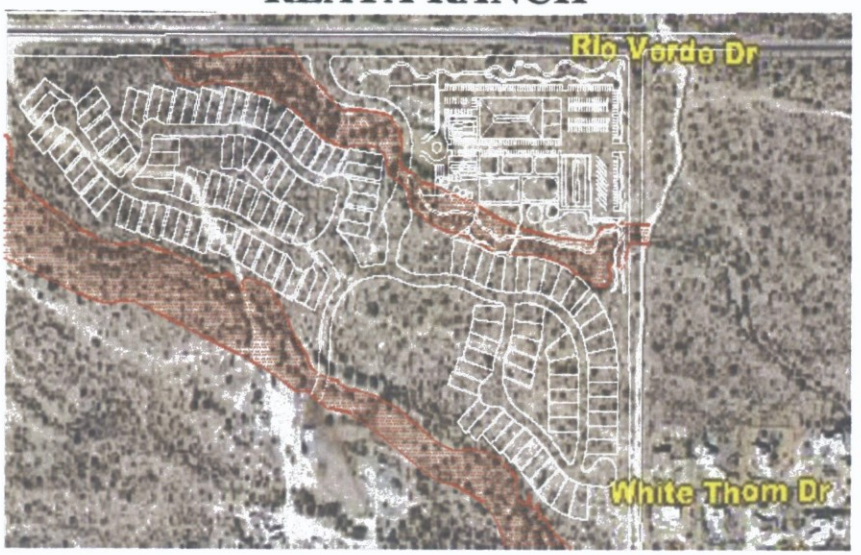
PRELIMINARY DRAINAGE REPORT
FOR
EQUESTRIAN AND RESORT CENTER
AT
REATA RANCH



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Expires 3.31.16

August 2014

9-DR-2014
9/11/2014

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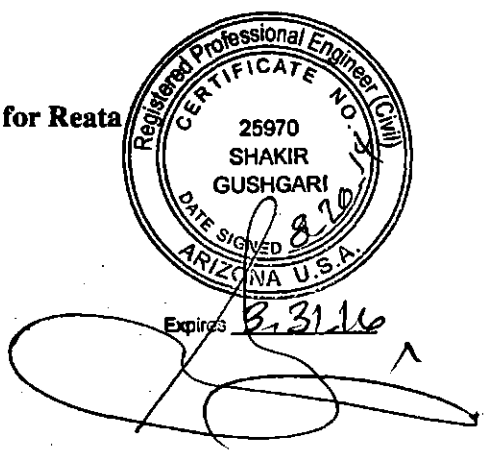
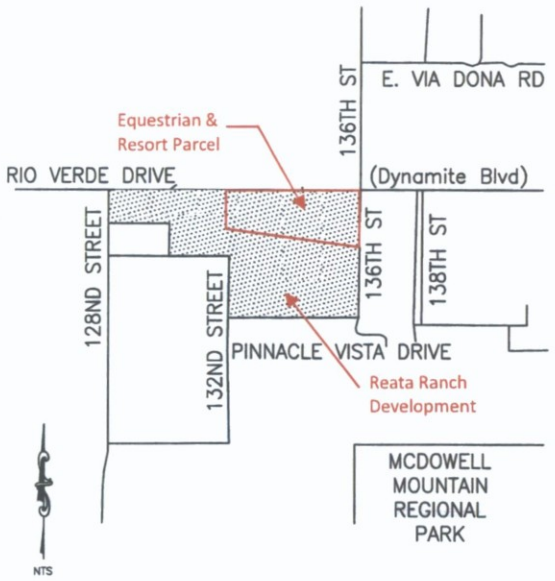


INTRODUCTION:

The 'Equestrian and Resort Center' is a proposed parcel, within the Reata Ranch master planned development. The parcel is bounded by 136th and 132nd Streets (east-west-direction) and Rio Verde Drive to RV-W10 Wash (north-south-direction), and is situated in a portion of the north half of Section 36, Township 5 North, Range 5 East of the Gila and Salt River Base and Meridian, Maricopa County, Scottsdale, Arizona.

The purpose of this application is to describe the general drainage and storm-water management plan for the proposed development known as "Reata Ranch-Equestrian & Resort Center". The master drainage study for Reata Ranch development was conducted as a part of the "Preliminary Drainage Report for Reata Ranch – Master Planned Development" dated May 2014, prepared by SKG Enterprises, Inc. (Reference 8). The drainage pattern for the 'Equestrian and Resort Center', proposed in this report will be consistent with the drainage concept defined in the Preliminary Drainage Report for Reata Ranch (Ref 8).



Site Location Map

PORTION OF THE NORTH HALF OF SECTION 36,
TOWNSHIP 5 NORTH, RANGE 5 EAST, OF THE GILA
AND SALT RIVER BASE & MERIDIAN, MARICOPA COUNTY, AZ

Exhibit 1 – Location Map

FLOODPLAIN DESIGNATION

Currently and prior to the adoption of the Dibble study, the Reata Ranch area has been designated as Flood Zone "D", per FEMA Flood Insurance Rate Map (FIRM) number 04013C1335L dated October 16, 2013. Zone "D" is defined as "Areas in which flood hazards are undetermined but possible." Exhibit 2 below presents a copy of the FEMA Flood Insurance Rate Map (FIRM) panel number 04013C1335L. The anticipated 2015/2016 mapping revision, Dibble study proposes to designate a portion of this area as a special flood hazard zone area where base flood elevations determined. Such designation is referred to, by FEMA, as an "AE" special flood hazard zone. The proposed 'Equestrian and Resort Center' parcel will however not fall within the special flood hazard zone.

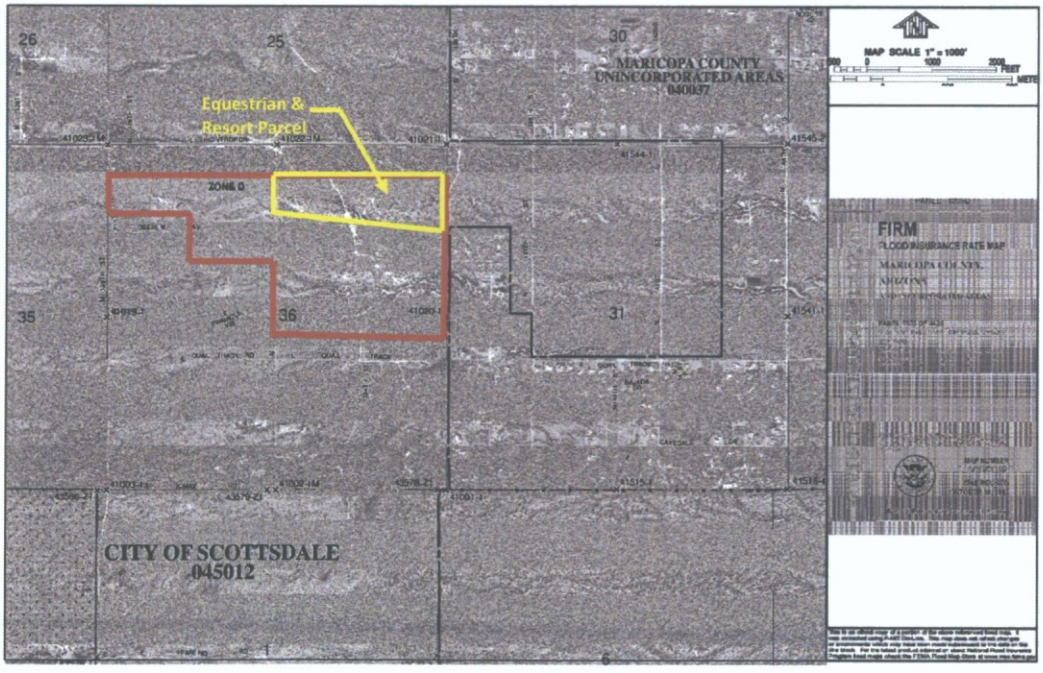


Exhibit 2 – FEMA FIRM Map

OFFSITE DRAINAGE

The offsite drainage for the 'Equestrian and Resort Center' was analyzed as a part of Preliminary Drainage Report for Reata Ranch (Appendix G of Reference 8). Excerpts of the 'Preliminary Drainage Report for Reata Ranch' are included in Appendix B of this report. The drainage corridor that conveys the offsite flow through the proposed 'Equestrian & Resort Center' is designated as 'RV Wash-A'.

Per the 'Preliminary Drainage Report for Reata Ranch' (HEC-1 output in Reference 8), the NOAA 14 Q_{100} estimated peak runoff for 'RV Wash-A' is summarized as below.

Table-1 Offsite Peak Discharge Values (Pre-Development Condition)

River	Reach	RS	100-year, 24-hour Peak Discharge (CFS) NOAA 14	Concentration Point per Dibble (RVADMS) Study
RVWASH A-T1	-	-	667	CP11G2*

Refer to Table 4.5.12 (Excerpt from CLOMR report (Ref 9) - Included in Appendix B of this report) for visual depiction of these concentration points locations

*See Exhibit 3 for this "CP" location.

Hydraulic analysis of RV Wash-A was updated as a part of this study to reflect the proposed grading pattern due to development of Equestrian and Resort center to the north and south of Wash-A. The hydraulic model results delineating the limits of 100-year flow inundation within Wash-A are presented in Appendix A of this report. Culvert crossing for Wash-A at 136th Street was also modeled as a part of HEC-RAS analysis. The proposed flow inundation limits along with the location of the culvert crossings is represented in 'HEC-RAS Inundation limits Key Map' in Appendix A.

Summary of culvert crossings proposed for this parcel are included in table below

Table 2 - Culvert Summary

Culvert no.	Culvert Location (1) (2)		Culvert Description	100-year, 24-hour Peak Discharge (CFS)
	Reach	Cross Section		
Culvert #3	RV WASH-A	10.5	8'X4' – 5 ea	667
Culvert #4	RV WASH-A	0.75	10'X4' – 5 ea	667

1 Note: Reach and Cross section details per Appendix A of this report.

2 Refer to 'Inundation Limits Key Map' in Appendix A for Culvert Location.

In addition to the flow from RV Wash A, offsite flows of 40 cfs enter the northern boundary of the Reata Ranch Equestrian Center, at the three concentration points

namely CP-A (for Q=12 cfs), CP-B (for Q=14 cfs), and CP-C (for Q=14 cfs), respectively(see Exhibit 3). Then flow is captured by means of a v-ditch which spreads all along the northern and eastern boundary and outfalls to RV Wash A. Please refer to the Post Development Drainage Map(Exhibit 3) for these drainage pattern and flow details. The v-ditch design was completed using Flow master software and the output is compiled in Appendix C.

ONSITE DRAINAGE

The primary design criteria for defining the grading pattern and sizing of the onsite drainage infrastructure for this parcel was to ensure that the proposed drainage pattern was consistent with the drainage concept defined in the 'Preliminary Drainage Report for Reata Ranch'. Adhering to the concept defined in the "Preliminary Drainage Report for Reata Ranch', will therefore ensure that the post development runoff volumes leaving the site are lower the pre-development values during the 100-year, 10-year and 2-year storm events.

Post Development drainage areas have been delineated based on the street layout and proposed grading plan for the entire site. Exhibit 3 of this report shows proposed drainage areas, drainage patterns and proposed points of storm water concentration, to be consistent with Exhibit 4c of Reference 8. All onsite drainage runoff will be conveyed within the streets curbs into 5 different detention storage basins spread across within the parcel limits. Onsite runoff from the proposed streets will enter the detention basin via proposed valley gutters and scuppers. The detention storage for this project will be provided in the form of open detention basin, as summarized in Table 3. All detention basins within the parcel will progressively outfall into the adjoining wash via the proposed 18" bleed-off pipes. The proposed detention volume for the entire parcel is consistent with the volumes proposed in the 'Preliminary Drainage Report for Reata Ranch'.

Table 3: Volume of Detention Basins

Basin ID	Drainage Area (acre)	Basin Size				Bleed off Pipe Size (inch)
		Area Top (acre)	Area Bottom (acre)	Depth (feet)	Volume (acre -feet)	
Basin E	15.40	0.46	0.30	3	1.09	18
Basin N	3.00	0.12	0.05	3	0.26	18
Basin O	7.40	0.20	0.10	3	0.45	18
Basin P	8.90	0.22	0.15	3	0.75	18
Basin Q	10.60	0.31	0.19	3	0.75	18
Basin R	15.40	0.07	0.02	3	0.14	18
Basin S	15.40	0.44	0.20	3	0.96	18
Basin T	1.60	0.09	0.03	3	0.19	18

PRE Vs POST DEVELOPMENT COMPARISION

The Pre Vs Post Development flow comparison for the 2-year, 10-year and 100-year storm frequencies, exiting the 'Equestrian and Resort Center' was performed using HEC-1 program as a part of the 'Preliminary Drainage Report of Reata Ranch' (Reference 8 Appendix A and B). Table-4 summarizes the flow comparison for the 2-year, 10-year and 100-year storm events during pre-development and post development conditions at the exit of the project site, along with its corresponding time to peak (Tp). Since the development of this parcel did not alter the proposed drainage concept defined in the 'Preliminary Drainage Report for Reata Ranch", the magnitude of the post-development flows exiting the parcel are lower than the pre-development runoff volumes for all storm events.

Table 4-Comparison of Pre versus Post development flows

Concentration Point	CP11G2			
	Pre		Post	
Storm Frequency	(Q) (cfs)	T_P (hour)	(Q) (cfs)	T_P (hour)
100-yr	721	12.30	667	12.30
10-yr	346	12.30	331	12.33
2-yr	137	12.43	135	12.40

Refer to Appendix B of Reference 8 for pre-vs-post drainage areas & Exhibit 3 of this report.

EROSION PROTECTION AND EROSION SETBACK

Scour Analysis is performed at the slopes of channelized portion of washes and scour depth is computed using various regime equations such as Neil's equation, Lacey's equation and Blench equation . Bank protection along the sides and toe of

the channel is proposed with 1.5 times the maximum of the scour depth computed using the above mentioned regime equations. See Inundation Limits – Keymap in Appendix A and the detailed calculations in Appendix D.

Table 5-Erosion Protection Calculation Summary:

River	Reach	River Sta	Neill's Equation Scour Depth (ft.)	Lacey's Equation Scour Depth (ft.)	Blench's Equation Scour Depth (ft.)
RV Wash A	R1	CS-20	0.5	2.3	2.5
RV Wash A	R1	CS-19	0.8	2.3	2.7
RV Wash A	R1	CS-18	0.4	2.3	2.2
RV Wash A	R1	CS-17	0.7	2.3	2.4
RV Wash A	R1	CS-16	1.2	2.3	3.2
RV Wash A	R1	CS-15	0.7	2.3	3.4
RV Wash A	R1	CS-14	0.9	2.3	2.7
RV Wash A	R1	CS-13	0.9	2.3	2.9
RV Wash A	R1	CS-12	1	2.3	4.0
RV Wash A	R1	CS-11	0.6	2.3	3.0
RV Wash A	R1	CS-10.8	0.5	2.3	1.9
RV Wash A	R1	CS-10.2	0.3	2.3	2.1
RV Wash A	R1	CS-10	0.3	2.3	2.0
RV Wash A	R1	CS-9	0.7	2.3	2.7
RV Wash A	R1	CS-8	0.7	2.3	2.8
RV Wash A	R1	CS-7	0.8	2.3	2.9
RV Wash A	R1	CS-6	1	2.3	3.5
RV Wash A	R1	CS-5	0.9	2.3	3.9
RV Wash A	R1	CS-4	0.6	2.3	2.8
RV Wash A	R1	CS-3	0.5	2.3	2.4
RV Wash A	R1	CS-2	0.5	2.3	2.1
RV Wash A	R1	CS-1	0.3	2.3	1.5
RV Wash A	R1	CS-0.5	0.4	2.3	1.7

Refer to Appendix D for details.

Refer to Appendix A for river - station locations.

CONCLUSION

1. The drainage pattern for this parcel is consistent with the drainage concept defined in the 'Preliminary Drainage Report for Reata Ranch' (Reference 8)

2. The historic offsite flow entering the site will continue to flow through the site via designated open channels dedicated as drainage easements, before it outfalls at

the eastern boundary of the project. This development will not alter the historical drainage pattern.

3. Five detention basins are designed to limit the post development discharge rate lesser than pre development rate for 100-year, 10-yr and 2-yr storm event at the exit of the project site. Storm water flows from events exceeding the 100-year storm will progressively flow through the site and exit along the eastern boundary without flooding the homes.

4. The grading details of the proposed improvements are shown in the grading plans submitted as a part of Preliminary Plat. All homes will be elevated sufficiently (minimum 14 inches from 100-year water surface elevation) to avoid being impacted by the 100-year flows in the channel.

5. All finished floors have been elevated a minimum of 14" above the adjacent low top of curb and the pertinent detention basin outfall elevation.

REFERENCES

1. City of Scottsdale, Design Standards and Policies Manual, January 2010 edition
2. Flood Control District of Maricopa County, ***The Drainage Design Manual for Maricopa County, Arizona, Volume I Hydrology***, February 2007.
3. Department of Agriculture, Soil Conservations Service, ***Soil Survey of Maricopa County, Central Part,*** September 1977
4. Chow, Ven Te, Maidment, David R., Mays, Larry W. ***"Applied Hydrology".*** McGraw-Hill Book Company, 1988.
5. Papadakis, C. N. and Kazan, M. N., ***"Time of Concentration in Small Rural Watersheds,"*** Proceedings of the Engineering Hydrology Symposium, ASCE, Williamsburg, Virginia, pp-633-638.
6. U. S. Army Corps of Engineers Hydraulic Engineering Center. ***"HEC-1 Flood Hydrograph Package User's Manual Version 4.0",*** May 1991
7. Technical Data Notebook, Rio Verde Area Drainage Master Plan, F.C.D. Contract No. 2001C056 dated August 31, 2006", Maricopa County, Arizona, prepared for the Flood Control District of Maricopa County (FCDMC), by Dibble Engineering, dated August 2006
8. "Preliminary Drainage Report for Reata Ranch –Master Planned Development" dated May 2014, prepared by SKG Enterprises, Inc.

9. Map Revision Application for Modified Corrected Effective Floodplain (CLOMR) dated September 2013, by SKG Enterprises, Inc

EXHIBIT 3

POST DEVELOPMENT DRAINAGE MAP

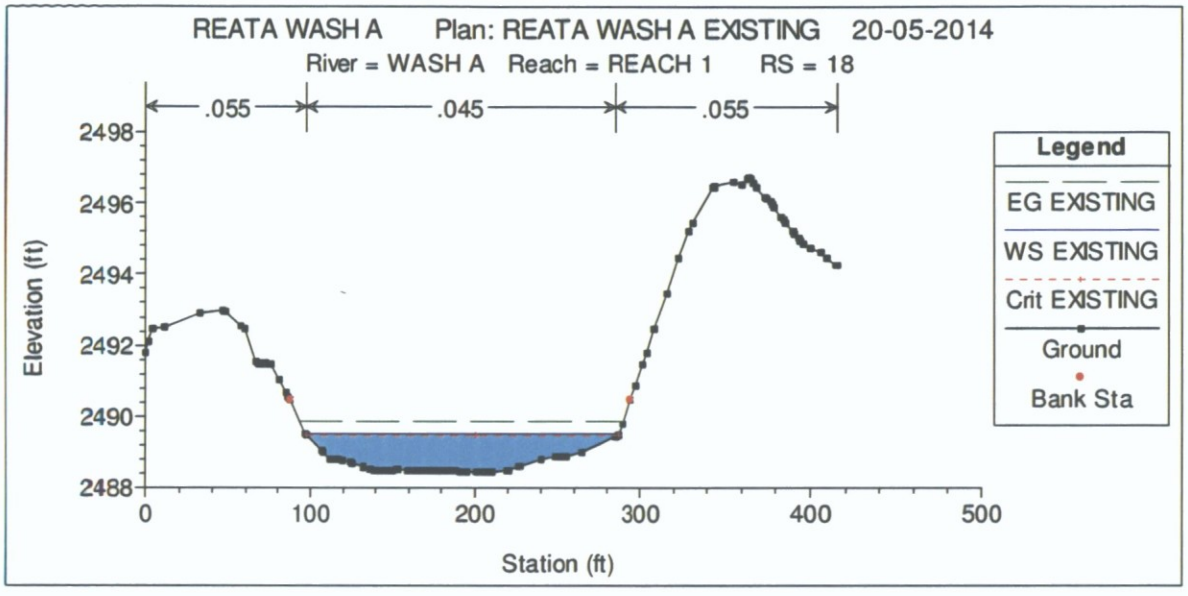
APPENDIX A

HEC-RAS OUTPUT – RV WASH A

HECRAS OUTPUT SUMMARY TABLE OF RV WASH A - REATA RANCH													
Reach	River Sta	Profile	Plan	Q Total	Min Ch El	W.S. Elev	Crit W.S.	Prof Delta WS	Sta W.S. Lft	Sta W.S. Rgt	Vel Chnl	Top Width	Froude # Chl
				(cfs)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/s)	(ft)	
REACH 1	20	EXISTING	EX RV WASH A	721	2492.42	2494.49	2494.36		8.64	137.54	5.11	128.9	0.84
REACH 1	20	ENCROACHED	RV WASH A	721	2492.42	2494.48	2494.37	-0.01	8.64	137.47	5.4	128.83	0.84
REACH 1	19	EXISTING	EX RV WASH A	721	2489.42	2491.08			119.13	290.51	3.64	171.38	0.6
REACH 1	19	ENCROACHED	RV WASH A	721	2489	2491.15		0.07	117.77	229.27	4.28	111.5	0.61
REACH 1	18	EXISTING	EX RV WASH A	721	2488.43	2489.5	2489.47		96.68	286.78	4.81	190.1	0.95
REACH 1	18	ENCROACHED	RV WASH A	721	2488.43	2489.5	2489.5	0	96.63	243.9	5.47	147.27	1.02
REACH 1	17	EXISTING	EX RV WASH A	721	2486.46	2487.92			61.82	264.92	3.9	203.1	0.71
REACH 1	17	ENCROACHED	RV WASH A	721	2485.27	2486.84		-1.08	102.38	240.01	3.92	137.63	0.6
REACH 1	16	EXISTING	EX RV WASH A	721	2485.27	2486.52			104.36	294.98	3.88	190.62	0.69
REACH 1	16	ENCROACHED	RV WASH A	721	2483.46	2486.37		-0.15	179.37	268.26	3.34	88.89	0.38
REACH 1	15	EXISTING	EX RV WASH A	721	2483.45	2484.9			156.03	308.53	4.69	152.5	0.77
REACH 1	15	ENCROACHED	RV WASH A	721	2483.46	2485.07	2485.07	0.17	183.55	261.18	6.71	77.64	1
REACH 1	14	EXISTING	EX RV WASH A	721	2481.91	2483.73			78	306.47	3.56	211.73	0.61
REACH 1	14	ENCROACHED	RV WASH A	721	2481.91	2484.13		0.4	174.29	286.81	3.61	112.51	0.48
REACH 1	13	EXISTING	EX RV WASH A	721	2480.46	2481.96	2481.96		107.47	309.22	4.92	201.75	1.01
REACH 1	13	ENCROACHED	RV WASH A	721	2481	2483.35		1.39	126.57	228.84	4.06	102.27	0.54
REACH 1	12	EXISTING	EX RV WASH A	721	2477.61	2479.78			76.99	318.9	3.74	222.56	0.56
REACH 1	12	ENCROACHED	RV WASH A	721	2479.28	2481.57		1.79	90.92	154.05	5.95	63.14	0.76
REACH 1	11	EXISTING	EX RV WASH A	721	2476.85	2478.53	2478.53		75.59	313.83	4.95	199.04	1.02
REACH 1	11	ENCROACHED	RV WASH A	721	2476.88	2479.62	2479.62	1.09	121.5	217.22	6.19	95.72	0.99
REACH 1	10.8	EXISTING	RV WASH A	721	2475.45	2479.2	2477.75		23.83	212.29	4.06	188.46	0.4
REACH 1	10.8	ENCROACHED	RV WASH A	721	2475.45	2479.2	2477.75	0	23.83	212.29	4.06	188.46	0.4
REACH 1	10.5			Culvert									
REACH 1	10.2	EXISTING	RV WASH A	721	2475.32	2477.64	2477.62		43.6	206.56	7.28	162.96	0.97
REACH 1	10.2	ENCROACHED	RV WASH A	721	2475.32	2477.64	2477.62	0	43.6	206.56	7.28	162.96	0.97
REACH 1	10	EXISTING	EX RV WASH A	721	2474.41	2476.3			60.23	325.43	3.22	210.84	0.55
REACH 1	10	ENCROACHED	RV WASH A	721	2474.41	2476.49	2476.47	0.19	57.96	288.51	6.67	180.22	0.97
REACH 1	9	EXISTING	EX RV WASH A	721	2472.39	2474.69	2474.57		156.88	300.7	5.2	143.82	0.84
REACH 1	9	ENCROACHED	RV WASH A	721	2472.39	2474.84		0.15	171.48	284.18	4.73	112.7	0.72
REACH 1	8	EXISTING	EX RV WASH A	721	2471.17	2472.96			89.7	295.01	3.94	205.3	0.73
REACH 1	8	ENCROACHED	RV WASH A	721	2471.17	2473.24	2472.94	0.28	168.22	275.99	4.78	107.77	0.71
REACH 1	7	EXISTING	EX RV WASH A	721	2468.46	2470.76	2470.62		119.78	315.62	4.24	195.83	0.79
REACH 1	7	ENCROACHED	RV WASH A	721	2468.46	2471.34		0.58	195.76	296.25	4.56	100.48	0.64
REACH 1	6	EXISTING	EX RV WASH A	721	2467.23	2468.96			137.48	309.72	4.31	172.24	0.77
REACH 1	6	ENCROACHED	RV WASH A	721	2467.23	2469.72		0.76	206.77	281.55	5.01	74.78	0.64
REACH 1	5	EXISTING	EX RV WASH A	721	2466.36	2468.07			152.89	304.74	3.94	151.85	0.63
REACH 1	5	ENCROACHED	RV WASH A	721	2466.36	2468.5		0.43	204.1	269.53	6.11	65.44	0.8
REACH 1	4	EXISTING	EX RV WASH A	721	2464.98	2466.89	2466.71		99.35	275.13	4.71	175.78	0.71
REACH 1	4	ENCROACHED	RV WASH A	721	2464.98	2466.99	2466.75	0.1	142.27	250.64	5.79	108.36	0.81
REACH 1	3	EXISTING	EX RV WASH A	721	2462.27	2463.97	2463.97		113.72	329.26	4.79	215.54	1
REACH 1	3	ENCROACHED	RV WASH A	721	2462.27	2464.08	2464.02	0.11	190.67	323.22	5.43	132.55	0.96
REACH 1	2	EXISTING	EX RV WASH A	721	2459.46	2462.27	2461.58		73.08	305.9	3.09	230.94	0.41
REACH 1	2	ENCROACHED	RV WASH A	721	2459.46	2462.32		0.05	144	310.19	4.78	166.19	0.62
REACH 1	1	EXISTING	EX RV WASH A	721	2459.4	2461.15	2461.15		147.11	312.61	5.84	165.5	0.87
REACH 1	1	ENCROACHED	RV WASH A	667	2459.4	2462.03	2461.07	0.88	116.63	368.83	4.08	252.2	0.46
REACH 1	0.75			Culvert									
REACH 1	0.5	EXISTING	RV WASH A	667	2457.35	2460.1	2459.3		60.51	259.46	4.5	198.95	0.53
REACH 1	0.5	ENCROACHED	RV WASH A	667	2457.35	2460.1	2459.3	0	60.51	259.46	4.5	198.95	0.53

RV WASH A – EXISTING CROSS SECTION

River Sta: 18



RV WASH A – ENCROACHED CROSS SECTION

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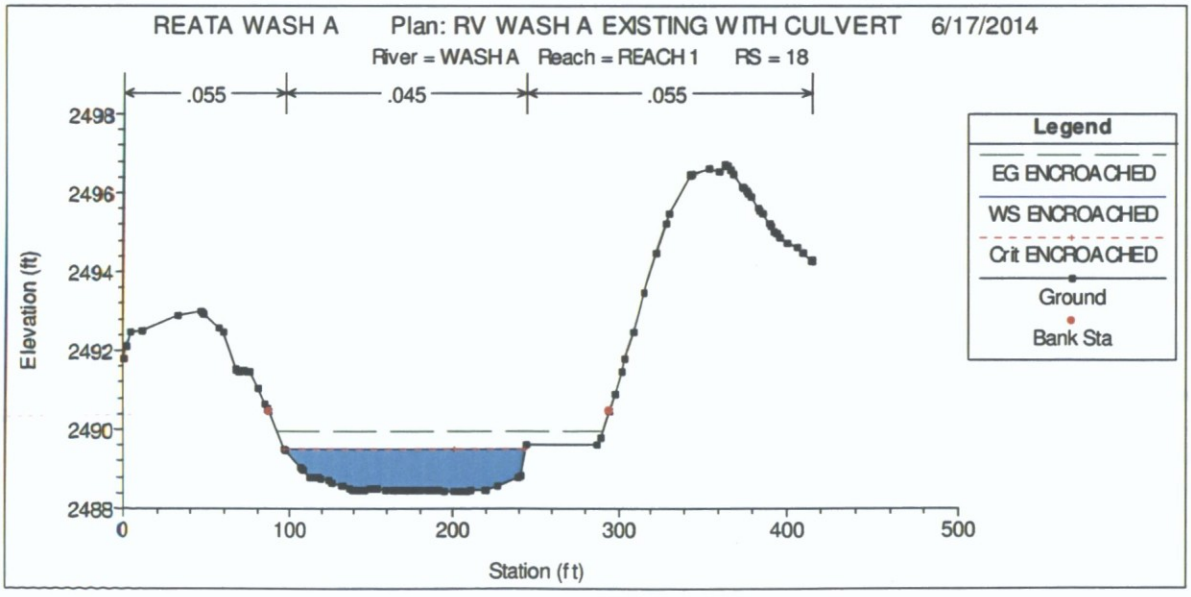

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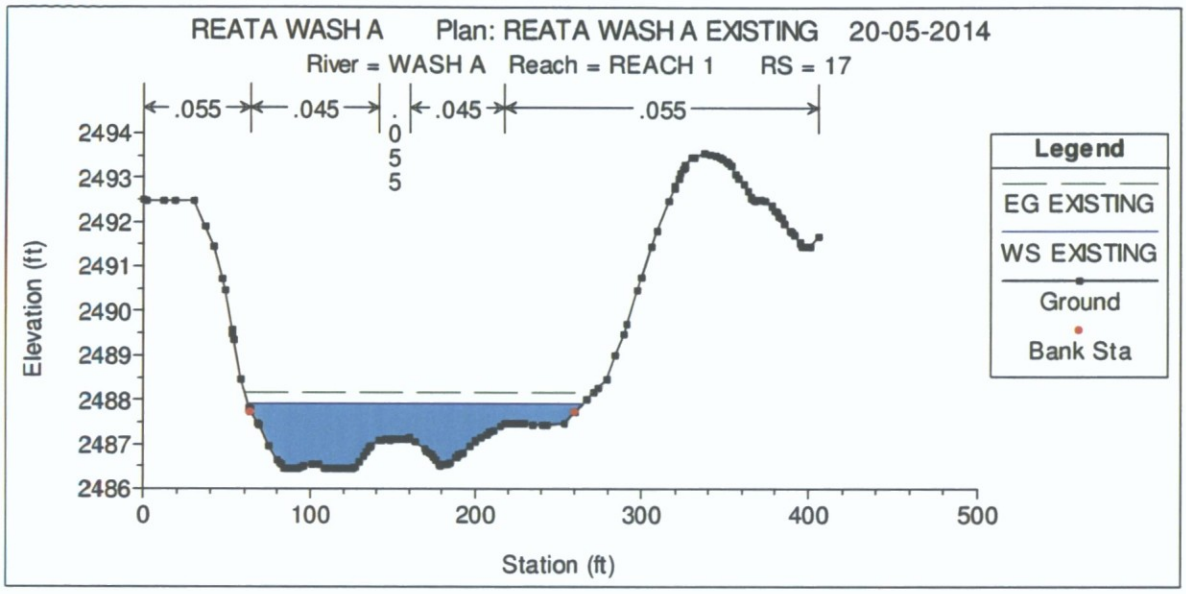

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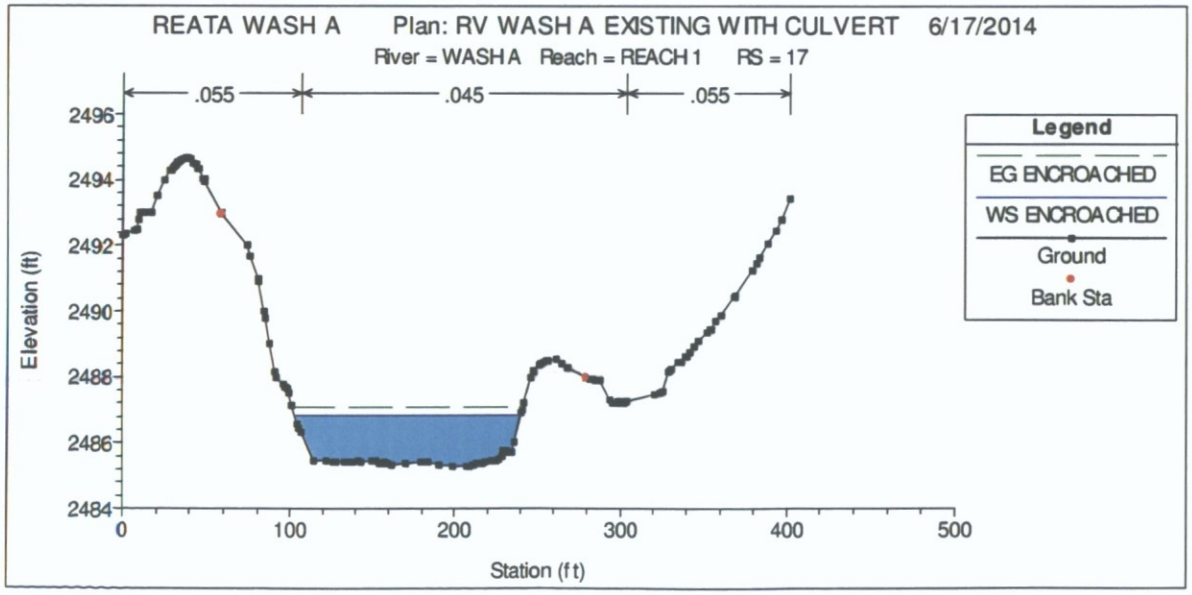

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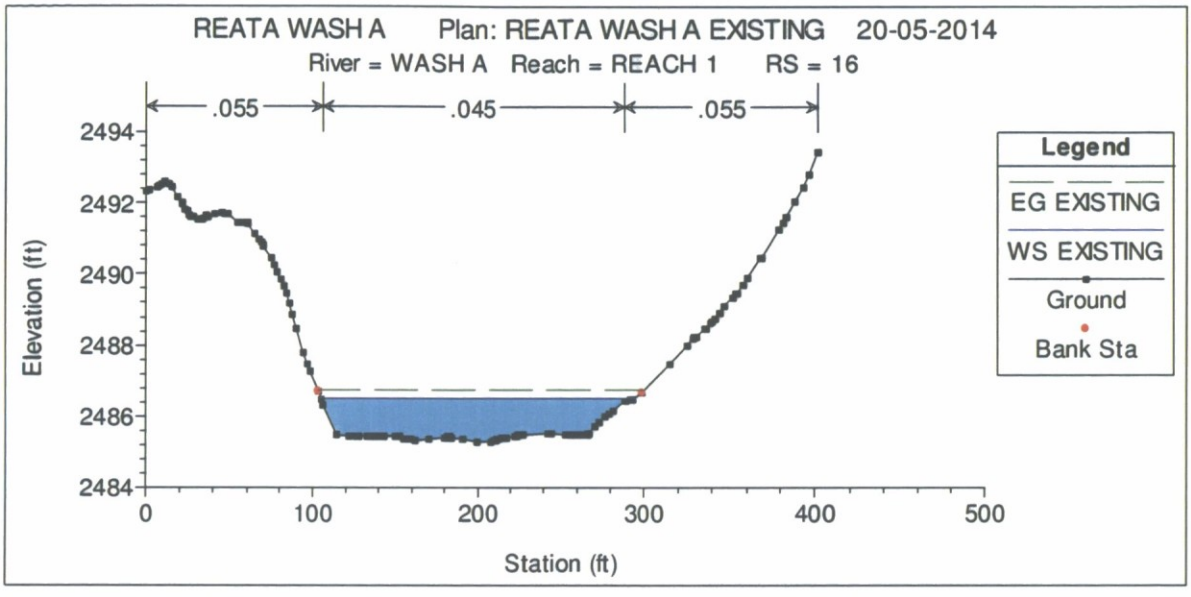

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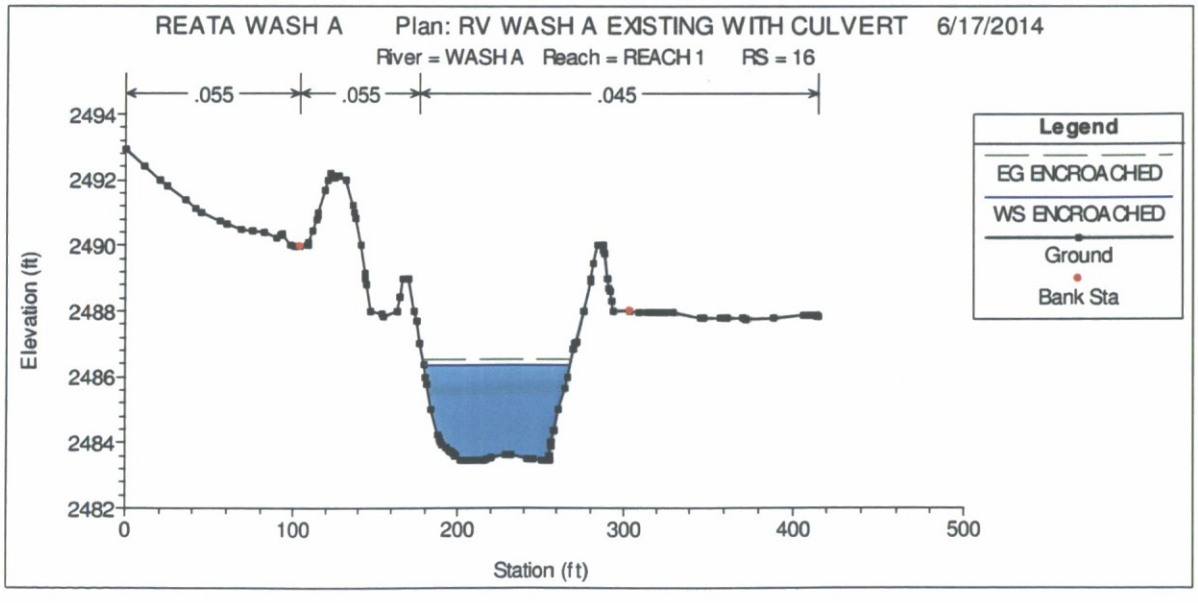

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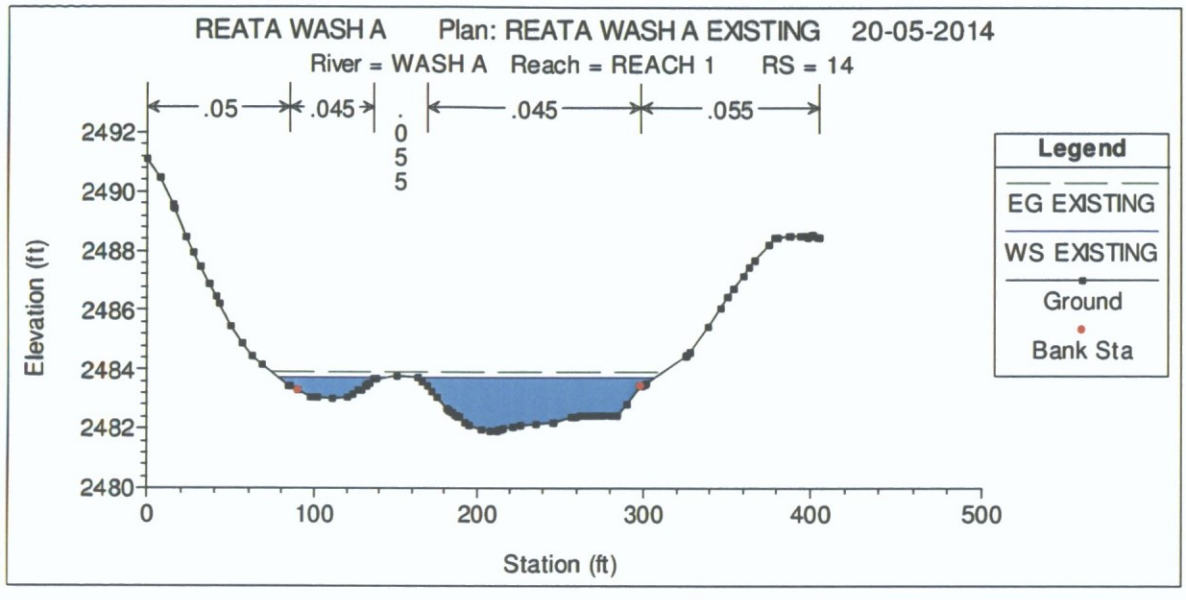

RV WASH A – ENCROACHED CROSS SECTION

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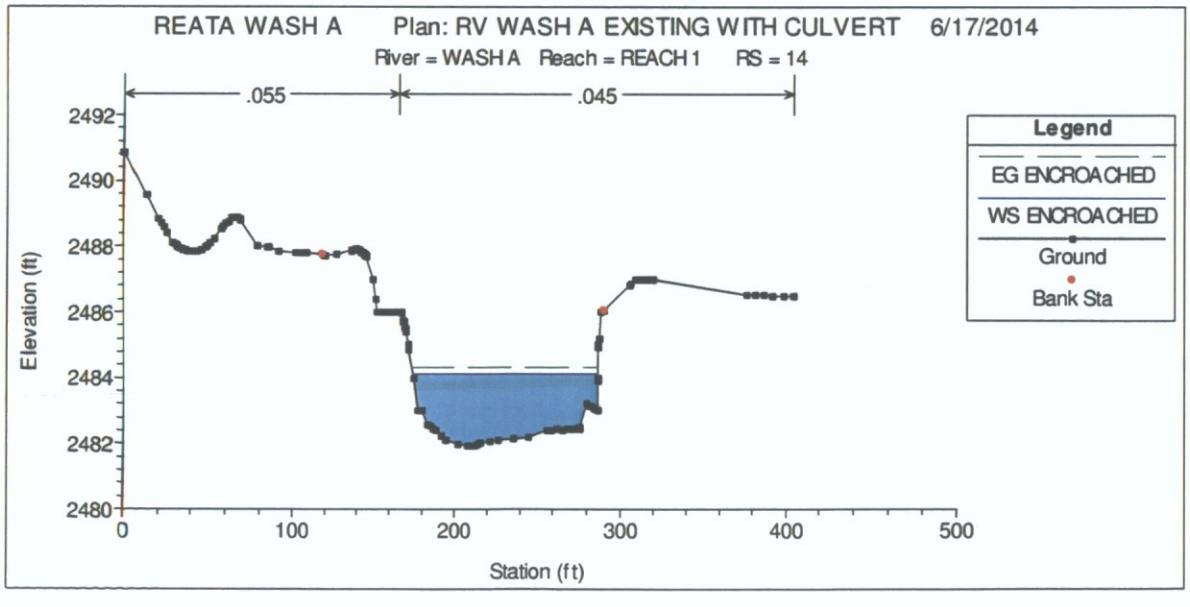

RV WASH A – EXISTING CROSS SECTION

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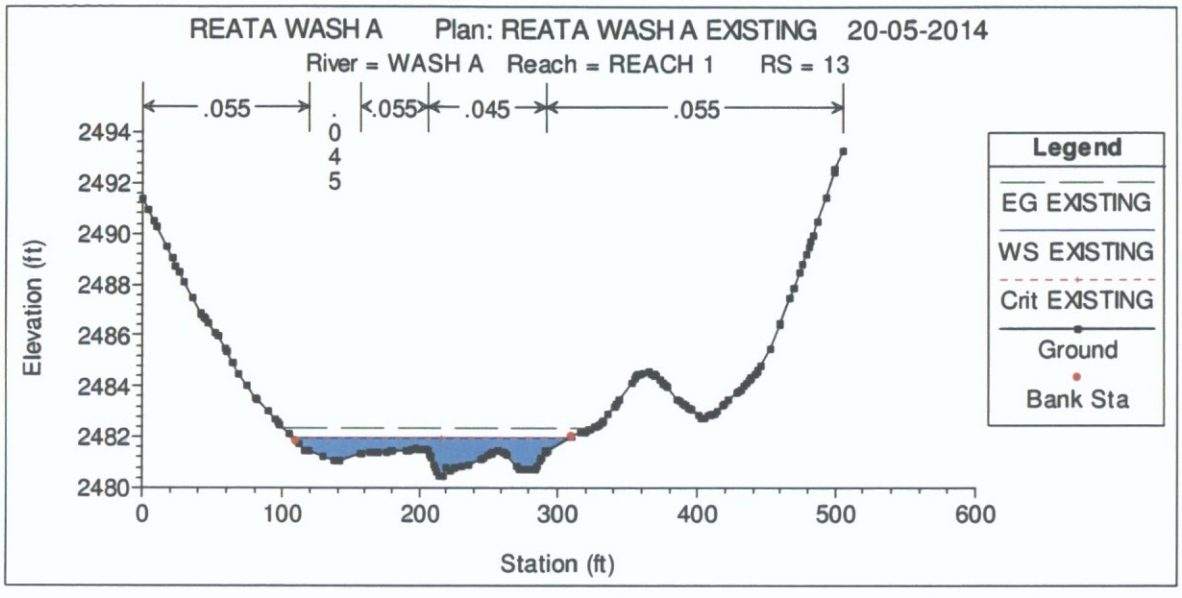

RV WASH A – ENCROACHED CROSS SECTION

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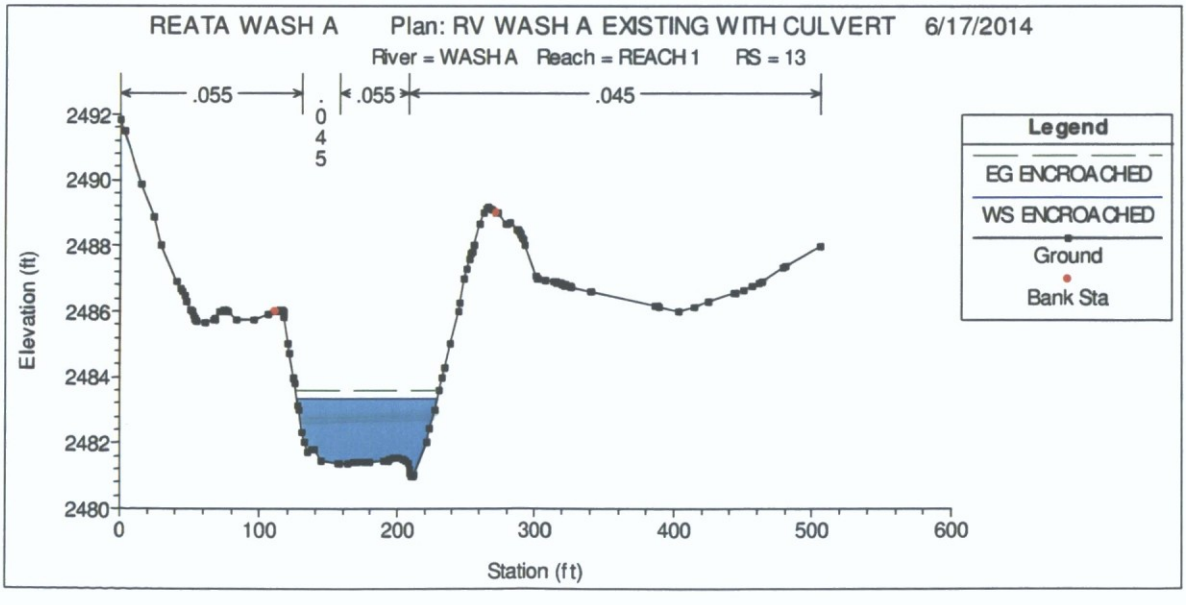

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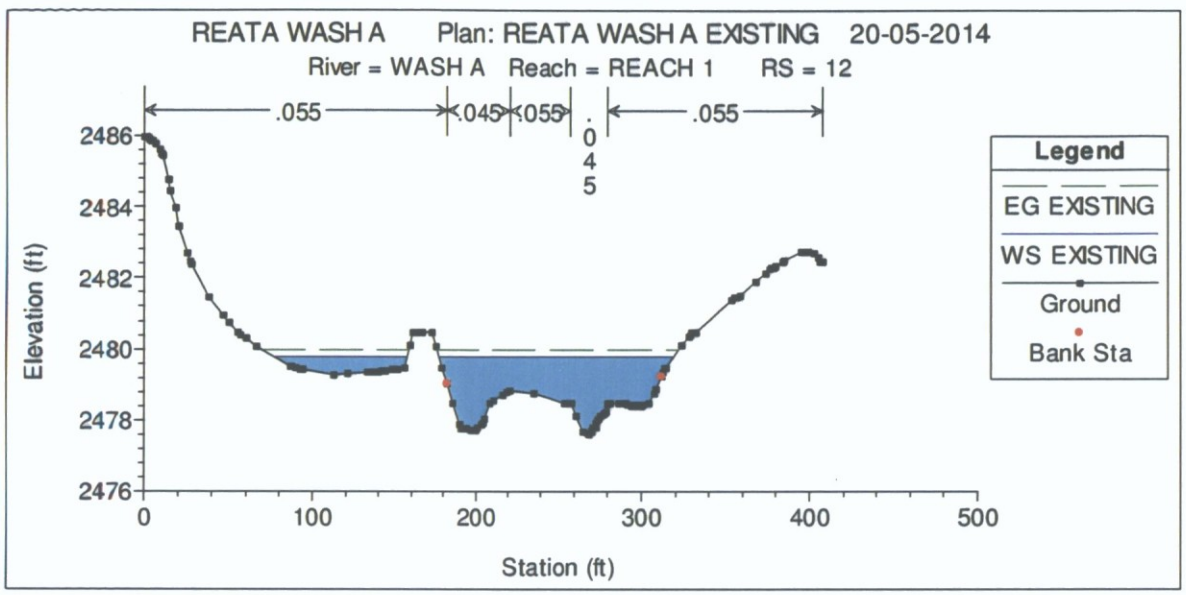

RV WASH A – ENCROACHED CROSS SECTION

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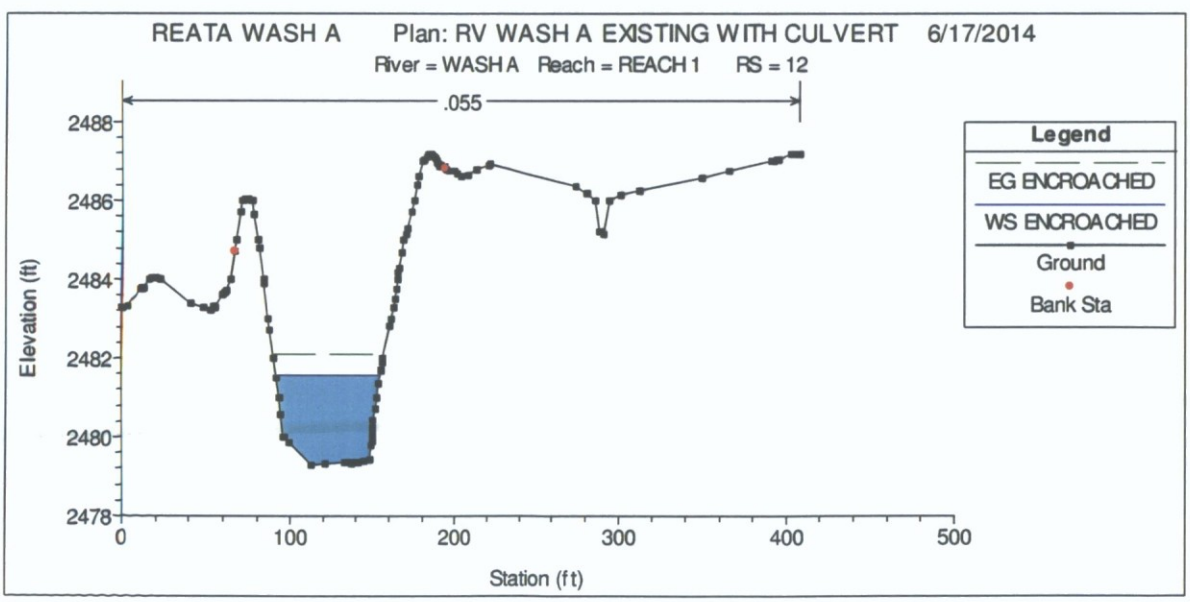

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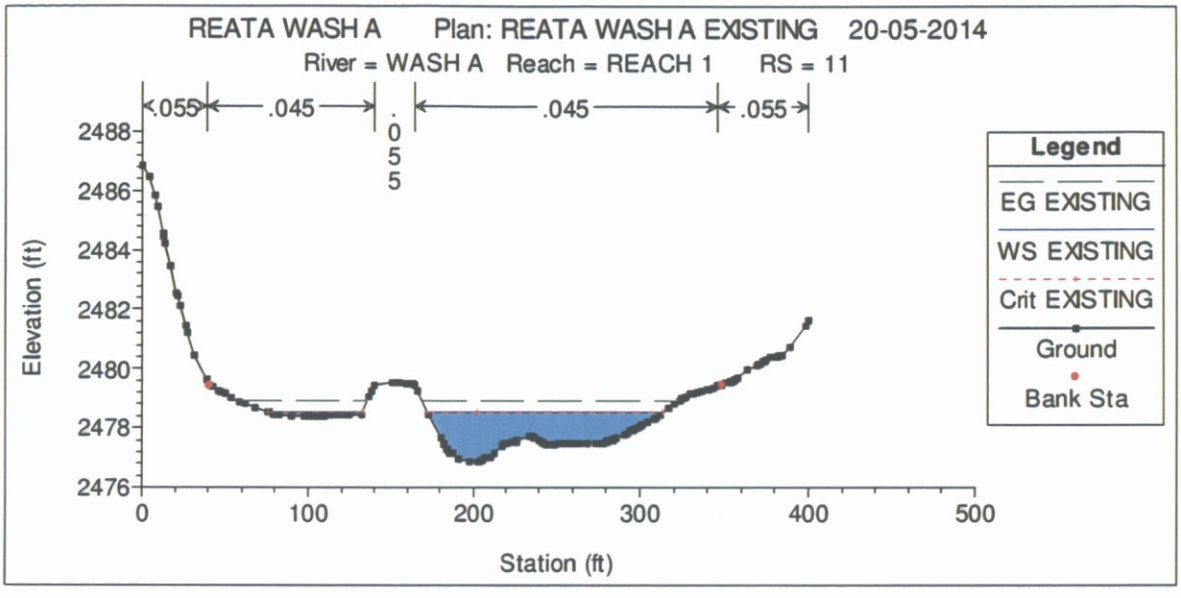

RV WASH A – ENCROACHED CROSS SECTION

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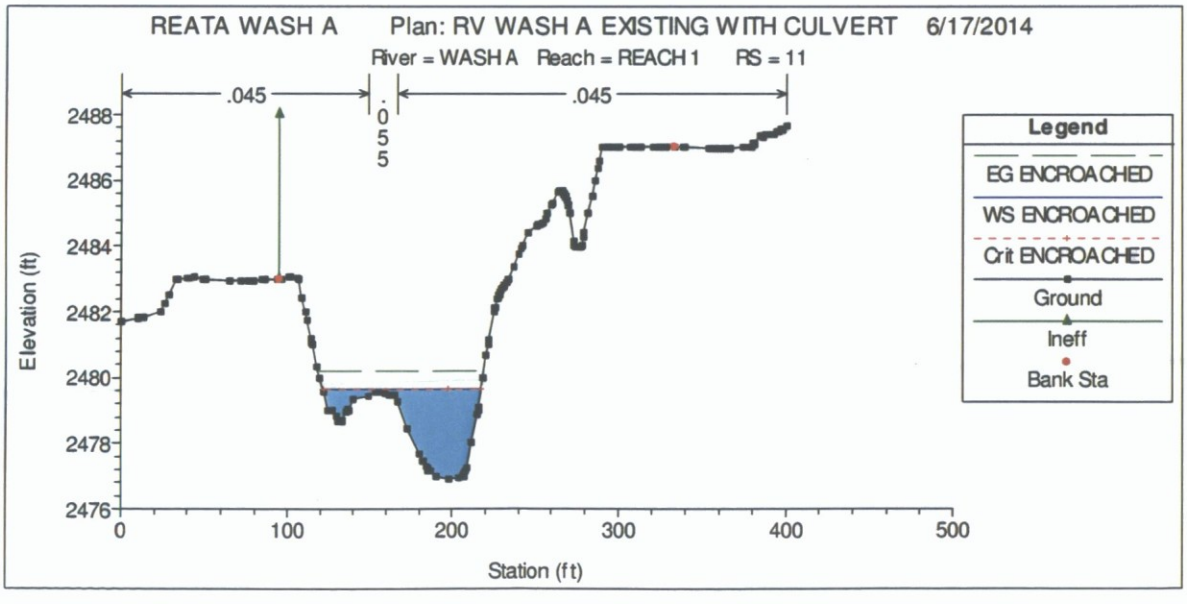

RV WASH A – ENCROACHED CROSS SECTION

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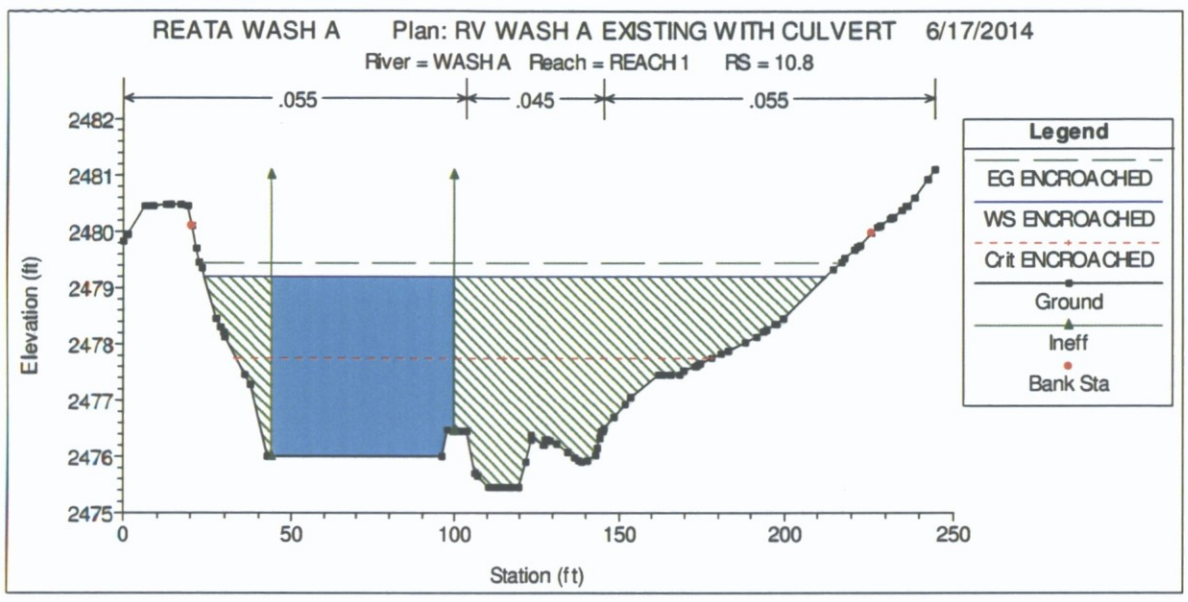
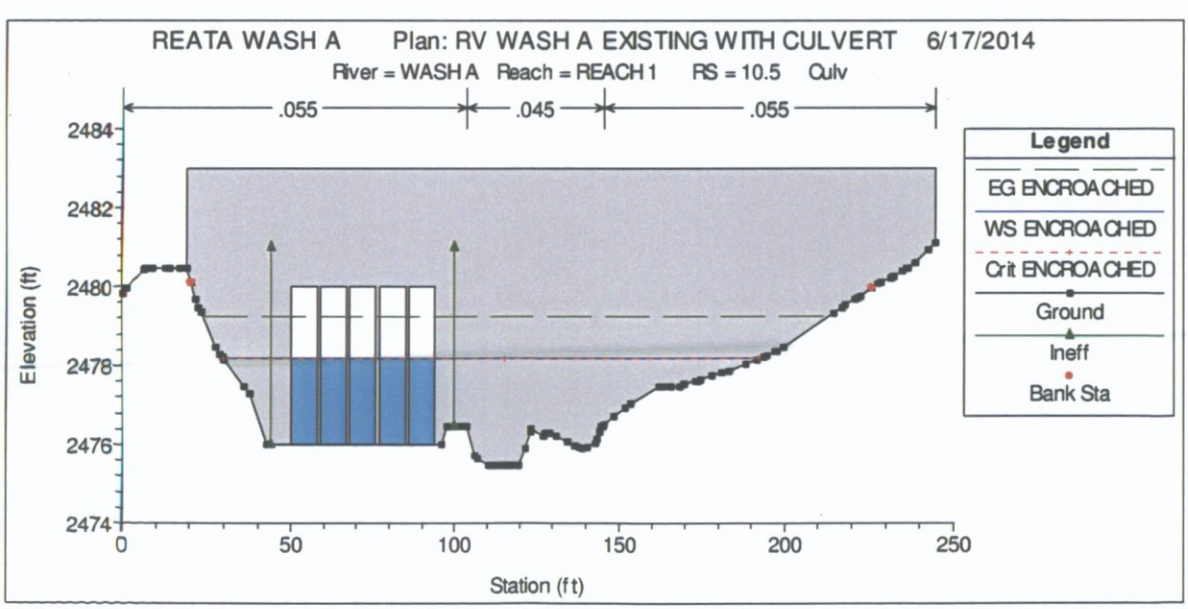


RV WASH A – ENCROACHED CROSS SECTION

River Sta: 10.5 CULV U



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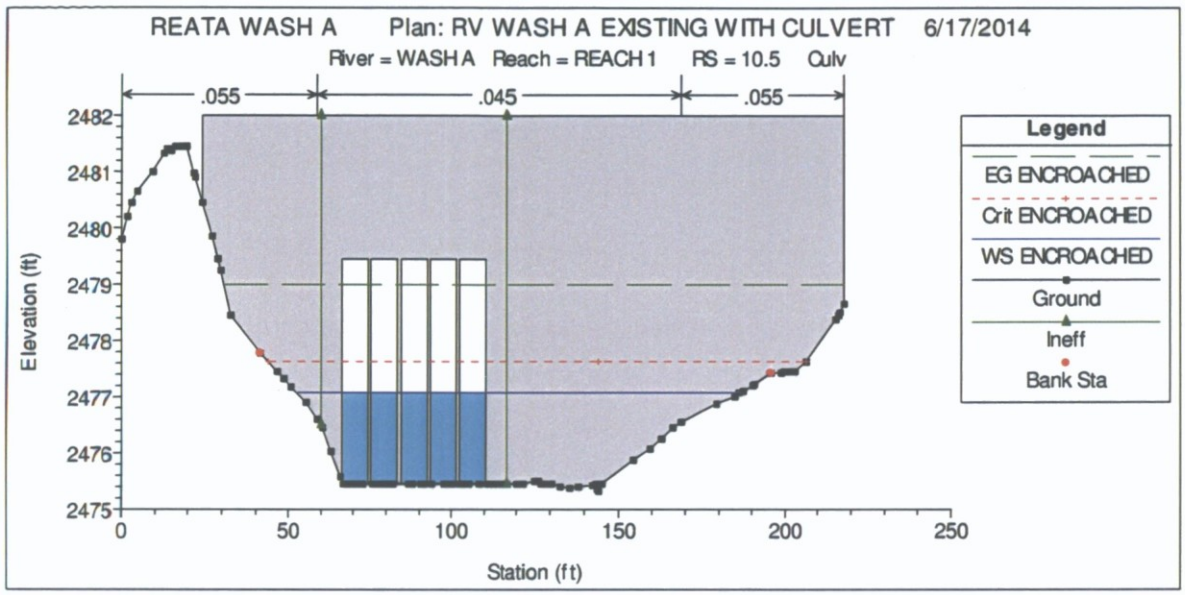

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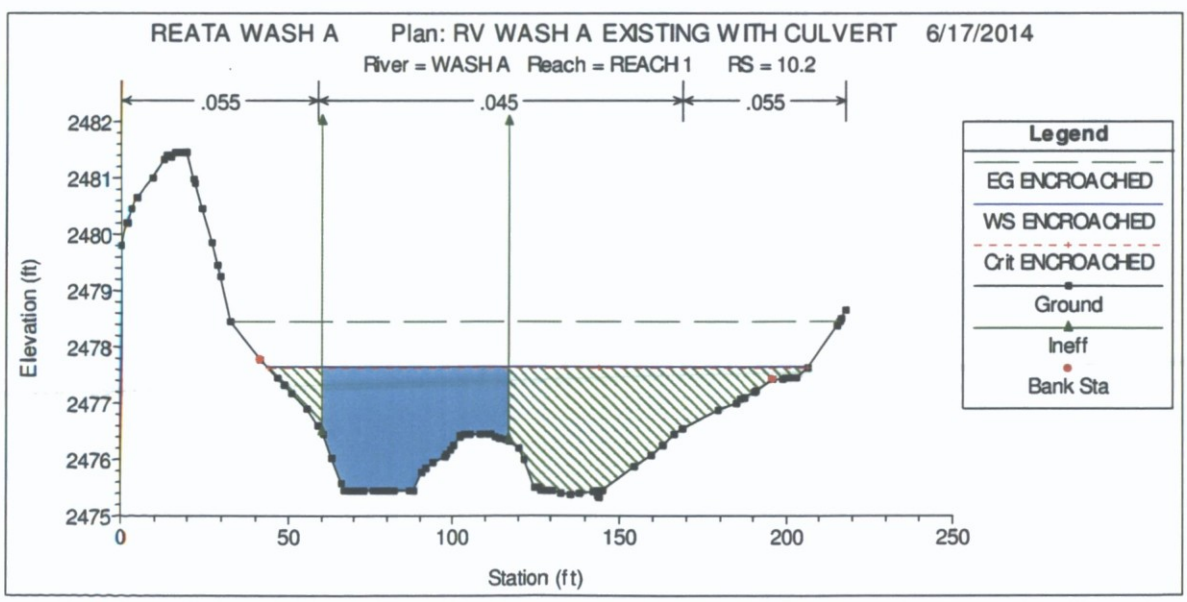

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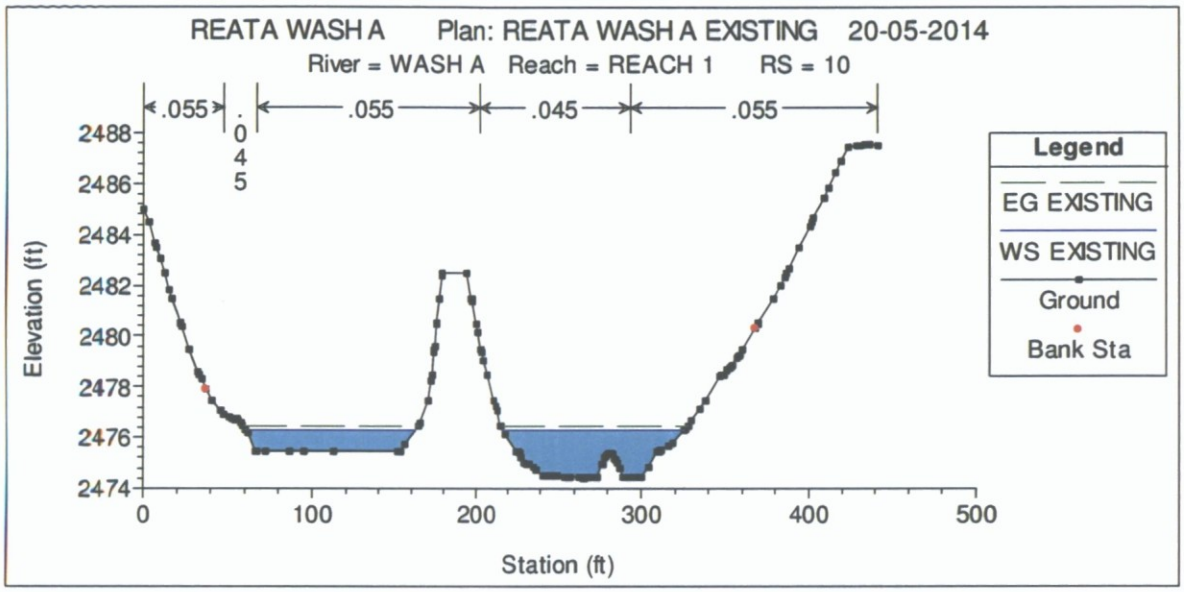

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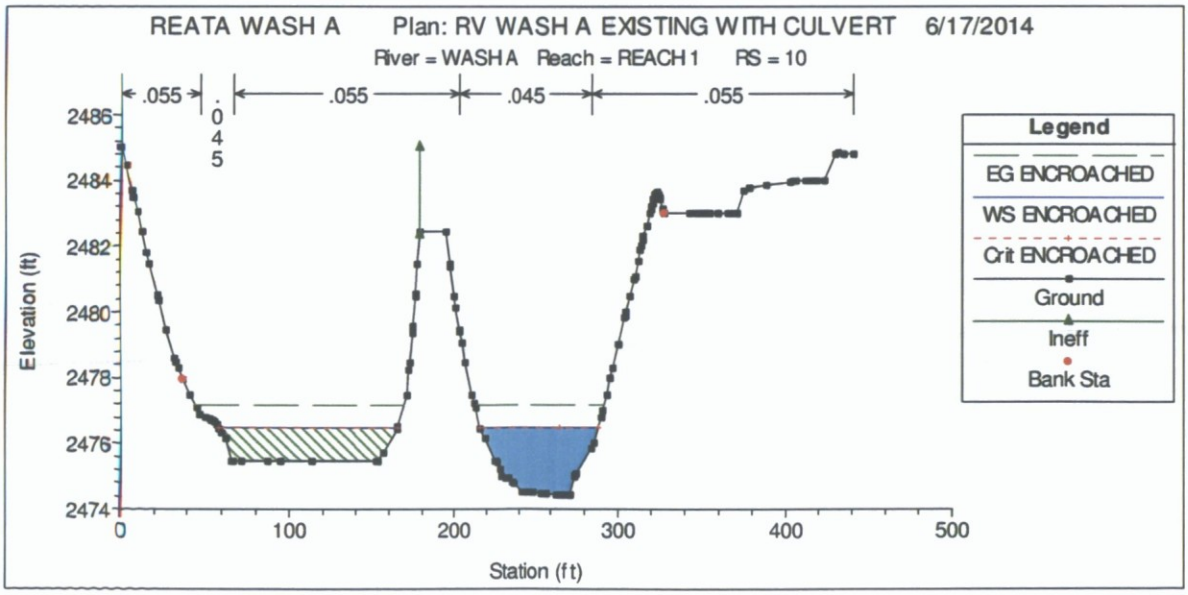

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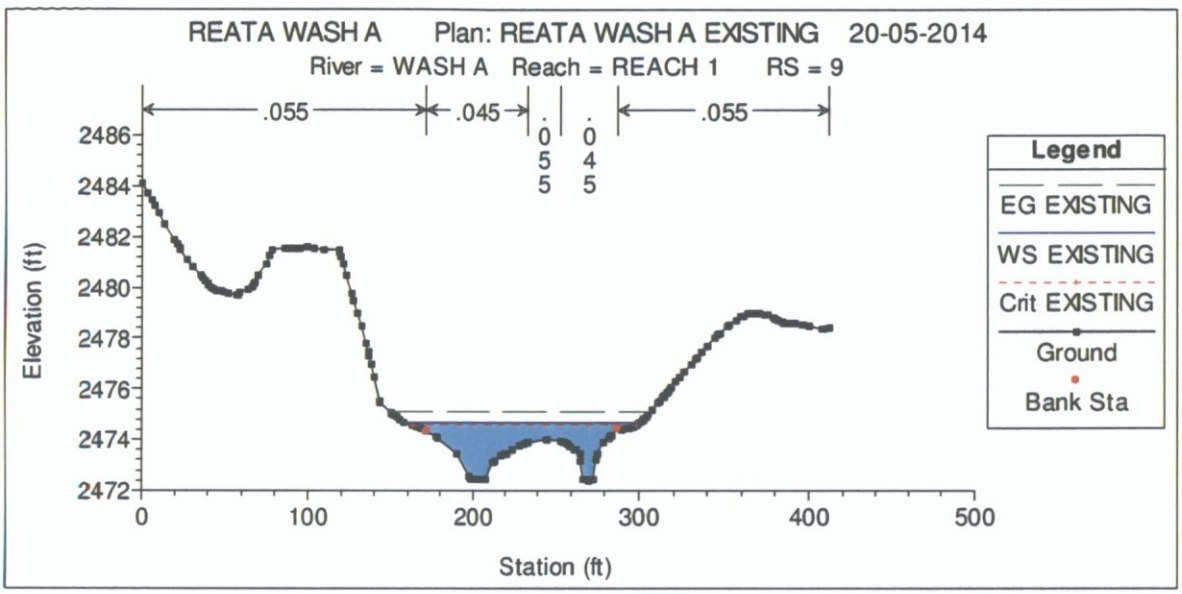

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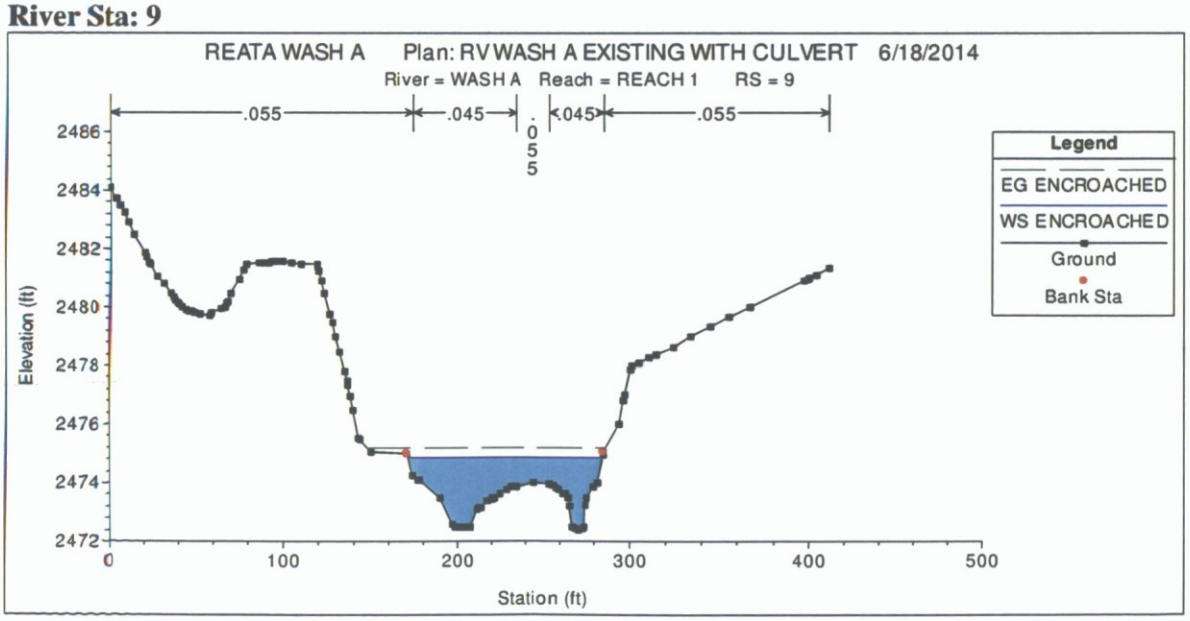

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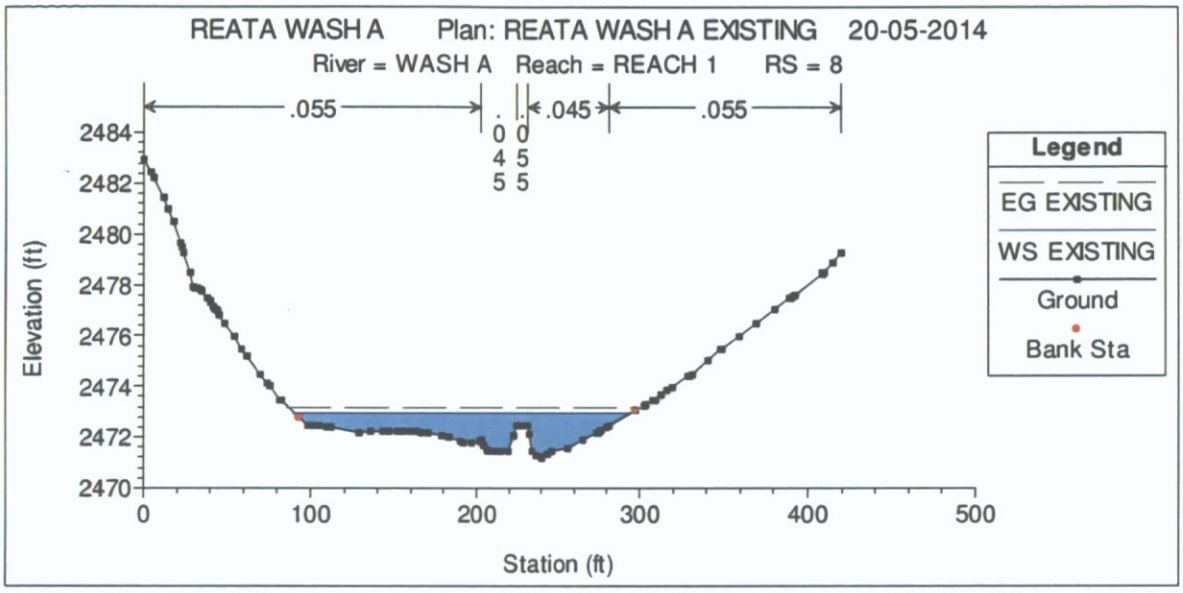

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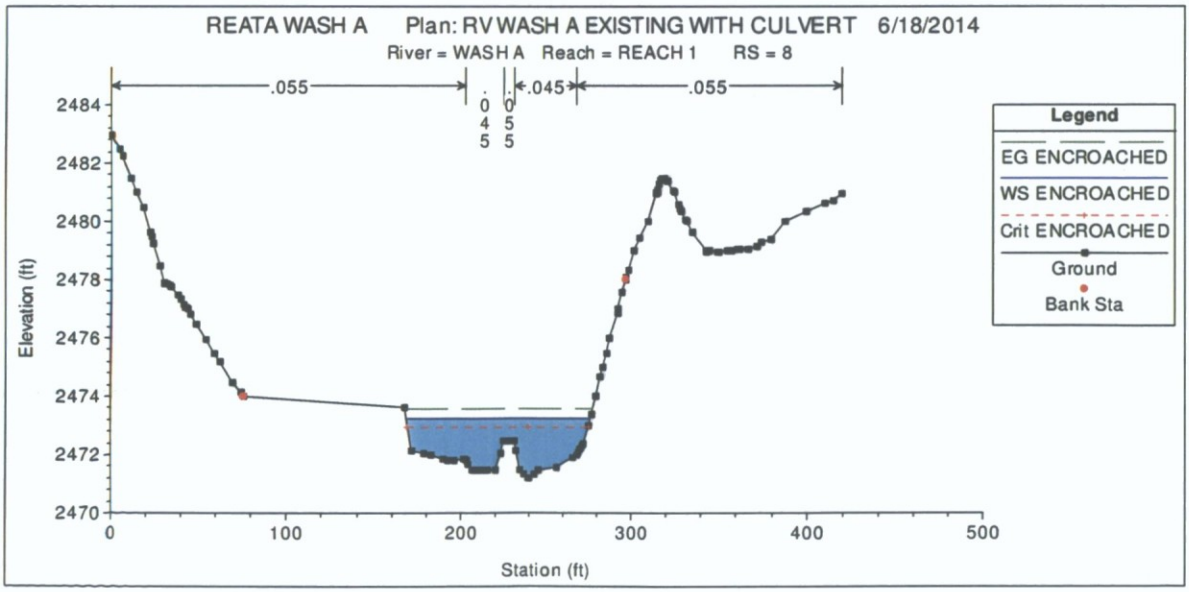

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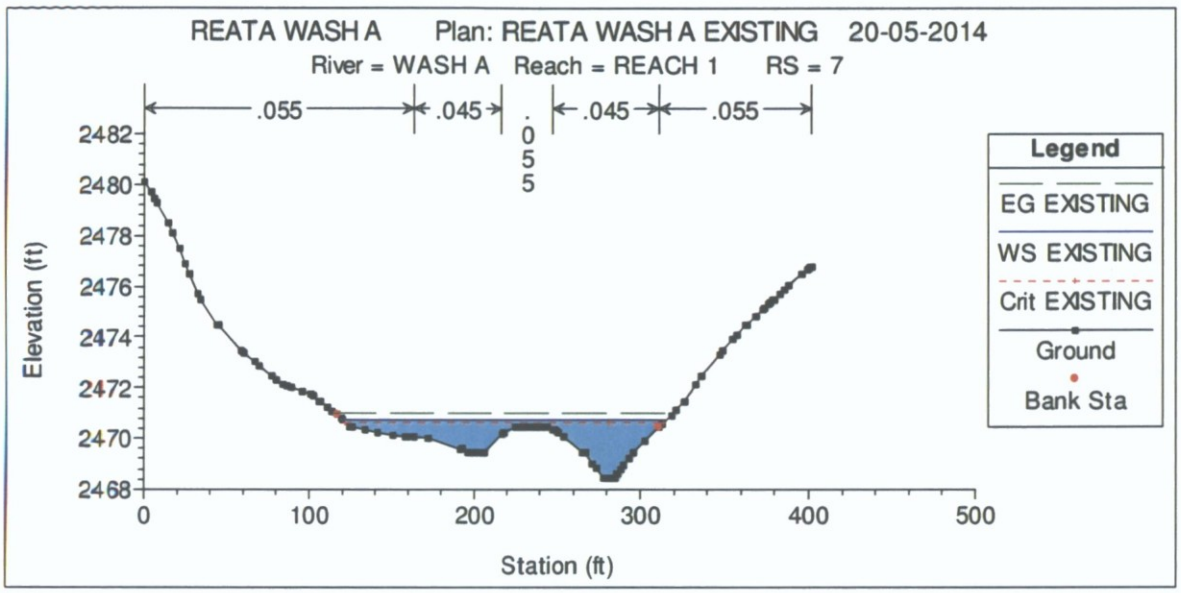

RV WASH A – ENCROACHED CROSS SECTION

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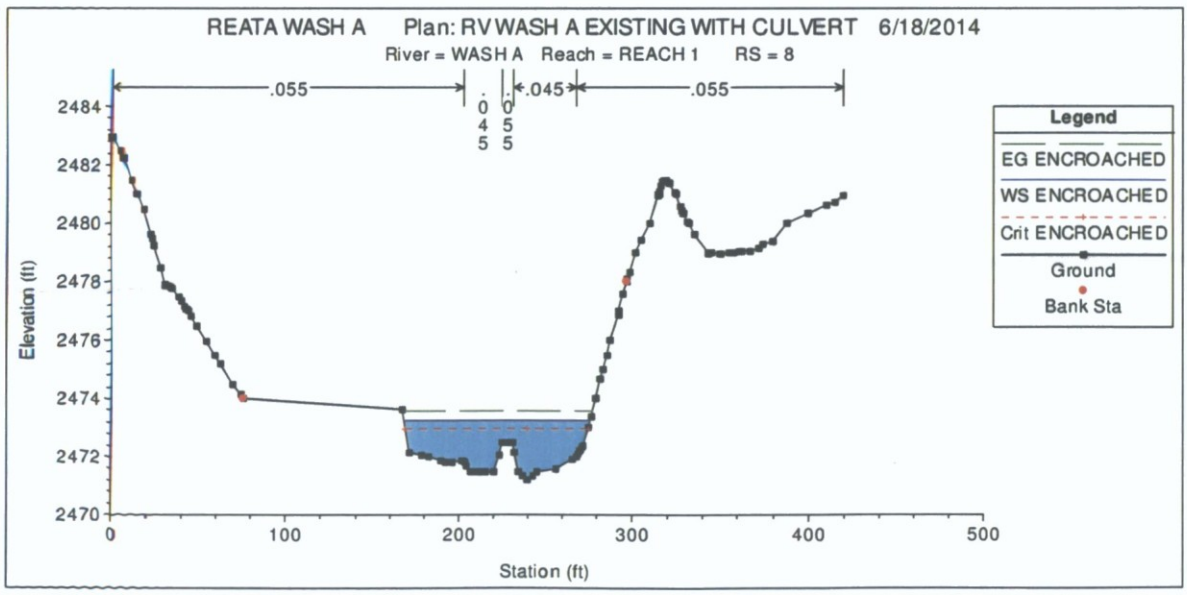

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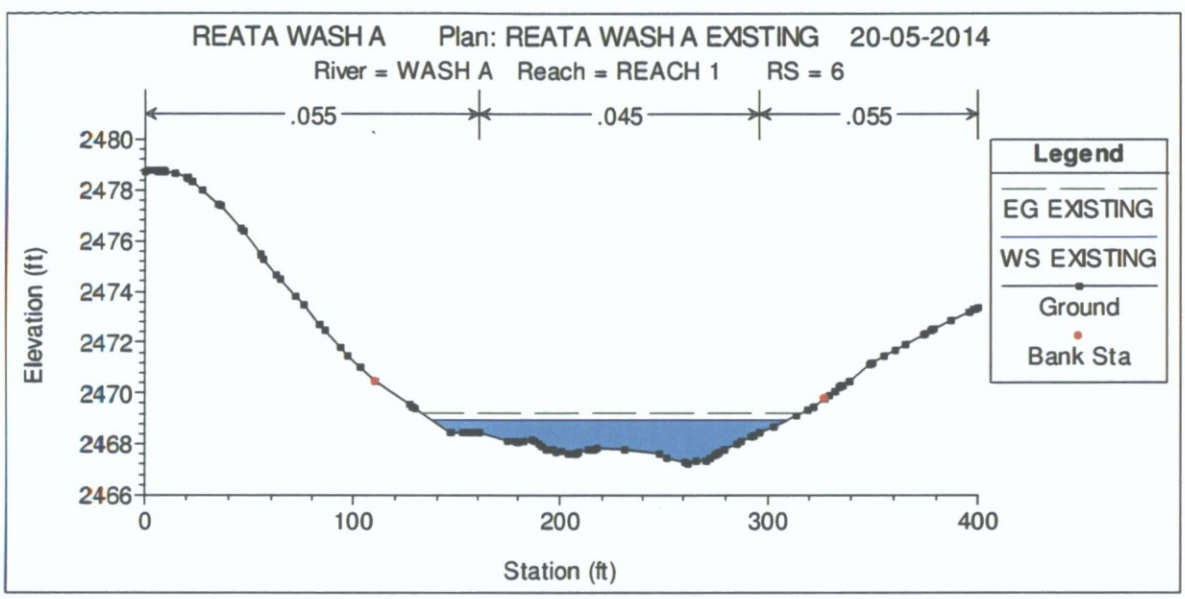

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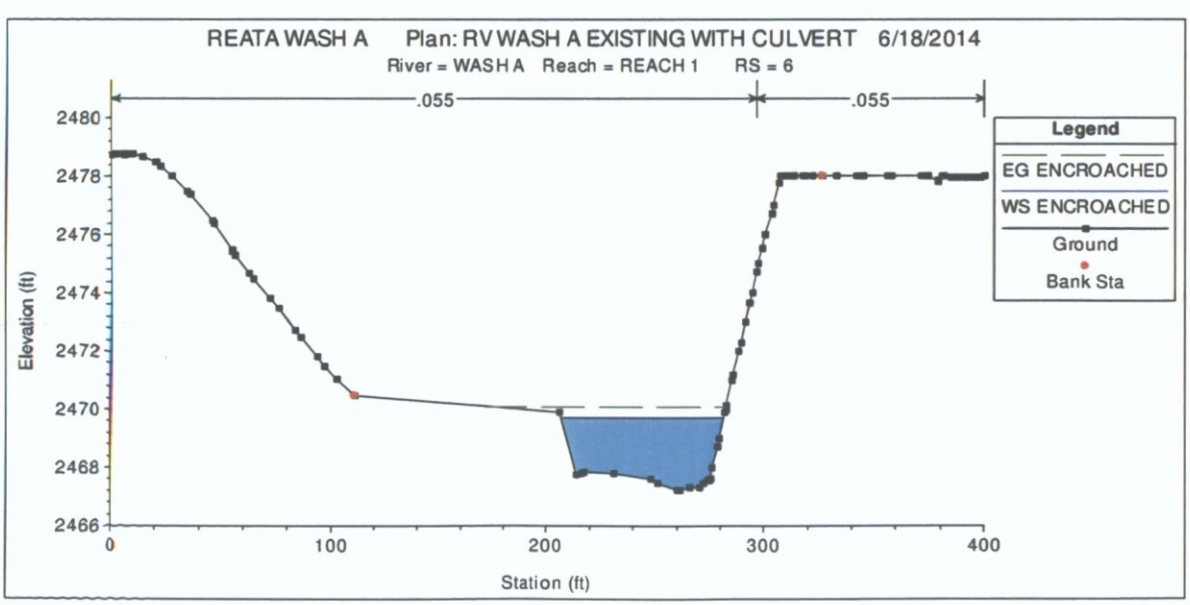

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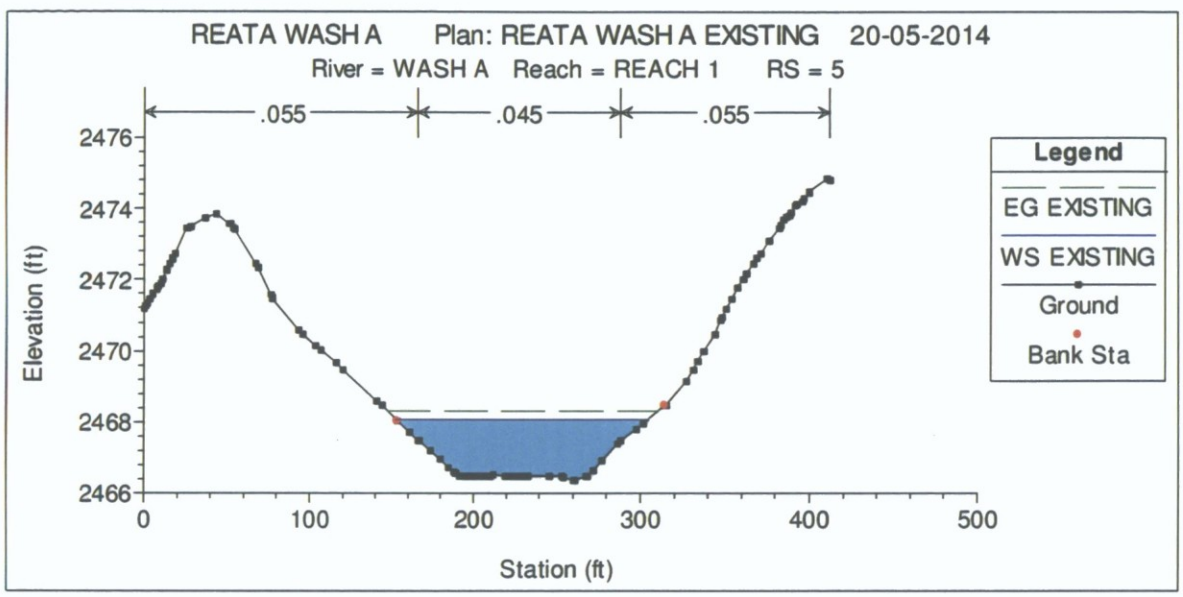

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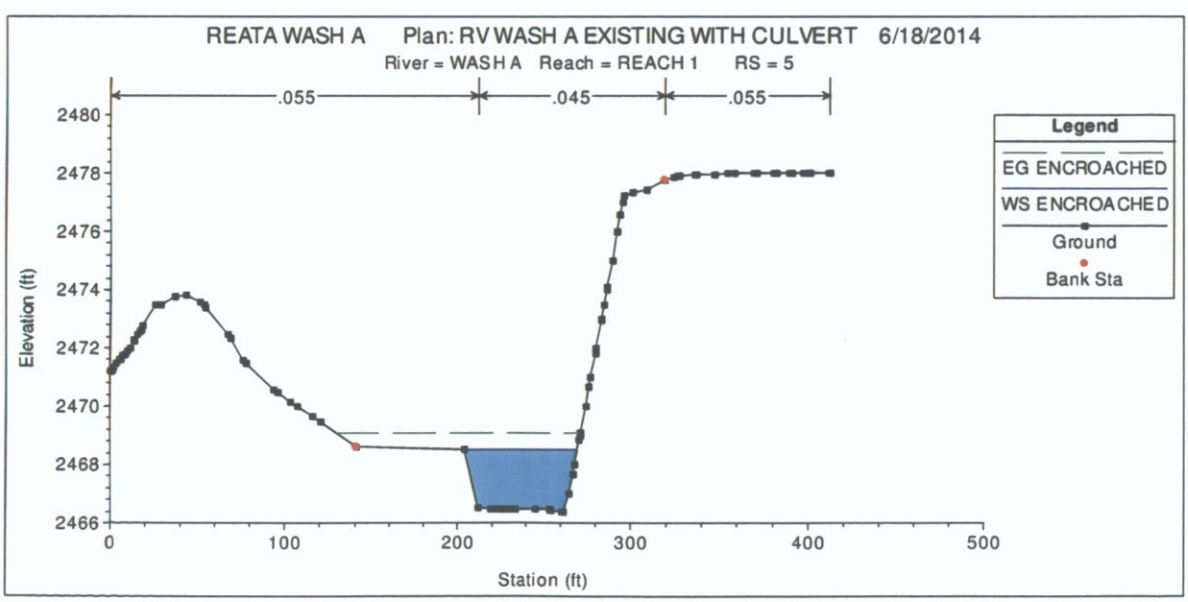

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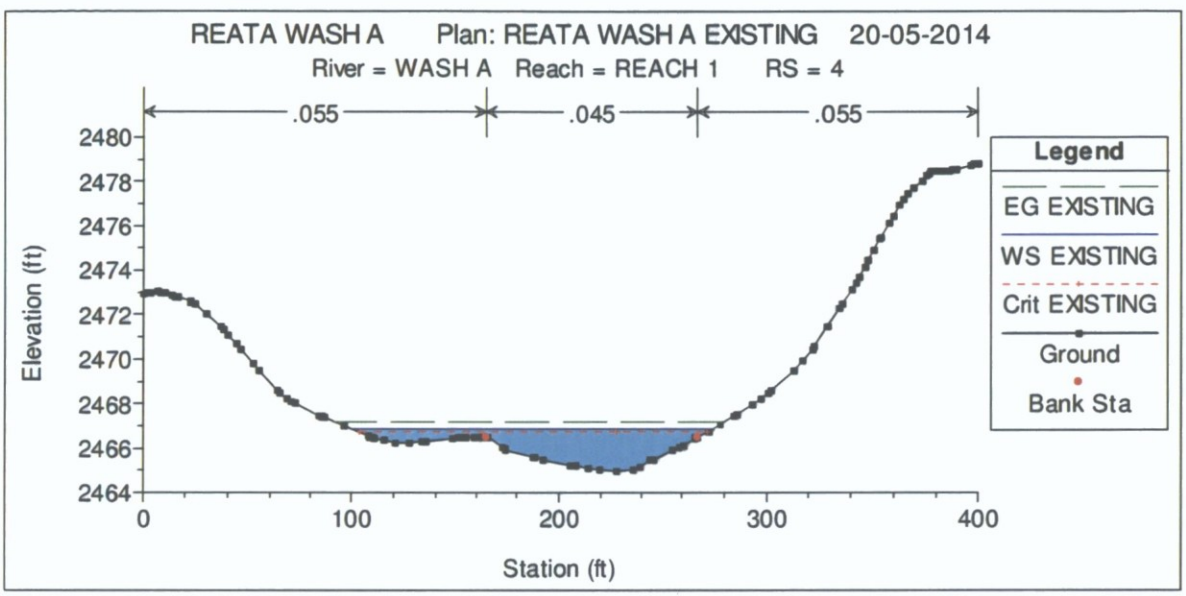

RV WASH A – ENCROACHED CROSS SECTION

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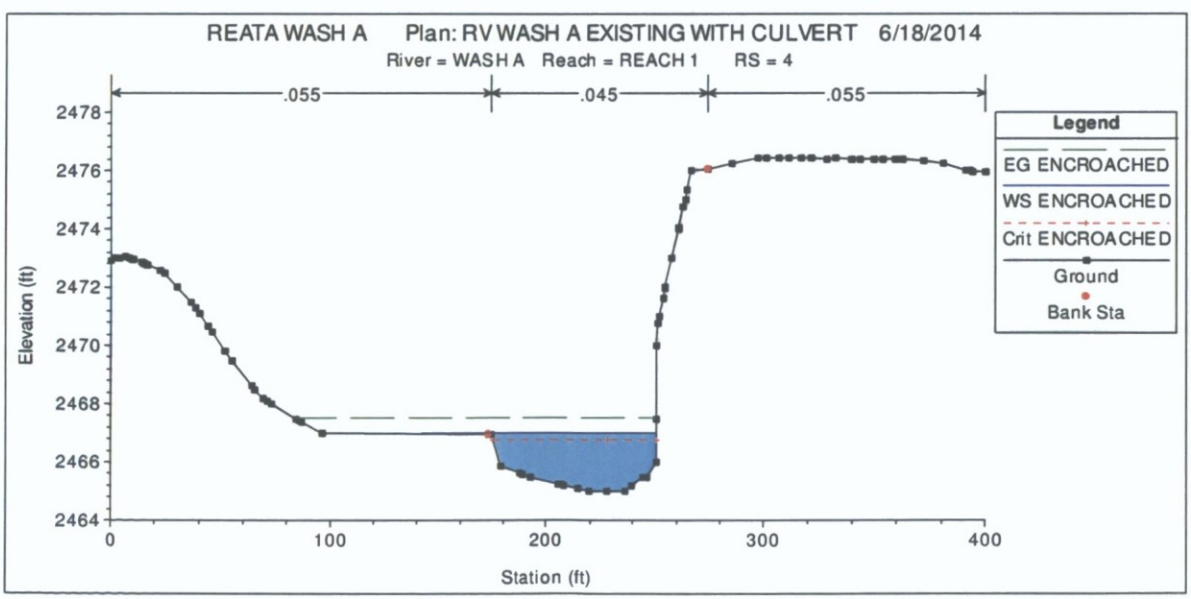

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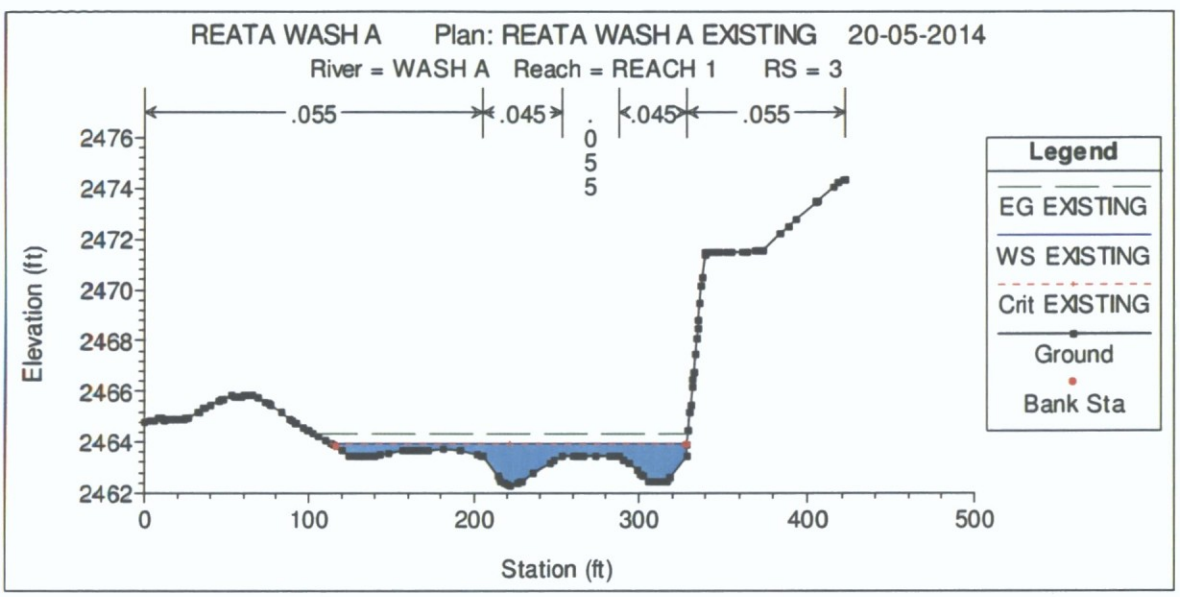

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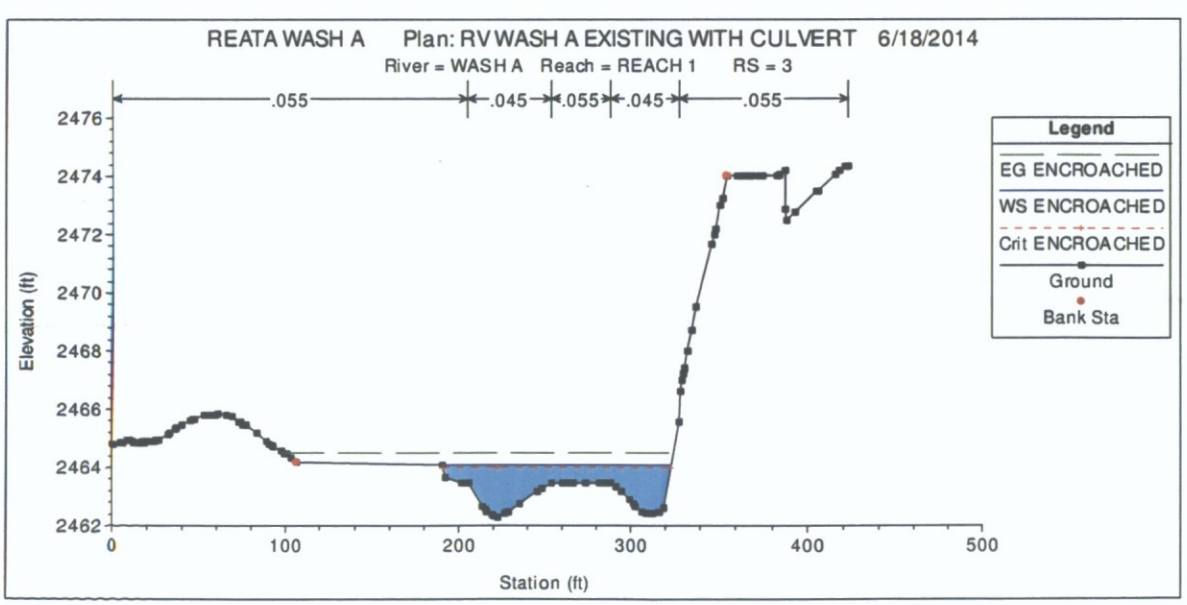

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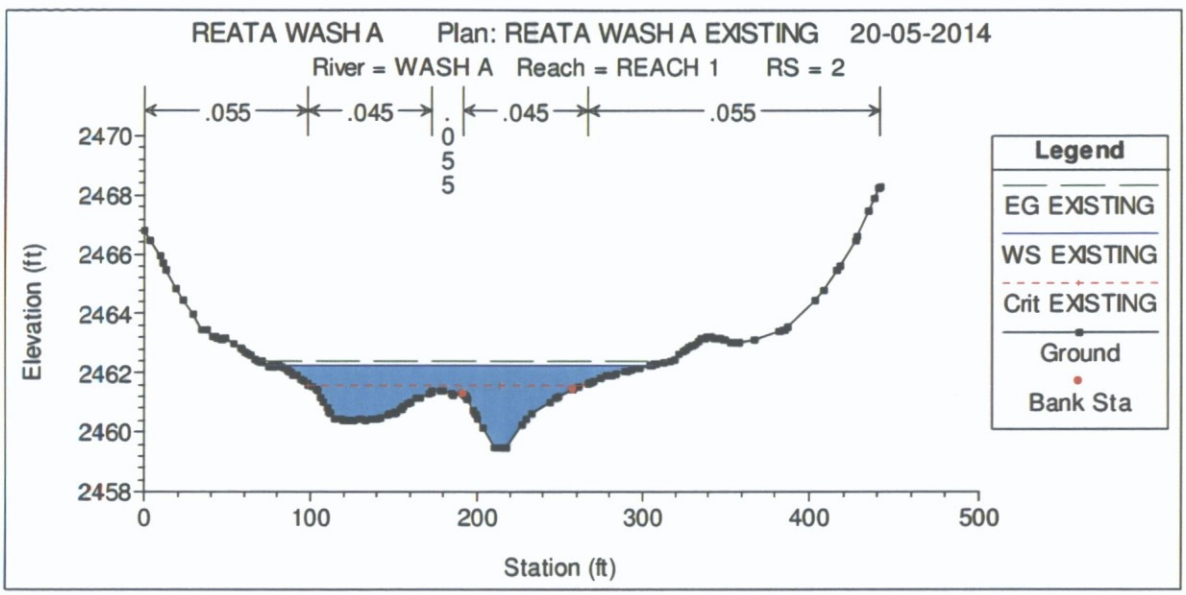

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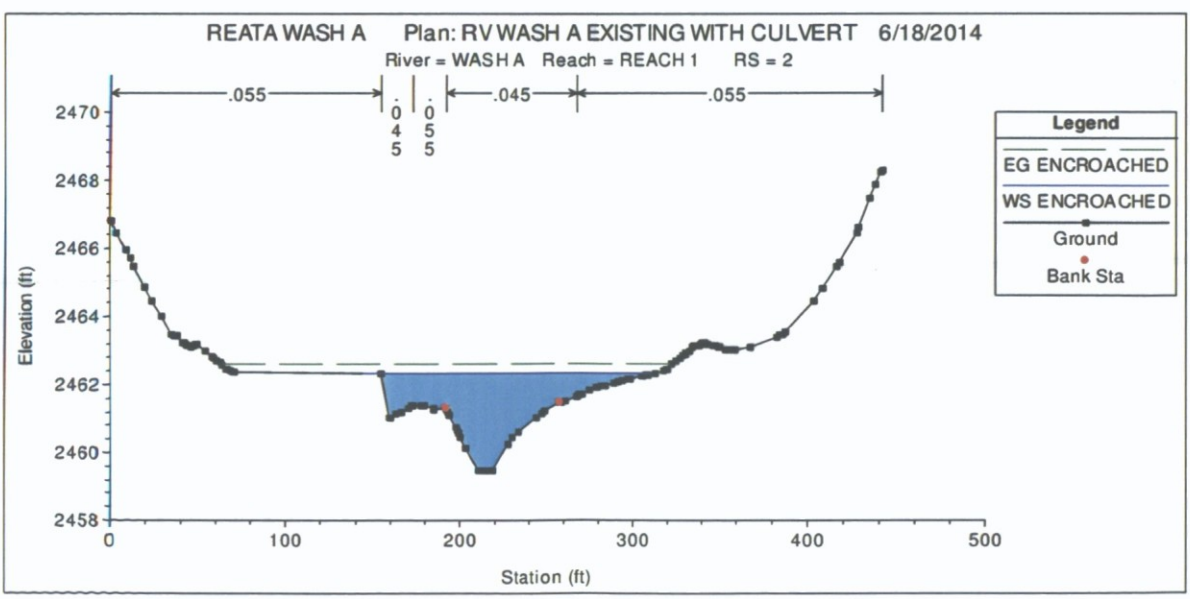

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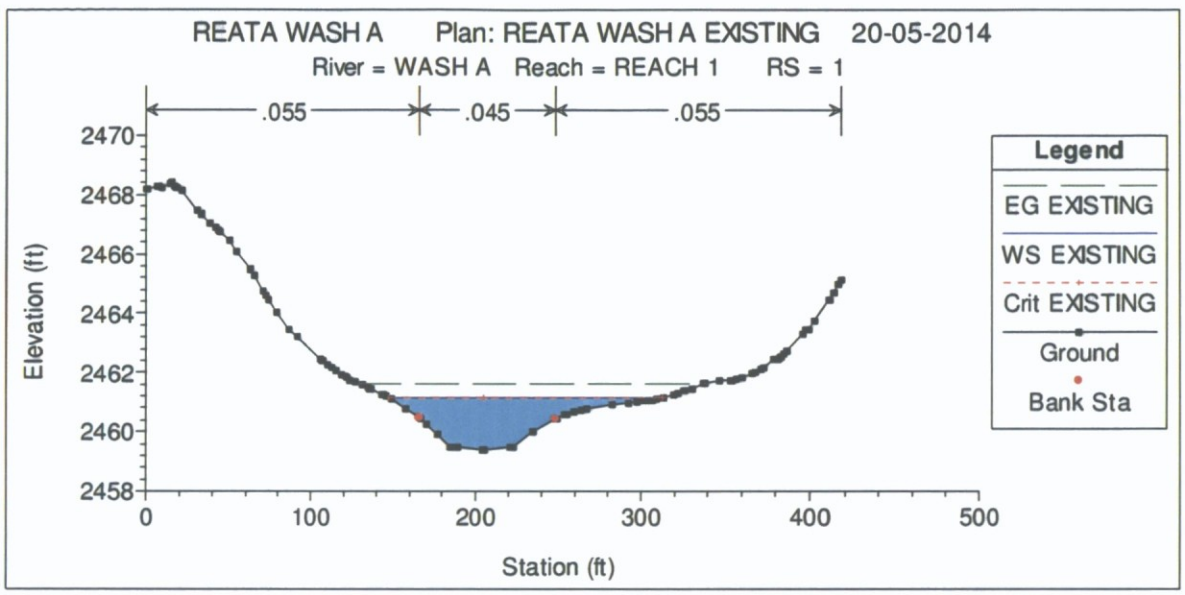

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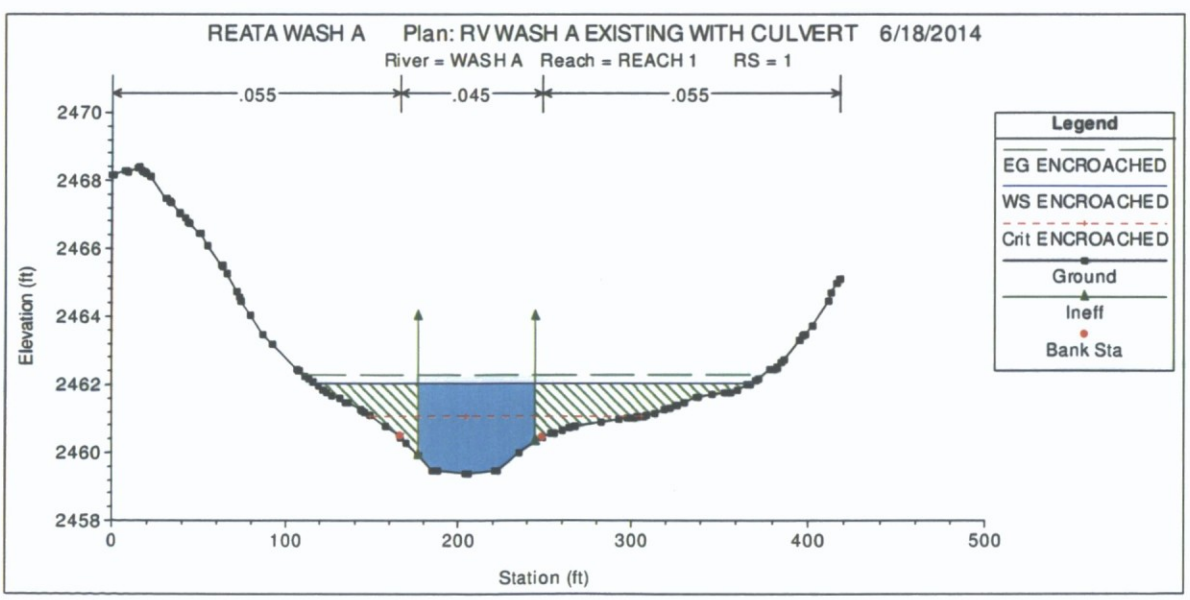

RV WASH A – ENCROACHED CROSS SECTION

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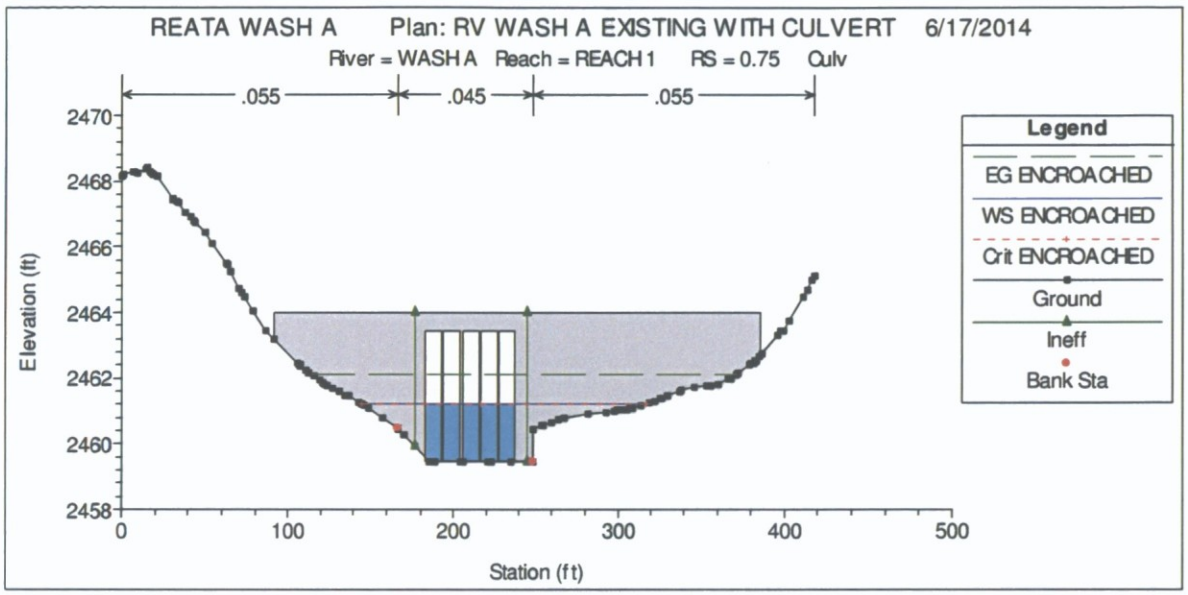

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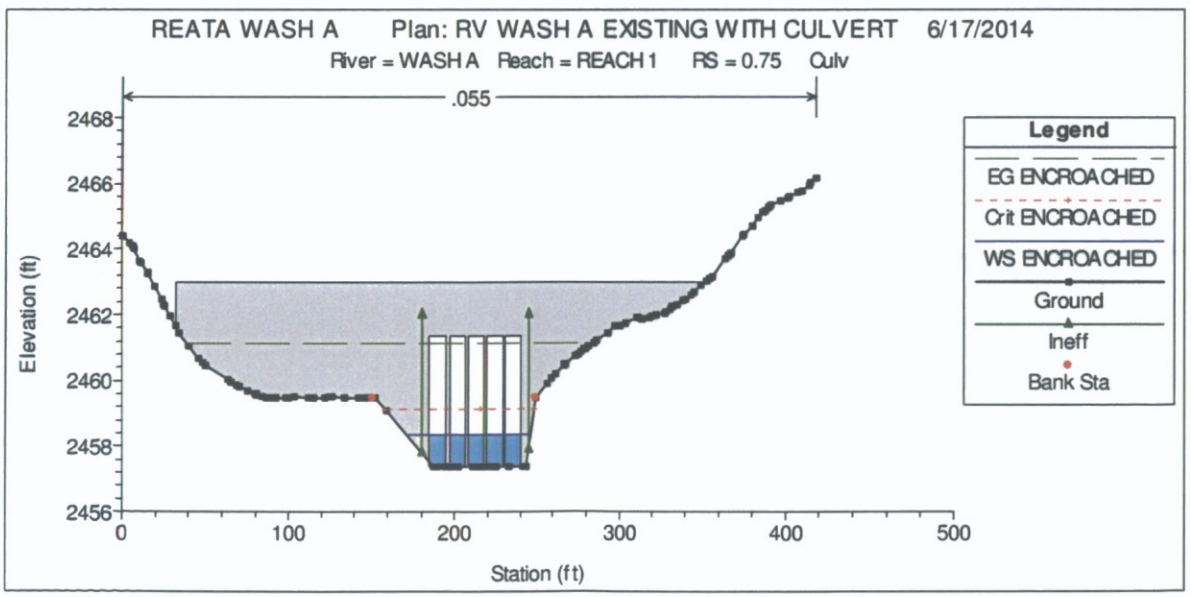

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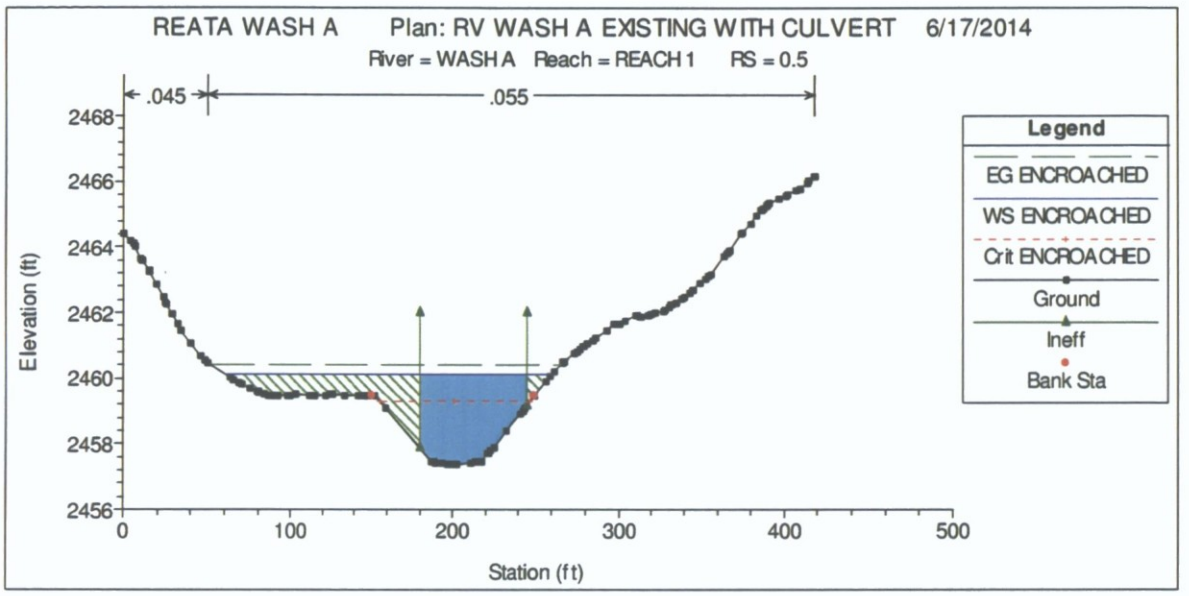
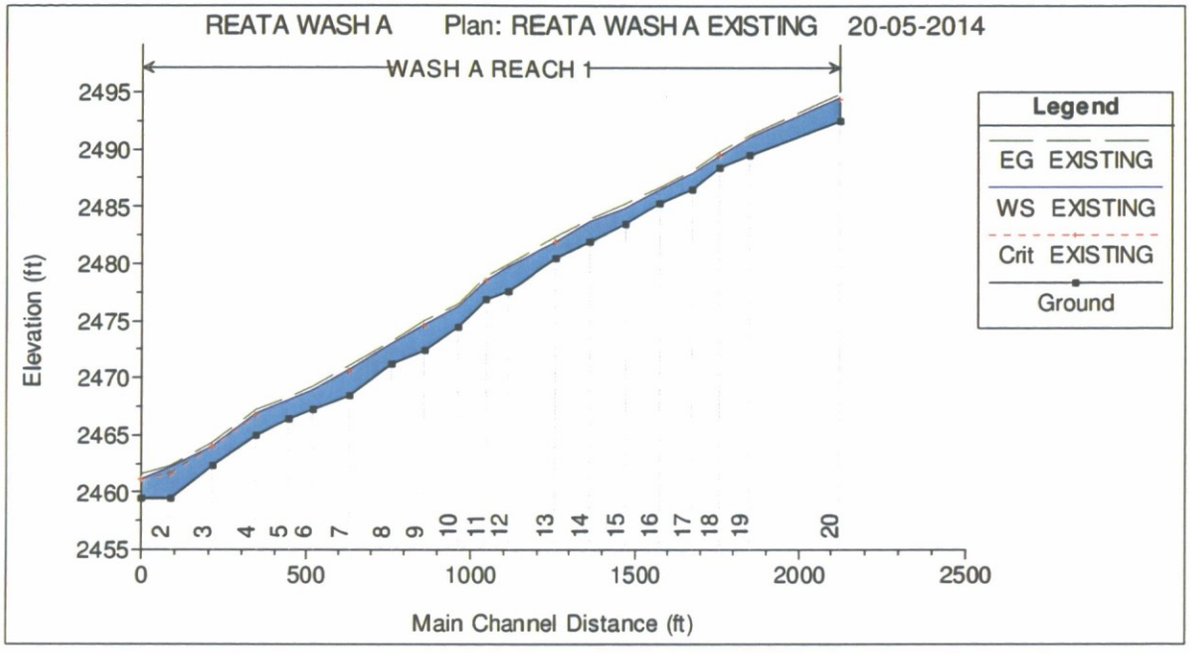


FLOOD PROFILES

RV WASH A – EXISTING WATER SURFACE PROFILE



RV WASH A – ENCROACHED WATER SURFACE PROFILE

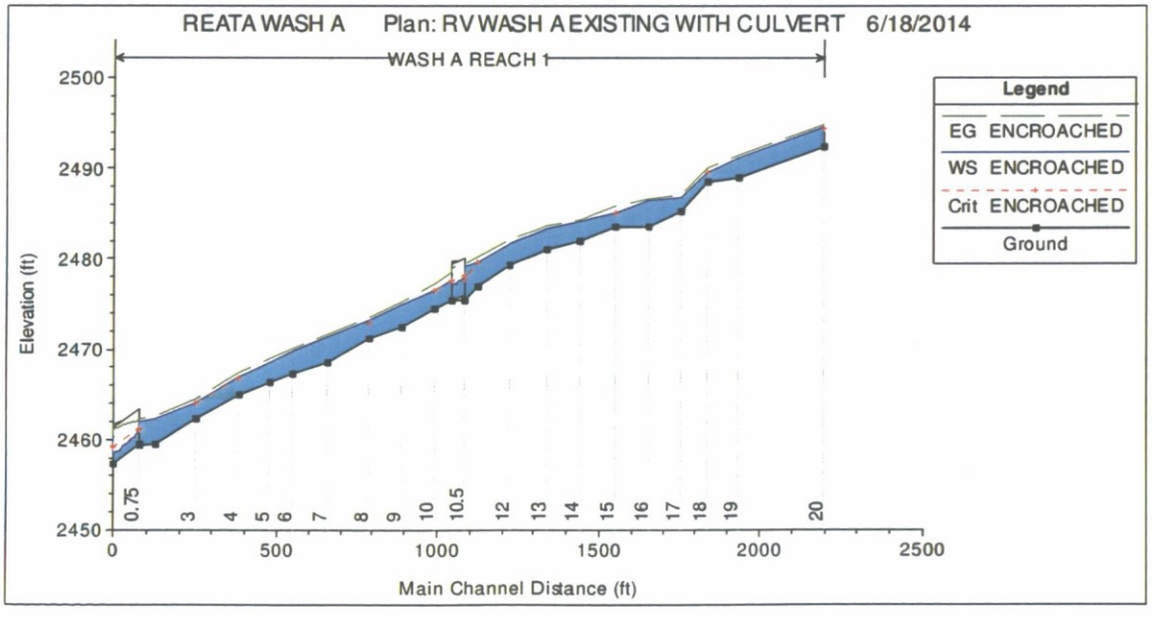


TABLE 4.5.12
HEC-1 Peak Flow Comparison Between Existing and Future Condition Models for the South Basin Area
(Without Development Guidelines)

Line No.	Existing Condition Models					Line No.	Future Condition Models (Without Guidelines)				
	Type	ID	Drainage Area	100-Year Event			Type	ID	Drainage Area	100-Year Event	
				24-hour	6-hour					24-hour	6-hour
			(sq. mi.)	(cfs)	(cfs)				(sq. mi.)	(cfs)	(cfs)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
66	2 COMBINED	CP11H	4.07	3135	2673	66	2 COMBINED	CP11H	4.07	3638	3257
67	ROUTED TO	RTHG4	4.07	3129	2670	67	ROUTED TO	RTHG4	4.07	3629	3254
68	HYDROGRAPH	511G1	0.31	505	329	68	HYDROGRAPH	511G1	0.31	567	381
69	ROUTED TO	RTG1G2	0.31	417	298	69	ROUTED TO	RTG1G2	0.31	471	350
70	HYDROGRAPH	511G2	0.16	228	151	70	HYDROGRAPH	511G2	0.16	258	176
71	2 COMBINED	CP11G2	0.47	594	429	71	2 COMBINED	CP11G2	0.47	674	508
72	ROUTED TO	RTG2G4	0.47	565	422	72	ROUTED TO	RTG2G4	0.47	642	499
73	HYDROGRAPH	511G3	0.10	138	90	73	HYDROGRAPH	511G3	0.1	162	109
74	ROUTED TO	RTG3G4	0.10	122	85	74	ROUTED TO	RTG3G4	0.1	142	103
75	HYDROGRAPH	511G4	0.30	348	238	75	HYDROGRAPH	511G4	0.3	406	290
76	3 COMBINED	CPG_G4	0.86	975	720	76	3 COMBINED	CPG_G4	0.86	1118	866
77	2 COMBINED	CP11G4	4.93	3612	3129	77	2 COMBINED	CP11G4	4.93	4225	3851
78	ROUTED TO	RTG4I	4.93	3586	3115	78	ROUTED TO	RTG4I	4.93	4192	3828
79	HYDROGRAPH	511I	0.20	254	158	79	HYDROGRAPH	511I	0.2	292	192
80	2 COMBINED	CP11I	5.13	3627	3155	80	2 COMBINED	CP11I	5.13	4245	3891
81	HYDROGRAPH	510A	0.92	866	707	81	HYDROGRAPH	510A	0.92	914	754
82	HYDROGRAPH	509A5	0.02	46	26	82	HYDROGRAPH	509A5	0.02	47	27
83	DIVERSION	DIA5S	0.02	1	1	83	DIVERSION	DIA5S	0.02	1	1
84	HYDROGRAPH	DIA59B	0.02	45	25	84	HYDROGRAPH	DIA59B	0.02	45	27
85	ROUTED TO	RTA59B	0.02	13	11	85	ROUTED TO	RTA59B	0.02	13	12
86	HYDROGRAPH	509B	0.65	497	384	86	HYDROGRAPH	509B	0.65	594	482
87	2 COMBINED	CP09B	0.67	497	385	87	2 COMBINED	CP09B	0.67	594	483

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ENGINEERS      *
 *              JUN   1998               *
CENTER    *
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*
*    U.S. ARMY CORPS OF
*    HYDROLOGIC ENGINEERING
*        609 SECOND
*     DAVIS, CALIFORNIA
*       (916) 756-1104
*
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X     X  XXXXXXX   XXXXX          XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION

NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

```
1                                   HEC-1 INPUT                                  PAGE  1

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

  1       ID    Project ID: S_24EX - Major Basin: 01 - Return Period: 100 Years
  2       ID    RIO VERDE AREA DRAINAGE MASTER PLAN                 FILE NAME: S_24EX.DAT
  3       ID    MODEL:     100-year, 24-hour Existing Condition Model
  4       ID    DEVELOPER:  Dibble & Associates, Inc.                DATE: Sept. 29, 2003
  5       ID
  6       ID    *** Modified South Watershed Model: Subbasin Added: 509A6 ***
  7       ID                                                        DATE REVISED: 5/06/05
  8       ID    *** Note Changes Per TDN Hydrology Review Comments by FCDMC - July 21, 2006
  9       ID    *** Modify Flow Distribution for DIC5E2 to match Floodplain RAS Modeling
 10       ID                                                        LAST UPDATE:  8/30/06
 11       ID
          *
          *DIAGRAM
 12       IT       2                 1200
 13       IO       5
 14       IN      15
          *
          * ******************************************************************************
          * ******************************       Major Basin 511     ************************
          * ******************************************************************************
          *

 15       KK    511A1   BASIN
 16       KM    Sub-Basin   511A1
 17       KM
 18       KM       The Phoenix Mountain S-Graph is used for this basin.
 19       KM
 20       BA    0.294
 21       PB    2.032
 22       PC    0.000   0.002   0.005   0.008   0.011   0.014   0.017   0.020   0.023   0.026
 23       PC    0.029   0.032   0.035   0.038   0.041   0.044   0.048   0.052   0.056   0.060
 24       PC    0.064   0.068   0.072   0.076   0.080   0.085   0.090   0.095   0.100   0.105
 25       PC    0.110   0.115   0.120   0.126   0.133   0.140   0.147   0.155   0.163   0.172
 26       PC    0.181   0.191   0.203   0.218   0.236   0.257   0.283   0.387   0.663   0.707
 27       PC    0.735   0.758   0.776   0.791   0.804   0.815   0.825   0.834   0.842   0.849
 28       PC    0.856   0.863   0.869   0.875   0.881   0.887   0.893   0.898   0.903   0.908
 29       PC    0.913   0.918   0.922   0.926   0.930   0.934   0.938   0.942   0.946   0.950
 30       PC    0.953   0.956   0.959   0.962   0.965   0.968   0.971   0.974   0.977   0.980
 31       PC    0.983   0.986   0.989   0.992   0.995   0.998   1.000
 32       LG     0.15    0.39    6.20    0.17       0
 33       UI       34      35      34      75     117     146     194     222     243     258
 34       UI      309     359     406     292     236     209     206     187     170     167
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35          UI    151     138     134     118     104      93      86      81      79      72
36          UI     68      57      53      43      44      39      37      38      31      26
37          UI     27      26      24      17      16      17      17      16      17      13
38          UI      6       0       0       0       0       0       0       0       0       0
39          UI      0       0       0       0       0       0       0       0       0       0
40          *       0       0       0       0       0       0       0       0       0       0
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1

HEC-1 INPUT


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LINE        ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
41          KK  511A2   BASIN
42          KM  Sub-Basin   511A2
43          KM
44          KM
45          KM      The Phoenix Mountain S-Graph is used for this basin.
46          KM
47          BA  0.059
48          LG   0.15    0.40    6.00    0.18       0
49          UI     12      17      42      66      88     102     138     106      79      68
50          UI     63      53      47      39      31      28      27      20      16      16
51          UI     13      10      10       8       6       6       6       4       2       2
52          UI      3       2       3       2       2       3       0       0       0       0
53          UI      0       0       0       0       0       0       0       0       0       0
54          UI      0       0       0       0       0       0       0       0       0       0
55          UI      0       0       0       0       0       0       0       0       0       0
            *       0       0       0       0       0       0       0       0       0       0
56          KK  RTA2A3   ROUTE   REACH
57          KM  Normal depth channel route from 511A2 to 511A3
58          RS      2    FLOW      -1
59          RC  0.070   0.040   0.070    3286  0.0158 2664.50
60          RX    0.0   100.1   119.0   129.4   137.7   156.2   367.9   409.0
61          RY 2664.5  2658.0  2657.5  2657.0  2657.2  2658.0  2662.0  2662.5
62          KK  511A3   BASIN
63          KM  Sub-Basin   511A3
64          KM
65          KM      The Phoenix Mountain S-Graph is used for this basin.
66          KM
67          BA  0.294
68          LG   0.15    0.39    6.20    0.17       0
69          UI     35      36      36      85     126     161     211     236     261     275
70          UI    338     406     368     272     234     208     201     185     170     167
71          UI    146     136     129     108      97      92      84      80      77      68
72          UI     57      54      45      44      41      38      38      29      27      27
73          UI     28      20      17      18      17      17      18      16       7       6
74          UI      7       0       0       0       0       0       0       0       0       0
75          UI      0       0       0       0       0       0       0       0       0       0
76          UI      0       0       0       0       0       0       0       0       0       0
77          UI      0       0       0       0       0       0       0       0       0       0
78          UI      0       0       0       0       0       0       0       0       0       0
79          UI      0       0       0       0       0       0       0       0       0       0
80          UI      0       0       0       0       0       0       0       0       0       0
81          UI      0       0       0       0       0       0       0       0       0       0
82          UI      0       0       0       0       0       0       0       0       0       0
83          UI      0       0       0       0       0       0       0       0       0       0
            *       0       0       0       0       0       0       0       0       0       0
```

1

HEC-1 INPUT


```
LINE        ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
84          KK  CP11A
85          KM    Combine routed hydrograph from 511A2 with runoff from 511A1 and 511A3
86          HC      3
            *
87          KK  RTA1D   ROUTE   REACH
88          KM  Normal depth channel route from CP11A to 511D
89          RS      4    FLOW      -1
90          RC  0.070   0.040   0.070    5358  0.0186  151.20
91          RX  900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
92          RY  151.2   100.0    99.5    99.0    99.0    99.6    99.7   151.2
93          KK  511D   BASIN
94          KM  Sub-Basin   511D
95          KM
96          KM      The Phoenix Mountain S-Graph is used for this basin.
97          KM
98          BA  0.104
99          LG   0.15    0.36    6.80    0.13       0
100         UI     14      14      22      45      64      81      95     105     126     156
101         UI    131      95      82      80      69      65      60      53      49      42
102         UI     35      33      32      28      25      23      17      18      15      15
103         UI     12      11      10      11       6       7       7       7       6       4
104         UI      3       2       2       3       2       3       2       3       2       2
105         UI      3       0       0       0       0       0       0       0       0       0
```

```
106          UI      0       0       0       0       0       0       0       0       0
107          UI      0       0       0       0       0       0       0       0       0
108          UI      0       0       0       0       0       0       0       0       0
             *

109          KK   CP11D
110          KM     Combine routed hydrograph from CP11A with runoff from 511D
111          HC      2
             *

112          KK    A   BASIN
113          KM   Sub-Basin   A
114          KM
115          KM      The Phoenix Mountain S-Graph is used for this basin.
116          KM
117          BA   0.037
118          LG    0.15    0.36    6.80    0.30      23
119          UI      32      63      95     127     133     114      95      76      57      38
120          UI      19       1       0       0       0       0       0       0       0       0
121          UI       0       0       0       0       0       0       0       0       0       0
122          UI       0       0       0       0       0       0       0       0       0       0
123          UI       0       0       0       0       0       0       0       0       0       0
124          UI       0       0       0       0       0       0       0       0       0       0
125          UI       0       0       0       0       0       0       0       0       0       0
126          UI       0       0       0       0       0       0       0       0       0       0
127          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

128          KK  RSA
             * RESERVOIR STORAGE
129          KO        0       0     0.0       0      22
130          RS        1    STOR     0.0     0.0
             * RSA Volume
131          SV      0.0    0.66    1.40    2.22
             * RSA Storage elev
132          SE      0.0     1.0     2.0     3.0
133          SL      0.5   0.785     0.6     0.5
134          SS      2.0    40.0     2.6     1.5

135          KK   CP11DA
136          KM     Combine routed hydrograph from CP11D with runoff from A
137          HC      2
             *

138          KK   511B4   BASIN
139          KM   Sub-Basin   511B4
140          KM
141          KM      The Phoenix Mountain S-Graph is used for this basin.
142          KM
143          BA   0.194
144          LG    0.15    0.36    6.80    0.13      12
145          UI      32      33      76     128     188     219     250     308     386     258
146          UI     213     184     171     160     137     124     110      90      79      77
147          UI      68      56      51      41      37      37      30      25      26      20
148          UI      16      16      16      16       8       6       6       7       6       6
149          UI       7       6       6       6       7       6       0       0       0       0
150          UI       0       0       0       0       0       0       0       0       0       0
151          UI       0       0       0       0       0       0       0       0       0       0
152          UI       0       0       0       0       0       0       0       0       0       0
             *

153          KK   511B1   BASIN
154          KM   Sub-Basin   511B1
155          KM
156          KM      The Phoenix Mountain S-Graph is used for this basin.
157          KM
158          BA   0.583
159          LG    0.15    0.38    6.40    0.16       4
160          UI      49      50      49      48      88     138     176     216     256     293
161          UI     325     344     361     399     425     492     580     572     421     361
162          UI     330     296     294     282     258     256     238     224     218     201
163          UI     191     188     170     150     145     128     123     124     113     111
164          UI     107     102      88      82      79      66      64      62      61      55
165          UI      53       0       0       0       0       0       0       0       0       0
166          UI       0       0       0       0       0       0       0       0       0       0
167          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

168          KK   511B2   BASIN
169          KM   Sub-Basin   511B2
170          KM
171          KM      The Phoenix Mountain S-Graph is used for this basin.
172          KM
```

```
 173          BA   0.222
 174          LG    0.15    0.38    6.40    0.16       0
 175          UI      23      24      23      36      71      91     113     140     153     166
 176          UI     185     198     238     289     227     172     155     140     135     129
 177          UI     118     110     105      96      91      86      75      69      62      57
 178          UI      56      55      49      47      40      38      31      31      29      26
 179          UI      26      25      21      18      18      18      18      12      12      11
 180          UI      12       0       0       0       0       0       0       0       0       0
 181          UI       0       0       0       0       0       0       0       0       0       0
 182          UI       0       0       0       0       0       0       0       0       0       0
 183          UI       0       0       0       0       0       0       0       0       0       0
 184          UI       0       0       0       0       0       0       0       0       0       0
 185          UI       0       0       0       0       0       0       0       0       0       0
 186          UI       0       0       0       0       0       0       0       0       0       0
 187          UI       0       0       0       0       0       0       0       0       0       0
 188          UI       0       0       0       0       0       0       0       0       0       0
 189          UI       0       0       0       0       0       0       0       0       0       0
              *

 190          KK  CPB1B2
 191          KM     Combine hydrograph from S11B1 and S11B2
 192          HC       2
              *

 193          KK  RT1284   ROUTE   REACH
 194          KM   Normal depth channel route from CPB1B2 to S11B4
 195          RS       3     FLOW      -1
 196          RC   0.070   0.040   0.070    3973  0.0186 2582.00
 197          RX     0.0    36.4    62.6    86.9    98.0   114.8   303.0   378.7
 198          RY  2582.0  2578.0  2576.0  2574.0  2573.4  2574.0  2578.0  2582.0
              *

 199          KK   S11B3   BASIN
 200          KM   Sub-Basin   S11B3
 201          KM
 202          KM      The Phoenix Mountain S-Graph is used for this basin.
 203          KM
 204          BA   0.080
 205          LG    0.15    0.37    6.60    0.14       0
 206          UI      15      15      44      68      97     109     130     176     120      96
 207          UI      85      76      69      62      50      44      38      35      31      26
 208          UI      21      18      17      16      11      12       9       8       7       7
 209          UI       7       3       2       3       3       3       3       3       3       2
 210          UI       3       0       0       0       0       0       0       0       0       0
 211          UI       0       0       0       0       0       0       0       0       0       0
 212          UI       0       0       0       0       0       0       0       0       0       0
 213          UI       0       0       0       0       0       0       0       0       0       0
 214          UI       0       0       0       0       0       0       0       0       0       0
 215          UI       0       0       0       0       0       0       0       0       0       0
```



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

 216          UI       0       0       0       0       0       0       0       0       0       0
 217          UI       0       0       0       0       0       0       0       0       0       0
 218          UI       0       0       0       0       0       0       0       0       0       0
 219          UI       0       0       0       0       0       0       0       0       0       0
 220          UI       0       0       0       0       0       0       0       0       0       0
              *

 221          KK  RTB3B4   ROUTE   REACH
 222          KM   Normal depth channel route from S11B3 to S11B4
 223          RS       2     FLOW      -1
 224          RC   0.070   0.040   0.070    3126  0.0205 2565.00
 225          RX     0.0    16.6    28.0    34.2    39.7    63.8   108.6   198.6
 226          RY  2563.0  2562.0  2560.8  2560.3  2560.6  2562.0  2564.3  2565.0
              *

 227          KK   CP11B
 228          KM     Combine routed hydrographs from CPB1B2 and S11B3 with S11B4
 229          HC       3
              *

 230          KK   RTB4D   ROUTE   REACH
 231          KM   Normal depth channel route from CP11B to RTB4D
 232          RS       1     FLOW      -1
 233          RC   0.070   0.040   0.070     521  0.0179 2536.00
 234          RX     0.0    89.0   118.0   165.0   222.0   363.0   411.0   516.0
 235          RY  2536.0  2534.0  2532.0  2531.5  2532.0  2532.2  2532.8  2534.0
              *

 236          KK  CP11DF
 237          KM     Combine routed hydrographs from CP11D and RTB4D
 238          HC       2
              *-------------------------------------------------------------------------------
              *

 239          KK    RTDF   ROUTE   REACH
 240          KM   Normal depth channel route from CP11DF to CP11F                          R
 241          RS       3     FLOW      -1
 242          RC   0.070   0.040   0.070    3664  0.0191  151.20
```

```
243          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
244          RY   151.2   100.0    99.5    99.0    99.0    99.6    99.7   151.2
             *

245          KK    C   BASIN
246          KM   Sub-Basin   C
247          KM
248          KM      The Phoenix Mountain S-Graph is used for this basin.
249          KM
250          BA   0.006
251          LG    0.14    0.38    6.40    0.30      23
252          UI      11      23      25      18      12       5       0       0       0       0
253          UI       0       0       0       0       0       0       0       0       0       0
254          UI       0       0       0       0       0       0       0       0       0       0
255          UI       0       0       0       0       0       0       0       0       0       0
256          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

257          KK  RSC
             * RESERVOIR STORAGE
258          KO        0       0     0.0       0      22
259          RS        1    STOR     0.0     0.0
             * RSC Volume
260          SV      0.0    0.13    0.31    0.51
             * RSC Storage elev
261          SE      0.0     1.0     2.0     3.0
262          SL      0.5   0.785     0.6     0.5
263          SS      1.0    10.0     2.6     1.5

264          KK    B   BASIN
265          KM   Sub-Basin   B
266          KM
267          KM      The Phoenix Mountain S-Graph is used for this basin.
268          KM
269          BA   0.018
270          LG    0.14    0.38    6.40    0.30      23
271          UI      34      68      75      55      34      14       0       0       0       0
272          UI       0       0       0       0       0       0       0       0       0       0
273          UI       0       0       0       0       0       0       0       0       0       0
274          UI       0       0       0       0       0       0       0       0       0       0
275          UI       0       0       0       0       0       0       0       0       0       0
             *

276          KK  RSB
             * RESERVOIR STORAGE
277          KO        0       0     0.0       0      22
278          RS        1    STOR     0.0     0.0
             * RSB Volume
279          SV      0.0    0.19    0.47    0.83
             * RSB Storage elev
280          SE      0.0     1.0     2.0     3.0
281          SL      0.5   0.785     0.6     0.5
282          SS      2.0    20.0     2.6     1.5

283          KK    D   BASIN
284          KM   Sub-Basin   D
285          KM
286          KM      The Phoenix Mountain S-Graph is used for this basin.
287          KM
288          BA   0.012
289          LG    0.14    0.38    6.40    0.30      23
290          UI      23      47      51      37      23       9       0       0       0       0
291          UI       0       0       0       0       0       0       0       0       0       0
292          UI       0       0       0       0       0       0       0       0       0       0
293          UI       0       0       0       0       0       0       0       0       0       0
294          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

295          KK  RSD
             * RESERVOIR STORAGE
296          KO        0       0     0.0       0      22
297          RS        1    STOR     0.0     0.0
             * RSD Volume
298          SV      0.0    0.19    0.42    0.68
             * RSD Storage elev
299          SE      0.0     1.0     2.0     3.0
300          SL      0.5   0.785     0.6     0.5
301          SS      2.0    10.0     2.6     1.5

302          KK   CP-A
303          KM   CP(CBD)
304          KM     Combine hydrograph from C, B and D
305          HC       3
```

```
                *
306             KK    G   BASIN
307             KM    Sub-Basin   G
308             KM
309             KM       The Phoenix Mountain S-Graph is used for this basin.
310             KM
311             BA    0.009
312             LG     0.14    0.38    6.40    0.30      23
313             UI       17      35      38      28      18       7       0       0       0       0
314             UI        0       0       0       0       0       0       0       0       0       0
315             UI        0       0       0       0       0       0       0       0       0       0
316             UI        0       0       0       0       0       0       0       0       0       0
317             UI        0       0       0       0       0       0       0       0       0       0
                *
318             KK  RSG
                * RESERVOIR STORAGE
319             KO        0       0     0.0       0      22
320             RS        1    STOR     0.0     0.0
                * RSG Volume
321             SV      0.0     0.12    0.27    0.46
                * RSG Storage elev
322             SE      0.0      1.0     2.0     3.0
323             SL     0.75     1.77     0.6     0.5
324             SS      2.0     10.0     2.6     1.5

325             KK    I   BASIN
326             KM    Sub-Basin   I
327             KM
328             KM       The Phoenix Mountain S-Graph is used for this basin.
329             KM
330             BA    0.044
331             LG     0.14    0.38    6.40    0.30      23
332             UI       55     110     165     176     143     110      77      44      11       0
333             UI        0       0       0       0       0       0       0       0       0       0
334             UI        0       0       0       0       0       0       0       0       0       0
335             UI        0       0       0       0       0       0       0       0       0       0
336             UI        0       0       0       0       0       0       0       0       0       0
                *
```



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

337             KK  RSI
                * RESERVOIR STORAGE
338             KO        0       0     0.0       0      22
339             RS        1    STOR     0.0     0.0
                * RSI Volume
340             SV      0.0     0.59    1.29    2.12
                * RSI Storage elev
341             SE      0.0      1.0     2.0     3.0
342             SL     0.33    0.352     0.6     0.5
343             SS      2.0     50.0     2.6     1.5

344             KK   CP-B
345             KM   CP(CBDGI)
346             KM     Combine hydrograph from CP(CBD), G and I
347             HC       3
                *

348             KK    N   BASIN
349             KM    Sub-Basin   N
350             KM
351             KM       The Phoenix Mountain S-Graph is used for this basin.
352             KM
353             BA    0.005
354             LG     0.14    0.38    6.40    0.30      23
355             UI       11      21      23      17      11       4       0       0       0       0
356             UI        0       0       0       0       0       0       0       0       0       0
357             UI        0       0       0       0       0       0       0       0       0       0
358             UI        0       0       0       0       0       0       0       0       0       0
359             UI        0       0       0       0       0       0       0       0       0       0
                *

360             KK  RSN
                * RESERVOIR STORAGE
361             KO        0       0     0.0       0      22
362             RS        1    STOR     0.0     0.0
                * RSN Volume
363             SV      0.0     0.06    0.14    0.25
                * RSN Storage elev
364             SE      0.0      1.0     2.0     3.0
365             SL     0.75     1.77     0.6     0.5
366             SS      2.0     20.0     2.6     1.5

367             KK    S   BASIN
368             KM    Sub-Basin   S
369             KM
370             KM       The Phoenix Mountain S-Graph is used for this basin.
```

```
371          KM
372          BA   0.008
373          LG    0.14    0.38    6.40    0.30      23
374          UI      19      37      41      30      19       8       0       0       0       0
375          UI       0       0       0       0       0       0       0       0       0       0
376          UI       0       0       0       0       0       0       0       0       0       0
377          UI       0       0       0       0       0       0       0       0       0       0
378          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

379          KK  RSS
             * RESERVOIR STORAGE
380          KO        0       0     0.0       0      22
381          RS        1    STOR     0.0     0.0
             * RSS Volume
382          SV      0.0    0.11    0.26    0.43
             * RSS Storage elev
383          SE      0.0     1.0     2.0     3.0
384          SL     0.75    1.77     0.6     0.5
385          SS      2.0    20.0     2.6     1.5

386          KK    V   BASIN
387          KM   Sub-Basin   V
388          KM
389          KM      The Phoenix Mountain S-Graph is used for this basin.
390          KM
391          BA   0.021
392          LG    0.14    0.38    6.40    0.30      23
393          UI       4       8      12      16      21      25      29      33      37      41
394          UI      45      43      40      38      35      33      30      28      26      23
395          UI      21      18      16      13      11       8       6       3       1       0
396          UI       0       0       0       0       0       0       0       0       0       0
397          UI       0       0       0       0       0       0       0       0       0       0
             *

398          KK   CP-C
399          KM   CP(CBDGINS)
400          KM     Combine hydrograph from CP(CBDGI), N, S and V
401          HC       4
             *

402          KK    R   BASIN
403          KM   Sub-Basin   R
404          KM
405          KM      The Phoenix Mountain S-Graph is used for this basin.
406          KM
407          BA   0.003
408          LG    0.14    0.38    6.40    0.30      23
409          UI       6      13      14      10       6       3       0       0       0       0
410          UI       0       0       0       0       0       0       0       0       0       0
411          UI       0       0       0       0       0       0       0       0       0       0
412          UI       0       0       0       0       0       0       0       0       0       0
413          UI       0       0       0       0       0       0       0       0       0       0
             *

414          KK  RSR
             * RESERVOIR STORAGE
415          KO        0       0     0.0       0      22
416          RS        1    STOR     0.0     0.0
             * RSR Volume
417          SV      0.0    0.04    0.10    0.19
             * RSR Storage elev
418          SE      0.0     1.0     2.0     3.0
419          SL      0.5   0.785     0.6     0.5
```



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

420          SS      2.0    20.0     2.6     1.5

421          KK   CP511
422          KM   CP(CBDGINSR)
423          KM     Combine routed hydrograph from CP11DF with runoff from CP(CBDGINS) and R
424          HC       3
             *

425          KK   S11C1   BASIN
426          KM   Sub-Basin   S11C1
427          KM
428          KM      The Phoenix Mountain S-Graph is used for this basin.
429          KM
430          BA   0.329
431          LG    0.15    0.40    6.00    0.18       0
432          UI      33      34      33      44      99     124     155     200     212     235
433          UI     256     276     317     389     386     271     235     210     197     193
434          UI     177     166     160     146     136     134     116     106      98      87
435          UI      81      81      77      71      72      54      55      47      43      42
```

```
436          UI      39      37      36      34      26      25      27      25      23      17
437          UI      16       0       0       0       0       0       0       0       0       0
438          UI       0       0       0       0       0       0       0       0       0       0
439          UI       0       0       0       0       0       0       0       0       0       0
440          UI       0       0       0       0       0       0       0       0       0       0
441          UI       0       0       0       0       0       0       0       0       0       0
442          UI       0       0       0       0       0       0       0       0       0       0
443          UI       0       0       0       0       0       0       0       0       0       0
444          UI       0       0       0       0       0       0       0       0       0       0
             *

445          KK  DIC1E2
446          KM   DIVERT FLOW FROM S11C1 TO S11C4 AT NATURAL FLOW SPLIT
447          DT  DIC1C4
448          DI       0      75     150     225     300     480     650
449          DQ       0      38      77     117     155     250     340
             *

450          KK  RTC1E2   ROUTE   REACH
451          KM   Normal depth channel route from S11C1 to S11E2
452          RS       5    FLOW      -1
453          RC   0.070   0.040   0.070    7085  0.0209 2506.00
454          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
455          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
             *

456          KK   S11E1   BASIN
457          KM   Sub-Basin   S11E1
458          KM
459          KM      The Phoenix Mountain S-Graph is used for this basin.
460          KM
461          BA   0.296
462          LG    0.15    0.40    6.00    0.18       0
463          UI      32      33      32      57     101     128     163     202     216     232
464          UI     261     291     350     392     261     222     206     185     179     170
465          UI     156     146     139     127     117     108      96      84      81      76
```



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

466          UI      72      71      65      51      53      42      40      41      36      35
467          UI      36      25      24      25      24      22      16      16      16      16
468          UI      15       0       0       0       0       0       0       0       0       0
469          UI       0       0       0       0       0       0       0       0       0       0
470          UI       0       0       0       0       0       0       0       0       0       0
471          UI       0       0       0       0       0       0       0       0       0       0
472          UI       0       0       0       0       0       0       0       0       0       0
473          UI       0       0       0       0       0       0       0       0       0       0
474          UI       0       0       0       0       0       0       0       0       0       0
475          UI       0       0       0       0       0       0       0       0       0       0
             *

476          KK  RTE1E2   ROUTE   REACH
477          KM   Normal depth channel route from S11E1 to S11E2
478          RS       3    FLOW      -1
479          RC   0.070   0.040   0.070    4907  0.0187 2506.00
480          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
481          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
             *

482          KK   S11E2   BASIN
483          KM   Sub-Basin   S11E2
484          KM
485          KM      The Phoenix Mountain S-Graph is used for this basin.
486          KM
487          BA   0.257
488          LG    0.15    0.36    6.80    0.13       1
489          UI      25      25      25      33      72      92     114     148     158     173
490          UI     189     203     235     286     285     201     173     155     145     143
491          UI     131     121     118     108     101      99      85      78      73      64
492          UI      59      60      56      53      53      40      40      35      32      31
493          UI      29      27      26      26      18      19      19      18      17      12
494          UI      12       0       0       0       0       0       0       0       0       0
495          UI       0       0       0       0       0       0       0       0       0       0
496          UI       0       0       0       0       0       0       0       0       0       0
497          UI       0       0       0       0       0       0       0       0       0       0
498          UI       0       0       0       0       0       0       0       0       0       0
499          UI       0       0       0       0       0       0       0       0       0       0
500          UI       0       0       0       0       0       0       0       0       0       0
501          UI       0       0       0       0       0       0       0       0       0       0
             *

502          KK  CPE1E2
503          KM     Combine routed hydrographs from S11E1 with S11E2
504          HC       2
             *

505          KK   F    BASIN
506          KM   Sub-Basin   F
507          KM
508          KM      The Phoenix Mountain S-Graph is used for this basin.
```

```
 509          KM
 510          BA    0.009
 511          LG     0.15     0.36     6.80     0.30       23
 512          UI       17       34       37       27       17        7        0        0        0        0
1                                        HEC-1 INPUT                                                  PAGE 13

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

 513          UI        0        0        0        0        0        0        0        0        0        0
 514          UI        0        0        0        0        0        0        0        0        0        0
 515          UI        0        0        0        0        0        0        0        0        0        0
 516          UI        0        0        0        0        0        0        0        0        0        0
 517          UI        0        0        0        0        0        0        0        0        0        0
 518          UI        0        0        0        0        0        0        0        0        0        0
 519          UI        0        0        0        0        0        0        0        0        0        0
 520          UI        0        0        0        0        0        0        0        0        0        0
 521          UI        0        0        0        0        0        0        0        0        0        0
 522          UI        0        0        0        0        0        0        0        0        0        0
 523          UI        0        0        0        0        0        0        0        0        0        0
 524          UI        0        0        0        0        0        0        0        0        0        0
              *

 525          KK   RSF
              * RESERVOIR STORAGE
 526          KO        0        0      0.0        0       22
 527          RS        1     STOR      0.0      0.0
              * RSF Volume
 528          SV      0.0     0.14     0.31     0.52
              * RSF Storage elev
 529          SE      0.0      1.0      2.0      3.0
 530          SL     0.75     1.77      0.6      0.5
 531          SS      2.0     10.0      2.6      1.5

 532          KK      H    BASIN
 533          KM    Sub-Basin   H
 534          KM
 535          KM       The Phoenix Mountain S-Graph is used for this basin.
 536          KM
 537          BA    0.006
 538          LG     0.15     0.36     6.80     0.30       23
 539          UI       12       25       27       20       13        5        0        0        0        0
 540          UI        0        0        0        0        0        0        0        0        0        0
 541          UI        0        0        0        0        0        0        0        0        0        0
 542          UI        0        0        0        0        0        0        0        0        0        0
 543          UI        0        0        0        0        0        0        0        0        0        0
 544          UI        0        0        0        0        0        0        0        0        0        0
 545          UI        0        0        0        0        0        0        0        0        0        0
 546          UI        0        0        0        0        0        0        0        0        0        0
 547          UI        0        0        0        0        0        0        0        0        0        0
 548          UI        0        0        0        0        0        0        0        0        0        0
 549          UI        0        0        0        0        0        0        0        0        0        0
 550          UI        0        0        0        0        0        0        0        0        0        0
 551          UI        0        0        0        0        0        0        0        0        0        0
              *

 552          KK   RSH
              * RESERVOIR STORAGE
 553          KO        0        0      0.0        0       22
 554          RS        1     STOR      0.0      0.0
              * RSH Volume
 555          SV      0.0     0.08     0.20     0.35
              * RSH Storage elev
 556          SE      0.0      1.0      2.0      3.0
1                                        HEC-1 INPUT                                                  PAGE 14

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

 557          SL     0.75     1.77      0.6      0.5
 558          SS      2.0     10.0      2.6      1.5

 559          KK      K    BASIN
 560          KM    Sub-Basin   K
 561          KM
 562          KM       The Phoenix Mountain S-Graph is used for this basin.
 563          KM
 564          BA    0.005
 565          LG     0.15     0.36     6.80     0.30       23
 566          UI        7       15       22       18       13        9        4        0        0        0
 567          UI        0        0        0        0        0        0        0        0        0        0
 568          UI        0        0        0        0        0        0        0        0        0        0
 569          UI        0        0        0        0        0        0        0        0        0        0
 570          UI        0        0        0        0        0        0        0        0        0        0
 571          UI        0        0        0        0        0        0        0        0        0        0
 572          UI        0        0        0        0        0        0        0        0        0        0
 573          UI        0        0        0        0        0        0        0        0        0        0
 574          UI        0        0        0        0        0        0        0        0        0        0
 575          UI        0        0        0        0        0        0        0        0        0        0
 576          UI        0        0        0        0        0        0        0        0        0        0
 577          UI        0        0        0        0        0        0        0        0        0        0
 578          UI        0        0        0        0        0        0        0        0        0        0
              *
```

```
 579          KK  RSK
              * RESERVOIR STORAGE
 580          KO       0       0     0.0       0      22
 581          RS       1    STOR     0.0     0.0
              * RSK Volume
 582          SV     0.0    0.07    0.16    0.27
              * RSK Storage elev
 583          SE     0.0     1.0     2.0     3.0
 584          SL    0.75    1.77     0.6     0.5
 585          SS     2.0    10.0     2.6     1.5

 586          KK   L    BASIN
 587          KM   Sub-Basin   L
 588          KM
 589          KM      The Phoenix Mountain S-Graph is used for this basin.
 590          KM
 591          BA   0.005
 592          LG    0.15    0.36    6.80    0.30      23
 593          UI      11      44      48      35      22       9       0       0       0       0
 594          UI       0       0       0       0       0       0       0       0       0       0
 595          UI       0       0       0       0       0       0       0       0       0       0
 596          UI       0       0       0       0       0       0       0       0       0       0
 597          UI       0       0       0       0       0       0       0       0       0       0
 598          UI       0       0       0       0       0       0       0       0       0       0
 599          UI       0       0       0       0       0       0       0       0       0       0
 600          UI       0       0       0       0       0       0       0       0       0       0
 601          UI       0       0       0       0       0       0       0       0       0       0
 602          UI       0       0       0       0       0       0       0       0       0       0
 603          UI       0       0       0       0       0       0       0       0       0       0
 604          UI       0       0       0       0       0       0       0       0       0       0
```



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

 605          UI       0       0       0       0       0       0       0       0       0       0
              *

 606          KK  RSL
              * RESERVOIR STORAGE
 607          KO       0       0     0.0       0      22
 608          RS       1    STOR     0.0     0.0
              * RSL Volume
 609          SV     0.0    0.18    0.41    0.67
              * RSL Storage elev
 610          SE     0.0     1.0     2.0     3.0
 611          SL    0.75    1.77     0.6     0.5
 612          SS     2.0    10.0     2.6     1.5

 613          KK   CP-D
 614          KM   CP(E2FHKL)
 615          KM     Combine routed hydrographs from S11E2 with F, H, K and L
 616          HC       5
              *

 617          KK   J    BASIN
 618          KM   Sub-Basin   J
 619          KM
 620          KM      The Phoenix Mountain S-Graph is used for this basin.
 621          KM
 622          BA   0.002
 623          LG    0.15    0.36    6.80    0.30      23
 624          UI       3       7       8       5       3       1       0       0       0       0
 625          UI       0       0       0       0       0       0       0       0       0       0
 626          UI       0       0       0       0       0       0       0       0       0       0
 627          UI       0       0       0       0       0       0       0       0       0       0
 628          UI       0       0       0       0       0       0       0       0       0       0
 629          UI       0       0       0       0       0       0       0       0       0       0
 630          UI       0       0       0       0       0       0       0       0       0       0
 631          UI       0       0       0       0       0       0       0       0       0       0
 632          UI       0       0       0       0       0       0       0       0       0       0
 633          UI       0       0       0       0       0       0       0       0       0       0
 634          UI       0       0       0       0       0       0       0       0       0       0
 635          UI       0       0       0       0       0       0       0       0       0       0
 636          UI       0       0       0       0       0       0       0       0       0       0
              *

 637          KK  RSJ
              * RESERVOIR STORAGE
 638          KO       0       0     0.0       0      22
 639          RS       1    STOR     0.0     0.0
              * RSJ Volume
 640          SV     0.0    0.04    0.11    0.20
              * RSJ Storage elev
 641          SE     0.0     1.0     2.0     3.0
 642          SL    0.75    1.77     0.6     0.5
 643          SS     2.0    20.0     2.6     1.5
```

```
644         KK   M    BASIN
645         KM   Sub-Basin   M
646         KM
647         KM      The Phoenix Mountain S-Graph is used for this basin.
648         KM
649         BA   0.010
650         LG    0.15    0.36    6.80    0.30      23
651         UI      18      37      41      30      19       7       0       0       0       0
652         UI       0       0       0       0       0       0       0       0       0       0
653         UI       0       0       0       0       0       0       0       0       0       0
654         UI       0       0       0       0       0       0       0       0       0       0
655         UI       0       0       0       0       0       0       0       0       0       0
656         UI       0       0       0       0       0       0       0       0       0       0
657         UI       0       0       0       0       0       0       0       0       0       0
658         UI       0       0       0       0       0       0       0       0       0       0
659         UI       0       0       0       0       0       0       0       0       0       0
660         UI       0       0       0       0       0       0       0       0       0       0
661         UI       0       0       0       0       0       0       0       0       0       0
662         UI       0       0       0       0       0       0       0       0       0       0
663         UI       0       0       0       0       0       0       0       0       0       0
            *        0       0       0       0       0       0       0       0       0       0

664         KK  RSM
            * RESERVOIR STORAGE
665         KO       0       0
666         RS       1    STOR     0.0       0      22
            * RSM Volume
667         SV     0.0    0.13    0.31    0.54
            * RSM Storage elev
668         SE     0.0     1.0     2.0     3.0
669         SL     0.5   0.785     0.6     0.5
670         SS     2.0    10.0     2.6     1.5

671         KK   W    BASIN
672         KM   Sub-Basin   W
673         KM
674         KM      The Phoenix Mountain S-Graph is used for this basin.
675         KM
676         BA   0.026
677         LG    0.15    0.36    6.80    0.30      23
678         UI       3       7      10      14      17      20      24      27      31      34
679         UI      38      41      44      48      46      44      42      40      38      36
680         UI      33      31      29      27      25      23      21      19      17      15
681         UI      13      11       9       7       5       3       1       0       0       0
682         UI       0       0       0       0       0       0       0       0       0       0
683         UI       0       0       0       0       0       0       0       0       0       0
684         UI       0       0       0       0       0       0       0       0       0       0
685         UI       0       0       0       0       0       0       0       0       0       0
686         UI       0       0       0       0       0       0       0       0       0       0
687         UI       0       0       0       0       0       0       0       0       0       0
688         UI       0       0       0       0       0       0       0       0       0       0
689         UI       0       0       0       0       0       0       0       0       0       0
690         UI       0       0       0       0       0       0       0       0       0       0
            *        0       0       0       0       0       0       0       0       0       0
```

1


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691         KK   X    BASIN
692         KM   Sub-Basin   X
693         KM
694         KM      The Phoenix Mountain S-Graph is used for this basin.
695         KM
696         BA   0.004
697         LG    0.15    0.36    6.80    0.30      23
698         UI       1       3       4       6       7       8      10       9       8       7
699         UI       6       6       5       4       3       2       1       1       0       0
700         UI       0       0       0       0       0       0       0       0       0       0
701         UI       0       0       0       0       0       0       0       0       0       0
702         UI       0       0       0       0       0       0       0       0       0       0
703         UI       0       0       0       0       0       0       0       0       0       0
704         UI       0       0       0       0       0       0       0       0       0       0
705         UI       0       0       0       0       0       0       0       0       0       0
706         UI       0       0       0       0       0       0       0       0       0       0
707         UI       0       0       0       0       0       0       0       0       0       0
708         UI       0       0       0       0       0       0       0       0       0       0
709         UI       0       0       0       0       0       0       0       0       0       0
710         UI       0       0       0       0       0       0       0       0       0       0
            *        0       0       0       0       0       0       0       0       0       0

711         KK   CP-E
712         KM   CP(E2FHKLJM)
713         KM     Combine routed hydrographs from S11E2 with F, H, K, L, J, M, W and X
714         HC       5
            *

715         KK   S11C4   BASIN
716         KM   Sub-Basin   S11C4
717         KM
```

```
718          KM      The Phoenix Mountain S-Graph is used for this basin.
719          KM
720          BA   0.020
721          LG    0.15    0.40    6.00    0.18       0
722          UI       7      21      42      57      67      40      34      27      21      16
723          UI      13       9       8       6       5       3       3       1       2       1
724          UI       1       2       1       0       0       0       0       0       0       0
725          UI       0       0       0       0       0       0       0       0       0       0
726          UI       0       0       0       0       0       0       0       0       0       0
727          UI       0       0       0       0       0       0       0       0       0       0
728          UI       0       0       0       0       0       0       0       0       0       0
729          UI       0       0       0       0       0       0       0       0       0       0
730          UI       0       0       0       0       0       0       0       0       0       0
731          UI       0       0       0       0       0       0       0       0       0       0
732          UI       0       0       0       0       0       0       0       0       0       0
733          UI       0       0       0       0       0       0       0       0       0       0
734          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

735          KK  DRC1C4
736          KM        RETURN DIVERT FROM 511C1
737          DR  DIC1C4
             *

738          KK  RTC1C4   ROUTE   REACH
739          KM   Normal depth channel route from 511C1 to 511C4
740          RS      1     FLOW      -1
741          RC  0.070   0.040   0.070    1058  0.0170 2605.30
742          RX    0.0   104.0   140.0   187.0   243.0   273.0   302.0   324.0
743          RY 2599.4  2599.6  2598.4  2598.3  2600.0  2602.0  2604.0  2605.3
             *

744          KK  CP11C4
745          KM     Combine routed hydrographs from 511C1 with 511C4
746          HC      2
             *

747          KK  DIC4E2
748          KM   DIVERT FLOW FROM 511C4 TO 511C5 AT NATURAL FLOW SPLIT
749          DT  DIC4C5
750          DI       0      25     100     150     300     400     500
751          DQ       0      20      73     106     203     264     325
             *

752          KK  RTC4E2   ROUTE   REACH
753          KM   Normal depth channel route from 511C4 to 511E2
754          RS      4     FLOW      -1
755          RC  0.070   0.040   0.070    6075  0.0214 2506.00
756          RX    0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
757          RY 2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
             *

758          KK  CP11E2
759          KM     Combine routed hydrographs from CPE1E2, RTC1E2,RTC4E2
760          HC      3
             *

761          KK   511C5   BASIN
762          KM   Sub-Basin   511C5
763          KM
764          KM      The Phoenix Mountain S-Graph is used for this basin.
765          KM
766          BA   0.110
767          LG    0.15    0.35    7.00    0.12       0
768          UI      19      20      51      80     120     136     156     213     198     136
769          UI     119     106      94      87      76      66      57      48      44      43
770          UI      33      28      25      22      21      16      15      15      10       9
771          UI      10       9       7       4       4       3       4       4       4       3
772          UI       4       4       4       0       0       0       0       0       0       0
773          UI       0       0       0       0       0       0       0       0       0       0
774          UI       0       0       0       0       0       0       0       0       0       0
775          UI       0       0       0       0       0       0       0       0       0       0
776          UI       0       0       0       0       0       0       0       0       0       0
```



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

777          UI       0       0       0       0       0       0       0       0       0       0
778          UI       0       0       0       0       0       0       0       0       0       0
779          UI       0       0       0       0       0       0       0       0       0       0
780          UI       0       0       0       0       0       0       0       0       0       0
             *

781          KK  DRC4C5
782          KM        RETURN DIVERT FROM 511C4
783          DR  DIC4C5
             *
```

```
784          KK  RTC4C5   ROUTE   REACH
785          KM   Normal depth channel route from 511C4 to 511C5
786          RS       2    FLOW      -1
787          RC   0.070   0.040   0.070    3182  0.0236 2532.20
788          RX     0.0    17.5    62.9   117.1   128.2   142.8   157.3   170.1
789          RY  2532.2  2532.0  2530.0  2526.0  2525.5  2526.0  2530.0  2530.2
             *

790          KK   511C3   BASIN
791          KM   Sub-Basin   511C3
792          KM
793          KM      The Phoenix Mountain S-Graph is used for this basin.
794          KM
795          BA   0.141
796          LG    0.15    0.40    6.00    0.18       0
797          UI      22      22      40      73     109     134     156     176     212     250
798          UI     171     140     125     117     106      95      90      76      68      58
799          UI      53      49      47      37      34      28      27      23      24      18
800          UI      17      17      13      10      11      10      10       9       4       4
801          UI       4       4       4       5       4       4       4       4       4       5
802          UI       0       0       0       0       0       0       0       0       0       0
803          UI       0       0       0       0       0       0       0       0       0       0
804          UI       0       0       0       0       0       0       0       0       0       0
805          UI       0       0       0       0       0       0       0       0       0       0
806          UI       0       0       0       0       0       0       0       0       0       0
807          UI       0       0       0       0       0       0       0       0       0       0
808          UI       0       0       0       0       0       0       0       0       0       0
809          UI       0       0       0       0       0       0       0       0       0       0
             *

810          KK  RTC3C5   ROUTE   REACH
811          KM   Normal depth channel route from 511C3 to 511C5
812          RS       2    FLOW      -1
813          RC   0.070   0.040   0.070    3234  0.0232 2532.20
814          RX     0.0    17.5    62.9   117.1   128.2   142.8   157.3   170.1
815          RY  2532.2  2532.0  2530.0  2526.0  2525.5  2526.0  2530.0  2530.2
             *

816          KK   511C2   BASIN
817          KM   Sub-Basin   511C2
818          KM
819          KM      The Phoenix Mountain S-Graph is used for this basin.
820          KM
821          BA   0.392
```



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

822          LG    0.15    0.40    6.00    0.18       0
823          UI      36      38      36      36      98     119     148     191     216     238
824          UI     266     275     296     349     403     442     338     270     241     227
825          UI     215     203     193     182     170     164     150     144     137     122
826          UI     114     100      93      90      88      84      77      78      62      59
827          UI      57      47      46      48      39      40      41      36      28      29
828          UI      28       0       0       0       0       0       0       0       0       0
829          UI       0       0       0       0       0       0       0       0       0       0
830          UI       0       0       0       0       0       0       0       0       0       0
831          UI       0       0       0       0       0       0       0       0       0       0
832          UI       0       0       0       0       0       0       0       0       0       0
833          UI       0       0       0       0       0       0       0       0       0       0
834          UI       0       0       0       0       0       0       0       0       0       0
835          UI       0       0       0       0       0       0       0       0       0       0
             *

836          KK  DIC2C5
837          KM   DIVERT FLOW FROM 511C2 TO 509A2 AT NATURAL FLOW SPLIT
838          DT  DIC2A2
839          DI       0      25      70     150     300     400     500
840          DQ       0       7    22.5      51     111     152     197
             *

841          KK  RTC2C5   ROUTE   REACH
842          KM   Normal depth channel route from 511C2 to 511C5
843          RS       2    FLOW      -1
844          RC   0.070   0.040   0.070    3086  0.0230 2554.50
845          RX     0.0     9.3    49.5   114.2   122.3   140.1   149.6   197.3
846          RY  2554.5  2554.0  2552.2  2552.0  2551.8  2551.6  2552.0  2553.8
             *

847          KK  CP11C5
848          KM     Combine routed hydrographs from 511C5, RTC4C5, RTC3C5, RTC2C5
849          HC       4
             *

850          KK  DIC5E2
851          KM   DIVERT FLOW FROM 511C5 TO 511C6 AT NATURAL FLOW SPLIT
852          DT  DIC5C6
853          DI       0     100     150     200     250     300     350     400     450     500
854          DI     550     600     650     700     750
855          DQ       0      60      97     136     174     218     257     290     332     375
```

```
 856          DQ     418     455     369     401     421
              *

 857          KK  RTC5E2   ROUTE   REACH
 858          KM   Normal depth channel route from S11C5 to S11E2
 859          RS       2    FLOW      -1
 860          RC   0.070   0.040   0.070    2668  0.0217 2506.00
 861          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
 862          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
              *
```



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

 863          KK   S11C6   BASIN
 864          KM   Sub-Basin   S11C6
 865          KM
 866          KM      The Phoenix Mountain S-Graph is used for this basin.
 867          KM
 868          BA   0.035
 869          LG    0.15    0.35    7.00    0.12       0
 870          UI       8      10      24      39      53      60      82      63      46      41
 871          UI      37      32      28      23      18      17      16      12       9       9
 872          UI       8       6       6       4       4       4       4       2       1       2
 873          UI       1       2       1       2       1       2       0       0       0       0
 874          UI       0       0       0       0       0       0       0       0       0       0
 875          UI       0       0       0       0       0       0       0       0       0       0
 876          UI       0       0       0       0       0       0       0       0       0       0
 877          UI       0       0       0       0       0       0       0       0       0       0
 878          UI       0       0       0       0       0       0       0       0       0       0
 879          UI       0       0       0       0       0       0       0       0       0       0
 880          UI       0       0       0       0       0       0       0       0       0       0
 881          UI       0       0       0       0       0       0       0       0       0       0
 882          UI       0       0       0       0       0       0       0       0       0       0
 883          UI       0       0       0       0       0       0       0       0       0       0
 884          UI       0       0       0       0       0       0       0       0       0       0
 885          UI       0       0       0       0       0       0       0       0       0       0
              *

 886          KK  DRC5C6
 887          KM      RETURN DIVERT FROM S11C5
 888          DR  DIC5C6
              *

 889          KK  RTC5C6   ROUTE   REACH
 890          KM   Normal depth channel route from S11C5 to S11C6
 891          RS       2    FLOW      -1
 892          RC   0.070   0.040   0.070    2644  0.0155 2490.80
 893          RX     0.0    68.8   177.6   245.2   257.0   350.0   363.8   398.6
 894          RY  2490.0  2489.3  2488.8  2490.0  2489.0  2489.0  2490.0  2490.8
              *

 895          KK  CP11C6
 896          KM     Combine routed hydrograph from S11C6 and RTC5C6
 897          HC       2
              *

 898          KK  CP11EF
 899          KM     Combine hydrographs CP11E2, RTC5E2 and CP11C6
 900          HC       3
              *

 901          KK    CPEF
 902          KM     Combine hydrographs from CP11EF and CP11F2
 903          HC       2
              *
```



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

 904          KK  RTEFC8   ROUTE   REACH
 905          KM   Normal depth channel route from CPEF to CP11C8
 906          RS       1    FLOW      -1
 907          RC   0.070   0.040   0.070    1278  0.0141 2454.00
 908          RX     0.0    86.0    91.9   125.2   207.6   319.0   482.9   605.1
 909          RY  2454.0  2448.0  2447.0  2447.0  2448.0  2450.0  2451.0  2452.0
              *

 910          KK   S11C8   BASIN
 911          KM   Sub-Basin   S118
 912          KM
 913          KM      The Phoenix Mountain S-Graph is used for this basin.
 914          KM
 915          BA   0.041
 916          LG    0.15    0.37    5.20    0.25       0
 917          UI      13      34      69      94     139      89      70      59      48      36
 918          UI      30      25      17      15      12      10       7       6       5       3
 919          UI       2       3       2       3       2       0       0       0       0       0
 920          UI       0       0       0       0       0       0       0       0       0       0
```

```
 921          UI      0      0      0      0      0      0      0      0      0      0
 922          UI      0      0      0      0      0      0      0      0      0      0
 923          UI      0      0      0      0      0      0      0      0      0      0
 924          UI      0      0      0      0      0      0      0      0      0      0
 925          UI      0      0      0      0      0      0      0      0      0      0
 926          UI      0      0      0      0      0      0      0      0      0      0
 927          UI      0      0      0      0      0      0      0      0      0      0
 928          UI      0      0      0      0      0      0      0      0      0      0
 929          UI      0      0      0      0      0      0      0      0      0      0
 930          UI      0      0      0      0      0      0      0      0      0      0
 931          UI      0      0      0      0      0      0      0      0      0      0
 932          UI      0      0      0      0      0      0      0      0      0      0
              *

 933          KK  CP11C8
 934          KM     Combine routed hydrograph from CPEF with 511C8
 935          HC       2
              *

 936          KK  RTC8C7   ROUTE   REACH
 937          KM   Normal depth channel route from CP11C8 to 511C7
 938          RS        1    FLOW       -1
 939          RC    0.070   0.040   0.070     547  0.0146 2460.00
 940          RX    950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
 941          RY   2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
              *

 942          KK   511C7   BASIN
 943          KM   Sub-Basin   511C7
 944          KM
 945          KM      The Phoenix Mountain S-Graph is used for this basin.
 946          KM
 947          BA   0.121
 948          LG    0.14    0.39    6.20    0.16       7
 949          UI      17      17      25      53      73      99     113     130     139     177
```



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

 950          UI     201     127     110     102      91      84      82      71      65      59
 951          UI      50      45      42      38      35      32      28      22      22      19
 952          UI      19      18      13      13      13      10       8       9       8       8
 953          UI       9       3       3       4       3       3       3       4       3       3
 954          UI       4       0       0       0       0       0       0       0       0       0
 955          UI       0       0       0       0       0       0       0       0       0       0
 956          UI       0       0       0       0       0       0       0       0       0       0
 957          UI       0       0       0       0       0       0       0       0       0       0
 958          UI       0       0       0       0       0       0       0       0       0       0
 959          UI       0       0       0       0       0       0       0       0       0       0
 960          UI       0       0       0       0       0       0       0       0       0       0
 961          UI       0       0       0       0       0       0       0       0       0       0
 962          UI       0       0       0       0       0       0       0       0       0       0
 963          UI       0       0       0       0       0       0       0       0       0       0
 964          UI       0       0       0       0       0       0       0       0       0       0
              *

 965          KK  CP11C7
 966          KM     Combine routed hydrograph from CP11C8, 511C7
 967          HC       2
              *

 968          KK   RTC7H   ROUTE   REACH
 969          KM   Normal depth channel route from 511C7 to 511H
 970          RS        4    FLOW       -1
 971          RC    0.070   0.040   0.070    6348  0.0176 2460.00
 972          RX    950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
 973          RY   2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
 974          RL                   0.62  2356.3
              *

 975          KK    511H   BASIN
 976          KM   Sub-Basin   511H
 977          KM
 978          KM      The Phoenix Mountain S-Graph is used for this basin.
 979          KM
 980          BA   0.303
 981          LG    0.15    0.35    4.40    0.38       1
 982          UI      32      34      32      59     104     132     166     207     221     238
 983          UI     267     297     358     402     267     227     211     189     183     174
 984          UI     161     149     142     131     119     111      98      86      82      78
 985          UI      74      73      66      53      54      43      41      43      35      36
 986          UI      37      25      25      26      25      22      17      16      16      16
 987          UI      16       0       0       0       0       0       0       0       0       0
 988          UI       0       0       0       0       0       0       0       0       0       0
 989          UI       0       0       0       0       0       0       0       0       0       0
 990          UI       0       0       0       0       0       0       0       0       0       0
 991          UI       0       0       0       0       0       0       0       0       0       0
 992          UI       0       0       0       0       0       0       0       0       0       0
 993          UI       0       0       0       0       0       0       0       0       0       0
 994          UI       0       0       0       0       0       0       0       0       0       0
 995          UI       0       0       0       0       0       0       0       0       0       0
```

```
 996          UI       0        0        0        0        0        0        0        0        0        0
 997          UI       0        0        0        0        0        0        0        0        0        0
              *
1                                              HEC-1 INPUT                                              PAGE 24

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

 998          KK   CP11H
 999          KM     Combine routed hydrographs from RTC7H with 511H
1000          HC       2
              *

1001          KK   RTHG4    ROUTE    REACH
1002          KM   Normal depth channel route from CPC7H TO 511G4
1003          RS       1     FLOW       -1
1004          RC   0.070    0.040    0.070      933   0.0209  2336.00
1005          RX     0.0     44.0     71.0     80.0     90.0    101.0    143.0    154.0
1006          RY  2336.0   2330.0   2324.0   2323.3   2324.0   2330.0   2334.0   2335.0
              *

1007          KK   511G1    BASIN
1008          KM   Sub-Basin   511G1
1009          KM
1010          KM       The Phoenix Mountain S-Graph is used for this basin.
1011          KM
1012          BA   0.310
1013          LG    0.15     0.38     5.60     0.22        8
1014          UI      51       53      122      205      299      350      400      492      618      411
1015          UI     340      294      274      255      220      198      174      144      126      124
1016          UI     108       91       80       66       60       59       48       40       41       32
1017          UI      25       26       25       26       13       10       10       10       10       10
1018          UI      10       10       10       10       10       10        0        0        0        0
1019          UI       0        0        0        0        0        0        0        0        0        0
1020          UI       0        0        0        0        0        0        0        0        0        0
1021          UI       0        0        0        0        0        0        0        0        0        0
1022          UI       0        0        0        0        0        0        0        0        0        0
1023          UI       0        0        0        0        0        0        0        0        0        0
              *

1024          KK   RTG1G2   ROUTE    REACH
1025          KM   Normal depth channel route from 511G1 to 511G2
1026          RS       3     FLOW       -1
1027          RC   0.070    0.040    0.070     4246   0.0146  2472.00
1028          RX    19.0     45.0     98.0    182.0    219.0    234.0    270.0    308.0
1029          RY  2472.0   2470.0   2468.0   2466.0   2465.5   2466.0   2468.0   2472.0
              *

1030          KK   511G2    BASIN
1031          KM   Sub-Basin   511G2
1032          KM
1033          KM       The Phoenix Mountain S-Graph is used for this basin.
1034          KM
1035          BA   0.106
1036          LG    0.15     0.37     5.30     0.24        0
1037          UI      16       16       20       41       61       78       90      103      122      152
1038          UI     127       92       78       76       66       62       56       50       46       38
1039          UI      32       30       28       25       22       20       14       14       12       12
1040          UI      12       11       11       10        7        7        7        7        7        4
1041          UI       2        3        2        3        2        2        3        2        3        2
1042          UI       3        0        0        0        0        0        0        0        0        0
1043          UI       0        0        0        0        0        0        0        0        0        0
1                                              HEC-1 INPUT                                              PAGE 25

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

1044          UI       0        0        0        0        0        0        0        0        0        0
1045          UI       0        0        0        0        0        0        0        0        0        0
1046          UI       0        0        0        0        0        0        0        0        0        0
              *
              * ***********************************************************************************
              *   ONSITE NEW BASINS ADDED
              * ***********************************************************************************

1047          KK       P    BASIN
1048          BA    .014
1049          LG     .35      .39     5.70      .20    23.00
1050          UI     31.      62.      68.      50.      31.      13.       0.       0.       0.       0.
1051          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
1052          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
              *

1053          KK     RSP
              * RESERVOIR STORAGE
1054          KO       0        0      0.0        0       22
1055          RS       1     STOR      0.0      0.0
              *    RSP Volume
1056          SV     0.0     0.21     0.46     0.75
              *    RSP Storage elev
1057          SE     0.0      1.0      2.0      3.0
1058          SL     .75     1.77      0.6      0.5
```

```
1059          SS     2.0    10.0    2.60     1.5
              *

1060          KK     Q   BASIN
1061          BA    .017
1062          LG    .35     .39    5.70     .20   23.00
1063          UI    37.     73.    81.      59.    37.     15.     0.      0.      0.      0.
1064          UI     0.      0.     0.       0.     0.      0.     0.      0.      0.      0.
1065          UI     0.      0.     0.       0.     0.      0.     0.      0.      0.      0.
              *

1066          KK    RSQ
              * RESERVOIR STORAGE
1067          KO      0       0     0.0      0     22
1068          RS      1    STOR     0.0     0.0
              *    RSQ Volume
1069          SV    0.0    0.21    0.46    0.75
              *    RSQ Storage elev
1070          SE    0.0     1.0     2.0     3.0
1071          SL    .75    1.77     0.6     0.5
1072          SS    2.0    20.0    2.60     1.5
              *

1073          KK     O   BASIN
1074          BA    .012
1075          LG    .35     .39    5.70     .20   23.00
1076          UI    26.     51.    57.      41.    26.     10.     0.      0.      0.      0.
1077          UI     0.      0.     0.       0.     0.      0.     0.      0.      0.      0.
1078          UI     0.      0.     0.       0.     0.      0.     0.      0.      0.      0.
              *
```



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

1079          KK    RSO
              * RESERVOIR STORAGE
1080          KO      0       0     0.0      0     22
1081          RS      1    STOR     0.0     0.0
              *    RSO Volume
1082          SV    0.0    0.12    0.27    0.45
              *    RSO Storage elev
1083          SE    0.0     1.0     2.0     3.0
1084          SL    .75    1.77     0.6     0.5
1085          SS    2.0    10.0    2.60     1.5
              *

1086          KK     T   BASIN
1087          BA    .003
1088          LG    .35     .39    5.70     .20   23.00
1089          UI     6.     11.    12.       9.     6.      2.     0.      0.      0.      0.
1090          UI     0.      0.     0.       0.     0.      0.     0.      0.      0.      0.
1091          UI     0.      0.     0.       0.     0.      0.     0.      0.      0.      0.
              *

1092          KK    RST
              * RESERVOIR STORAGE
1093          KO      0       0     0.0      0     22
1094          RS      1    STOR     0.0     0.0
              *    RST Volume
1095          SV    0.0    0.04    0.10    0.19
              *    RST Storage elev
1096          SE    0.0     1.0     2.0     3.0
1097          SL    .75    1.77     0.6     0.5
1098          SS    2.0    10.0    2.60     1.5
              *

1099          KK     E   BASIN
1100          BA    .024
1101          LG    .35     .39    5.70     .20   23.00
1102          UI    53.    107.    117.     85.    53.     22.     0.      0.      0.      0.
1103          UI     0.      0.     0.       0.     0.      0.     0.      0.      0.      0.
1104          UI     0.      0.     0.       0.     0.      0.     0.      0.      0.      0.
              *

1105          KK    RSE
              * RESERVOIR STORAGE
1106          KO      0       0     0.0      0     22
1107          RS      1    STOR     0.0     0.0
              *    RSE Volume
1108          SV    0.0    0.31    0.67    1.09
              *    RSE Storage elev
1109          SE    0.0     1.0     2.0     3.0
1110          SL    .75    1.77     0.6     0.5
1111          SS    2.0    30.0    2.60     1.5
              *
              * ********************************************************************************
              *  CP11G MODIFIED TO INCLUDE NEW BASINS
              * ********************************************************************************
```

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

1112          KK   CP11G
1113          KM   COMBINE HYDROGRAPHS RSP, RSQ, RSO, RST, AND RSE
1114          HC      5
              *

1115          KK     Y  BASIN
1116          BA   .004
1117          LG    .35     .39    5.70     .20   23.00
1118          UI     3.      6.      9.     12.     11.      9.      7.      5.      3.      1.
1119          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1120          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1121          KK  CP11G2
1122          KM     Combine routed hydrographs from S11G1, S11G2, CPC7H, CP11G and Y
1123          HC      4
              *

1124          KK  RTG2G4   ROUTE   REACH
1125          RS       4    FLOW      -1
1126          RC   0.070   0.040   0.070    5908  0.0190 2472.00
1127          RX   950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
1128          RY  2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
              *

1129          KK   S11G3   BASIN
1130          KM   Sub-Basin   S11G3
1131          KM
1132          KM      The Phoenix Mountain S-Graph is used for this basin.
1133          KM
1134          BA   0.097
1135          LG    0.15    0.36    5.00    0.28       0
1136          UI      14      15      23      46      67      84      99     110     130     163
1137          UI     137     100      84      83      72      68      62      56      50      44
1138          UI      37      34      33      30      26      24      18      18      16      15
1139          UI      13      11      11      10       7       7       7       7       7       4
1140          UI       3       2       3       3       3       2       3       3       3       2
1141          UI       3       0       0       0       0       0       0       0       0       0
1142          UI       0       0       0       0       0       0       0       0       0       0
1143          UI       0       0       0       0       0       0       0       0       0       0
1144          UI       0       0       0       0       0       0       0       0       0       0
1145          UI       0       0       0       0       0       0       0       0       0       0
              *

1146          KK  RTG3G4   ROUTE   REACH
1147          KM   Normal depth channel route from S11G3 to S11G4
1148          RS       4    FLOW      -1
1149          RC   0.070   0.040   0.070    5322  0.0231 2380.30
1150          RX    34.0    65.0    84.0    98.0   105.0   131.0   166.0   173.0
1151          RY  2380.0  2378.0  2376.0  2374.0  2376.0  2378.0  2380.0  2380.3
              *
```



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

1152          KK   S11G4   BASIN
1153          KM   Sub-Basin   S11G4
1154          KM
1155          KM      The Phoenix Mountain S-Graph is used for this basin.
1156          KM
1157          BA   0.298
1158          LG    0.15    0.35    4.65    0.32       1
1159          UI      33      34      33      67     110     139     179     213     230     248
1160          UI     285     321     402     343     248     217     204     189     176     171
1161          UI     155     144     140     124     111     104      89      83      82      76
1162          UI      71      68      54      53      44      42      40      37      37      33
1163          UI      26      26      25      26      18      17      16      17      16      17
1164          UI      16       0       0       0       0       0       0       0       0       0
1165          UI       0       0       0       0       0       0       0       0       0       0
1166          UI       0       0       0       0       0       0       0       0       0       0
1167          UI       0       0       0       0       0       0       0       0       0       0
1168          UI       0       0       0       0       0       0       0       0       0       0
              *

1169          KK  CPG_G4
1170          KM     Combine routed hydrographs from RTG2G4, RTG3G4 and S11G4
1171          HC      3
              *

1172          KK  CP11G4
1173          KM     Combine routed hydrographs from RTHG4 and CPG_G4
1174          HC      2
              *

1175          KK   RTG4I   ROUTE   REACH
1176          RS       3    FLOW      -1
1177          RC   0.070   0.040   0.070    4438  0.0361 2460.00
```

```
1178          RX   950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
1179          RY  2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
              *

1180          KK    511I   BASIN
1181          KM   Sub-Basin   511I
1182          KM
1183          KM      The Phoenix Mountain S-Graph is used for this basin.
1184          KM
1185          BA   0.198
1186          LG    0.14    0.35    4.10    0.44       2
1187          UI      28      28      40      86     121     162     184     213     228     290
1188          UI     328     209     179     166     151     137     133     117     107      96
1189          UI      82      72      69      63      58      52      46      36      36      32
1190          UI      30      28      22      21      22      16      14      14      13      14
1191          UI      14       5       5       6       5       5       6       5       5       5
1192          UI       6       0       0       0       0       0       0       0       0       0
1193          UI       0       0       0       0       0       0       0       0       0       0
              *
```



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

1194          KK   CP11I
1195          KM     Combine routed hydrograph from RTG2I with runoff from 511I
1196          KO                                    21
1197          HC      2
              *
              *
              * ********************************************************************************
              * ******************************     Major Basin 510    ************************
              * ********************************************************************************
              *

1198          KK    510A   BASIN
1199          KM   Sub-Basin   510A
1200          KM
1201          KM      The Phoenix Mountain S-Graph is used for this basin.
1202          KM
1203          BA   0.923
1204          KO                                    21
1205          LG    0.12    0.39    6.20    0.15      10
1206          UI      63      64      63      63      64     106     182     212     240     286
1207          UI     347     373     402     435     459     472     507     535     601     691
1208          UI     753     746     570     467     446     419     383     370     381     338
1209          UI     329     330     308     294     290     269     251     253     238     215
1210          UI     212     197     177     171     160     153     156     144     144     139
1211          UI     133       0       0       0       0       0       0       0       0       0
1212          UI       0       0       0       0       0       0       0       0       0       0
1213          UI       0       0       0       0       0       0       0       0       0       0
1214          UI       0       0       0       0       0       0       0       0       0       0
1215          UI       0       0       0       0       0       0       0       0       0       0
1216          UI       0       0       0       0       0       0       0       0       0       0
              *
              *
              * ********************************************************************************
              * ******************************     Major Basin 509    ************************
              * ********************************************************************************
              *

1217          KK   509A5   BASIN
1218          KM   Sub-Basin   509A5
1219          KM
1220          KM      The Phoenix Mountain S-Graph is used for this basin.
1221          KM
1222          BA   0.020
1223          LG    0.12    0.36    5.10    0.24       9
1224          UI       7      21      42      57      67      40      34      27      21      16
1225          UI      13       9       8       6       5       3       3       1       2       1
1226          UI       1       2       1       0       0       0       0       0       0       0
1227          UI       0       0       0       0       0       0       0       0       0       0
1228          UI       0       0       0       0       0       0       0       0       0       0
1229          UI       0       0       0       0       0       0       0       0       0       0
1230          UI       0       0       0       0       0       0       0       0       0       0
1231          UI       0       0       0       0       0       0       0       0       0       0
1232          UI       0       0       0       0       0       0       0       0       0       0
1233          UI       0       0       0       0       0       0       0       0       0       0
```



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

1234          UI       0       0       0       0       0       0       0       0       0       0
1235          UI       0       0       0       0       0       0       0       0       0       0
              *

1236          KK  DIA59B
1237          KM   DIVERT FLOW FROM 509A5 TO 509A6 BY NATURAL FLOW SPLIT
1238          DT   DIA5S
1239          DI       0      75     150     225     308     480     650
1240          DQ       0       2      15      30      50      95     140
```

```
*
1241  KK  RTA59B   ROUTE   REACH
1242  KM   Normal depth channel route from 509A5 to 509B
1243  RS      13    FLOW      -1
1244  RC   0.070   0.040   0.070   18484  0.0233 2188.00
1245  RX     0.0    61.0   150.0   160.0   164.0   174.0   266.0   290.0
1246  RY  2184.6  2184.0  2182.0  2180.0  2179.8  2180.0  2186.0  2188.0
*
1247  KK    509B   BASIN
1248  KM   Sub-Basin   509B
1249  KM
1250  KM      The Phoenix Mountain S-Graph is used for this basin.
1251  KM
1252  BA   0.654
1253  LG    0.15    0.36    5.10    0.26       0
1254  UI      39      40      39      39      40      38      80     116     125     150
1255  UI     172     190     226     240     255     262     289     292     304     327
1256  UI     348     381     433     481     463     377     304     281     268     245
1257  UI     239     234     225     217     214     201     194     191     180     175
1258  UI     172     159     156     154     140     133     129     121     110     107
1259  UI     101       0       0       0       0       0       0       0       0       0
1260  UI       0       0       0       0       0       0       0       0       0       0
1261  UI       0       0       0       0       0       0       0       0       0       0
1262  UI       0       0       0       0       0       0       0       0       0       0
1263  UI       0       0       0       0       0       0       0       0       0       0
1264  UI       0       0       0       0       0       0       0       0       0       0
1265  UI       0       0       0       0       0       0       0       0       0       0
* ------------------------------------------------------------------------------
1266  KK   CP09B
1267  KM     Combine hydrographs from 509B and RTA59B
1268  KO                                      21
1269  HC       2
*
1270  KK   509A1   BASIN
1271  KM   Sub-Basin   509A1
1272  KM
1273  KM      The Phoenix Mountain S-Graph is used for this basin.
1274  KM
1275  BA   0.193
1276  LG    0.14    0.38    6.40    0.15       5
1277  UI      23      24      23      56      82     107     137     156     171     181
1278  UI     222     266     242     178     154     137     132     120     113     110
```



```
LINE  ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
1279  UI      95      90      83      72      64      60      55      52      51      45
1280  UI      37      36      29      30      26      25      25      19      18      17
1281  UI      19      13      11      12      11      11      12      11       4       4
1282  UI       5       0       0       0       0       0       0       0       0       0
1283  UI       0       0       0       0       0       0       0       0       0       0
1284  UI       0       0       0       0       0       0       0       0       0       0
1285  UI       0       0       0       0       0       0       0       0       0       0
1286  UI       0       0       0       0       0       0       0       0       0       0
1287  UI       0       0       0       0       0       0       0       0       0       0
1288  UI       0       0       0       0       0       0       0       0       0       0
*
1289  KK  RTA1A2   ROUTE   REACH
1290  KM   Normal depth channel route from 509A1 to 509A2
1291  RS       1    FLOW      -1
1292  RC   0.070   0.040   0.070    1427  0.0234 2464.80
1293  RX     0.0    33.0    66.0    86.0   114.0   120.0   135.0   177.0
1294  RY  2464.0  2463.7  2463.2  2462.8  2463.2  2463.8  2464.0  2464.8
*
1295  KK   509A2   BASIN
1296  KM   Sub-Basin   509A2
1297  KM
1298  KM      The Phoenix Mountain S-Graph is used for this basin.
1299  KM
1300  BA   0.128
1301  LG    0.13    0.36    6.80    0.12       6
1302  UI      17      18      21      51      72      94     109     130     137     163
1303  UI     210     155     119     107      98      93      84      78      70      66
1304  UI      57      51      45      42      38      38      32      28      24      22
1305  UI      20      19      19      14      13      13      13       9       8       9
1306  UI       8       9       7       3       3       4       3       3       3       4
1307  UI       3       0       0       0       0       0       0       0       0       0
1308  UI       0       0       0       0       0       0       0       0       0       0
1309  UI       0       0       0       0       0       0       0       0       0       0
1310  UI       0       0       0       0       0       0       0       0       0       0
1311  UI       0       0       0       0       0       0       0       0       0       0
1312  UI       0       0       0       0       0       0       0       0       0       0
1313  UI       0       0       0       0       0       0       0       0       0       0
*
```

```
1314          KK  DRC2A2
1315          KM        RETURN DIVERT FROM S11C2
1316          DR  DIC2A2
              *

1317          KK  RTC2A2   ROUTE   REACH
1318          KM   Normal depth channel route from S11C2 to S09A2
1319          RS       4    FLOW      -1
1320          RC   0.070   0.040   0.070    6045  0.0218 2520.00
1321          RX     0.0   147.0   228.3   252.5   257.8   262.8   282.7   348.4
1322          RY  2502.0  2500.6  2500.0  2498.0  2497.6  2498.0  2500.0  2520.0
              *
```



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

1323          KK  CP09A2
1324          KM     Combine routed hydrograph from S11E4 with runoff from S09A2
1325          HC       3
              *

1326          KK  RTA2A4   ROUTE   REACH
1327          KM   Normal depth channel route from S09A2 to S09A3
1328          RS       2    FLOW      -1
1329          RC   0.070   0.040   0.070    2604  0.0384 2426.00
1330          RX     0.0   103.0   187.0   344.0   439.0   505.0   563.0   596.0
1331          RY  2422.0  2418.0  2417.4  2417.3  2418.0  2416.4  2422.0  2426.0
              *

1332          KK   S09A3   BASIN
1333          KM   Sub-Basin   S09A3
1334          KM
1335          KM      The Phoenix Mountain S-Graph is used for this basin.
1336          KM
1337          BA   0.162
1338          LG    0.14    0.38    6.40    0.15       4
1339          UI      25      25      46      83     127     154     178     202     244     288
1340          UI     196     161     144     134     122     109     103      88      78      67
1341          UI      60      56      54      44      39      32      30      27      28      20
1342          UI      19      19      16      12      12      12      12      10       4       5
1343          UI       5       5       4       5       5       4       5       5       4       5
1344          UI       0       0       0       0       0       0       0       0       0       0
1345          UI       0       0       0       0       0       0       0       0       0       0
1346          UI       0       0       0       0       0       0       0       0       0       0
1347          UI       0       0       0       0       0       0       0       0       0       0
1348          UI       0       0       0       0       0       0       0       0       0       0
1349          UI       0       0       0       0       0       0       0       0       0       0
1350          UI       0       0       0       0       0       0       0       0       0       0
              *

1351          KK  RTA3A4   ROUTE   REACH
1352          KM   Normal depth channel route from S09A3 to S09A4
1353          RS       1    FLOW      -1
1354          RC   0.070   0.040   0.070     717  0.0167 2406.00
1355          RX     0.0    69.0   124.0   175.0   252.0   303.0   342.0   363.0
1356          RY  2404.8  2404.0  2403.5  2402.8  2403.6  2403.0  2404.0  2406.0
              *

1357          KK   S09A4   BASIN
1358          KM   Sub-Basin   S09A4
1359          KM
1360          KM      The Phoenix Mountain S-Graph is used for this basin.
1361          KM
1362          BA   0.062
1363          LG    0.15    0.36    6.80    0.13       1
1364          UI      16      32      72     106     139     175     111      95      79      67
1365          UI      56      44      37      33      24      20      18      14      12       9
1366          UI       7       8       4       3       3       4       3       3       3       3
1367          UI       0       0       0       0       0       0       0       0       0       0
1368          UI       0       0       0       0       0       0       0       0       0       0
```



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

1369          UI       0       0       0       0       0       0       0       0       0       0
1370          UI       0       0       0       0       0       0       0       0       0       0
1371          UI       0       0       0       0       0       0       0       0       0       0
1372          UI       0       0       0       0       0       0       0       0       0       0
1373          UI       0       0       0       0       0       0       0       0       0       0
1374          UI       0       0       0       0       0       0       0       0       0       0
1375          UI       0       0       0       0       0       0       0       0       0       0
              *

1376          KK  CP09A4
1377          KM     Combine hydrographs from S09A4, RTA2A4, RTA3A4
1378          HC       3
              *
              * MODIFICATION STARTS
              *
```

```
1379          KK  RTA4A6   ROUTE   REACH
1380          KM   Normal depth channel route from CP509A4 to 509A6
1381          RS      2     FLOW      -1
1382          RC  0.070   0.040   0.070    1778  0.0185 2382.00
1383          RX    0.0    84.4   120.0   123.0   125.0   130.5   135.7   193.0
1384          RY 2382.0  2380.0  2378.0  2377.8  2378.0  2379.0  2380.0  2382.0
              *
              *

1385          KK  DRA5A6
1386          KM        RETURN DIVERT FROM 509A5
1387          DR   DIA5S
              *

1388          KK  RTA5A6   ROUTE   REACH
1389          KM   Normal depth channel route from 509A5 to 509A6
1390          RS      2     FLOW      -1
1391          RC  0.070   0.040   0.070    1778  0.0185 2382.00
1392          RX    0.0    84.4   120.0   123.0   125.0   130.5   135.7   193.0
1393          RY 2382.0  2380.0  2378.0  2377.8  2378.0  2379.0  2380.0  2382.0
              *

1394          KK   509A6   BASIN
1395          KM   Sub-Basin   509A6
1396          KM
1397          KM      The Phoenix Mountain S-Graph is used for this basin.
1398          KM
1399          BA   0.032
1400          KO                                    21
1401          LG   0.15    0.32    7.60    0.10     0
1402          UI      9      27      55      73     109      69      54      46      38      28
1403          UI     24      19      14      11       9       8       6       4       4       2
1404          UI      2       2       2       2       2       0       0       0       0       0
1405          UI      0       0       0       0       0       0       0       0       0       0
1406          UI      0       0       0       0       0       0       0       0       0       0
1407          UI      0       0       0       0       0       0       0       0       0       0
1408          UI      0       0       0       0       0       0       0       0       0       0
1409          UI      0       0       0       0       0       0       0       0       0       0
1410          UI      0       0       0       0       0       0       0       0       0       0
              *
```



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

1411          KK  CP09A6
1412          KM     Combine hydrographs from RTA4A6, RTA5A6, 509A6
1413          HC      3
              *
              * END OF MODIFICATION
              *

1414          KK    509D   BASIN
1415          KM   Sub-Basin   509D
1416          KM
1417          KM      The Phoenix Mountain S-Graph is used for this basin.
1418          KM
1419          BA   0.382
1420          KO                                    21
1421          LG   0.14    0.40    6.00    0.17     4
1422          UI     31      32      31      31      50      89     108     133     158     184
1423          UI    201     216     229     245     263     292     348     391     308     250
1424          UI    213     202     191     181     172     169     158     149     148     132
1425          UI    126     125     113     105     101      88      81      80      76      72
1426          UI     73      66      65      60      51      52      45      39      40      41
1427          UI     34       0       0       0       0       0       0       0       0       0
1428          UI      0       0       0       0       0       0       0       0       0       0
1429          UI      0       0       0       0       0       0       0       0       0       0
1430          UI      0       0       0       0       0       0       0       0       0       0
              *
              * ********************************************************************************
              * ******************************     Major Basin 500    ************************
              * ********************************************************************************
              *

1431          KK    500A   BASIN
1432          KM   Sub-Basin   500A
1433          KM
1434          KM      The Phoenix Mountain S-Graph is used for this basin.
1435          KM
1436          BA   0.204
1437          LG   0.15    0.37    5.20    0.25     1
1438          UI     28      30      41      89     124     167     189     221     235     298
1439          UI    338     215     184     172     155     142     137     120     110      99
1440          UI     85      75      70      65      59      54      46      38      37      33
1441          UI     31      30      21      22      22      17      14      15      13      14
1442          UI     15       5       6       5       6       5       6       5       6       5
1443          UI      6       0       0       0       0       0       0       0       0       0
              *

1444          KK    RTA8   ROUTE   REACH
```

```
1445          KM   Normal depth channel route from 500A to 500B
1446          RS      4     FLOW      -1
1447          RC   0.070   0.040   0.070    6187  0.0283 2261.00
1448          RX   822.0  1013.0  1035.0  1045.0  1049.0  1053.0  1076.0  1573.0
1449          RY  2261.0  2159.2  2158.9  2156.6  2156.8  2158.9  2159.0  2261.0
              *
```

1 HEC-1 INPUT

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

1450          KK    500B   BASIN
1451          KM   Sub-Basin   500B
1452          KM
1453          KM      The Phoenix Mountain S-Graph is used for this basin.
1454          KM
1455          BA   0.192
1456          LG    0.12    0.37    5.30    0.22       8
1457          UI      20      20      20      32      62      77      98     121     133     143
1458          UI     161     171     206     250     196     149     133     122     116     112
1459          UI     102      95      91      84      79      73      66      59      54      49
1460          UI      48      48      42      41      34      33      27      26      26      22
1461          UI      23      21      18      16      15      16      15      11      10      10
1462          UI      10       0       0       0       0       0       0       0       0       0
1463          UI       0       0       0       0       0       0       0       0       0       0
1464          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

1465          KK  CP500B
1466          KM     Combine routed hydrograph from 500A with runoff from 500B
1467          KO                                      21
1468          HC       2
              *
1469          ZZ
```

1

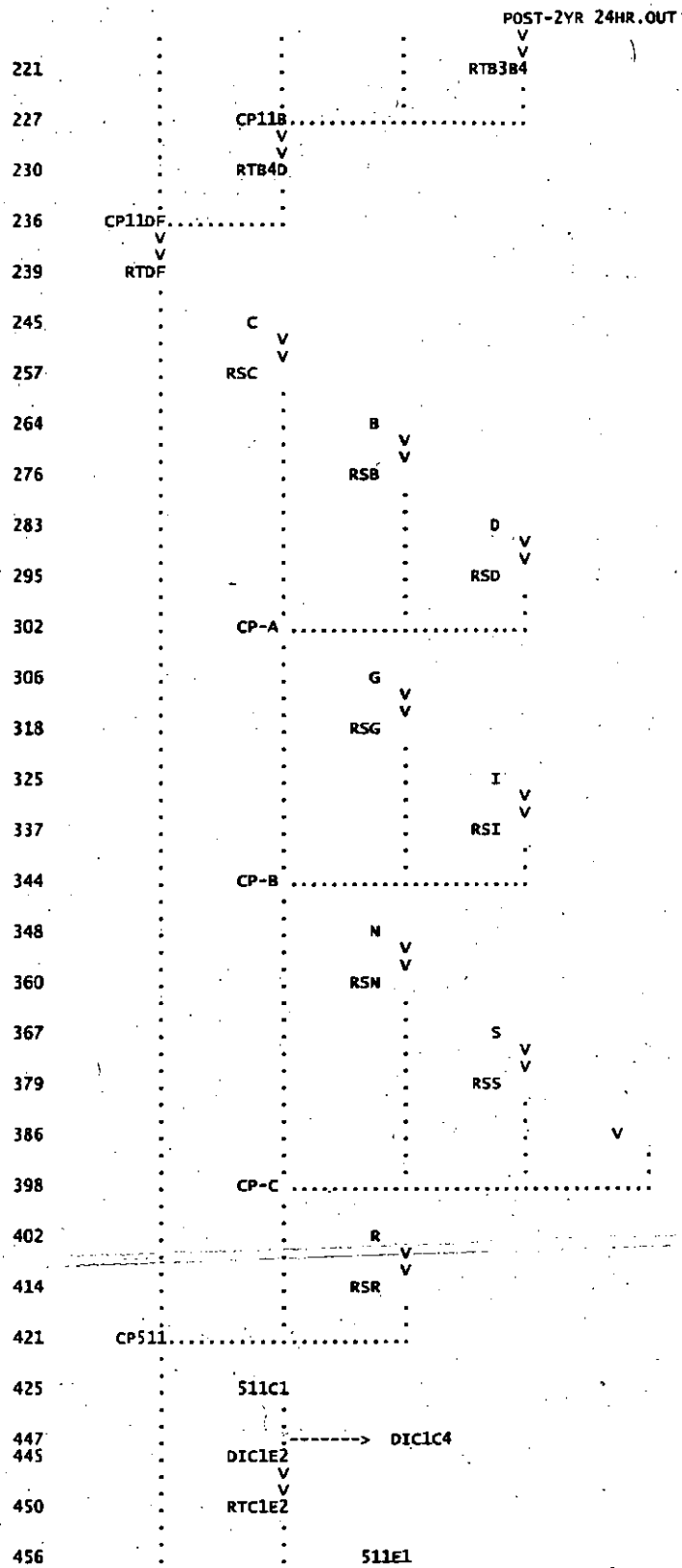
SCHEMATIC DIAGRAM OF STREAM NETWORK

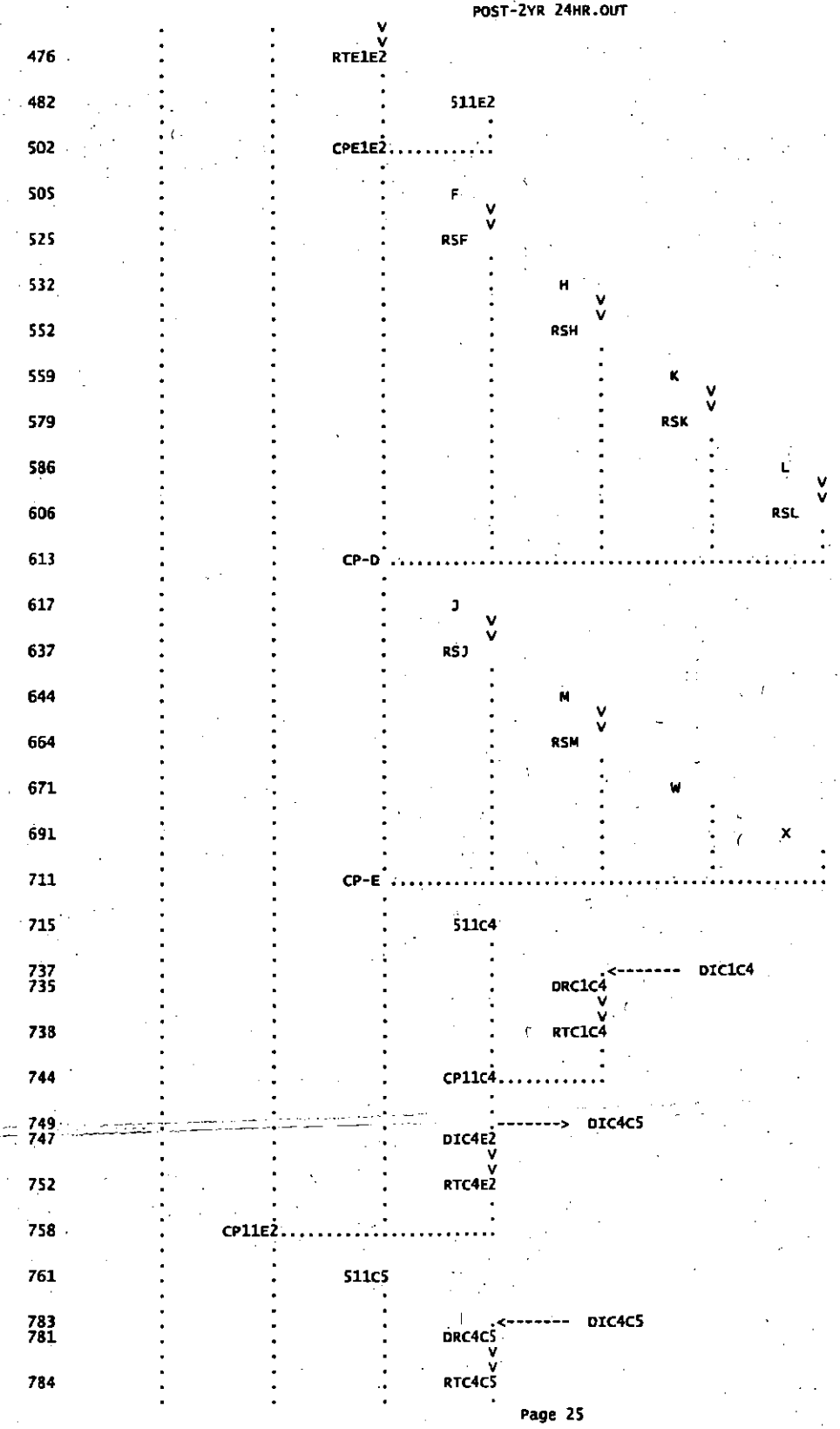
INPUT LINE NO.

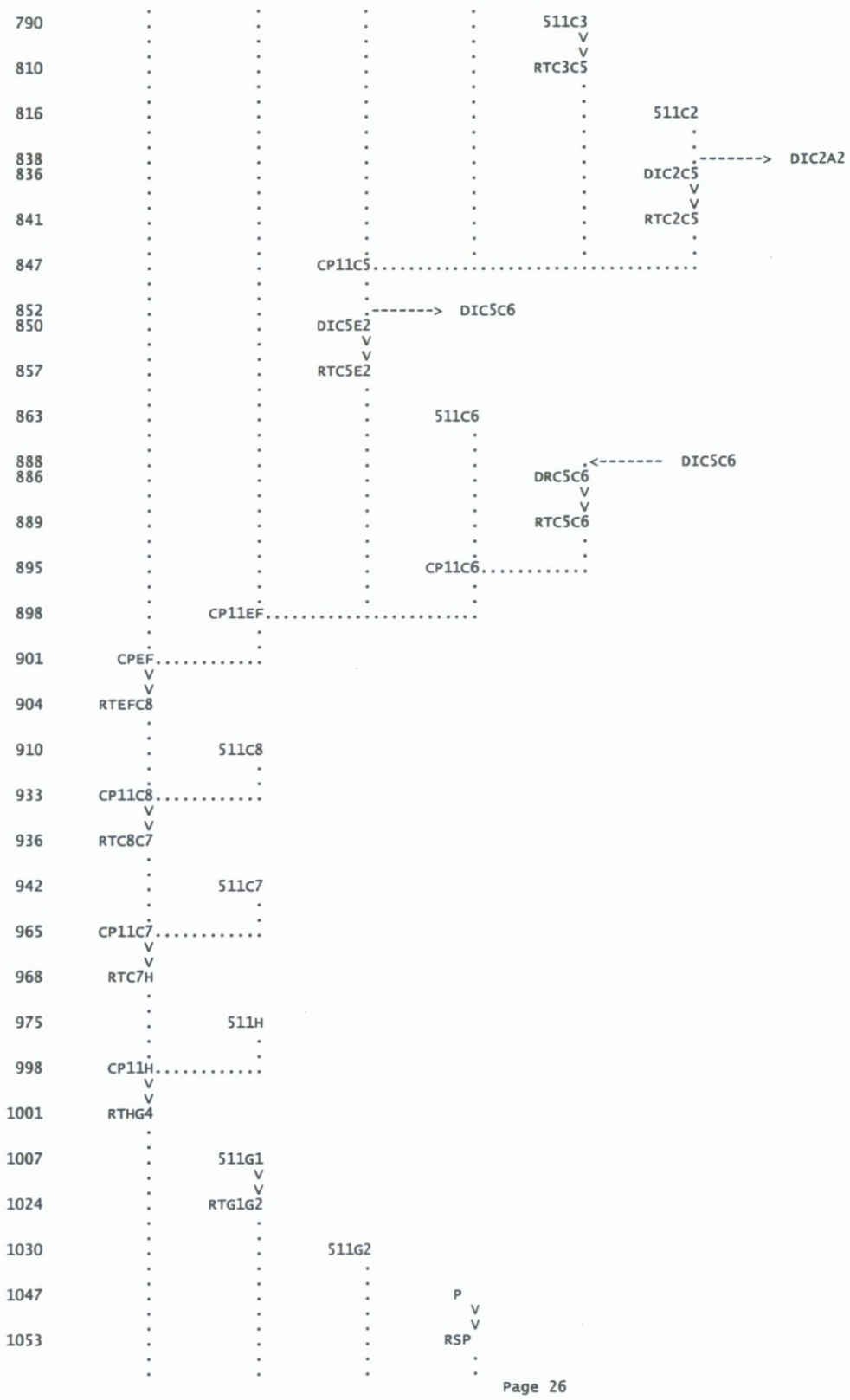
(V) ROUTING (---->) DIVERSION OR PUMP FLOW

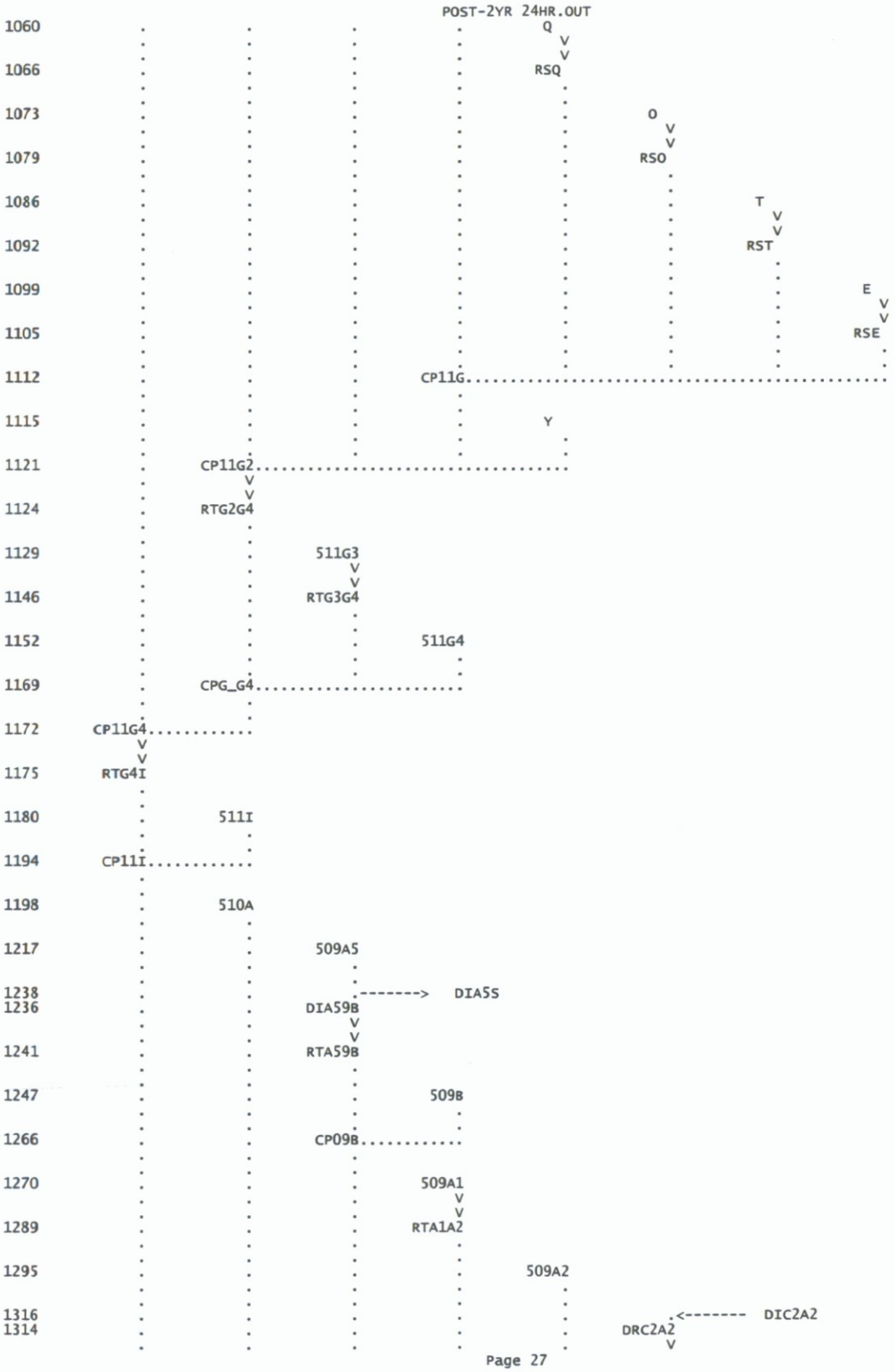
(.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW

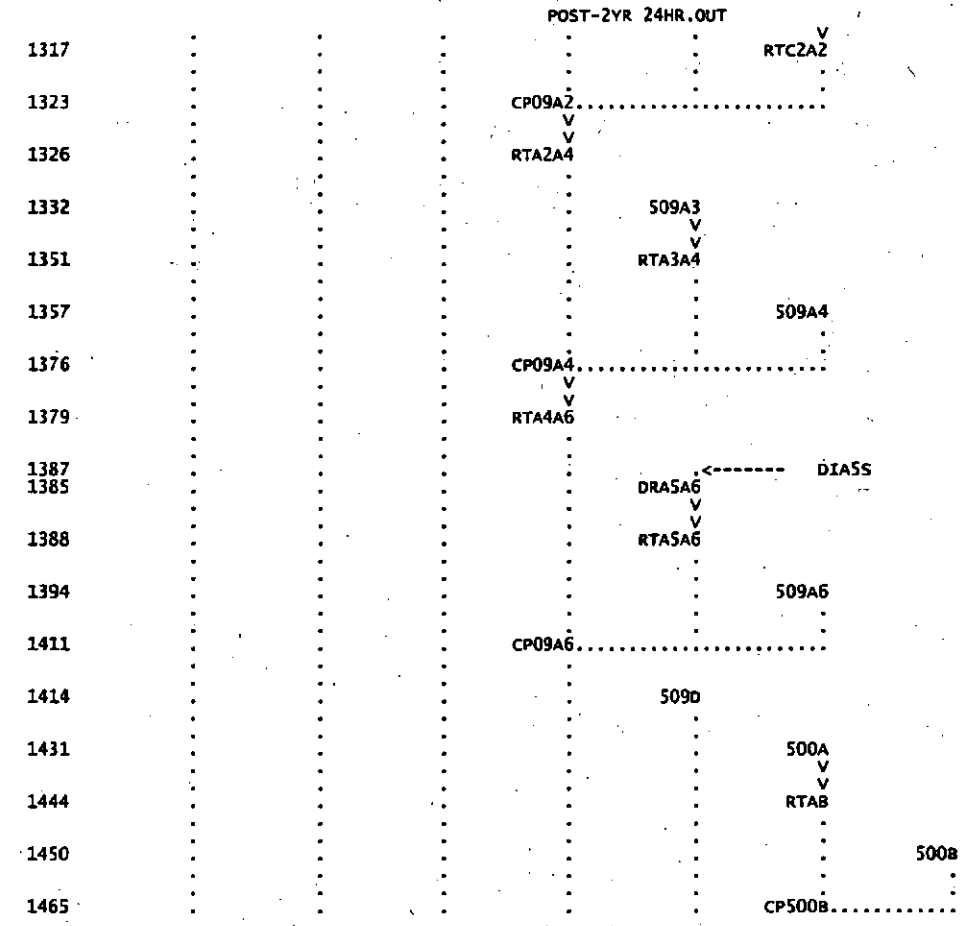
```
 15       511A1
              .
              .
 41           .       511A2
              .          V
              .          V
 56           .      RTA2A3
              .          .
              .          .
 62           .          .       511A3
              .          .          .
              .          .          .
 84       CP11A.....................
              V
              V
 87       RTA1D
              .
              .
 93           .        511D
              .          .
              .          .
109       CP11D...........
              .
              .
112           .        A
              .          V
              .          V
128           .      RSA
              .          .
              .          .
135       CP11D...........
              .
              .
138           .       511B4
              .          .
              .          .
153           .          .       511B1
              .          .          .
              .          .          .
168           .          .          .       511B2
              .          .          .          .
              .          .          .          .
190           .          .       CPB1B2.........
              .          .          V
              .          .          V
193           .          .       RT12B4
              .          .          .
              .          .          .
199           .          .          .       511B3
```


POST-2YR 24HR.OUT
221
RTB3B4
227
CP11B
230
RTB4D
236
CP11DF
239
RTDF
245
C
257
RSC
264
B
276
RSB
283
D
295
RSD
302
CP-A
306
G
318
RSG
325
I
337
RSI
344
CP-B
348
N
360
RSN
367
S
379
RSS
386
398
CP-C
402
R
414
RSR
421
CP511
425
511C1
447
445
DIC1E2
450
RTC1E2
456
511E1
DIC1C4


476
RTE1E2
482
511E2
502
CPE1E2
505
F
525
RSF
532
H
552
RSH
559
K
579
RSK
586
L
606
RSL
613
CP-D
617
J
637
RSJ
644
M
664
RSM
671
W
691
X
711
CP-E
715
511C4
737
735
DIC1C4
DRC1C4
738
RTC1C4
744
CP11C4
749
747
DIC4C5
DIC4E2
752
RTC4E2
758
CP11E2
761
511C5
783
781
DIC4C5
DRC4C5
784
RTC4C5


790
511C3
810
RTC3C5
816
511C2
838
DIC2A2
836
DIC2C5
841
RTC2C5
847
CP11C5
852
DIC5C6
850
DIC5E2
857
RTC5E2
863
511C6
888
DIC5C6
886
DRC5C6
889
RTC5C6
895
CP11C6
898
CP11EF
901
CPEF
904
RTEFC8
910
511C8
933
CP11C8
936
RTC8C7
942
511C7
965
CP11C7
968
RTC7H
975
511H
998
CP11H
1001
RTHG4
1007
511G1
1024
RTG1G2
1030
511G2
1047
P
1053
RSP


1060
Q
1066
RSQ
1073
O
1079
RSO
1086
T
1092
RST
1099
E
1105
RSE
1112
CP11G
1115
Y
1121
CP11G2
1124
RTG2G4
1129
511G3
1146
RTG3G4
1152
511G4
1169
CPG_G4
1172
CP11G4
1175
RTG4I
1180
511I
1194
CP11I
1198
510A
1217
509A5
1238
DIA5S
1236
DIA59B
1241
RTA59B
1247
509B
1266
CP09B
1270
509A1
1289
RTA1A2
1295
509A2
1316
DIC2A2
1314
DRC2A2



(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

1**********

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* *

* FLOOD HYDROGRAPH PACKAGE (HEC-1) *

* JUN 1998 *

* VERSION 4.1 *

* *

* RUN DATE 21MAY14 TIME 16:16:26 *

* *

****

****

* *

* U.S. ARMY CORPS OF

* HYDROLOGIC ENGINEERING

* 609 SECOND

* DAVIS, CALIFORNIA

* (916) 756-1104

* *

Project ID: S_24EX - Major Basin: 01 - Return Period: 100 Years
RIO VERDE AREA DRAINAGE MASTER PLAN FILE NAME: S_24EX.DAT
MODEL: 100-year, 24-hour Existing Condition Model
DEVELOPER: Dibble & Associates, Inc. DATE: Sept. 29, 2003

*** Modified South Watershed Model: Subbasin Added: 509A6 ***
DATE REVISED: 5/06/05
*** Note Changes Per TDN Hydrology Review Comments by FCDMC - July 21, 2006
*** Modify Flow Distribution for DICSE2 to match Floodplain RAS Modeling
LAST UPDATE: 8/30/06

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         1200  NUMBER OF HYDROGRAPH ORDINATES
                 NDDATE      2     0  ENDING DATE
                 NDTIME         1558  ENDING TIME
                  ICENT           19  CENTURY MARK

              COMPUTATION INTERVAL     .03 HOURS
                   TOTAL TIME BASE   39.97 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

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

               **************
               *            *
   128 KK      *    RSA     *
               *            *
               **************

   129 KO       OUTPUT CONTROL VARIABLES
                 IPRNT            5  PRINT CONTROL
                 IPLOT            0  PLOT CONTROL
                 QSCAL           0.  HYDROGRAPH PLOT SCALE
                 IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                  IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                 ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                 ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT         .033  TIME INTERVAL IN HOURS

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

               **************
               *            *
   257 KK      *    RSC     *
               *            *
               **************

   258 KO       OUTPUT CONTROL VARIABLES
                 IPRNT            5  PRINT CONTROL
                 IPLOT            0  PLOT CONTROL
                 QSCAL           0.  HYDROGRAPH PLOT SCALE
                 IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                  IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                 ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                 ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT         .033  TIME INTERVAL IN HOURS

*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
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               **************
               *            *
   276 KK      *    RSB     *
               *            *
               **************

   277 KO       OUTPUT CONTROL VARIABLES
                 IPRNT            5  PRINT CONTROL
                 IPLOT            0  PLOT CONTROL
                 QSCAL           0.  HYDROGRAPH PLOT SCALE
                 IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                  IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                 ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                 ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT         .033  TIME INTERVAL IN HOURS
```

```
*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
*** *** ***

              **************
              *            *
 295 KK       *    RSD     *
              *            *
              **************

 296 KO             OUTPUT CONTROL VARIABLES
                          IPRNT           5  PRINT CONTROL
                          IPLOT           0  PLOT CONTROL
                          QSCAL          0.  HYDROGRAPH PLOT SCALE
                          IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                          IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                          ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                          ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                         TIMINT        .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
 318 KK       *    RSG     *
              *            *
              **************

 319 KO             OUTPUT CONTROL VARIABLES
                          IPRNT           5  PRINT CONTROL
                          IPLOT           0  PLOT CONTROL
                          QSCAL          0.  HYDROGRAPH PLOT SCALE
                          IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                          IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                          ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                          ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                         TIMINT        .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
 337 KK       *    RSI     *
              *            *
              **************

 338 KO             OUTPUT CONTROL VARIABLES
                          IPRNT           5  PRINT CONTROL
                          IPLOT           0  PLOT CONTROL
                          QSCAL          0.  HYDROGRAPH PLOT SCALE
                          IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                          IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                          ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                          ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                         TIMINT        .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
 360 KK       *    RSN     *
              *            *
              **************

 361 KO             OUTPUT CONTROL VARIABLES
                          IPRNT           5  PRINT CONTROL
                          IPLOT           0  PLOT CONTROL
                          QSCAL          0.  HYDROGRAPH PLOT SCALE
                          IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                          IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                          ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                          ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                         TIMINT        .033  TIME INTERVAL IN HOURS
```

```
*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
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              **************
              *            *
 379 KK       *    RSS     *
              *            *
              **************

 380 KO           OUTPUT CONTROL VARIABLES
                        IPRNT           5  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE
                        IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                         IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                        ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                        ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                       TIMINT        .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
 414 KK       *    RSR     *
              *            *
              **************

 415 KO           OUTPUT CONTROL VARIABLES
                        IPRNT           5  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE
                        IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                         IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                        ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                        ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                       TIMINT        .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
 525 KK       *    RSF     *
              *            *
              **************

 526 KO           OUTPUT CONTROL VARIABLES
                        IPRNT           5  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE
                        IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                         IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                        ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                        ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                       TIMINT        .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
 552 KK       *    RSH     *
              *            *
              **************

 553 KO           OUTPUT CONTROL VARIABLES
                        IPRNT           5  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE
                        IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                         IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                        ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                        ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
```

```
                 TIMINT        .033  TIME INTERVAL IN HOURS

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

            **************
            *            *
 579 KK     *    RSK     *
            *            *
            **************

 580 KO         OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .033  TIME INTERVAL IN HOURS

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

            **************
            *            *
 606 KK     *    RSL     *
            *            *
            **************

 607 KO         OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .033  TIME INTERVAL IN HOURS

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

            **************
            *            *
 637 KK     *    RSJ     *
            *            *
            **************

 638 KO         OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .033  TIME INTERVAL IN HOURS

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

            **************
            *            *
 664 KK     *    RSM     *
            *            *
            **************

 665 KO         OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
```

```
                 ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT         .033  TIME INTERVAL IN HOURS


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

            **************
            *            *
 1053 KK    *     RSP    *
            *            *
            **************

 1054 KO         OUTPUT CONTROL VARIABLES
                 IPRNT            5  PRINT CONTROL
                 IPLOT            0  PLOT CONTROL
                 QSCAL           0.  HYDROGRAPH PLOT SCALE
                 IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                  IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                 ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                 ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT         .033  TIME INTERVAL IN HOURS


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

            **************
            *            *
 1066 KK    *     RSQ    *
            *            *
            **************

 1067 KO         OUTPUT CONTROL VARIABLES
                 IPRNT            5  PRINT CONTROL
                 IPLOT            0  PLOT CONTROL
                 QSCAL           0.  HYDROGRAPH PLOT SCALE
                 IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                  IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                 ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                 ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT         .033  TIME INTERVAL IN HOURS


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

            **************
            *            *
 1079 KK    *     RSO    *
            *            *
            **************

 1080 KO         OUTPUT CONTROL VARIABLES
                 IPRNT            5  PRINT CONTROL
                 IPLOT            0  PLOT CONTROL
                 QSCAL           0.  HYDROGRAPH PLOT SCALE
                 IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                  IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                 ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                 ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT         .033  TIME INTERVAL IN HOURS


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

            **************
            *            *
 1092 KK    *     RST    *
            *            *
            **************

 1093 KO         OUTPUT CONTROL VARIABLES
                 IPRNT            5  PRINT CONTROL
                 IPLOT            0  PLOT CONTROL
                 QSCAL           0.  HYDROGRAPH PLOT SCALE
                 IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                  IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
```

```
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       .033  TIME INTERVAL IN HOURS


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

              **************
              *            *
 1105 KK      *    RSE     *
              *            *
              **************

 1106 KO          OUTPUT CONTROL VARIABLES
                IPRNT          5  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                 IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       .033  TIME INTERVAL IN HOURS


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

              **************
              *            *
 1194 KK      *   CP11I    *
              *            *
              **************

 1196 KO          OUTPUT CONTROL VARIABLES
                IPRNT          5  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                 IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       .033  TIME INTERVAL IN HOURS


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

              **************
              *            *
 1198 KK      *    510A    *      BASIN
              *            *
              **************

 1204 KO          OUTPUT CONTROL VARIABLES
                IPRNT          5  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                 IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       .033  TIME INTERVAL IN HOURS


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

              **************
              *            *
 1266 KK      *   CP09B    *
              *            *
              **************

 1268 KO          OUTPUT CONTROL VARIABLES
                IPRNT          5  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
```

```
         IOUT        21  SAVE HYDROGRAPH ON THIS UNIT
        ISAV1         1  FIRST ORDINATE PUNCHED OR SAVED
        ISAV2      1200  LAST ORDINATE PUNCHED OR SAVED
       TIMINT      .033  TIME INTERVAL IN HOURS
```

```
*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
*** *** ***

              **************
              *            *
1394 KK       *   509A6    *      BASIN
              *            *
              **************

1400 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .033  TIME INTERVAL IN HOURS
```

```
*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
*** *** ***

              **************
              *            *
1414 KK       *    509D    *      BASIN
              *            *
              **************

1420 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .033  TIME INTERVAL IN HOURS
```

```
*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
*** *** ***

              **************
              *            *
1465 KK       *   CP500B   *
              *            *
              **************

1467 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         21  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .033  TIME INTERVAL IN HOURS
```

1

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

TIME OF STAGE	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	MAX
+	HYDROGRAPH AT	511A1	111.	12.27	12.	3.	2.	.29		
+	HYDROGRAPH AT	511A2	33.	12.10	2.	1.	0.	.06		

+	ROUTED TO	RTA2A3	19.	12.40	2.	1.	0.	.06
++ 12.40								2657.51
+	HYDROGRAPH AT	S11A3	114.	12.23	12.	3.	2.	.29
+	3 COMBINED AT	CP11A	241.	12.27	26.	6.	4.	.65
+	ROUTED TO	RTA1D	200.	12.53	26.	6.	4.	.65
++ 12.53								99.37
+	HYDROGRAPH AT	S11D	47.	12.17	4.	1.	1.	.10
+	2 COMBINED AT	CP11D	218.	12.53	30.	8.	5.	.75
+	HYDROGRAPH AT	A	32.	12.03	2.	1.	0.	.04
+	ROUTED TO	RSA	4.	12.30	2.	1.	0.	.04
++ 12.33								1.57
+	2 COMBINED AT	CP11D	222.	12.53	32.	8.	5.	.79
+	HYDROGRAPH AT	S11B4	117.	12.13	12.	3.	2.	.19
+	HYDROGRAPH AT	S11B1	184.	12.40	25.	7.	4.	.58
+	HYDROGRAPH AT	S11B2	80.	12.30	9.	2.	1.	.22
+	2 COMBINED AT	CPB1B2	259.	12.37	34.	9.	5.	.81
+	ROUTED TO	RT12B4	223.	12.60	34.	9.	5.	.81
++ 12.60								2574.87
+	HYDROGRAPH AT	S11B3	47.	12.13	4.	1.	1.	.08
+	ROUTED TO	RTB3B4	34.	12.33	4.	1.	1.	.08
++ 12.33								2561.14
+	3 COMBINED AT	CP11B	275.	12.57	49.	13.	8.	1.08
+	ROUTED TO	RTB4D	273.	12.60	49.	13.	8.	1.08
++ 12.60								2532.35
+	2 COMBINED AT	CP11DF	491.	12.57	81.	21.	13.	1.87
+	ROUTED TO	RTDF	466.	12.73	81.	21.	13.	1.87
++ 12.73								99.86
+	HYDROGRAPH AT	C	4.	12.00	0.	0.	0.	.01
+	ROUTED TO	RSC	2.	12.10	0.	0.	0.	.01
++ 12.10								.82
+	HYDROGRAPH AT	B	13.	12.00	1.	0.	0.	.02
+	ROUTED TO	RSB	4.	12.13	1.	0.	0.	.02
++ 12.13								1.40
	HYDROGRAPH AT							

+		D	9.	12.00	1.	0.	0.	.01	
+	ROUTED TO	RSD	3.	12.10	0.	0.	0.	.01	1.10
12.10									
+	3 COMBINED AT	CP-A	8.	12.10	1.	0.	0.	.04	
+	HYDROGRAPH AT	G	6.	12.00	0.	0.	0.	.01	
+	ROUTED TO	RSG	5.	12.07	0.	0.	0.	.01	1.06
12.07									
+	HYDROGRAPH AT	I	38.	12.00	3.	1.	0.	.04	
+	ROUTED TO	RSI	2.	12.30	2.	1.	0.	.04	1.81
12.37									
+	3 COMBINED AT	CP-B	15.	12.10	3.	1.	1.	.09	
+	HYDROGRAPH AT	N	4.	12.00	0.	0.	0.	.00	
+	ROUTED TO	RSN	4.	12.03	0.	0.	0.	.00	.97
12.03									
+	HYDROGRAPH AT	S	7.	12.00	0.	0.	0.	.01	
+	ROUTED TO	RSS	5.	12.07	0.	0.	0.	.01	1.11
12.07									
+	HYDROGRAPH AT	V	14.	12.27	2.	1.	0.	.02	
+	4 COMBINED AT	CP-C	34.	12.10	6.	2.	1.	.12	
+	HYDROGRAPH AT	R	2.	12.00	0.	0.	0.	.00	
+	ROUTED TO	RSR	2.	12.03	0.	0.	0.	.00	.86
12.03									
+	3 COMBINED AT	CP511	476.	12.73	87.	23.	14.	1.99	
+	HYDROGRAPH AT	511C1	110.	12.30	13.	3.	2.	.33	
+	DIVERSION TO	DIC1C4	56.	12.30	6.	2.	1.	.33	
+	HYDROGRAPH AT	DIC1E2	54.	12.30	6.	2.	1.	.33	
+	ROUTED TO	RTC1E2	29.	13.13	6.	2.	1.	.33	2496.17
13.13									
+	HYDROGRAPH AT	511E1	104.	12.30	11.	3.	2.	.30	
+	ROUTED TO	RTE1E2	71.	12.67	11.	3.	2.	.30	2496.36
12.67									
+	HYDROGRAPH AT	511E2	95.	12.30	11.	3.	2.	.26	
+	2 COMBINED AT	CPE1E2	123.	12.47	23.	6.	3.	.55	
	HYDROGRAPH AT								

+		DRC4C5	40.	12.40	6.	1.	1.	.00	
+	ROUTED TO	RTC4C5	33.	12.63	6.	1.	1.	.00	2526.14
12.63									
+	HYDROGRAPH AT	511C3	64.	12.17	6.	1.	1.	.14	
+	ROUTED TO	RTC3C5	50.	12.37	6.	1.	1.	.14	2526.27
12.37									
+	HYDROGRAPH AT	511C2	123.	12.33	15.	4.	2.	.39	
+	DIVERSION TO	DIC2A2	41.	12.33	5.	1.	1.	.39	
+	HYDROGRAPH AT	DIC2C5	81.	12.33	10.	3.	2.	.39	
+	ROUTED TO	RTC2C5	59.	12.63	10.	3.	2.	.39	2552.25
12.63									
+	4 COMBINED AT	CP11C5	141.	12.57	27.	7.	4.	.64	
+	DIVERSION TO	DIC5C6	90.	12.57	16.	4.	2.	.64	
+	HYDROGRAPH AT	DIC5E2	51.	12.57	10.	3.	2.	.64	
+	ROUTED TO	RTC5E2	48.	12.73	10.	3.	2.	.64	2496.28
12.73									
+	HYDROGRAPH AT	511C6	24.	12.10	2.	0.	0.	.04	
+	HYDROGRAPH AT	DRC5C6	90.	12.57	16.	4.	2.	.00	
+	ROUTED TO	RTC5C6	73.	12.87	16.	4.	2.	.00	2489.24
12.87									
+	2 COMBINED AT	CP11C6	74.	12.87	18.	5.	3.	.04	
+	3 COMBINED AT	CP11EF	261.	12.73	63.	16.	10.	1.65	
+	2 COMBINED AT	CPEF	734.	12.73	150.	39.	24.	3.64	
+	ROUTED TO	RTEFC8	728.	12.80	150.	39.	24.	3.64	2448.60
12.80									
+	HYDROGRAPH AT	511C8	27.	12.07	1.	0.	0.	.04	
+	2 COMBINED AT	CP11C8	728.	12.80	152.	40.	24.	3.68	
+	ROUTED TO	RTC8C7	728.	12.80	152.	40.	24.	3.68	2356.67
12.80									
+	HYDROGRAPH AT	511C7	58.	12.20	6.	2.	1.	.12	
+	2 COMBINED AT	CP11C7	740.	12.80	158.	41.	25.	3.80	
+	ROUTED TO	RTC7H	705.	12.97	143.	36.	22.	3.80	2356.62
12.97									
	HYDROGRAPH AT								

POST Q 2YR 24HR @ CPEF

+	3 COMBINED AT	CP09A6	168.	12.53	34.	9.	5.	.58	
+	HYDROGRAPH AT	509D	116.	12.43	16.	4.	3.	.38	
+	HYDROGRAPH AT	500A	80.	12.20	8.	2.	1.	.20	
+	ROUTED TO	RTAB	72.	12.37	8.	2.	1.	.20	2156.76
+ 12.37									
+	HYDROGRAPH AT	500B	71.	12.30	9.	2.	1.	.19	
+	2 COMBINED AT	CP500B	141.	12.33	17.	4.	3.	.40	

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

APPENDIX B

HEC-1 Model - Post Development Condition (10yr 24hr)

```
1****************************************                        ****************************************
*                                       *                        *                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                        *   U.S. ARMY CORPS OF ENGINEERS       *
*              JUN   1998               *                        *   HYDROLOGIC ENGINEERING CENTER      *
*            VERSION 4.1                *                        *          609 SECOND STREET           *
*                                       *                        *       DAVIS, CALIFORNIA 95616        *
* RUN DATE   21MAY14  TIME  16:14:45    *                        *          (916) 756-1104              *
*                                       *                        *                                      *
****************************************                        ****************************************


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


THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.
THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                       HEC-1 INPUT                                              PAGE  1

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

       1         ID    Project ID: S_24EX - Major Basin: 01 - Return Period: 100 Years
       2         ID    RIO VERDE AREA DRAINAGE MASTER PLAN                     FILE NAME: S_24EX.DAT
       3         ID    MODEL:      100-year, 24-hour Existing Condition Model
       4         ID    DEVELOPER:  Dibble & Associates, Inc.                   DATE: Sept. 29, 2003
       5         ID
       6         ID    *** Modified South Watershed Model: Subbasin Added: 509A6 ***
       7         ID                                                      DATE REVISED: 5/06/05
       8         ID    *** Note Changes Per TDN Hydrology Review Comments by FCDMC - July 21, 2006
       9         ID    *** Modify Flow Distribution for DIC5E2 to match Floodplain RAS Modeling
      10         ID                                                      LAST UPDATE:  8/30/06
      11         ID
                 *
                 *DIAGRAM
      12         IT       2                1200
      13         IO       5
      14         IN      15
                 *
                 * ****************************************************************************
                 * ******************************       Major Basin 511     ********************
                 * ****************************************************************************
                 *

      15         KK    511A1   BASIN
      16         KM    Sub-Basin   511A1
      17         KM
      18         KM       The Phoenix Mountain S-Graph is used for this basin.
      19         KM
      20         BA    0.294
      21         PB    3.144
      22         PC    0.000   0.002   0.005   0.008   0.011   0.014   0.017   0.020   0.023   0.026
      23         PC    0.029   0.032   0.035   0.038   0.041   0.044   0.048   0.052   0.056   0.060
      24         PC    0.064   0.068   0.072   0.076   0.080   0.085   0.090   0.095   0.100   0.105
      25         PC    0.110   0.115   0.120   0.126   0.133   0.140   0.147   0.155   0.163   0.172
      26         PC    0.181   0.191   0.203   0.218   0.236   0.257   0.283   0.387   0.663   0.707
      27         PC    0.735   0.758   0.776   0.791   0.804   0.815   0.825   0.834   0.842   0.849
      28         PC    0.856   0.863   0.869   0.875   0.881   0.887   0.893   0.898   0.903   0.908
      29         PC    0.913   0.918   0.922   0.926   0.930   0.934   0.938   0.942   0.946   0.950
      30         PC    0.953   0.956   0.959   0.962   0.965   0.968   0.971   0.974   0.977   0.980
      31         PC    0.983   0.986   0.989   0.992   0.995   0.998   1.000
      32         LG     0.15    0.39    6.20    0.17       0
      33         UI       34      35      34      75     117     146     194     222     243     258
      34         UI      309     359     406     292     236     209     206     187     170     167
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 35          UI     151     138     134     118     104      93      86      81      79      72
 36          UI      68      57      53      43      44      39      37      38      31      26
 37          UI      27      26      24      17      16      17      17      16      17      13
 38          UI       6       0       0       0       0       0       0       0       0       0
 39          UI       0       0       0       0       0       0       0       0       0       0
 40          UI       0       0       0       0       0       0       0       0       0       0
             *
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

 41          KK   511A2   BASIN
 42          KM   Sub-Basin   511A2
 43          KM
 44          KM      The Phoenix Mountain S-Graph is used for this basin.
 45          KM
 46          BA   0.059
 47          LG    0.15    0.40    6.00    0.18       0
 48          UI      12      17      42      66      88     102     138     106      79      68
 49          UI      63      53      47      39      31      28      27      20      16      16
 50          UI      13      10      10       8       6       6       6       4       2       2
 51          UI       3       2       3       2       2       3       0       0       0       0
 52          UI       0       0       0       0       0       0       0       0       0       0
 53          UI       0       0       0       0       0       0       0       0       0       0
 54          UI       0       0       0       0       0       0       0       0       0       0
 55          UI       0       0       0       0       0       0       0       0       0       0
             *

 56          KK  RTA2A3   ROUTE   REACH
 57          KM   Normal depth channel route from 511A2 to 511A3
 58          RS       2    FLOW      -1
 59          RC   0.070   0.040   0.070    3286  0.0158 2664.50
 60          RX     0.0   100.1   119.0   129.4   137.7   156.2   367.9   409.0
 61          RY  2664.5  2658.0  2657.5  2657.0  2657.2  2658.0  2662.0  2662.5
             *

 62          KK   511A3   BASIN
 63          KM   Sub-Basin   511A3
 64          KM
 65          KM      The Phoenix Mountain S-Graph is used for this basin.
 66          KM
 67          BA   0.294
 68          LG    0.15    0.39    6.20    0.17       0
 69          UI      35      36      36      85     126     161     211     236     261     275
 70          UI     338     406     368     272     234     208     201     185     170     167
 71          UI     146     136     129     108      97      92      84      80      77      68
 72          UI      57      54      45      44      41      38      38      29      27      27
 73          UI      28      20      17      18      17      17      18      16       7       6
 74          UI       7       0       0       0       0       0       0       0       0       0
 75          UI       0       0       0       0       0       0       0       0       0       0
 76          UI       0       0       0       0       0       0       0       0       0       0
 77          UI       0       0       0       0       0       0       0       0       0       0
 78          UI       0       0       0       0       0       0       0       0       0       0
 79          UI       0       0       0       0       0       0       0       0       0       0
 80          UI       0       0       0       0       0       0       0       0       0       0
 81          UI       0       0       0       0       0       0       0       0       0       0
 82          UI       0       0       0       0       0       0       0       0       0       0
 83          UI       0       0       0       0       0       0       0       0       0       0
             *
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

 84          KK   CP11A
 85          KM     Combine routed hydrograph from 511A2 with runoff from 511A1 and 511A3
 86          HC       3
             *

 87          KK   RTA1D   ROUTE   REACH
 88          KM   Normal depth channel route from CP11A to 511D
 89          RS       4    FLOW      -1
 90          RC   0.070   0.040   0.070    5358  0.0186  151.20
 91          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
 92          RY   151.2   100.0    99.5    99.0    99.0    99.6    99.7   151.2
             *

 93          KK    511D   BASIN
 94          KM   Sub-Basin   511D
 95          KM
 96          KM      The Phoenix Mountain S-Graph is used for this basin.
 97          KM
 98          BA   0.104
 99          LG    0.15    0.36    6.80    0.13       0
100          UI      14      14      22      45      64      81      95     105     126     156
101          UI     131      95      82      80      69      65      60      53      49      42
102          UI      35      33      32      28      25      23      17      18      15      15
103          UI      12      11      10      11       6       7       7       7       6       4
104          UI       3       2       2       3       2       3       2       3       2       2
105          UI       3       0       0       0       0       0       0       0       0       0
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106          UI      0       0       0       0       0       0       0       0       0       0
107          UI      0       0       0       0       0       0       0       0       0       0
108          UI      0       0       0       0       0       0       0       0       0       0
             *

109          KK   CP11D
110          KM     Combine routed hydrograph from CP11A with runoff from 511D
111          HC       2
             *

112          KK    A   BASIN
113          KM   Sub-Basin   A
114          KM
115          KM       The Phoenix Mountain S-Graph is used for this basin.
116          KM
117          BA   0.037
118          LG    0.15    0.36    6.80    0.30      23
119          UI      32      63      95     127     133     114      95      76      57      38
120          UI      19       1       0       0       0       0       0       0       0       0
121          UI       0       0       0       0       0       0       0       0       0       0
122          UI       0       0       0       0       0       0       0       0       0       0
123          UI       0       0       0       0       0       0       0       0       0       0
124          UI       0       0       0       0       0       0       0       0       0       0
125          UI       0       0       0       0       0       0       0       0       0       0
126          UI       0       0       0       0       0       0       0       0       0       0
127          UI       0       0       0       0       0       0       0       0       0       0
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

128          KK  RSA
             * RESERVOIR STORAGE
129          KO       0       0     0.0       0      22
130          RS       1    STOR     0.0     0.0
             * RSA Volume
131          SV     0.0    0.66    1.40    2.22
             * RSA Storage elev
132          SE     0.0     1.0     2.0     3.0
133          SL     0.5   0.785     0.6     0.5
134          SS     2.0    40.0     2.6     1.5

135          KK   CP11DA
136          KM     Combine routed hydrograph from CP11D with runoff from A
137          HC       2
             *

138          KK   511B4   BASIN
139          KM   Sub-Basin   511B4
140          KM
141          KM       The Phoenix Mountain S-Graph is used for this basin.
142          KM
143          BA   0.194
144          LG    0.15    0.36    6.80    0.13      12
145          UI      32      33      76     128     188     219     250     308     386     258
146          UI     213     184     171     160     137     124     110      90      79      77
147          UI      68      56      51      41      37      37      30      25      26      20
148          UI      16      16      16      16       8       6       6       7       6       6
149          UI       7       6       6       6       7       6       0       0       0       0
150          UI       0       0       0       0       0       0       0       0       0       0
151          UI       0       0       0       0       0       0       0       0       0       0
152          UI       0       0       0       0       0       0       0       0       0       0
             *

153          KK   511B1   BASIN
154          KM   Sub-Basin   511B1
155          KM
156          KM       The Phoenix Mountain S-Graph is used for this basin.
157          KM
158          BA   0.583
159          LG    0.15    0.38    6.40    0.16       4
160          UI      49      50      49      48      88     138     176     216     256     293
161          UI     325     344     361     399     425     492     580     572     421     361
162          UI     330     296     294     282     258     256     238     224     218     201
163          UI     191     188     170     150     145     128     123     124     113     111
164          UI     107     102      88      82      79      66      64      62      61      55
165          UI      53       0       0       0       0       0       0       0       0       0
166          UI       0       0       0       0       0       0       0       0       0       0
167          UI       0       0       0       0       0       0       0       0       0       0
             *
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

168          KK   511B2   BASIN
169          KM   Sub-Basin   511B2
170          KM
171          KM       The Phoenix Mountain S-Graph is used for this basin.
172          KM
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173          BA   0.222
174          LG    0.15    0.38    6.40    0.16       0
175          UI      23      24      23      36      71      91     113     140     153     166
176          UI     185     198     238     289     227     172     155     140     135     129
177          UI     118     110     105      96      91      86      75      69      62      57
178          UI      56      55      49      47      40      38      31      31      29      26
179          UI      26      25      21      18      18      18      18      12      12      11
180          UI      12       0       0       0       0       0       0       0       0       0
181          UI       0       0       0       0       0       0       0       0       0       0
182          UI       0       0       0       0       0       0       0       0       0       0
183          UI       0       0       0       0       0       0       0       0       0       0
184          UI       0       0       0       0       0       0       0       0       0       0
185          UI       0       0       0       0       0       0       0       0       0       0
186          UI       0       0       0       0       0       0       0       0       0       0
187          UI       0       0       0       0       0       0       0       0       0       0
188          UI       0       0       0       0       0       0       0       0       0       0
189          UI       0       0       0       0       0       0       0       0       0       0
             *

190          KK  CPB1B2
191          KM     Combine hydrograph from 511B1 and 511B2
192          HC       2
             *

193          KK  RT12B4   ROUTE   REACH
194          KM   Normal depth channel route from CPB1B2 to 511B4
195          RS       3    FLOW      -1
196          RC   0.070   0.040   0.070    3973  0.0186 2582.00
197          RX     0.0    36.4    62.6    86.9    98.0   114.8   303.0   378.7
198          RY  2582.0  2578.0  2576.0  2574.0  2573.4  2574.0  2578.0  2582.0
             *

199          KK   511B3   BASIN
200          KM   Sub-Basin   511B3
201          KM
202          KM      The Phoenix Mountain S-Graph is used for this basin.
203          KM
204          BA   0.080
205          LG    0.15    0.37    6.60    0.14       0
206          UI      15      15      44      68      97     109     130     176     120      96
207          UI      85      76      69      62      50      44      38      35      31      26
208          UI      21      18      17      16      11      12       9       8       7       7
209          UI       7       3       2       3       3       3       3       3       3       2
210          UI       3       0       0       0       0       0       0       0       0       0
211          UI       0       0       0       0       0       0       0       0       0       0
212          UI       0       0       0       0       0       0       0       0       0       0
213          UI       0       0       0       0       0       0       0       0       0       0
214          UI       0       0       0       0       0       0       0       0       0       0
215          UI       0       0       0       0       0       0       0       0       0       0
```



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

216          UI       0       0       0       0       0       0       0       0       0       0
217          UI       0       0       0       0       0       0       0       0       0       0
218          UI       0       0       0       0       0       0       0       0       0       0
219          UI       0       0       0       0       0       0       0       0       0       0
220          UI       0       0       0       0       0       0       0       0       0       0
             *

221          KK  RTB3B4   ROUTE   REACH
222          KM   Normal depth channel route from 511B3 to 511B4
223          RS       2    FLOW      -1
224          RC   0.070   0.040   0.070    3126  0.0205 2565.00
225          RX     0.0    16.6    28.0    34.2    39.7    63.8   108.6   198.6
226          RY  2563.0  2562.0  2560.8  2560.3  2560.6  2562.0  2564.3  2565.0
             *

227          KK   CP11B
228          KM     Combine routed hydrographs from CPB1B2 and 511B3 with 511B4
229          HC       3
             *

230          KK   RTB4D   ROUTE   REACH
231          KM   Normal depth channel route from CP11B to RTB4D
232          RS       1    FLOW      -1
233          RC   0.070   0.040   0.070     521  0.0179 2536.00
234          RX     0.0    89.0   118.0   165.0   222.0   363.0   411.0   516.0
235          RY  2536.0  2534.0  2532.0  2531.5  2532.0  2532.2  2532.8  2534.0
             *

236          KK  CP11DF
237          KM     Combine routed hydrographs from CP11D and RTB4D
238          HC       2
             * ------------------------------------------------------------------------
             *

239          KK    RTDF   ROUTE   REACH
240          KM   Normal depth channel route from CP11DF to CP11F                    R
241          RS       3    FLOW      -1
242          RC   0.070   0.040   0.070    3664  0.0191  151.20
```

```
 243          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
 244          RY   151.2   100.0    99.5    99.0    99.0    99.6    99.7   151.2
              *

 245          KK     C   BASIN
 246          KM   Sub-Basin   C
 247          KM
 248          KM       The Phoenix Mountain S-Graph is used for this basin.
 249          KM
 250          BA   0.006
 251          LG    0.14    0.38    6.40    0.30      23
 252          UI      11      23      25      18      12       5       0       0       0       0
 253          UI       0       0       0       0       0       0       0       0       0       0
 254          UI       0       0       0       0       0       0       0       0       0       0
 255          UI       0       0       0       0       0       0       0       0       0       0
 256          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                        HEC-1 INPUT                                        PAGE  7

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

 257          KK   RSC
              * RESERVOIR STORAGE
 258          KO       0       0     0.0       0      22
 259          RS       1    STOR     0.0     0.0
              * RSC Volume
 260          SV     0.0    0.13    0.31    0.51
              * RSC Storage elev
 261          SE     0.0     1.0     2.0     3.0
 262          SL     0.5   0.785     0.6     0.5
 263          SS     1.0    10.0     2.6     1.5

 264          KK     B   BASIN
 265          KM   Sub-Basin   B
 266          KM
 267          KM       The Phoenix Mountain S-Graph is used for this basin.
 268          KM
 269          BA   0.018
 270          LG    0.14    0.38    6.40    0.30      23
 271          UI      34      68      75      55      34      14       0       0       0       0
 272          UI       0       0       0       0       0       0       0       0       0       0
 273          UI       0       0       0       0       0       0       0       0       0       0
 274          UI       0       0       0       0       0       0       0       0       0       0
 275          UI       0       0       0       0       0       0       0       0       0       0
              *

 276          KK   RSB
              * RESERVOIR STORAGE
 277          KO       0       0     0.0       0      22
 278          RS       1    STOR     0.0     0.0
              * RSB Volume
 279          SV     0.0    0.19    0.47    0.83
              * RSB Storage elev
 280          SE     0.0     1.0     2.0     3.0
 281          SL     0.5   0.785     0.6     0.5
 282          SS     2.0    20.0     2.6     1.5

 283          KK     D   BASIN
 284          KM   Sub-Basin   D
 285          KM
 286          KM       The Phoenix Mountain S-Graph is used for this basin.
 287          KM
 288          BA   0.012
 289          LG    0.14    0.38    6.40    0.30      23
 290          UI      23      47      51      37      23       9       0       0       0       0
 291          UI       0       0       0       0       0       0       0       0       0       0
 292          UI       0       0       0       0       0       0       0       0       0       0
 293          UI       0       0       0       0       0       0       0       0       0       0
 294          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                        HEC-1 INPUT                                        PAGE  8

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

 295          KK   RSD
              * RESERVOIR STORAGE
 296          KO       0       0     0.0       0      22
 297          RS       1    STOR     0.0     0.0
              * RSD Volume
 298          SV     0.0    0.19    0.42    0.68
              * RSD Storage elev
 299          SE     0.0     1.0     2.0     3.0
 300          SL     0.5   0.785     0.6     0.5
 301          SS     2.0    10.0     2.6     1.5

 302          KK    CP-A
 303          KM    CP(CBD)
 304          KM       Combine hydrograph from C, B and D
 305          HC       3
```

```
                *
306             KK    G   BASIN
307             KM   Sub-Basin   G
308             KM
309             KM      The Phoenix Mountain S-Graph is used for this basin.
310             KM
311             BA   0.009
312             LG    0.14    0.38    6.40    0.30      23
313             UI      17      35      38      28      18       7       0       0       0       0
314             UI       0       0       0       0       0       0       0       0       0       0
315             UI       0       0       0       0       0       0       0       0       0       0
316             UI       0       0       0       0       0       0       0       0       0       0
317             UI       0       0       0       0       0       0       0       0       0       0
                *
318             KK  RSG
                * RESERVOIR STORAGE
319             KO       0       0     0.0       0      22
320             RS       1    STOR     0.0     0.0
                * RSG Volume
321             SV     0.0    0.12    0.27    0.46
                * RSG Storage elev
322             SE     0.0     1.0     2.0     3.0
323             SL    0.75    1.77     0.6     0.5
324             SS     2.0    10.0     2.6     1.5

325             KK    I   BASIN
326             KM   Sub-Basin   I
327             KM
328             KM      The Phoenix Mountain S-Graph is used for this basin.
329             KM
330             BA   0.044
331             LG    0.14    0.38    6.40    0.30      23
332             UI      55     110     165     176     143     110      77      44      11       0
333             UI       0       0       0       0       0       0       0       0       0       0
334             UI       0       0       0       0       0       0       0       0       0       0
335             UI       0       0       0       0       0       0       0       0       0       0
336             UI       0       0       0       0       0       0       0       0       0       0
                *
```



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

337             KK  RSI
                * RESERVOIR STORAGE
338             KO       0       0     0.0       0      22
339             RS       1    STOR     0.0     0.0
                * RSI Volume
340             SV     0.0    0.59    1.29    2.12
                * RSI Storage elev
341             SE     0.0     1.0     2.0     3.0
342             SL    0.33   0.352     0.6     0.5
343             SS     2.0    50.0     2.6     1.5

344             KK   CP-B
345             KM   CP(CBDGI)
346             KM     Combine hydrograph from CP(CBD), G and I
347             HC       3
                *

348             KK    N   BASIN
349             KM   Sub-Basin   N
350             KM
351             KM      The Phoenix Mountain S-Graph is used for this basin.
352             KM
353             BA   0.005
354             LG    0.14    0.38    6.40    0.30      23
355             UI      11      21      23      17      11       4       0       0       0       0
356             UI       0       0       0       0       0       0       0       0       0       0
357             UI       0       0       0       0       0       0       0       0       0       0
358             UI       0       0       0       0       0       0       0       0       0       0
359             UI       0       0       0       0       0       0       0       0       0       0
                *

360             KK  RSN
                * RESERVOIR STORAGE
361             KO       0       0     0.0       0      22
362             RS       1    STOR     0.0     0.0
                * RSN Volume
363             SV     0.0    0.06    0.14    0.25
                * RSN Storage elev
364             SE     0.0     1.0     2.0     3.0
365             SL    0.75    1.77     0.6     0.5
366             SS     2.0    20.0     2.6     1.5

367             KK    S   BASIN
368             KM   Sub-Basin   S
369             KM
370             KM      The Phoenix Mountain S-Graph is used for this basin.
```

```
371          KM
372          BA   0.008
373          LG    0.14    0.38    6.40    0.30      23
374          UI      19      37      41      30      19       8       0       0       0       0
375          UI       0       0       0       0       0       0       0       0       0       0
376          UI       0       0       0       0       0       0       0       0       0       0
377          UI       0       0       0       0       0       0       0       0       0       0
378          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

379          KK  RSS
             * RESERVOIR STORAGE
380          KO        0       0     0.0       0      22
381          RS        1    STOR     0.0     0.0
             * RSS Volume
382          SV      0.0    0.11    0.26    0.43
             * RSS Storage elev
383          SE      0.0     1.0     2.0     3.0
384          SL     0.75    1.77     0.6     0.5
385          SS      2.0    20.0     2.6     1.5

386          KK    V   BASIN
387          KM   Sub-Basin   V
388          KM
389          KM      The Phoenix Mountain S-Graph is used for this basin.
390          KM
391          BA   0.021
392          LG    0.14    0.38    6.40    0.30      23
393          UI       4       8      12      16      21      25      29      33      37      41
394          UI      45      43      40      38      35      33      30      28      26      23
395          UI      21      18      16      13      11       8       6       3       1       0
396          UI       0       0       0       0       0       0       0       0       0       0
397          UI       0       0       0       0       0       0       0       0       0       0
             *

398          KK   CP-C
399          KM   CP(CBDGINS)
400          KM     Combine hydrograph from CP(CBDGI), N, S and V
401          HC       4
             *

402          KK    R   BASIN
403          KM   Sub-Basin   R
404          KM
405          KM      The Phoenix Mountain S-Graph is used for this basin.
406          KM
407          BA   0.003
408          LG    0.14    0.38    6.40    0.30      23
409          UI       6      13      14      10       6       3       0       0       0       0
410          UI       0       0       0       0       0       0       0       0       0       0
411          UI       0       0       0       0       0       0       0       0       0       0
412          UI       0       0       0       0       0       0       0       0       0       0
413          UI       0       0       0       0       0       0       0       0       0       0
             *

414          KK  RSR
             * RESERVOIR STORAGE
415          KO        0       0     0.0       0      22
416          RS        1    STOR     0.0     0.0
             * RSR Volume
417          SV      0.0    0.04    0.10    0.19
             * RSR Storage elev
418          SE      0.0     1.0     2.0     3.0
419          SL      0.5   0.785     0.6     0.5
```



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

420          SS      2.0    20.0     2.6     1.5

421          KK   CP511
422          KM   CP(CBDGINSR)
423          KM     Combine routed hydrograph from CP11DF with runoff from CP(CBDGINS) and R
424          HC       3
             *

425          KK   511C1   BASIN
426          KM   Sub-Basin   511C1
427          KM
428          KM      The Phoenix Mountain S-Graph is used for this basin.
429          KM
430          BA   0.329
431          LG    0.15    0.40    6.00    0.18       0
432          UI      33      34      33      44      99     124     155     200     212     235
433          UI     256     276     317     389     386     271     235     210     197     193
434          UI     177     166     160     146     136     134     116     106      98      87
435          UI      81      81      77      71      72      54      55      47      43      42
```

```
436          UI      39      37      36      34      26      25      27      25      23      17
437          UI      16       0       0       0       0       0       0       0       0       0
438          UI       0       0       0       0       0       0       0       0       0       0
439          UI       0       0       0       0       0       0       0       0       0       0
440          UI       0       0       0       0       0       0       0       0       0       0
441          UI       0       0       0       0       0       0       0       0       0       0
442          UI       0       0       0       0       0       0       0       0       0       0
443          UI       0       0       0       0       0       0       0       0       0       0
444          UI       0       0       0       0       0       0       0       0       0       0
             *

445          KK  DIC1E2
446          KM   DIVERT FLOW FROM 511C1 TO 511C4 AT NATURAL FLOW SPLIT
447          DT  DIC1C4
448          DI       0      75     150     225     300     480     650
449          DQ       0      38      77     117     155     250     340
             *

450          KK  RTC1E2   ROUTE   REACH
451          KM   Normal depth channel route from 511C1 to 511E2
452          RS       5    FLOW      -1
453          RC   0.070   0.040   0.070    7085  0.0209 2506.00
454          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
455          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
             *

456          KK   511E1   BASIN
457          KM   Sub-Basin   511E1
458          KM
459          KM      The Phoenix Mountain S-Graph is used for this basin.
460          KM
461          BA   0.296
462          LG    0.15    0.40    6.00    0.18       0
463          UI      32      33      32      57     101     128     163     202     216     232
464          UI     261     291     350     392     261     222     206     185     179     170
465          UI     156     146     139     127     117     108      96      84      81      76
```



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

466          UI      72      71      65      51      53      42      40      41      36      35
467          UI      36      25      24      25      24      22      16      16      16      16
468          UI      15       0       0       0       0       0       0       0       0       0
469          UI       0       0       0       0       0       0       0       0       0       0
470          UI       0       0       0       0       0       0       0       0       0       0
471          UI       0       0       0       0       0       0       0       0       0       0
472          UI       0       0       0       0       0       0       0       0       0       0
473          UI       0       0       0       0       0       0       0       0       0       0
474          UI       0       0       0       0       0       0       0       0       0       0
475          UI       0       0       0       0       0       0       0       0       0       0
             *

476          KK  RTE1E2   ROUTE   REACH
477          KM   Normal depth channel route from 511E1 to 511E2
478          RS       3    FLOW      -1
479          RC   0.070   0.040   0.070    4907  0.0187 2506.00
480          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
481          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
             *

482          KK   511E2   BASIN
483          KM   Sub-Basin   511E2
484          KM
485          KM      The Phoenix Mountain S-Graph is used for this basin.
486          KM
487          BA   0.257
488          LG    0.15    0.36    6.80    0.13       1
489          UI      25      25      25      33      72      92     114     148     158     173
490          UI     189     203     235     286     285     201     173     155     145     143
491          UI     131     121     118     108     101      99      85      78      73      64
492          UI      59      60      56      53      53      40      40      35      32      31
493          UI      29      27      26      26      18      19      19      18      17      12
494          UI      12       0       0       0       0       0       0       0       0       0
495          UI       0       0       0       0       0       0       0       0       0       0
496          UI       0       0       0       0       0       0       0       0       0       0
497          UI       0       0       0       0       0       0       0       0       0       0
498          UI       0       0       0       0       0       0       0       0       0       0
499          UI       0       0       0       0       0       0       0       0       0       0
500          UI       0       0       0       0       0       0       0       0       0       0
501          UI       0       0       0       0       0       0       0       0       0       0
             *

502          KK  CPE1E2
503          KM    Combine routed hydrographs from 511E1 with 511E2
504          HC       2
             *

505          KK   F    BASIN
506          KM   Sub-Basin   F
507          KM
508          KM      The Phoenix Mountain S-Graph is used for this basin.
```

```
509          KM
510          BA   0.009
511          LG    0.15    0.36    6.80    0.30      23
512          UI      17      34      37      27      17       7       0       0       0       0
```



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

513          UI       0       0       0       0       0       0       0       0       0       0
514          UI       0       0       0       0       0       0       0       0       0       0
515          UI       0       0       0       0       0       0       0       0       0       0
516          UI       0       0       0       0       0       0       0       0       0       0
517          UI       0       0       0       0       0       0       0       0       0       0
518          UI       0       0       0       0       0       0       0       0       0       0
519          UI       0       0       0       0       0       0       0       0       0       0
520          UI       0       0       0       0       0       0       0       0       0       0
521          UI       0       0       0       0       0       0       0       0       0       0
522          UI       0       0       0       0       0       0       0       0       0       0
523          UI       0       0       0       0       0       0       0       0       0       0
524          UI       0       0       0       0       0       0       0       0       0       0
             *

525          KK  RSF
             * RESERVOIR STORAGE
526          KO       0       0     0.0       0      22
527          RS       1    STOR     0.0     0.0
             * RSF Volume
528          SV     0.0    0.14    0.31    0.52
             * RSF Storage elev
529          SE     0.0     1.0     2.0     3.0
530          SL    0.75    1.77     0.6     0.5
531          SS     2.0    10.0     2.6     1.5

532          KK   H    BASIN
533          KM   Sub-Basin   H
534          KM
535          KM      The Phoenix Mountain S-Graph is used for this basin.
536          KM
537          BA   0.006
538          LG    0.15    0.36    6.80    0.30      23
539          UI      12      25      27      20      13       5       0       0       0       0
540          UI       0       0       0       0       0       0       0       0       0       0
541          UI       0       0       0       0       0       0       0       0       0       0
542          UI       0       0       0       0       0       0       0       0       0       0
543          UI       0       0       0       0       0       0       0       0       0       0
544          UI       0       0       0       0       0       0       0       0       0       0
545          UI       0       0       0       0       0       0       0       0       0       0
546          UI       0       0       0       0       0       0       0       0       0       0
547          UI       0       0       0       0       0       0       0       0       0       0
548          UI       0       0       0       0       0       0       0       0       0       0
549          UI       0       0       0       0       0       0       0       0       0       0
550          UI       0       0       0       0       0       0       0       0       0       0
551          UI       0       0       0       0       0       0       0       0       0       0
             *

552          KK  RSH
             * RESERVOIR STORAGE
553          KO       0       0     0.0       0      22
554          RS       1    STOR     0.0     0.0
             * RSH Volume
555          SV     0.0    0.08    0.20    0.35
             * RSH Storage elev
556          SE     0.0     1.0     2.0     3.0
```



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

557          SL    0.75    1.77     0.6     0.5
558          SS     2.0    10.0     2.6     1.5

559          KK   K    BASIN
560          KM   Sub-Basin   K
561          KM
562          KM      The Phoenix Mountain S-Graph is used for this basin.
563          KM
564          BA   0.005
565          LG    0.15    0.36    6.80    0.30      23
566          UI       7      15      22      18      13       9       4       0       0       0
567          UI       0       0       0       0       0       0       0       0       0       0
568          UI       0       0       0       0       0       0       0       0       0       0
569          UI       0       0       0       0       0       0       0       0       0       0
570          UI       0       0       0       0       0       0       0       0       0       0
571          UI       0       0       0       0       0       0       0       0       0       0
572          UI       0       0       0       0       0       0       0       0       0       0
573          UI       0       0       0       0       0       0       0       0       0       0
574          UI       0       0       0       0       0       0       0       0       0       0
575          UI       0       0       0       0       0       0       0       0       0       0
576          UI       0       0       0       0       0       0       0       0       0       0
577          UI       0       0       0       0       0       0       0       0       0       0
578          UI       0       0       0       0       0       0       0       0       0       0
             *
```

```
579          KK  RSK
             * RESERVOIR STORAGE
580          KO       0       0     0.0       0      22
581          RS       1    STOR     0.0     0.0
             * RSK Volume
582          SV     0.0    0.07    0.16    0.27
             * RSK Storage elev
583          SE     0.0     1.0     2.0     3.0
584          SL    0.75    1.77     0.6     0.5
585          SS     2.0    10.0     2.6     1.5

586          KK   L    BASIN
587          KM   Sub-Basin   L
588          KM
589          KM      The Phoenix Mountain S-Graph is used for this basin.
590          KM
591          BA   0.005
592          LG    0.15    0.36    6.80    0.30      23
593          UI      11      44      48      35      22       9       0       0       0       0
594          UI       0       0       0       0       0       0       0       0       0       0
595          UI       0       0       0       0       0       0       0       0       0       0
596          UI       0       0       0       0       0       0       0       0       0       0
597          UI       0       0       0       0       0       0       0       0       0       0
598          UI       0       0       0       0       0       0       0       0       0       0
599          UI       0       0       0       0       0       0       0       0       0       0
600          UI       0       0       0       0       0       0       0       0       0       0
601          UI       0       0       0       0       0       0       0       0       0       0
602          UI       0       0       0       0       0       0       0       0       0       0
603          UI       0       0       0       0       0       0       0       0       0       0
604          UI       0       0       0       0       0       0       0       0       0       0
```



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

605          UI       0       0       0       0       0       0       0       0       0       0
             *

606          KK  RSL
             * RESERVOIR STORAGE
607          KO       0       0     0.0       0      22
608          RS       1    STOR     0.0     0.0
             * RSL Volume
609          SV     0.0    0.18    0.41    0.67
             * RSL Storage elev
610          SE     0.0     1.0     2.0     3.0
611          SL    0.75    1.77     0.6     0.5
612          SS     2.0    10.0     2.6     1.5

613          KK   CP-D
614          KM   CP(E2FHKL)
615          KM     Combine routed hydrographs from 511E2 with F, H, K and L
616          HC       5
             *

617          KK   J    BASIN
618          KM   Sub-Basin   J
619          KM
620          KM      The Phoenix Mountain S-Graph is used for this basin.
621          KM
622          BA   0.002
623          LG    0.15    0.36    6.80    0.30      23
624          UI       3       7       8       5       3       1       0       0       0       0
625          UI       0       0       0       0       0       0       0       0       0       0
626          UI       0       0       0       0       0       0       0       0       0       0
627          UI       0       0       0       0       0       0       0       0       0       0
628          UI       0       0       0       0       0       0       0       0       0       0
629          UI       0       0       0       0       0       0       0       0       0       0
630          UI       0       0       0       0       0       0       0       0       0       0
631          UI       0       0       0       0       0       0       0       0       0       0
632          UI       0       0       0       0       0       0       0       0       0       0
633          UI       0       0       0       0       0       0       0       0       0       0
634          UI       0       0       0       0       0       0       0       0       0       0
635          UI       0       0       0       0       0       0       0       0       0       0
636          UI       0       0       0       0       0       0       0       0       0       0
             *

637          KK  RSJ
             * RESERVOIR STORAGE
638          KO       0       0     0.0       0      22
639          RS       1    STOR     0.0     0.0
             * RSJ Volume
640          SV     0.0    0.04    0.11    0.20
             * RSJ Storage elev
641          SE     0.0     1.0     2.0     3.0
642          SL    0.75    1.77     0.6     0.5
643          SS     2.0    20.0     2.6     1.5
```

```
644          KK   M    BASIN
645          KM   Sub-Basin   M
646          KM
647          KM      The Phoenix Mountain S-Graph is used for this basin.
648          KM
649          BA   0.010
650          LG    0.15    0.36    6.80    0.30      23
651          UI      18      37      41      30      19       7       0       0       0       0
652          UI       0       0       0       0       0       0       0       0       0       0
653          UI       0       0       0       0       0       0       0       0       0       0
654          UI       0       0       0       0       0       0       0       0       0       0
655          UI       0       0       0       0       0       0       0       0       0       0
656          UI       0       0       0       0       0       0       0       0       0       0
657          UI       0       0       0       0       0       0       0       0       0       0
658          UI       0       0       0       0       0       0       0       0       0       0
659          UI       0       0       0       0       0       0       0       0       0       0
660          UI       0       0       0       0       0       0       0       0       0       0
661          UI       0       0       0       0       0       0       0       0       0       0
662          UI       0       0       0       0       0       0       0       0       0       0
663          UI       0       0       0       0       0       0       0       0       0       0
             *

664          KK  RSM
             * RESERVOIR STORAGE
665          KO       0       0     0.0       0      22
666          RS       1    STOR     0.0     0.0
             * RSM Volume
667          SV     0.0    0.13    0.31    0.54
             * RSM Storage elev
668          SE     0.0     1.0     2.0     3.0
669          SL     0.5   0.785     0.6     0.5
670          SS     2.0    10.0     2.6     1.5

671          KK   W    BASIN
672          KM   Sub-Basin   W
673          KM
674          KM      The Phoenix Mountain S-Graph is used for this basin.
675          KM
676          BA   0.026
677          LG    0.15    0.36    6.80    0.30      23
678          UI       3       7      10      14      17      20      24      27      31      34
679          UI      38      41      44      48      46      44      42      40      38      36
680          UI      33      31      29      27      25      23      21      19      17      15
681          UI      13      11       9       7       5       3       1       0       0       0
682          UI       0       0       0       0       0       0       0       0       0       0
683          UI       0       0       0       0       0       0       0       0       0       0
684          UI       0       0       0       0       0       0       0       0       0       0
685          UI       0       0       0       0       0       0       0       0       0       0
686          UI       0       0       0       0       0       0       0       0       0       0
687          UI       0       0       0       0       0       0       0       0       0       0
688          UI       0       0       0       0       0       0       0       0       0       0
689          UI       0       0       0       0       0       0       0       0       0       0
690          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

691          KK   X    BASIN
692          KM   Sub-Basin   X
693          KM
694          KM      The Phoenix Mountain S-Graph is used for this basin.
695          KM
696          BA   0.004
697          LG    0.15    0.36    6.80    0.30      23
698          UI       1       3       4       6       7       8      10       9       8       7
699          UI       6       6       5       4       3       2       1       1       0       0
700          UI       0       0       0       0       0       0       0       0       0       0
701          UI       0       0       0       0       0       0       0       0       0       0
702          UI       0       0       0       0       0       0       0       0       0       0
703          UI       0       0       0       0       0       0       0       0       0       0
704          UI       0       0       0       0       0       0       0       0       0       0
705          UI       0       0       0       0       0       0       0       0       0       0
706          UI       0       0       0       0       0       0       0       0       0       0
707          UI       0       0       0       0       0       0       0       0       0       0
708          UI       0       0       0       0       0       0       0       0       0       0
709          UI       0       0       0       0       0       0       0       0       0       0
710          UI       0       0       0       0       0       0       0       0       0       0
             *

711          KK   CP-E
712          KM   CP(E2FHKLJM)
713          KM     Combine routed hydrographs from S11E2 with F, H, K, L, J, M, W and X
714          HC       5
             *

715          KK   S11C4   BASIN
716          KM   Sub-Basin   S11C4
717          KM
```

```
718          KM      The Phoenix Mountain S-Graph is used for this basin.
719          KM
720          BA   0.020
721          LG    0.15    0.40    6.00    0.18       0
722          UI       7      21      42      57      67      40      34      27      21      16
723          UI      13       9       8       6       5       3       3       1       2       1
724          UI       1       2       1       0       0       0       0       0       0       0
725          UI       0       0       0       0       0       0       0       0       0       0
726          UI       0       0       0       0       0       0       0       0       0       0
727          UI       0       0       0       0       0       0       0       0       0       0
728          UI       0       0       0       0       0       0       0       0       0       0
729          UI       0       0       0       0       0       0       0       0       0       0
730          UI       0       0       0       0       0       0       0       0       0       0
731          UI       0       0       0       0       0       0       0       0       0       0
732          UI       0       0       0       0       0       0       0       0       0       0
733          UI       0       0       0       0       0       0       0       0       0       0
734          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

735          KK  DRC1C4
736          KM        RETURN DIVERT FROM 511C1
737          DR  DIC1C4
             *

738          KK  RTC1C4   ROUTE   REACH
739          KM   Normal depth channel route from 511C1 to 511C4
740          RS       1    FLOW      -1
741          RC   0.070   0.040   0.070    1058  0.0170 2605.30
742          RX     0.0   104.0   140.0   187.0   243.0   273.0   302.0   324.0
743          RY  2599.4  2599.6  2598.4  2598.3  2600.0  2602.0  2604.0  2605.3
             *

744          KK  CP11C4
745          KM     Combine routed hydrographs from 511C1 with 511C4
746          HC       2
             *

747          KK  DIC4E2
748          KM   DIVERT FLOW FROM 511C4 TO 511C5 AT NATURAL FLOW SPLIT
749          DT  DIC4C5
750          DI       0      25     100     150     300     400     500
751          DQ       0      20      73     106     203     264     325
             *

752          KK  RTC4E2   ROUTE   REACH
753          KM   Normal depth channel route from 511C4 to 511E2
754          RS       4    FLOW      -1
755          RC   0.070   0.040   0.070    6075  0.0214 2506.00
756          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
757          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
             *

758          KK  CP11E2
759          KM     Combine routed hydrographs from CPE1E2, RTC1E2,RTC4E2
760          HC       3
             *

761          KK   511C5   BASIN
762          KM   Sub-Basin   511C5
763          KM
764          KM      The Phoenix Mountain S-Graph is used for this basin.
765          KM
766          BA   0.110
767          LG    0.15    0.35    7.00    0.12       0
768          UI       19      20      51      80     120     136     156     213     198     136
769          UI      119     106      94      87      76      66      57      48      44      43
770          UI       33      28      25      22      21      16      15      15      10       9
771          UI       10       9       7       4       4       3       4       4       4       3
772          UI        4       4       4       0       0       0       0       0       0       0
773          UI        0       0       0       0       0       0       0       0       0       0
774          UI        0       0       0       0       0       0       0       0       0       0
775          UI        0       0       0       0       0       0       0       0       0       0
776          UI        0       0       0       0       0       0       0       0       0       0
```



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

777          UI        0       0       0       0       0       0       0       0       0       0
778          UI        0       0       0       0       0       0       0       0       0       0
779          UI        0       0       0       0       0       0       0       0       0       0
780          UI        0       0       0       0       0       0       0       0       0       0
             *

781          KK  DRC4C5
782          KM        RETURN DIVERT FROM 511C4
783          DR  DIC4C5
             *
```

```
784          KK  RTC4C5   ROUTE   REACH
785          KM   Normal depth channel route from 511C4 to 511C5
786          RS       2    FLOW      -1
787          RC   0.070   0.040   0.070    3182  0.0236 2532.20
788          RX     0.0    17.5    62.9   117.1   128.2   142.8   157.3   170.1
789          RY  2532.2  2532.0  2530.0  2526.0  2525.5  2526.0  2530.0  2530.2
             *

790          KK   511C3   BASIN
791          KM   Sub-Basin   511C3
792          KM
793          KM      The Phoenix Mountain S-Graph is used for this basin.
794          KM
795          BA   0.141
796          LG    0.15    0.40    6.00    0.18       0
797          UI      22      22      40      73     109     134     156     176     212     250
798          UI     171     140     125     117     106      95      90      76      68      58
799          UI      53      49      47      37      34      28      27      23      24      18
800          UI      17      17      13      10      11      10      10       9       4       4
801          UI       4       4       4       5       4       4       4       4       4       5
802          UI       0       0       0       0       0       0       0       0       0       0
803          UI       0       0       0       0       0       0       0       0       0       0
804          UI       0       0       0       0       0       0       0       0       0       0
805          UI       0       0       0       0       0       0       0       0       0       0
806          UI       0       0       0       0       0       0       0       0       0       0
807          UI       0       0       0       0       0       0       0       0       0       0
808          UI       0       0       0       0       0       0       0       0       0       0
809          UI       0       0       0       0       0       0       0       0       0       0
             *

810          KK  RTC3C5   ROUTE   REACH
811          KM   Normal depth channel route from 511C3 to 511C5
812          RS       2    FLOW      -1
813          RC   0.070   0.040   0.070    3234  0.0232 2532.20
814          RX     0.0    17.5    62.9   117.1   128.2   142.8   157.3   170.1
815          RY  2532.2  2532.0  2530.0  2526.0  2525.5  2526.0  2530.0  2530.2
             *

816          KK   511C2   BASIN
817          KM   Sub-Basin   511C2
818          KM
819          KM      The Phoenix Mountain S-Graph is used for this basin.
820          KM
821          BA   0.392
```



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

822          LG    0.15    0.40    6.00    0.18       0
823          UI      36      38      36      36      98     119     148     191     216     238
824          UI     266     275     296     349     403     442     338     270     241     227
825          UI     215     203     193     182     170     164     150     144     137     122
826          UI     114     100      93      90      88      84      77      78      62      59
827          UI      57      47      46      48      39      40      41      36      28      29
828          UI      28       0       0       0       0       0       0       0       0       0
829          UI       0       0       0       0       0       0       0       0       0       0
830          UI       0       0       0       0       0       0       0       0       0       0
831          UI       0       0       0       0       0       0       0       0       0       0
832          UI       0       0       0       0       0       0       0       0       0       0
833          UI       0       0       0       0       0       0       0       0       0       0
834          UI       0       0       0       0       0       0       0       0       0       0
835          UI       0       0       0       0       0       0       0       0       0       0
             *

836          KK  DIC2C5
837          KM   DIVERT FLOW FROM 511C2 TO 509A2 AT NATURAL FLOW SPLIT
838          DT  DIC2A2
839          DI       0      25      70     150     300     400     500
840          DQ       0       7    22.5      51     111     152     197
             *

841          KK  RTC2C5   ROUTE   REACH
842          KM   Normal depth channel route from 511C2 to 511C5
843          RS       2    FLOW      -1
844          RC   0.070   0.040   0.070    3086  0.0230 2554.50
845          RX     0.0     9.3    49.5   114.2   122.3   140.1   149.6   197.3
846          RY  2554.5  2554.0  2552.2  2552.0  2551.8  2551.6  2552.0  2553.8
             *

847          KK  CP11C5
848          KM     Combine routed hydrographs from 511C5, RTC4C5, RTC3C5, RTC2C5
849          HC       4
             *

850          KK  DIC5E2
851          KM   DIVERT FLOW FROM 511C5 TO 511C6 AT NATURAL FLOW SPLIT
852          DT  DIC5C6
853          DI       0     100     150     200     250     300     350     400     450     500
854          DI     550     600     650     700     750
855          DQ       0      60      97     136     174     218     257     290     332     375
```

```
 856          DQ     418     455     369     401     421
              *

 857          KK  RTC5E2   ROUTE   REACH
 858          KM   Normal depth channel route from 511C5 to 511E2
 859          RS       2    FLOW      -1
 860          RC   0.070   0.040   0.070    2668  0.0217 2506.00
 861          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
 862          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
              *
```



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

 863          KK   511C6   BASIN
 864          KM   Sub-Basin   511C6
 865          KM
 866          KM      The Phoenix Mountain S-Graph is used for this basin.
 867          KM
 868          BA   0.035
 869          LG    0.15    0.35    7.00    0.12       0
 870          UI       8      10      24      39      53      60      82      63      46      41
 871          UI      37      32      28      23      18      17      16      12       9       9
 872          UI       8       6       6       4       4       4       4       2       1       2
 873          UI       1       2       1       2       1       2       0       0       0       0
 874          UI       0       0       0       0       0       0       0       0       0       0
 875          UI       0       0       0       0       0       0       0       0       0       0
 876          UI       0       0       0       0       0       0       0       0       0       0
 877          UI       0       0       0       0       0       0       0       0       0       0
 878          UI       0       0       0       0       0       0       0       0       0       0
 879          UI       0       0       0       0       0       0       0       0       0       0
 880          UI       0       0       0       0       0       0       0       0       0       0
 881          UI       0       0       0       0       0       0       0       0       0       0
 882          UI       0       0       0       0       0       0       0       0       0       0
 883          UI       0       0       0       0       0       0       0       0       0       0
 884          UI       0       0       0       0       0       0       0       0       0       0
 885          UI       0       0       0       0       0       0       0       0       0       0
              *

 886          KK  DRC5C6
 887          KM        RETURN DIVERT FROM 511C5
 888          DR  DIC5C6
              *

 889          KK  RTC5C6   ROUTE   REACH
 890          KM   Normal depth channel route from 511C5 to 511C6
 891          RS       2    FLOW      -1
 892          RC   0.070   0.040   0.070    2644  0.0155 2490.80
 893          RX     0.0    68.8   177.6   245.2   257.0   350.0   363.8   398.6
 894          RY  2490.0  2489.3  2488.8  2490.0  2489.0  2489.0  2490.0  2490.8
              *

 895          KK  CP11C6
 896          KM     Combine routed hydrograph from 511C6 and RTC5C6
 897          HC       2
              *

 898          KK  CP11EF
 899          KM     Combine hydrographs CP11E2, RTC5E2 and CP11C6
 900          HC       3
              *

 901          KK    CPEF
 902          KM     Combine hydrographs from CP11EF and CP11F2
 903          HC       2
              *
```



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

 904          KK  RTEFC8   ROUTE   REACH
 905          KM   Normal depth channel route from CPEF to CP11C8
 906          RS       1    FLOW      -1
 907          RC   0.070   0.040   0.070    1278  0.0141 2454.00
 908          RX     0.0    86.0    91.9   125.2   207.6   319.0   482.9   605.1
 909          RY  2454.0  2448.0  2447.0  2447.0  2448.0  2450.0  2451.0  2452.0
              *

 910          KK   511C8   BASIN
 911          KM   Sub-Basin   5118
 912          KM
 913          KM      The Phoenix Mountain S-Graph is used for this basin.
 914          KM
 915          BA   0.041
 916          LG    0.15    0.37    5.20    0.25       0
 917          UI      13      34      69      94     139      89      70      59      48      36
 918          UI      30      25      17      15      12      10       7       6       5       3
 919          UI       2       3       2       3       2       0       0       0       0       0
 920          UI       0       0       0       0       0       0       0       0       0       0
```

```
 921           UI        0         0         0         0         0         0         0         0         0         0
 922           UI        0         0         0         0         0         0         0         0         0         0
 923           UI        0         0         0         0         0         0         0         0         0         0
 924           UI        0         0         0         0         0         0         0         0         0         0
 925           UI        0         0         0         0         0         0         0         0         0         0
 926           UI        0         0         0         0         0         0         0         0         0         0
 927           UI        0         0         0         0         0         0         0         0         0         0
 928           UI        0         0         0         0         0         0         0         0         0         0
 929           UI        0         0         0         0         0         0         0         0         0         0
 930           UI        0         0         0         0         0         0         0         0         0         0
 931           UI        0         0         0         0         0         0         0         0         0         0
 932           UI        0         0         0         0         0         0         0         0         0         0
               *

 933           KK   CP11C8
 934           KM      Combine routed hydrograph from CPEF with 511C8
 935           HC        2
               *

 936           KK   RTC8C7    ROUTE    REACH
 937           KM   Normal depth channel route from CP11C8 to 511C7
 938           RS        1      FLOW        -1
 939           RC    0.070     0.040     0.070       547    0.0146  2460.00
 940           RX    950.0    1053.0    1139.0    1150.0    1177.0    1255.0    1302.0    1352.0
 941           RY   2460.0    2357.0    2357.4    2356.4    2356.3    2357.8    2359.6    2460.0
               *

 942           KK    511C7    BASIN
 943           KM   Sub-Basin    511C7
 944           KM
 945           KM      The Phoenix Mountain S-Graph is used for this basin.
 946           KM
 947           BA    0.121
 948           LG     0.14      0.39      6.20      0.16         7
 949           UI       17        17        25        53        73        99       113       130       139       177
1                                                      HEC-1 INPUT                                                  PAGE 23

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

 950           UI      201       127       110       102        91        84        82        71        65        59
 951           UI       50        45        42        38        35        32        28        22        22        19
 952           UI       19        18        13        13        13        10         8         9         8         8
 953           UI        9         3         3         4         3         3         3         4         3         3
 954           UI        4         0         0         0         0         0         0         0         0         0
 955           UI        0         0         0         0         0         0         0         0         0         0
 956           UI        0         0         0         0         0         0         0         0         0         0
 957           UI        0         0         0         0         0         0         0         0         0         0
 958           UI        0         0         0         0         0         0         0         0         0         0
 959           UI        0         0         0         0         0         0         0         0         0         0
 960           UI        0         0         0         0         0         0         0         0         0         0
 961           UI        0         0         0         0         0         0         0         0         0         0
 962           UI        0         0         0         0         0         0         0         0         0         0
 963           UI        0         0         0         0         0         0         0         0         0         0
 964           UI        0         0         0         0         0         0         0         0         0         0
               *

 965           KK   CP11C7
 966           KM      Combine routed hydrograph from CP11C8, 511C7
 967           HC        2
               *

 968           KK    RTC7H    ROUTE    REACH
 969           KM   Normal depth channel route from 511C7 to 511H
 970           RS        4      FLOW        -1
 971           RC    0.070     0.040     0.070      6348    0.0176  2460.00
 972           RX    950.0    1053.0    1139.0    1150.0    1177.0    1255.0    1302.0    1352.0
 973           RY   2460.0    2357.0    2357.4    2356.4    2356.3    2357.8    2359.6    2460.0
 974           RL                         0.62    2356.3
               *

 975           KK     511H    BASIN
 976           KM   Sub-Basin    511H
 977           KM
 978           KM      The Phoenix Mountain S-Graph is used for this basin.
 979           KM
 980           BA    0.303
 981           LG     0.15      0.35      4.40      0.38         1
 982           UI       32        34        32        59       104       132       166       207       221       238
 983           UI      267       297       358       402       267       227       211       189       183       174
 984           UI      161       149       142       131       119       111        98        86        82        78
 985           UI       74        73        66        53        54        43        41        43        35        36
 986           UI       37        25        25        26        25        22        17        16        16        16
 987           UI       16         0         0         0         0         0         0         0         0         0
 988           UI        0         0         0         0         0         0         0         0         0         0
 989           UI        0         0         0         0         0         0         0         0         0         0
 990           UI        0         0         0         0         0         0         0         0         0         0
 991           UI        0         0         0         0         0         0         0         0         0         0
 992           UI        0         0         0         0         0         0         0         0         0         0
 993           UI        0         0         0         0         0         0         0         0         0         0
 994           UI        0         0         0         0         0         0         0         0         0         0
 995           UI        0         0         0         0         0         0         0         0         0         0
```

```
 996          UI       0       0       0       0       0       0       0       0       0       0
 997          UI       0       0       0       0       0       0       0       0       0       0
              *
```



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

 998          KK   CP11H
 999          KM     Combine routed hydrographs from RTC7H with 511H
1000          HC       2
              *

1001          KK   RTHG4    ROUTE    REACH
1002          KM   Normal depth channel route from CPC7H TO 511G4
1003          RS        1     FLOW       -1
1004          RC    0.070    0.040    0.070      933  0.0209 2336.00
1005          RX      0.0     44.0     71.0     80.0     90.0    101.0    143.0    154.0
1006          RY   2336.0   2330.0   2324.0   2323.3   2324.0   2330.0   2334.0   2335.0
              *

1007          KK   511G1    BASIN
1008          KM   Sub-Basin   511G1
1009          KM
1010          KM      The Phoenix Mountain S-Graph is used for this basin.
1011          KM
1012          BA   0.310
1013          LG    0.15     0.38     5.60     0.22        8
1014          UI      51       53      122      205      299      350      400      492      618      411
1015          UI     340      294      274      255      220      198      174      144      126      124
1016          UI     108       91       80       66       60       59       48       40       41       32
1017          UI      25       26       25       26       13       10       10       10       10       10
1018          UI      10       10       10       10       10       10        0        0        0        0
1019          UI       0        0        0        0        0        0        0        0        0        0
1020          UI       0        0        0        0        0        0        0        0        0        0
1021          UI       0        0        0        0        0        0        0        0        0        0
1022          UI       0        0        0        0        0        0        0        0        0        0
1023          UI       0        0        0        0        0        0        0        0        0        0
              *

1024          KK  RTG1G2   ROUTE    REACH
1025          KM   Normal depth channel route from 511G1 to 511G2
1026          RS        3     FLOW       -1
1027          RC    0.070    0.040    0.070     4246  0.0146 2472.00
1028          RX     19.0     45.0     98.0    182.0    219.0    234.0    270.0    308.0
1029          RY   2472.0   2470.0   2468.0   2466.0   2465.5   2466.0   2468.0   2472.0
              *

1030          KK   511G2    BASIN
1031          KM   Sub-Basin   511G2
1032          KM
1033          KM      The Phoenix Mountain S-Graph is used for this basin.
1034          KM
1035          BA   0.106
1036          LG    0.15     0.37     5.30     0.24        0
1037          UI      16       16       20       41       61       78       90      103      122      152
1038          UI     127       92       78       76       66       62       56       50       46       38
1039          UI      32       30       28       25       22       20       14       14       12       12
1040          UI      12       11       11       10        7        7        7        7        7        4
1041          UI       2        3        2        3        2        2        3        2        3        2
1042          UI       3        0        0        0        0        0        0        0        0        0
1043          UI       0        0        0        0        0        0        0        0        0        0
```



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

1044          UI       0        0        0        0        0        0        0        0        0        0
1045          UI       0        0        0        0        0        0        0        0        0        0
1046          UI       0        0        0        0        0        0        0        0        0        0
              *
              * ********************************************************************************
              *  ONSITE NEW BASINS ADDED
              * ********************************************************************************

1047          KK      P    BASIN
1048          BA    .014
1049          LG     .35      .39     5.70      .20    23.00
1050          UI     31.      62.      68.      50.      31.      13.       0.       0.       0.       0.
1051          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
1052          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
              *

1053          KK     RSP
              * RESERVOIR STORAGE
1054          KO       0        0      0.0        0       22
1055          RS       1     STOR      0.0      0.0
              *    RSP Volume
1056          SV     0.0     0.21     0.46     0.75
              *    RSP Storage elev
1057          SE     0.0      1.0      2.0      3.0
1058          SL     .75     1.77      0.6      0.5
```

```
1059          SS     2.0    10.0    2.60     1.5
              *

1060          KK     Q   BASIN
1061          BA    .017
1062          LG     .35     .39    5.70     .20   23.00
1063          UI     37.     73.     81.     59.     37.     15.      0.      0.      0.      0.
1064          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1065          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1066          KK    RSQ
              * RESERVOIR STORAGE
1067          KO      0       0     0.0       0      22
1068          RS      1    STOR     0.0     0.0
              *    RSQ Volume
1069          SV    0.0    0.21    0.46    0.75
              *    RSQ Storage elev
1070          SE    0.0     1.0     2.0     3.0
1071          SL    .75    1.77     0.6     0.5
1072          SS    2.0    20.0    2.60     1.5
              *

1073          KK     O   BASIN
1074          BA    .012
1075          LG     .35     .39    5.70     .20   23.00
1076          UI     26.     51.     57.     41.     26.     10.      0.      0.      0.      0.
1077          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1078          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *
```



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

1079          KK    RSO
              * RESERVOIR STORAGE
1080          KO      0       0     0.0       0      22
1081          RS      1    STOR     0.0     0.0
              *    RSO Volume
1082          SV    0.0    0.12    0.27    0.45
              *    RSO Storage elev
1083          SE    0.0     1.0     2.0     3.0
1084          SL    .75    1.77     0.6     0.5
1085          SS    2.0    10.0    2.60     1.5
              *

1086          KK     T   BASIN
1087          BA    .003
1088          LG     .35     .39    5.70     .20   23.00
1089          UI      6.     11.     12.      9.      6.      2.      0.      0.      0.      0.
1090          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1091          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1092          KK    RST
              * RESERVOIR STORAGE
1093          KO      0       0     0.0       0      22
1094          RS      1    STOR     0.0     0.0
              *    RST Volume
1095          SV    0.0    0.04    0.10    0.19
              *    RST Storage elev
1096          SE    0.0     1.0     2.0     3.0
1097          SL    .75    1.77     0.6     0.5
1098          SS    2.0    10.0    2.60     1.5
              *

1099          KK     E   BASIN
1100          BA    .024
1101          LG     .35     .39    5.70     .20   23.00
1102          UI     53.    107.    117.     85.     53.     22.      0.      0.      0.      0.
1103          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1104          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1105          KK    RSE
              * RESERVOIR STORAGE
1106          KO      0       0     0.0       0      22
1107          RS      1    STOR     0.0     0.0
              *    RSE Volume
1108          SV    0.0    0.31    0.67    1.09
              *    RSE Storage elev
1109          SE    0.0     1.0     2.0     3.0
1110          SL    .75    1.77     0.6     0.5
1111          SS    2.0    30.0    2.60     1.5
              *
              * ************************************************************************
              *  CP11G MODIFIED TO INCLUDE NEW BASINS
              * ************************************************************************
```

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

1112          KK   CP11G
1113          KM   COMBINE HYDROGRAPHS RSP, RSQ, RSO, RST, AND RSE
1114          HC       5
              *

1115          KK     Y  BASIN
1116          BA    .004
1117          LG    .35     .39    5.70     .20   23.00
1118          UI      3.      6.      9.     12.     11.      9.      7.      5.      3.      1.
1119          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1120          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1121          KK  CP11G2
1122          KM     Combine routed hydrographs from S11G1, S11G2, CPC7H, CP11G and Y
1123          HC       4
              *

1124          KK  RTG2G4   ROUTE   REACH
1125          RS       4    FLOW      -1
1126          RC   0.070   0.040   0.070    5908  0.0190 2472.00
1127          RX   950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
1128          RY  2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
              *

1129          KK   S11G3   BASIN
1130          KM   Sub-Basin   S11G3
1131          KM
1132          KM      The Phoenix Mountain S-Graph is used for this basin.
1133          KM
1134          BA   0.097
1135          LG    0.15    0.36    5.00    0.28       0
1136          UI      14      15      23      46      67      84      99     110     130     163
1137          UI     137     100      84      83      72      68      62      56      50      44
1138          UI      37      34      33      30      26      24      18      18      16      15
1139          UI      13      11      11      10       7       7       7       7       7       4
1140          UI       3       2       3       3       3       2       3       3       3       2
1141          UI       3       0       0       0       0       0       0       0       0       0
1142          UI       0       0       0       0       0       0       0       0       0       0
1143          UI       0       0       0       0       0       0       0       0       0       0
1144          UI       0       0       0       0       0       0       0       0       0       0
1145          UI       0       0       0       0       0       0       0       0       0       0
              *

1146          KK  RTG3G4   ROUTE   REACH
1147          KM   Normal depth channel route from S11G3 to S11G4
1148          RS       4    FLOW      -1
1149          RC   0.070   0.040   0.070    5322  0.0231 2380.30
1150          RX    34.0    65.0    84.0    98.0   105.0   131.0   166.0   173.0
1151          RY  2380.0  2378.0  2376.0  2374.0  2376.0  2378.0  2380.0  2380.3
              *
```



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

1152          KK   S11G4   BASIN
1153          KM   Sub-Basin   S11G4
1154          KM
1155          KM      The Phoenix Mountain S-Graph is used for this basin.
1156          KM
1157          BA   0.298
1158          LG    0.15    0.35    4.65    0.32       1
1159          UI      33      34      33      67     110     139     179     213     230     248
1160          UI     285     321     402     343     248     217     204     189     176     171
1161          UI     155     144     140     124     111     104      89      83      82      76
1162          UI      71      68      54      53      44      42      40      37      37      33
1163          UI      26      26      25      26      18      17      16      17      16      17
1164          UI      16       0       0       0       0       0       0       0       0       0
1165          UI       0       0       0       0       0       0       0       0       0       0
1166          UI       0       0       0       0       0       0       0       0       0       0
1167          UI       0       0       0       0       0       0       0       0       0       0
1168          UI       0       0       0       0       0       0       0       0       0       0
              *

1169          KK  CPG_G4
1170          KM     Combine routed hydrographs from RTG2G4, RTG3G4 and S11G4
1171          HC       3
              *

1172          KK  CP11G4
1173          KM     Combine routed hydrographs from RTHG4 and CPG_G4
1174          HC       2
              *

1175          KK   RTG4I   ROUTE   REACH
1176          RS       3    FLOW      -1
1177          RC   0.070   0.040   0.070    4438  0.0361 2460.00
```

```
1178          RX   950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
1179          RY  2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
              *
1180          KK    511I   BASIN
1181          KM   Sub-Basin   511I
1182          KM
1183          KM      The Phoenix Mountain S-Graph is used for this basin.
1184          KM
1185          BA   0.198
1186          LG    0.14    0.35    4.10    0.44       2
1187          UI      28      28      40      86     121     162     184     213     228     290
1188          UI     328     209     179     166     151     137     133     117     107      96
1189          UI      82      72      69      63      58      52      46      36      36      32
1190          UI      30      28      22      21      22      16      14      14      13      14
1191          UI      14       5       5       6       5       5       6       5       5       5
1192          UI       6       0       0       0       0       0       0       0       0       0
1193          UI       0       0       0       0       0       0       0       0       0       0
              *
```



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

1194          KK   CP11I
1195          KM     Combine routed hydrograph from RTG2I with runoff from 511I
1196          KO                                      21
1197          HC       2
              *
              *
              * ********************************************************************************
              * ******************************     Major Basin 510    ************************
              * ********************************************************************************
              *

1198          KK    510A   BASIN
1199          KM   Sub-Basin   510A
1200          KM
1201          KM      The Phoenix Mountain S-Graph is used for this basin.
1202          KM
1203          BA   0.923
1204          KO                                      21
1205          LG    0.12    0.39    6.20    0.15      10
1206          UI      63      64      63      63      64     106     182     212     240     286
1207          UI     347     373     402     435     459     472     507     535     601     691
1208          UI     753     746     570     467     446     419     383     370     381     338
1209          UI     329     330     308     294     290     269     251     253     238     215
1210          UI     212     197     177     171     160     153     156     144     144     139
1211          UI     133       0       0       0       0       0       0       0       0       0
1212          UI       0       0       0       0       0       0       0       0       0       0
1213          UI       0       0       0       0       0       0       0       0       0       0
1214          UI       0       0       0       0       0       0       0       0       0       0
1215          UI       0       0       0       0       0       0       0       0       0       0
1216          UI       0       0       0       0       0       0       0       0       0       0
              *
              *
              * ********************************************************************************
              * ******************************     Major Basin 509    ************************
              * ********************************************************************************
              *

1217          KK   509A5   BASIN
1218          KM   Sub-Basin   509A5
1219          KM
1220          KM      The Phoenix Mountain S-Graph is used for this basin.
1221          KM
1222          BA   0.020
1223          LG    0.12    0.36    5.10    0.24       9
1224          UI       7      21      42      57      67      40      34      27      21      16
1225          UI      13       9       8       6       5       3       3       1       2       1
1226          UI       1       2       1       0       0       0       0       0       0       0
1227          UI       0       0       0       0       0       0       0       0       0       0
1228          UI       0       0       0       0       0       0       0       0       0       0
1229          UI       0       0       0       0       0       0       0       0       0       0
1230          UI       0       0       0       0       0       0       0       0       0       0
1231          UI       0       0       0       0       0       0       0       0       0       0
1232          UI       0       0       0       0       0       0       0       0       0       0
1233          UI       0       0       0       0       0       0       0       0       0       0
```



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

1234          UI       0       0       0       0       0       0       0       0       0       0
1235          UI       0       0       0       0       0       0       0       0       0       0
              *

1236          KK  DIA59B
1237          KM   DIVERT FLOW FROM 509A5 TO 509A6 BY NATURAL FLOW SPLIT
1238          DT   DIA5S
1239          DI       0      75     150     225     308     480     650
1240          DQ       0       2      15      30      50      95     140
```

```
*
1241          KK  RTA59B   ROUTE   REACH
1242          KM   Normal depth channel route from 509A5 to 509B
1243          RS      13    FLOW      -1
1244          RC   0.070   0.040   0.070   18484  0.0233 2188.00
1245          RX     0.0    61.0   150.0   160.0   164.0   174.0   266.0   290.0
1246          RY  2184.6  2184.0  2182.0  2180.0  2179.8  2180.0  2186.0  2188.0
              *
1247          KK    509B   BASIN
1248          KM   Sub-Basin   509B
1249          KM
1250          KM      The Phoenix Mountain S-Graph is used for this basin.
1251          KM
1252          BA   0.654
1253          LG   0.15    0.36    5.10    0.26       0
1254          UI     39      40      39      39      40      38      80     116     125     150
1255          UI    172     190     226     240     255     262     289     292     304     327
1256          UI    348     381     433     481     463     377     304     281     268     245
1257          UI    239     234     225     217     214     201     194     191     180     175
1258          UI    172     159     156     154     140     133     129     121     110     107
1259          UI    101       0       0       0       0       0       0       0       0       0
1260          UI      0       0       0       0       0       0       0       0       0       0
1261          UI      0       0       0       0       0       0       0       0       0       0
1262          UI      0       0       0       0       0       0       0       0       0       0
1263          UI      0       0       0       0       0       0       0       0       0       0
1264          UI      0       0       0       0       0       0       0       0       0       0
1265          UI      0       0       0       0       0       0       0       0       0       0
              * ------------------------------------------------------------------------------

1266          KK   CP09B
1267          KM     Combine hydrographs from 509B and RTA59B
1268          KO                                      21
1269          HC       2
              *
1270          KK   509A1   BASIN
1271          KM   Sub-Basin   509A1
1272          KM
1273          KM      The Phoenix Mountain S-Graph is used for this basin.
1274          KM
1275          BA   0.193
1276          LG   0.14    0.38    6.40    0.15       5
1277          UI     23      24      23      56      82     107     137     156     171     181
1278          UI    222     266     242     178     154     137     132     120     113     110
```



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

1279          UI     95      90      83      72      64      60      55      52      51      45
1280          UI     37      36      29      30      26      25      25      19      18      17
1281          UI     19      13      11      12      11      11      12      11       4       4
1282          UI      5       0       0       0       0       0       0       0       0       0
1283          UI      0       0       0       0       0       0       0       0       0       0
1284          UI      0       0       0       0       0       0       0       0       0       0
1285          UI      0       0       0       0       0       0       0       0       0       0
1286          UI      0       0       0       0       0       0       0       0       0       0
1287          UI      0       0       0       0       0       0       0       0       0       0
1288          UI      0       0       0       0       0       0       0       0       0       0
              *
1289          KK  RTA1A2   ROUTE   REACH
1290          KM   Normal depth channel route from 509A1 to 509A2
1291          RS       1    FLOW      -1
1292          RC   0.070   0.040   0.070    1427  0.0234 2464.80
1293          RX     0.0    33.0    66.0    86.0   114.0   120.0   135.0   177.0
1294          RY  2464.0  2463.7  2463.2  2462.8  2463.2  2463.8  2464.0  2464.8
              *
1295          KK   509A2   BASIN
1296          KM   Sub-Basin   509A2
1297          KM
1298          KM      The Phoenix Mountain S-Graph is used for this basin.
1299          KM
1300          BA   0.128
1301          LG   0.13    0.36    6.80    0.12       6
1302          UI     17      18      21      51      72      94     109     130     137     163
1303          UI    210     155     119     107      98      93      84      78      70      66
1304          UI     57      51      45      42      38      38      32      28      24      22
1305          UI     20      19      19      14      13      13      13       9       8       9
1306          UI      8       9       7       3       3       4       3       3       3       4
1307          UI      3       0       0       0       0       0       0       0       0       0
1308          UI      0       0       0       0       0       0       0       0       0       0
1309          UI      0       0       0       0       0       0       0       0       0       0
1310          UI      0       0       0       0       0       0       0       0       0       0
1311          UI      0       0       0       0       0       0       0       0       0       0
1312          UI      0       0       0       0       0       0       0       0       0       0
1313          UI      0       0       0       0       0       0       0       0       0       0
              *
```

```
1314          KK  DRC2A2
1315          KM        RETURN DIVERT FROM 511C2
1316          DR  DIC2A2
              *

1317          KK  RTC2A2   ROUTE   REACH
1318          KM   Normal depth channel route from 511C2 to 509A2
1319          RS       4    FLOW      -1
1320          RC   0.070   0.040   0.070    6045  0.0218 2520.00
1321          RX     0.0   147.0   228.3   252.5   257.8   262.8   282.7   348.4
1322          RY  2502.0  2500.6  2500.0  2498.0  2497.6  2498.0  2500.0  2520.0
              *
```



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

1323          KK  CP09A2
1324          KM    Combine routed hydrograph from 511E4 with runoff from 509A2
1325          HC       3
              *

1326          KK  RTA2A4   ROUTE   REACH
1327          KM   Normal depth channel route from 509A2 to 509A3
1328          RS       2    FLOW      -1
1329          RC   0.070   0.040   0.070    2604  0.0384 2426.00
1330          RX     0.0   103.0   187.0   344.0   439.0   505.0   563.0   596.0
1331          RY  2422.0  2418.0  2417.4  2417.3  2418.0  2416.4  2422.0  2426.0
              *

1332          KK   509A3   BASIN
1333          KM   Sub-Basin   509A3
1334          KM
1335          KM      The Phoenix Mountain S-Graph is used for this basin.
1336          KM
1337          BA   0.162
1338          LG    0.14    0.38    6.40    0.15       4
1339          UI      25      25      46      83     127     154     178     202     244     288
1340          UI     196     161     144     134     122     109     103      88      78      67
1341          UI      60      56      54      44      39      32      30      27      28      20
1342          UI      19      19      16      12      12      12      12      10       4       5
1343          UI       5       5       4       5       5       4       5       5       4       5
1344          UI       0       0       0       0       0       0       0       0       0       0
1345          UI       0       0       0       0       0       0       0       0       0       0
1346          UI       0       0       0       0       0       0       0       0       0       0
1347          UI       0       0       0       0       0       0       0       0       0       0
1348          UI       0       0       0       0       0       0       0       0       0       0
1349          UI       0       0       0       0       0       0       0       0       0       0
1350          UI       0       0       0       0       0       0       0       0       0       0
              *

1351          KK  RTA3A4   ROUTE   REACH
1352          KM   Normal depth channel route from 509A3 to 509A4
1353          RS       1    FLOW      -1
1354          RC   0.070   0.040   0.070     717  0.0167 2406.00
1355          RX     0.0    69.0   124.0   175.0   252.0   303.0   342.0   363.0
1356          RY  2404.8  2404.0  2403.5  2402.8  2403.6  2403.0  2404.0  2406.0
              *

1357          KK   509A4   BASIN
1358          KM   Sub-Basin   509A4
1359          KM
1360          KM      The Phoenix Mountain S-Graph is used for this basin.
1361          KM
1362          BA   0.062
1363          LG    0.15    0.36    6.80    0.13       1
1364          UI      16      32      72     106     139     175     111      95      79      67
1365          UI      56      44      37      33      24      20      18      14      12       9
1366          UI       7       8       4       3       3       4       3       3       3       3
1367          UI       0       0       0       0       0       0       0       0       0       0
1368          UI       0       0       0       0       0       0       0       0       0       0
```



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

1369          UI       0       0       0       0       0       0       0       0       0       0
1370          UI       0       0       0       0       0       0       0       0       0       0
1371          UI       0       0       0       0       0       0       0       0       0       0
1372          UI       0       0       0       0       0       0       0       0       0       0
1373          UI       0       0       0       0       0       0       0       0       0       0
1374          UI       0       0       0       0       0       0       0       0       0       0
1375          UI       0       0       0       0       0       0       0       0       0       0
              *

1376          KK  CP09A4
1377          KM    Combine hydrographs from 509A4, RTA2A4, RTA3A4
1378          HC       3
              *
              * MODIFICATION STARTS
              *
```

```
1379          KK  RTA4A6   ROUTE   REACH
1380          KM   Normal depth channel route from CP509A4 to 509A6
1381          RS      2    FLOW     -1
1382          RC  0.070   0.040   0.070    1778  0.0185 2382.00
1383          RX    0.0    84.4   120.0   123.0   125.0   130.5   135.7   193.0
1384          RY 2382.0  2380.0  2378.0  2377.8  2378.0  2379.0  2380.0  2382.0
              *
              *

1385          KK  DRA5A6
1386          KM        RETURN DIVERT FROM 509A5
1387          DR   DIA5S
              *

1388          KK  RTA5A6   ROUTE   REACH
1389          KM   Normal depth channel route from 509A5 to 509A6
1390          RS      2    FLOW     -1
1391          RC  0.070   0.040   0.070    1778  0.0185 2382.00
1392          RX    0.0    84.4   120.0   123.0   125.0   130.5   135.7   193.0
1393          RY 2382.0  2380.0  2378.0  2377.8  2378.0  2379.0  2380.0  2382.0
              *

1394          KK   509A6   BASIN
1395          KM   Sub-Basin   509A6
1396          KM
1397          KM      The Phoenix Mountain S-Graph is used for this basin.
1398          KM
1399          BA   0.032
1400          KO                                    21
1401          LG   0.15    0.32    7.60    0.10     0
1402          UI     9      27      55      73     109      69      54      46      38      28
1403          UI    24      19      14      11       9       8       6       4       4       2
1404          UI     2       2       2       2       2       0       0       0       0       0
1405          UI     0       0       0       0       0       0       0       0       0       0
1406          UI     0       0       0       0       0       0       0       0       0       0
1407          UI     0       0       0       0       0       0       0       0       0       0
1408          UI     0       0       0       0       0       0       0       0       0       0
1409          UI     0       0       0       0       0       0       0       0       0       0
1410          UI     0       0       0       0       0       0       0       0       0       0
              *
```



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

1411          KK  CP09A6
1412          KM     Combine hydrographs from RTA4A6, RTA5A6, 509A6
1413          HC      3
              *
              * END OF MODIFICATION
              *

1414          KK    509D   BASIN
1415          KM   Sub-Basin   509D
1416          KM
1417          KM      The Phoenix Mountain S-Graph is used for this basin.
1418          KM
1419          BA   0.382
1420          KO                                    21
1421          LG   0.14    0.40    6.00    0.17     4
1422          UI     31      32      31      31      50      89     108     133     158     184
1423          UI    201     216     229     245     263     292     348     391     308     250
1424          UI    213     202     191     181     172     169     158     149     148     132
1425          UI    126     125     113     105     101      88      81      80      76      72
1426          UI     73      66      65      60      51      52      45      39      40      41
1427          UI     34       0       0       0       0       0       0       0       0       0
1428          UI      0       0       0       0       0       0       0       0       0       0
1429          UI      0       0       0       0       0       0       0       0       0       0
1430          UI      0       0       0       0       0       0       0       0       0       0
              *
              * ********************************************************************************
              * ******************************    Major Basin 500    ***************************
              * ********************************************************************************
              *

1431          KK    500A   BASIN
1432          KM   Sub-Basin   500A
1433          KM
1434          KM      The Phoenix Mountain S-Graph is used for this basin.
1435          KM
1436          BA   0.204
1437          LG   0.15    0.37    5.20    0.25     1
1438          UI     28      30      41      89     124     167     189     221     235     298
1439          UI    338     215     184     172     155     142     137     120     110      99
1440          UI     85      75      70      65      59      54      46      38      37      33
1441          UI     31      30      21      22      22      17      14      15      13      14
1442          UI     15       5       6       5       6       5       6       5       6       5
1443          UI      6       0       0       0       0       0       0       0       0       0
              *

1444          KK    RTAB   ROUTE   REACH
```

```
1445          KM   Normal depth channel route from 500A to 500B
1446          RS      4     FLOW      -1
1447          RC   0.070   0.040   0.070    6187  0.0283 2261.00
1448          RX   822.0  1013.0  1035.0  1045.0  1049.0  1053.0  1076.0  1573.0
1449          RY  2261.0  2159.2  2158.9  2156.6  2156.8  2158.9  2159.0  2261.0
              *
```



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

1450          KK   500B   BASIN
1451          KM   Sub-Basin   500B
1452          KM
1453          KM      The Phoenix Mountain S-Graph is used for this basin.
1454          KM
1455          BA   0.192
1456          LG    0.12    0.37    5.30    0.22       8
1457          UI      20      20      20      32      62      77      98     121     133     143
1458          UI     161     171     206     250     196     149     133     122     116     112
1459          UI     102      95      91      84      79      73      66      59      54      49
1460          UI      48      48      42      41      34      33      27      26      26      22
1461          UI      23      21      18      16      15      16      15      11      10      10
1462          UI      10       0       0       0       0       0       0       0       0       0
1463          UI       0       0       0       0       0       0       0       0       0       0
1464          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

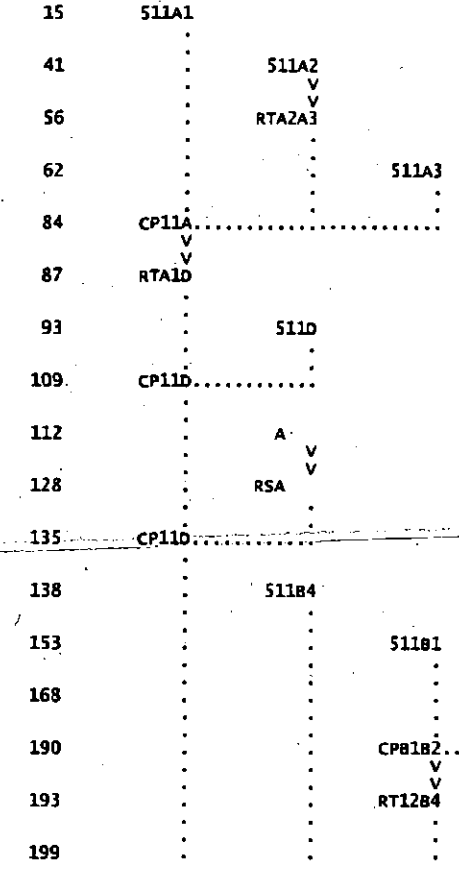
1465          KK  CP500B
1466          KM     Combine routed hydrograph from 500A with runoff from 500B
1467          KO                                        21
1468          HC       2
              *
1469          ZZ
```

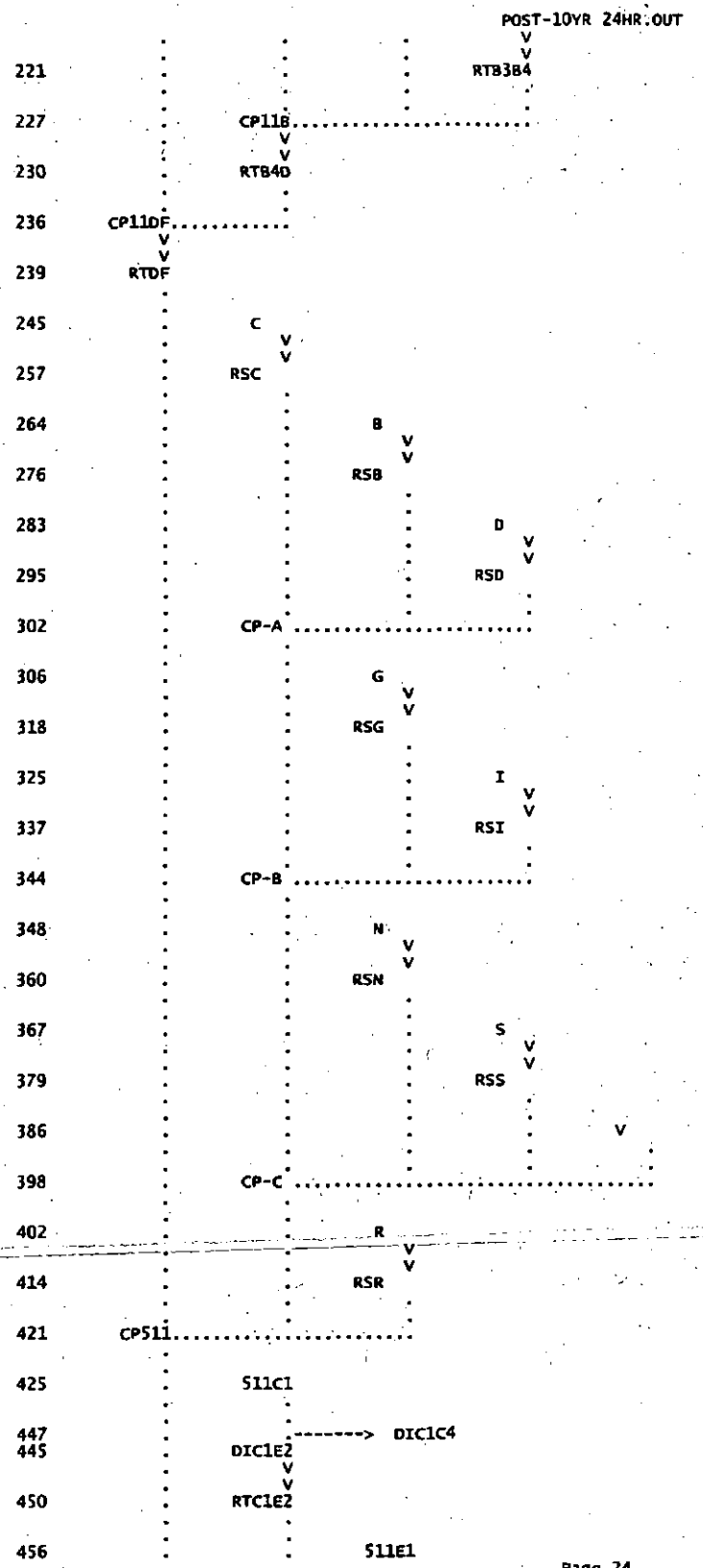
1

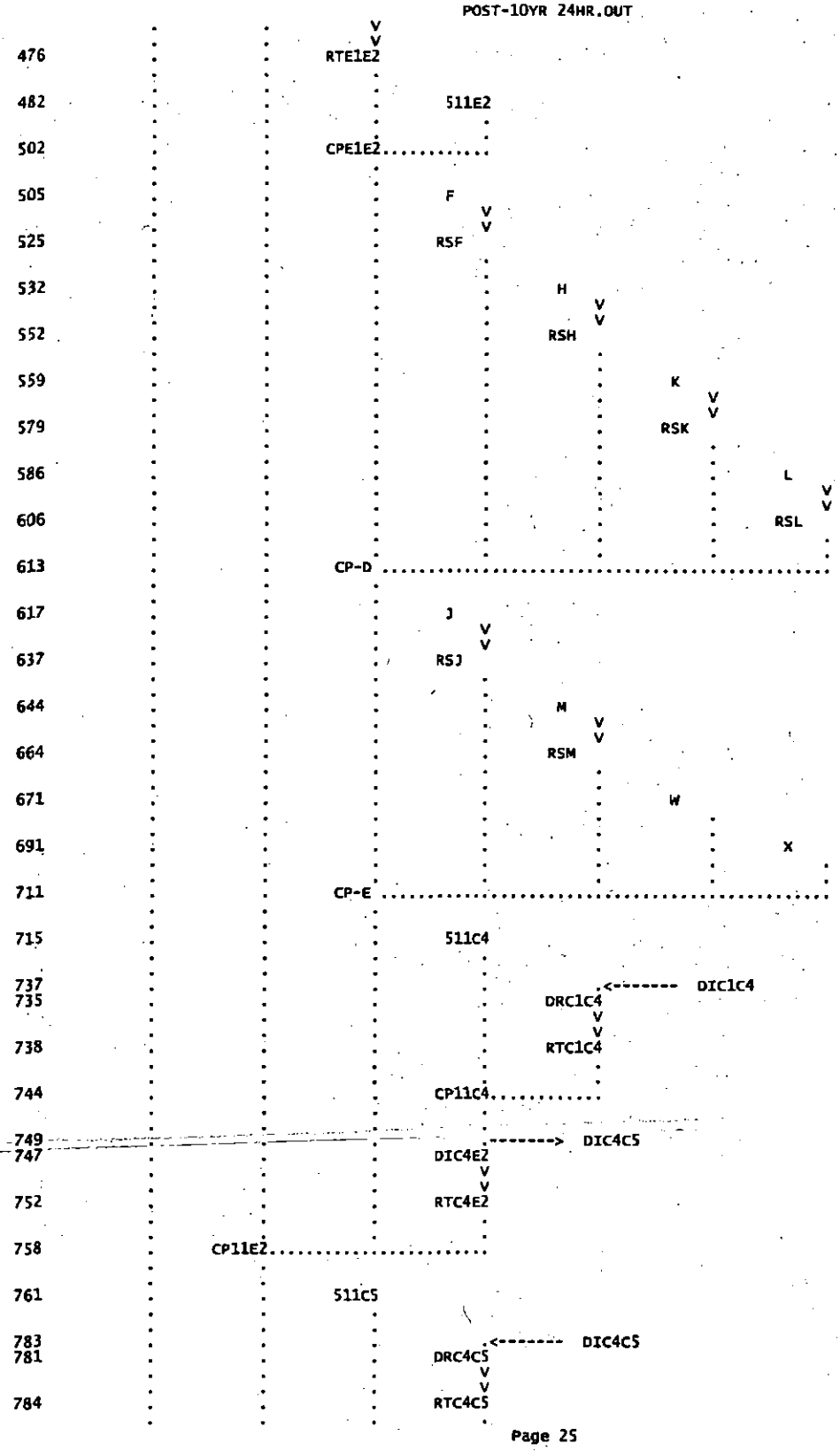
SCHEMATIC DIAGRAM OF STREAM NETWORK

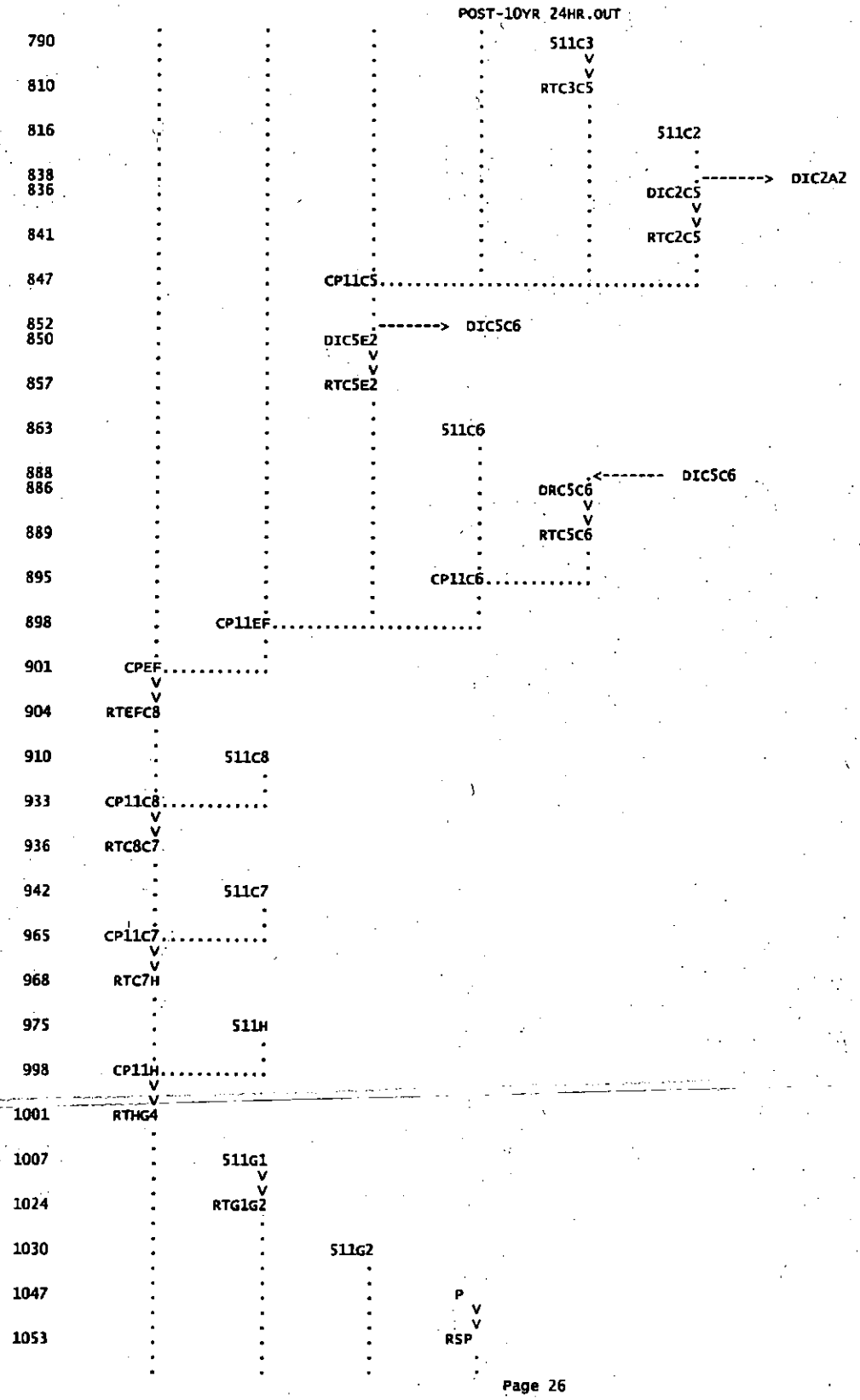
INPUT LINE NO.

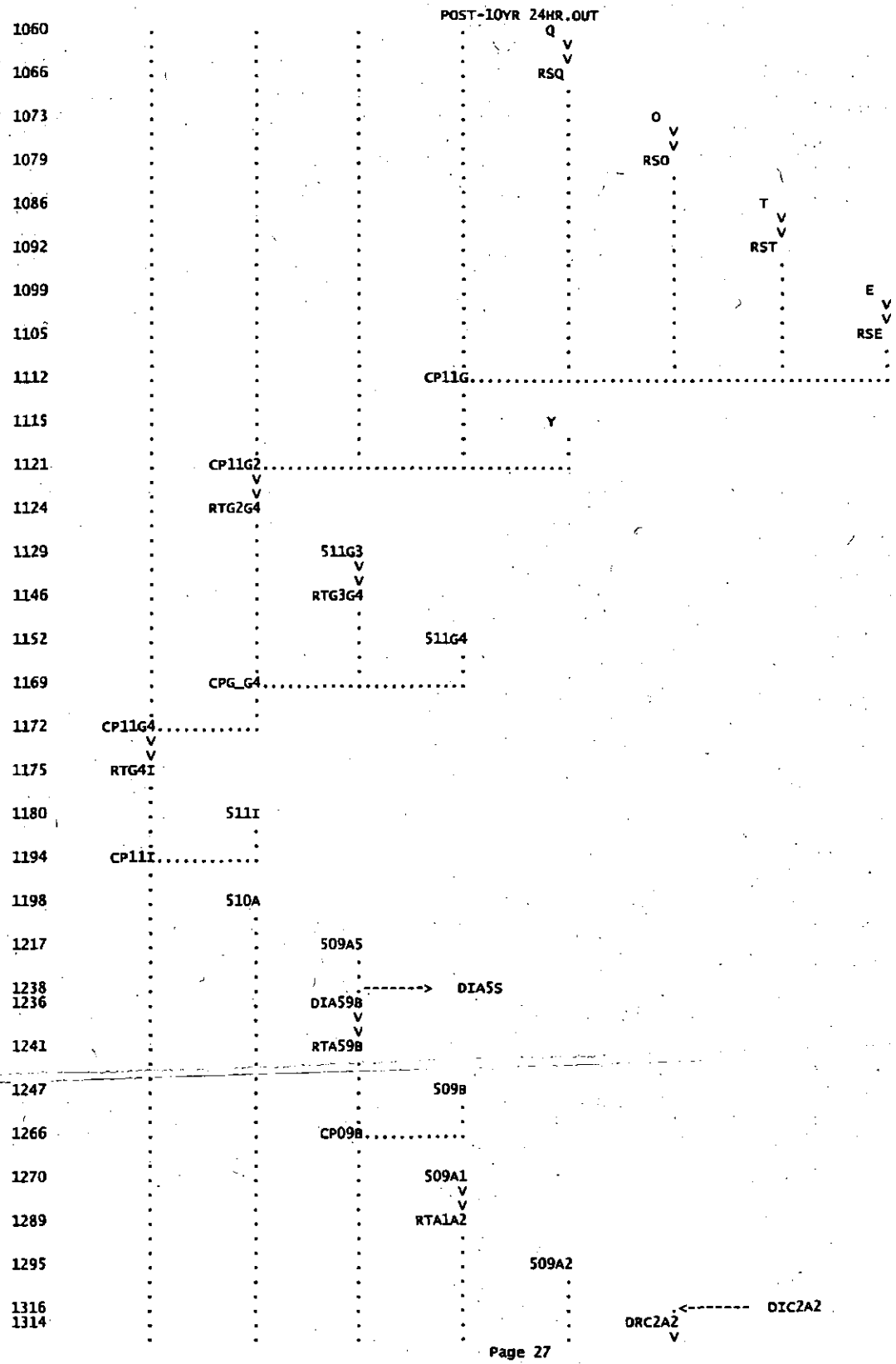
(V) ROUTING (.) CONNECTOR (---->) DIVERSION OR PUMP FLOW (<---) RETURN OF DIVERTED OR PUMPED FLOW




221
RTB3B4
227
CP11B
230
RTB4D
236
CP11DF
239
RTDF
245
C
257
RSC
264
B
276
RSB
283
D
295
RSD
302
CP-A
306
G
318
RSG
325
I
337
RSI
344
CP-B
348
N
360
RSN
367
S
379
RSS
386
V
398
CP-C
402
R
414
RSR
421
CP511
425
511C1
447
445
DIC1E2
450
RTC1E2
456
511E1
DIC1C4


476
RTE1E2
482
511E2
502
CPE1E2
505
F
525
RSF
532
H
552
RSH
559
K
579
RSK
586
L
606
RSL
613
CP-D
617
J
637
RSJ
644
M
664
RSM
671
W
691
X
711
CP-E
715
511C4
737
735
DIC1C4
DRC1C4
738
RTC1C4
744
CP11C4
749
747
DIC4C5
DIC4E2
752
RTC4E2
758
CP11E2
761
511C5
783
781
DIC4C5
DRC4C5
784
RTC4C5


POST-10YR 24HR.OUT
790
511C3
810
RTC3C5
816
511C2
838
836
DIC2C5
DIC2A2
841
RTC2C5
847
CP11C5
852
850
DIC5C6
DIC5E2
857
RTC5E2
863
511C6
888
886
DIC5C6
DRC5C6
889
RTC5C6
895
CP11C6
898
CP11EF
901
CPEF
904
RTEFC8
910
511C8
933
CP11C8
936
RTC8C7
942
511C7
965
CP11C7
968
RTC7H
975
511H
998
CP11H
1001
RTHG4
1007
511G1
1024
RTG1G2
1030
511G2
1047
P
1053
RSP


POST-10YR 24HR.OUT
1060
Q
1066
RSQ
1073
O
1079
RSO
1086
T
1092
RST
1099
E
1105
RSE
1112
CP11G
1115
Y
1121
CP11G2
1124
RTG2G4
1129
511G3
1146
RTG3G4
1152
511G4
1169
CPG_G4
1172
CP11G4
1175
RTG4I
1180
511I
1194
CP11I
1198
510A
1217
509A5
1238
1236
DIA59B
1241
RTA59B
DIA5S
1247
509B
1266
CP09B
1270
509A1
1289
RTA1A2
1295
509A2
1316
1314
DRC2A2
DIC2A2

```
                                                                          V
 1317        .         .         .         .         .          RTC2A2
                                                                     .
 1323        .         .         .  CP09A2.........................
                                         V
                                         V
 1326        .         .         .  RTA2A4

 1332        .         .         .         .       509A3
                                                       V
                                                       V
 1351        .         .         .         .      RTA3A4
                                                        .
 1357        .         .         .         .         .        509A4
                                                                  .
 1376        .         .         .  CP09A4.........................
                                         V
                                         V
 1379        .         .         .  RTA4A6

 1387        .         .         .         .         .<-------   DIA5S
 1385        .         .         .         .      DRA5A6
                                                       V
                                                       V
 1388        .         .         .         .      RTA5A6
                                                        .
 1394        .         .         .         .         .        509A6
                                                                  .
 1411        .         .         .  CP09A6.........................
                                         .
 1414        .         .         .         .       509D
                                                        .
 1431        .         .         .         .         .        500A
                                                                 V
                                                                 V
 1444        .         .         .         .         .        RTAB
                                                                 .
 1450        .         .         .         .         .         .        500B
                                                                            .
 1465        .         .         .         .         .     CP500B............
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*****************************************
*****************************************
*                                        *                                       *
*                                        *                                       *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)     *                                       *   U.S. ARMY CORPS OF ENGINEERS
*            JUN  1998                   *                                       *   HYDROLOGIC ENGINEERING CENTER
*          VERSION 4.1                   *                                       *          609 SECOND STREET
*                                        *                                       *       DAVIS, CALIFORNIA 95616
*  RUN DATE  21MAY14  TIME  16:14:45     *                                       *          (916) 756-1104
*                                        *                                       *
*                                        *
*****************************************
*****************************************
```

```
                 Project ID: S_24EX - Major Basin: 01 - Return Period: 100 Years
                 RIO VERDE AREA DRAINAGE MASTER PLAN                     FILE NAME: S_24EX.DAT
                 MODEL:      100-year, 24-hour Existing Condition Model
                 DEVELOPER:  Dibble & Associates, Inc.                   DATE: Sept. 29, 2003

                 *** Modified South Watershed Model: Subbasin Added: 509A6 ***
                                                                         DATE REVISED: 5/06/05
                 *** Note Changes Per TDN Hydrology Review Comments by FCDMC - July 21, 2006
                 *** Modify Flow Distribution for DIC5E2 to match Floodplain RAS Modeling
                                                                         LAST UPDATE:  8/30/06


   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       1200  NUMBER OF HYDROGRAPH ORDINATES
               NDDATE      2   0  ENDING DATE
               NDTIME       1558  ENDING TIME
                ICENT         19  CENTURY MARK

          COMPUTATION INTERVAL     .03 HOURS
               TOTAL TIME BASE   39.97 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

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

              **************
              *            *
  128 KK      *    RSA     *
              *            *
              **************

  129 KO        OUTPUT CONTROL VARIABLES
                IPRNT          5  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                 IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  257 KK      *    RSC     *
              *            *
              **************

  258 KO        OUTPUT CONTROL VARIABLES
                IPRNT          5  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                 IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  276 KK      *    RSB     *
              *            *
              **************

  277 KO        OUTPUT CONTROL VARIABLES
                IPRNT          5  PRINT CONTROL
                IPLOT          0  PLOT CONTROL
                QSCAL         0.  HYDROGRAPH PLOT SCALE
                IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                 IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT       .033  TIME INTERVAL IN HOURS
```

```
*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***
*** *** ***

              **************
              *            *
295 KK        *    RSD     *
              *            *
              **************

296 KO              OUTPUT CONTROL VARIABLES
                          IPRNT            5  PRINT CONTROL
                          IPLOT            0  PLOT CONTROL
                          QSCAL           0.  HYDROGRAPH PLOT SCALE
                          IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                           IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                          ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                          ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                         TIMINT         .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
318 KK        *    RSG     *
              *            *
              **************

319 KO              OUTPUT CONTROL VARIABLES
                          IPRNT            5  PRINT CONTROL
                          IPLOT            0  PLOT CONTROL
                          QSCAL           0.  HYDROGRAPH PLOT SCALE
                          IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                           IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                          ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                          ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                         TIMINT         .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
337 KK        *    RSI     *
              *            *
              **************

338 KO              OUTPUT CONTROL VARIABLES
                          IPRNT            5  PRINT CONTROL
                          IPLOT            0  PLOT CONTROL
                          QSCAL           0.  HYDROGRAPH PLOT SCALE
                          IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                           IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                          ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                          ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                         TIMINT         .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
360 KK        *    RSN     *
              *            *
              **************

361 KO              OUTPUT CONTROL VARIABLES
                          IPRNT            5  PRINT CONTROL
                          IPLOT            0  PLOT CONTROL
                          QSCAL           0.  HYDROGRAPH PLOT SCALE
                          IPNCH            0  PUNCH COMPUTED HYDROGRAPH
                           IOUT           22  SAVE HYDROGRAPH ON THIS UNIT
                          ISAV1            1  FIRST ORDINATE PUNCHED OR SAVED
                          ISAV2         1200  LAST ORDINATE PUNCHED OR SAVED
                         TIMINT         .033  TIME INTERVAL IN HOURS
```

*** ***

```
          **************
          *            *
379 KK    *    RSS     *
          *            *
          **************

380 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .033  TIME INTERVAL IN HOURS
```

*** ***

```
          **************
          *            *
414 KK    *    RSR     *
          *            *
          **************

415 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .033  TIME INTERVAL IN HOURS
```

*** ***

```
          **************
          *            *
525 KK    *    RSF     *
          *            *
          **************

526 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                    TIMINT       .033  TIME INTERVAL IN HOURS
```

*** ***

```
          **************
          *            *
552 KK    *    RSH     *
          *            *
          **************

553 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                     IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                      IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                     ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                     ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
```

```
                     TIMINT          .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  579 KK      *    RSK     *
              *            *
              **************

  580 KO          OUTPUT CONTROL VARIABLES
                      IPRNT             5  PRINT CONTROL
                      IPLOT             0  PLOT CONTROL
                      QSCAL            0.  HYDROGRAPH PLOT SCALE
                      IPNCH             0  PUNCH COMPUTED HYDROGRAPH
                       IOUT            22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1             1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2          1200  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT          .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  606 KK      *    RSL     *
              *            *
              **************

  607 KO          OUTPUT CONTROL VARIABLES
                      IPRNT             5  PRINT CONTROL
                      IPLOT             0  PLOT CONTROL
                      QSCAL            0.  HYDROGRAPH PLOT SCALE
                      IPNCH             0  PUNCH COMPUTED HYDROGRAPH
                       IOUT            22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1             1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2          1200  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT          .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  637 KK      *    RSJ     *
              *            *
              **************

  638 KO          OUTPUT CONTROL VARIABLES
                      IPRNT             5  PRINT CONTROL
                      IPLOT             0  PLOT CONTROL
                      QSCAL            0.  HYDROGRAPH PLOT SCALE
                      IPNCH             0  PUNCH COMPUTED HYDROGRAPH
                       IOUT            22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1             1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2          1200  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT          .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  664 KK      *    RSM     *
              *            *
              **************

  665 KO          OUTPUT CONTROL VARIABLES
                      IPRNT             5  PRINT CONTROL
                      IPLOT             0  PLOT CONTROL
                      QSCAL            0.  HYDROGRAPH PLOT SCALE
                      IPNCH             0  PUNCH COMPUTED HYDROGRAPH
                       IOUT            22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1             1  FIRST ORDINATE PUNCHED OR SAVED
```

```
       ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
      TIMINT        .033  TIME INTERVAL IN HOURS


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

             **************
             *            *
1053 KK      *    RSP     *
             *            *
             **************

1054 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           5  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                       ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                       ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                      TIMINT        .033  TIME INTERVAL IN HOURS


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

             **************
             *            *
1066 KK      *    RSQ     *
             *            *
             **************

1067 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           5  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                       ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                       ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                      TIMINT        .033  TIME INTERVAL IN HOURS


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

             **************
             *            *
1079 KK      *    RSO     *
             *            *
             **************

1080 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           5  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                       ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                       ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                      TIMINT        .033  TIME INTERVAL IN HOURS


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

             **************
             *            *
1092 KK      *    RST     *
             *            *
             **************

1093 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           5  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
```

```
                ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT        .033  TIME INTERVAL IN HOURS

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

            **************
            *            *
  1105 KK   *     RSE    *
            *            *
            **************

  1106 KO        OUTPUT CONTROL VARIABLES
                IPRNT           5  PRINT CONTROL
                IPLOT           0  PLOT CONTROL
               QSCAL           0.  HYDROGRAPH PLOT SCALE
                IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                 IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT        .033  TIME INTERVAL IN HOURS

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

            **************
            *            *
  1194 KK   *    CP11I   *
            *            *
            **************

  1196 KO        OUTPUT CONTROL VARIABLES
                IPRNT           5  PRINT CONTROL
                IPLOT           0  PLOT CONTROL
               QSCAL           0.  HYDROGRAPH PLOT SCALE
                IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                 IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT        .033  TIME INTERVAL IN HOURS

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

            **************
            *            *
  1198 KK   *    510A    *        BASIN
            *            *
            **************

  1204 KO        OUTPUT CONTROL VARIABLES
                IPRNT           5  PRINT CONTROL
                IPLOT           0  PLOT CONTROL
               QSCAL           0.  HYDROGRAPH PLOT SCALE
                IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                 IOUT          21  SAVE HYDROGRAPH ON THIS UNIT
                ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
               TIMINT        .033  TIME INTERVAL IN HOURS

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

            **************
            *            *
  1266 KK   *    CP09B   *
            *            *
            **************

  1268 KO        OUTPUT CONTROL VARIABLES
                IPRNT           5  PRINT CONTROL
                IPLOT           0  PLOT CONTROL
               QSCAL           0.  HYDROGRAPH PLOT SCALE
                IPNCH           0  PUNCH COMPUTED HYDROGRAPH
```

IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

```
          ***************
          *             *
1394 KK   *    509A6    *        BASIN
          *             *
          ***************
```

1400 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

```
          ***************
          *             *
1414 KK   *     509D    *        BASIN
          *             *
          ***************
```

1420 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

```
          ***************
          *             *
1465 KK   *   CP500B    *
          *             *
          ***************
```

1467 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	511A1	241.	12.23	27.	7.	4.	.29		
+	HYDROGRAPH AT	511A2	70.	12.10	5.	1.	1.	.06		

+	ROUTED TO	RTA2A3	46.	12.33	5.	1.	1.	.06
+								2657.79
12.33								
+	HYDROGRAPH AT	S11A3	247.	12.23	27.	7.	4.	.29
+	3 COMBINED AT	CP11A	529.	12.23	60.	15.	9.	.65
+	ROUTED TO	RTA1D	450.	12.53	60.	15.	9.	.65
+								99.84
12.53								
+	HYDROGRAPH AT	S11D	96.	12.17	10.	2.	1.	.10
+	2 COMBINED AT	CP11D	493.	12.50	70.	18.	11.	.75
+	HYDROGRAPH AT	A	69.	12.03	5.	1.	1.	.04
+	ROUTED TO	RSA	36.	12.17	5.	1.	1.	.04
+								2.44
12.17								
+	2 COMBINED AT	CP11D	501.	12.50	75.	19.	11.	.79
+	HYDROGRAPH AT	S11B4	224.	12.13	23.	6.	4.	.19
+	HYDROGRAPH AT	S11B1	390.	12.40	56.	14.	9.	.58
+	HYDROGRAPH AT	S11B2	172.	12.27	21.	5.	3.	.22
+	2 COMBINED AT	CP81B2	551.	12.37	77.	20.	12.	.81
+	ROUTED TO	RT12B4	499.	12.57	77.	20.	12.	.81
+								2575.43
12.57								
+	HYDROGRAPH AT	S11B3	94.	12.13	8.	2.	1.	.08
+	ROUTED TO	RTB3B4	76.	12.30	8.	2.	1.	.08
+								2561.47
12.30								
+	3 COMBINED AT	CP11B	621.	12.50	108.	28.	17.	1.08
+	ROUTED TO	RTB4D	619.	12.53	108.	28.	17.	1.08
+								2532.60
12.53								
+	2 COMBINED AT	CP11DF	1119.	12.50	183.	47.	28.	1.87
+	ROUTED TO	RTDF	1063.	12.70	183.	47.	28.	1.87
+								100.96
12.70								
+	HYDROGRAPH AT	C	9.	12.00	1.	0.	0.	.01
+	ROUTED TO	RSC	6.	12.07	0.	0.	0.	.01
+								1.22
12.07								
+	HYDROGRAPH AT	B	26.	12.00	2.	0.	0.	.02
+	ROUTED TO	RSB	11.	12.10	2.	0.	0.	.02
+								2.23
12.10								
	HYDROGRAPH AT							

+	D	18.	12.00	1.	0.	0.	.01	
	ROUTED TO							
+	RSD	5.	12.13	1.	0.	0.	.01	
+								1.95
12.13								
	3 COMBINED AT							
+	CP-A	21.	12.10	3.	1.	1.	.04	
	HYDROGRAPH AT							
+	G	13.	12.00	1.	0.	0.	.01	
	ROUTED TO							
+	RSG	8.	12.07	1.	0.	0.	.01	
+								1.65
12.07								
	HYDROGRAPH AT							
+	I	79.	12.00	5.	2.	1.	.04	
	ROUTED TO							
+	RSI	51.	12.10	4.	1.	1.	.04	
+								2.51
12.10								
	3 COMBINED AT							
+	CP-B	80.	12.10	8.	2.	1.	.09	
	HYDROGRAPH AT							
+	N	8.	12.00	1.	0.	0.	.00	
	ROUTED TO							
+	RSN	7.	12.03	0.	0.	0.	.00	
+								1.35
12.03								
	HYDROGRAPH AT							
+	S	14.	12.00	1.	0.	0.	.01	
	ROUTED TO							
+	RSS	8.	12.07	1.	0.	0.	.01	
+								1.74
12.07								
	HYDROGRAPH AT							
+	V	31.	12.23	4.	1.	1.	.02	
	4 COMBINED AT							
+	CP-C	119.	12.10	13.	4.	2.	.12	
	HYDROGRAPH AT							
+	R	5.	12.00	0.	0.	0.	.00	
	ROUTED TO							
+	RSR	3.	12.07	0.	0.	0.	.00	
+								1.30
12.07								
	3 COMBINED AT							
+	CP511	1086.	12.67	196.	51.	31.	1.99	
	HYDROGRAPH AT							
+	511C1	242.	12.30	30.	7.	4.	.33	
	DIVERSION TO							
+	DIC1C4	125.	12.30	15.	4.	2.	.33	
	HYDROGRAPH AT							
+	DIC1E2	116.	12.30	14.	4.	2.	.33	
	ROUTED TO							
+	RTC1E2	83.	12.80	14.	4.	2.	.33	
+								2496.39
12.80								
	HYDROGRAPH AT							
+	511E1	227.	12.27	27.	7.	4.	.30	
	ROUTED TO							
+	RTE1E2	172.	12.60	27.	7.	4.	.30	
+								2496.67
12.60								
	HYDROGRAPH AT							
+	511E2	195.	12.30	25.	6.	4.	.26	
	2 COMBINED AT							
+	CPE1E2	313.	12.43	52.	13.	8.	.55	
	HYDROGRAPH AT							

+		F	13.	12.00	1.	0.	0.	.01	
	ROUTED TO								
+		RSF	8.	12.07	1.	0.	0.	.01	
+									1.54
12.07									
	HYDROGRAPH AT								
+		H	9.	12.00	1.	0.	0.	.01	
	ROUTED TO								
+		RSH	7.	12.07	1.	0.	0.	.01	
+									1.39
12.07									
	HYDROGRAPH AT								
+		K	8.	12.00	1.	0.	0.	.00	
	ROUTED TO								
+		RSK	6.	12.07	0.	0.	0.	.00	
+									1.32
12.07									
	HYDROGRAPH AT								
+		L	16.	12.00	1.	0.	0.	.00	
	ROUTED TO								
+		RSL	8.	12.10	1.	0.	0.	.00	
+									1.58
12.10									
	5 COMBINED AT								
+		CP-D	320.	12.43	54.	14.	8.	.58	
	HYDROGRAPH AT								
+		J	2.	12.00	0.	0.	0.	.00	
	ROUTED TO								
+		RSJ	2.	12.00	0.	0.	0.	.00	
+									.89
12.00									
	HYDROGRAPH AT								
+		M	14.	12.00	1.	0.	0.	.01	
	ROUTED TO								
+		RSM	4.	12.10	1.	0.	0.	.01	
+									1.90
12.10									
	HYDROGRAPH AT								
+		W	34.	12.33	5.	2.	1.	.03	
	HYDROGRAPH AT								
+		X	6.	12.10	1.	0.	0.	.00	
	5 COMBINED AT								
+		CP-E	358.	12.40	61.	16.	9.	.62	
	HYDROGRAPH AT								
+		511C4	30.	12.03	2.	0.	0.	.02	
	HYDROGRAPH AT								
+		DRC1C4	125.	12.30	15.	4.	2.	.00	
	ROUTED TO								
+		RTC1C4	119.	12.37	15.	4.	2.	.00	
+									2598.94
12.37									
	2 COMBINED AT								
+		CP11C4	122.	12.37	17.	4.	3.	.02	
	DIVERSION TO								
+		DIC4C5	88.	12.37	13.	3.	2.	.02	
	HYDROGRAPH AT								
+		DIC4E2	35.	12.37	4.	1.	1.	.02	
	ROUTED TO								
+		RTC4E2	21.	13.03	4.	1.	1.	.02	
+									2496.03
13.03									
	3 COMBINED AT								
+		CP11E2	387.	12.60	80.	20.	12.	.97	
	HYDROGRAPH AT								
+		511C5	129.	12.13	12.	3.	2.	.11	
	HYDROGRAPH AT								

+		DRC4C5	88.	12.37	13.	3.	2.	.00	
+	ROUTED TO	RTC4C5	81.	12.50	13.	3.	2.	.00	2526.44
12.50									
+	HYDROGRAPH AT	511C3	138.	12.17	13.	3.	2.	.14	
+	ROUTED TO	RTC3C5	121.	12.30	13.	3.	2.	.14	2526.63
12.30									
+	HYDROGRAPH AT	511C2	270.	12.33	35.	9.	5.	.39	
+	DIVERSION TO	DIC2A2	99.	12.33	12.	3.	2.	.39	
+	HYDROGRAPH AT	DIC2C5	171.	12.33	23.	6.	3.	.39	
+	ROUTED TO	RTC2C5	149.	12.53	23.	6.	3.	.39	2552.44
12.53									
+	4 COMBINED AT	CP11C5	369.	12.40	60.	15.	9.	.64	
+	DIVERSION TO	DIC5C6	270.	12.40	41.	10.	6.	.64	
+	HYDROGRAPH AT	DIC5E2	100.	12.40	19.	5.	3.	.64	
+	ROUTED TO	RTC5E2	93.	12.57	19.	5.	3.	.64	2496.41
12.57									
+	HYDROGRAPH AT	511C6	45.	12.10	4.	1.	1.	.04	
+	HYDROGRAPH AT	DRC5C6	270.	12.40	41.	10.	6.	.00	
+	ROUTED TO	RTC5C6	234.	12.67	41.	10.	6.	.00	2489.49
12.67									
+	2 COMBINED AT	CP11C6	238.	12.67	45.	11.	7.	.04	
+	3 COMBINED AT	CP11EF	716.	12.63	144.	36.	22.	1.65	
+	2 COMBINED AT	CPEF	1794.	12.67	339.	87.	53.	3.64	
+	ROUTED TO	RTEFC8	1782.	12.70	339.	87.	53.	3.64	2449.41
12.70									
+	HYDROGRAPH AT	511C8	56.	12.07	4.	1.	1.	.04	
+	2 COMBINED AT	CP11C8	1783.	12.70	343.	88.	53.	3.68	
+	ROUTED TO	RTC8C7	1780.	12.73	343.	88.	53.	3.68	2357.19
12.73									
+	HYDROGRAPH AT	511C7	118.	12.17	13.	3.	2.	.12	
+	2 COMBINED AT	CP11C7	1810.	12.70	356.	92.	55.	3.80	
+	ROUTED TO	RTC7H	1751.	12.87	340.	85.	51.	3.80	2357.10
12.87									
	HYDROGRAPH AT								

POST Q 10YR 24HR @ CPEF

+		511H	198.	12.27	23.	6.	3.	.30	
+	2 COMBINED AT	CP11H	1805.	12.87	363.	91.	54.	4.11	
+	ROUTED TO	RTHG4	1801.	12.87	363.	91.	54.	4.11	2328.63
12.87									
+	HYDROGRAPH AT	511G1	322.	12.13	31.	8.	5.	.31	
+	ROUTED TO	RTG1G2	249.	12.40	31.	8.	5.	.31	2466.74
12.40									
+	HYDROGRAPH AT	511G2	82.	12.17	8.	2.	1.	.11	
+	HYDROGRAPH AT	P	25.	12.00	2.	0.	0.	.01	
+	ROUTED TO	RSP	12.	12.10	1.	0.	0.	.01	2.16
12.10									
+	HYDROGRAPH AT	Q	29.	12.00	2.	1.	0.	.02	
+	ROUTED TO	RSQ	20.	12.07	2.	0.	0.	.02	2.31
12.07									
+	HYDROGRAPH AT	O	21.	12.00	1.	0.	0.	.01	
+	ROUTED TO	RSO	14.	12.07	1.	0.	0.	.01	2.25
12.07									
+	HYDROGRAPH AT	T	4.	12.00	0.	0.	0.	.00	
+	ROUTED TO	RST	4.	12.00	0.	0.	0.	.00	1.01
12.00									
+	HYDROGRAPH AT	E	43.	12.00	3.	1.	0.	.02	
+	ROUTED TO	RSE	30.	12.07	3.	1.	0.	.02	2.40
12.07									
+	5 COMBINED AT	CP11G	79.	12.07	7.	2.	1.	.07	
+	HYDROGRAPH AT	Y	6.	12.03	0.	0.	0.	.00	
+	4 COMBINED AT	CP11G2	331.	12.33	47.	12.	8.	.49	
+	ROUTED TO	RTG2G4	320.	12.47	47.	12.	8.	.49	2356.43
12.47									
+	HYDROGRAPH AT	511G3	85.	12.17	8.	2.	1.	.10	
+	ROUTED TO	RTG3G4	71.	12.43	8.	2.	1.	.10	2375.66
12.43									
+	HYDROGRAPH AT	511G4	212.	12.27	24.	6.	4.	.30	
+	3 COMBINED AT	CPG_G4	556.	12.40	79.	21.	12.	.88	
+	2 COMBINED AT	CP11G4	2059.	12.83	442.	111.	67.	4.99	

POST Q 10YR 24HR @ CP11G2

+	ROUTED TO	RTG4I	2051.	12.90	442.	111.	67.	4.99	2356.96
+ 12.90									
+	HYDROGRAPH AT	511I	149.	12.20	15.	4.	2.	.20	
+	2 COMBINED AT	CP11I	2070.	12.90	457.	115.	69.	5.19	
+	HYDROGRAPH AT	510A	557.	12.53	92.	25.	15.	.92	
+	HYDROGRAPH AT	509A5	30.	12.03	2.	1.	0.	.02	
+	DIVERSION TO	DIA5S	1.	12.03	0.	0.	0.	.02	
+	HYDROGRAPH AT	DIA59B	29.	12.03	2.	1.	0.	.02	
+	ROUTED TO	RTA59B	8.	13.93	2.	1.	0.	.02	2180.06
+ 13.90									
+	HYDROGRAPH AT	509B	301.	12.63	47.	12.	7.	.65	
+	2 COMBINED AT	CP09B	302.	12.63	49.	12.	7.	.67	
+	HYDROGRAPH AT	509A1	171.	12.23	20.	5.	3.	.19	
+	ROUTED TO	RTA1A2	160.	12.33	20.	5.	3.	.19	2463.70
+ 12.33									
+	HYDROGRAPH AT	509A2	129.	12.20	15.	4.	2.	.13	
+	HYDROGRAPH AT	DRC2A2	99.	12.33	12.	3.	2.	.00	
+	ROUTED TO	RTC2A2	79.	12.67	12.	3.	2.	.00	2498.84
+ 12.67									
+	3 COMBINED AT	CP09A2	300.	12.30	47.	12.	7.	.32	
+	ROUTED TO	RTA2A4	275.	12.43	47.	12.	7.	.32	2417.54
+ 12.43									
+	HYDROGRAPH AT	509A3	168.	12.17	17.	4.	3.	.16	
+	ROUTED TO	RTA3A4	160.	12.23	17.	4.	3.	.16	2403.55
+ 12.23									
+	HYDROGRAPH AT	509A4	88.	12.07	7.	2.	1.	.06	
+	3 COMBINED AT	CP09A4	418.	12.33	71.	18.	11.	.55	
+	ROUTED TO	RTA4A6	401.	12.47	71.	18.	11.	.55	2380.50
+ 12.47									
+	HYDROGRAPH AT	DRA5A6	1.	12.03	0.	0.	0.	.00	
+	ROUTED TO	RTA5A6	0.	12.30	0.	0.	0.	.00	2377.92
+ 12.30									
+	HYDROGRAPH AT	509A6	51.	12.07	4.	1.	1.	.03	

+	3 COMBINED AT	CP09A6	408.	12.43	74.	19.	12.	.58	
+	HYDROGRAPH AT	509D	247.	12.40	36.	9.	6.	.38	
+	HYDROGRAPH AT	500A	179.	12.17	18.	5.	3.	.20	
+	ROUTED TO	RTAB	164.	12.37	18.	5.	3.	.20	
+ 12.37									2156.96
+	HYDROGRAPH AT	500B	148.	12.27	19.	5.	3.	.19	
+	2 COMBINED AT	CP500B	307.	12.33	37.	10.	6.	.40	

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

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1*****************************************
*****************************************
 *                                       *                                       *
        *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                       *    U.S. ARMY CORPS OF
ENGINEERS      *
 *              JUN   1998               *                                       *    HYDROLOGIC ENGINEERING
CENTER     *
 *            VERSION 4.1                *                                       *         609 SECOND
STREET          *
 *                                       *                                       *        DAVIS, CALIFORNIA
95616        *
 *  RUN DATE   21MAY14  TIME  15:58:57   *                                       *            (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   Project ID: S_24EX - Major Basin: 01 - Return Period: 100 Years
            2       ID   RIO VERDE AREA DRAINAGE MASTER PLAN                  FILE NAME: S_24EX.DAT
            3       ID   MODEL:      100-year, 24-hour Existing Condition Model
            4       ID   DEVELOPER:  Dibble & Associates, Inc.                DATE: Sept. 29, 2003
            5       ID
            6       ID   *** Modified South Watershed Model: Subbasin Added: 509A6 ***
            7       ID                                                        DATE REVISED: 5/06/05
            8       ID   *** Note Changes Per TDN Hydrology Review Comments by FCDMC - July 21, 2006
            9       ID   *** Modify Flow Distribution for DIC5E2 to match Floodplain RAS Modeling
           10       ID                                                        LAST UPDATE:  8/30/06
           11       ID
                    *
                    *DIAGRAM
           12       IT       2                    1200
           13       IO       5
           14       IN      15
                    *
                    * ***************************************************************************
                    * ****************************     Major Basin 511    ************************
                    * ***************************************************************************
                    *
           15       KK   511A1   BASIN
           16       KM   Sub-Basin   511A1
           17       KM
           18       KM      The Phoenix Mountain S-Graph is used for this basin.
           19       KM
           20       BA   0.294
           21       PB   5.022
           22       PC   0.000   0.002   0.005   0.008   0.011   0.014   0.017   0.020   0.023   0.026
           23       PC   0.029   0.032   0.035   0.038   0.041   0.044   0.048   0.052   0.056   0.060
           24       PC   0.064   0.068   0.072   0.076   0.080   0.085   0.090   0.095   0.100   0.105
           25       PC   0.110   0.115   0.120   0.126   0.133   0.140   0.147   0.155   0.163   0.172
           26       PC   0.181   0.191   0.203   0.218   0.236   0.257   0.283   0.387   0.663   0.707
           27       PC   0.735   0.758   0.776   0.791   0.804   0.815   0.825   0.834   0.842   0.849
           28       PC   0.856   0.863   0.869   0.875   0.881   0.887   0.893   0.898   0.903   0.908
           29       PC   0.913   0.918   0.922   0.926   0.930   0.934   0.938   0.942   0.946   0.950
           30       PC   0.953   0.956   0.959   0.962   0.965   0.968   0.971   0.974   0.977   0.980
           31       PC   0.983   0.986   0.989   0.992   0.995   0.998   1.000
           32       LG    0.15    0.39    6.20    0.17       0
           33       UI      34      35      34      75     117     146     194     222     243     258
           34       UI     309     359     406     292     236     209     206     187     170     167
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 35          UI     151     138     134     118     104      93      86      81      79      72
 36          UI      68      57      53      43      44      39      37      38      31      26
 37          UI      27      26      24      17      16      17      17      16      17      13
 38          UI       6       0       0       0       0       0       0       0       0       0
 39          UI       0       0       0       0       0       0       0       0       0       0
 40          UI       0       0       0       0       0       0       0       0       0       0
             *
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

 41          KK  511A2   BASIN
 42          KM  Sub-Basin   511A2
 43          KM
 44          KM     The Phoenix Mountain S-Graph is used for this basin.
 45          KM
 46          BA  0.059
 47          LG   0.15    0.40    6.00    0.18       0
 48          UI     12      17      42      66      88     102     138     106      79      68
 49          UI     63      53      47      39      31      28      27      20      16      16
 50          UI     13      10      10       8       6       6       6       4       2       2
 51          UI      3       2       3       2       2       3       0       0       0       0
 52          UI      0       0       0       0       0       0       0       0       0       0
 53          UI      0       0       0       0       0       0       0       0       0       0
 54          UI      0       0       0       0       0       0       0       0       0       0
 55          UI      0       0       0       0       0       0       0       0       0       0
             *
 56          KK  RTA2A3   ROUTE   REACH
 57          KM  Normal depth channel route from 511A2 to 511A3
 58          RS      2    FLOW      -1
 59          RC  0.070   0.040   0.070    3286  0.0158 2664.50
 60          RX    0.0   100.1   119.0   129.4   137.7   156.2   367.9   409.0
 61          RY 2664.5  2658.0  2657.5  2657.0  2657.2  2658.0  2662.0  2662.5
             *
 62          KK  511A3   BASIN
 63          KM  Sub-Basin   511A3
 64          KM
 65          KM     The Phoenix Mountain S-Graph is used for this basin.
 66          KM
 67          BA  0.294
 68          LG   0.15    0.39    6.20    0.17       0
 69          UI     35      36      36      85     126     161     211     236     261     275
 70          UI    338     406     368     272     234     208     201     185     170     167
 71          UI    146     136     129     108      97      92      84      80      77      68
 72          UI     57      54      45      44      41      38      38      29      27      27
 73          UI     28      20      17      18      17      17      18      16       7       6
 74          UI      7       0       0       0       0       0       0       0       0       0
 75          UI      0       0       0       0       0       0       0       0       0       0
 76          UI      0       0       0       0       0       0       0       0       0       0
 77          UI      0       0       0       0       0       0       0       0       0       0
 78          UI      0       0       0       0       0       0       0       0       0       0
 79          UI      0       0       0       0       0       0       0       0       0       0
 80          UI      0       0       0       0       0       0       0       0       0       0
 81          UI      0       0       0       0       0       0       0       0       0       0
 82          UI      0       0       0       0       0       0       0       0       0       0
 83          UI      0       0       0       0       0       0       0       0       0       0
             *
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

 84          KK  CP11A
 85          KM    Combine routed hydrograph from 511A2 with runoff from 511A1 and 511A3
 86          HC      3
             *
 87          KK  RTA1D   ROUTE   REACH
 88          KM  Normal depth channel route from CP11A to 511D
 89          RS      4    FLOW      -1
 90          RC  0.070   0.040   0.070    5358  0.0186  151.20
 91          RX  900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
 92          RY  151.2   100.0    99.5    99.0    99.0    99.6    99.7   151.2
             *
 93          KK   511D   BASIN
 94          KM  Sub-Basin   511D
 95          KM
 96          KM     The Phoenix Mountain S-Graph is used for this basin.
 97          KM
 98          BA  0.104
 99          LG   0.15    0.36    6.80    0.13       0
100          UI     14      14      22      45      64      81      95     105     126     156
101          UI    131      95      82      80      69      65      60      53      49      42
102          UI     35      33      32      28      25      23      17      18      15      15
103          UI     12      11      10      11       6       7       7       7       6       4
104          UI      3       2       2       3       2       3       2       3       2       2
105          UI      3       0       0       0       0       0       0       0       0       0
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106          UI      0       0       0       0       0       0       0       0       0       0
107          UI      0       0       0       0       0       0       0       0       0       0
108          UI      0       0       0       0       0       0       0       0       0       0
             *

109          KK   CP11D
110          KM     Combine routed hydrograph from CP11A with runoff from 511D
111          HC       2
             *

112          KK    A   BASIN
113          KM   Sub-Basin   A
114          KM
115          KM       The Phoenix Mountain S-Graph is used for this basin.
116          KM
117          BA   0.037
118          LG    0.15    0.36    6.80    0.30      23
119          UI      32      63      95     127     133     114      95      76      57      38
120          UI      19       1       0       0       0       0       0       0       0       0
121          UI       0       0       0       0       0       0       0       0       0       0
122          UI       0       0       0       0       0       0       0       0       0       0
123          UI       0       0       0       0       0       0       0       0       0       0
124          UI       0       0       0       0       0       0       0       0       0       0
125          UI       0       0       0       0       0       0       0       0       0       0
126          UI       0       0       0       0       0       0       0       0       0       0
127          UI       0       0       0       0       0       0       0       0       0       0
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

128          KK  RSA
             * RESERVOIR STORAGE
129          KO       0       0     0.0       0      22
130          RS       1    STOR     0.0     0.0
             * RSA Volume
131          SV     0.0    0.66    1.40    2.22
             * RSA Storage elev
132          SE     0.0     1.0     2.0     3.0
133          SL     0.5   0.785     0.6     0.5
134          SS     2.0    40.0     2.6     1.5

135          KK   CP11DA
136          KM     Combine routed hydrograph from CP11D with runoff from A
137          HC       2
             *

138          KK   511B4   BASIN
139          KM   Sub-Basin   511B4
140          KM
141          KM       The Phoenix Mountain S-Graph is used for this basin.
142          KM
143          BA   0.194
144          LG    0.15    0.36    6.80    0.13      12
145          UI      32      33      76     128     188     219     250     308     386     258
146          UI     213     184     171     160     137     124     110      90      79      77
147          UI      68      56      51      41      37      37      30      25      26      20
148          UI      16      16      16      16       8       6       6       7       6       6
149          UI       7       6       6       6       7       6       0       0       0       0
150          UI       0       0       0       0       0       0       0       0       0       0
151          UI       0       0       0       0       0       0       0       0       0       0
152          UI       0       0       0       0       0       0       0       0       0       0
             *

153          KK   511B1   BASIN
154          KM   Sub-Basin   511B1
155          KM
156          KM       The Phoenix Mountain S-Graph is used for this basin.
157          KM
158          BA   0.583
159          LG    0.15    0.38    6.40    0.16       4
160          UI      49      50      49      48      88     138     176     216     256     293
161          UI     325     344     361     399     425     492     580     572     421     361
162          UI     330     296     294     282     258     256     238     224     218     201
163          UI     191     188     170     150     145     128     123     124     113     111
164          UI     107     102      88      82      79      66      64      62      61      55
165          UI      53       0       0       0       0       0       0       0       0       0
166          UI       0       0       0       0       0       0       0       0       0       0
167          UI       0       0       0       0       0       0       0       0       0       0
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

168          KK   511B2   BASIN
169          KM   Sub-Basin   511B2
170          KM
171          KM       The Phoenix Mountain S-Graph is used for this basin.
172          KM
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173          BA   0.222
174          LG    0.15    0.38    6.40    0.16       0
175          UI      23      24      23      36      71      91     113     140     153     166
176          UI     185     198     238     289     227     172     155     140     135     129
177          UI     118     110     105      96      91      86      75      69      62      57
178          UI      56      55      49      47      40      38      31      31      29      26
179          UI      26      25      21      18      18      18      18      12      12      11
180          UI      12       0       0       0       0       0       0       0       0       0
181          UI       0       0       0       0       0       0       0       0       0       0
182          UI       0       0       0       0       0       0       0       0       0       0
183          UI       0       0       0       0       0       0       0       0       0       0
184          UI       0       0       0       0       0       0       0       0       0       0
185          UI       0       0       0       0       0       0       0       0       0       0
186          UI       0       0       0       0       0       0       0       0       0       0
187          UI       0       0       0       0       0       0       0       0       0       0
188          UI       0       0       0       0       0       0       0       0       0       0
189          UI       0       0       0       0       0       0       0       0       0       0
             *

190          KK  CP8182
191          KM     Combine hydrograph from 51181 and 51182
192          HC       2
             *

193          KK  RT1284   ROUTE   REACH
194          KM   Normal depth channel route from CP8182 to 51184
195          RS       3    FLOW      -1
196          RC   0.070   0.040   0.070    3973  0.0186 2582.00
197          RX     0.0    36.4    62.6    86.9    98.0   114.8   303.0   378.7
198          RY  2582.0  2578.0  2576.0  2574.0  2573.4  2574.0  2578.0  2582.0
             *

199          KK   5118B3   BASIN
200          KM   Sub-Basin   5118B3
201          KM
202          KM      The Phoenix Mountain S-Graph is used for this basin.
203          KM
204          BA   0.080
205          LG    0.15    0.37    6.60    0.14       0
206          UI      15      15      44      68      97     109     130     176     120      96
207          UI      85      76      69      62      50      44      38      35      31      26
208          UI      21      18      17      16      11      12       9       8       7       7
209          UI       7       3       2       3       3       3       3       3       3       2
210          UI       3       0       0       0       0       0       0       0       0       0
211          UI       0       0       0       0       0       0       0       0       0       0
212          UI       0       0       0       0       0       0       0       0       0       0
213          UI       0       0       0       0       0       0       0       0       0       0
214          UI       0       0       0       0       0       0       0       0       0       0
215          UI       0       0       0       0       0       0       0       0       0       0
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

216          UI       0       0       0       0       0       0       0       0       0       0
217          UI       0       0       0       0       0       0       0       0       0       0
218          UI       0       0       0       0       0       0       0       0       0       0
219          UI       0       0       0       0       0       0       0       0       0       0
220          UI       0       0       0       0       0       0       0       0       0       0
             *

221          KK  RTB384   ROUTE   REACH
222          KM   Normal depth channel route from 51183 to 51184
223          RS       2    FLOW      -1
224          RC   0.070   0.040   0.070    3126  0.0205 2565.00
225          RX     0.0    16.6    28.0    34.2    39.7    63.8   108.6   198.6
226          RY  2563.0  2562.0  2560.8  2560.3  2560.6  2562.0  2564.3  2565.0
             *

227          KK   CP118
228          KM     Combine routed hydrographs from CP8182 and 51183 with 51184
229          HC       3
             *

230          KK   RTB4D   ROUTE   REACH
231          KM   Normal depth channel route from CP118 to RTB4D
232          RS       1    FLOW      -1
233          RC   0.070   0.040   0.070     521  0.0179 2536.00
234          RX     0.0    89.0   118.0   165.0   222.0   363.0   411.0   516.0
235          RY  2536.0  2534.0  2532.0  2531.5  2532.0  2532.2  2532.8  2534.0
             *

236          KK  CP11DF
237          KM     Combine routed hydrographs from CP11D and RTB4D
238          HC       2
             * ------------------------------------------------------------------------
             *

239          KK    RTDF   ROUTE   REACH
240          KM   Normal depth channel route from CP11DF to CP11F                    R
241          RS       3    FLOW      -1
242          RC   0.070   0.040   0.070    3664  0.0191  151.20
```

```
 243          RX   900.0  1000.0  1035.0  1038.0  1048.0  1054.0  1120.0  1330.0
 244          RY   151.2   100.0    99.5    99.0    99.0    99.6    99.7   151.2
              *

 245          KK     C    BASIN
 246          KM   Sub-Basin   C
 247          KM
 248          KM      The Phoenix Mountain S-Graph is used for this basin.
 249          KM
 250          BA   0.006
 251          LG    0.14    0.38    6.40    0.30      23
 252          UI      11      23      25      18      12       5       0       0       0       0
 253          UI       0       0       0       0       0       0       0       0       0       0
 254          UI       0       0       0       0       0       0       0       0       0       0
 255          UI       0       0       0       0       0       0       0       0       0       0
 256          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                         HEC-1 INPUT                                        PAGE  7

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

 257          KK   RSC
              * RESERVOIR STORAGE
 258          KO       0       0     0.0       0      22
 259          RS       1    STOR     0.0     0.0
              * RSC Volume
 260          SV     0.0    0.13    0.31    0.51
              * RSC Storage elev
 261          SE     0.0     1.0     2.0     3.0
 262          SL     0.5   0.785     0.6     0.5
 263          SS     1.0    10.0     2.6     1.5

 264          KK     B    BASIN
 265          KM   Sub-Basin   B
 266          KM
 267          KM      The Phoenix Mountain S-Graph is used for this basin.
 268          KM
 269          BA   0.018
 270          LG    0.14    0.38    6.40    0.30      23
 271          UI      34      68      75      55      34      14       0       0       0       0
 272          UI       0       0       0       0       0       0       0       0       0       0
 273          UI       0       0       0       0       0       0       0       0       0       0
 274          UI       0       0       0       0       0       0       0       0       0       0
 275          UI       0       0       0       0       0       0       0       0       0       0
              *

 276          KK   RSB
              * RESERVOIR STORAGE
 277          KO       0       0     0.0       0      22
 278          RS       1    STOR     0.0     0.0
              * RSB Volume
 279          SV     0.0    0.19    0.47    0.83
              * RSB Storage elev
 280          SE     0.0     1.0     2.0     3.0
 281          SL     0.5   0.785     0.6     0.5
 282          SS     2.0    20.0     2.6     1.5

 283          KK     D    BASIN
 284          KM   Sub-Basin   D
 285          KM
 286          KM      The Phoenix Mountain S-Graph is used for this basin.
 287          KM
 288          BA   0.012
 289          LG    0.14    0.38    6.40    0.30      23
 290          UI      23      47      51      37      23       9       0       0       0       0
 291          UI       0       0       0       0       0       0       0       0       0       0
 292          UI       0       0       0       0       0       0       0       0       0       0
 293          UI       0       0       0       0       0       0       0       0       0       0
 294          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                         HEC-1 INPUT                                        PAGE  8

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

 295          KK   RSD
              * RESERVOIR STORAGE
 296          KO       0       0     0.0       0      22
 297          RS       1    STOR     0.0     0.0
              * RSD Volume
 298          SV     0.0    0.19    0.42    0.68
              * RSD Storage elev
 299          SE     0.0     1.0     2.0     3.0
 300          SL     0.5   0.785     0.6     0.5
 301          SS     2.0    10.0     2.6     1.5

 302          KK    CP-A
 303          KM    CP(CBD)
 304          KM      Combine hydrograph from C, B and D
 305          HC       3
```

```
*
306          KK    G   BASIN
307          KM   Sub-Basin   G
308          KM
309          KM      The Phoenix Mountain S-Graph is used for this basin.
310          KM
311          BA   0.009
312          LG    0.14    0.38    6.40    0.30      23
313          UI      17      35      38      28      18       7       0       0       0       0
314          UI       0       0       0       0       0       0       0       0       0       0
315          UI       0       0       0       0       0       0       0       0       0       0
316          UI       0       0       0       0       0       0       0       0       0       0
317          UI       0       0       0       0       0       0       0       0       0       0
             *

318          KK  RSG
             * RESERVOIR STORAGE
319          KO        0       0     0.0       0      22
320          RS        1    STOR     0.0     0.0
             * RSG Volume
321          SV      0.0    0.12    0.27    0.46
             * RSG Storage elev
322          SE      0.0     1.0     2.0     3.0
323          SL     0.75    1.77     0.6     0.5
324          SS      2.0    10.0     2.6     1.5

325          KK    I   BASIN
326          KM   Sub-Basin   I
327          KM
328          KM      The Phoenix Mountain S-Graph is used for this basin.
329          KM
330          BA   0.044
331          LG    0.14    0.38    6.40    0.30      23
332          UI      55     110     165     176     143     110      77      44      11       0
333          UI       0       0       0       0       0       0       0       0       0       0
334          UI       0       0       0       0       0       0       0       0       0       0
335          UI       0       0       0       0       0       0       0       0       0       0
336          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

337          KK  RSI
             * RESERVOIR STORAGE
338          KO        0       0     0.0       0      22
339          RS        1    STOR     0.0     0.0
             * RSI Volume
340          SV      0.0    0.59    1.29    2.12
             * RSI Storage elev
341          SE      0.0     1.0     2.0     3.0
342          SL     0.33   0.352     0.6     0.5
343          SS      2.0    50.0     2.6     1.5

344          KK   CP-B
345          KM   CP(CBDGI)
346          KM     Combine hydrograph from CP(CBD), G and I
347          HC       3
             *

348          KK    N   BASIN
349          KM   Sub-Basin   N
350          KM
351          KM      The Phoenix Mountain S-Graph is used for this basin.
352          KM
353          BA   0.005
354          LG    0.14    0.38    6.40    0.30      23
355          UI      11      21      23      17      11       4       0       0       0       0
356          UI       0       0       0       0       0       0       0       0       0       0
357          UI       0       0       0       0       0       0       0       0       0       0
358          UI       0       0       0       0       0       0       0       0       0       0
359          UI       0       0       0       0       0       0       0       0       0       0
             *

360          KK  RSN
             * RESERVOIR STORAGE
361          KO        0       0     0.0       0      22
362          RS        1    STOR     0.0     0.0
             * RSN Volume
363          SV      0.0    0.06    0.14    0.25
             * RSN Storage elev
364          SE      0.0     1.0     2.0     3.0
365          SL     0.75    1.77     0.6     0.5
366          SS      2.0    20.0     2.6     1.5

367          KK    S   BASIN
368          KM   Sub-Basin   S
369          KM
370          KM      The Phoenix Mountain S-Graph is used for this basin.
```

```
371          KM
372          BA   0.008
373          LG    0.14    0.38    6.40    0.30      23
374          UI      19      37      41      30      19       8       0       0       0       0
375          UI       0       0       0       0       0       0       0       0       0       0
376          UI       0       0       0       0       0       0       0       0       0       0
377          UI       0       0       0       0       0       0       0       0       0       0
378          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

379          KK  RSS
             * RESERVOIR STORAGE
380          KO       0       0     0.0       0      22
381          RS       1    STOR     0.0     0.0
             * RSS Volume
382          SV     0.0    0.11    0.26    0.43
             * RSS Storage elev
383          SE     0.0     1.0     2.0     3.0
384          SL    0.75    1.77     0.6     0.5
385          SS     2.0    20.0     2.6     1.5

386          KK    V   BASIN
387          KM   Sub-Basin   V
388          KM
389          KM      The Phoenix Mountain S-Graph is used for this basin.
390          KM
391          BA   0.021
392          LG    0.14    0.38    6.40    0.30      23
393          UI       4       8      12      16      21      25      29      33      37      41
394          UI      45      43      40      38      35      33      30      28      26      23
395          UI      21      18      16      13      11       8       6       3       1       0
396          UI       0       0       0       0       0       0       0       0       0       0
397          UI       0       0       0       0       0       0       0       0       0       0
             *

398          KK   CP-C
399          KM   CP(CBDGINS)
400          KM     Combine hydrograph from CP(CBDGI), N, S and V
401          HC       4
             *

402          KK    R   BASIN
403          KM   Sub-Basin   R
404          KM
405          KM      The Phoenix Mountain S-Graph is used for this basin.
406          KM
407          BA   0.003
408          LG    0.14    0.38    6.40    0.30      23
409          UI       6      13      14      10       6       3       0       0       0       0
410          UI       0       0       0       0       0       0       0       0       0       0
411          UI       0       0       0       0       0       0       0       0       0       0
412          UI       0       0       0       0       0       0       0       0       0       0
413          UI       0       0       0       0       0       0       0       0       0       0
             *

414          KK  RSR
             * RESERVOIR STORAGE
415          KO       0       0     0.0       0      22
416          RS       1    STOR     0.0     0.0
             * RSR Volume
417          SV     0.0    0.04    0.10    0.19
             * RSR Storage elev
418          SE     0.0     1.0     2.0     3.0
419          SL     0.5   0.785     0.6     0.5
```



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

420          SS     2.0    20.0     2.6     1.5

421          KK   CP511
422          KM   CP(CBDGINSR)
423          KM     Combine routed hydrograph from CP11DF with runoff from CP(CBDGINS) and R
424          HC       3
             *

425          KK   511C1   BASIN
426          KM   Sub-Basin   511C1
427          KM
428          KM      The Phoenix Mountain S-Graph is used for this basin.
429          KM
430          BA   0.329
431          LG    0.15    0.40    6.00    0.18       0
432          UI      33      34      33      44      99     124     155     200     212     235
433          UI     256     276     317     389     386     271     235     210     197     193
434          UI     177     166     160     146     136     134     116     106      98      87
435          UI      81      81      77      71      72      54      55      47      43      42
```

```
436          UI      39      37      36      34      26      25      27      25      23      17
437          UI      16       0       0       0       0       0       0       0       0       0
438          UI       0       0       0       0       0       0       0       0       0       0
439          UI       0       0       0       0       0       0       0       0       0       0
440          UI       0       0       0       0       0       0       0       0       0       0
441          UI       0       0       0       0       0       0       0       0       0       0
442          UI       0       0       0       0       0       0       0       0       0       0
443          UI       0       0       0       0       0       0       0       0       0       0
444          UI       0       0       0       0       0       0       0       0       0       0
             *

445          KK  DIC1E2
446          KM   DIVERT FLOW FROM S11C1 TO S11C4 AT NATURAL FLOW SPLIT
447          DT  DIC1C4
448          DI       0      75     150     225     300     480     650
449          DQ       0      38      77     117     155     250     340
             *

450          KK  RTC1E2   ROUTE   REACH
451          KM   Normal depth channel route from S11C1 to S11E2
452          RS       5    FLOW      -1
453          RC   0.070   0.040   0.070    7085  0.0209 2506.00
454          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
455          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
             *

456          KK   S11E1   BASIN
457          KM   Sub-Basin   S11E1
458          KM
459          KM      The Phoenix Mountain S-Graph is used for this basin.
460          KM
461          BA   0.296
462          LG   0.15    0.40    6.00    0.18       0
463          UI      32      33      32      57     101     128     163     202     216     232
464          UI     261     291     350     392     261     222     206     185     179     170
465          UI     156     146     139     127     117     108      96      84      81      76
```



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

466          UI      72      71      65      51      53      42      40      41      36      35
467          UI      36      25      24      25      24      22      16      16      16      16
468          UI      15       0       0       0       0       0       0       0       0       0
469          UI       0       0       0       0       0       0       0       0       0       0
470          UI       0       0       0       0       0       0       0       0       0       0
471          UI       0       0       0       0       0       0       0       0       0       0
472          UI       0       0       0       0       0       0       0       0       0       0
473          UI       0       0       0       0       0       0       0       0       0       0
474          UI       0       0       0       0       0       0       0       0       0       0
475          UI       0       0       0       0       0       0       0       0       0       0
             *

476          KK  RTE1E2   ROUTE   REACH
477          KM   Normal depth channel route from S11E1 to S11E2
478          RS       3    FLOW      -1
479          RC   0.070   0.040   0.070    4907  0.0187 2506.00
480          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
481          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
             *

482          KK   S11E2   BASIN
483          KM   Sub-Basin   S11E2
484          KM
485          KM      The Phoenix Mountain S-Graph is used for this basin.
486          KM
487          BA   0.257
488          LG   0.15    0.36    6.80    0.13       1
489          UI      25      25      25      33      72      92     114     148     158     173
490          UI     189     203     235     286     285     201     173     155     145     143
491          UI     131     121     118     108     101      99      85      78      73      64
492          UI      59      60      56      53      53      40      40      35      32      31
493          UI      29      27      26      26      18      19      19      18      17      12
494          UI      12       0       0       0       0       0       0       0       0       0
495          UI       0       0       0       0       0       0       0       0       0       0
496          UI       0       0       0       0       0       0       0       0       0       0
497          UI       0       0       0       0       0       0       0       0       0       0
498          UI       0       0       0       0       0       0       0       0       0       0
499          UI       0       0       0       0       0       0       0       0       0       0
500          UI       0       0       0       0       0       0       0       0       0       0
501          UI       0       0       0       0       0       0       0       0       0       0
             *

502          KK  CPE1E2
503          KM     Combine routed hydrographs from S11E1 with S11E2
504          HC       2
             *

505          KK   F    BASIN
506          KM   Sub-Basin   F
507          KM
508          KM      The Phoenix Mountain S-Graph is used for this basin.
```

```
509          KM
510          BA   0.009
511          LG    0.15    0.36    6.80    0.30      23
512          UI      17      34      37      27      17       7       0       0       0       0
```



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

513          UI       0       0       0       0       0       0       0       0       0       0
514          UI       0       0       0       0       0       0       0       0       0       0
515          UI       0       0       0       0       0       0       0       0       0       0
516          UI       0       0       0       0       0       0       0       0       0       0
517          UI       0       0       0       0       0       0       0       0       0       0
518          UI       0       0       0       0       0       0       0       0       0       0
519          UI       0       0       0       0       0       0       0       0       0       0
520          UI       0       0       0       0       0       0       0       0       0       0
521          UI       0       0       0       0       0       0       0       0       0       0
522          UI       0       0       0       0       0       0       0       0       0       0
523          UI       0       0       0       0       0       0       0       0       0       0
524          UI       0       0       0       0       0       0       0       0       0       0
             *

525          KK  RSF
             * RESERVOIR STORAGE
526          KO       0       0     0.0       0      22
527          RS       1    STOR     0.0     0.0
             * RSF Volume
528          SV     0.0    0.14    0.31    0.52
             * RSF Storage elev
529          SE     0.0     1.0     2.0     3.0
530          SL    0.75    1.77     0.6     0.5
531          SS     2.0    10.0     2.6     1.5

532          KK   H    BASIN
533          KM   Sub-Basin   H
534          KM
535          KM      The Phoenix Mountain S-Graph is used for this basin.
536          KM
537          BA   0.006
538          LG    0.15    0.36    6.80    0.30      23
539          UI      12      25      27      20      13       5       0       0       0       0
540          UI       0       0       0       0       0       0       0       0       0       0
541          UI       0       0       0       0       0       0       0       0       0       0
542          UI       0       0       0       0       0       0       0       0       0       0
543          UI       0       0       0       0       0       0       0       0       0       0
544          UI       0       0       0       0       0       0       0       0       0       0
545          UI       0       0       0       0       0       0       0       0       0       0
546          UI       0       0       0       0       0       0       0       0       0       0
547          UI       0       0       0       0       0       0       0       0       0       0
548          UI       0       0       0       0       0       0       0       0       0       0
549          UI       0       0       0       0       0       0       0       0       0       0
550          UI       0       0       0       0       0       0       0       0       0       0
551          UI       0       0       0       0       0       0       0       0       0       0
             *

552          KK  RSH
             * RESERVOIR STORAGE
553          KO       0       0     0.0       0      22
554          RS       1    STOR     0.0     0.0
             * RSH Volume
555          SV     0.0    0.08    0.20    0.35
             * RSH Storage elev
556          SE     0.0     1.0     2.0     3.0
```



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

557          SL    0.75    1.77     0.6     0.5
558          SS     2.0    10.0     2.6     1.5

559          KK   K    BASIN
560          KM   Sub-Basin   K
561          KM
562          KM      The Phoenix Mountain S-Graph is used for this basin.
563          KM
564          BA   0.005
565          LG    0.15    0.36    6.80    0.30      23
566          UI       7      15      22      18      13       9       4       0       0       0
567          UI       0       0       0       0       0       0       0       0       0       0
568          UI       0       0       0       0       0       0       0       0       0       0
569          UI       0       0       0       0       0       0       0       0       0       0
570          UI       0       0       0       0       0       0       0       0       0       0
571          UI       0       0       0       0       0       0       0       0       0       0
572          UI       0       0       0       0       0       0       0       0       0       0
573          UI       0       0       0       0       0       0       0       0       0       0
574          UI       0       0       0       0       0       0       0       0       0       0
575          UI       0       0       0       0       0       0       0       0       0       0
576          UI       0       0       0       0       0       0       0       0       0       0
577          UI       0       0       0       0       0       0       0       0       0       0
578          UI       0       0       0       0       0       0       0       0       0       0
             *
```

```
579          KK  RSK
             * RESERVOIR STORAGE
580          KO       0       0     0.0       0      22
581          RS       1    STOR     0.0     0.0
             * RSK Volume
582          SV     0.0    0.07    0.16    0.27
             * RSK Storage elev
583          SE     0.0     1.0     2.0     3.0
584          SL    0.75    1.77     0.6     0.5
585          SS     2.0    10.0     2.6     1.5

586          KK   L    BASIN
587          KM   Sub-Basin   L
588          KM
589          KM      The Phoenix Mountain S-Graph is used for this basin.
590          KM
591          BA   0.005
592          LG    0.15    0.36    6.80    0.30      23
593          UI      11      44      48      35      22       9       0       0       0       0
594          UI       0       0       0       0       0       0       0       0       0       0
595          UI       0       0       0       0       0       0       0       0       0       0
596          UI       0       0       0       0       0       0       0       0       0       0
597          UI       0       0       0       0       0       0       0       0       0       0
598          UI       0       0       0       0       0       0       0       0       0       0
599          UI       0       0       0       0       0       0       0       0       0       0
600          UI       0       0       0       0       0       0       0       0       0       0
601          UI       0       0       0       0       0       0       0       0       0       0
602          UI       0       0       0       0       0       0       0       0       0       0
603          UI       0       0       0       0       0       0       0       0       0       0
604          UI       0       0       0       0       0       0       0       0       0       0
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LINE         ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

605          UI       0       0       0       0       0       0       0       0       0       0
             *

606          KK  RSL
             * RESERVOIR STORAGE
607          KO       0       0     0.0       0      22
608          RS       1    STOR     0.0     0.0
             * RSL Volume
609          SV     0.0    0.18    0.41    0.67
             * RSL Storage elev
610          SE     0.0     1.0     2.0     3.0
611          SL    0.75    1.77     0.6     0.5
612          SS     2.0    10.0     2.6     1.5

613          KK   CP-D
614          KM   CP(E2FHKL)
615          KM     Combine routed hydrographs from S11E2 with F, H, K and L
616          HC       5
             *

617          KK   J    BASIN
618          KM   Sub-Basin   J
619          KM
620          KM      The Phoenix Mountain S-Graph is used for this basin.
621          KM
622          BA   0.002
623          LG    0.15    0.36    6.80    0.30      23
624          UI       3       7       8       5       3       1       0       0       0       0
625          UI       0       0       0       0       0       0       0       0       0       0
626          UI       0       0       0       0       0       0       0       0       0       0
627          UI       0       0       0       0       0       0       0       0       0       0
628          UI       0       0       0       0       0       0       0       0       0       0
629          UI       0       0       0       0       0       0       0       0       0       0
630          UI       0       0       0       0       0       0       0       0       0       0
631          UI       0       0       0       0       0       0       0       0       0       0
632          UI       0       0       0       0       0       0       0       0       0       0
633          UI       0       0       0       0       0       0       0       0       0       0
634          UI       0       0       0       0       0       0       0       0       0       0
635          UI       0       0       0       0       0       0       0       0       0       0
636          UI       0       0       0       0       0       0       0       0       0       0
             *

637          KK  RSJ
             * RESERVOIR STORAGE
638          KO       0       0     0.0       0      22
639          RS       1    STOR     0.0     0.0
             * RSJ Volume
640          SV     0.0    0.04    0.11    0.20
             * RSJ Storage elev
641          SE     0.0     1.0     2.0     3.0
642          SL    0.75    1.77     0.6     0.5
643          SS     2.0    20.0     2.6     1.5
1                                          HEC-1 INPUT                                    PAGE 16

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

```
644          KK   M    BASIN
645          KM   Sub-Basin   M
646          KM
647          KM      The Phoenix Mountain S-Graph is used for this basin.
648          KM
649          BA   0.010
650          LG    0.15    0.36    6.80    0.30      23
651          UI      18      37      41      30      19       7       0       0       0       0
652          UI       0       0       0       0       0       0       0       0       0       0
653          UI       0       0       0       0       0       0       0       0       0       0
654          UI       0       0       0       0       0       0       0       0       0       0
655          UI       0       0       0       0       0       0       0       0       0       0
656          UI       0       0       0       0       0       0       0       0       0       0
657          UI       0       0       0       0       0       0       0       0       0       0
658          UI       0       0       0       0       0       0       0       0       0       0
659          UI       0       0       0       0       0       0       0       0       0       0
660          UI       0       0       0       0       0       0       0       0       0       0
661          UI       0       0       0       0       0       0       0       0       0       0
662          UI       0       0       0       0       0       0       0       0       0       0
663          UI       0       0       0       0       0       0       0       0       0       0
             *

664          KK  RSM
             * RESERVOIR STORAGE
665          KO       0       0     0.0       0      22
666          RS       1    STOR     0.0     0.0
             * RSM Volume
667          SV     0.0    0.13    0.31    0.54
             * RSM Storage elev
668          SE     0.0     1.0     2.0     3.0
669          SL     0.5   0.785     0.6     0.5
670          SS     2.0    10.0     2.6     1.5

671          KK   W    BASIN
672          KM   Sub-Basin   W
673          KM
674          KM      The Phoenix Mountain S-Graph is used for this basin.
675          KM
676          BA   0.026
677          LG    0.15    0.36    6.80    0.30      23
678          UI       3       7      10      14      17      20      24      27      31      34
679          UI      38      41      44      48      46      44      42      40      38      36
680          UI      33      31      29      27      25      23      21      19      17      15
681          UI      13      11       9       7       5       3       1       0       0       0
682          UI       0       0       0       0       0       0       0       0       0       0
683          UI       0       0       0       0       0       0       0       0       0       0
684          UI       0       0       0       0       0       0       0       0       0       0
685          UI       0       0       0       0       0       0       0       0       0       0
686          UI       0       0       0       0       0       0       0       0       0       0
687          UI       0       0       0       0       0       0       0       0       0       0
688          UI       0       0       0       0       0       0       0       0       0       0
689          UI       0       0       0       0       0       0       0       0       0       0
690          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

691          KK   X    BASIN
692          KM   Sub-Basin   X
693          KM
694          KM      The Phoenix Mountain S-Graph is used for this basin.
695          KM
696          BA   0.004
697          LG    0.15    0.36    6.80    0.30      23
698          UI       1       3       4       6       7       8      10       9       8       7
699          UI       6       6       5       4       3       2       1       1       0       0
700          UI       0       0       0       0       0       0       0       0       0       0
701          UI       0       0       0       0       0       0       0       0       0       0
702          UI       0       0       0       0       0       0       0       0       0       0
703          UI       0       0       0       0       0       0       0       0       0       0
704          UI       0       0       0       0       0       0       0       0       0       0
705          UI       0       0       0       0       0       0       0       0       0       0
706          UI       0       0       0       0       0       0       0       0       0       0
707          UI       0       0       0       0       0       0       0       0       0       0
708          UI       0       0       0       0       0       0       0       0       0       0
709          UI       0       0       0       0       0       0       0       0       0       0
710          UI       0       0       0       0       0       0       0       0       0       0
             *

711          KK   CP-E
712          KM   CP(E2FHKLJM)
713          KM     Combine routed hydrographs from 511E2 with F, H, K, L, J, M, W and X
714          HC       5
             *

715          KK   511C4   BASIN
716          KM   Sub-Basin   511C4
717          KM
```

```
718          KM      The Phoenix Mountain S-Graph is used for this basin.
719          KM
720          BA   0.020
721          LG    0.15    0.40    6.00    0.18       0
722          UI       7      21      42      57      67      40      34      27      21      16
723          UI      13       9       8       6       5       3       3       1       2       1
724          UI       1       2       1       0       0       0       0       0       0       0
725          UI       0       0       0       0       0       0       0       0       0       0
726          UI       0       0       0       0       0       0       0       0       0       0
727          UI       0       0       0       0       0       0       0       0       0       0
728          UI       0       0       0       0       0       0       0       0       0       0
729          UI       0       0       0       0       0       0       0       0       0       0
730          UI       0       0       0       0       0       0       0       0       0       0
731          UI       0       0       0       0       0       0       0       0       0       0
732          UI       0       0       0       0       0       0       0       0       0       0
733          UI       0       0       0       0       0       0       0       0       0       0
734          UI       0       0       0       0       0       0       0       0       0       0
             *
```



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

735          KK  DRC1C4
736          KM        RETURN DIVERT FROM 511C1
737          DR  DIC1C4
             *

738          KK  RTC1C4   ROUTE   REACH
739          KM   Normal depth channel route from 511C1 to 511C4
740          RS      1    FLOW      -1
741          RC  0.070   0.040   0.070    1058  0.0170 2605.30
742          RX    0.0   104.0   140.0   187.0   243.0   273.0   302.0   324.0
743          RY 2599.4  2599.6  2598.4  2598.3  2600.0  2602.0  2604.0  2605.3
             *

744          KK  CP11C4
745          KM     Combine routed hydrographs from 511C1 with 511C4
746          HC      2
             *

747          KK  DIC4E2
748          KM   DIVERT FLOW FROM 511C4 TO 511C5 AT NATURAL FLOW SPLIT
749          DT  DIC4C5
750          DI       0      25     100     150     300     400     500
751          DQ       0      20      73     106     203     264     325
             *

752          KK  RTC4E2   ROUTE   REACH
753          KM   Normal depth channel route from 511C4 to 511E2
754          RS      4    FLOW      -1
755          RC  0.070   0.040   0.070    6075  0.0214 2506.00
756          RX    0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
757          RY 2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
             *

758          KK  CP11E2
759          KM     Combine routed hydrographs from CPE1E2, RTC1E2,RTC4E2
760          HC      3
             *

761          KK   511C5   BASIN
762          KM   Sub-Basin   511C5
763          KM
764          KM      The Phoenix Mountain S-Graph is used for this basin.
765          KM
766          BA   0.110
767          LG    0.15    0.35    7.00    0.12       0
768          UI      19      20      51      80     120     136     156     213     198     136
769          UI     119     106      94      87      76      66      57      48      44      43
770          UI      33      28      25      22      21      16      15      15      10       9
771          UI      10       9       7       4       4       3       4       4       4       3
772          UI       4       4       4       0       0       0       0       0       0       0
773          UI       0       0       0       0       0       0       0       0       0       0
774          UI       0       0       0       0       0       0       0       0       0       0
775          UI       0       0       0       0       0       0       0       0       0       0
776          UI       0       0       0       0       0       0       0       0       0       0
```



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

777          UI       0       0       0       0       0       0       0       0       0       0
778          UI       0       0       0       0       0       0       0       0       0       0
779          UI       0       0       0       0       0       0       0       0       0       0
780          UI       0       0       0       0       0       0       0       0       0       0
             *

781          KK  DRC4C5
782          KM        RETURN DIVERT FROM 511C4
783          DR  DIC4C5
             *
```

```
784          KK  RTC4C5   ROUTE   REACH
785          KM   Normal depth channel route from S11C4 to S11C5
786          RS       2    FLOW      -1
787          RC   0.070   0.040   0.070    3182  0.0236 2532.20
788          RX     0.0    17.5    62.9   117.1   128.2   142.8   157.3   170.1
789          RY  2532.2  2532.0  2530.0  2526.0  2525.5  2526.0  2530.0  2530.2
             *

790          KK   S11C3   BASIN
791          KM   Sub-Basin   S11C3
792          KM
793          KM      The Phoenix Mountain S-Graph is used for this basin.
794          KM
795          BA   0.141
796          LG    0.15    0.40    6.00    0.18       0
797          UI      22      22      40      73     109     134     156     176     212     250
798          UI     171     140     125     117     106      95      90      76      68      58
799          UI      53      49      47      37      34      28      27      23      24      18
800          UI      17      17      13      10      11      10      10       9       4       4
801          UI       4       4       4       5       4       4       4       4       4       5
802          UI       0       0       0       0       0       0       0       0       0       0
803          UI       0       0       0       0       0       0       0       0       0       0
804          UI       0       0       0       0       0       0       0       0       0       0
805          UI       0       0       0       0       0       0       0       0       0       0
806          UI       0       0       0       0       0       0       0       0       0       0
807          UI       0       0       0       0       0       0       0       0       0       0
808          UI       0       0       0       0       0       0       0       0       0       0
809          UI       0       0       0       0       0       0       0       0       0       0
             *

810          KK  RTC3C5   ROUTE   REACH
811          KM   Normal depth channel route from S11C3 to S11C5
812          RS       2    FLOW      -1
813          RC   0.070   0.040   0.070    3234  0.0232 2532.20
814          RX     0.0    17.5    62.9   117.1   128.2   142.8   157.3   170.1
815          RY  2532.2  2532.0  2530.0  2526.0  2525.5  2526.0  2530.0  2530.2
             *

816          KK   S11C2   BASIN
817          KM   Sub-Basin   S11C2
818          KM
819          KM      The Phoenix Mountain S-Graph is used for this basin.
820          KM
821          BA   0.392
```



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

822          LG    0.15    0.40    6.00    0.18       0
823          UI      36      38      36      36      98     119     148     191     216     238
824          UI     266     275     296     349     403     442     338     270     241     227
825          UI     215     203     193     182     170     164     150     144     137     122
826          UI     114     100      93      90      88      84      77      78      62      59
827          UI      57      47      46      48      39      40      41      36      28      29
828          UI      28       0       0       0       0       0       0       0       0       0
829          UI       0       0       0       0       0       0       0       0       0       0
830          UI       0       0       0       0       0       0       0       0       0       0
831          UI       0       0       0       0       0       0       0       0       0       0
832          UI       0       0       0       0       0       0       0       0       0       0
833          UI       0       0       0       0       0       0       0       0       0       0
834          UI       0       0       0       0       0       0       0       0       0       0
835          UI       0       0       0       0       0       0       0       0       0       0
             *

836          KK  DIC2C5
837          KM   DIVERT FLOW FROM S11C2 TO S09A2 AT NATURAL FLOW SPLIT
838          DT  DIC2A2
839          DI       0      25      70     150     300     400     500
840          DQ       0       7    22.5      51     111     152     197
             *

841          KK  RTC2C5   ROUTE   REACH
842          KM   Normal depth channel route from S11C2 to S11C5
843          RS       2    FLOW      -1
844          RC   0.070   0.040   0.070    3086  0.0230 2554.50
845          RX     0.0     9.3    49.5   114.2   122.3   140.1   149.6   197.3
846          RY  2554.5  2554.0  2552.2  2552.0  2551.8  2551.6  2552.0  2553.8
             *

847          KK  CP11C5
848          KM     Combine routed hydrographs from S11C5, RTC4C5, RTC3C5, RTC2C5
849          HC       4
             *

850          KK  DIC5E2
851          KM   DIVERT FLOW FROM S11C5 TO S11C6 AT NATURAL FLOW SPLIT
852          DT  DIC5C6
853          DI       0     100     150     200     250     300     350     400     450     500
854          DI     550     600     650     700     750
855          DQ       0      60      97     136     174     218     257     290     332     375
```

```
 856          DQ     418     455     369     401     421
              *

 857          KK  RTC5E2   ROUTE   REACH
 858          KM   Normal depth channel route from 511C5 to 511E2
 859          RS       2    FLOW      -1
 860          RC   0.070   0.040   0.070    2668  0.0217 2506.00
 861          RX     0.0   120.9   137.9   150.8   209.8   266.4   359.6   477.6
 862          RY  2506.0  2500.0  2498.0  2497.0  2495.7  2496.7  2498.0  2502.0
              *
```



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

 863          KK   511C6   BASIN
 864          KM   Sub-Basin   511C6
 865          KM
 866          KM      The Phoenix Mountain S-Graph is used for this basin.
 867          KM
 868          BA   0.035
 869          LG    0.15    0.35    7.00    0.12       0
 870          UI       8      10      24      39      53      60      82      63      46      41
 871          UI      37      32      28      23      18      17      16      12       9       9
 872          UI       8       6       6       4       4       4       4       2       1       2
 873          UI       1       2       1       2       1       2       0       0       0       0
 874          UI       0       0       0       0       0       0       0       0       0       0
 875          UI       0       0       0       0       0       0       0       0       0       0
 876          UI       0       0       0       0       0       0       0       0       0       0
 877          UI       0       0       0       0       0       0       0       0       0       0
 878          UI       0       0       0       0       0       0       0       0       0       0
 879          UI       0       0       0       0       0       0       0       0       0       0
 880          UI       0       0       0       0       0       0       0       0       0       0
 881          UI       0       0       0       0       0       0       0       0       0       0
 882          UI       0       0       0       0       0       0       0       0       0       0
 883          UI       0       0       0       0       0       0       0       0       0       0
 884          UI       0       0       0       0       0       0       0       0       0       0
 885          UI       0       0       0       0       0       0       0       0       0       0
              *

 886          KK  DRC5C6
 887          KM        RETURN DIVERT FROM 511C5
 888          DR  DIC5C6
              *

 889          KK  RTC5C6   ROUTE   REACH
 890          KM   Normal depth channel route from 511C5 to 511C6
 891          RS       2    FLOW      -1
 892          RC   0.070   0.040   0.070    2644  0.0155 2490.80
 893          RX     0.0    68.8   177.6   245.2   257.0   350.0   363.8   398.6
 894          RY  2490.0  2489.3  2488.8  2490.0  2489.0  2489.0  2490.0  2490.8
              *

 895          KK  CP11C6
 896          KM     Combine routed hydrograph from 511C6 and RTC5C6
 897          HC       2
              *

 898          KK  CP11EF
 899          KM     Combine hydrographs CP11E2, RTC5E2 and CP11C6
 900          HC       3
              *

 901          KK    CPEF
 902          KM     Combine hydrographs from CP11EF and CP11F2
 903          HC       2
              *
```



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

 904          KK  RTEFC8   ROUTE   REACH
 905          KM   Normal depth channel route from CPEF to CP11C8
 906          RS       1    FLOW      -1
 907          RC   0.070   0.040   0.070    1278  0.0141 2454.00
 908          RX     0.0    86.0    91.9   125.2   207.6   319.0   482.9   605.1
 909          RY  2454.0  2448.0  2447.0  2447.0  2448.0  2450.0  2451.0  2452.0
              *

 910          KK   511C8   BASIN
 911          KM   Sub-Basin   5118
 912          KM
 913          KM      The Phoenix Mountain S-Graph is used for this basin.
 914          KM
 915          BA   0.041
 916          LG    0.15    0.37    5.20    0.25       0
 917          UI      13      34      69      94     139      89      70      59      48      36
 918          UI      30      25      17      15      12      10       7       6       5       3
 919          UI       2       3       2       3       2       0       0       0       0       0
 920          UI       0       0       0       0       0       0       0       0       0       0
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921          UI       0       0       0       0       0       0       0       0       0       0
922          UI       0       0       0       0       0       0       0       0       0       0
923          UI       0       0       0       0       0       0       0       0       0       0
924          UI       0       0       0       0       0       0       0       0       0       0
925          UI       0       0       0       0       0       0       0       0       0       0
926          UI       0       0       0       0       0       0       0       0       0       0
927          UI       0       0       0       0       0       0       0       0       0       0
928          UI       0       0       0       0       0       0       0       0       0       0
929          UI       0       0       0       0       0       0       0       0       0       0
930          UI       0       0       0       0       0       0       0       0       0       0
931          UI       0       0       0       0       0       0       0       0       0       0
932          UI       0       0       0       0       0       0       0       0       0       0
             *

933          KK  CP11C8
934          KM    Combine routed hydrograph from CPEF with 511C8
935          HC      2
             *

936          KK  RTC8C7   ROUTE   REACH
937          KM   Normal depth channel route from CP11C8 to 511C7
938          RS      1     FLOW      -1
939          RC  0.070   0.040   0.070     547  0.0146 2460.00
940          RX  950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
941          RY 2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
             *

942          KK   511C7   BASIN
943          KM   Sub-Basin   511C7
944          KM
945          KM      The Phoenix Mountain S-Graph is used for this basin.
946          KM
947          BA   0.121
948          LG   0.14    0.39    6.20    0.16       7
949          UI     17      17      25      53      73      99     113     130     139     177
```



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

950          UI    201     127     110     102      91      84      82      71      65      59
951          UI     50      45      42      38      35      32      28      22      22      19
952          UI     19      18      13      13      13      10       8       9       8       8
953          UI      9       3       3       4       3       3       3       4       3       3
954          UI      4       0       0       0       0       0       0       0       0       0
955          UI      0       0       0       0       0       0       0       0       0       0
956          UI      0       0       0       0       0       0       0       0       0       0
957          UI      0       0       0       0       0       0       0       0       0       0
958          UI      0       0       0       0       0       0       0       0       0       0
959          UI      0       0       0       0       0       0       0       0       0       0
960          UI      0       0       0       0       0       0       0       0       0       0
961          UI      0       0       0       0       0       0       0       0       0       0
962          UI      0       0       0       0       0       0       0       0       0       0
963          UI      0       0       0       0       0       0       0       0       0       0
964          UI      0       0       0       0       0       0       0       0       0       0
             *

965          KK  CP11C7
966          KM    Combine routed hydrograph from CP11C8, 511C7
967          HC      2
             *

968          KK   RTC7H   ROUTE   REACH
969          KM   Normal depth channel route from 511C7 to 511H
970          RS      4     FLOW      -1
971          RC  0.070   0.040   0.070    6348  0.0176 2460.00
972          RX  950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
973          RY 2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
974          RL                 0.62  2356.3
             *

975          KK    511H   BASIN
976          KM   Sub-Basin   511H
977          KM
978          KM      The Phoenix Mountain S-Graph is used for this basin.
979          KM
980          BA   0.303
981          LG   0.15    0.35    4.40    0.38       1
982          UI     32      34      32      59     104     132     166     207     221     238
983          UI    267     297     358     402     267     227     211     189     183     174
984          UI    161     149     142     131     119     111      98      86      82      78
985          UI     74      73      66      53      54      43      41      43      35      36
986          UI     37      25      25      26      25      22      17      16      16      16
987          UI     16       0       0       0       0       0       0       0       0       0
988          UI      0       0       0       0       0       0       0       0       0       0
989          UI      0       0       0       0       0       0       0       0       0       0
990          UI      0       0       0       0       0       0       0       0       0       0
991          UI      0       0       0       0       0       0       0       0       0       0
992          UI      0       0       0       0       0       0       0       0       0       0
993          UI      0       0       0       0       0       0       0       0       0       0
994          UI      0       0       0       0       0       0       0       0       0       0
995          UI      0       0       0       0       0       0       0       0       0       0
```

```
 996          UI       0       0       0       0       0       0       0       0       0       0
 997          UI       0       0       0       0       0       0       0       0       0       0
              *
```



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

 998          KK   CP11H
 999          KM     Combine routed hydrographs from RTC7H with 511H
1000          HC       2
              *

1001          KK   RTHG4    ROUTE    REACH
1002          KM   Normal depth channel route from CPC7H TO 511G4
1003          RS        1     FLOW       -1
1004          RC    0.070    0.040    0.070      933  0.0209 2336.00
1005          RX      0.0     44.0     71.0     80.0     90.0    101.0    143.0    154.0
1006          RY   2336.0   2330.0   2324.0   2323.3   2324.0   2330.0   2334.0   2335.0
              *

1007          KK   511G1    BASIN
1008          KM   Sub-Basin   511G1
1009          KM
1010          KM      The Phoenix Mountain S-Graph is used for this basin.
1011          KM
1012          BA   0.310
1013          LG    0.15     0.38     5.60     0.22        8
1014          UI      51       53      122      205      299      350      400      492      618      411
1015          UI     340      294      274      255      220      198      174      144      126      124
1016          UI     108       91       80       66       60       59       48       40       41       32
1017          UI      25       26       25       26       13       10       10       10       10       10
1018          UI      10       10       10       10       10       10        0        0        0        0
1019          UI       0        0        0        0        0        0        0        0        0        0
1020          UI       0        0        0        0        0        0        0        0        0        0
1021          UI       0        0        0        0        0        0        0        0        0        0
1022          UI       0        0        0        0        0        0        0        0        0        0
1023          UI       0        0        0        0        0        0        0        0        0        0
              *

1024          KK  RTG1G2   ROUTE    REACH
1025          KM   Normal depth channel route from 511G1 to 511G2
1026          RS        3     FLOW       -1
1027          RC    0.070    0.040    0.070     4246  0.0146 2472.00
1028          RX     19.0     45.0     98.0    182.0    219.0    234.0    270.0    308.0
1029          RY   2472.0   2470.0   2468.0   2466.0   2465.5   2466.0   2468.0   2472.0
              *

1030          KK   511G2    BASIN
1031          KM   Sub-Basin   511G2
1032          KM
1033          KM      The Phoenix Mountain S-Graph is used for this basin.
1034          KM
1035          BA   0.106
1036          LG    0.15     0.37     5.30     0.24        0
1037          UI      16       16       20       41       61       78       90      103      122      152
1038          UI     127       92       78       76       66       62       56       50       46       38
1039          UI      32       30       28       25       22       20       14       14       12       12
1040          UI      12       11       11       10        7        7        7        7        7        4
1041          UI       2        3        2        3        2        2        3        2        3        2
1042          UI       3        0        0        0        0        0        0        0        0        0
1043          UI       0        0        0        0        0        0        0        0        0        0
```



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

1044          UI       0        0        0        0        0        0        0        0        0        0
1045          UI       0        0        0        0        0        0        0        0        0        0
1046          UI       0        0        0        0        0        0        0        0        0        0
              *
              * ************************************************************************
              *  ONSITE NEW BASINS ADDED
              * ************************************************************************

1047          KK      P    BASIN
1048          BA    .014
1049          LG     .35      .39     5.70      .20    23.00
1050          UI     31.      62.      68.      50.      31.      13.       0.       0.       0.       0.
1051          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
1052          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
              *

1053          KK     RSP
              * RESERVOIR STORAGE
1054          KO       0        0      0.0        0       22
1055          RS       1     STOR      0.0      0.0
              *    RSP Volume
1056          SV     0.0     0.21     0.46     0.75
              *    RSP Storage elev
1057          SE     0.0      1.0      2.0      3.0
1058          SL     .75     1.77      0.6      0.5
```

```
1059          SS     2.0    10.0    2.60     1.5
              *

1060          KK     Q   BASIN
1061          BA    .017
1062          LG     .35     .39    5.70     .20   23.00
1063          UI     37.     73.     81.     59.     37.     15.      0.      0.      0.      0.
1064          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1065          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1066          KK    RSQ
              * RESERVOIR STORAGE
1067          KO      0       0     0.0       0      22
1068          RS      1    STOR     0.0     0.0
              *    RSQ Volume
1069          SV    0.0    0.21    0.46    0.75
              *    RSQ Storage elev
1070          SE    0.0     1.0     2.0     3.0
1071          SL    .75    1.77     0.6     0.5
1072          SS    2.0    20.0    2.60     1.5
              *

1073          KK     O   BASIN
1074          BA    .012
1075          LG     .35     .39    5.70     .20   23.00
1076          UI     26.     51.     57.     41.     26.     10.      0.      0.      0.      0.
1077          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1078          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *
```



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

1079          KK    RSO
              * RESERVOIR STORAGE
1080          KO      0       0     0.0       0      22
1081          RS      1    STOR     0.0     0.0
              *    RSO Volume
1082          SV    0.0    0.12    0.27    0.45
              *    RSO Storage elev
1083          SE    0.0     1.0     2.0     3.0
1084          SL    .75    1.77     0.6     0.5
1085          SS    2.0    10.0    2.60     1.5
              *

1086          KK     T   BASIN
1087          BA    .003
1088          LG     .35     .39    5.70     .20   23.00
1089          UI      6.     11.     12.      9.      6.      2.      0.      0.      0.      0.
1090          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1091          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1092          KK    RST
              * RESERVOIR STORAGE
1093          KO      0       0     0.0       0      22
1094          RS      1    STOR     0.0     0.0
              *    RST Volume
1095          SV    0.0    0.04    0.10    0.19
              *    RST Storage elev
1096          SE    0.0     1.0     2.0     3.0
1097          SL    .75    1.77     0.6     0.5
1098          SS    2.0    10.0    2.60     1.5
              *

1099          KK     E   BASIN
1100          BA    .024
1101          LG     .35     .39    5.70     .20   23.00
1102          UI     53.    107.    117.     85.     53.     22.      0.      0.      0.      0.
1103          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1104          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1105          KK    RSE
              * RESERVOIR STORAGE
1106          KO      0       0     0.0       0      22
1107          RS      1    STOR     0.0     0.0
              *    RSE Volume
1108          SV    0.0    0.31    0.67    1.09
              *    RSE Storage elev
1109          SE    0.0     1.0     2.0     3.0
1110          SL    .75    1.77     0.6     0.5
1111          SS    2.0    30.0    2.60     1.5
              *
              * ************************************************************************
              *  CP11G MODIFIED TO INCLUDE NEW BASINS
              * ************************************************************************
```

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

1112      KK   CP11G
1113      KM   COMBINE HYDROGRAPHS RSP, RSQ, RSO, RST, AND RSE
1114      HC      5
          *

1115      KK     Y  BASIN
1116      BA    .004
1117      LG    .35     .39    5.70     .20   23.00
1118      UI     3.      6.     9.      12.    11.      9.      7.      5.      3.      1.
1119      UI     0.      0.     0.       0.     0.      0.      0.      0.      0.      0.
1120      UI     0.      0.     0.       0.     0.      0.      0.      0.      0.      0.
          *

1121      KK  CP11G2
1122      KM    Combine routed hydrographs from S11G1, S11G2, CPC7H, CP11G and Y
1123      HC      4
          *

1124      KK  RTG2G4   ROUTE   REACH
1125      RS      4    FLOW      -1
1126      RC  0.070   0.040   0.070    5908  0.0190 2472.00
1127      RX  950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
1128      RY 2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
          *

1129      KK   S11G3   BASIN
1130      KM   Sub-Basin   S11G3
1131      KM
1132      KM      The Phoenix Mountain S-Graph is used for this basin.
1133      KM
1134      BA   0.097
1135      LG   0.15    0.36    5.00    0.28       0
1136      UI     14      15      23      46      67      84      99     110     130     163
1137      UI    137     100      84      83      72      68      62      56      50      44
1138      UI     37      34      33      30      26      24      18      18      16      15
1139      UI     13      11      11      10       7       7       7       7       7       4
1140      UI      3       2       3       3       3       2       3       3       3       2
1141      UI      3       0       0       0       0       0       0       0       0       0
1142      UI      0       0       0       0       0       0       0       0       0       0
1143      UI      0       0       0       0       0       0       0       0       0       0
1144      UI      0       0       0       0       0       0       0       0       0       0
1145      UI      0       0       0       0       0       0       0       0       0       0
          *

1146      KK  RTG3G4   ROUTE   REACH
1147      KM   Normal depth channel route from S11G3 to S11G4
1148      RS      4    FLOW      -1
1149      RC  0.070   0.040   0.070    5322  0.0231 2380.30
1150      RX   34.0    65.0    84.0    98.0   105.0   131.0   166.0   173.0
1151      RY 2380.0  2378.0  2376.0  2374.0  2376.0  2378.0  2380.0  2380.3
          *
```



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

1152      KK   S11G4   BASIN
1153      KM   Sub-Basin   S11G4
1154      KM
1155      KM      The Phoenix Mountain S-Graph is used for this basin.
1156      KM
1157      BA   0.298
1158      LG   0.15    0.35    4.65    0.32       1
1159      UI     33      34      33      67     110     139     179     213     230     248
1160      UI    285     321     402     343     248     217     204     189     176     171
1161      UI    155     144     140     124     111     104      89      83      82      76
1162      UI     71      68      54      53      44      42      40      37      37      33
1163      UI     26      26      25      26      18      17      16      17      16      17
1164      UI     16       0       0       0       0       0       0       0       0       0
1165      UI      0       0       0       0       0       0       0       0       0       0
1166      UI      0       0       0       0       0       0       0       0       0       0
1167      UI      0       0       0       0       0       0       0       0       0       0
1168      UI      0       0       0       0       0       0       0       0       0       0
          *

1169      KK  CPG_G4
1170      KM    Combine routed hydrographs from RTG2G4, RTG3G4 and S11G4
1171      HC      3
          *

1172      KK  CP11G4
1173      KM    Combine routed hydrographs from RTHG4 and CPG_G4
1174      HC      2
          *

1175      KK   RTG4I   ROUTE   REACH
1176      RS      3    FLOW      -1
1177      RC  0.070   0.040   0.070    4438  0.0361 2460.00
```

```
1178          RX   950.0  1053.0  1139.0  1150.0  1177.0  1255.0  1302.0  1352.0
1179          RY  2460.0  2357.0  2357.4  2356.4  2356.3  2357.8  2359.6  2460.0
              *

1180          KK    511I   BASIN
1181          KM   Sub-Basin   511I
1182          KM
1183          KM      The Phoenix Mountain S-Graph is used for this basin.
1184          KM
1185          BA   0.198
1186          LG    0.14    0.35    4.10    0.44       2
1187          UI      28      28      40      86     121     162     184     213     228     290
1188          UI     328     209     179     166     151     137     133     117     107      96
1189          UI      82      72      69      63      58      52      46      36      36      32
1190          UI      30      28      22      21      22      16      14      14      13      14
1191          UI      14       5       5       6       5       5       6       5       5       5
1192          UI       6       0       0       0       0       0       0       0       0       0
1193          UI       0       0       0       0       0       0       0       0       0       0
              *
```



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

1194          KK   CP11I
1195          KM     Combine routed hydrograph from RTG2I with runoff from 511I
1196          KO                                    21
1197          HC       2
              *
              *
              * ********************************************************************************
              * ******************************     Major Basin 510    ************************
              * ********************************************************************************
              *

1198          KK    510A   BASIN
1199          KM   Sub-Basin   510A
1200          KM
1201          KM      The Phoenix Mountain S-Graph is used for this basin.
1202          KM
1203          BA   0.923
1204          KO                                    21
1205          LG    0.12    0.39    6.20    0.15      10
1206          UI      63      64      63      63      64     106     182     212     240     286
1207          UI     347     373     402     435     459     472     507     535     601     691
1208          UI     753     746     570     467     446     419     383     370     381     338
1209          UI     329     330     308     294     290     269     251     253     238     215
1210          UI     212     197     177     171     160     153     156     144     144     139
1211          UI     133       0       0       0       0       0       0       0       0       0
1212          UI       0       0       0       0       0       0       0       0       0       0
1213          UI       0       0       0       0       0       0       0       0       0       0
1214          UI       0       0       0       0       0       0       0       0       0       0
1215          UI       0       0       0       0       0       0       0       0       0       0
1216          UI       0       0       0       0       0       0       0       0       0       0
              *
              *
              * ********************************************************************************
              * ******************************     Major Basin 509    ************************
              * ********************************************************************************
              *

1217          KK   509A5   BASIN
1218          KM   Sub-Basin   509A5
1219          KM
1220          KM      The Phoenix Mountain S-Graph is used for this basin.
1221          KM
1222          BA   0.020
1223          LG    0.12    0.36    5.10    0.24       9
1224          UI       7      21      42      57      67      40      34      27      21      16
1225          UI      13       9       8       6       5       3       3       1       2       1
1226          UI       1       2       1       0       0       0       0       0       0       0
1227          UI       0       0       0       0       0       0       0       0       0       0
1228          UI       0       0       0       0       0       0       0       0       0       0
1229          UI       0       0       0       0       0       0       0       0       0       0
1230          UI       0       0       0       0       0       0       0       0       0       0
1231          UI       0       0       0       0       0       0       0       0       0       0
1232          UI       0       0       0       0       0       0       0       0       0       0
1233          UI       0       0       0       0       0       0       0       0       0       0
```



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

1234          UI       0       0       0       0       0       0       0       0       0       0
1235          UI       0       0       0       0       0       0       0       0       0       0
              *

1236          KK  DIA59B
1237          KM   DIVERT FLOW FROM 509A5 TO 509A6 BY NATURAL FLOW SPLIT
1238          DT   DIA5S
1239          DI       0      75     150     225     308     480     650
1240          DQ       0       2      15      30      50      95     140
```

```
*
1241          KK  RTA59B   ROUTE    REACH
1242          KM   Normal depth channel route from 509A5 to 509B
1243          RS      13    FLOW       -1
1244          RC   0.070   0.040   0.070   18484  0.0233 2188.00
1245          RX     0.0    61.0   150.0   160.0   164.0   174.0   266.0   290.0
1246          RY  2184.6  2184.0  2182.0  2180.0  2179.8  2180.0  2186.0  2188.0
              *
1247          KK    509B   BASIN
1248          KM   Sub-Basin   509B
1249          KM
1250          KM      The Phoenix Mountain S-Graph is used for this basin.
1251          KM
1252          BA   0.654
1253          LG    0.15    0.36    5.10    0.26       0
1254          UI      39      40      39      39      40      38      80     116     125     150
1255          UI     172     190     226     240     255     262     289     292     304     327
1256          UI     348     381     433     481     463     377     304     281     268     245
1257          UI     239     234     225     217     214     201     194     191     180     175
1258          UI     172     159     156     154     140     133     129     121     110     107
1259          UI     101       0       0       0       0       0       0       0       0       0
1260          UI       0       0       0       0       0       0       0       0       0       0
1261          UI       0       0       0       0       0       0       0       0       0       0
1262          UI       0       0       0       0       0       0       0       0       0       0
1263          UI       0       0       0       0       0       0       0       0       0       0
1264          UI       0       0       0       0       0       0       0       0       0       0
1265          UI       0       0       0       0       0       0       0       0       0       0
              * ------------------------------------------------------------------------------

1266          KK   CP09B
1267          KM     Combine hydrographs from 509B and RTA59B
1268          KO                                      21
1269          HC       2
              *
1270          KK   509A1   BASIN
1271          KM   Sub-Basin   509A1
1272          KM
1273          KM      The Phoenix Mountain S-Graph is used for this basin.
1274          KM
1275          BA   0.193
1276          LG    0.14    0.38    6.40    0.15       5
1277          UI      23      24      23      56      82     107     137     156     171     181
1278          UI     222     266     242     178     154     137     132     120     113     110
```



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

1279          UI      95      90      83      72      64      60      55      52      51      45
1280          UI      37      36      29      30      26      25      25      19      18      17
1281          UI      19      13      11      12      11      11      12      11       4       4
1282          UI       5       0       0       0       0       0       0       0       0       0
1283          UI       0       0       0       0       0       0       0       0       0       0
1284          UI       0       0       0       0       0       0       0       0       0       0
1285          UI       0       0       0       0       0       0       0       0       0       0
1286          UI       0       0       0       0       0       0       0       0       0       0
1287          UI       0       0       0       0       0       0       0       0       0       0
1288          UI       0       0       0       0       0       0       0       0       0       0
              *
1289          KK  RTA1A2   ROUTE    REACH
1290          KM   Normal depth channel route from 509A1 to 509A2
1291          RS       1    FLOW       -1
1292          RC   0.070   0.040   0.070    1427  0.0234 2464.80
1293          RX     0.0    33.0    66.0    86.0   114.0   120.0   135.0   177.0
1294          RY  2464.0  2463.7  2463.2  2462.8  2463.2  2463.8  2464.0  2464.8
              *
1295          KK   509A2   BASIN
1296          KM   Sub-Basin   509A2
1297          KM
1298          KM      The Phoenix Mountain S-Graph is used for this basin.
1299          KM
1300          BA   0.128
1301          LG    0.13    0.36    6.80    0.12       6
1302          UI      17      18      21      51      72      94     109     130     137     163
1303          UI     210     155     119     107      98      93      84      78      70      66
1304          UI      57      51      45      42      38      38      32      28      24      22
1305          UI      20      19      19      14      13      13      13       9       8       9
1306          UI       8       9       7       3       3       4       3       3       3       4
1307          UI       3       0       0       0       0       0       0       0       0       0
1308          UI       0       0       0       0       0       0       0       0       0       0
1309          UI       0       0       0       0       0       0       0       0       0       0
1310          UI       0       0       0       0       0       0       0       0       0       0
1311          UI       0       0       0       0       0       0       0       0       0       0
1312          UI       0       0       0       0       0       0       0       0       0       0
1313          UI       0       0       0       0       0       0       0       0       0       0
              *
```

```
1314          KK  DRC2A2
1315          KM        RETURN DIVERT FROM S11C2
1316          DR  DIC2A2
              *

1317          KK  RTC2A2   ROUTE   REACH
1318          KM   Normal depth channel route from S11C2 to S09A2
1319          RS      4     FLOW      -1
1320          RC  0.070   0.040   0.070    6045  0.0218 2520.00
1321          RX    0.0   147.0   228.3   252.5   257.8   262.8   282.7   348.4
1322          RY 2502.0  2500.6  2500.0  2498.0  2497.6  2498.0  2500.0  2520.0
              *
```



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

1323          KK  CP09A2
1324          KM     Combine routed hydrograph from S11E4 with runoff from S09A2
1325          HC      3
              *

1326          KK  RTA2A4   ROUTE   REACH
1327          KM   Normal depth channel route from S09A2 to S09A3
1328          RS      2     FLOW      -1
1329          RC  0.070   0.040   0.070    2604  0.0384 2426.00
1330          RX    0.0   103.0   187.0   344.0   439.0   505.0   563.0   596.0
1331          RY 2422.0  2418.0  2417.4  2417.3  2418.0  2416.4  2422.0  2426.0
              *

1332          KK   S09A3   BASIN
1333          KM   Sub-Basin   S09A3
1334          KM
1335          KM      The Phoenix Mountain S-Graph is used for this basin.
1336          KM
1337          BA  0.162
1338          LG   0.14    0.38    6.40    0.15       4
1339          UI     25      25      46      83     127     154     178     202     244     288
1340          UI    196     161     144     134     122     109     103      88      78      67
1341          UI     60      56      54      44      39      32      30      27      28      20
1342          UI     19      19      16      12      12      12      12      10       4       5
1343          UI      5       5       4       5       5       4       5       5       4       5
1344          UI      0       0       0       0       0       0       0       0       0       0
1345          UI      0       0       0       0       0       0       0       0       0       0
1346          UI      0       0       0       0       0       0       0       0       0       0
1347          UI      0       0       0       0       0       0       0       0       0       0
1348          UI      0       0       0       0       0       0       0       0       0       0
1349          UI      0       0       0       0       0       0       0       0       0       0
1350          UI      0       0       0       0       0       0       0       0       0       0
              *

1351          KK  RTA3A4   ROUTE   REACH
1352          KM   Normal depth channel route from S09A3 to S09A4
1353          RS      1     FLOW      -1
1354          RC  0.070   0.040   0.070     717  0.0167 2406.00
1355          RX    0.0    69.0   124.0   175.0   252.0   303.0   342.0   363.0
1356          RY 2404.8  2404.0  2403.5  2402.8  2403.6  2403.0  2404.0  2406.0
              *

1357          KK   S09A4   BASIN
1358          KM   Sub-Basin   S09A4
1359          KM
1360          KM      The Phoenix Mountain S-Graph is used for this basin.
1361          KM
1362          BA  0.062
1363          LG   0.15    0.36    6.80    0.13       1
1364          UI     16      32      72     106     139     175     111      95      79      67
1365          UI     56      44      37      33      24      20      18      14      12       9
1366          UI      7       8       4       3       3       4       3       3       3       3
1367          UI      0       0       0       0       0       0       0       0       0       0
1368          UI      0       0       0       0       0       0       0       0       0       0
```



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

1369          UI      0       0       0       0       0       0       0       0       0       0
1370          UI      0       0       0       0       0       0       0       0       0       0
1371          UI      0       0       0       0       0       0       0       0       0       0
1372          UI      0       0       0       0       0       0       0       0       0       0
1373          UI      0       0       0       0       0       0       0       0       0       0
1374          UI      0       0       0       0       0       0       0       0       0       0
1375          UI      0       0       0       0       0       0       0       0       0       0
              *

1376          KK  CP09A4
1377          KM     Combine hydrographs from S09A4, RTA2A4, RTA3A4
1378          HC      3
              *
              * MODIFICATION STARTS
              *
```

```
1379        KK  RTA4A6   ROUTE   REACH
1380        KM   Normal depth channel route from CP509A4 to 509A6
1381        RS      2     FLOW      -1
1382        RC   0.070   0.040   0.070    1778  0.0185 2382.00
1383        RX     0.0    84.4   120.0   123.0   125.0   130.5   135.7   193.0
1384        RY  2382.0  2380.0  2378.0  2377.8  2378.0  2379.0  2380.0  2382.0
            *
            *

1385        KK  DRA5A6
1386        KM          RETURN DIVERT FROM 509A5
1387        DR  DIA5S
            *

1388        KK  RTA5A6   ROUTE   REACH
1389        KM   Normal depth channel route from 509A5 to 509A6
1390        RS      2     FLOW      -1
1391        RC   0.070   0.040   0.070    1778  0.0185 2382.00
1392        RX     0.0    84.4   120.0   123.0   125.0   130.5   135.7   193.0
1393        RY  2382.0  2380.0  2378.0  2377.8  2378.0  2379.0  2380.0  2382.0
            *

1394        KK   509A6   BASIN
1395        KM  Sub-Basin   509A6
1396        KM
1397        KM      The Phoenix Mountain S-Graph is used for this basin.
1398        KM
1399        BA   0.032
1400        KO                                      21
1401        LG    0.15    0.32    7.60    0.10       0
1402        UI       9      27      55      73     109      69      54      46      38      28
1403        UI      24      19      14      11       9       8       6       4       4       2
1404        UI       2       2       2       2       2       0       0       0       0       0
1405        UI       0       0       0       0       0       0       0       0       0       0
1406        UI       0       0       0       0       0       0       0       0       0       0
1407        UI       0       0       0       0       0       0       0       0       0       0
1408        UI       0       0       0       0       0       0       0       0       0       0
1409        UI       0       0       0       0       0       0       0       0       0       0
1410        UI       0       0       0       0       0       0       0       0       0       0
            *
```

1   HEC-1 INPUT   PAGE 34

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

1411        KK  CP09A6
1412        KM      Combine hydrographs from RTA4A6, RTA5A6, 509A6
1413        HC      3
            *
            * END OF MODIFICATION
            *

1414        KK   509D   BASIN
1415        KM  Sub-Basin   509D
1416        KM
1417        KM      The Phoenix Mountain S-Graph is used for this basin.
1418        KM
1419        BA   0.382
1420        KO                                      21
1421        LG    0.14    0.40    6.00    0.17       4
1422        UI      31      32      31      31      50      89     108     133     158     184
1423        UI     201     216     229     245     263     292     348     391     308     250
1424        UI     213     202     191     181     172     169     158     149     148     132
1425        UI     126     125     113     105     101      88      81      80      76      72
1426        UI      73      66      65      60      51      52      45      39      40      41
1427        UI      34       0       0       0       0       0       0       0       0       0
1428        UI       0       0       0       0       0       0       0       0       0       0
1429        UI       0       0       0       0       0       0       0       0       0       0
1430        UI       0       0       0       0       0       0       0       0       0       0
            *
            * ****************************************************************************
            * ******************************      Major Basin 500      ***********************
            * ****************************************************************************
            *

1431        KK   500A   BASIN
1432        KM  Sub-Basin   500A
1433        KM
1434        KM      The Phoenix Mountain S-Graph is used for this basin.
1435        KM
1436        BA   0.204
1437        LG    0.15    0.37    5.20    0.25       1
1438        UI      28      30      41      89     124     167     189     221     235     298
1439        UI     338     215     184     172     155     142     137     120     110      99
1440        UI      85      75      70      65      59      54      46      38      37      33
1441        UI      31      30      21      22      22      17      14      15      13      14
1442        UI      15       5       6       5       6       5       6       5       6       5
1443        UI       6       0       0       0       0       0       0       0       0       0
            *

1444        KK    RTAB   ROUTE   REACH
```

```
1445          KM   Normal depth channel route from 500A to 500B
1446          RS      4    FLOW     -1
1447          RC   0.070   0.040   0.070     6187  0.0283 2261.00
1448          RX   822.0  1013.0  1035.0  1045.0  1049.0  1053.0  1076.0  1573.0
1449          RY  2261.0  2159.2  2158.9  2156.6  2156.8  2158.9  2159.0  2261.0
              *
1                                        HEC-1 INPUT                                        PAGE 35

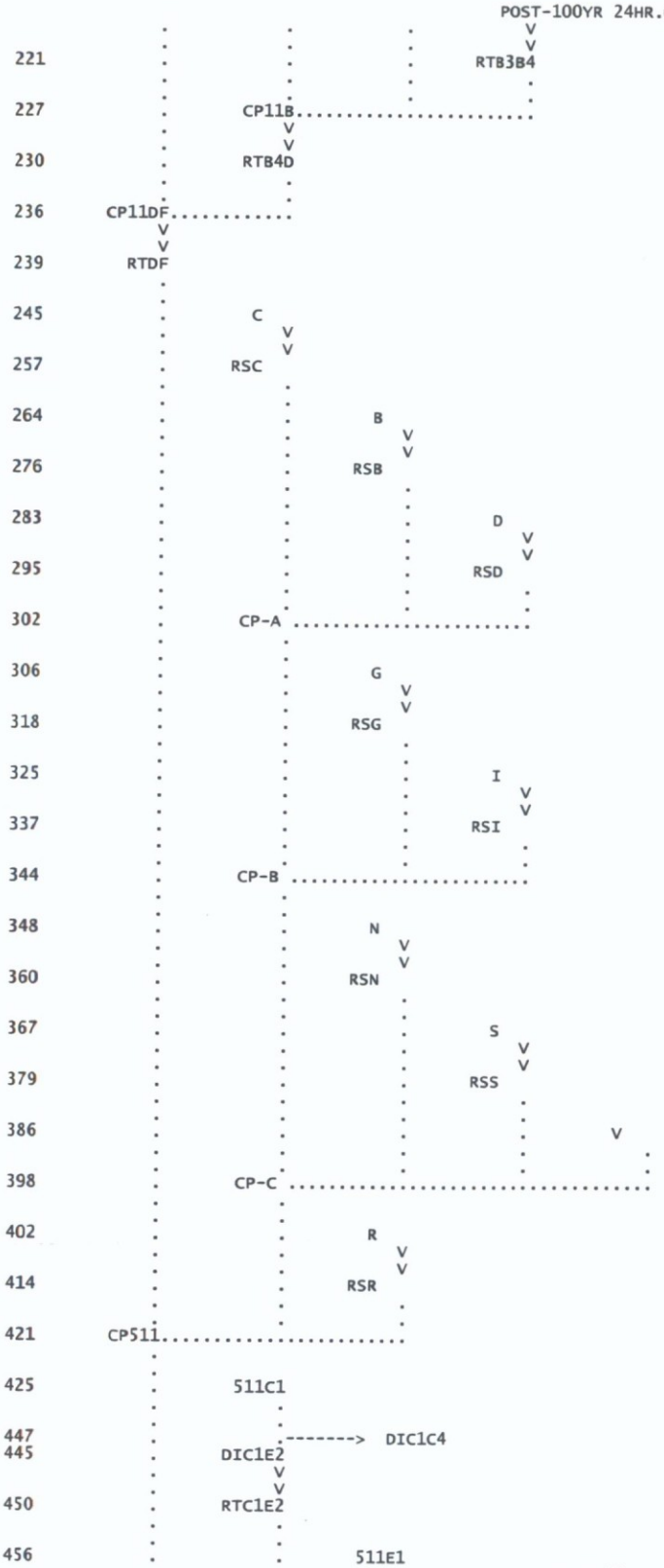
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

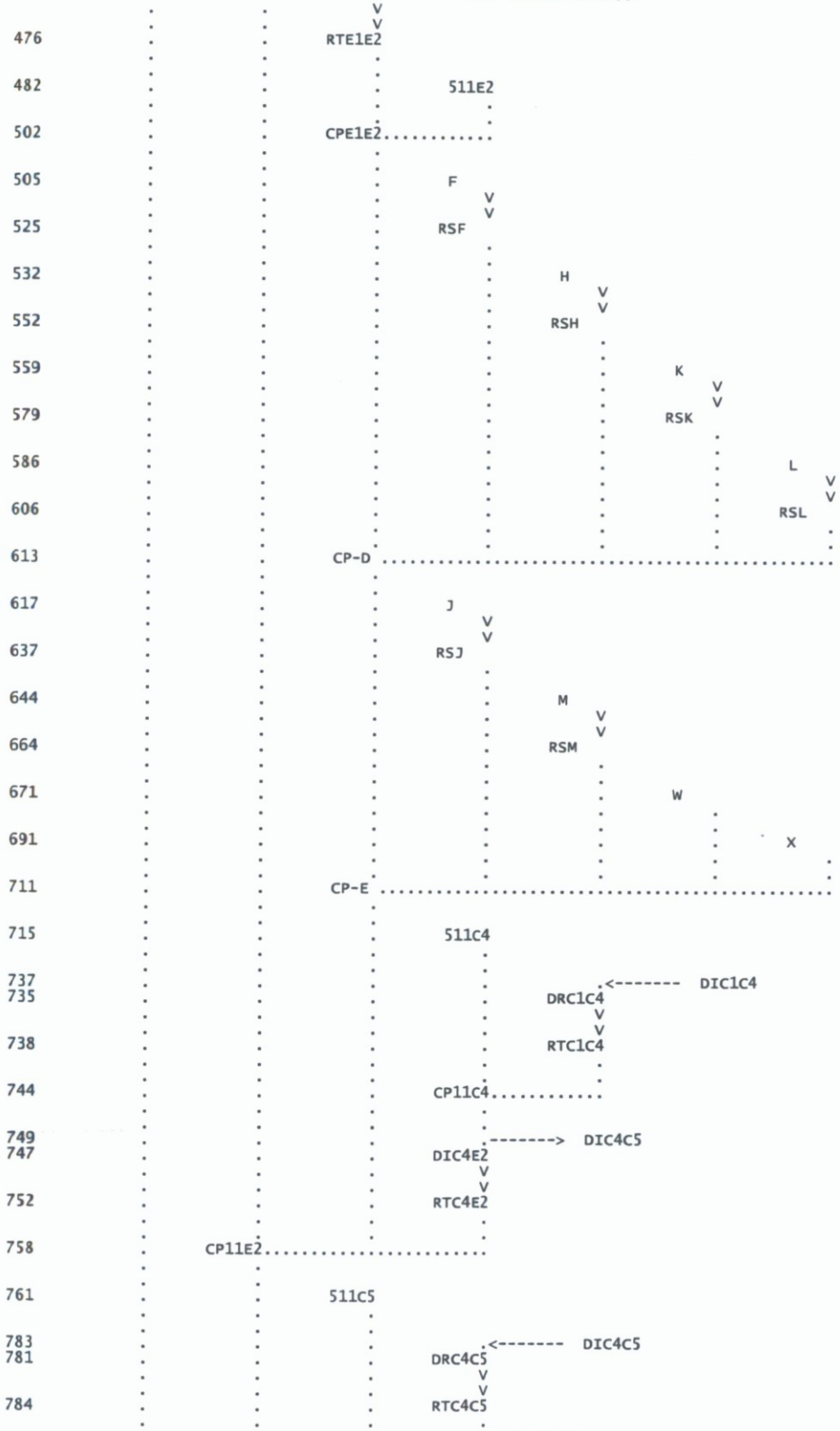

1450          KK    500B   BASIN
1451          KM   Sub-Basin   500B
1452          KM
1453          KM      The Phoenix Mountain S-Graph is used for this basin.
1454          KM
1455          BA   0.192
1456          LG    0.12    0.37    5.30    0.22       8
1457          UI      20      20      20      32      62      77      98     121     133     143
1458          UI     161     171     206     250     196     149     133     122     116     112
1459          UI     102      95      91      84      79      73      66      59      54      49
1460          UI      48      48      42      41      34      33      27      26      26      22
1461          UI      23      21      18      16      15      16      15      11      10      10
1462          UI      10       0       0       0       0       0       0       0       0       0
1463          UI       0       0       0       0       0       0       0       0       0       0
1464          UI       0       0       0       0       0       0       0       0       0       0
              *
              *

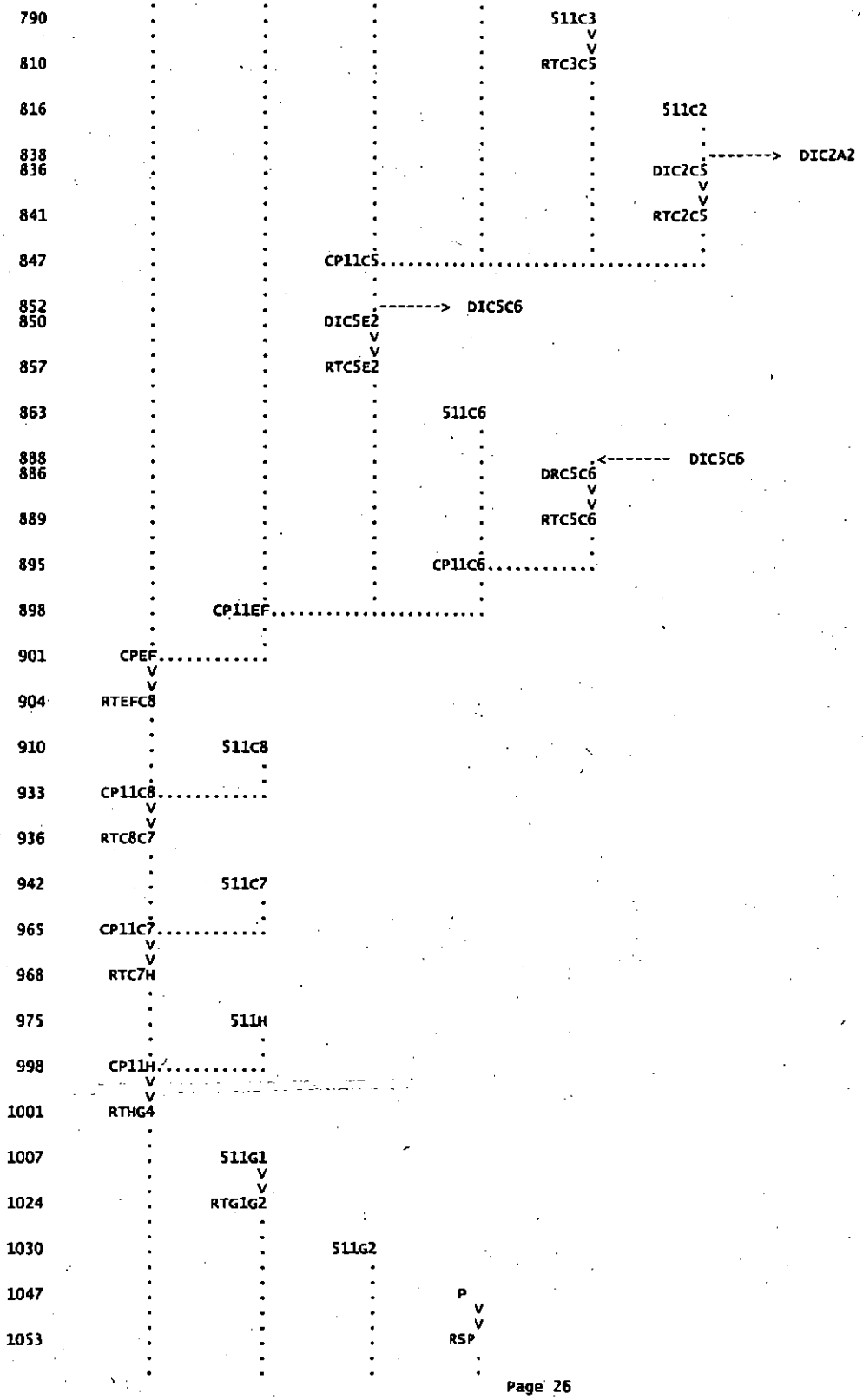
1465          KK  CP500B
1466          KM     Combine routed hydrograph from 500A with runoff from 500B
1467          KO                                       21
1468          HC       2
              *
1469          ZZ
1
            SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

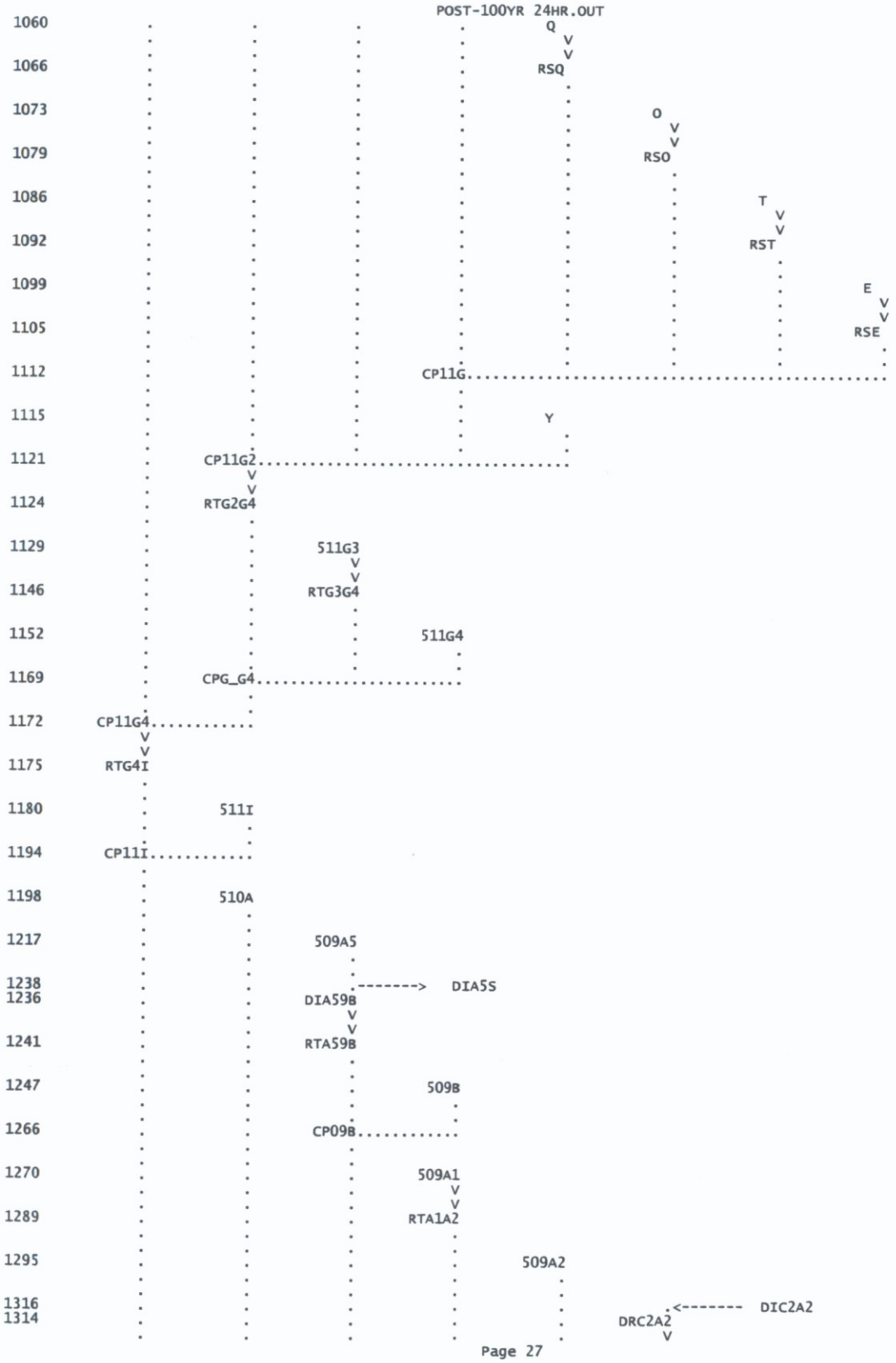
  NO.     (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

   15     511A1
              .
   41         .     511A2
              .         V
              .         V
   56         .     RTA2A3
              .         .
              .         .
   62         .         .     511A3
              .         .         .
              .         .         .
   84     CP11A.......................
              V
              V
   87     RTA1D
              .
              .
   93         .     511D
              .         .
              .         .
  109     CP11D...........
              .
              .
  112         .     A
              .         V
              .         V
  128         .     RSA
              .         .
              .         .
  135     CP11D...........
              .
              .
  138         .     511B4
              .         .
              .         .
  153         .         .     511B1
              .         .         .
              .         .         .
  168         .         .         .     511B2
              .         .         .         .
              .         .         .         .
  190         .         .     CPB1B2...........
              .         .         V
              .         .         V
  193         .         .     RT12B4
              .         .         .
              .         .         .
  199         .         .         .     511B3
```


221
RTB3B4
227
CP11B
230
RTB4D
236
CP11DF
239
RTDF
245
C
257
RSC
264
B
276
RSB
283
D
295
RSD
302
CP-A
306
G
318
RSG
325
I
337
RSI
344
CP-B
348
N
360
RSN
367
S
379
RSS
386
V
398
CP-C
402
R
414
RSR
421
CP511
425
511C1
447
445
DIC1E2
DIC1C4
450
RTC1E2
456
511E1


476
RTE1E2
482
511E2
502
CPE1E2
505
F
525
RSF
532
H
552
RSH
559
K
579
RSK
586
L
606
RSL
613
CP-D
617
J
637
RSJ
644
M
664
RSM
671
W
691
X
711
CP-E
715
511C4
737
735
DIC1C4
DRC1C4
738
RTC1C4
744
CP11C4
749
747
DIC4C5
DIC4E2
752
RTC4E2
758
CP11E2
761
511C5
783
781
DIC4C5
DRC4C5
784
RTC4C5


790
511C3
810
RTC3C5
816
511C2
838
DIC2A2
836
DIC2C5
841
RTC2C5
847
CP11C5
852
DIC5C6
850
DIC5E2
857
RTC5E2
863
511C6
888
DIC5C6
886
DRC5C6
889
RTC5C6
895
CP11C6
898
CP11EF
901
CPEF
904
RTEFC8
910
511C8
933
CP11C8
936
RTC8C7
942
511C7
965
CP11C7
968
RTC7H
975
511H
998
CP11H
1001
RTHG4
1007
511G1
1024
RTG1G2
1030
511G2
1047
P
1053
RSP


POST-100YR 24HR.OUT
1060
Q
1066
RSQ
1073
O
1079
RSO
1086
T
1092
RST
1099
E
1105
RSE
1112
CP11G
1115
Y
1121
CP11G2
1124
RTG2G4
1129
511G3
1146
RTG3G4
1152
511G4
1169
CPG_G4
1172
CP11G4
1175
RTG4I
1180
511I
1194
CP11I
1198
510A
1217
509A5
1238
1236
DIA59B
1241
RTA59B
1247
509B
1266
CP09B
1270
509A1
1289
RTA1A2
1295
509A2
1316
1314
DRC2A2
DIA5S
DIC2A2

```
                                                                     V
1317          .          .          .          .          .     RTC2A2
                                                                     .
1323          .          .          .    CP09A2.......................
                                             V
                                             V
1326          .          .          .    RTA2A4
                                             .
1332          .          .          .        .      509A3
                                             .          V
                                             .          V
1351          .          .          .        .     RTA3A4
                                             .          .
1357          .          .          .        .          .       509A4
                                             .          .          .
1376          .          .          .    CP09A4.......................
                                             V
                                             V
1379          .          .          .    RTA4A6
                                             .
1387          .          .          .        .          .<--------    DIA5S
1385          .          .          .        .     DRA5A6
                                             .          V
                                             .          V
1388          .          .          .        .     RTA5A6
                                             .          .
1394          .          .          .        .          .       509A6
                                             .          .          .
1411          .          .          .    CP09A6.......................
                                             .
1414          .          .          .        .      509D
                                             .          .
1431          .          .          .        .          .       500A
                                             .          .          V
                                             .          .          V
1444          .          .          .        .          .       RTAB
                                             .          .          .
1450          .          .          .        .          .          .          500B
                                             .          .          .          .
1465          .          .          .        .          .     CP500B...........

 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************
*****************************************
 *                                        *                                    *
          *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *                                    *    U.S. ARMY CORPS OF
ENGINEERS     *
 *             JUN   1998                 *                                    *    HYDROLOGIC ENGINEERING
CENTER    *
 *           VERSION 4.1                  *                                    *         609 SECOND
STREET        *
 *                                        *                                    *      DAVIS, CALIFORNIA
95616        *
 *   RUN DATE   21MAY14  TIME  15:58:57   *                                    *        (916) 756-1104
          *
 *                                        *                                    *
          *
*****************************************
*****************************************


                    Project ID: S_24EX - Major Basin: 01 - Return Period: 100 Years
                    RIO VERDE AREA DRAINAGE MASTER PLAN                  FILE NAME: S_24EX.DAT
                    MODEL:      100-year, 24-hour Existing Condition Model
                    DEVELOPER:  Dibble & Associates, Inc.               DATE: Sept. 29, 2003

                    *** Modified South Watershed Model: Subbasin Added: 509A6 ***
                                                                       DATE REVISED: 5/06/05
                    *** Note Changes Per TDN Hydrology Review Comments by FCDMC - July 21, 2006
                    *** Modify Flow Distribution for DIC5E2 to match Floodplain RAS Modeling
                                                                       LAST UPDATE:  8/30/06


  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           1200  NUMBER OF HYDROGRAPH ORDINATES
                NDDATE         2    0  ENDING DATE
                NDTIME           1558  ENDING TIME
                 ICENT             19  CENTURY MARK

           COMPUTATION INTERVAL      .03 HOURS
                TOTAL TIME BASE    39.97 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

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

             **************
             *            *
  128 KK     *    RSA     *
             *            *
             **************

  129 KO       OUTPUT CONTROL VARIABLES
                 IPRNT              5  PRINT CONTROL
                 IPLOT              0  PLOT CONTROL
                 QSCAL             0.  HYDROGRAPH PLOT SCALE
                 IPNCH              0  PUNCH COMPUTED HYDROGRAPH
                  IOUT             22  SAVE HYDROGRAPH ON THIS UNIT
                 ISAV1              1  FIRST ORDINATE PUNCHED OR SAVED
                 ISAV2           1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT           .033  TIME INTERVAL IN HOURS

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

             **************
             *            *
  257 KK     *    RSC     *
             *            *
             **************

  258 KO       OUTPUT CONTROL VARIABLES
                 IPRNT              5  PRINT CONTROL
                 IPLOT              0  PLOT CONTROL
                 QSCAL             0.  HYDROGRAPH PLOT SCALE
                 IPNCH              0  PUNCH COMPUTED HYDROGRAPH
                  IOUT             22  SAVE HYDROGRAPH ON THIS UNIT
                 ISAV1              1  FIRST ORDINATE PUNCHED OR SAVED
                 ISAV2           1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT           .033  TIME INTERVAL IN HOURS

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

             **************
             *            *
  276 KK     *    RSB     *
             *            *
             **************

  277 KO       OUTPUT CONTROL VARIABLES
                 IPRNT              5  PRINT CONTROL
                 IPLOT              0  PLOT CONTROL
                 QSCAL             0.  HYDROGRAPH PLOT SCALE
                 IPNCH              0  PUNCH COMPUTED HYDROGRAPH
                  IOUT             22  SAVE HYDROGRAPH ON THIS UNIT
                 ISAV1              1  FIRST ORDINATE PUNCHED OR SAVED
                 ISAV2           1200  LAST ORDINATE PUNCHED OR SAVED
                TIMINT           .033  TIME INTERVAL IN HOURS
```

*** ***

```
           ***************
           *             *
295 KK     *     RSD     *
           *             *
           ***************

296 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .033  TIME INTERVAL IN HOURS
```

*** ***

```
           ***************
           *             *
318 KK     *     RSG     *
           *             *
           ***************

319 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .033  TIME INTERVAL IN HOURS
```

*** ***

```
           ***************
           *             *
337 KK     *     RSI     *
           *             *
           ***************

338 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .033  TIME INTERVAL IN HOURS
```

*** ***

```
           ***************
           *             *
360 KK     *     RSN     *
           *             *
           ***************

361 KO          OUTPUT CONTROL VARIABLES
                      IPRNT           5  PRINT CONTROL
                      IPLOT           0  PLOT CONTROL
                      QSCAL          0.  HYDROGRAPH PLOT SCALE
                      IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                       IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                      ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                      ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                     TIMINT        .033  TIME INTERVAL IN HOURS
```

*** ***

```
               ***************
               *             *
 379 KK        *    RSS      *
               *             *
               ***************

 380 KO              OUTPUT CONTROL VARIABLES
                       IPRNT           5  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                       ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                       ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                      TIMINT        .033  TIME INTERVAL IN HOURS
```

*** ***

```
               ***************
               *             *
 414 KK        *    RSR      *
               *             *
               ***************

 415 KO              OUTPUT CONTROL VARIABLES
                       IPRNT           5  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                       ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                       ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                      TIMINT        .033  TIME INTERVAL IN HOURS
```

*** ***

```
               ***************
               *             *
 525 KK        *    RSF      *
               *             *
               ***************

 526 KO              OUTPUT CONTROL VARIABLES
                       IPRNT           5  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                       ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                       ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
                      TIMINT        .033  TIME INTERVAL IN HOURS
```

*** ***

```
               ***************
               *             *
 552 KK        *    RSH      *
               *             *
               ***************

 553 KO              OUTPUT CONTROL VARIABLES
                       IPRNT           5  PRINT CONTROL
                       IPLOT           0  PLOT CONTROL
                       QSCAL          0.  HYDROGRAPH PLOT SCALE
                       IPNCH           0  PUNCH COMPUTED HYDROGRAPH
                        IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
                       ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
                       ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
```

```
                TIMINT        .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  579 KK      *    RSK     *
              *            *
              **************

  580 KO            OUTPUT CONTROL VARIABLES
                         IPRNT          5  PRINT CONTROL
                         IPLOT          0  PLOT CONTROL
                         QSCAL         0.  HYDROGRAPH PLOT SCALE
                         IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                          IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                         ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                         ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                        TIMINT       .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  606 KK      *    RSL     *
              *            *
              **************

  607 KO            OUTPUT CONTROL VARIABLES
                         IPRNT          5  PRINT CONTROL
                         IPLOT          0  PLOT CONTROL
                         QSCAL         0.  HYDROGRAPH PLOT SCALE
                         IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                          IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                         ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                         ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                        TIMINT       .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  637 KK      *    RSJ     *
              *            *
              **************

  638 KO            OUTPUT CONTROL VARIABLES
                         IPRNT          5  PRINT CONTROL
                         IPLOT          0  PLOT CONTROL
                         QSCAL         0.  HYDROGRAPH PLOT SCALE
                         IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                          IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                         ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
                         ISAV2       1200  LAST ORDINATE PUNCHED OR SAVED
                        TIMINT       .033  TIME INTERVAL IN HOURS

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

              **************
              *            *
  664 KK      *    RSM     *
              *            *
              **************

  665 KO            OUTPUT CONTROL VARIABLES
                         IPRNT          5  PRINT CONTROL
                         IPLOT          0  PLOT CONTROL
                         QSCAL         0.  HYDROGRAPH PLOT SCALE
                         IPNCH          0  PUNCH COMPUTED HYDROGRAPH
                          IOUT         22  SAVE HYDROGRAPH ON THIS UNIT
                         ISAV1          1  FIRST ORDINATE PUNCHED OR SAVED
```

```
           ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
          TIMINT        .033  TIME INTERVAL IN HOURS


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

              **************
              *            *
 1053 KK      *    RSP     *
              *            *
              **************

 1054 KO         OUTPUT CONTROL VARIABLES
           IPRNT           5  PRINT CONTROL
           IPLOT           0  PLOT CONTROL
           QSCAL          0.  HYDROGRAPH PLOT SCALE
           IPNCH           0  PUNCH COMPUTED HYDROGRAPH
            IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
           ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
           ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
          TIMINT        .033  TIME INTERVAL IN HOURS


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

              **************
              *            *
 1066 KK      *    RSQ     *
              *            *
              **************

 1067 KO         OUTPUT CONTROL VARIABLES
           IPRNT           5  PRINT CONTROL
           IPLOT           0  PLOT CONTROL
           QSCAL          0.  HYDROGRAPH PLOT SCALE
           IPNCH           0  PUNCH COMPUTED HYDROGRAPH
            IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
           ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
           ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
          TIMINT        .033  TIME INTERVAL IN HOURS


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

              **************
              *            *
 1079 KK      *    RSO     *
              *            *
              **************

 1080 KO         OUTPUT CONTROL VARIABLES
           IPRNT           5  PRINT CONTROL
           IPLOT           0  PLOT CONTROL
           QSCAL          0.  HYDROGRAPH PLOT SCALE
           IPNCH           0  PUNCH COMPUTED HYDROGRAPH
            IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
           ISAV1           1  FIRST ORDINATE PUNCHED OR SAVED
           ISAV2        1200  LAST ORDINATE PUNCHED OR SAVED
          TIMINT        .033  TIME INTERVAL IN HOURS


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

              **************
              *            *
 1092 KK      *    RST     *
              *            *
              **************

 1093 KO         OUTPUT CONTROL VARIABLES
           IPRNT           5  PRINT CONTROL
           IPLOT           0  PLOT CONTROL
           QSCAL          0.  HYDROGRAPH PLOT SCALE
           IPNCH           0  PUNCH COMPUTED HYDROGRAPH
            IOUT          22  SAVE HYDROGRAPH ON THIS UNIT
```

ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

1105 KK

****
* *
* RSE *
* *
****

1106 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	22	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

1194 KK

****
* *
* CP11I *
* *
****

1196 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

1198 KK

****
* *
* 510A * BASIN
* *
****

1204 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

1266 KK

****
* *
* CP09B *
* *
****

1268 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH

IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

```
          **************
          *            *
1394 KK   *     509A6  *        BASIN
          *            *
          **************
```

1400 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

```
          **************
          *            *
1414 KK   *      509D  *        BASIN
          *            *
          **************
```

1420 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

*** ***

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          **************
          *            *
1465 KK   *    CP500B  *
          *            *
          **************
```

1467 KO OUTPUT CONTROL VARIABLES

IPRNT	5	PRINT CONTROL
IPLOT	0	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE
IPNCH	0	PUNCH COMPUTED HYDROGRAPH
IOUT	21	SAVE HYDROGRAPH ON THIS UNIT
ISAV1	1	FIRST ORDINATE PUNCHED OR SAVED
ISAV2	1200	LAST ORDINATE PUNCHED OR SAVED
TIMINT	.033	TIME INTERVAL IN HOURS

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	511A1	456.	12.23	57.	14.	9.	.29		
+	HYDROGRAPH AT	511A2	130.	12.10	11.	3.	2.	.06		

+	ROUTED TO	RTA2A3	97.	12.30	11.	3.	2.	.06
+								2658.03
12.30								
+	HYDROGRAPH AT	511A3	468.	12.23	57.	14.	9.	.29
+	3 COMBINED AT	CP11A	1017.	12.23	126.	31.	19.	.65
+	ROUTED TO	RTA1D	882.	12.53	126.	31.	19.	.65
+								100.65
12.53								
+	HYDROGRAPH AT	511D	173.	12.17	20.	5.	3.	.10
+	2 COMBINED AT	CP11D	967.	12.50	146.	36.	22.	.75
+	HYDROGRAPH AT	A	125.	12.03	9.	3.	2.	.04
+	ROUTED TO	RSA	110.	12.10	9.	3.	2.	.04
+								3.00
12.10								
+	2 COMBINED AT	CP11D	981.	12.50	155.	39.	23.	.79
+	HYDROGRAPH AT	511B4	398.	12.13	45.	12.	7.	.19
+	HYDROGRAPH AT	511B1	738.	12.40	113.	29.	18.	.58
+	HYDROGRAPH AT	511B2	325.	12.30	43.	11.	7.	.22
+	2 COMBINED AT	CP8182	1047.	12.37	157.	40.	24.	.81
+	ROUTED TO	RT12B4	976.	12.53	157.	40.	24.	.81
+								2576.05
12.53								
+	HYDROGRAPH AT	511B3	170.	12.13	17.	4.	3.	.08
+	ROUTED TO	RTB3B4	147.	12.27	17.	4.	3.	.08
+								2561.82
12.27								
+	3 COMBINED AT	CP11B	1233.	12.47	219.	56.	34.	1.08
+	ROUTED TO	RTB4D	1231.	12.50	219.	56.	34.	1.08
+								2532.93
12.50								
+	2 COMBINED AT	CP11DF	2212.	12.50	373.	95.	57.	1.87
+	ROUTED TO	RTDF	2182.	12.60	373.	95.	57.	1.87
+								102.18
12.60								
+	HYDROGRAPH AT	C	16.	12.00	1.	0.	0.	.01
+	ROUTED TO	RSC	14.	12.03	1.	0.	0.	.01
+								1.52
12.03								
+	HYDROGRAPH AT	B	46.	12.00	3.	1.	1.	.02
+	ROUTED TO	RSB	40.	12.03	3.	1.	1.	.02
+								2.75
12.03								
	HYDROGRAPH AT							

+		D	31.	12.00	2.	1.	0.	.01	
	ROUTED TO								
+		RSD	22.	12.07	2.	1.	0.	.01	
+									2.73
12.07									
	3 COMBINED AT								
+		CP-A	74.	12.03	6.	2.	1.	.04	
	HYDROGRAPH AT								
+		G	24.	12.00	2.	0.	0.	.01	
	ROUTED TO								
+		RSG	18.	12.07	2.	0.	0.	.01	
+									2.41
12.07									
	HYDROGRAPH AT								
+		I	143.	12.00	10.	3.	2.	.04	
	ROUTED TO								
+		RSI	130.	12.07	9.	3.	2.	.04	
+									2.98
12.07									
	3 COMBINED AT								
+		CP-B	221.	12.03	16.	5.	3.	.09	
	HYDROGRAPH AT								
+		N	14.	12.00	1.	0.	0.	.00	
	ROUTED TO								
+		RSN	12.	12.03	1.	0.	0.	.00	
+									2.11
12.03									
	HYDROGRAPH AT								
+		S	25.	12.00	2.	1.	0.	.01	
	ROUTED TO								
+		RSS	23.	12.03	2.	0.	0.	.01	
+									2.38
12.03									
	HYDROGRAPH AT								
+		V	60.	12.23	7.	2.	1.	.02	
	4 COMBINED AT								
+		CP-C	300.	12.07	26.	8.	5.	.12	
	HYDROGRAPH AT								
+		R	9.	12.00	1.	0.	0.	.00	
	ROUTED TO								
+		RSR	6.	12.07	1.	0.	0.	.00	
+									2.10
12.07									
	3 COMBINED AT								
+		CP511	2232.	12.57	400.	103.	62.	1.99	
	HYDROGRAPH AT								
+		511C1	465.	12.30	62.	15.	9.	.33	
	DIVERSION TO								
+		DIC1C4	242.	12.30	32.	8.	5.	.33	
	HYDROGRAPH AT								
+		DIC1E2	223.	12.30	30.	7.	4.	.33	
	ROUTED TO								
+		RTC1E2	172.	12.80	30.	7.	4.	.33	
+									2496.65
12.80									
	HYDROGRAPH AT								
+		511E1	436.	12.27	56.	14.	8.	.30	
	ROUTED TO								
+		RTE1E2	375.	12.53	56.	14.	8.	.30	
+									2496.99
12.53									
	HYDROGRAPH AT								
+		511E2	359.	12.30	51.	13.	8.	.26	
	2 COMBINED AT								
+		CPE1E2	674.	12.43	107.	27.	16.	.55	
	HYDROGRAPH AT								

+		F	23.	12.00	2.	0.	0.	.01	
	ROUTED TO								
+		RSF	16.	12.07	2.	0.	0.	.01	
+									2.34
12.07									
	HYDROGRAPH AT								
+		H	17.	12.00	1.	0.	0.	.01	
	ROUTED TO								
+		RSH	12.	12.07	1.	0.	0.	.01	
+									2.16
12.07									
	HYDROGRAPH AT								
+		K	15.	12.00	1.	0.	0.	.00	
	ROUTED TO								
+		RSK	11.	12.07	1.	0.	0.	.00	
+									2.09
12.07									
	HYDROGRAPH AT								
+		L	28.	12.00	2.	1.	0.	.00	
	ROUTED TO								
+		RSL	18.	12.07	2.	0.	0.	.00	
+									2.42
12.07									
	5 COMBINED AT								
+		CP-D	691.	12.43	112.	28.	17.	.58	
	HYDROGRAPH AT								
+		J	4.	12.00	0.	0.	0.	.00	
	ROUTED TO								
+		RSJ	4.	12.00	0.	0.	0.	.00	
+									1.01
12.00									
	HYDROGRAPH AT								
+		M	25.	12.00	2.	0.	0.	.01	
	ROUTED TO								
+		RSM	18.	12.07	2.	0.	0.	.01	
+									2.61
12.07									
	HYDROGRAPH AT								
+		W	67.	12.33	10.	3.	2.	.03	
	HYDROGRAPH AT								
+		X	11.	12.10	1.	0.	0.	.00	
	5 COMBINED AT								
+		CP-E	763.	12.40	125.	32.	19.	.62	
	HYDROGRAPH AT								
+		511C4	54.	12.03	4.	1.	1.	.02	
	HYDROGRAPH AT								
+		DRC1C4	242.	12.30	32.	8.	5.	.00	
	ROUTED TO								
+		RTC1C4	235.	12.37	32.	8.	5.	.00	
+									2599.22
12.37									
	2 COMBINED AT								
+		CP11C4	245.	12.33	36.	9.	5.	.02	
	DIVERSION TO								
+		DIC4C5	167.	12.33	26.	6.	4.	.02	
	HYDROGRAPH AT								
+		DIC4E2	78.	12.33	10.	3.	2.	.02	
	ROUTED TO								
+		RTC4E2	58.	12.80	10.	3.	2.	.02	
+									2496.31
12.80									
	3 COMBINED AT								
+		CP11E2	859.	12.47	165.	42.	25.	.97	
	HYDROGRAPH AT								
+		511C5	231.	12.13	24.	6.	4.	.11	
	HYDROGRAPH AT								

+		DRC4C5	167.	12.33	26.	6.	4.	.00	
	ROUTED TO								
+		RTC4C5	160.	12.47	26.	6.	4.	.00	
+									2526.77
12.47									
	HYDROGRAPH AT								
+		511C3	259.	12.17	27.	7.	4.	.14	
	ROUTED TO								
+		RTC3C5	239.	12.30	27.	7.	4.	.14	
+									2527.04
12.30									
	HYDROGRAPH AT								
+		511C2	521.	12.33	73.	18.	11.	.39	
	DIVERSION TO								
+		DIC2A2	207.	12.33	27.	7.	4.	.39	
	HYDROGRAPH AT								
+		DIC2C5	315.	12.33	46.	11.	7.	.39	
	ROUTED TO								
+		RTC2C5	291.	12.50	46.	11.	7.	.39	
+									2552.67
12.50									
	4 COMBINED AT								
+		CP11C5	757.	12.37	123.	31.	18.	.64	
	DIVERSION TO								
+		DIC5C6	440.	12.37	80.	20.	12.	.64	
	HYDROGRAPH AT								
+		DIC5E2	333.	12.37	43.	11.	6.	.64	
	ROUTED TO								
+		RTC5E2	314.	12.50	43.	11.	6.	.64	
+									2496.89
12.50									
	HYDROGRAPH AT								
+		511C6	80.	12.10	8.	2.	1.	.04	
	HYDROGRAPH AT								
+		DRC5C6	440.	12.63	80.	20.	12.	.00	
	ROUTED TO								
+		RTC5C6	404.	12.73	80.	20.	12.	.00	
+									2489.67
12.73									
	2 COMBINED AT								
+		CP11C6	416.	12.70	87.	22.	13.	.04	
	3 COMBINED AT								
+		CP11EF	1572.	12.53	296.	75.	45.	1.65	
	2 COMBINED AT								
+		CPEF	3794.	12.57	696.	178.	107.	3.64	
	ROUTED TO								
+		RTEFC8	3775.	12.60	696.	178.	107.	3.64	
+									2450.31
12.60									
	HYDROGRAPH AT								
+		511C8	104.	12.07	8.	2.	1.	.04	
	2 COMBINED AT								
+		CP11C8	3780.	12.60	704.	180.	108.	3.68	
	ROUTED TO								
+		RTC8C7	3775.	12.60	704.	180.	108.	3.68	
+									2358.20
12.60									
	HYDROGRAPH AT								
+		511C7	216.	12.17	26.	7.	4.	.12	
	2 COMBINED AT								
+		CP11C7	3863.	12.60	729.	187.	112.	3.80	
	ROUTED TO								
+		RTC7H	3738.	12.77	712.	178.	107.	3.80	
+									2358.01
12.77									
	HYDROGRAPH AT								

POST Q 100YR 24HR @ CPEF

+		511H	407.	12.27	50.	13.	8.	.30	
+	2 COMBINED AT	CP11H	3883.	12.77	762.	191.	114.	4.11	
+	ROUTED TO	RTHG4	3877.	12.77	762.	191.	114.	4.11	
+									2330.92
12.77									
+	HYDROGRAPH AT	511G1	602.	12.13	63.	17.	10.	.31	
+	ROUTED TO	RTG1G2	504.	12.37	63.	17.	10.	.31	
+									2467.19
12.37									
+	HYDROGRAPH AT	511G2	157.	12.17	16.	4.	2.	.11	
+	HYDROGRAPH AT	P	44.	12.00	3.	1.	1.	.01	
+	ROUTED TO	RSP	34.	12.07	3.	1.	0.	.01	
+									2.88
12.07									
+	HYDROGRAPH AT	Q	52.	12.00	4.	1.	1.	.02	
+	ROUTED TO	RSQ	48.	12.03	4.	1.	1.	.02	
+									2.78
12.03									
+	HYDROGRAPH AT	O	36.	12.00	3.	1.	0.	.01	
+	ROUTED TO	RSO	33.	12.03	3.	1.	0.	.01	
+									2.85
12.03									
+	HYDROGRAPH AT	T	8.	12.00	1.	0.	0.	.00	
+	ROUTED TO	RST	7.	12.03	1.	0.	0.	.00	
+									1.41
12.03									
+	HYDROGRAPH AT	E	75.	12.00	5.	2.	1.	.02	
+	ROUTED TO	RSE	70.	12.03	5.	1.	1.	.02	
+									2.82
12.03									
+	5 COMBINED AT	CP11G	192.	12.03	13.	4.	2.	.07	
+	HYDROGRAPH AT	Y	11.	12.03	1.	0.	0.	.00	
+	4 COMBINED AT	CP11G2	667.	12.30	95.	25.	15.	.49	
+	ROUTED TO	RTG2G4	643.	12.43	95.	25.	15.	.49	
+									2356.55
12.43									
+	HYDROGRAPH AT	511G3	167.	12.17	17.	4.	3.	.10	
+	ROUTED TO	RTG3G4	148.	12.40	17.	4.	3.	.10	
+									2376.18
12.40									
+	HYDROGRAPH AT	511G4	423.	12.27	52.	13.	8.	.30	
+	3 COMBINED AT	CPG_G4	1156.	12.37	164.	42.	25.	.88	
+	2 COMBINED AT	CP11G4	4508.	12.73	926.	233.	140.	4.99	

POST Q 100YR 24HR @ CP11G2

+	ROUTED TO	RTG4I	4477.	12.80	926.	233.	140.	4.99
+ 12.80								2357.73
+	HYDROGRAPH AT	511I	310.	12.17	33.	8.	5.	.20
+	2 COMBINED AT	CP11I	4534.	12.80	958.	241.	145.	5.19
+	HYDROGRAPH AT	510A	1036.	12.53	181.	48.	29.	.92
+	HYDROGRAPH AT	509A5	54.	12.03	4.	1.	1.	.02
+	DIVERSION TO	DIA5S	1.	12.03	0.	0.	0.	.02
+	HYDROGRAPH AT	DIA59B	53.	12.03	4.	1.	1.	.02
+	ROUTED TO	RTA59B	17.	13.40	4.	1.	1.	.02
+ 13.40								2180.27
+	HYDROGRAPH AT	509B	604.	12.63	98.	25.	15.	.65
+	2 COMBINED AT	CP09B	605.	12.63	102.	26.	15.	.67
+	HYDROGRAPH AT	509A1	315.	12.23	41.	11.	6.	.19
+	ROUTED TO	RTA1A2	298.	12.33	41.	11.	6.	.19
+ 12.33								2463.97
+	HYDROGRAPH AT	509A2	230.	12.20	29.	8.	5.	.13
+	HYDROGRAPH AT	DRC2A2	207.	12.33	27.	7.	4.	.00
+	ROUTED TO	RTC2A2	180.	12.60	27.	7.	4.	.00
+ 12.60								2499.24
+	3 COMBINED AT	CP09A2	583.	12.33	97.	25.	15.	.32
+	ROUTED TO	RTA2A4	552.	12.50	97.	25.	15.	.32
+ 12.50								2417.72
+	HYDROGRAPH AT	509A3	306.	12.17	34.	9.	5.	.16
+	ROUTED TO	RTA3A4	298.	12.20	34.	9.	5.	.16
+ 12.20								2403.72
+	HYDROGRAPH AT	509A4	156.	12.07	13.	3.	2.	.06
+	3 COMBINED AT	CP09A4	804.	12.33	145.	37.	22.	.55
+	ROUTED TO	RTA4A6	787.	12.43	145.	37.	22.	.55
+ 12.43								2381.23
+	HYDROGRAPH AT	DRA5A6	1.	12.03	0.	0.	0.	.00
+	ROUTED TO	RTA5A6	1.	12.27	0.	0.	0.	.00
+ 12.27								2378.03
+	HYDROGRAPH AT	509A6	87.	12.03	7.	2.	1.	.03

+	3 COMBINED AT	CP09A6	804.	12.43	152.	39.	23.	.58
+	HYDROGRAPH AT	509D	472.	12.40	73.	19.	11.	.38
+	HYDROGRAPH AT	500A	346.	12.17	38.	9.	6.	.20
+	*ROUTED TO*	RTAB	320.	12.37	38.	9.	6.	.20
+ 12.37								2157.30
+	HYDROGRAPH AT	500B	278.	12.27	38.	10.	6.	.19
+	2 COMBINED AT	CP500B	592.	12.33	76.	20.	12.	.40

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

APPENDIX C

V DITCH DESIGN CALCULATION

Appendix C - Equestrian Center at Reata Ranch

Worksheet for Triangular Channel

Project Description	
Worksheet	V Ditch 1
Flow Element	Triangular Channel
Method	Manning's Formula
Solve For	Channel Depth

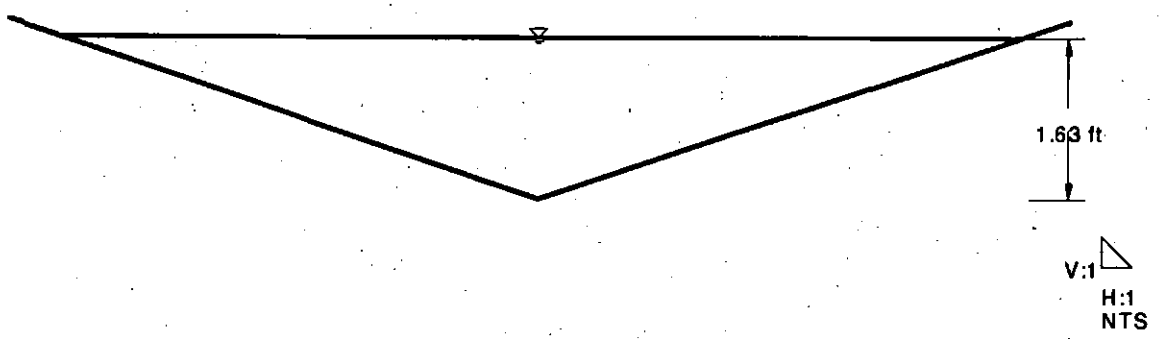
Input Data		
Mannings Coefficient	0.030	
Slope	0.014500	ft/ft
Left Side Slope	3.00	H : V
Right Side Slope	3.00	H : V
Discharge	40.00	cfs

Results		
Depth	1.63	ft
Flow Area	8.0	ft²
Wetted Perimeter	10.30	ft
Top Width	9.78	ft
Critical Depth	1.62	ft
Critical Slope	0.015102	ft/ft
Velocity	5.02	ft/s
Velocity Head	0.39	ft
Specific Energy	2.02	ft
Froude Number	0.98	
Flow Type	Subcritical	

Cross Section - V Ditch 1
Cross Section for Triangular Channel

Project Description	
Worksheet	V Ditch 1
Flow Element	Triangular Channel
Method	Manning's Formula
Solve For	Channel Depth

Section Data		
Mannings Coefficient	0.030	
Slope	0.014500	ft/ft
Depth	1.63	ft
Left Side Slope	3.00	H : V
Right Side Slope	3.00	H : V
Discharge	40.00	cfs



APPENDIX D

SCOUR DEPTH ANALYSIS

APPENDIX D - SCOUR ANALYSIS - EQUESTRIAN CENTER AT REATA RANCH

						Neill's Equation					Lacey's Equation				Blench's Equation					
River	Reach	River Sta.	100-Year Peak Discharge ($ft.^3/sec.$)	Top Width (ft.)	Unit Water Discharge ($ft.^3/sec./ft.$)	Velocity ($ft.^2/sec.$)	Average Depth (ft.)	Bank Full Discharge (ft.)	Multiplying Factor	Neill's Equation Scour Depth (ft.)	Mean Grain Size (mm)	Lacey's Silt Factor	Multiplying Factor	Lacey's Equation Scour Depth (ft.)	Blench's Zero Bed Factor (ft./sec.)	Multiplying Factor	Blench's Equation Scour Depth (ft.)	Maximum Scour Depth (ft.)	Minimum Toe Length Req. (ft.)	Toe Length Provided (ft.)
RV Wash A	R1	CS-20	721	128.83	6	5.4	1.0	721	0.5	0.5	0.6	1.36	0.5	2.3	2.2	0.6	2.5	2	3.0	6.0
RV Wash A	R1	CS-19	721	111.5	6	4.28	1.5	721	0.5	0.8	0.6	1.36	0.5	2.3	2.2	0.6	2.7	3	4.5	6.0
RV Wash A	R1	CS-18	721	147.27	5	5.47	0.9	721	0.5	0.4	0.6	1.36	0.5	2.3	2.2	0.6	2.2	2	3.0	6.0
RV Wash A	R1	CS-17	721	137.63	5	3.92	1.3	721	0.5	0.7	0.6	1.36	0.5	2.3	2.2	0.6	2.4	2	3.0	6.0
RV Wash A	R1	CS-16	721	88.89	8	3.34	2.4	721	0.5	1.2	0.6	1.36	0.5	2.3	2.2	0.6	3.2	3	4.5	6.0
RV Wash A	R1	CS-15	721	77.64	9	6.71	1.4	721	0.5	0.7	0.6	1.36	0.5	2.3	2.2	0.6	3.4	3	4.5	6.0
RV Wash A	R1	CS-14	721	112.51	6	3.61	1.8	721	0.5	0.9	0.6	1.36	0.5	2.3	2.2	0.6	2.7	3	4.5	6.0
RV Wash A	R1	CS-13	721	102.27	7	4.06	1.7	721	0.5	0.9	0.6	1.36	0.5	2.3	2.2	0.6	2.9	3	4.5	6.0
RV Wash A	R1	CS-12	721	63.14	11	5.95	1.9	721	0.5	1	0.6	1.36	0.5	2.3	2.2	0.6	4.0	4	6.0	6.0
RV Wash A	R1	CS-11	721	95.72	8	6.19	1.2	721	0.5	0.6	0.6	1.36	0.5	2.3	2.2	0.6	3.0	3	4.5	6.0
RV Wash A	R1	CS-10.8	721	188.46	4	4.06	0.9	721	0.5	0.5	0.6	1.36	0.5	2.3	2.2	0.6	1.9	2	3.0	6.0
RV Wash A	R1	CS-10.2	721	162.96	4	7.28	0.6	721	0.5	0.3	0.6	1.36	0.5	2.3	2.2	0.6	2.1	2	3.0	6.0
RV Wash A	R1	CS-10	721	180.22	4	6.67	0.6	721	0.5	0.3	0.6	1.36	0.5	2.3	2.2	0.6	2.0	2	3.0	6.0
RV Wash A	R1	CS-9	721	112.7	6	4.73	1.4	721	0.5	0.7	0.6	1.36	0.5	2.3	2.2	0.6	2.7	3	4.5	6.0
RV Wash A	R1	CS-8	721	107.77	7	4.78	1.4	721	0.5	0.7	0.6	1.36	0.5	2.3	2.2	0.6	2.8	3	4.5	6.0
RV Wash A	R1	CS-7	721	100.48	7	4.56	1.6	721	0.5	0.8	0.6	1.36	0.5	2.3	2.2	0.6	2.9	3	4.5	6.0
RV Wash A	R1	CS-6	721	74.78	10	5.01	1.9	721	0.5	1	0.6	1.36	0.5	2.3	2.2	0.6	3.5	4	6.0	6.0
RV Wash A	R1	CS-5	721	65.44	11	6.11	1.8	721	0.5	0.9	0.6	1.36	0.5	2.3	2.2	0.6	3.9	4	6.0	6.0
RV Wash A	R1	CS-4	721	108.36	7	5.79	1.1	721	0.5	0.6	0.6	1.36	0.5	2.3	2.2	0.6	2.8	3	4.5	6.0
RV Wash A	R1	CS-3	721	132.55	5	5.43	1.0	721	0.5	0.5	0.6	1.36	0.5	2.3	2.2	0.6	2.4	2	3.0	6.0
RV Wash A	R1	CS-2	721	166.19	4	4.78	0.9	721	0.5	0.5	0.6	1.36	0.5	2.3	2.2	0.6	2.1	2	3.0	6.0
RV Wash A	R1	CS-1	667	252.2	3	4.08	0.6	667	0.5	0.3	0.6	1.36	0.5	2.3	2.2	0.6	1.5	2	3.0	6.0
RV Wash A	R1	CS-0.5	667	198.95	3	4.5	0.7	667	0.5	0.4	0.6	1.36	0.5	2.3	2.2	0.6	1.7	2	3.0	6.0

Notes:
See Inundation Limits - Keymap for cross section location
See Appendix A (HEC RAS Model) for channel velocity
Assume mean grain size to be 0.6 mm

Regime Equation (Pemberton and Lara, 1984)

Condition	Value of Z		
	Neill $d_s = Z\ d_f$	Lacey $d_s = Z\ d_m$	Blench $d_s = Z\ d_{fo}$
Equation Types A and B			
Straight reach	0.5	0.25	1/ 0.6
Moderate bend	0.6	0.5	
Severe bend	0.7	0.75	
Right angle bends		1.0	1.25
Vertical rock bank or wall		1.25	