZ Record. (J3.9 must = 0)
 C JZ340.10 340.11 240.10 240.11 220.10 220.11 320.10 200.10 170.04

C Insertion of the J9 Record triggers the HEC-5Q simulation option. All of
 C the other inputs are standard HEC-5 input records. These input records are
 C described in Appendix H. The HEC-5Q options specified on the J9 Record
 C are described in Exhibit 3, Section 1.

C IDQEV IFLOAG ISTEADY ICALIB QCOSA IJ9 IPL1 IPL2 IPL3 IRDLN
 J9 0 0 0 1 0 0 0 0 1 1

c Cottonwood Creek stub first to get around "MAPGEN.for" limitation
 C ***** dummy reservoir - Cottonwood Cr. *****

RL 176
 R0
 RS 2 10 10000
 RQ 2 -1 -1
 CP 176 500000 60 40
 IDClear Creek near Sac.R
 RT 176 174

C ***** Trinity Dam / Reservoir *****

C Reservoir Level Elevation, feet
 C 1 : TOP OF INACTIVE 2,000
 C 2 : TOP OF BUFFER POOL 2,145
 C 3 : TOP OF CONSERVATION POOL 2,370
 C 4 : TOP OF FLOOD CONTROL POOL 2,387
 C 5 : TOP OF DAM 2,395

C ##### ==> The historical elevations need to be inserted into DSS to allow
 C dynamic assignment of starting elevation for all reservoirs

RL 340 -2276.3
 RL 1 340 -1 12370
 RL 2 340 -1 312600
 RL 3 340 -1 2447700
 RL 4 340 -1 2739600
 RL 5 340 -1 2791100

R0 3 330 320 300

RS -45 .14 .67 1.89 4.13 7.57 12.37 18.66 26.44 35.83
 RS 47.02 60.22 75.50 92.60 112.93 136.16 162.23 190.76 221.70 255.62
 RS 292.86 333.15 376.53 423.56 474.74 529.61 588.41 651.60 719.87 793.41
 RS 871.67 955.14 1044.0 1138.6 1239.5 1347.3 1462.2 1583.6 1711.4 1845.6
 RS 1986.4 2133.9 2287.1 2447.7 2617.0 2791.1

RQ 45 1100 1200 1400 1600 1750 1900 1800 1850 1900
 RQ 2000 2200 7840 10000 12000 14180 14700 15150 15820 16470
 RQ 17120 17710 18300 18730 18900 19150 19500 19700 19900 20100
 RQ 22070 28060 35700 60000 96000 100000 100000 100000 100000 100000
 RQ 100000 100000 100000 100000 100000 100000

RA 45 29 87 170 294 409 569 704 869 1030

	UpSac_5F									
RA	1230	1431	1648	1859	2181	2495	2746	2986	3232	3586
RA	3895	4195	4517	4933	5342	5673	6134	6556	7154	7602
RA	8105	8646	9190	9796	10443	11192	11861	12486	13145	13752
RA	14483	15075	15634	16575	17361	17833				

RE	45	1950	1960	1970	1980	1990	2000	2010	2020	2030
RE	2040	2050	2060	2070	2080	2090	2100	2110	2120	2130
RE	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230
RE	2240	2250	2260	2270	2280	2290	2300	2310	2320	2330
RE	2340	2350	2360	2370	2380	2390				

CP 340 299999 0 0
IDTrinity

C Trinity Dam to Lewiston Reservoir
RT 340 330
CP 330 299999 250 250
IDAbove Lewiston Reservoir

C route through reservoir
RT 330 320

C ***** Lewiston Dam / Reservoir *****
C Reservoir Level Elevation, feet
C 1 : TOP OF INACTIVE 1,870
C 2 : TOP OF BUFFER POOL 1,898
C 3 : TOP OF CONSERVATION POOL 1,902
C 4 : TOP OF FLOOD CONTROL POOL 1,903
C 5 : TOP OF DAM 1,904

RL	320	13800								
RL	1	320	-1		1543					
RL	2	320	-1		11772					
RL	3	320	-1		14685					
RL	4	320	-1		15445					
RL	5	320	-1		16200					

R0 1 300

RS	17	14	65	167	318	547	941	1543	2397	3598
RS	5181	7232	9871	13175	13925	14685	15445	16200		

RQ	17	-1	-1	-1	-1	-1	-1	-1	-1	-1
RQ	-1	-1	-1	-1	-1	-1	-1	-1		

RA	17	6	16	26	37	62	106	146	212	285
RA	369	477	607	734	744	755	766	775		

RE	17	1840	1845	1850	1855	1860	1865	1870	1875	1880
RE	1885	1890	1895	1900	1901	1902	1903	1904		

CP 320 200000 300 250
IDLewiston
RT 320 300
DR 320 244 -5

C ***** dummy reservoir below Lewiston Dam *****
RL 300
R0
RS 2 10 10000
RQ 2 -1 -1
CP 300 200000 300 250
IDbelow Lewiston Dam

UpSac_5F

RT 300 100

C ***** dummy reservoir @ Clear Creek tunnel powerplant *****

RL 244
 RO
 RS 2 10 10000
 RQ 2 -1 -1
 CP 244 499999
 IDCLEAR. CR. Tunnel
 RT 244 242

CP 242 499999
 IDCLEAR. CR. PP
 RT 242 240

C ***** Whiskeytown Dam / Reservoir *****

C Reservoir Level El evati on, feet
 C 1 : TOP OF INACTIVE 1,085
 C 2 : TOP OF BUFFER POOL 1,100
 C 3 : TOP OF CONSERVATION POOL 1,210
 C 4 : TOP OF FLOOD CONTROL POOL 1,220.5
 C 5 : TOP OF DAM 1,225

RL 240 -1198.9
 RL 1 240 -1 17676
 RL 2 240 -1 27542
 RL 3 240 -1 241096
 RL 4 240 -1 276117
 RL 5 240 -1 292000

RO 1 230
 RS 26 27 89 227 501 994 1797 3055 4898 7418
 RS 10751 15076 20589 27542 36185 46701 59265 73960 90837 109952
 RS131413 156276 181513 210125 241096 274389 292000

RQ 26 2000 3200 4500 5000 5500 6000 6500 7000 7400
 RQ 7800 8200 8600 9000 9300 9600 9900 10200 10500 10800
 RQ 11100 11400 11700 12000 10200 26000 999999

RA 26 4 9 20 38 65 102 158 219 295
 RA 383 496 623 787 963 1164 1373 1591 1809 2039
 RA 2279 2519 2753 2994 3224 3459 3600

RE 26 980 990 1000 1010 1020 1030 1040 1050 1060
 RE 1070 1080 1090 1100 1110 1120 1130 1140 1150 1160
 RE 1170 1180 1190 1200 1210 1220 1225

CP 240 500000 0 0
 IDWhiskeytown
 RT 240 230
 DR 240 214 -5

C Clear Creek below Whiskeytown Dam

C ***** dummy reservoir below Whiskeytown Dam *****

RL 230
 RO
 RS 2 10 10000
 RQ 2 -1 -1
 CP 230 500000 60 40
 IDClear Creek near Sac. R
 RT 230 180

UpSac_5F

C ***** dummy reservoir @ spring Creek tunnel powerplant *****

RL 214
 RO
 RS 2 10 10000
 RQ 2 -1 -1
 CP 214 499999
 ID Spring Cr. Tunnel
 RT 214 212

CP 212 250000
 ID Spring Cr. PP
 RT 212 200

C ***** Shasta Dam / Reservoir *****

C Reservoir Level Elevation, feet
 C 1 : TOP OF INACTIVE 742
 C 2 : TOP OF BUFFER POOL 1,000
 C 3 : TOP OF CONSERVATION POOL 1,030
 C 4 : TOP OF FLOOD CONTROL POOL 1,050
 C 5 : TOP OF DAM 1,067

RL 220 -994.2
 C RL 1 220 -1 751030
 RL 1 220 -1 125000

c Based on 1995 - 2000 operation data

RL	2	220	6	2616600	2828500	3792600	3792600	2416000	2616600
C	DATE			01Jan	01Mar	01May	01Jul	01Oct	31Dec
C	ELEVATION			990	1000	1040	1040	980	990

RL	3	220	6	3238900	3533500	4552100	4552100	3238900	3238900	
C	DATE			01Jan	01Mar	01May	01Jul	01Oct	31Dec	
C	ELEVATION			1018	1030	1067	1067	1018	1018	
C			CS	6	1	61	122	183	275	365

RL 4 220 -1 4856800
 RL 5 220 -1 4950700

RO 1 210

RS	-49	4.58	7.52	11.40	16.32	22.51	30.25	39.74	51.10	64.52
RS	80.31	98.97	121.07	146.79	176.35	210.15	248.51	291.44	339.00	391.74
RS	450.37	515.54	587.13	665.51	751.03	843.59	943.93	1051.7	1167.9	1291.9
RS	1424.8	1566.2	1717.3	1877.0	2046.8	2226.1	2416.0	2616.6	2828.5	3051.8
RS	3238.9	3286.9	3533.5	3792.6	4063.1	4346.7	4552.1	4642.2	4856.8	4950.7

RQ	49	0	0	0	0	0	0	0	0	0
RQ	1704	0	0	1000	4000	8000	12000	13000	14000	15000
RQ	16000	18000	25000	35000	44000	52000	54000	56000	57000	58000
RQ	58500	59000	59500	60000	64000	68000	71000	73000	75000	76000
RQ	76500	76600	77000	77500	78000	78000	78500	80000	110000	150000

RA	49	248	340	437	549	658	850	1040	1234	1450
RA	1704	2032	2388	2760	3160	3606	4067	4519	5002	5557
RA	6178	6832	7492	8190	8900	9639	10404	11182	12005	12839
RA	13716	14618	15540	16572	17452	18454	19521	20620	21751	22914
RA	23882	24082	25403	26536	27700	28950	29740	30230	31080	31330

RE	49	630	640	650	660	670	680	690	700	710
RE	720	730	740	750	760	770	780	790	800	810
RE	820	830	840	850	860	870	880	890	900	910

	920	930	940	950	960	970	980	990	1000	1010
RE	1018	1020	1030	1040	1050	1060	1067	1070	1077	1080

CP 220 450000 0 0
 IDShasta
 RT 220 210

	6	1	61	122	183	275	365
C DATE	01Jan	01Mar	01May	01Jul	01Oct	31Dec	

C Sacramento River above Keswick
 CP 210 450000 5000 3000
 IDAbove Keswick
 RT 210 200

C ***** Keswick Dam / Reservoir *****
 C Reservoir Level El evati on, feet
 C 1 : TOP OF INACTIVE 550
 C 2 : TOP OF BUFFER POOL 570
 C 3 : TOP OF CONSERVATION POOL 581
 C 4 : TOP OF FLOOD CONTROL POOL 586
 C 5 : TOP OF DAM 589

RL	200	22300	6950	14338	20100	23129	25072
RO	1	200					

RS	18	20	300	1150	2514	4433	5612	6950	8486	10201
RS	12167	14338	16811	18410	20100	21890	23129	23772	25072	

RQ	18	99999	99999	99999	99999	99999	99999	99999	99999	99999
RQ	99999	99999	99999	99999	99999	99999	99999	99999	99999	99999

RA	18	20	65	110	166	222	253	287	325	367
RA	414	463	518	550	585	615	632	640	660	

RE	18	504	510	520	530	540	545	550	555	560
RE	565	570	575	578	581	584	586	587	589	

CP 200 500000 2500 2000
 IDKeswick
 RT 200 180 1.9
 CR 2 .87 .13

CP 180 500000 12000 8000
 IDClear Creek confluence-Sacramento River
 C1 170 .07
 RT 180 178 1.9
 CR 2 .91 .09

C ACID di versi on
 DR 180 -5

CP 178 500000 12000 8000
 IDSacramento River below Cow Creek
 C1 170 .49
 RT 178 174 1.9
 CR 2 .95 .05

CP 174 500000 12000 8000
 IDSacramento River below Cottonwood Creek
 C1 170 .21
 RT 174 170 1.9
 CR 2 .90 .10

UpSac_5F

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CP 170 500000 0
IDBend Bri dge
C1 170 .23
RT 170 160 1.9
CR 2 .85 .15

CP 160 500000 0
IDRedBl uff Di v. Dam
RT 160 100

CP 100 500000 0 0
IDSac. R Dummy
RT 100 80

CP 80 500000 0 0
IDSac. R Stub
RT 80

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ED

C Daily reservoir inflows and outflows are stored in DSS file format.
C Allocation of the total inflow to individual tributaries is controlled
C within the HEC-5Q data sets.

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BF 2 365 365 091010100 24 1900
C NOLI ST

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ZR IN340 A=SACRAMENTO B=TRI NI TY C=FLOW-LOC F=FCST E=1DAY
ZR IN240 A=SACRAMENTO B=WHI SKEYTOWN C=FLOW-LOC F=FCST E=1DAY
ZR IN220 A=SACRAMENTO B=SHASTA C=FLOW-LOC F=FCST E=1DAY
ZR IN176 A=SACRAMENTO B=COTTONWOOD_CR C=FLOW-LOC F=FCST E=1DAY
ZR IN170 A=SACRAMENTO B=BEND_BR C=FLOW-LOC F=FCST E=1DAY
C
ZR QA340 A=SACRAMENTO B=TRI NI TY C=FLOW-RES OUT F=FCST E=1DAY
ZR QA240 A=SACRAMENTO B=WHI SKEYTOWN C=FLOW-RES OUT F=FCST E=1DAY
ZR QA220 A=SACRAMENTO B=SHASTA C=FLOW-RES OUT F=FCST E=1DAY
ZR QA200 A=SACRAMENTO B=KESWI CK C=FLOW-RES OUT F=FCST E=1DAY
C
ZR QD320 A=SACRAMENTO B=CARR_PP C=FLOW-DI V F=FCST E=1DAY
ZR QD240 A=SACRAMENTO B=SPRI NG_CR_PP C=FLOW-DI V F=FCST E=1DAY
ZR QD180 A=SACRAMENTO B=ACI D C=FLOW-DI V F=FCST E=1DAY

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C ZW A=HEC-5 F=OUTLOOK
EJ

ER