(T.D.N. SECTION 4.0)

(Volume 2 of 4)
HYDROLOGY REPORT

FOR

PADELFORD WASH FLOODPLAIN

DELINEATION STUDY

FCD NO. 99-12

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INTRODUCTION

A-N West was contracted by the Flood Control District of Maricopa County (FCDMC) to obtain detailed mapping, prepare hydrology and perform the hydraulic analysis for the 100-year storm floodplain delineation of Padelford Wash between State Route 74 and Central Arizona Canal.

The data in support of this study has been compiled in four volumes of the Technical Data Notebook (T.D.N.) as summarized below.

T.D.N. Volume 1 of 4 Base Technical Data Notebook with correspondence, Scope of Work, Survey Notes Draft F.I.S. Report.

T.D.N. Volume 2 of 4 – Hydrology Report – Including watershed Maps, Hard and Digital Input Report – Including Hard and Digital Input/Output and Draft 200 scale work maps.

T.D.N. Volume 3 of 4 – Hydraulic Analysis Results Report – Including HEC-RAS Model and Digital input/output and Draft 200 Scale Work Maps.

T.D.N. Volume 4 of 4 – Field Reconnaissance with Photos of the structures and (N) Value Estimations, As-Built Plans etc. and Hydraulic Parameter Estimation Summary.

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1.0 INTRODUCTION

The purpose of this report is to present the results of an existing condition hydrologic analysis of the 100-year storm runoff contributing to the Padelford Wash watershed at the S.R. 74 highway and CAP Canal. The resulting peak discharges will be used for a subsequent floodplain delineation analysis of Padelford Wash between S.R. 74 and the CAP Canal.

2.0 STUDY AREA

The general location of the study area is shown on Figure 1. The limits of detailed mapping for the floodplain delineation study are shown on Plate 1. The Watershed and Soils Maps are shown on Exhibits 1 and 2.

The majority of the watershed is currently undeveloped natural desert. The only development involves twenty residential homes and lots exist (1± Ac.) southwest of 163rd Avenue and Dove Valley Road.

The general watershed slopes north to south from a high elevation of 2,900 to a low elevation of 1,540 over a distance of approximately 9.5 miles, resulting in a 2.7 percent average slope (143 ft. / mile).

The State Route 74 (S.R. 74) highway crosses the watershed in an east-west direction. This highway was built in 1971. There are approximately 20 culvert structures of 36-inch dia. or larger ranging up in size to a (4) barrel 10' x 10' reinforced concrete box (RCB) structure.

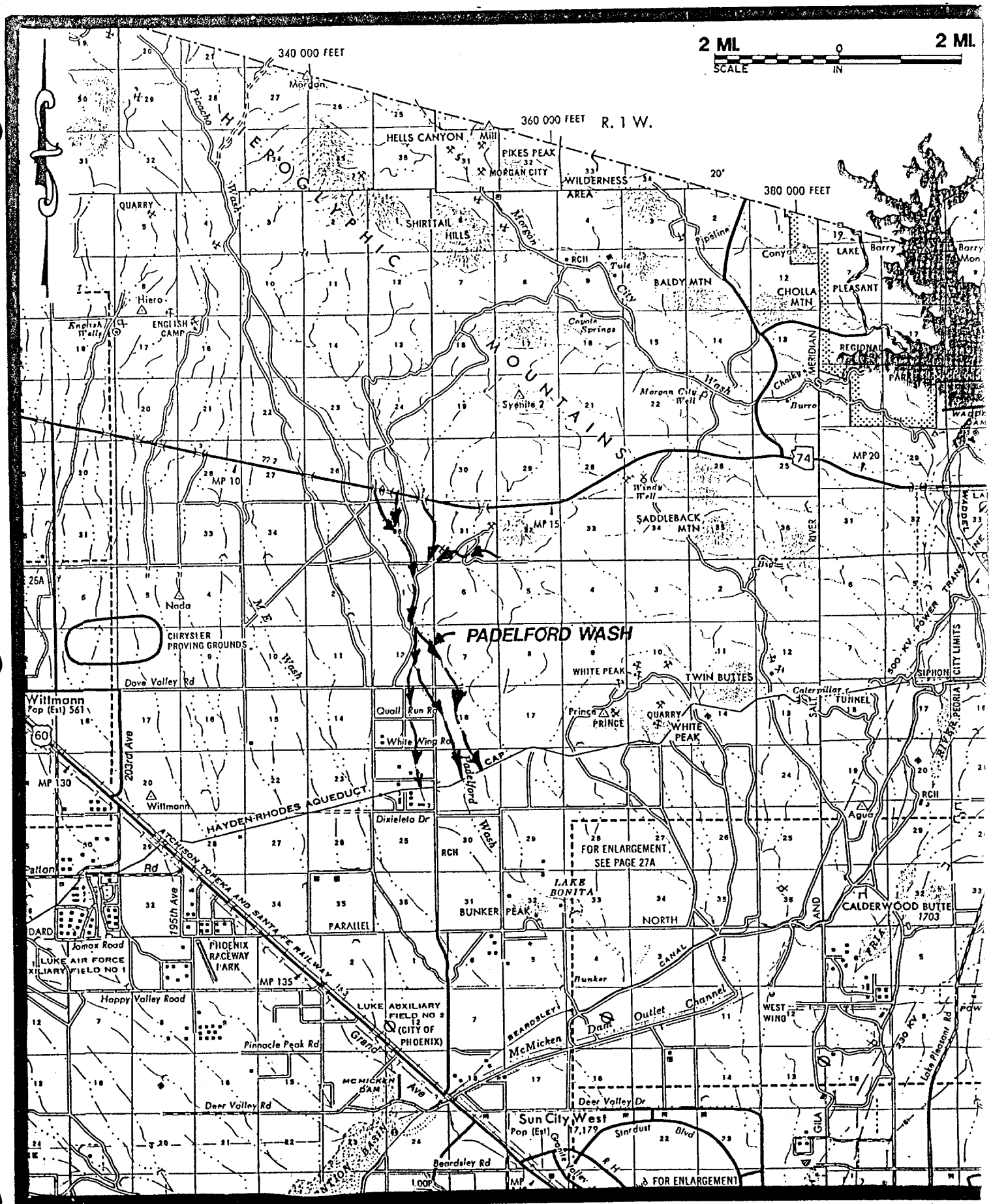
The Central Arizona Canal (CAP) has 6 sets of overchute structures that convey flow across the Canal as summarized below. These pipes are a smooth flow cement lined steel pipe with headwalls (no trash racks).

TABLE 1
CAP OVERCHUTE SUMMARY

Exhibit 1 I.D. No.	CAP Sta.	Size	CAP Design 100yr – 6 hour Outflow (cfs)
1	240+00	1 - 72" Dia.	435
2	253+00	1 - 72" Dia.	435
3	272+35	3 - 72" Dia.	1,305
4	279+00	1 - 72" Dia.	435
5	298+70	1 - 72" Dia.	435
6	315+00	3 - 72" Dia.	1,305

3.0 PREVIOUS STUDIES

The Wittman Area Drainage Master Study (Reference 6) in 1989 analyzed 100-year peak runoff to the CAP Canal at Padelford Wash. It also identified approximate 100-year ponding limits upstream of the CAP and approximate floodplains for the washes downstream of the CAP which were incorporated into FEMA FIRM mapping (Reference 7).



EXPLANATION

STUDY WASH

PADELFORD WASH FLOODPLAIN DELINEATION STUDY
FCD NO.99-12

LOCATION MAP

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FIGURE 1

The Wittman ADMS computed peak discharges for the 2, 5, 10, 50 and 100 year – 24 hour duration storm events. The HEC-1 computer model was used for this analysis.

The Wittman ADMS identified a total drainage area of 23.06 square miles at the CAP Canal between 163rd Avenue and the berm approximately 1.5 miles east of 163rd Avenue.

The Wittman ADMS report computed a combined total peak 100-year – 24-hour storm inflow to the (5) sets of overchutes east of 163rd Avenue of 5,389 cfs. A peak ponded water elevation of 1,545.90 was computed relative to the Top of CAP Berm El. of 1,554.00. A combined outflow of 2,200 cfs was computed.

The CAP Canal overchute Hydrology Summary (Ref. 5) shows fourteen (14) sets of overchutes receiving a 100-year – 6-hpur discharge of 12,150 cfs with a drainage area of 79.5 square miles. The six (6) sets of overchutes in this study are part of these and located at the east edge of these fourteen (14) sets of structures.

4.0 HYDROLOGY METHODOLOGY

4.1 General

The Flood Control District's Hydrologic Design Manual for Maricopa County, dated September, 1990 with January, 1995 revisions, was used as the basis for the hydrologic analysis (Reference 1). The HEC-1 computer model (Reference 2) was used for computing the peak discharges. The FCDMC Drainage Design Management System for Windows (Reference 8) was used to compute weighted average soil and land use parameters and data input parameters to the HEC-1 program.

The USGS Quadrangle Maps (Reference 3) were used for the base mapping for the analysis (see Exhibit 1). The Project Detail Mapping (Ref. 12) was used to compute storage volumes, estimate routing reach parameters and verify subarea boundaries.

4.2 Design Storm-Rainfall Depth, Distribution and Aerial Reduction

Both a local 100-year – 6-hour storm using FCD manual and a general 100-year – 24-hour duration storm were considered for this study. The Soil Conservation Services (SCS) Type II rainfall distribution was used for the 24-hour duration storm as developed from the FCDMC Hydrologic Design Manual Drainage Design Management System (Reference 8). The 100-year – 6 and 24-hour storm precipitation values computed from the FCDMC Design Manual (Reference 1) were 3.36 and 4.18 inches respectively (see Appendix A). The rainfall distributions were generated by the Drainage Design Management System (Reference 8).

The JD record was used with the 100-year – 6 hour and 24-hour storms to vary the aerial reduction factor to obtain consistent depth/area relationship for smaller drainage areas as well as the total watershed. For this JD record option, the total 100-year – 24-hour precipitation value of 4.18 inches was modeled for a drainage area of 0.001 sq. mile. Using Table 2.1a of the FCDMC manual, precipitation values were reduced to 4.155, 4.055, 3.93, 3.80 and 3.76 inches for evaluation of drainage areas of 1.5, 10, 20, and 30 square miles, respectively.

Likewise, the 100-year 6 hour precipitation values of 3.316, 3.226, 3.158, 3.058 and 2.099 were used for drainage areas of 1, 5, 10, 29 and 30 square miles as obtained from Table 2.2 of the FCDMC manual.

4.3 Drainage Subareas

Forty-six (46) subareas were identified within the study watershed as shown on Exhibit 1. These subbasins were identified using several criteria; a.) Drainage areas to concentration points at significant washes, b.) drainage areas to culvert structures along S.R. 74, c.) drainage areas of roughly equal size.

4.4 Land Use

A digital file of land use was obtained from the FCDMC's Hydrologic or Geographic Information System (HIS / GIS) files to use as a basis for land use in the hydrologic analysis.

As discussed earlier, very little development has occurred in the watershed to date. The only development involves approximately 20 single family residential lots (1± acre) southwest of Dove Valley Road and 163rd Avenue.

No adjustment to the Ia and RTIMP values was considered for land development, since this development did not alter drainage patterns or add significant impervious surfaces to the subareas

4.5 Soils, Vegetative Cover and RTIMP Values

The Green and Ampt Method was used to estimate rainfall losses due to soil infiltration and initial retention or loss (IA).

A digital file of soils classifications was obtained from the FCDMC's HIS files to use as a basis for determining the soil infiltration parameters for each subarea. The soils map I.D. Number correlates to a textural soils classification in the FCDMC manual and the Drainage Design Management System for Windows (DDMS for Windows) Computer Program (Reference 8).

The soil's ID. numbers and classifications are from the Soil Conservation Service (SCS) Soils Survey for the Aguila / Carefree (Reference 9).

The FCDMC Drainage Design Management System for Windows (DDMS for Windows) Computer Program (Reference 8) sub-basin preparation subroutine was used to compute Green and Ampt Loss Parameters. The (Ia), Surface Retention Loss, Vegetative Cover Percent, and RTIMP values were generally derived from the FCDMC manual (Reference 1) Tables 4.1 and 4.2a.

Vegetative cover was assessed in the field at several locations by pulling a 100-foot tape across what was considered representative vegetation. This assessment suggested vegetative cover densities of approximately 50 percent, assuming full crown widths of desert shrubs. After discussion with FCDMC staff, a 35 percent cover density was proposed by A-N

West and concurred with by FCDMC staff as a more reasonable value consistent with other study's values submitted to the FCD.

Soil Moisture was assumed as dry for all subareas, for estimating the Green and Ampt Loss Rate Parameter, DTHETA, soil moisture deficit, based on desert conditions from Table 4.2 of the FCD manual.

Soil Moisture was used to adjust the DTHETA values in the DDMSW program (Reference 8). The vegetative cover percent was used to adjust the XKSAT value in the DDMSW program (Reference 8).

Several Soil Survey Classification Units, Nos. 31, 63, 108 and 109 within the study watershed have a 30, 25, 35 and 35 percent, respectively, rock outcrop associated with them. The default directly connected imperviousness value (RTIMP) in the DDMSW program is this percentage rock outcrop value. Initially, A-N West proposed to FCDMC staff, a reduction of this rock outcrop percentage to 50 percent for use as the RTIMP value in the HEC-1 modeling. This proposed reduction of the rock outcrop percentage and RTIMP values was based on FCDMC manual modeling notes suggesting not all rock outcrop percentage may be directly connected, if separated from the outlet by pervious soils.

This is a somewhat subjective assessment. Based on further discussions FCDMC staff, A-N West has proposed use of 60 percent of the full rock outcrop percentage was modeled as the RTIMP value, or directly connected. Impervious percentage for the hydrologic analysis.

4.6 Unit Hydrograph Method

The S-Graph method of generating unit hydrographs was used for this site, based on input from FCDMC staff.

The Phoenix Mountain S-Graph was used to generate unit hydrograph values from the DDMSW model. A Kn-0.04 value was chosen for use in generating lag times for the S-Graph method.

A computational time ordinate of 2 minutes was used for the 6 and 24-hour duration storm events. The version 4.1 HEC-1 model (Ref. 2) is capable of modeling 2000 time ordinates or a 66.7-hour storm hydrograph with this time ordinate which will adequately model these storms.

4.7 Channel Routing

The normal depth channel routing option of the HEC-1 model was used to route flows along washes. This method includes inputting an eight-point representative channel cross-section using the RX, and RY records of HEC-1. Also, input on the RC record are left overbank, channel and right overbank Manning's "n" values and channel reach length in feet and slope in ft/ft. Also, included in the channel routing parameters is the NSTPS record value, which is the integer number of routing steps to route flow along the reach length. Initially, the NSTPS value was computed by dividing the reach length by an estimated average travel velocity, which in turn, was divided by the 2 minute time ordinate times 60.

After the initial HEC-1 model was run, a second check of the NSTPS value was made by dividing the difference in peak times from start to end of the routing reach by the respective 2 minute time ordinate times 60. The resultant integer value was used to update the earlier estimate of NSTPS and again checked by this time difference method. The following Table 2 summarizes the NSTPS values for each channel routing reach. The initial NSTPS calculations and input parameters are contained in Appendix F (Ref.11).

TABLE 2

NSTPS VALUES FOR NORMAL DEPTH CHANNEL ROUTING

	HEC-1 ROUTING ID. NO.	REACH LENGTH (FT.)	EST. TRAVEL VEL. (FPS)	EST. NSTPS VALUE	100-YR – 24-HR CHECK NSTPS VALUE
1	R171	1750	5.8	3	2
2	R161	7950	8.3	8	8
3	R175	3200	4.2	6	4
4	R153	5200	7.8	6	5
5	R145	4910	5.8	7	5
6	R149	2300	7.8	3	2
7	R55	3800	9.5	3	2
8	R59	4500	8.7	4	2
9	R49	6200	8.3	6	4
10	R123	1400	8.3	1	1
11	R121	700	8.1	1	1
12	R129	5600	7.9	6	4
13	R137	1920	7.1	2	2
14	R11	4600	8.6	5	4
15	R19	6200	9.3	6	3
16	R27	11,200	9.3	10	6
17	R113	3300	8.6	3	2
18	R111	3100	5.6	5	5
19	R117	1000	8.6	1	1
20	R107	1700	8.5	2	2
21	R103	2560	3.6	6	3
22	R109	3200	8.5	3	3
23	R118	5400	7.2	6	3
24	R101	8460	5.3	13	12
25	R101A	4300	5.3	7	7
26	R193	2500	5.4	4	2
27	R197	4700	5.4	7	5
28	R316	4520	5.4	7	6
29	R211	6480	4.8	11	11
30	R231	4800	7.0	6	8
31	R237	3760	4.8	7	3
32	R203	5,600	5.2	9	10
33	R205	5600	5.2	9	11
33	R318	11,200	4.8	19	15
36	R301	8920	5.4	14	11
37	R323	3800	5.3	6	6
35	R321	3400	4.7	6	4
38	R251	5475	7.0	7	5

Channel Transmission Losses

A-N West made a site visit to review potential channel transmission or infiltration losses. The main wash was traversed continuously by vehicle from the 163rd Avenue / Dove Valley Road intersection to approx. the north edge of Section 23, T 6N, R 2W.

Four tests of the streambed material porosity were made along this (5) mile distance. Using a (4) gallon bucket, the bucket was filled level with streambed material. A measured quantity of water was then added to fill the bucket to the rim. At each of the (4) tests, approximately 1.1 gallons of water was added. This would indicate approximately 28% porosity streambed material.

Over this (5) mile traveled main wash reach, bedrock outcroppings were observed south of S.R. 74 and in scattered locations upstream of S.R. 74 as well as quite continuously upstream of the north end of Section 23.

Evidence cf caliche, or a natural cemented soil was also observed on some stream banks, notably at approx. ½, 2 and 2 ½ miles upstream of Dove Valley Road.

These rock and caliche formations minimize the potential for transmissions losses in the flood hydrograph routing as the permeable bed material is obviously reduced in these areas.

The area with the most potential for transmission losses was approximately a 2-mile reach north of Dove Valley Road. Using this 2 mile reach and an average width of sand, gravel channel of 80-feet width and depth of 2-foot with the 28% porosity rate yields the following potential transmission loss volume: 2 x 5,280 ft. x 80 ft. x 2 ft. x 0.28 = 473,088 cubic feet or 10.9 ac. ft.

The 100-year – 24-hour storm volume in the main Padelford Wash, approximately ½ mile north of Dove Valley Road is estimated as 1,500 acre-feet. The estimated transmission loss of 10.9 ac-ft would be less than 1 percent of this storm volume. It is not anticipated that transmission losses will be a significant impact to peak flows and was therefore not modeled.

4.8 Detention Basin Routing

CAP Canal

The reservoir routing option of HEC-1 model was used to route flows through the detention area upstream of the CAP Canal. This method involved inputting the storage and discharge versus elevation parameters for basins on SV, SQ and SE records. Basin storage capacity (in Acre-Feet) was entered on SV records, Basin discharges (in CFS) on SQ records and Elevation (feet) data on SE records. The storage routing calculations for the CAP Canal are included in Appendix B (Ref. 11). The storage routing was computed for two areas; East of the 163rd Ave as HEC-1 I.D. DR 500 and west of the CAP Canal as HEC-1 I.D. DR 400.

The majority of split flows, "Split 1", "Split 2", "Split 5" and main Padelford Wash were initially considered to contribute to the CAP Canal east of 163rd Ave. and the split flows "Split 3" and Split 4" were considered to contribute to the CAP Canal west of 163rd Avenue.

As discussed in the split flow section, the split flows were analyzed in some detail to attempt to define the amount of flow contributing to each reservoir routing area along the CAP Canal.

S.R. 74

The following Table 3 provides a summary of culverts along S.R. 74 that reservoir routing by HEC-1 model was performed. Appendix #E (Ref. 11) contains the HEC-1 discharge and volume calculations for input to the model.

Table 3 includes the 100-year – 24- hour storm inflow and outflow discharges and ponded water surface elevation (WSEL) as well as the water surface elevation coinciding with breakout of flow along or over S.R. 74. As shown by Table 3, the S.R. 74 culverts adequately pass these 100-year flows. The attenuation of flows is minimal as a result of the large culvert capacity and relatively little upstream storage.

TABLE 3

SUMMARY OF S.R. 74 CULVERTS OVER 42" ± DIA. MODELED FOR DETENTION

EXH. I.D.	ADOT STA.	HEC-1 INFLOW I.D.	PIPE SIZE	100-YR 24-HR INFLOW (CFS)	100-YR 24-HR OUTFLOW (CFS)	PONDED WSEL	ELEV. AT BREAK-OUT
A	620+35	SB 36	6'x7' RCB	142	139	1904.11	1908
B	640+20	SB 38	6'x5' RCB	149	145	1878.61	1886
C	642+63	SB 34	3-10'x8' RCB's	793	792	1877.63	1880
D	654+29	CO 31	4-10'x10' RCB's	3037	3001	1867.13	1871
E	662+70	SB 32	6'x5' RCB	80	80	1859.36	1869
F	681+47	CO 63	3-10,x10' RCB's	1964	1926	1845.62	1848
G	683+63	CO 61	2-12'x10' RCB's	2462	2376	1847.19	1848
H	691+30	SB 64	10'x6' RCB	526	519	1837.61	1846
I	692+55	SB 64	6'x5' RCB	526	519	1837.61	1846
J	709+40	SB 68	2-8'x6' RCB's	661	655	1838.93	1841
K	713+70	SB 70	42" RCP	154	123	1837.10	1841
L	717+26	SB 70	54" RCP	154	123	1837.10	1841
M	720+55	SB 72	8'x5' RCB	191	185	1843.34	1850
N	734+07	SB 76	2-10'x8' RCB's	1005	1006	1857.88	1870
O	782+95	SB 92	60" RCP	153	135	1940.79	1950

Notes: 1) Culverts I.D. H and I combined Routing
2) Culverts I.D. K and L combined Routing

4.9 Split Flows

The main Padelford Wash was noted to have several flow splits, initiating approximately 3400-ft. mile north of the Dove Valley Road alignment.

In addition to the main Padleford Wash identified as "Main 1", "Main 2" and "Main 3" at each HEC-1 model flow split, the three (3) flow splits north of Dove Valley Road were identified as "Split 1", "Split 2" and "Split 3".

Another flow split identified as "Split 4" and "Splt 3" occurs at the "Split 3" intersection with White Wing Road.

Another flow split identified as "Splt 1" and "MN 1" occurs on the "split 1" wash, between the Dove Valley Road and Quail Run Road alignment, wherein Weir breakout over a ridge leaves "split 1" wash and returns to main Padelford Wash.

Another flow split identified as "split 1" and "split 5" occurs on "split 1" wash near the Quail Run Road alignment, wherein flow splits from "split 1" wash into "split 5" wash.

These flow splits were modeled in the HEC-1 model as follows;

These six flow splits are shown on Exhibit 1.

These five splits "Split 3" vs.. "Main 3", "Split 3" vs. "Split 4", "Split 2" vs. "Main 2", "Split 1" vs. Main 1", and "Split 1" vs. "Split 5", involve washes in the field wherein the sand bed bottoms split off in two directions with flare angles of 30° or less and the wash inverts are approximately equal.

For these flow splits the detailed mapping was used with digitally coded cross-sections input to the HEC-RAS hydraulic model to create rating curves of discharge versus energy grade elevations a cross-sections chosen as representatives of the flow split. These cross-sections are part of the later HEC-RAS floodplain hydraulic model. The discharge relationship from this rating curve was input to the HEC-1 model to determine the flow split later used in the detailed HEC-RAS floodplain model.

The Appendix B contains the Split Flow Summary and excerpts from the HEC-RAS model involving the summary table and a rating curve plot of energy grade versus discharge.

This sixth split flow; "Splt 1" vs "MN 1", involved what was considered more of a side weir overflow of a ridge along "split 1" wash near Section 11.523, wherein the overflow exited "split 1" wash and entered the "main Padelford Wash". For this analysis the HEC-RAS model of Section 11.523 was used to generate a rating curve of water surface elevation versus discharge, which was identified as "Splt 1". The weir overflow, which was identified as "MN 1" was estimated by review of the topographic mapping and water surface profile along "split 1" wash, by estimating an 800 ft long weir at invert 1624.4, or 3.8 ft above the Section 11.523 invert. The 800 ft wide weir flow discharge was estimated to be based on a shallow overland normal depth flow with a Manning's N value of 0.055 and a longitudinal slope of 0.02 ft/ft.

The discharge relationship summary at matching water surface elevations is shown in Appendix B, and was input to the hydrology HEC-1 model to determine the discharge used in the HEC-RAS floodplain analysis.

SPLIT FLOW AT CAP

Exhibit 1 shows several flow splits along the CAP Canal.

DV 400 AND DV501

The ponding along the upstream side of the CAP Canal was modeled as two separate ponding areas in the HEC-1 model. The area west of the 163rd Avenue was estimated to receive flow from the upstream "split 3" and "split 4" washes.

It was conservatively assumed that no water would split to the west. This was because an entirely different watershed also contributed to ponding in this area and it was not easily estimated what influence the other watershed would have on the amount of flow which could flow west.

Flow to the east across 163rd Avenue was estimated. This was shown in the Reconnaissance Report (Ref. 11), Appendix B, p. B-27 as part of the discharge versus volume reservoir routing data at HEC-1 I.D. CO400 and DR400. A normal depth rating curve analysis was made on pages B-28 – B-32. The ponded water surface in the reservoir was used to estimate weir flow east across 163rd Avenue to this ponded area.

The flow to each of the six CAP overchute structures shown on Exhibit 1 was further modeled in the HEC-1 data. The data for spliting flow to each structure is also in the Reconnaissance Report, Appendix B.

TABLE 4

SUMMARY OF PEAK DISCHARGES

HEC-1 I.D.	DRAINAGE AREA (sq. mi.)	DESCRIPTION	* 100 – YEAR *			
			* 6 HOUR		24 HOUR *	
			DISCHARGE (cfs)	(csm)	DISCHARGE (cfs)	(csm)
CO169	1.46	Upstream End Padelford Wash	1090	474	1624	1112
CO173	2.10	0.5 mi. from u/s end Padelford	1595	763	2347	1118
CO155	3.92	0.9 mi. from u/s end Padelford	2815	725	3972	1013
CO147	5.09	Padelford U/S of Trib. 'C'	3646	722	5263	1034
DR63	2.68	Trib. 'C' at S.R. 74	1649	615	2135	796
CO127	5.28	Trib. 'C' 0.27 mi. d/s of S.R. 74	3322	628	4637	878
CO132	5.63	Trib. 'C', u/s of Padelford w.	3485	620	4733	841
CO133	10.72	Padelford Wash at Trib. 'C'	6708	629	9063	845
CO31	4.69	Trib 'B' at S.R. 74 u/s	3268	699	4624	986
DR31	4.77	Trib. 'B' D/S of S.R. 74	3247	682	4522	948
CO115	4.77	Trib. 'B' U/S Trib. 'A" Confluence	3281	692	4517	947
S34	1.13	Trib. 'A' at S.R. 74	970	858	1181	1045
CO105	1.23	Trib. 'A' 0.3 MI. D/S S.R.74	1037	846	1215	988
CO119	6.35	Confluence Trib. 'A' and 'B;	4422	700	5722	901
CO124	6.84	Trib. 'A; u/s of Padelford W.	4589	676	5759	842
CO125	17.56	Padelford Wash at Trib. 'A;	10486	601	13396	763
CO191	18.15	Padelford Wash	10911	605	13824	762
CO195	18.67	Padelford Wash	10954	592	13776	738
CO199	19.09	Padelford Wash at Split 3, 2100 FT u/s Dove Valley Rd.	10911	577	13671	716
MAIN 3	N/A (1)	Main Padelford, d/s of Split 3	7064	N/A	9012	N/A
SPLIT 3	N/A (1)	Split 3, d/s Main Padelford	3847	N/A	4660	N/A
CO215	N/A	Split 3 at White Wing Road and Spit 4	3780	N/A	4485	N/A
Split 3	N/A/ (1)	Split 3, d/s Spit 4	3205	N/A	3781	N/A
Spit 4	N/A (1)	Split 4, d/s Split 3	575	N/A	704	N/A
CO219	N/A	Split 3 AT CAP	3186	N/A	3738	N/A
CO217	N/A	Split 4 AT CAP	665	N/A	806	N/A
CO400	N/A	Total Flow At Cat, W. of 163rd	3721	N/A	4405	N/A
DR400	N/A	Routed out flow	2614	N/A	2940	N/A
DR400		Peak WSEL At CAP	1556.0	N/A	1556.2	N/A
DV501	N/A (2)	Overflow E. Across 163rd	2145		2468	N/A
DV400	N/A (2)	CAP Overchute #1	468		472	N/A
MAIN 2	N/A (1)	Main Padelford, d/s of Split 2	4828	N/A	5862	N/A
Split 2	N/A (1)	Split 2, d/s Main Padelford	2236	N/A	3149	N/A
CO410	N/A	Split 2 AT CAP	2127	N/A	2904	N/A
MAIN 1	N/A (1)	Main Padelford, d/s of Split 1	1257	N/A	1538	N/A
Split 1	N/A (1)	Split 1, d/s Main Padelford	3571	N/A	4324	N/A
CO208	N/A (1)	Split 1, u/s of Main Split	3524	N/A	4270	N/A

Continued:

Continued:

TABLE 4

SUMMARY OF PEAK DISCHARGES

HEC-1 I.D.	DRAINAGE AREA (sq. mi.)	DESCRIPTION	* 100 – YEAR *			
			* 6 HOUR		24 HOUR *	
			DISCHARGE (cfs)	(csm)	DISCHARGE (cfs)	(csm)
MN 1	N/A (1)	Split to Main Padelford	909	N/A	1416	N/A
Splt 1	N/A (1)	Split 2, d/s of Main Split	2615	N/A	2854	N/A
CO209	N/A (1)	Split 1, u/s split 5	2719	N/A	2952	N/A
Split 5	N/A (1)	Split 5, at Split 1	941	N/A	1048	N/A
Split 1	N/A (1)	Split 1, d/s Split 5	1778	N/A	1904	N/A
CO430	N/A (1)	Split 1 AT CAP	1767	N/A	1891	N/A
CO207	N/A (1)	Main Padelford, d/s Main 1 in flow	2028	N/A	2775	N/A
CO420	N/A (1)	Main Padelford at CAP	1954	N/A	2692	N/A
CO500	N/A (1)	Total Flow at CAP E. of 163rd	6677	N/A	8461	N/A
DV501	N/A (1)	Flow, E. Across 163rd	2145	N/A	2468	N/A
CO501	N/A (1)	Total Flow AT CAP, E. of 163rd	7682	N/A	9584	N/A
DR501	N/A (1)	Routed outflow at CAP	2938	N/A	3170	N/A
DR501		Peak WSEL AT CAP	1548.8	N/A	1550.0	
DV2	N/A (1)	CAP Overchute #2	289	N/A	321	N/A
DV3	N/A (1)	CAP Overchute #3	966	N/A	1047	N/A
DV4	N/A (1)	CAP Overchute #4	335	N/A	357	N/A
DV5	N/A (1)	CAP Overchute #5	335	N/A	357	N/A
DV6	N/A (1)	CAP Overchute #6	1013	N/A	1086	N/A

NOTE: 1.) Split Flows Based on Detailed Hydraulic Analysis.

(2.) NO Flow Split to west assumed, but likely.

4.10 Ponding Elevations Relative to CAP Canal Berm.

As noted in the reconnaissance Report (Ref. 11) Appendix A, p. A-35, A-37, and A-39, the field survey on FIS mapping datum (NGVD 29) tied into two Brass Caps and six overchute inverts from the original CAP Design/As-Built Plans. Per this study's survey results, the equation to transfer design/as-built plans to 29, NGVD is to add 0.6 feet to the CAP Plans.

The two CAP Brass Caps also were used by the Wittman ADMS (Ref. 6) as ERM Nos. 72 and 73. As such the Wittman ADMS Study was on the same elevation datum as the CAP Canal Design.

The CAP design top of protective berm elevation along this study limits was 1556.0 (Design) or 1556.6 (Current Study 29 NGVD).

Furthermore, as shown on Reconnaissance Report (Ref. 11, p. A-35) an overflow elevation at the east end of the CAP Canal Berm of 1554.0 (Design) or 1554.6 (Current Study 29 NGVD) allowed overflow easterly.

The study's 100-year, 24-hour peak ponded elevation at the upstream face of the canal was 1556.2, west of 163rd Avenue and 1550.0 east of 163rd Avenue. As noted earlier, for the ponded area west of 163rd Avenue, flow could proceed westerly beginning at elevation 1549 ±, but was not modeled as a conservative assumption, since additional watershed, beyond this study's scope contributes to ponding to the west.

It would be reasonable to expect some flow to spread west, which would reduce the peak ponded elevation of 1556.2 and provide a better freeboard.

To the east of 163rd Avenue, the peak ponded elevation of 1550.0 is 6.5 feet below top of berm and 4.5 ft below the overflow elevation.

Again, these peak ponded elevations are influenced by the split flows upstream.

4.11 Discussion Of Results And Comparison To Other Studies.

Appendix C and D contain a hard copy printout of the HEC-1 input/output for the 100-year – 6-hour storm and 100-year – 24-hour storms, respectively. Also included is a digital copy of the DDMSW backup and HEC-1 model results.

Table 4 summarizes the peak 100-year – 6 and 24-hour peak discharges at significant locations along the proposed study washes. In addition to peak discharges, the peak discharge (cfs) divided by drainage area (square mile) are shown as (csm) values for comparison.

As discussed in Section 2.0, Study Area, the Wittman ADMS (Ref. 6) study computed a peak 100-year – 24-hour storm discharge of 5389 cfs (HEC-1 #C53) at the CAP Canal for a drainage area of 23.06 sq. miles or 233 csm. This peak discharge is approximately 33 percent by "CSM" value of the peak 100-year – 24-hour discharge of 13671 cfs computed at the main Padelford Wash HEC-1 #CO199 (See Table 4).

The split flows make a discharge versus drainage area comparison difficult. However, the CO500 and CO400 peak 100-year – 24-hour discharges of 8461 cfs and 4405 cfs,

respectively, can be combined for a total of 12,866 cfs and a total drainage area of 23.523 sq. mi. or 547 csm. This 100-year – 24-hour peak, 547csm value from this study is 2.3 times that of the Wittman ADMS study.

Several of this study's 100-year – 24-hour peak discharge and/or csm values and the Wittman study peak discharge were plotted on an envelope curve of peak 100-year discharges, Figure 10-1 from the ADOT manual (Ref. 13). The three (3) most applicable curves from Figure 10-1 (See Appendix A) are C, G and H which are more specific to Arizona.

These same peak discharges were plotted on Figure 10-4 from the ADOT manual (Ref. 13), (See Appendix A), a 100-Year Peak Discharge Log-Pierson (LP3) Analysis of Arizona Steamgage Records vs.. Drainage Area.

These same peak csm values were also plotted on a Maricopa County envelope graph (See Appendix A), prepared by the Arizona Department of Water Resources (ADWR) of 100-year peak discharges from Flood Insurance Studies vs.. Drainage Area.

Referring to these three-(3) plots in general, the smaller drainage area (less 3 sq. mi.) discharges appeared somewhat low, while the larger drainage area discharges plotted close to 100-year envelope curves.

The Wittman ADMS study peak 100-year – 24-hour storm discharge appears low relative to these enveloping curves. In reviewing the Wittman ADMS study HEC-1 model, it was noted that this model used SCS curve numbers for estimating rainfall losses and no directly connected impervious value (RTIMP) was applied. This would probably be a significant reason for the lower discharges.

In summary, given the reasonable correlation of the study's 100-year – 24 hour discharges to the enveloping curves, it is recommended that these values be utilized in the subsequent hydraulic analysis.

5.0 References

1. Hydrologic Design Manual for Maricopa County, Arizona, Dated: September 1990, with Revisions, Dated: January 1995.

2. HEC-1 Flood Hydrograph Package Computer Model Version 4.1, June 1998, U.S. Corps of Engineers, Hydrologic Engineering Center, Davis California 85616-4617.

3. U.S.G.S. 7.5 minute services Quadrangle Mapping, Garfias Mountain (1964, Hieroglyphic Mts., S.W., Arizona. (1965, Photo Rev. 1981) and Baldy Mtn. (1964, Photo Rev. 1981).

4. ADOT State Route 74 (S.R. 74) Highway As-Built Plan, As-Built Date 10/7/71, Project No. S-434-503.

5. Central Arizona Project, Bureau of Reclamation Granite Reef Aqueduct, Reach 9 Drainage Cross-Structures Location Mapping and Flood Routing and Unit Hydrograph Summary, dated September 1975.

6. Wittman Area Drainage Master Study (ADMS) Part A Hydrology and Hydraulics and Part B Stormwater Management Plans, Reports By WLB Group, March 10, 1989 for Flood Control District of Maricopa County (FCDMC).

7. Flood Insurance Rate Map (FIRM) Panels 710 and 720 of 4350, Map Revised September 4, 1991, FEMA.

8. Drainage Design Management System for Windows (DDMSW) Computer Program by FCDMC, Version 1.5.

9. Soil Survey for Aguila/Carefree Area Part of Maricopa and Pinal Countries, Arizona by USDA, Soil Conservation Service (SCS). Date: 1978.

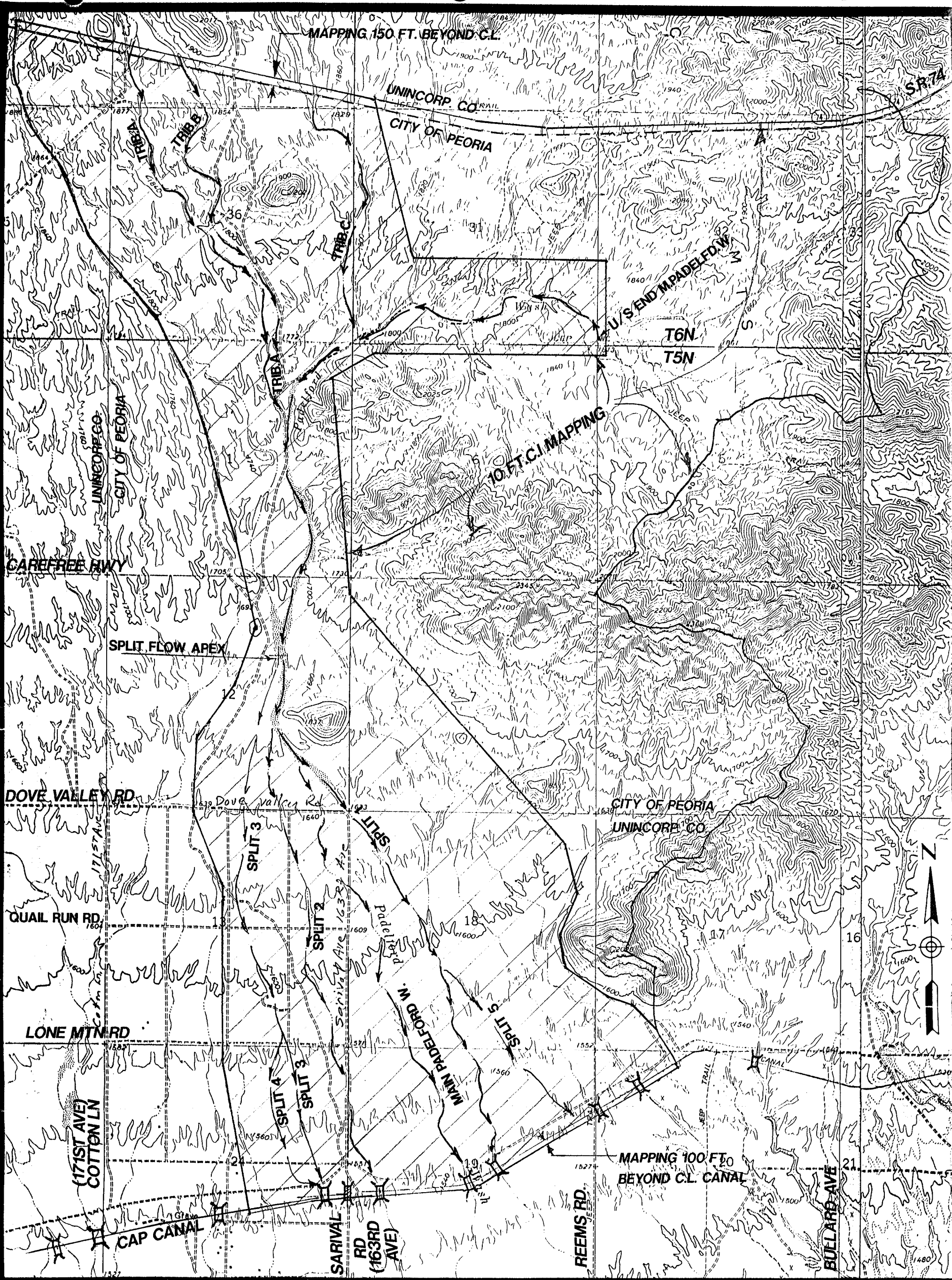
10. Digital Aerial Photo of Study Watershed from FCDMC HIS Database at Scale of 1" = 2,000'±.

11. "Field Reconnaissance and Hydraulic Parameter Estimation Summary", (Technical Date Notebook section 4.4) For Padleford Wash Floodplain Delineation Study, FCDMC No. 99-12 by A-N West, Inc., Dated 9/11/00, A-N West No. 7158-07.

12. Project Detailed 2 and 10 foot Contour Interval 200 scale Mapping Flown 10/28/99 and 2/20/99 by Cooper Aerial Surveys Company, Phoenix, AZ, with Ground Control by Aztec Engineering, Inc., Phoenix, AZ for A-N West, Inc.

13. ADOT "Highway Drainage Design Manual, Hydrology, No. FHWA-AZ93-281, March 1993.

14. HEC-RAS, RIVER ANALYSIS SYSTEM COMPUTER MODEL, VERSION 2.2, SEPT. 1998, U.S. ARMY CORPS OF ENGINEERS, HYDROLOGIC ENGINEERING CENTER, 609 Second Street, Suite D, Davis, California 95616-4687.



A-N W#7158-07

R2W R1W

2 FT.C.I. MAPPING

4000 FT 2000 FT 0 4000 FT

SCALE IN FEET

A-N WEST INC.
Consulting Engineers

FCD 99-12
PADELFORD WASH
FLOOD DELINEATION STUDY

PLATE 1

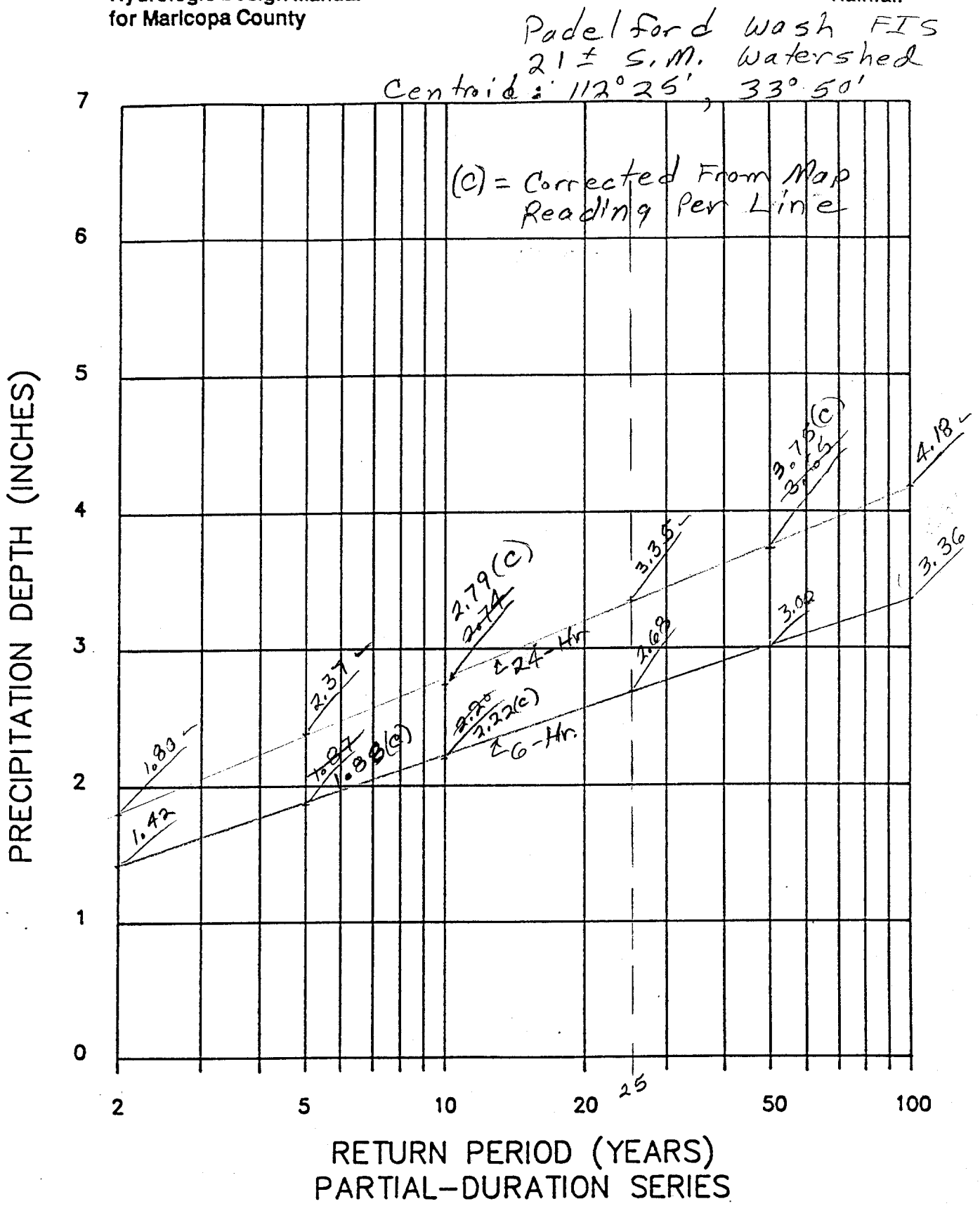
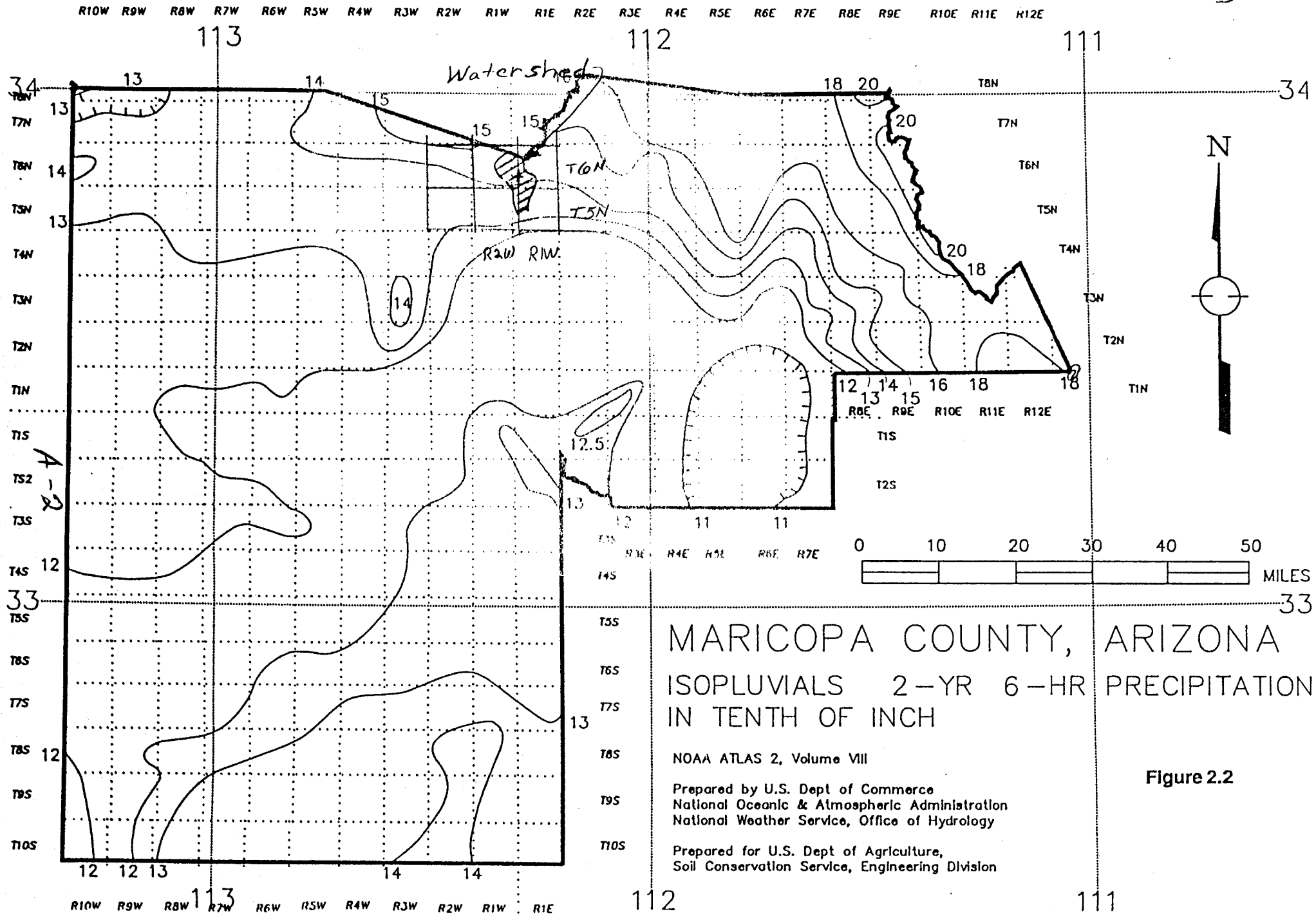


Figure 2.14
Precipitation Depth versus Return Period for Partial-Duration Series

A-1



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 2-YR 6-HR PRECIPITATION IN TENTH OF INCH

NOAA ATLAS 2, Volume VIII

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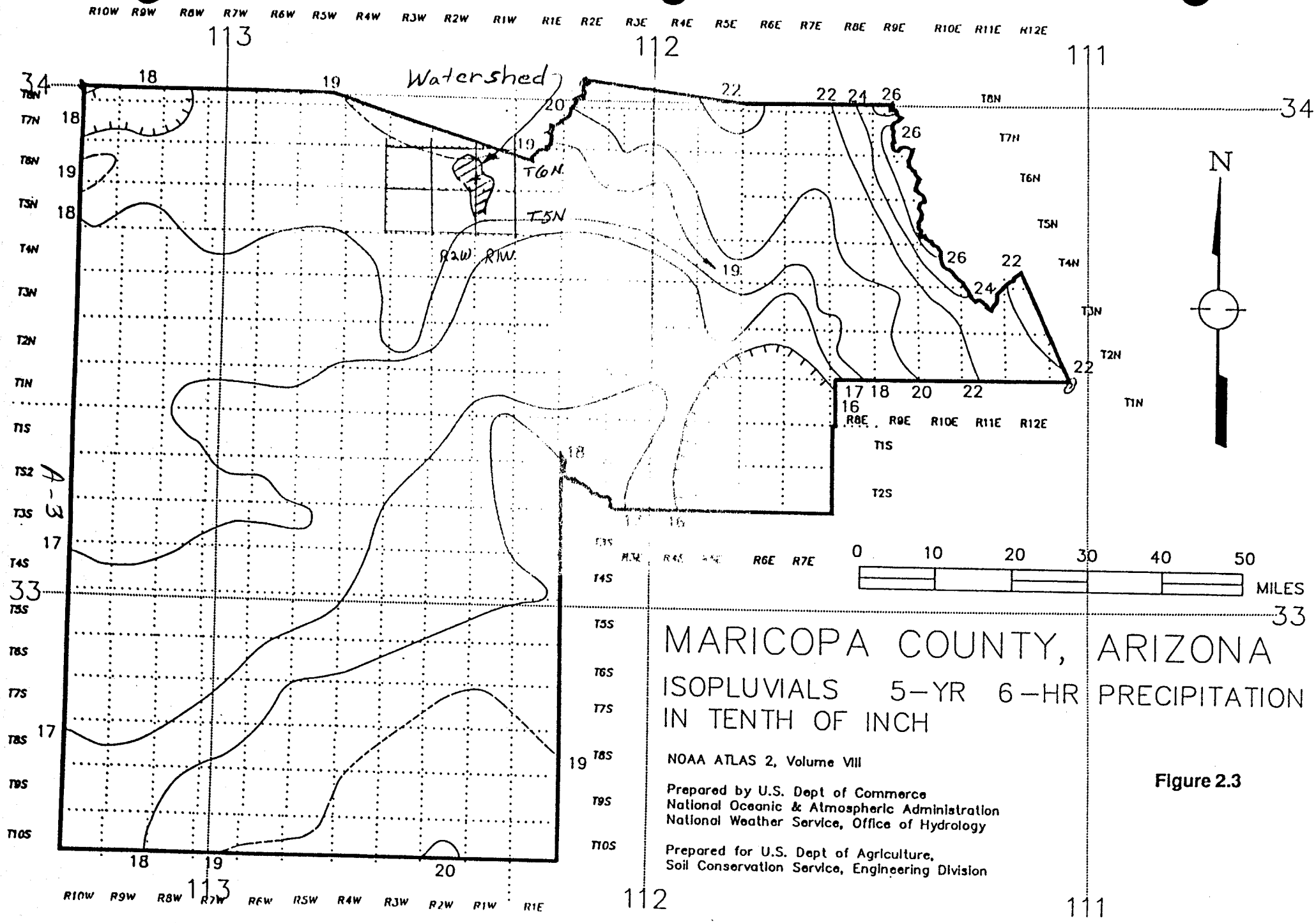
National Oceanic & Atmospheric Administration
National Weather Service, Office of Hydrology

Prepared for U.S. Dept of Agriculture,
Soil Conservation Service, Engineering Division

Figure 2.2



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 5-YR 6-HR PRECIPITATION IN TENTH OF INCH

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Figure 2.3

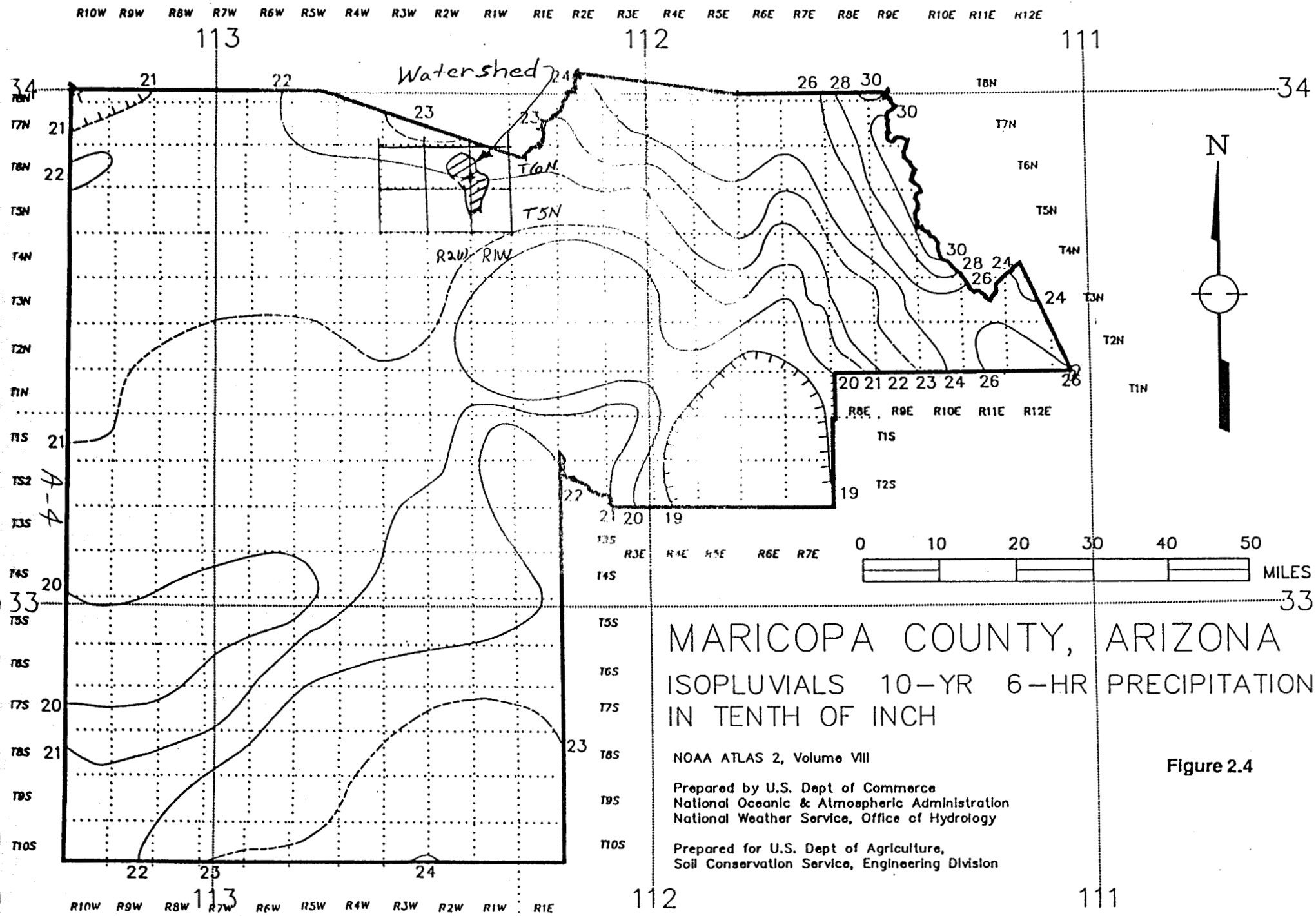
Watershed
T6N
T5N
R2W R1W
N
0 10 20 30 40 50
MILES
MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 10-YR 6-HR PRECIPITATION
IN TENTH OF INCH
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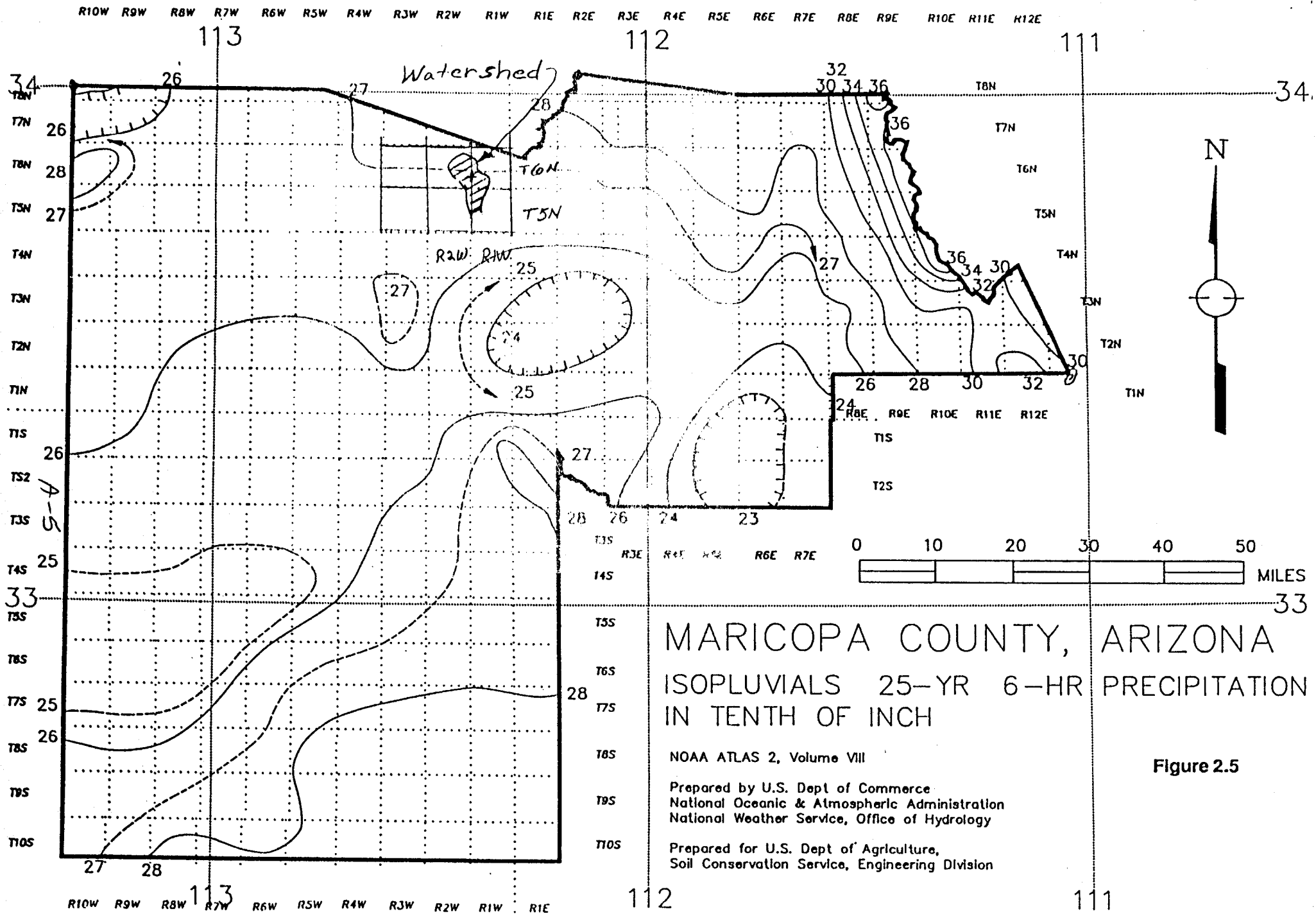
Figure 2.4



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 25–YR 6–HR PRECIPITATION IN TENTH OF INCH

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Figure 2.5

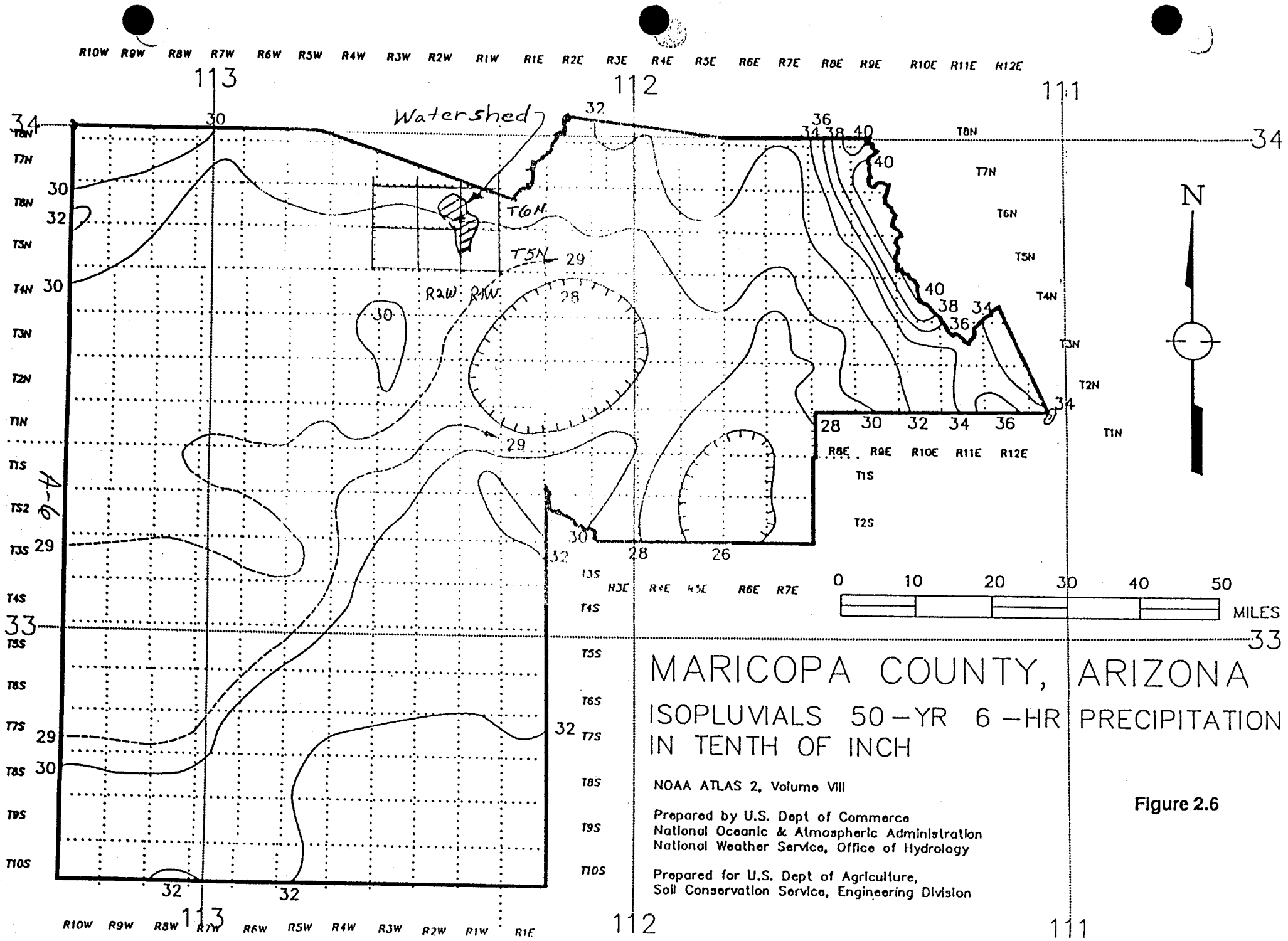
Watershed
T6N
T5N
R2W R1W
R10W R9W R8W R7W R6W R5W R4W R3W R2W R1W R1E R2E R3E R4E R5E R6E R7E R8E R9E R10E R11E R12E
113
112
111
34
33
T8N
T7N
T6N
T5N
T4N
T3N
T2N
T1N
T1S
T2S
T3S
T4S
T5S
T6S
T7S
T8S
T9S
T10S
N
0 10 20 30 40 50
MILES
MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 50-YR 6-HR PRECIPITATION
IN TENTH OF INCH
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Figure 2.6

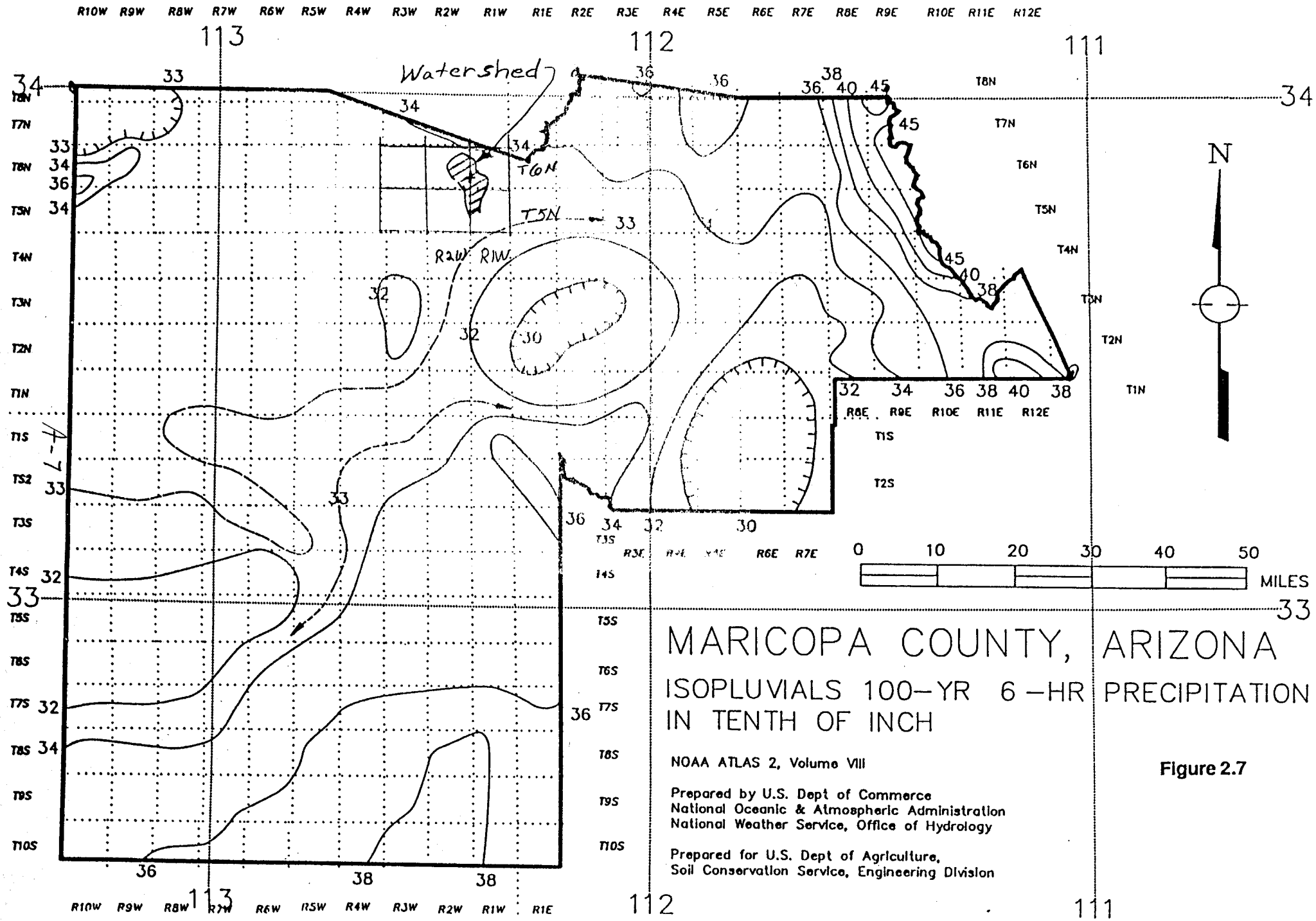
Watershed
T6N
T5N
R2W
R1W
N
0 10 20 30 40 50
MILES
MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 100-YR 6-HR PRECIPITATION
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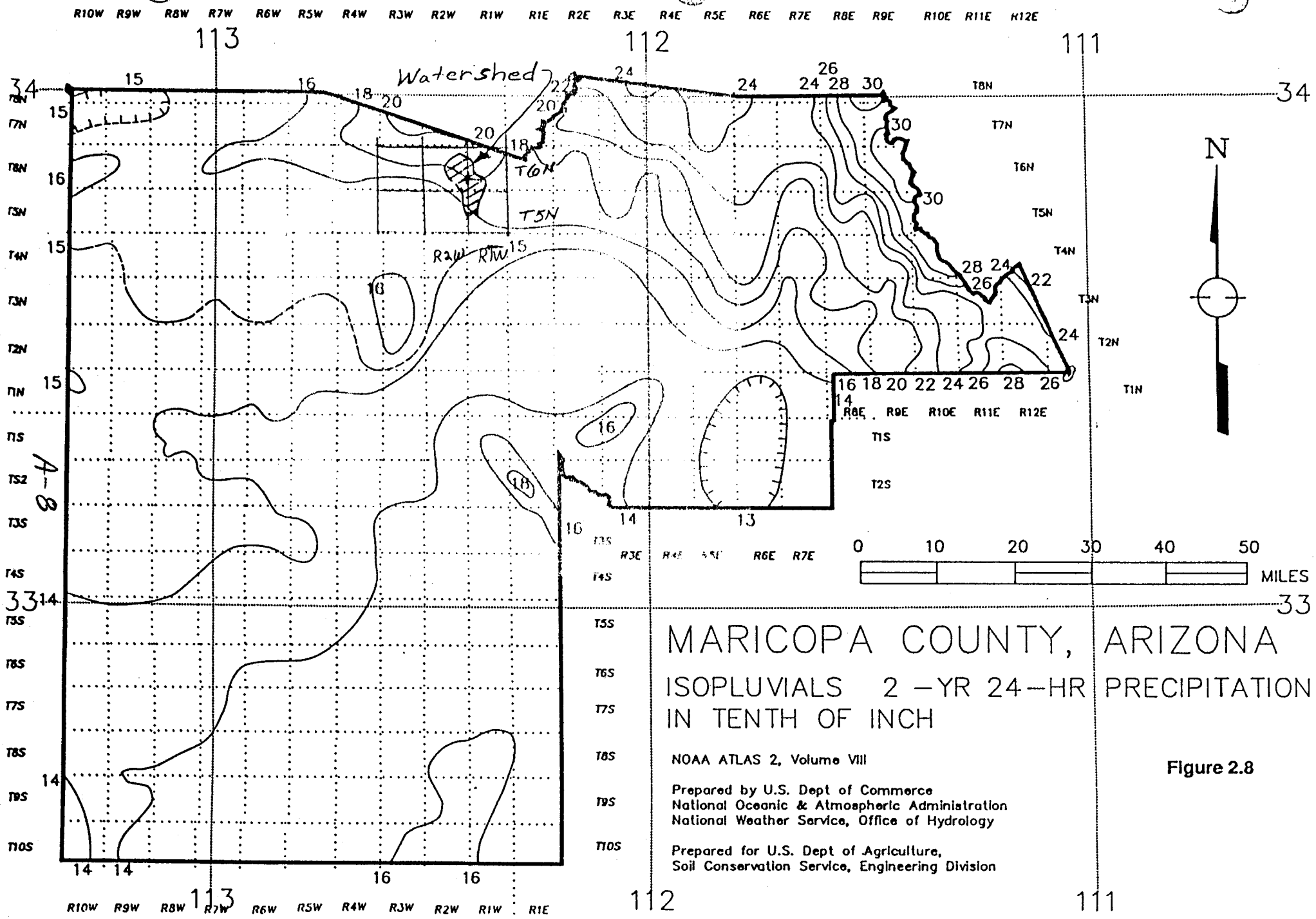
Figure 2.7



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 2 –YR 24–HR PRECIPITATION IN TENTH OF INCH

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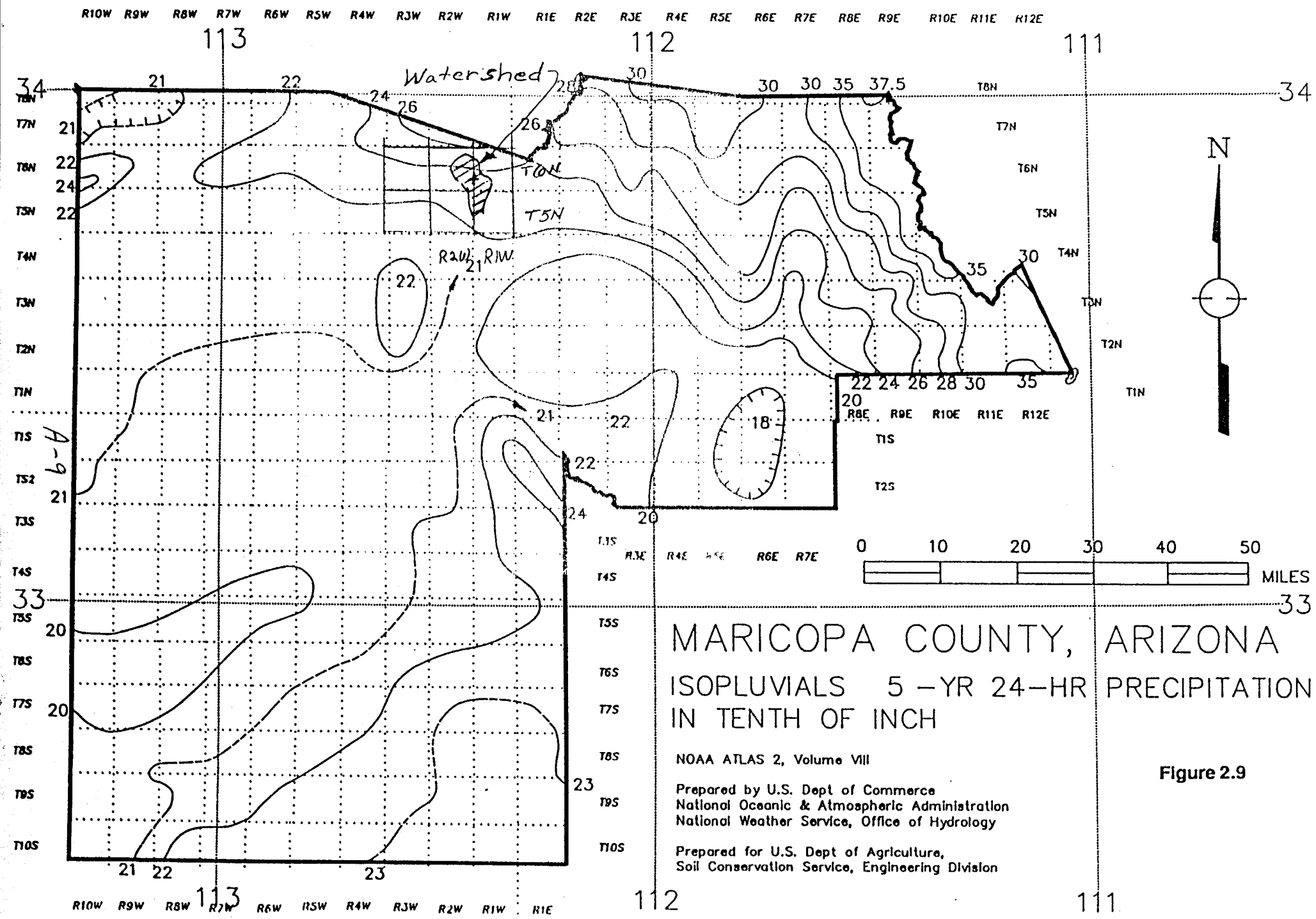
Figure 2.8

A-8



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 5 –YR 24–HR PRECIPITATION IN TENTH OF INCH

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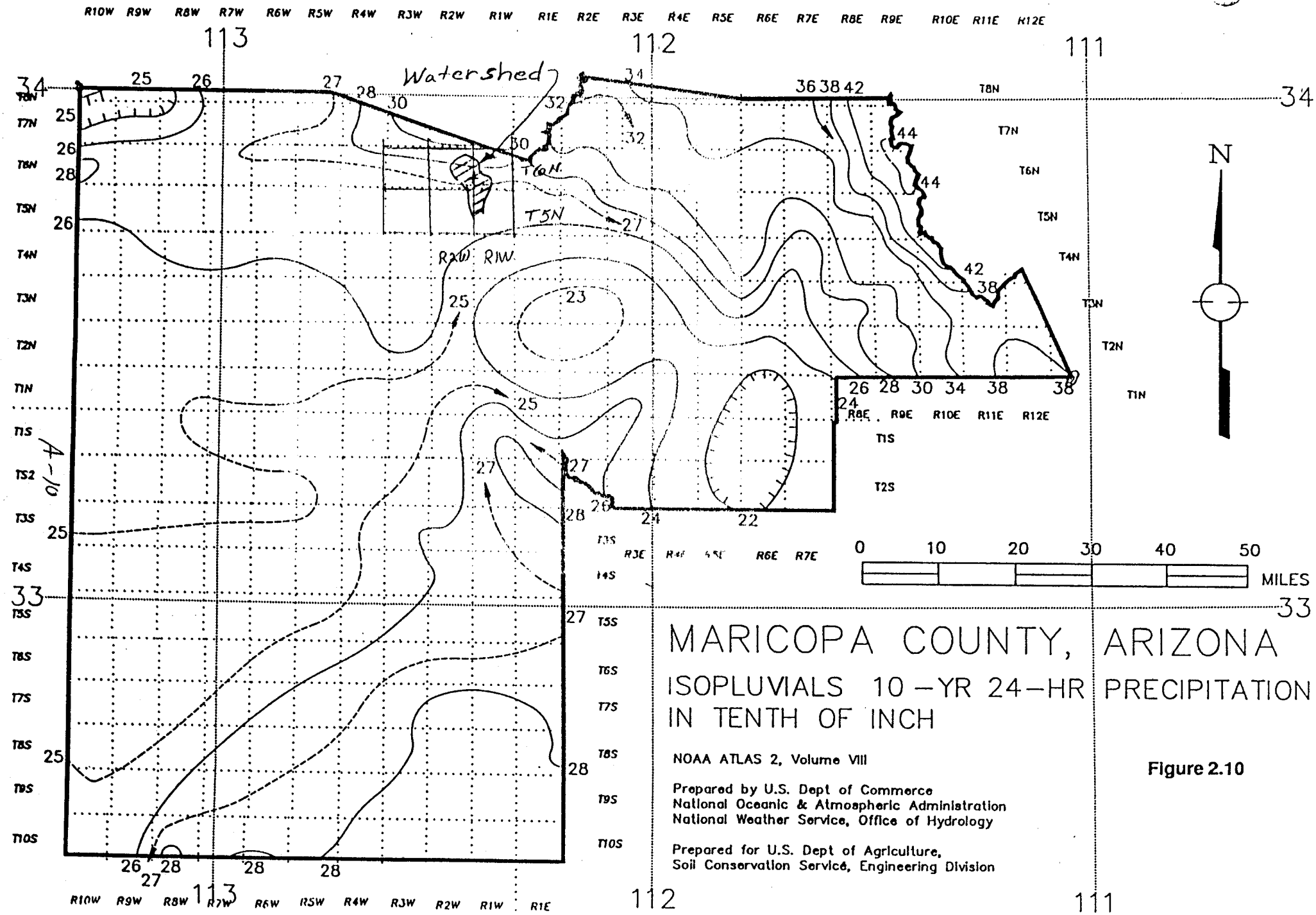
Figure 2.9



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 10-YR 24-HR PRECIPITATION IN TENTH OF INCH

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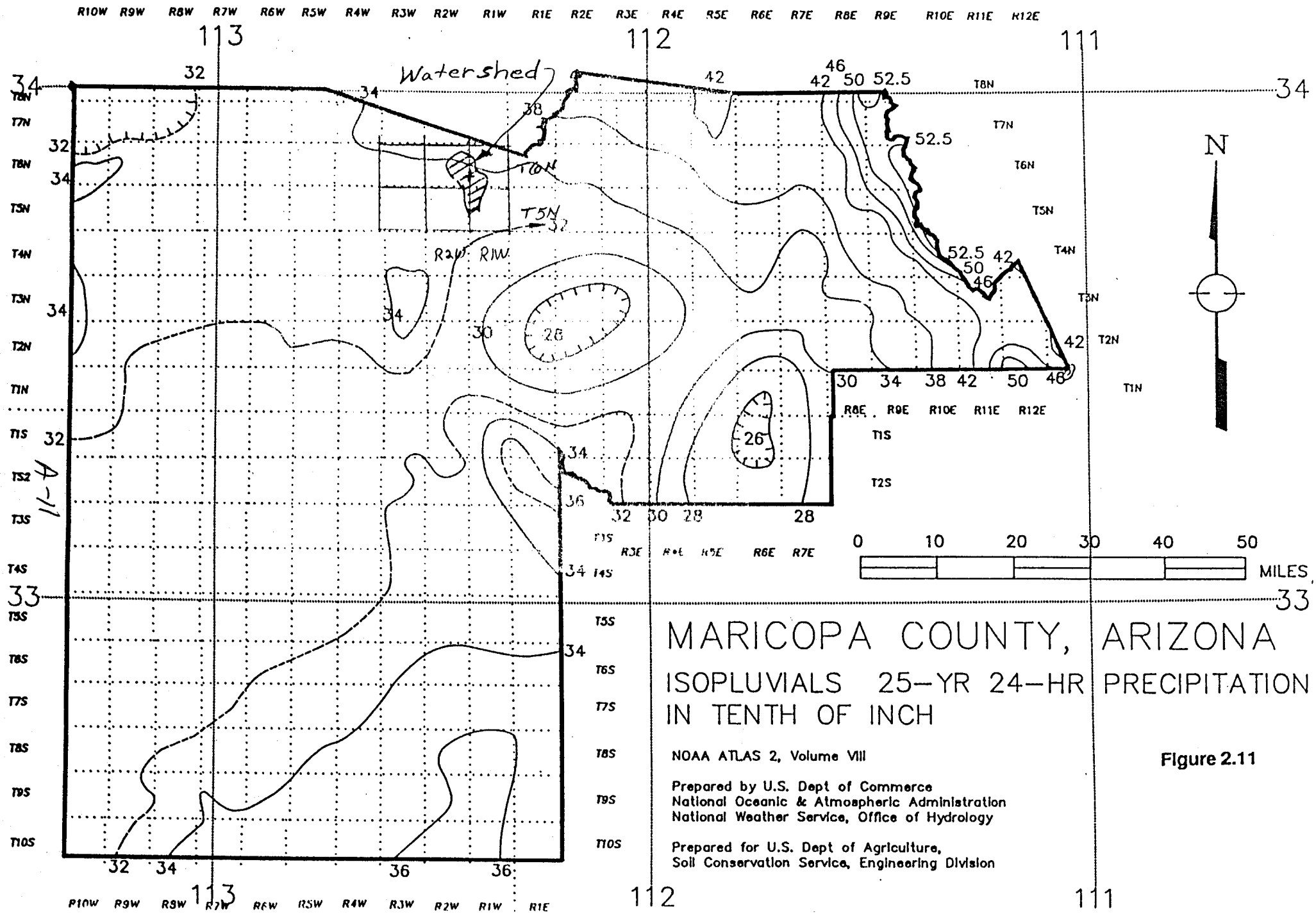
Figure 2.10



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 25–YR 24–HR PRECIPITATION IN TENTH OF INCH

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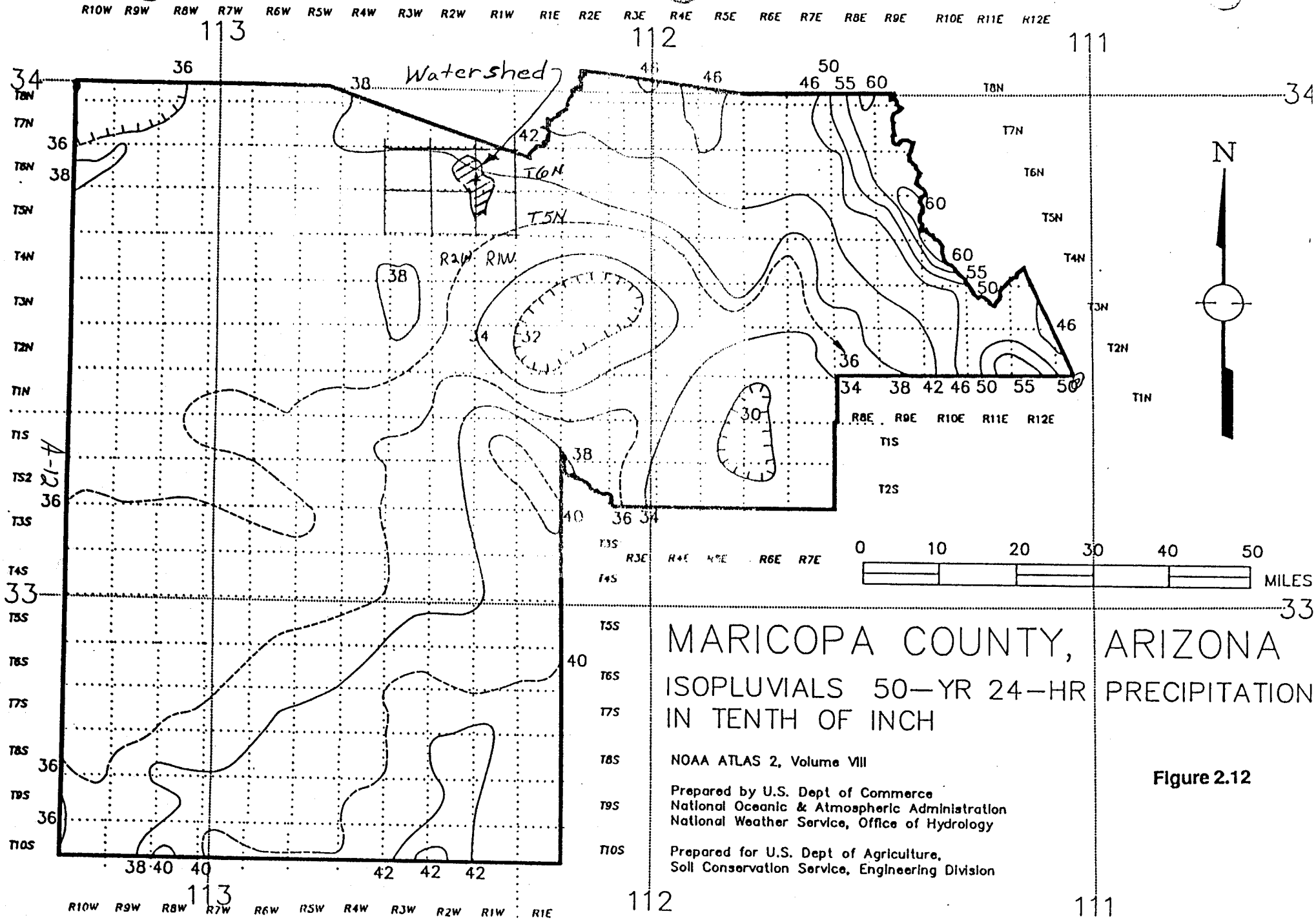
Figure 2.11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T5N
R2W R1W
N
0 10 20 30 40 50
MILES
R10W R9W R8W R7W R6W R5W R4W R3W R2W R1W R1E R2E R3E R4E R5E R6E R7E R8E R9E R10E R11E R12E
T8N T7N T6N T5N T4N T3N T2N T1N T1S T2S T3S T4S T5S T6S T7S T8S T9S T10S
113
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MARICOPA COUNTY, ARIZONA
ISOPLUVIALS 50—YR 24—HR PRECIPITATION
IN TENTH OF INCH
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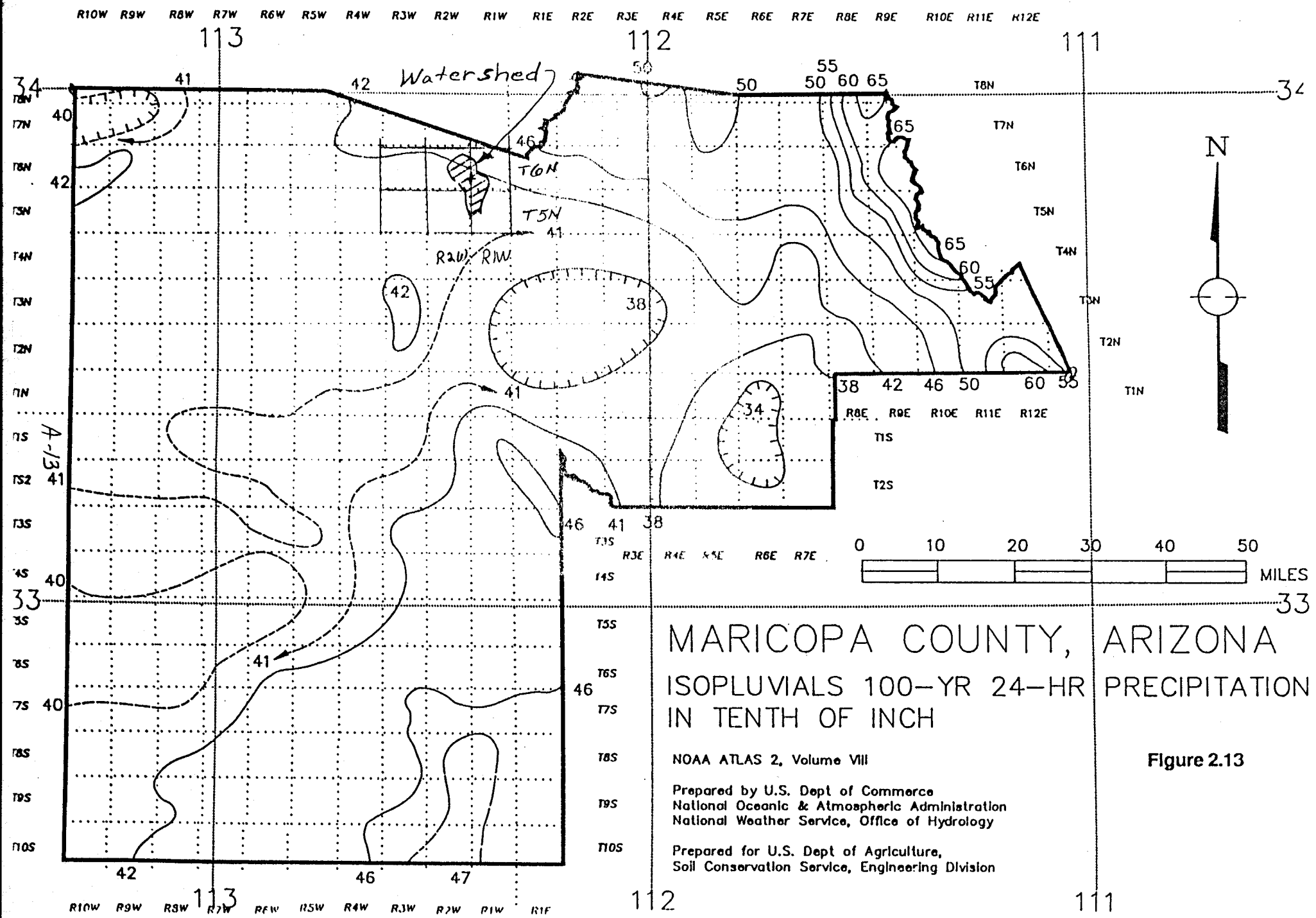
Figure 2.12



MARICOPA COUNTY, ARIZONA

ISOPLUVIALS 100-YR 24-HR PRECIPITATION IN TENTH OF INCH

NOAA ATLAS 2, Volume VIII

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Prepared for U.S. Dept of Agriculture,
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Figure 2.13

Table 2.1a
Depth-Area Reduction Factors for 24-Hour Duration Rainfall

Area Square Miles	Ratio to Point Rainfall
0	1
10	0.94
20	0.91
30	0.90
40	0.88
50	0.87
60	0.86
70	0.856
80	0.855
90	0.846
100	0.842
110	0.838
120	0.834
130	0.833
140	0.829
150	0.825
200	0.817
300	0.80
400	0.79
500	0.78

A-14

Table 2.2
Depth-Area Reduction Factors
for 6-Hour Duration Rainfall

Area, Square Miles	Ratio to Point of Rainfall
0	1.0
1	0.987
5	0.96
10	0.94
20	0.91
30	0.89
40	0.87
50	0.86
100	0.80
200	0.72
300	0.66
400	0.61
500	0.57

Use the depth-area reduction values from Figure 2.14 or Table 2.2 to correct the 6-hour point rainfall depth from the isopluvial maps (Figures 2.2 through 2.7) for all flood studies in which the 6-hour local storm is the design rainfall criteria (see Table 2.1).

If the flood study is for the design of a retention/detention facility for a small drainage area and the design rainfall criteria is the 100-year, 2-hour storm, then the point rainfall depths from Figure 2.1 are not to be reduced for area. This is because local retention/detention basins will be provided only for very small drainage areas and the point rainfall from Figure 2.1 is representative of the equivalent uniform depth of rainfall over the entire contributing area.

If a general storm is the accepted design rainfall criteria (as opposed to the 6-hour local storm as defined in this manual), then the appropriate depth-area reduction curve will need to be defined to correspond with the rainfall duration and the temporal distribution of the general storm. Usually the general storm for use in Maricopa County is the SCS Type II 24-hour design rainfall. Areal reductions for point rainfall for this 24-hour storm should be performed using Table 2.1a. The data for Table 2.1a have been taken from Figure 15 of the NWS HYDRO-40 (Zehr and Myers, 1984). For other general storms, the depth-area reduction and temporal distribution will need to be performed on a case-by-case basis depending on the purpose of the study, location of the watershed, and other meteorological and hydrological factors.

2.3.1 Procedure for Depth-Area Adjustment

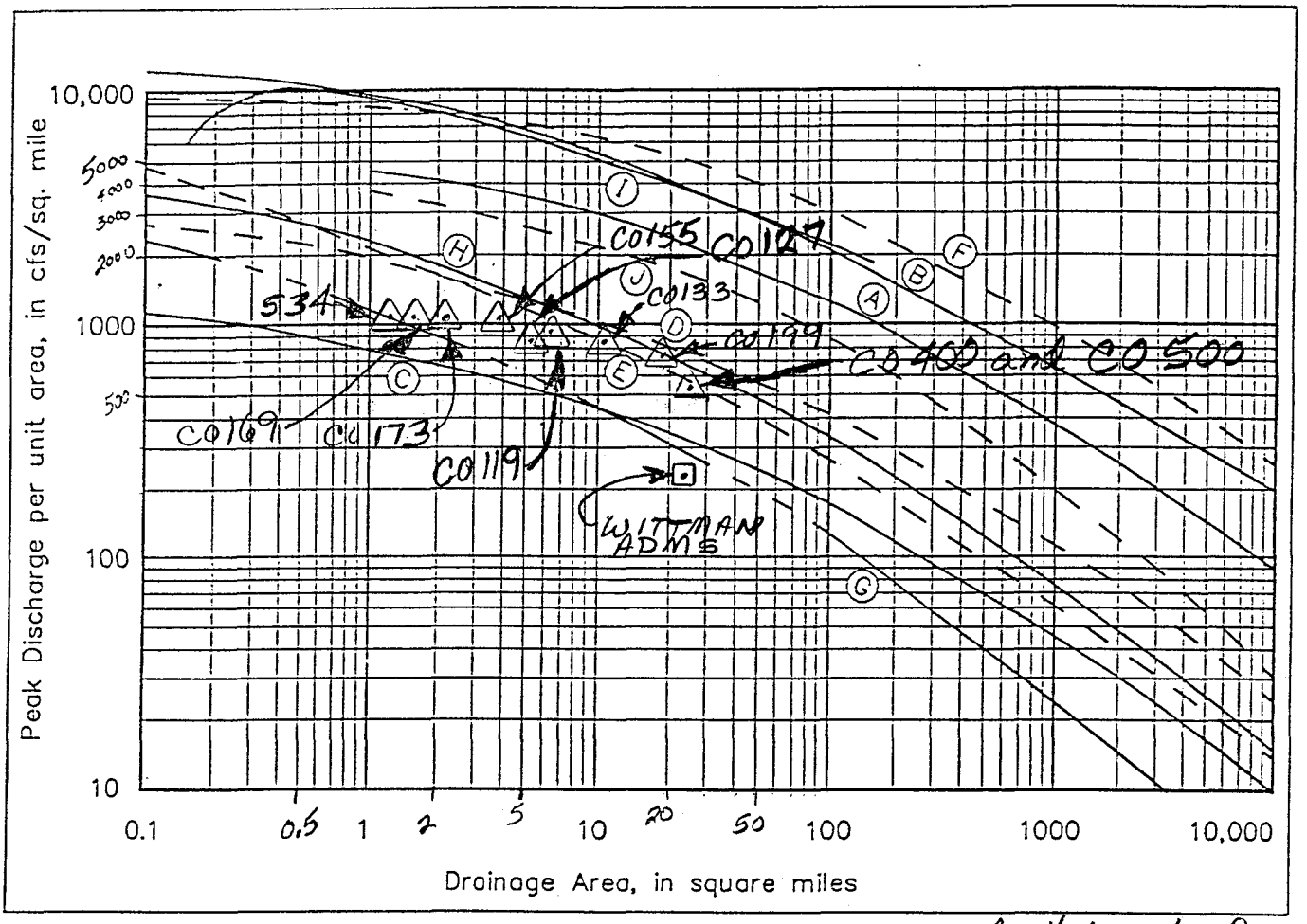
The following procedure is to be used with the 6-hour local storm rainfall depths (Figures 2.2 through 2.7):

1. Determine the size of the drainage area.

A-15

FIGURE 10-1

PEAK DISCHARGE RELATIONS AND ENVELOPE CURVES



A-N west Results

△ - Padelford wash 100-Yr - 24 Hour Storm, CSM Value

⊡ - Wittman ADMS (Ref. 6)

When using Figure 10-1, it must be noted that the curves represent different data sets for different hydrologic regions. Seven of the curves represent envelopes of maximum observed flood discharges (Curves A, B, D, E, F, I and J), one is a 100-year discharge envelope (Curve H), and two are 100-year discharge relations (Curves C and G). The curves of most interest in evaluating 100-year peak discharges for Arizona are C, G, and H.

C - A 100-year peak discharge relation developed for Arizona from an analysis by Malvick (1980).

G - A 100-year peak discharge relation for Southeastern Arizona developed by Eychaner (1984).

H - A 100-year peak discharge envelope curve for Southeastern Arizona developed by Boughton and others (1987).

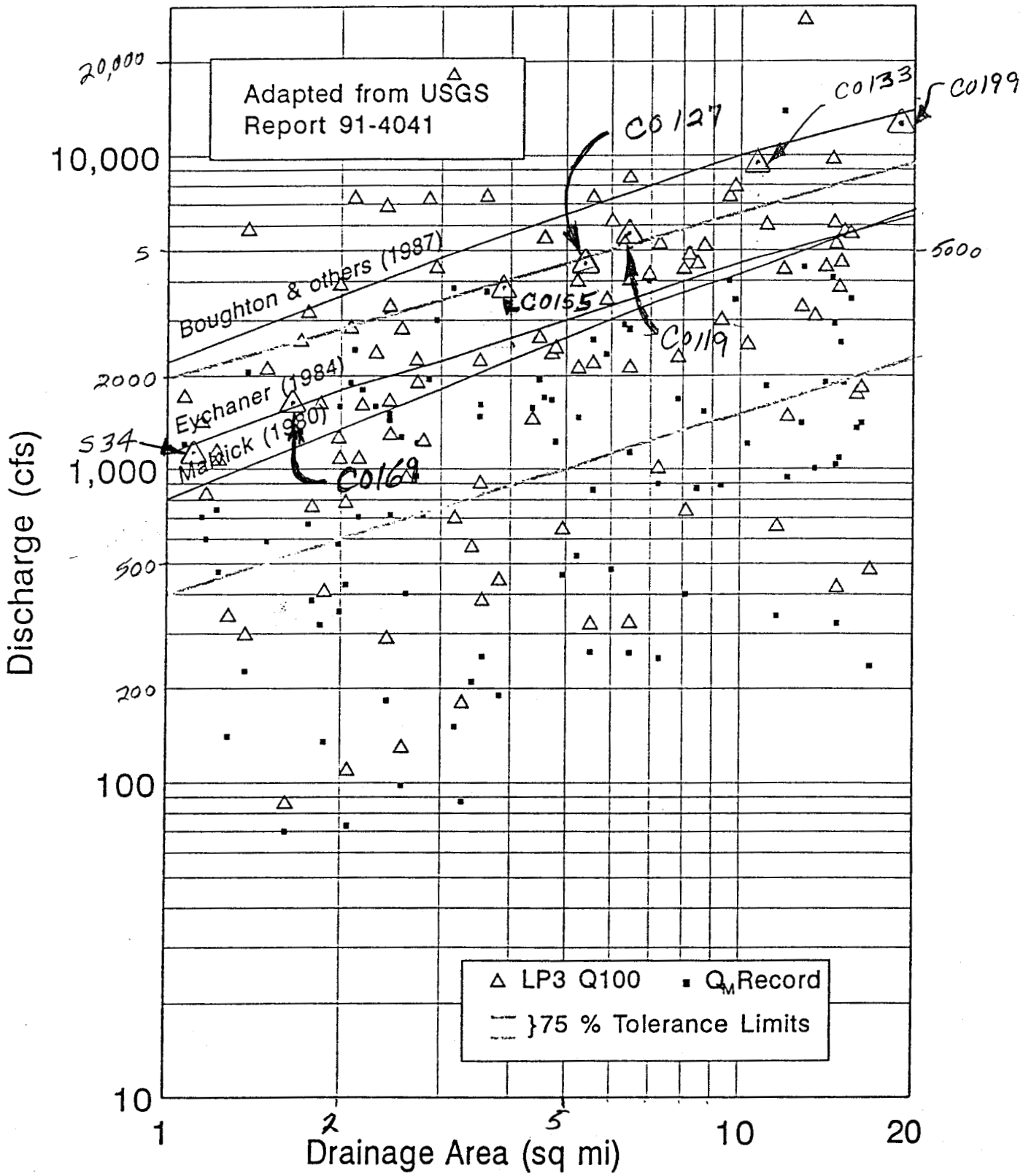
A-16

SOURCE: ADOT HIGHWAY DRAINAGE DESIGN MANUAL,HYDROLOGY,NO.FHWA-AZ93-281, MARCH,1993

FIGURE 10-4

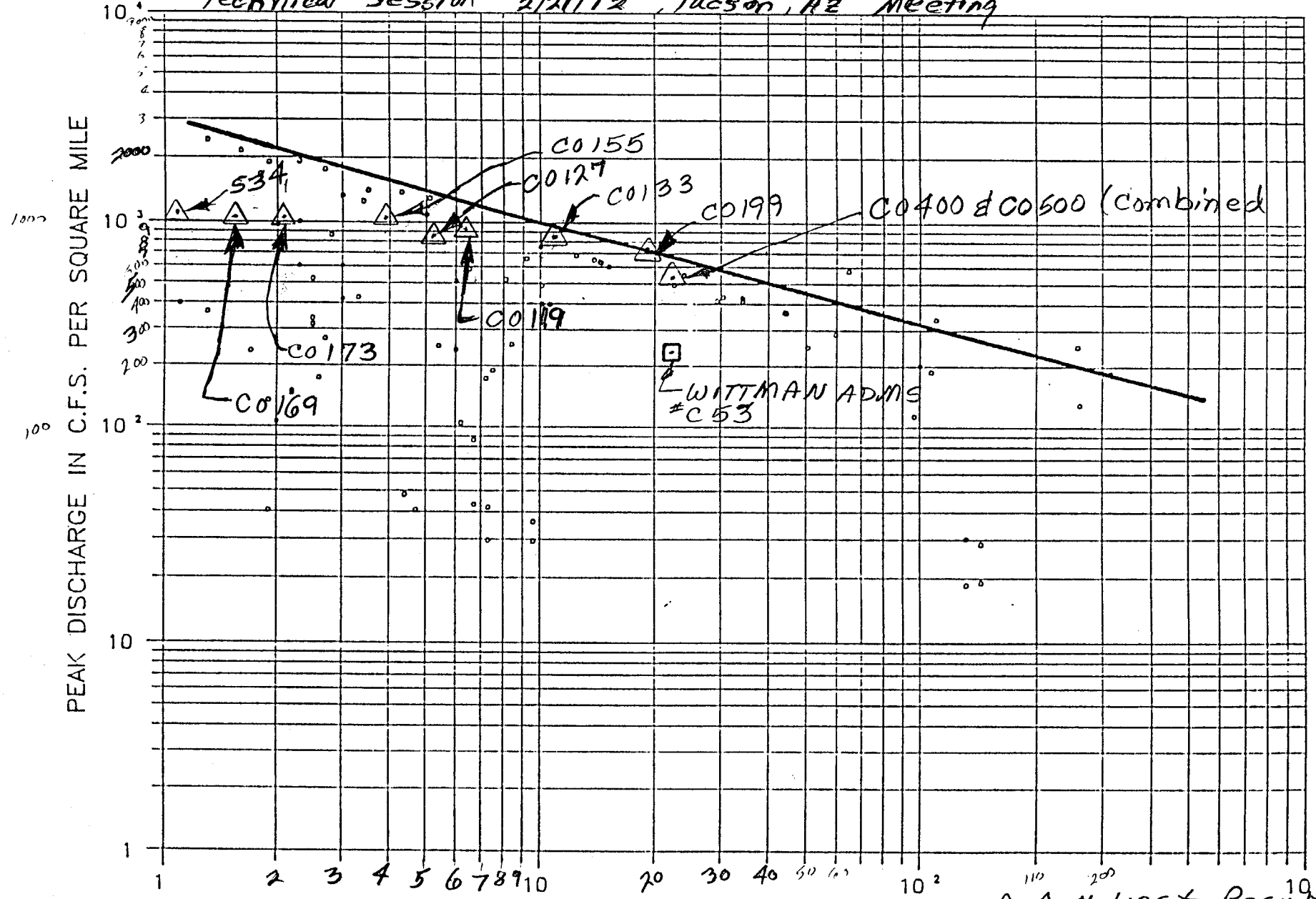
100-YEAR PEAK DISCHARGE BY LP3 ANALYSIS (LP3 Q100) AND MAXIMUM RECORDED DISCHARGE (Q_M RECORD) vs. DRAINAGE AREA FOR 1 TO 20 SQUARE MILES

△ A-N West Results
Padel Ford Wash; 100-Yr - 24 Hr Storm



SOURCE: ADOT HIGHWAY DRAINAGE DESIGN MANUAL,HYDROLOGY,NO.FHWA-AZ93-281, MARCH,1993

Source: Arizona Dept. of Water Resources (ADWR)
Arizona Flood Plain Managers Assoc. (AFMA) HEC-1/HEC-2
Technical Session 2/21/92, Tucson, AZ Meeting



MARICOPA COUNTY ENVELOPE CURVE

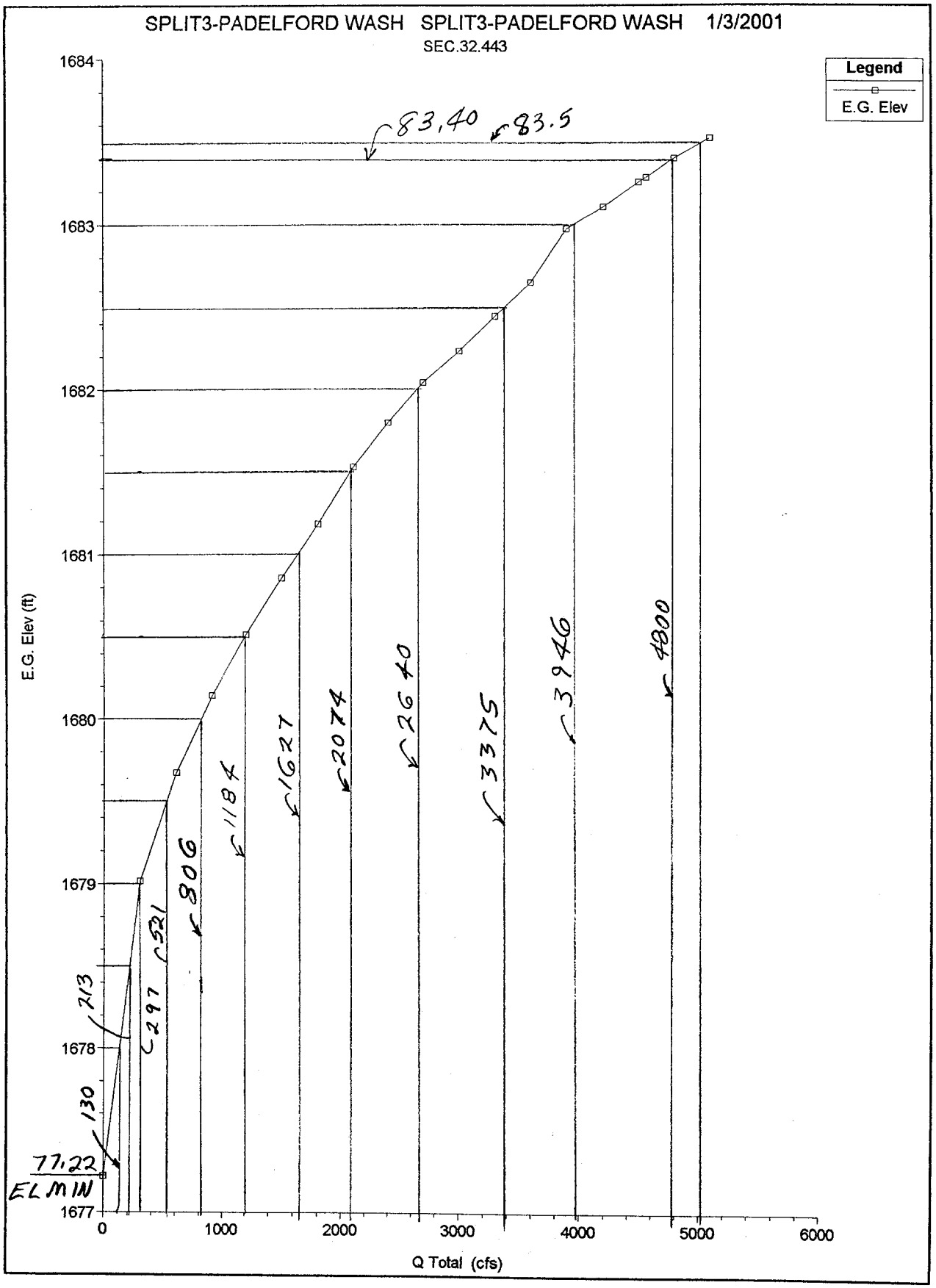
⊡ Wittman ADMS study (Ref. 6) Conc. Pt C53

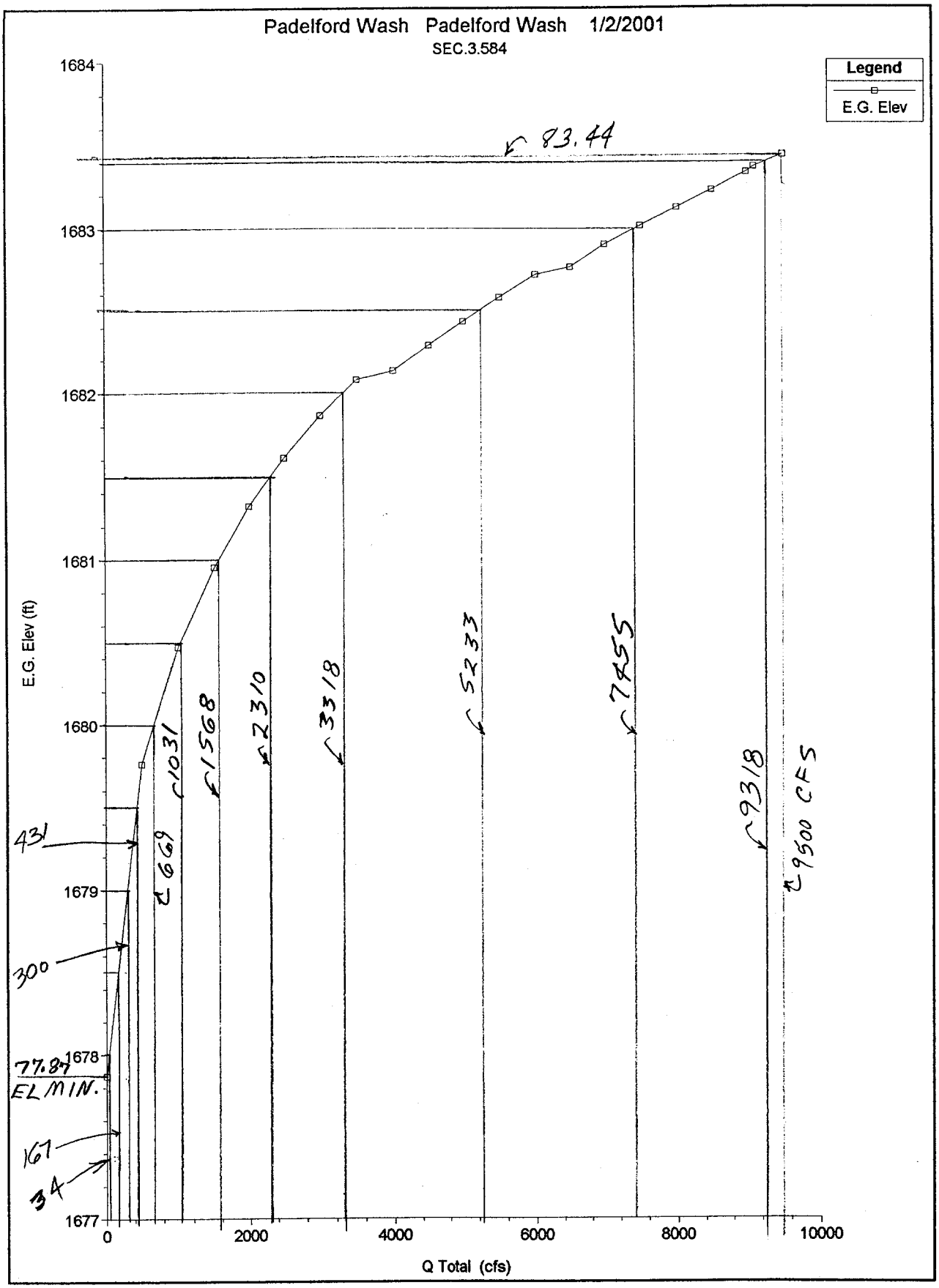
△ A-N West Results Padelford Wash 100-Yr -24 Hour Storm CSM Values

A-18

FLOW SPLIT SUMMARY
FOR USE IN HEC-1 ANALYSIS
MAIN, SECTION 3.584 AND SPLIT 3, SECTION 32.443

E.G.ELEV.	SPLT 3 Q SEC. 32.443 (CFS)	MAIN 3 Q SEC. 3.584 (CFS)	TOTAL Q (CFS)
1677.72	0	0	0
1678.0	130	34	164
1678.5	213	167	380
1679.0	297	300	597
1679.5	521	431	952
1680.0	806	669	1475
1680.5	1184	1031	2215
1681.0	1627	1568	3195
1681.5	2074	2310	4384
1682.0	2640	3318	5958
1682.5	3375	5233	8608
1683.0	3946	7455	11401
1683.4	4800	9318	14118


SPLIT3-PADELFORD WASH SPLIT3-PADELFORD WASH 1/3/2001
SEC.32.443
Legend
E.G. Elev
E.G. Elev (ft)
Q Total (cfs)
1684
1683
1682
1681
1680
1679
1678
1677
0
1000
2000
3000
4000
5000
6000
83.40
83.5
806
1184
1627
2074
2640
3375
3946
4800
521
297
213
130
77.22
ELMIN


Padelford Wash Padelford Wash 1/2/2001
SEC.3.584
Legend
E.G. Elev
E.G. Elev (ft)
Q Total (cfs)
1684
1683
1682
1681
1680
1679
1678
1677
0
2000
4000
6000
8000
10000
83.44
431
300
77.84
EL MIN.
167
34
669
1031
1568
2310
3318
5233
7455
9318
9500 CFS

HEC-RAS Plan: SPLIT3A River: PADELFORD WASH Reach: SPLIT 3

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
SPLIT 3	32.443	4565.00	1677.22	1682.54	1681.63	1683.29	0.008762	9.66	903.14	350.42	0.80
SPLIT 3	32.443	300.00	1677.22	1678.83	1678.49	1679.02	0.010350	4.17	101.79	118.56	0.71
SPLIT 3	32.443	600.00	1677.22	1679.44	1679.00	1679.67	0.009358	4.86	185.58	158.23	0.71
SPLIT 3	32.443	900.00	1677.22	1679.85	1679.33	1680.15	0.008968	5.58	254.07	178.55	0.72
SPLIT 3	32.443	1200.00	1677.22	1680.18	1679.60	1680.52	0.008525	6.03	314.15	184.57	0.72
SPLIT 3	32.443	1500.00	1677.22	1680.48	1679.96	1680.86	0.008185	6.43	371.56	192.26	0.72
SPLIT 3	32.443	1800.00	1677.22	1680.77	1680.17	1681.19	0.007913	6.77	428.61	202.29	0.72
SPLIT 3	32.443	2100.00	1677.22	1681.11	1680.26	1681.53	0.007060	6.87	499.63	214.41	0.69
SPLIT 3	32.443	2400.00	1677.22	1681.35	1680.46	1681.80	0.007066	7.19	550.86	226.26	0.69
SPLIT 3	32.443	2700.00	1677.22	1681.56	1680.63	1682.05	0.007127	7.50	600.79	246.86	0.70
SPLIT 3	32.443	3000.00	1677.22	1681.70	1680.80	1682.24	0.007613	7.94	636.33	262.54	0.73
SPLIT 3	32.443	3300.00	1677.22	1681.88	1680.96	1682.45	0.007683	8.21	685.64	284.89	0.73
SPLIT 3	32.443	3600.00	1677.22	1682.06	1681.13	1682.65	0.007646	8.43	739.81	307.58	0.74
SPLIT 3	32.443	3900.00	1677.22	1682.28	1681.29	1682.98	0.008548	9.20	812.52	343.72	0.78
SPLIT 3	32.443	4200.00	1677.22	1682.37	1681.45	1683.11	0.008979	9.55	842.44	345.95	0.80
SPLIT 3	32.443	4500.00	1677.22	1682.52	1681.59	1683.26	0.008763	9.63	893.78	349.73	0.80
SPLIT 3	32.443	4800.00	1677.22	1682.65	1681.75	1683.40	0.008693	9.76	940.43	354.32	0.80
SPLIT 3	32.443	5100.00	1677.22	1682.74	1681.96	1683.52	0.008925	10.00	971.36	354.32	0.81
SPLIT 3	32.390	4565.00	1674.28	1679.37	1679.37	1680.66	0.008691	9.72	636.17	310.05	0.84
SPLIT 3	32.390	300.00	1674.28	1675.98		1676.18	0.009135	3.66	81.93	87.45	0.67
SPLIT 3	32.390	600.00	1674.28	1676.44		1676.80	0.010219	4.80	125.32	98.19	0.74
SPLIT 3	32.390	900.00	1674.28	1676.78		1677.28	0.010521	5.68	159.89	104.21	0.78
SPLIT 3	32.390	1200.00	1674.28	1677.09		1677.71	0.010505	6.36	192.39	109.64	0.81
SPLIT 3	32.390	1500.00	1674.28	1677.35		1678.10	0.010577	6.95	222.47	115.65	0.83
SPLIT 3	32.390	1800.00	1674.28	1677.60		1678.45	0.010630	7.48	251.34	120.96	0.84
SPLIT 3	32.390	2100.00	1674.28	1677.73	1677.60	1678.78	0.012145	8.28	269.55	162.50	0.91
SPLIT 3	32.390	2400.00	1674.28	1677.95	1677.95	1679.08	0.011817	8.63	305.50	165.73	0.91
SPLIT 3	32.390	2700.00	1674.28	1678.17	1678.16	1679.35	0.011380	8.90	342.76	188.26	0.90
SPLIT 3	32.390	3000.00	1674.28	1678.45	1678.45	1679.61	0.010046	8.88	402.47	219.84	0.86
SPLIT 3	32.390	3300.00	1674.28	1678.64	1678.64	1679.84	0.009785	9.09	444.52	229.63	0.86
SPLIT 3	32.390	3600.00	1674.28	1678.80	1678.80	1680.05	0.009730	9.34	482.25	239.04	0.86
SPLIT 3	32.390	3900.00	1674.28	1678.96	1678.96	1680.25	0.009587	9.55	521.92	249.42	0.86
SPLIT 3	32.390	4200.00	1674.28	1679.19	1679.19	1680.45	0.008779	9.50	584.33	287.30	0.83
SPLIT 3	32.390	4500.00	1674.28	1679.33	1679.33	1680.63	0.008737	9.70	625.76	305.62	0.84
SPLIT 3	32.390	4800.00	1674.28	1679.47	1679.47	1680.79	0.008620	9.85	670.79	324.37	0.84

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HEC-RAS Plan: Padelford Wa River: PADELFORD WASH Reach: REACH M1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
REACH M1	3.681	3000.00	1683.42	1686.52	1686.47	1687.12	0.016623	6.86	536.14	470.76	0.98
REACH M1	3.681	3500.00	1683.42	1686.68	1686.60	1687.32	0.015824	7.16	618.59	527.67	0.97
REACH M1	3.681	4000.00	1683.42	1686.83	1686.83	1687.50	0.015581	7.51	699.59	573.45	0.97
REACH M1	3.681	4500.00	1683.42	1686.98	1686.98	1687.66	0.014441	7.62	788.37	616.02	0.95
REACH M1	3.681	5000.00	1683.42	1687.09	1687.09	1687.80	0.014364	7.88	858.93	663.03	0.96
REACH M1	3.681	5500.00	1683.42	1687.19	1687.19	1687.94	0.014499	8.15	925.04	706.23	0.97
REACH M1	3.681	6000.00	1683.42	1687.34	1687.34	1688.07	0.013042	8.10	1038.29	738.85	0.93
REACH M1	3.681	6500.00	1683.42	1687.43	1687.43	1688.18	0.013185	8.33	1100.41	754.03	0.94
REACH M1	3.681	7000.00	1683.42	1687.53	1687.53	1688.29	0.012664	8.40	1181.73	769.71	0.93
REACH M1	3.681	7500.00	1683.42	1687.62	1687.62	1688.40	0.012654	8.58	1245.11	779.67	0.93
REACH M1	3.681	8000.00	1683.42	1687.69	1687.69	1688.50	0.012734	8.76	1303.18	787.72	0.94
REACH M1	3.681	8500.00	1683.42	1687.76	1687.76	1688.60	0.012878	8.96	1356.86	793.31	0.95
REACH M1	3.681	9000.00	1683.42	1687.82	1687.81	1688.69	0.013005	9.15	1409.38	797.14	0.96
REACH M1	3.681	9500.00	1683.42	1687.90	1687.88	1688.79	0.012819	9.25	1472.97	798.21	0.95
REACH M1	3.584	9106.00	1677.87	1682.78	1682.28	1683.36	0.008544	8.00	1689.99	702.86	0.78
REACH M1	3.584	500.00	1677.87	1679.59	1679.15	1679.76	0.005821	3.53	155.23	157.92	0.55
REACH M1	3.584	1000.00	1677.87	1680.25	1679.68	1680.47	0.006233	4.14	271.34	244.27	0.59
REACH M1	3.584	1500.00	1677.87	1680.71	1680.10	1680.95	0.006440	4.44	394.79	356.58	0.61
REACH M1	3.584	2000.00	1677.87	1681.08	1680.47	1681.32	0.006559	4.44	517.98	487.77	0.61
REACH M1	3.584	2500.00	1677.87	1681.33	1680.72	1681.61	0.006847	4.88	616.23	581.37	0.64
REACH M1	3.584	3000.00	1677.87	1681.55	1680.96	1681.86	0.007064	5.33	704.76	634.04	0.66
REACH M1	3.584	3500.00	1677.87	1681.72	1681.09	1682.08	0.007262	5.71	779.94	667.02	0.68
REACH M1	3.584	4000.00	1677.87	1681.82	1681.21	1682.13	0.006774	5.68	1025.35	687.87	0.66
REACH M1	3.584	4500.00	1677.87	1681.96	1681.30	1682.29	0.006788	5.90	1117.35	688.79	0.66
REACH M1	3.584	5000.00	1677.87	1682.08	1681.57	1682.43	0.006836	6.11	1202.50	689.65	0.67
REACH M1	3.584	5500.00	1677.87	1682.21	1681.70	1682.58	0.006762	6.28	1291.62	690.54	0.67
REACH M1	3.584	6000.00	1677.87	1682.33	1681.83	1682.71	0.006752	6.45	1373.52	691.35	0.68
REACH M1	3.584	6500.00	1677.87	1682.29	1681.87	1682.76	0.008393	7.13	1346.27	691.08	0.75
REACH M1	3.584	7000.00	1677.87	1682.42	1681.95	1682.90	0.008073	7.20	1436.68	691.98	0.74
REACH M1	3.584	7500.00	1677.87	1682.51	1682.03	1683.01	0.008244	7.42	1495.75	692.57	0.75
REACH M1	3.584	8000.00	1677.87	1682.59	1682.10	1683.12	0.008404	7.62	1553.09	693.14	0.77
REACH M1	3.584	8500.00	1677.87	1682.67	1682.18	1683.22	0.008576	7.83	1608.51	696.39	0.78
REACH M1	3.584	9000.00	1677.87	1682.75	1682.25	1683.33	0.008729	8.03	1663.77	700.79	0.79
REACH M1	3.584	9500.00	1677.87	1682.83	1682.32	1683.44	0.008838	8.21	1720.33	705.25	0.79

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FLOW SPLIT SUMMARY
FOR USE IN HEC-1 ANALYSIS
SPLT 3, SECTION 30.717 AND SPLIT 4, SECTION 30.841

E.G.ELEV.	SPLT 3 Q SEC. 30.717 (CFS)	SPLIT 4 Q SEC. 30.841 (CFS)	TOTAL Q (CFS)
1581.29	0	0	0
1582.0	448	0	448
1582.5	729	51	780
1583.0	1152	131	1283
1583.5	1680	212	1892
1584.0	2384	380	2764
1584.5	3577	663	4240
1584.9	4913	931	5844

HEC-RAS Plan: Split 4 of P River: PADELFORD WASH Reach: SPLIT 4

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
SPLIT 4	30.841	764.00	1582.18	1584.31	1584.00	1584.66	0.009046	4.78	159.72	112.86	0.71
SPLIT 4	30.841	250.00	1582.18	1583.59	1583.32	1583.74	0.008125	3.11	80.47	100.92	0.61
SPLIT 4	30.841	500.00	1582.18	1583.99	1583.72	1584.24	0.008642	4.01	124.79	111.47	0.67
SPLIT 4	30.841	750.00	1582.18	1584.29	1583.99	1584.64	0.009042	4.75	157.93	112.79	0.71
SPLIT 4	30.841	1000.00	1582.18	1584.56	1584.22	1585.00	0.009079	5.31	188.44	113.98	0.73
SPLIT 4	30.841	1250.00	1582.18	1584.81	1584.45	1585.33	0.008909	5.74	217.72	115.12	0.74
SPLIT 4	30.841	1500.00	1582.18	1585.17	1584.65	1585.69	0.007302	5.80	258.85	116.71	0.68
SPLIT 4	30.841	1750.00	1582.18	1585.55	1584.84	1586.07	0.005917	5.78	303.41	118.42	0.63
SPLIT 4	30.841	2000.00	1582.18	1585.02	1585.02	1586.09	0.016294	8.28	241.59	116.04	1.01
SPLIT 4	30.841	2250.00	1582.18	1585.20	1585.20	1586.34	0.015733	8.58	262.28	116.84	1.01
SPLIT 4	30.841	2500.00	1582.18	1585.36	1585.36	1586.59	0.015463	8.90	281.21	117.57	1.01
SPLIT 4	30.841	2750.00	1582.18	1585.53	1585.53	1586.83	0.014874	9.13	301.75	118.36	1.00
SPLIT 4	30.793	764.00	1578.35	1580.98	1580.98	1581.57	0.018648	6.98	147.54	124.29	1.02
SPLIT 4	30.793	250.00	1578.35	1580.22	1580.22	1580.56	0.023447	5.16	61.74	97.99	1.04
SPLIT 4	30.793	500.00	1578.35	1580.64	1580.64	1581.12	0.019940	6.21	106.82	114.49	1.02
SPLIT 4	30.793	750.00	1578.35	1580.96	1580.96	1581.55	0.018706	6.94	145.49	123.94	1.02
SPLIT 4	30.793	1000.00	1578.35	1581.22	1581.22	1581.91	0.018458	7.58	178.57	129.53	1.04
SPLIT 4	30.793	1250.00	1578.35	1581.44	1581.44	1582.23	0.018879	8.24	207.10	151.27	1.07
SPLIT 4	30.793	1500.00	1578.35	1581.45	1581.45	1582.58	0.026255	9.78	209.84	155.70	1.27
SPLIT 4	30.793	1750.00	1578.35	1581.61	1581.53	1583.14	0.031695	11.33	240.43	235.40	1.41
SPLIT 4	30.793	2000.00	1578.35	1582.28	1582.41	1582.88	0.010081	7.75	525.11	713.93	0.83
SPLIT 4	30.793	2250.00	1578.35	1582.35	1582.48	1583.00	0.010984	8.22	571.33	717.32	0.87
SPLIT 4	30.793	2500.00	1578.35	1582.40	1582.57	1583.12	0.012121	8.74	606.49	719.44	0.92
SPLIT 4	30.793	2750.00	1578.35	1582.43	1582.65	1583.24	0.013476	9.30	633.40	721.06	0.97
SPLIT 4	30.690	764.00	1572.11	1574.96	1574.35	1575.23	0.006304	4.54	222.19	210.83	0.61
SPLIT 4	30.690	250.00	1572.11	1573.87	1573.34	1574.02	0.005411	3.32	86.95	77.13	0.53
SPLIT 4	30.690	500.00	1572.11	1574.55	1573.87	1574.74	0.006025	3.81	155.33	139.27	0.58
SPLIT 4	30.690	750.00	1572.11	1574.93	1574.33	1575.20	0.006343	4.50	216.79	172.24	0.61
SPLIT 4	30.690	1000.00	1572.11	1575.21	1574.64	1575.53	0.006277	4.96	275.53	214.56	0.63
SPLIT 4	30.690	1250.00	1572.11	1575.44	1574.66	1575.80	0.006371	5.38	324.04	217.39	0.64
SPLIT 4	30.690	1500.00	1572.11	1575.66	1575.23	1576.05	0.006263	5.69	372.44	222.02	0.65
SPLIT 4	30.690	1750.00	1572.11	1575.85		1576.28	0.006290	6.00	418.88	265.94	0.66
SPLIT 4	30.690	2000.00	1572.11	1576.12	1575.67	1576.61	0.006335	6.42	503.59	342.23	0.67
SPLIT 4	30.690	2250.00	1572.11	1576.27	1575.69	1576.78	0.006281	6.62	556.94	348.39	0.67

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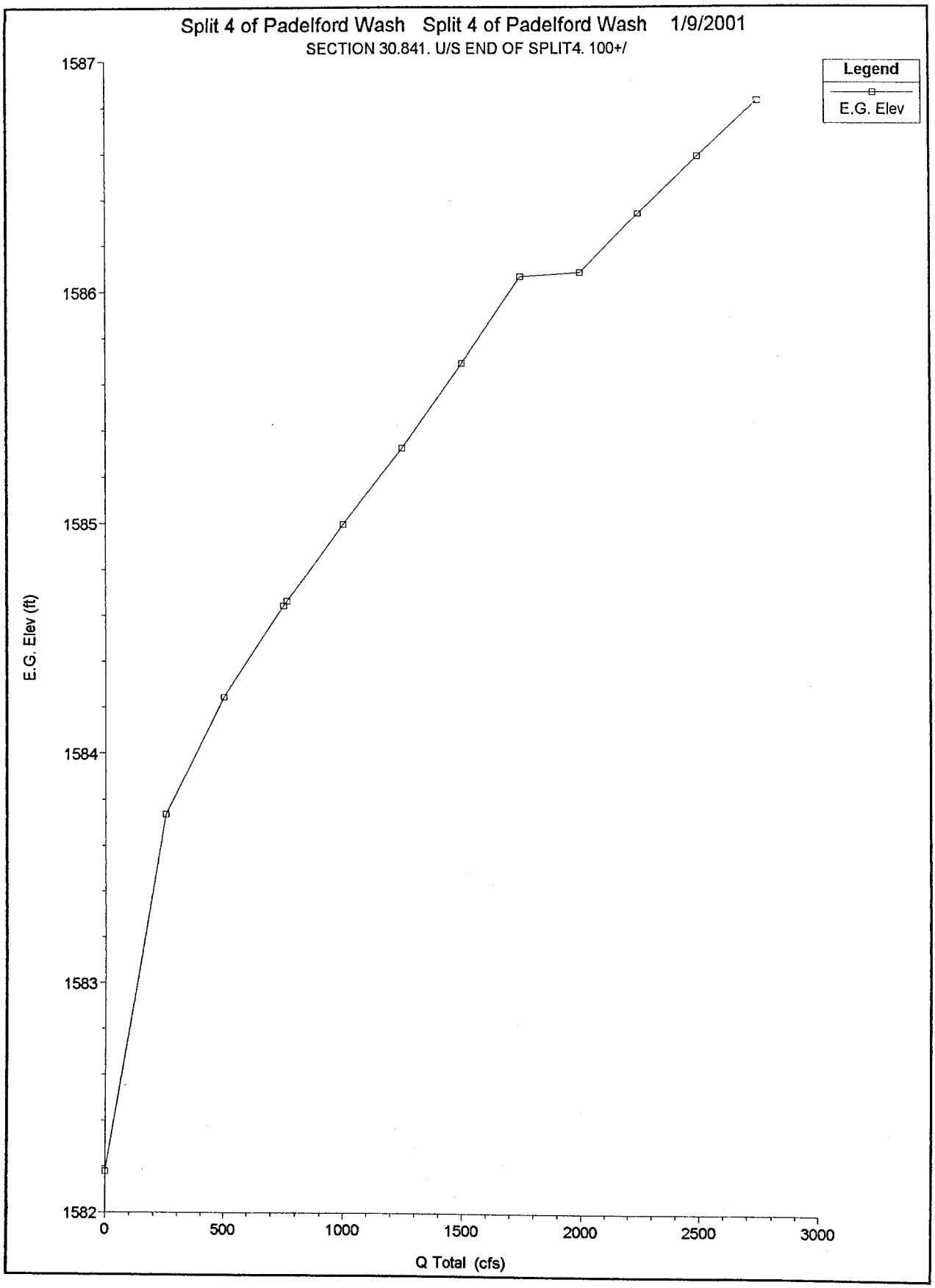
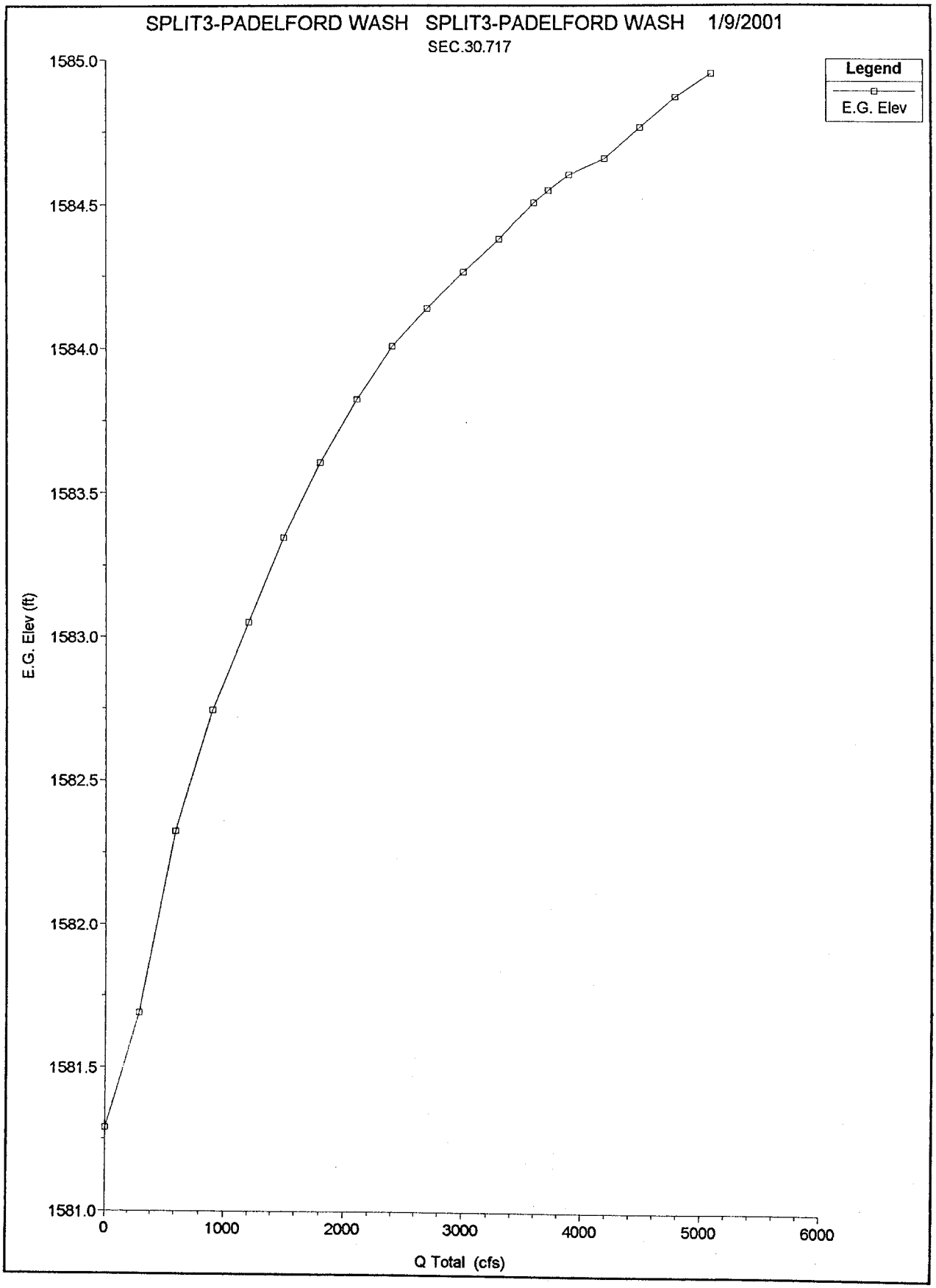

Split 4 of Padelford Wash Split 4 of Padelford Wash 1/9/2001
SECTION 30.841. U/S END OF SPLIT4. 100+/
Legend
E.G. Elev
E.G. Elev (ft)
1587
1586
1585
1584
1583
1582
0
500
1000
1500
2000
2500
3000
Q Total (cfs)

HEC-RAS Plan: SPLIT3A River: PADELFORD WASH Reach: SPLIT 3 (Continued)

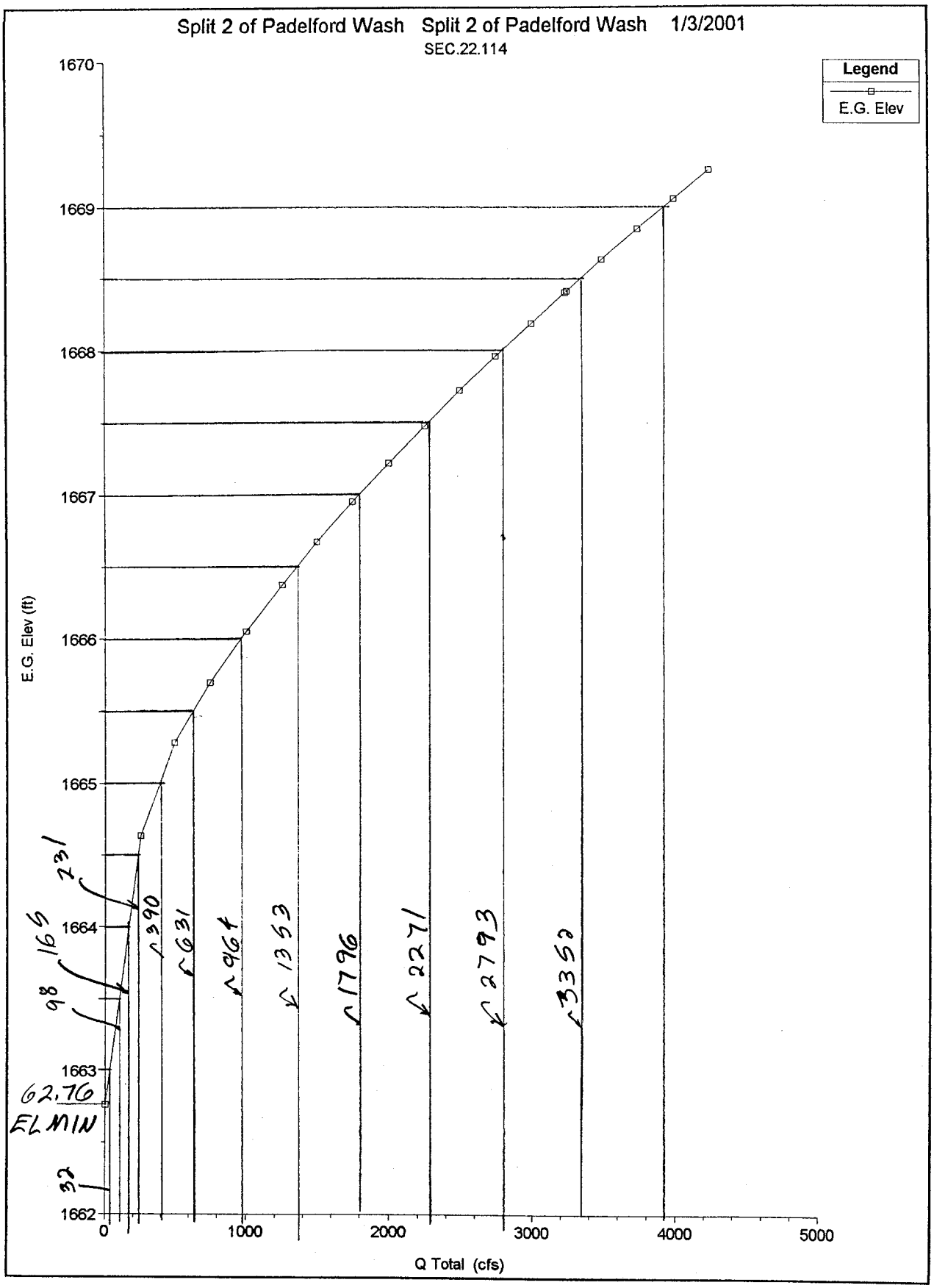
Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
SPLIT 3	30.765	3600.00	1583.90	1586.63		1586.83	0.008113	5.29	1115.17	705.77	0.70
SPLIT 3	30.765	3900.00	1583.90	1586.75		1586.96	0.008012	5.49	1200.70	720.29	0.70
SPLIT 3	30.765	4200.00	1583.90	1586.86		1587.08	0.007574	5.55	1281.67	724.76	0.69
SPLIT 3	30.765	4500.00	1583.90	1586.94		1587.16	0.007634	5.70	1336.01	727.74	0.70
SPLIT 3	30.765	4800.00	1583.90	1587.02		1587.25	0.007594	5.84	1394.60	730.94	0.70
SPLIT 3	30.765	5100.00	1583.90	1587.10		1587.35	0.007446	5.93	1458.81	734.44	0.70
SPLIT 3	30.717	3722.00	1581.29	1584.25		1584.55	0.012671	5.77	889.13	517.17	0.84
SPLIT 3	30.717	300.00	1581.29	1581.52		1581.69	0.017826	1.25	91.91	110.00	0.66
SPLIT 3	30.717	600.00	1581.29	1582.15		1582.32	0.016035	3.64	179.90	170.86	0.82
SPLIT 3	30.717	900.00	1581.29	1582.54		1582.74	0.015145	4.50	255.99	214.12	0.85
SPLIT 3	30.717	1200.00	1581.29	1582.81		1583.05	0.014848	4.99	316.31	234.50	0.86
SPLIT 3	30.717	1500.00	1581.29	1583.09		1583.35	0.014228	5.37	385.48	272.50	0.87
SPLIT 3	30.717	1800.00	1581.29	1583.35		1583.60	0.014588	5.26	464.89	347.54	0.87
SPLIT 3	30.717	2100.00	1581.29	1583.61		1583.82	0.015436	4.47	569.54	454.92	0.85
SPLIT 3	30.717	2400.00	1581.29	1583.79		1584.01	0.013909	4.70	656.79	494.92	0.83
SPLIT 3	30.717	2700.00	1581.29	1583.90		1584.14	0.013569	4.98	712.21	500.55	0.84
SPLIT 3	30.717	3000.00	1581.29	1584.01		1584.26	0.013279	5.24	765.77	505.94	0.84
SPLIT 3	30.717	3300.00	1581.29	1584.10		1584.38	0.013276	5.50	812.93	510.63	0.85
SPLIT 3	30.717	3600.00	1581.29	1584.21		1584.51	0.012630	5.67	871.85	515.96	0.84
SPLIT 3	30.717	3900.00	1581.29	1584.28		1584.60	0.012991	5.93	908.15	518.49	0.86
SPLIT 3	30.717	4200.00	1581.29	1584.29		1584.66	0.014859	6.37	912.08	518.78	0.92
SPLIT 3	30.717	4500.00	1581.29	1584.38		1584.77	0.014567	6.55	958.44	522.84	0.92
SPLIT 3	30.717	4800.00	1581.29	1584.47		1584.87	0.014277	6.72	1004.29	526.49	0.92
SPLIT 3	30.717	5100.00	1581.29	1584.52		1584.95	0.014845	6.98	1030.57	528.58	0.94
SPLIT 3	30.669	3722.00	1579.42	1581.52		1581.72	0.011635	4.32	1029.12	661.93	0.76
SPLIT 3	30.669	300.00	1579.42	1579.36		1579.43	0.006318		145.98	159.41	0.00
SPLIT 3	30.669	600.00	1579.42	1580.01		1580.07	0.006622	1.31	291.22	308.58	0.46
SPLIT 3	30.669	900.00	1579.42	1580.33		1580.41	0.007272	1.87	403.06	381.74	0.52
SPLIT 3	30.669	1200.00	1579.42	1580.57		1580.66	0.007538	2.25	500.95	430.07	0.55
SPLIT 3	30.669	1500.00	1579.42	1580.75		1580.85	0.008347	2.58	580.38	473.13	0.59
SPLIT 3	30.669	1800.00	1579.42	1580.94		1581.05	0.008547	2.78	675.41	529.37	0.61
SPLIT 3	30.669	2100.00	1579.42	1581.13		1581.25	0.008377	2.95	785.16	596.18	0.61
SPLIT 3	30.669	2400.00	1579.42	1581.18		1581.32	0.009873	3.27	813.14	610.01	0.67
SPLIT 3	30.669	2700.00	1579.42	1581.28		1581.43	0.010118	3.44	873.23	636.97	0.68

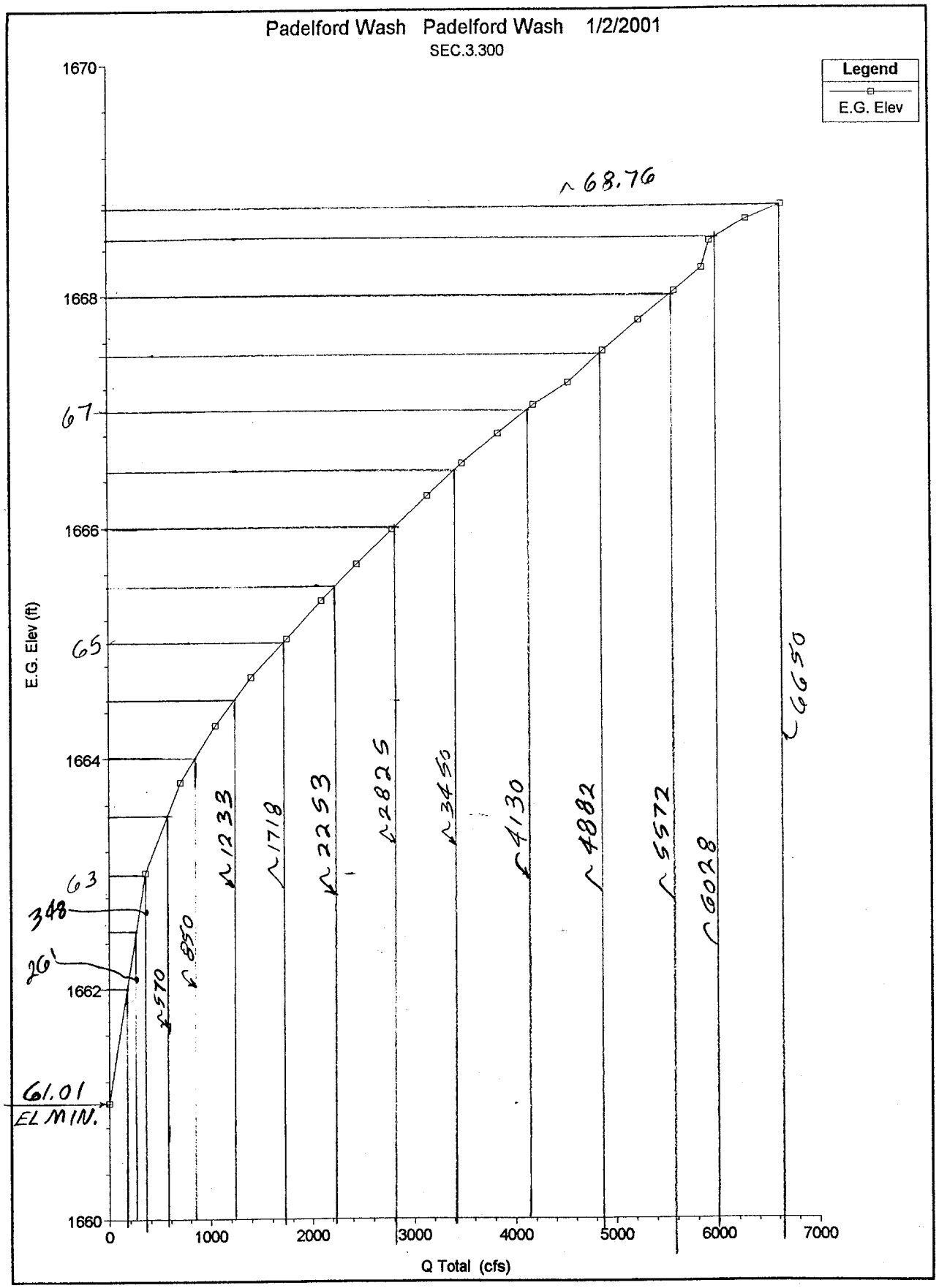
B-9


SPLIT3-PADELFORD WASH SPLIT3-PADELFORD WASH 1/9/2001
SEC.30.717
Legend
E.G. Elev
E.G. Elev (ft)
1585.0
1584.5
1584.0
1583.5
1583.0
1582.5
1582.0
1581.5
1581.0
0
1000
2000
3000
4000
5000
6000
Q Total (cfs)

FLOW SPLIT SUMMARY
FOR USE IN HEC-1 ANALYSIS
MAIN, SECTION 3.300 AND SPLIT 2, SECTION 22.114

E.G.ELEV.	SPLIT 2 Q SEC. 12.114 (CFS)	MAIN 2 Q SEC. 3.300 (CFS)	TOTAL Q (CFS)
1661.0	0	0	0
1662.5	0	261	261
1663.0	32	348	380
1663.5	98	570	668
1664.0	165	850	1015
1664.5	231	1233	1464
1665.0	390	1718	2108
1665.5	631	2253	2884
1666.0	964	2825	3789
1666.5	1353	3450	4803
1167.0	1796	4130	5926
1667.5	2271	4887	7158
1668.0	2793	5572	8365
1668.5	3352	6028	9380


Split 2 of Padelford Wash Split 2 of Padelford Wash 1/3/2001
SEC.22.114
Legend
E.G. Elev
E.G. Elev (ft)
Q Total (cfs)
1670
1669
1668
1667
1666
1665
1664
1663
1662
0
1000
2000
3000
4000
5000
231
165
98
62.76
ELMIN
32
390
631
964
1353
1796
2271
2793
3350


Padelford Wash Padelford Wash 1/2/2001
SEC.3.300
Legend
E.G. Elev
E.G. Elev (ft)
Q Total (cfs)
1670
1668
67
1666
65
1664
63
1662
1660
0
1000
2000
3000
4000
5000
6000
7000
~68.76
~570
~850
~1233
~1718
~2253
~2825
~3450
~4130
~4882
~5572
~6028
~6650
348
261
61.01
EL MIN.

HEC-RAS Plan: Split 2 of P River: PADELFORD WASH Reach: SPLIT 2 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
SPLIT 2	22.161	4250.00	1664.86	1670.61	1670.50	1672.38	0.011096	12.04	481.99	121.26	0.96
SPLIT 2	22.114	3236.00	1662.76	1666.97	1666.97	1668.40	0.014305	11.50	417.64	139.44	1.05
SPLIT 2	22.114	250.00	1662.76	1664.22	1664.22	1664.64	0.018441	5.30	52.26	73.38	0.95
SPLIT 2	22.114	500.00	1662.76	1664.81	1664.81	1665.28	0.011975	5.88	116.55	139.44	0.83
SPLIT 2	22.114	750.00	1662.76	1665.13	1665.13	1665.70	0.011998	6.68	161.62	139.44	0.86
SPLIT 2	22.114	1000.00	1662.76	1665.36	1665.36	1666.05	0.013251	7.57	192.91	139.44	0.92
SPLIT 2	22.114	1250.00	1662.76	1665.59	1665.59	1666.38	0.013440	8.17	225.08	139.44	0.94
SPLIT 2	22.114	1500.00	1662.76	1665.79	1665.79	1666.67	0.013735	8.74	253.57	139.44	0.97
SPLIT 2	22.114	1750.00	1662.76	1666.00	1666.00	1666.95	0.013625	9.17	282.47	139.44	0.98
SPLIT 2	22.114	2000.00	1662.76	1666.18	1666.18	1667.22	0.013872	9.65	307.19	139.44	1.00
SPLIT 2	22.114	2250.00	1662.76	1666.34	1666.34	1667.48	0.014144	10.10	330.15	139.44	1.01
SPLIT 2	22.114	2500.00	1662.76	1666.50	1666.50	1667.72	0.014372	10.53	352.14	139.44	1.03
SPLIT 2	22.114	2750.00	1662.76	1666.67	1666.67	1667.96	0.014167	10.83	376.70	139.44	1.03
SPLIT 2	22.114	3000.00	1662.76	1666.83	1666.83	1668.19	0.014214	11.17	398.36	139.44	1.04
SPLIT 2	22.114	3250.00	1662.76	1666.97	1666.97	1668.41	0.014317	11.52	418.70	139.44	1.05
SPLIT 2	22.114	3500.00	1662.76	1667.11	1667.11	1668.63	0.014569	11.89	436.86	139.44	1.07
SPLIT 2	22.114	3750.00	1662.76	1667.25	1667.25	1668.84	0.014582	12.18	456.69	139.44	1.07
SPLIT 2	22.114	4000.00	1662.76	1667.41	1667.41	1669.05	0.014219	12.37	480.02	139.44	1.07
SPLIT 2	22.114	4250.00	1662.76	1667.54	1667.54	1669.25	0.014419	12.69	496.89	139.44	1.08
SPLIT 2	22.066	3236.00	1660.18	1664.34	1663.83	1665.07	0.009642	9.36	583.25	201.03	0.86
SPLIT 2	22.066	250.00	1660.18	1661.87	1661.59	1662.02	0.006277	3.59	102.59	128.43	0.58
SPLIT 2	22.066	500.00	1660.18	1662.29	1661.99	1662.55	0.008183	5.00	171.39	201.03	0.69
SPLIT 2	22.066	750.00	1660.18	1662.63	1662.06	1662.92	0.007470	5.42	240.13	201.03	0.68
SPLIT 2	22.066	1000.00	1660.18	1662.87	1662.60	1663.20	0.008005	6.05	286.66	201.03	0.72
SPLIT 2	22.066	1250.00	1660.18	1663.10	1662.78	1663.48	0.007964	6.46	334.12	201.03	0.73
SPLIT 2	22.066	1500.00	1660.18	1663.30	1662.95	1663.72	0.008239	6.91	373.01	201.03	0.75
SPLIT 2	22.066	1750.00	1660.18	1663.48	1663.09	1663.95	0.008384	7.30	410.46	201.03	0.77
SPLIT 2	22.066	2000.00	1660.18	1663.66	1663.23	1664.16	0.008514	7.66	445.55	201.03	0.78
SPLIT 2	22.066	2250.00	1660.18	1663.85	1663.37	1664.38	0.008364	7.91	483.61	201.03	0.78
SPLIT 2	22.066	2500.00	1660.18	1663.97	1663.50	1664.56	0.008815	8.33	508.89	201.03	0.81
SPLIT 2	22.066	2750.00	1660.18	1664.11	1663.61	1664.74	0.009051	8.68	536.40	201.03	0.82
SPLIT 2	22.066	3000.00	1660.18	1664.23	1663.72	1664.91	0.009402	9.05	560.23	201.03	0.85
SPLIT 2	22.066	3250.00	1660.18	1664.37	1663.85	1665.09	0.009457	9.31	588.47	201.03	0.85
SPLIT 2	22.066	3500.00	1660.18	1664.49	1663.97	1665.26	0.009624	9.60	613.46	201.03	0.87

HEC-RAS Plan: Padelford Wa River: PADELFORD WASH Reach: REACH M1 (Continued)

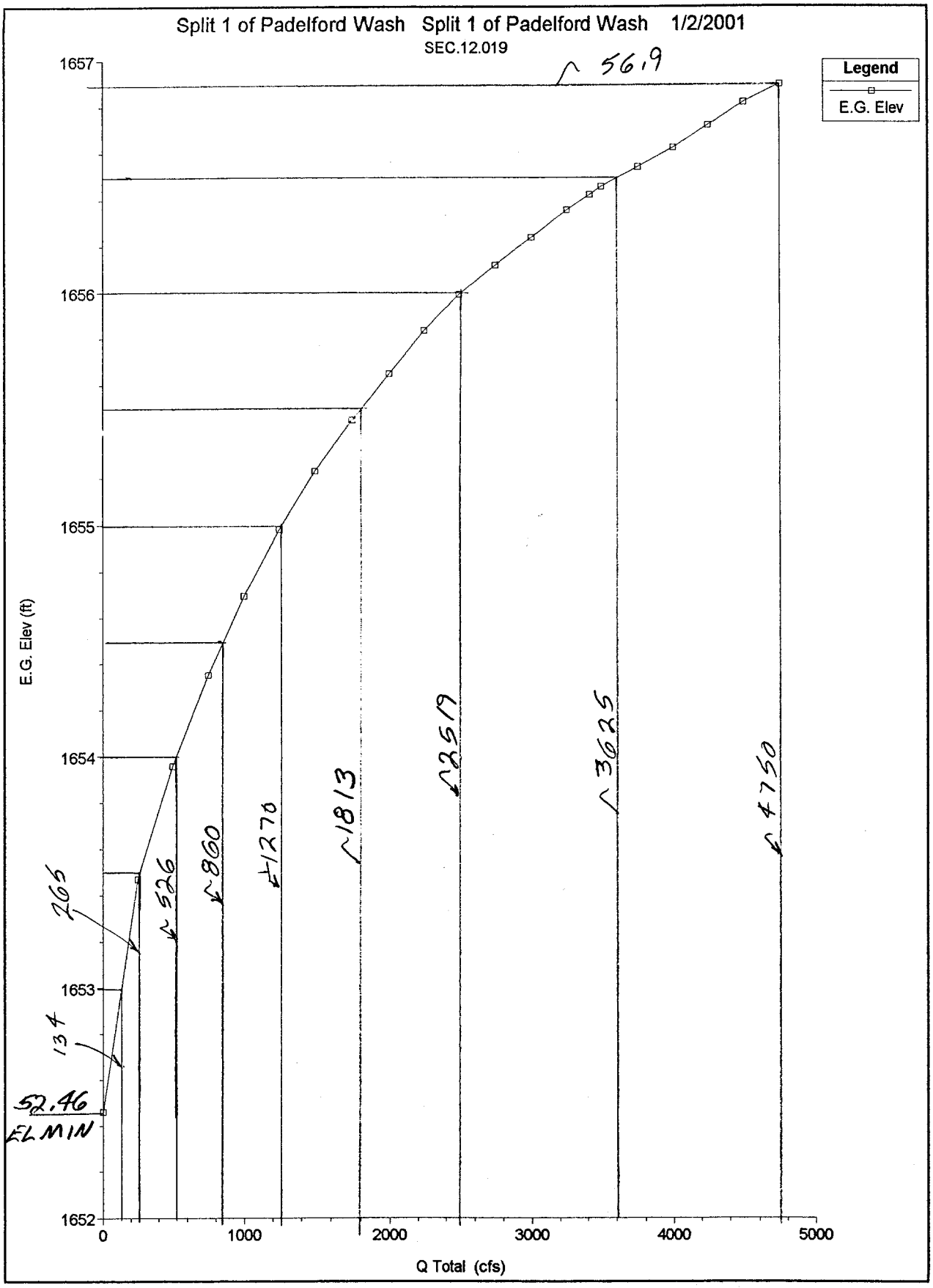
Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
REACH M1	3.300	1050.00	1661.01	1663.92		1664.28	0.007528	4.81	218.73	137.11	0.66
REACH M1	3.300	1400.00	1661.01	1664.26	1663.78	1664.70	0.007135	5.30	265.69	140.18	0.67
REACH M1	3.300	1750.00	1661.01	1664.48	1664.04	1665.03	0.007867	5.96	296.33	142.77	0.71
REACH M1	3.300	2100.00	1661.01	1664.73	1664.26	1665.36	0.007907	6.42	332.53	148.36	0.73
REACH M1	3.300	2450.00	1661.01	1664.96	1664.48	1665.68	0.007910	6.82	367.75	152.80	0.74
REACH M1	3.300	2800.00	1661.01	1665.19	1664.69	1665.98	0.007809	7.15	403.57	157.18	0.74
REACH M1	3.300	3150.00	1661.01	1665.41	1664.87	1666.26	0.007764	7.47	437.72	161.26	0.75
REACH M1	3.300	3500.00	1661.01	1665.62	1665.07	1666.54	0.007662	7.75	472.42	165.29	0.75
REACH M1	3.300	3850.00	1661.01	1665.82	1665.25	1666.80	0.007615	8.02	505.50	169.05	0.75
REACH M1	3.300	4200.00	1661.01	1666.00	1665.44	1667.05	0.007643	8.30	536.28	172.47	0.76
REACH M1	3.300	4550.00	1661.01	1665.27	1665.62	1667.24	0.018952	11.32	415.15	158.58	1.16
REACH M1	3.300	4900.00	1661.01	1665.34	1665.78	1667.51	0.020120	11.87	427.70	160.07	1.20
REACH M1	3.300	5250.00	1661.01	1665.43	1665.93	1667.77	0.020916	12.33	442.29	161.79	1.23
REACH M1	3.300	5600.00	1661.01	1665.54	1666.10	1668.02	0.021333	12.72	459.04	163.75	1.24
REACH M1	3.300	5950.00	1661.01	1667.45	1666.27	1668.46	0.004889	8.22	814.62	211.51	0.64
REACH M1	3.300	6300.00	1661.01	1667.58	1666.39	1668.64	0.005008	8.45	842.68	213.28	0.65
REACH M1	3.300	6650.00	1661.01	1665.80	1666.52	1668.76	0.023143	13.93	502.28	168.69	1.31
REACH M1	3.254	5870.00	1659.08	1664.18	1664.18	1665.23	0.009218	9.52	999.69	468.08	0.85
REACH M1	3.254	350.00	1659.08	1661.18		1661.34	0.006756	3.26	115.45	138.87	0.58
REACH M1	3.254	700.00	1659.08	1661.65		1661.91	0.007022	4.21	186.13	157.24	0.63
REACH M1	3.254	1050.00	1659.08	1661.98		1662.34	0.007626	4.98	244.36	201.38	0.67
REACH M1	3.254	1400.00	1659.08	1662.22		1662.70	0.008562	5.77	300.29	251.30	0.73
REACH M1	3.254	1750.00	1659.08	1662.52		1663.02	0.007674	6.01	378.97	271.07	0.71
REACH M1	3.254	2100.00	1659.08	1662.69		1663.27	0.008307	6.56	425.01	278.21	0.75
REACH M1	3.254	2450.00	1659.08	1662.83		1663.51	0.009120	7.13	463.00	285.00	0.79
REACH M1	3.254	2800.00	1659.08	1662.95		1663.73	0.009956	7.68	497.70	293.32	0.83
REACH M1	3.254	3150.00	1659.08	1663.05		1663.94	0.010796	8.22	529.64	300.77	0.87
REACH M1	3.254	3500.00	1659.08	1663.15		1664.14	0.011697	8.74	558.18	307.27	0.91
REACH M1	3.254	3850.00	1659.08	1663.24	1663.23	1664.34	0.012479	9.23	587.14	313.73	0.95
REACH M1	3.254	4200.00	1659.08	1663.34	1663.34	1664.53	0.013077	9.65	617.91	320.45	0.97
REACH M1	3.254	4550.00	1659.08	1663.82	1663.82	1664.74	0.008738	8.69	832.12	465.12	0.82
REACH M1	3.254	4900.00	1659.08	1663.92	1663.92	1664.88	0.008850	8.92	879.86	465.97	0.82
REACH M1	3.254	5250.00	1659.08	1664.02	1664.02	1665.01	0.008944	9.13	926.26	466.79	0.83
REACH M1	3.254	5600.00	1659.08	1664.12	1664.12	1665.13	0.009028	9.33	971.37	467.58	0.84
REACH M1	3.254	5950.00	1659.08	1663.45	1663.24	1665.91	0.025117	13.70	663.13	462.14	1.36

HEC-RAS Plan: Padelford Wa River: PADELFORD WASH Reach: REACH M1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
REACH M1	3.393	3150.00	1668.09	1671.48		1671.93	0.007687	6.85	666.82	254.63	0.72
REACH M1	3.393	3500.00	1668.09	1671.71		1672.18	0.007186	6.97	727.08	255.58	0.70
REACH M1	3.393	3850.00	1668.09	1671.95		1672.43	0.006727	7.07	787.56	256.52	0.69
REACH M1	3.393	4200.00	1668.09	1672.19		1672.68	0.006284	7.15	849.33	257.49	0.67
REACH M1	3.393	4550.00	1668.09	1672.42		1672.92	0.005928	7.23	909.22	258.42	0.66
REACH M1	3.393	4900.00	1668.09	1672.65		1673.17	0.005602	7.30	969.33	259.34	0.64
REACH M1	3.393	5250.00	1668.09	1672.88		1673.40	0.005339	7.37	1027.40	260.24	0.63
REACH M1	3.393	5600.00	1668.09	1673.10		1673.63	0.005079	7.43	1086.65	261.15	0.62
REACH M1	3.393	5950.00	1668.09	1673.33		1673.87	0.004839	7.48	1146.11	262.06	0.61
REACH M1	3.393	6300.00	1668.09	1673.56		1674.10	0.004616	7.53	1205.71	262.96	0.60
REACH M1	3.393	6650.00	1668.09	1673.79		1674.33	0.004410	7.57	1265.49	263.89	0.59
REACH M1	3.343	5870.00	1663.56	1669.42	1669.42	1671.80	0.011548	12.98	521.26	112.40	1.00
REACH M1	3.343	350.00	1663.56	1665.01	1665.00	1665.43	0.020332	5.25	68.21	81.62	0.98
REACH M1	3.343	700.00	1663.56	1665.62		1666.18	0.014005	6.10	120.26	89.56	0.89
REACH M1	3.343	1050.00	1663.56	1665.98	1665.93	1666.78	0.014984	7.28	153.33	94.15	0.95
REACH M1	3.343	1400.00	1663.56	1666.29	1666.29	1667.30	0.015387	8.21	183.62	98.07	0.99
REACH M1	3.343	1750.00	1663.56	1666.63	1666.63	1667.78	0.014556	8.80	217.10	102.33	0.99
REACH M1	3.343	2100.00	1663.56	1666.97	1666.97	1668.22	0.013287	9.18	253.42	106.97	0.96
REACH M1	3.343	2450.00	1663.56	1667.25	1667.25	1668.62	0.013062	9.67	282.46	107.63	0.97
REACH M1	3.343	2800.00	1663.56	1667.50	1667.50	1669.00	0.012847	10.12	310.26	108.21	0.98
REACH M1	3.343	3150.00	1663.56	1667.76	1667.76	1669.36	0.012507	10.49	338.26	108.78	0.98
REACH M1	3.343	3500.00	1663.56	1668.00	1668.00	1669.71	0.012322	10.87	364.24	109.30	0.98
REACH M1	3.343	3850.00	1663.56	1668.22	1668.22	1670.04	0.012204	11.24	388.90	109.79	0.98
REACH M1	3.343	4200.00	1663.56	1668.43	1668.43	1670.37	0.012226	11.62	411.40	110.24	0.99
REACH M1	3.343	4550.00	1663.56	1668.64	1668.64	1670.68	0.012095	11.94	434.97	110.71	0.99
REACH M1	3.343	4900.00	1663.56	1668.85	1668.85	1670.99	0.012001	12.26	457.65	111.15	1.00
REACH M1	3.343	5250.00	1663.56	1669.06	1669.06	1671.29	0.011758	12.51	481.88	111.63	1.00
REACH M1	3.343	5600.00	1663.56	1669.27	1669.27	1671.58	0.011628	12.77	504.38	112.07	1.00
REACH M1	3.343	5950.00	1663.56	1669.46	1669.46	1671.87	0.011525	13.04	526.22	112.49	1.00
REACH M1	3.343	6300.00	1663.56	1669.65	1669.65	1672.15	0.011448	13.30	547.35	112.90	1.00
REACH M1	3.343	6650.00	1663.56	1669.83	1669.83	1672.42	0.011397	13.56	567.78	113.30	1.00
REACH M1	3.300	5870.00	1661.01	1665.60	1666.23	1668.22	0.022019	13.08	468.95	164.89	1.27
REACH M1	3.300	350.00	1661.01	1662.80		1663.01	0.006237	3.65	95.84	77.39	0.58
REACH M1	3.300	700.00	1661.01	1663.51		1663.79	0.007599	4.28	163.68	120.93	0.65

FLOW SPLIT SUMMARY
FOR USE IN HEC-1 ANALYSIS
MAIN, SECTION 3.108 AND SPLIT 1, SECTION 12.019

E.G.ELEV.	SPLIT 1 Q SEC. 12.109 (CFS)	MAIN 1 Q SEC. 3.108 (CFS)	TOTAL Q (CFS)
1652.46	0	0	0
1653.0	134	0	134
1653.50	265	55	320
1654.0	526	113	639
1654.5	860	171	1031
1655.0	1270	300	1570
1655.5	1813	516	2329
1656.0	2519	826	3345
1656.5	3625	1280	4905
1656.9	4750	1695	6445


Split 1 of Padelford Wash Split 1 of Padelford Wash 1/2/2001
SEC.12.019
Legend
E.G. Elev
E.G. Elev (ft)
Q Total (cfs)
1657
1656
1655
1654
1653
1652
0
1000
2000
3000
4000
5000
56.9
265
134
52.46
EL MIN
526
860
1270
1813
2519
3625
4750

HEC-RAS Plan: Split 1 of P River: PADELFORD WASH Reach: SPLIT 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
SPLIT 1	12.019	3750.00	1652.46	1655.72	1655.81	1656.54	0.010287	8.29	738.78	579.54	0.86
SPLIT 1	12.019	4000.00	1652.46	1655.91	1655.88	1656.62	0.008453	7.85	853.92	580.62	0.79
SPLIT 1	12.019	4250.00	1652.46	1656.05	1655.96	1656.72	0.007743	7.73	932.35	581.36	0.76
SPLIT 1	12.019	4500.00	1652.46	1655.89	1656.03	1656.82	0.011133	8.96	839.39	580.48	0.90
SPLIT 1	12.019	4750.00	1652.46	1655.98	1656.09	1656.90	0.010816	9.00	889.93	580.96	0.89
SPLIT 1	11.973	3414.00	1648.30	1652.25	1652.25	1653.56	0.012176	9.67	422.15	186.00	0.95
SPLIT 1	11.973	250.00	1648.30	1649.60	1649.16	1649.75	0.005061	3.08	81.11	72.18	0.51
SPLIT 1	11.973	500.00	1648.30	1650.09	1649.61	1650.37	0.006568	4.24	118.29	87.62	0.61
SPLIT 1	11.973	750.00	1648.30	1650.42	1649.98	1650.83	0.007848	5.12	153.09	117.21	0.69
SPLIT 1	11.973	1000.00	1648.30	1650.75	1650.37	1651.22	0.007907	5.62	196.04	138.19	0.70
SPLIT 1	11.973	1250.00	1648.30	1651.02	1650.69	1651.56	0.007868	6.04	234.14	140.88	0.71
SPLIT 1	11.973	1500.00	1648.30	1651.21	1650.92	1651.85	0.008435	6.56	261.91	142.80	0.75
SPLIT 1	11.973	1750.00	1648.30	1651.33	1651.12	1652.09	0.009727	7.23	278.64	143.95	0.81
SPLIT 1	11.973	2000.00	1648.30	1651.50	1651.31	1652.35	0.010125	7.65	303.00	145.60	0.83
SPLIT 1	11.973	2250.00	1648.30	1651.62	1651.49	1652.58	0.010933	8.16	321.09	146.82	0.87
SPLIT 1	11.973	2500.00	1648.30	1651.38	1651.67	1652.86	0.018523	10.09	285.90	144.44	1.12
SPLIT 1	11.973	2750.00	1648.30	1651.59	1651.83	1653.06	0.016953	10.10	316.76	146.53	1.08
SPLIT 1	11.973	3000.00	1648.30	1651.86	1651.98	1653.24	0.014886	9.88	355.49	150.25	1.03
SPLIT 1	11.973	3250.00	1648.30	1652.13	1652.13	1653.43	0.012706	9.63	399.95	174.87	0.96
SPLIT 1	11.973	3500.00	1648.30	1652.31	1652.31	1653.63	0.011974	9.71	433.34	191.37	0.94
SPLIT 1	11.973	3750.00	1648.30	1652.45	1652.45	1653.81	0.011852	9.92	460.08	203.61	0.94
SPLIT 1	11.973	4000.00	1648.30	1652.46	1652.46	1654.00	0.013311	10.54	462.54	204.70	1.00
SPLIT 1	11.973	4250.00	1648.30	1652.55	1652.55	1654.18	0.013631	10.86	482.50	228.10	1.02
SPLIT 1	11.973	4500.00	1648.30	1653.03	1653.48	1654.30	0.009403	9.81	713.77	620.38	0.86
SPLIT 1	11.973	4750.00	1648.30	1653.12	1653.55	1654.41	0.009429	9.96	769.26	634.79	0.87
SPLIT 1	11.924	3414.00	1645.82	1649.54	1649.70	1650.32	0.011848	8.59	752.42	777.54	0.91
SPLIT 1	11.924	250.00	1645.82	1646.69	1646.67	1647.02	0.031793	4.97	54.56	78.93	1.15
SPLIT 1	11.924	500.00	1645.82	1647.23	1647.10	1647.64	0.019315	5.60	101.42	93.75	0.98
SPLIT 1	11.924	750.00	1645.82	1647.70		1648.15	0.014103	5.81	148.64	106.62	0.88
SPLIT 1	11.924	1000.00	1645.82	1648.02		1648.55	0.013946	6.40	190.44	158.43	0.90
SPLIT 1	11.924	1250.00	1645.82	1648.31		1648.92	0.013722	6.86	240.44	184.67	0.91
SPLIT 1	11.924	1500.00	1645.82	1648.55		1649.18	0.012873	7.03	288.25	213.77	0.89
SPLIT 1	11.924	1750.00	1645.82	1648.87		1649.44	0.010453	6.79	364.51	262.06	0.82
SPLIT 1	11.924	2000.00	1645.82	1649.07		1649.67	0.010049	7.02	419.98	296.51	0.81

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HEC-RAS Plan: Split 1 of P River: PADELFORD WASH Reach: SPLIT 1

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
SPLIT 1	12.066	3414.00	1654.43	1658.24	1658.24	1659.39	0.011803	8.76	437.72	222.43	0.91
SPLIT 1	12.066	250.00	1654.43	1655.92	1655.59	1656.03	0.005545	2.69	92.81	108.33	0.51
SPLIT 1	12.066	500.00	1654.43	1656.33	1655.92	1656.53	0.006168	3.60	138.83	113.47	0.57
SPLIT 1	12.066	750.00	1654.43	1656.67	1656.21	1656.95	0.006416	4.22	177.54	117.61	0.61
SPLIT 1	12.066	1000.00	1654.43	1656.94	1656.44	1657.29	0.006801	4.77	209.69	120.94	0.64
SPLIT 1	12.066	1250.00	1654.43	1657.16	1656.67	1657.59	0.007269	5.27	237.17	123.72	0.67
SPLIT 1	12.066	1500.00	1654.43	1657.33	1656.87	1657.85	0.008083	5.81	258.02	125.79	0.72
SPLIT 1	12.066	1750.00	1654.43	1657.51	1657.07	1658.11	0.008491	6.23	286.20	187.56	0.74
SPLIT 1	12.066	2000.00	1654.43	1657.64	1657.25	1658.33	0.009142	6.67	312.39	196.61	0.78
SPLIT 1	12.066	2250.00	1654.43	1657.81	1657.48	1658.55	0.009112	6.94	345.89	204.68	0.78
SPLIT 1	12.066	2500.00	1654.43	1657.74	1657.68	1658.72	0.012428	7.97	331.76	201.13	0.91
SPLIT 1	12.066	2750.00	1654.43	1657.85	1657.85	1658.91	0.012917	8.34	353.55	206.82	0.93
SPLIT 1	12.066	3000.00	1654.43	1658.00	1658.00	1659.10	0.012432	8.50	386.35	215.71	0.92
SPLIT 1	12.066	3250.00	1654.43	1658.16	1658.13	1659.28	0.011861	8.62	420.08	220.32	0.91
SPLIT 1	12.066	3500.00	1654.43	1658.29	1658.29	1659.45	0.011650	8.81	448.75	223.74	0.91
SPLIT 1	12.066	3750.00	1654.43	1658.41	1658.41	1659.61	0.011443	8.98	477.18	227.08	0.91
SPLIT 1	12.066	4000.00	1654.43	1658.50	1658.50	1659.77	0.011783	9.28	496.20	229.28	0.93
SPLIT 1	12.066	4250.00	1654.43	1658.53	1658.53	1659.93	0.012810	9.74	503.55	230.13	0.97
SPLIT 1	12.066	4500.00	1654.43	1658.52	1658.52	1660.10	0.014461	10.33	502.20	229.98	1.03
SPLIT 1	12.066	4750.00	1654.43	1658.57	1658.57	1660.27	0.015198	10.71	514.43	235.65	1.06
SPLIT 1	12.019	3414.00	1652.46	1655.57	1655.70	1656.42	0.011072	8.30	651.61	578.71	0.88
SPLIT 1	12.019	250.00	1652.46	1653.18	1653.18	1653.47	0.023960	4.35	59.69	106.54	1.00
SPLIT 1	12.019	500.00	1652.46	1653.52	1653.52	1653.96	0.021063	5.36	97.89	116.48	1.01
SPLIT 1	12.019	750.00	1652.46	1653.79	1653.79	1654.35	0.019956	6.09	130.36	124.28	1.02
SPLIT 1	12.019	1000.00	1652.46	1654.06	1654.06	1654.69	0.017656	6.51	166.15	155.34	0.99
SPLIT 1	12.019	1250.00	1652.46	1654.30	1654.30	1654.98	0.016176	6.82	207.24	185.31	0.97
SPLIT 1	12.019	1500.00	1652.46	1654.54	1654.54	1655.23	0.014335	6.92	254.11	204.01	0.93
SPLIT 1	12.019	1750.00	1652.46	1654.70	1654.70	1655.45	0.013816	7.22	290.20	227.96	0.92
SPLIT 1	12.019	2000.00	1652.46	1654.88	1654.88	1655.65	0.012874	7.40	332.54	247.91	0.91
SPLIT 1	12.019	2250.00	1652.46	1654.99	1654.99	1655.84	0.013277	7.79	360.93	252.74	0.93
SPLIT 1	12.019	2500.00	1652.46	1655.33	1655.33	1655.99	0.009108	7.09	515.71	560.99	0.79
SPLIT 1	12.019	2750.00	1652.46	1655.42	1655.47	1656.12	0.009306	7.34	568.43	574.10	0.80
SPLIT 1	12.019	3000.00	1652.46	1655.48	1655.57	1656.24	0.010055	7.74	599.43	578.22	0.83
SPLIT 1	12.019	3250.00	1652.46	1655.51		1656.36	0.011099	8.20	618.98	578.41	0.88
SPLIT 1	12.019	3500.00	1652.46	1655.59	1655.73	1656.46	0.011064	8.35	668.14	578.87	0.88

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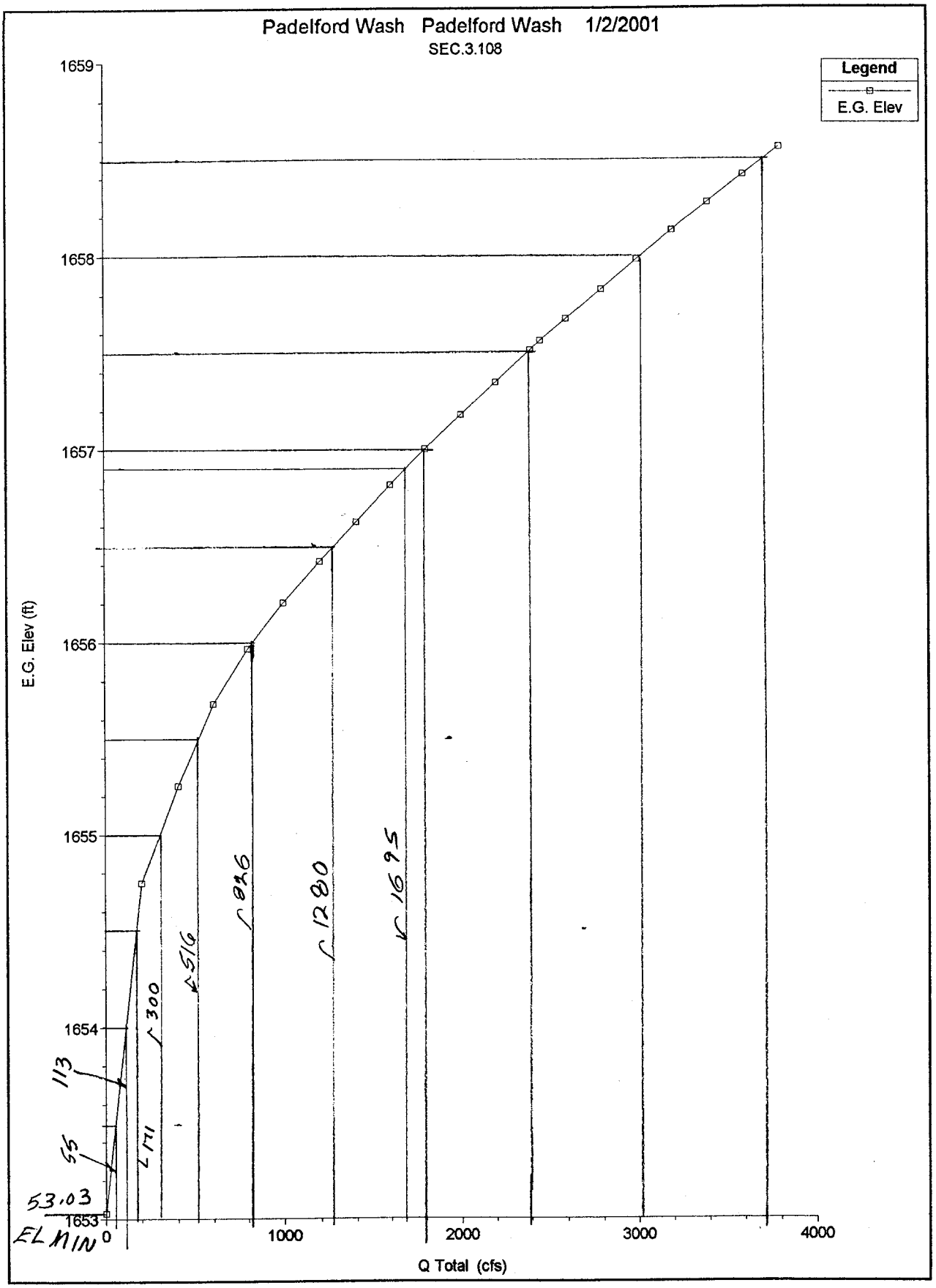
Padelford Wash Padelford Wash 1/2/2001
SEC.3.108
Legend
E.G. Elev
E.G. Elev (ft)
Q Total (cfs)
1659
1658
1657
1656
1655
1654
1653
0
1000
2000
3000
4000
113
55
53.03
EL MIN
300
516
826
1280
1695

HEC-RAS Plan: Padelford Wa River: PADELFORD WASH Reach: REACH M1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
REACH M1	3.156	2400.00	1654.73	1659.46	1659.33	1660.37	0.009641	9.11	410.77	171.97	0.85
REACH M1	3.156	2600.00	1654.73	1659.59	1659.44	1660.55	0.009696	9.36	433.42	171.97	0.86
REACH M1	3.156	2800.00	1654.73	1659.72	1659.56	1660.72	0.009690	9.58	456.24	171.97	0.86
REACH M1	3.156	3000.00	1654.73	1659.84	1659.66	1660.88	0.009779	9.82	476.81	171.97	0.87
REACH M1	3.156	3200.00	1654.73	1659.96	1659.77	1661.04	0.009785	10.03	498.10	171.97	0.88
REACH M1	3.156	3400.00	1654.73	1660.09		1661.20	0.009748	10.22	519.62	171.97	0.88
REACH M1	3.156	3600.00	1654.73	1660.21		1661.35	0.009754	10.41	539.87	171.97	0.89
REACH M1	3.156	3800.00	1654.73	1660.32		1661.50	0.009780	10.61	559.29	171.97	0.89
REACH M1	3.108	2456.00	1653.03	1656.66	1656.56	1657.56	0.013383	9.55	409.92	182.01	0.98
REACH M1	3.108	200.00	1653.03	1654.50		1654.75	0.013707	4.27	60.84	96.56	0.81
REACH M1	3.108	400.00	1653.03	1654.92		1655.25	0.013023	5.23	105.73	122.21	0.83
REACH M1	3.108	600.00	1653.03	1655.24		1655.68	0.012916	6.07	152.16	169.02	0.86
REACH M1	3.108	800.00	1653.03	1655.49		1655.97	0.012134	6.50	196.63	182.01	0.86
REACH M1	3.108	1000.00	1653.03	1655.69		1656.20	0.011852	6.89	232.87	182.01	0.86
REACH M1	3.108	1200.00	1653.03	1655.80	1655.80	1656.42	0.013444	7.61	253.17	182.01	0.93
REACH M1	3.108	1400.00	1653.03	1655.95	1655.91	1656.62	0.013564	8.01	280.68	182.01	0.94
REACH M1	3.108	1600.00	1653.03	1656.10	1656.06	1656.81	0.013508	8.34	307.72	182.01	0.95
REACH M1	3.108	1800.00	1653.03	1656.24	1656.18	1657.00	0.013472	8.65	333.29	182.01	0.96
REACH M1	3.108	2000.00	1653.03	1656.36	1656.29	1657.17	0.013594	8.98	356.38	182.01	0.97
REACH M1	3.108	2200.00	1653.03	1656.48	1656.41	1657.34	0.013795	9.31	377.66	182.01	0.98
REACH M1	3.108	2400.00	1653.03	1656.61	1656.53	1657.51	0.013585	9.53	401.83	182.01	0.98
REACH M1	3.108	2600.00	1653.03	1656.73	1656.64	1657.67	0.013628	9.80	422.92	182.01	0.99
REACH M1	3.108	2800.00	1653.03	1656.83	1656.74	1657.82	0.013871	10.10	441.23	182.01	1.01
REACH M1	3.108	3000.00	1653.03	1656.95	1656.83	1657.98	0.013766	10.31	462.49	182.01	1.01
REACH M1	3.108	3200.00	1653.03	1657.05	1656.93	1658.13	0.013914	10.57	480.49	182.01	1.02
REACH M1	3.108	3400.00	1653.03	1657.14	1657.02	1658.27	0.014070	10.83	497.79	182.01	1.03
REACH M1	3.108	3600.00	1653.03	1657.24	1657.13	1658.41	0.014168	11.07	515.24	182.01	1.04
REACH M1	3.108	3800.00	1653.03	1657.33	1657.23	1658.55	0.014225	11.29	532.70	182.01	1.04
REACH M1	3.061	2456.00	1649.95	1653.31	1653.31	1654.19	0.013703	8.64	406.51	222.24	0.96
REACH M1	3.061	200.00	1649.95	1651.48		1651.67	0.011369	3.50	57.11	76.89	0.72
REACH M1	3.061	400.00	1649.95	1651.85		1652.16	0.011944	4.54	98.36	153.24	0.78
REACH M1	3.061	600.00	1649.95	1652.08		1652.49	0.012700	5.31	140.03	193.30	0.83
REACH M1	3.061	800.00	1649.95	1652.25		1652.75	0.013892	6.02	173.11	206.07	0.88
REACH M1	3.061	1000.00	1649.95	1652.40		1652.98	0.014291	6.54	206.32	215.90	0.91

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FLOW SPLIT SUMMARY
FOR USE IN HEC-1 ANALYSIS
SPLT 1, SECTION 11.523 AND (MN 1), NORMAL DEPTH WEIR OVERFLOW TO PADELFORD WASH
(Normal Depth Assumptions: width = 800 FT., S = 0.02 FT./FT., N = 0.055)

WSE	WEIR IE.	FLOW DEPTH (FT.)	SPT MN 1 (CFS)	SPLT I (CFS)	TOTAL
1620.60	1624.4	0	0	0	0
1622.48	1624.4	0	0	250	250
1622.98	1624.4	0	0	500	500
1623.32	1624.4	0	0	750	750
1623.61	1624.4	0	0	1000	1000
1623.84	1624.4	0	0	1250	1250
1624.07	1624.4	0	0	1500	1500
1624.27	1624.4	0	0	1750	1750
1624.45	1624.4	0.05	21	2000	2021
1624.61	1624.4	0.21	227	2250	2477
1624.80	1624.4	0.40	663	2500	3163
1624.97	1624.4	0.57	1197	2750	3947
1625.11	1624.4	0.71	1725	3000	4725
1625.24	1624.4	0.84	2283	3250	5533
1625.38	1624.4	0.98	2950	3500	6450
1625.64	1624.4	1.24	4365	3750	8115
1625.79	1624.4	1.39	5279	4000	9279

HEC-RAS Plan: Split 1 of P River: PADELFORD WASH Reach: SPLIT 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
SPLIT 1	11.621	3000.00	1625.98	1629.82	1629.98	1630.67	0.014551	10.02	623.65	431.62	1.02
SPLIT 1	11.621	3250.00	1625.98	1630.05	1630.05	1630.74	0.011441	9.33	721.51	434.08	0.92
SPLIT 1	11.621	3500.00	1625.98	1630.12	1630.12	1630.85	0.011795	9.61	752.43	434.86	0.93
SPLIT 1	11.621	3750.00	1625.98	1630.18	1630.18	1630.95	0.012367	9.95	776.97	435.48	0.96
SPLIT 1	11.621	4000.00	1625.98	1630.24	1630.24	1631.05	0.012644	10.20	806.77	436.22	0.97
SPLIT 1	11.621	4250.00	1625.98	1630.33	1630.33	1631.14	0.012618	10.35	842.27	437.11	0.98
SPLIT 1	11.621	4500.00	1625.98	1630.40	1630.40	1631.23	0.012765	10.55	872.87	437.87	0.98
SPLIT 1	11.621	4750.00	1625.98	1630.46	1630.46	1631.33	0.012921	10.74	902.29	438.61	0.99
SPLIT 1	11.523	3414.00	1620.60	1625.32	1624.72	1625.70	0.006608	7.56	962.04	485.26	0.70
SPLIT 1	11.523	250.00	1620.60	1622.48		1622.74	0.012814	4.82	82.12	118.75	0.81
SPLIT 1	11.523	500.00	1620.60	1622.98		1623.26	0.012182	5.39	151.23	163.86	0.81
SPLIT 1	11.523	750.00	1620.60	1623.32		1623.65	0.011892	6.04	213.72	201.65	0.83
SPLIT 1	11.523	1000.00	1620.60	1623.61		1623.97	0.010909	6.39	276.78	228.04	0.81
SPLIT 1	11.523	1250.00	1620.60	1623.84		1624.23	0.010709	6.78	333.40	267.60	0.82
SPLIT 1	11.523	1500.00	1620.60	1624.07		1624.48	0.010028	7.01	404.56	347.51	0.81
SPLIT 1	11.523	1750.00	1620.60	1624.27		1624.70	0.009820	7.32	483.14	417.12	0.81
SPLIT 1	11.523	2000.00	1620.60	1624.45		1624.86	0.009067	7.36	559.60	432.20	0.78
SPLIT 1	11.523	2250.00	1620.60	1624.61		1625.02	0.008622	7.45	629.00	445.11	0.77
SPLIT 1	11.523	2500.00	1620.60	1624.80	1624.47	1625.20	0.008027	7.51	715.41	463.90	0.75
SPLIT 1	11.523	2750.00	1620.60	1624.97	1624.56	1625.35	0.007317	7.42	794.00	469.84	0.73
SPLIT 1	11.523	3000.00	1620.60	1625.11	1624.62	1625.48	0.006982	7.46	860.07	474.77	0.71
SPLIT 1	11.523	3250.00	1620.60	1625.24	1624.69	1625.61	0.006725	7.51	923.15	479.43	0.71
SPLIT 1	11.523	3500.00	1620.60	1625.38	1624.75	1625.75	0.006484	7.56	987.48	493.69	0.70
SPLIT 1	11.523	3750.00	1620.60	1625.64	1624.96	1625.97	0.005531	7.31	1124.30	525.97	0.65
SPLIT 1	11.523	4000.00	1620.60	1625.79	1625.03	1626.11	0.005161	7.24	1200.13	525.97	0.63
SPLIT 1	11.523	4250.00	1620.60	1625.88	1625.10	1626.21	0.005170	7.35	1247.96	525.97	0.64
SPLIT 1	11.523	4500.00	1620.60	1625.98	1625.16	1626.31	0.005089	7.41	1302.02	525.97	0.63
SPLIT 1	11.523	4750.00	1620.60	1626.07	1625.21	1626.41	0.005057	7.50	1351.20	525.97	0.63
SPLIT 1	11.423	3414.00	1615.32	1618.79	1618.70	1619.94	0.019363	11.37	485.69	206.70	1.17
SPLIT 1	11.423	250.00	1615.32	1616.71		1616.86	0.009849	3.79	99.37	153.91	0.69
SPLIT 1	11.423	500.00	1615.32	1617.10		1617.33	0.010199	4.75	163.05	169.45	0.74
SPLIT 1	11.423	750.00	1615.32	1617.40		1617.69	0.010583	5.46	214.90	180.78	0.78
SPLIT 1	11.423	1000.00	1615.32	1617.60		1617.97	0.011733	6.24	251.99	184.62	0.84
SPLIT 1	11.423	1250.00	1615.32	1617.82		1618.24	0.011812	6.77	292.07	188.67	0.86

Worksheet
Worksheet for Rectangular Channel

Project Description	
Project File	c:\fmw\padel2.fm2
Worksheet	weir flw ratng crve frm split1.sec11.523
Flow Element	Rectangular Channel
Method	Manning's Formula
Solve For	Discharge

Input Data		
Mannings Coefficient	0.055	
Channel Slope	0.020000	ft/ft
Depth	0.57	ft
Bottom Width	300.00	ft

Results		
Discharge	1196.60	ft^3/s
Flow Area	456.00	ft^2
Wetted Perimeter	801.14	ft
Top Width	800.00	ft
Critical Depth	0.41	ft
Critical Slope	0.059355	ft/ft
Velocity	2.62	ft/s
Velocity Head	0.11	ft
Specific Energy	0.68	ft
Froude Number	0.61	
Flow is subcritical.		

FLOW SPLIT SUMMARY
FOR USE IN HEC-1 ANALYSIS
SPLT 1, SECTION 11.093 AND SPLIT 5, SECTION 51.088

E.G.ELEV.	SPLIT 5 Q SEC. 51.088 (CFS)	SPLT 1 Q SEC. 11.093 (CFS)	TOTAL Q (CFS)
1696.6	0	0	0
1598.0	147	236	383
1598.5	263	422	685
1599.0	379	721	1100
1599.5	495	1217	1712
1600.0	1000	1853	2853
1600.5	1694	2594	4288
1601.0	2548	3692	6240

HEC-RAS Plan: Plan 01 River: PADELFORD WASH Reach: SPLIT 5

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
SPLIT 5	51.088	2500.00	1597.37	1600.55	1600.27	1600.98	0.010053	7.29	656.63	516.17	0.82
SPLIT 5	51.088	500.00	1597.37	1599.34	1599.01	1599.52	0.008476	4.24	205.05	299.20	0.67
SPLIT 5	51.088	1000.00	1597.37	1599.74	1599.58	1600.00	0.009554	5.42	333.98	337.41	0.75
SPLIT 5	51.088	1500.00	1597.37	1600.07	1599.82	1600.38	0.009233	6.03	447.67	351.78	0.76
SPLIT 5	51.088	2000.00	1597.37	1600.32	1600.02	1600.69	0.009857	6.75	545.79	421.64	0.80
SPLIT 5	51.088	3000.00	1597.37	1600.71	1600.38	1601.19	0.010666	7.83	739.42	523.39	0.86
SPLIT 5	51.047	2500.00	1595.15	1598.13		1598.68	0.012051	7.33	533.56	362.42	0.88
SPLIT 5	51.047	500.00	1595.15	1596.79	1596.51	1597.02	0.016984	4.53	147.74	211.95	0.89
SPLIT 5	51.047	1000.00	1595.15	1597.27		1597.62	0.013653	5.57	267.20	284.97	0.86
SPLIT 5	51.047	1500.00	1595.15	1597.56		1598.01	0.014071	6.46	351.47	301.99	0.91
SPLIT 5	51.047	2000.00	1595.15	1597.85	1597.70	1598.35	0.012895	6.92	440.94	315.75	0.89
SPLIT 5	51.047	3000.00	1595.15	1598.46		1599.01	0.010154	7.41	665.29	411.96	0.83
SPLIT 5	50.951	2500.00	1588.30	1593.00	1592.53	1593.52	0.008783	7.66	600.87	343.18	0.79
SPLIT 5	50.951	500.00	1588.30	1591.45		1591.64	0.007310	4.22	187.82	209.15	0.63
SPLIT 5	50.951	1000.00	1588.30	1591.93		1592.24	0.008520	5.57	297.73	241.74	0.72
SPLIT 5	50.951	1500.00	1588.30	1592.37		1592.74	0.008131	6.27	410.05	271.32	0.73
SPLIT 5	50.951	2000.00	1588.30	1592.73		1593.17	0.008262	6.97	513.08	310.58	0.75
SPLIT 5	50.951	3000.00	1588.30	1593.19		1593.85	0.010330	8.67	670.85	421.12	0.87
SPLIT 5	50.846	2500.00	1580.60	1587.02		1587.81	0.012683	8.06	513.28	554.56	0.91
SPLIT 5	50.846	500.00	1580.60	1585.14	1585.05	1585.80	0.016714	6.51	76.82	53.51	0.96
SPLIT 5	50.846	1000.00	1580.60	1586.17	1586.17	1586.68	0.012181	6.02	210.44	239.40	0.84
SPLIT 5	50.846	1500.00	1580.60	1586.49	1586.49	1587.14	0.013172	6.95	295.32	297.35	0.89
SPLIT 5	50.846	2000.00	1580.60	1586.75		1587.50	0.013451	7.66	384.32	389.96	0.92
SPLIT 5	50.846	3000.00	1580.60	1587.28		1588.02	0.011209	8.09	658.96	593.49	0.87
SPLIT 5	50.754	2500.00	1575.46	1581.88		1582.68	0.009193	9.09	533.99	320.91	0.83
SPLIT 5	50.754	500.00	1575.46	1579.64		1580.12	0.008578	6.00	108.09	80.59	0.73
SPLIT 5	50.754	1000.00	1575.46	1580.83	1580.32	1581.28	0.006584	6.20	250.67	163.88	0.66
SPLIT 5	50.754	1500.00	1575.46	1581.28	1581.03	1581.86	0.007474	7.30	358.20	265.71	0.73
SPLIT 5	50.754	2000.00	1575.46	1581.57		1582.31	0.008902	8.45	440.59	295.40	0.80
SPLIT 5	50.754	3000.00	1575.46	1582.11		1582.99	0.009853	9.79	613.91	384.23	0.87
SPLIT 5	50.639	2500.00	1568.05	1576.36	1576.36	1577.21	0.009847	8.02	451.11	310.50	0.83

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HEC-RAS Plan: Split 1 of P River: PADELFORD WASH Reach: SPLIT 1 (Continued)

Reach	River Sta	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
		(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
SPLIT 1	11.140	3750.00	1598.80	1602.39		1602.60	0.005841	5.06	1188.57	665.96	0.61
SPLIT 1	11.140	4000.00	1598.80	1602.53		1602.73	0.005272	5.01	1281.97	668.04	0.59
SPLIT 1	11.140	4250.00	1598.80	1602.59		1602.80	0.005409	5.17	1322.36	668.87	0.60
SPLIT 1	11.140	4500.00	1598.80	1602.66		1602.89	0.005420	5.28	1371.30	669.87	0.60
SPLIT 1	11.140	4750.00	1598.80	1602.73		1602.97	0.005421	5.39	1419.83	670.87	0.60
SPLIT 1	11.093	3813.00	1596.61	1600.66		1601.06	0.006560	6.42	980.10	574.51	0.68
SPLIT 1	11.093	250.00	1596.61	1597.88		1598.08	0.014931	4.29	78.66	104.57	0.83
SPLIT 1	11.093	500.00	1596.61	1598.55		1598.69	0.009805	3.44	180.43	208.09	0.67
SPLIT 1	11.093	750.00	1596.61	1598.88		1599.04	0.008754	3.81	257.42	262.28	0.66
SPLIT 1	11.093	1000.00	1596.61	1599.09		1599.30	0.009254	4.38	318.28	312.48	0.70
SPLIT 1	11.093	1250.00	1596.61	1599.29		1599.53	0.008648	4.70	385.13	343.00	0.70
SPLIT 1	11.093	1500.00	1596.61	1599.46		1599.73	0.008509	5.03	445.56	362.76	0.70
SPLIT 1	11.093	1750.00	1596.61	1599.64		1599.93	0.007819	5.18	511.69	377.13	0.69
SPLIT 1	11.093	2000.00	1596.61	1599.80		1600.10	0.007482	5.36	571.52	390.53	0.68
SPLIT 1	11.093	2250.00	1596.61	1599.95		1600.26	0.007173	5.52	631.94	417.89	0.68
SPLIT 1	11.093	2500.00	1596.61	1600.13		1600.44	0.006518	5.55	709.27	454.61	0.65
SPLIT 1	11.093	2750.00	1596.61	1600.28		1600.60	0.006132	5.63	782.07	486.68	0.64
SPLIT 1	11.093	3000.00	1596.61	1600.38		1600.72	0.006197	5.82	831.90	504.14	0.65
SPLIT 1	11.093	3250.00	1596.61	1600.48		1600.83	0.006219	5.98	883.16	520.97	0.65
SPLIT 1	11.093	3500.00	1596.61	1600.51		1600.90	0.006936	6.36	896.50	524.98	0.69
SPLIT 1	11.093	3750.00	1596.61	1600.63		1601.03	0.006622	6.41	962.98	553.46	0.68
SPLIT 1	11.093	4000.00	1596.61	1600.72		1601.17	0.007198	6.82	1014.10	590.22	0.71
SPLIT 1	11.093	4250.00	1596.61	1600.83		1601.27	0.006817	6.81	1079.59	590.22	0.70
SPLIT 1	11.093	4500.00	1596.61	1600.92		1601.37	0.006691	6.88	1131.32	590.22	0.70
SPLIT 1	11.093	4750.00	1596.61	1601.00		1601.46	0.006605	6.96	1180.10	590.22	0.69
SPLIT 1	11.044	3813.00	1593.24	1598.12	1598.12	1598.96	0.010333	9.73	788.83	442.71	0.89
SPLIT 1	11.044	250.00	1593.24	1595.35	1594.98	1595.59	0.006872	4.00	71.20	82.27	0.61
SPLIT 1	11.044	500.00	1593.24	1595.83	1595.59	1596.24	0.009165	5.41	124.49	152.02	0.73
SPLIT 1	11.044	750.00	1593.24	1596.16	1596.16	1596.64	0.009730	6.12	186.73	209.08	0.77
SPLIT 1	11.044	1000.00	1593.24	1596.47	1596.39	1596.94	0.009101	6.37	251.87	223.26	0.76
SPLIT 1	11.044	1250.00	1593.24	1596.67	1596.59	1597.20	0.009561	6.83	299.22	233.86	0.79
SPLIT 1	11.044	1500.00	1593.24	1596.89	1596.74	1597.43	0.009413	7.11	352.10	254.61	0.79
SPLIT 1	11.044	1750.00	1593.24	1597.03	1596.92	1597.64	0.009963	7.60	389.74	266.69	0.82
SPLIT 1	11.044	2000.00	1593.24	1597.17	1597.08	1597.83	0.010468	8.04	425.71	278.38	0.85

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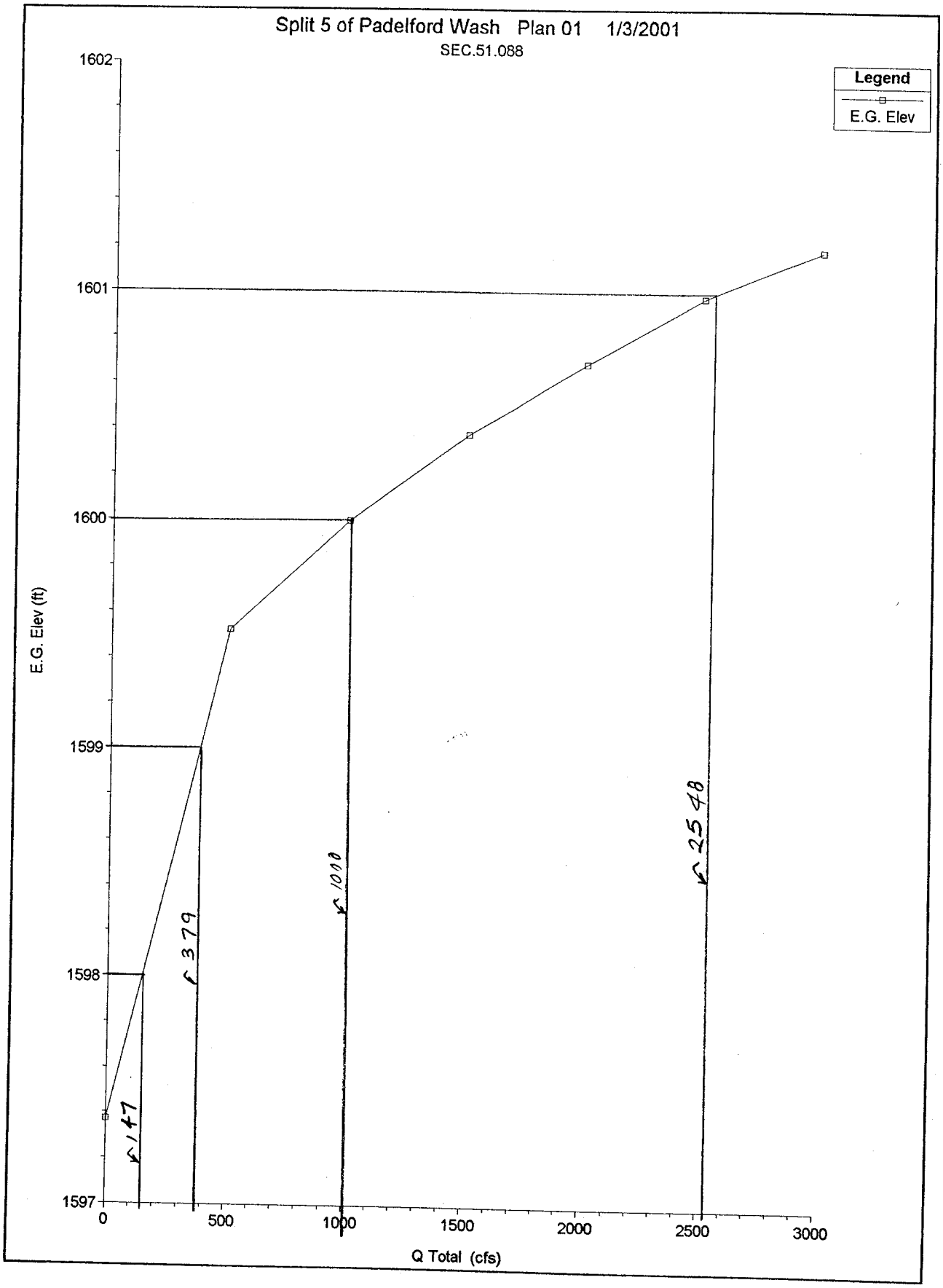
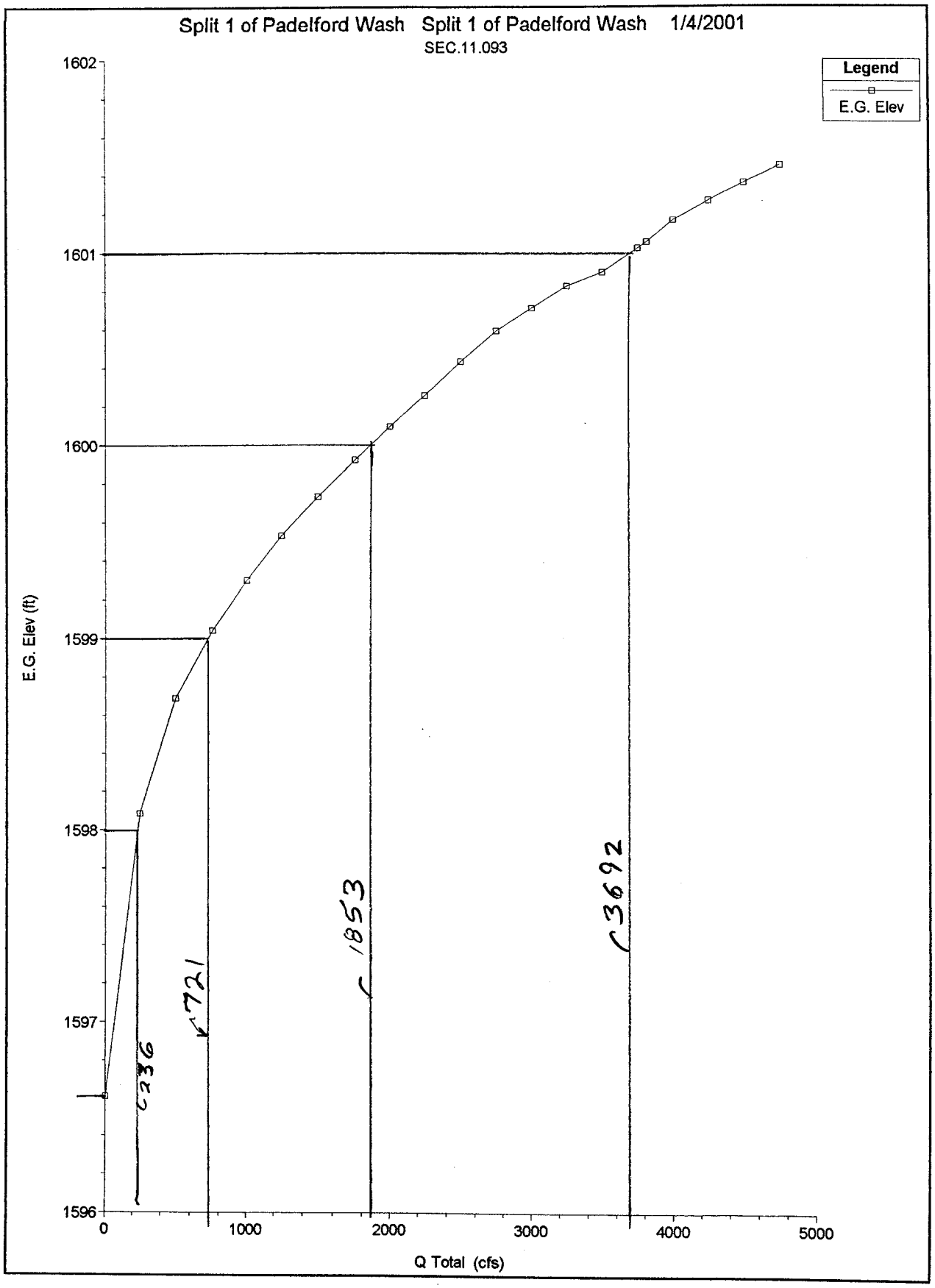

Split 5 of Padelford Wash Plan 01 1/3/2001
SEC.51.088
Legend
E.G. Elev
E.G. Elev (ft)
1602
1601
1600
1599
1598
1597
0
500
1000
1500
2000
2500
3000
Q Total (cfs)
147
379
1000
2548


Split 1 of Padelford Wash Split 1 of Padelford Wash 1/4/2001
SEC.11.093
Legend
E.G. Elev
E.G. Elev (ft)
1602
1601
1600
1599
1598
1597
1596
0
1000
2000
3000
4000
5000
Q Total (cfs)
236
721
1853
3692

B30

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1****************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *              JUN   1998              *
 *           VERSION 4.1                *
 *                                      *
 *  RUN DATE   03APR02  TIME  13:56:23  *
 *                                      *
 ****************************************
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*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X               X
XXXXXXX  XXXX     X       XXXXX   X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

C1

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

  1           ID   Project ID: PADEL6D - Major Basin: 01 - Return Period: 100 Years
  2           ID         PADELFORD WASH FLOODPLAIN DELINEATION STUDY,  FCDMC NO. 99-12
  3           ID         PREPARED BY A-N WEST, INC. JOB.NO.7158-07, DATE;9/28/00,REV.11/10/00
  4           ID         100-YR.  6. HR. STORM
  5           ID         REVISED 11/10/00 TO CONVERT FROM CLARK TO S-GRAPH UNIT HYDROGRAPH
  6           ID         METHOD.
  7           ID         60 PERCENT REDUCTION OF 'BOOK'ROCK OUTCROP % AS RTIMP VALUES,
  8           ID         MODELED IN THIS RUN.
  9           ID         REVISED1/3/01 TO FLOW DISTRIBUTIONS PER REFINED HEC-RAS ANALYSIS
 10           ID         AND REVISE CO500 HC RECORD TO SHOW 23 SQ. MI.D.A.
              *DIAGRAM*
 11           IT       2                    2000
 12           IO       5
 13           IN      15
 14           JD    3.36    0.01
 15           PC   0.000   0.012   0.023   0.035   0.053   0.068   0.082   0.098   0.113   0.128
 16           PC   0.145   0.163   0.187   0.235   0.317   0.478   0.667   0.791   0.862   0.907
 17           PC   0.942   0.957   0.971   0.986   1.000
 18           JD   3.316    1.00
 19           JD   3.226    5.00
 20           JD   3.158   10.00
 21           JD   3.058   20.00
 22           JD   2.990   30.00

 23           KK     180   BASIN
 24           BA   0.959
 25           LG    0.25    0.35    4.60    0.36      17
 26           UI      96     100      96     130     287     360     450     585     619     684
 27           UI     748     805     924    1134    1122     793     682     615     572     564
 28           UI     516     482     467     425     399     388     338     309     287     254
 29           UI     236     237     223     207     209     159     160     138     124     123
 30           UI     114     106     105     100      74      75      76      74      66      49
 31           UI      48       0       0       0       0       0       0       0       0       0
 32           UI       0       0       0       0       0       0       0       0       0       0
 33           UI       0       0       0       0       0       0       0       0       0       0
 34           UI       0       0       0       0       0       0       0       0       0       0

 35           KK     168   BASIN
 36           BA   0.504
 37           LG    0.25    0.37    5.30    0.26      11
 38           UI      88      91     232     370     550     620     716     976     904     625
 39           UI     547     484     432     401     349     299     259     221     203     197
 40           UI     149     127     116     101      97      75      68      68      45      43
 41           UI      44      44      30      17      17      17      17      17      17      17
 42           UI      18      17      17       0       0       0       0       0       0       0
 43           UI       0       0       0       0       0       0       0       0       0       0

 44           KK   CO169
 45           KM        COMBINE S180 AND S168
 46           HC       2
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C2

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

  47          KK    R171   ROUTE   REACH
  48          KM        ROUTE CO169 TO CO173
  49          RS       1    STOR      -1
  50          RC   0.065   0.037   0.065    1750  0.0067    0.00
  51          RX     0.0    10.0    37.5    45.0    70.0    77.5   105.0   115.0
  52          RY     7.0     5.0     3.0     0.0     0.0     3.0     5.0     7.0

  53          KK      92   BASIN
  54          BA   0.088
  55          LG    0.25    0.35    4.25    0.46      21
  56          UI      41     170     277     364     221     171     125      93      69      46
  57          UI      36      27      18      14       7       7       8       7       0       0
  58          UI       0       0       0       0       0       0       0       0       0       0

  59          KK    DR92
  60          KM        ROUTE S92 THRU THE 60 IN. I.D. X 114 FT. RCP CULVERT UNDER S.R.74
  61          KM        AND THE ASSOC. STORAGE AT THE RD.
  62          RS       1    STOR       0
  63          SV     0.0   0.209   0.617   1.241   2.080   3.134   4.404   5.890
  64          SQ     0.0    47.2   106.8   178.3   229.1   268.1   302.8   332.7
  65          SE  1935.2  1938.0  1940.0  1942.0  1944.0  1946.0  1948.0  1950.0

  66          KK    R161   ROUTE   REACH
  67          KM         RO161; ROUTE S92 TO CO173
  68          RS       8    STOR      -1
  69          RC   0.065   0.037   0.065    7950  0.0190    0.00
  70          RX     0.0     4.0    10.0    27.5    42.5    60.0    66.0    70.0
  71          RY     8.0     7.0     6.0     0.0     0.0     6.0     7.0     8.0

  72          KK     160   BASIN
  73          BA   0.549
  74          LG    0.25    0.39    5.70    0.22      10
  75          UI      76      79     111     239     334     450     510     592     632     803
  76          UI     909     579     496     461     419     381     369     324     296     266
  77          UI     227     201     190     176     161     144     126     100     101      87
  78          UI      84      80      59      58      60      46      37      39      37      37
  79          UI      39      15      15      15      15      14      15      15      15      15
  80          UI      14       0       0       0       0       0       0       0       0       0
  81          UI       0       0       0       0       0       0       0       0       0       0

  82          KK   CO173
  83          KM        COMBINE RO169, RO161, AND S160
  84          HC       3

  85          KK    R175   ROUTE   REACH
  86          KM        ROUTE CO173 TO CO155
  87          RS       2    STOR      -1
  88          RC   0.065   0.037   0.065    3200  0.0075    0.00
  89          RX     0.0     9.0    15.0    23.0    54.0    62.0    92.0   100.0
  90          RY     6.0     3.0     3.0     0.0     0.0     3.0     4.0     7.0
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C3

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

  91          KK     150   BASIN
  92          BA   0.877
  93          LG    0.25    0.37    5.20    0.27      14
  94          UI     139     142     289     509     775     894    1049    1221    1547    1400
  95          UI     994     863     769     721     645     573     536     452     371     352
  96          UI     322     298     253     215     178     173     151     145     110     106
  97          UI     107      70      69      68      71      64      27      28      26      27
  98          UI      28      26      27      28      26      27      28      26       0       0
  99          UI       0       0       0       0       0       0       0       0       0       0

 100          KK      76   BASIN
 101          BA   0.938
 102          LG    0.25    0.35    4.55    0.38      17
 103          UI     115     119     115     306     435     585     708     808     882     951
 104          UI    1231    1372    1012     847     704     686     637     576     544     512
 105          UI     454     420     388     326     293     284     267     247     231     191
 106          UI     170     152     147     126     130     118      89      91      89      84
 107          UI      58      57      57      58      57      57      29      22      22      23
 108          UI      23       0       0       0       0       0       0       0       0       0
 109          UI       0       0       0       0       0       0       0       0       0       0
 110          UI       0       0       0       0       0       0       0       0       0       0

 111          KK    DR76
 112          KM        ROUTE S76 THRU 2-10 FT.(SPAN) X 8 FT. X 150 FT. (LONG) RCB'S UNDER S.R.7
 113          KM        AND ASSOC. STOARGE AT RD.
 114          RS       1    STOR       0
 115          SV     0.0   0.453   1.145   2.152   3.474   5.575   8.917   13.50  19.324  26.389
 116          SQ     0.0   324.7   642.2  1029.8  1473.8  1967.1  2390.8  2721.3  3017.8  3285.9
 117          SE  1850.6  1854.0  1856.0  1858.0  1860.0  1862.0  1864.0  1866.0  1868.0  1870.0

 118          KK    R153   ROUTE   REACH
 119          KM        R153; ROUTE S76 TO CO155
 120          RS       4    STOR      -1
 121          RC   0.065   0.037   0.065    5200  0.0140    0.00
 122          RX     0.0     6.0    12.0    18.0    43.0    46.0    76.0    82.0
 123          RY    12.0     9.0     6.0     0.0     0.0     1.5     2.0     6.0

 124          KK   CO155
 125          KM         COMBINE R175, R153, AND S150
 126          HC       3

 127          KK      72   BASIN
 128          BA   0.143
 129          LG    0.25    0.35    4.70    0.34      14
 130          UI      39      95     198     286     393     373     250     212     175     145
 131          UI     116      94      78      61      48      42      32      27      19      20
 132          UI      14       7       8       8       7       8       8       0       0       0
 133          UI       0       0       0       0       0       0       0       0       0       0
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C4

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

 134          KK    DR72
 135          KM        ROUTE S72 THRU (1) 8 FT. (SPAN) X 5 FT. X 147 FT RCB UNDER S.R.74
 136          KM        AND ASSOC. STORAGE AT RD.
 137          RS       1    STOR       0
 138          SV     0.0   0.024   0.259   0.736   1.455   2.416   3.619
 139          SQ     0.0    26.0   103.4   225.3   374.6   503.5   600.0
 140          SE  1839.1  1840.0  1842.0  1844.0  1846.0  1848.0  1850.0

 141          KK      70   BASIN
 142          BA   0.090
 143          LG    0.25    0.35    4.80    0.33      14
 144          UI      42     174     284     371     227     174     128      95      71      47
 145          UI      37      27      18      15       7       7       8       7       0       0
 146          UI       0       0       0       0       0       0       0       0       0       0

 147          KK    DR70
 148          KM        ROUTE S70 THRU (1) 54 IN. I.D. RCP X 118 FT. LONG AND (1) 42 IN. I.D.
 149          KM        RCP X 162 FT. LONG CULVERTS UNDER S.R. 74 AND ASSOC. STORAGE AR RD.
 150          RS       1    STOR       0
 151          SV     0.0   0.317   0.904   1.792   2.980   3.687
 152          SQ     0.0    25.6    99.0   142.4   192.9   226.0
 153          SE  1831.1  1834.0  1836.0  1838.0  1840.0  1841.0

 154          KK      68   BASIN
 155          BA   0.601
 156          LG    0.25    0.35    4.25    0.46      21
 157          UI      77      79      77     225     314     406     482     559     592     680
 158          UI     872     873     582     509     462     425     407     376     340     318
 159          UI     284     253     226     197     186     183     163     146     132     109
 160          UI      99      97      84      85      72      59      59      61      45      38
 161          UI      39      37      38      39      25      15      15      15      14      16
 162          UI      14       0       0       0       0       0       0       0       0       0
 163          UI       0       0       0       0       0       0       0       0       0       0
 164          UI       0       0       0       0       0       0       0       0       0       0

 165          KK    DR68
 166          KM        ROUTE S68 THRU (2) 8 FT.(SPAN) X 6 FT. X 72 FT LONG RCB'S UNDER
 167          KM         S.R.74 AND ASSOC. STORAGE AT RD.
 168          RS       1    STOR       0
 169          SV     0.0   0.052   0.310   0.784   1.474   2.326
 170          SQ     0.0    67.9   254.7   511.4   821.7   993.1
 171          SE  1832.6  1834.0  1836.0  1838.0  1840.0  1841.0

 172          KK   CO141
 173          KM        COMBINE S72, S70, AND S68
 174          HC       3

 175          KK    R145   ROUTE   REACH
 176          KM        R145; ROUTE CO141 TO CO147
 177          RS       5    STOR      -1
 178          RC   0.065   0.037   0.065    4910  0.0150    0.00
 179          RX     0.0    20.0    28.0    31.0    56.0    59.0    89.0   101.0
 180          RY     7.0     1.5     1.0     0.0     0.0     1.0     2.0     6.0
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55

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

 181          KK     144   BASIN
 182          BA   0.343
 183          LG    0.25    0.39    5.70    0.22       9
 184          UI      52      54      98     176     266     328     378     428     516     609
 185          UI     415     342     303     285     258     231     217     187     164     142
 186          UI     129     119     114      91      82      69      65      57      58      43
 187          UI      40      41      32      25      27      25      26      20      10      10
 188          UI      10      10      10      10      10      10      10      10      10      10
 189          UI       0       0       0       0       0       0       0       0       0       0
 190          UI       0       0       0       0       0       0       0       0       0       0

 191          KK   CO147
 192          KM        COMBINE S144, R145, AND CO155
 193          HC       3

 194          KK    R149   ROUTE   REACH
 195          KM          R149; ROUTE CO147 TO CO133
 196          RS       2    STOR      -1
 197          RC   0.065   0.037   0.065    2300  0.0110    0.00
 198          RX     0.0    10.0    50.0    57.5    97.5   105.0   125.0   131.0
 199          RY     6.5     3.5     3.0     0.0     0.0     3.0     7.0     9.0

 200          KK      54   BASIN
 201          BA   1.171
 202          LG    0.25    0.35    4.30    0.44      21
 203          UI     149     155     149     441     610     790     940    1091    1154    1322
 204          UI    1701    1700    1133     992     902     827     793     732     663     619
 205          UI     554     493     441     383     362     359     316     285     256     213
 206          UI     192     190     164     164     141     116     115     119      87      73
 207          UI      76      73      73      76      49      28      30      29      29      29
 208          UI      29       0       0       0       0       0       0       0       0       0
 209          UI       0       0       0       0       0       0       0       0       0       0
 210          UI       0       0       0       0       0       0       0       0       0       0

 211          KK     R55   ROUTE   REACH
 212          KM         R55; ROUTE S54 TO CO57
 213          RS       2    STOR      -1
 214          RC   0.065   0.037   0.065    3800  0.0170    0.00
 215          RX     0.0     9.0    18.0    27.0    57.0    63.0    69.0    75.0
 216          RY     9.0     6.0     3.0     0.0     0.0     4.0     8.0    12.0

 217          KK      56   BASIN
 218          BA   0.750
 219          LG    0.25    0.35    4.30    0.44      21
 220          UI     104     107     152     327     457     614     696     810     863    1097
 221          UI    1241     792     678     629     572     521     504     442     405     363
 222          UI     310     276     259     239     221     197     171     138     137     119
 223          UI     114     111      80      79      83      62      51      53      51      51
 224          UI      52      21      20      21      20      20      20      20      20      21
 225          UI      20       0       0       0       0       0       0       0       0       0
 226          UI       0       0       0       0       0       0       0       0       0       0
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C6

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

 227          KK    CO57
 228          KM        COMBINE S56 AND R55
 229          HC       2

 230          KK     R59   ROUTE   REACH
 231          KM         R59; ROUTE CO57 TO CO61
 232          RS       3    STOR      -1
 233          RC   0.065   0.037   0.065    4500  0.0150    0.00
 234          RX     0.0    12.0    24.0    36.0    69.0    75.0    81.0    87.0
 235          RY     9.0     6.0     3.0     0.0     0.0     4.0     8.0    12.0

 236          KK      50   BASIN
 237          BA   0.235
 238          LG    0.25    0.35    4.25    0.46      21
 239          UI      44      44     129     200     284     320     383     520     351     281
 240          UI     251     222     202     182     148     128     114     101      92      75
 241          UI      61      55      50      45      33      35      28      21      22      21
 242          UI      19       8       9       8       9       8       8       9       8       9
 243          UI       8       0       0       0       0       0       0       0       0       0
 244          UI       0       0       0       0       0       0       0       0       0       0

 245          KK    CO61
 246          KM         COMBINE S50 AND R59
 247          HC       2

 248          KK    DR61
 249          KM        ROUTE CO61 THRU (2) 12 FT. (SPAN) X 10 FT. X 84.5 FT. RCB'S UNDER
 250          KM        S.R.74 AND ASSOC. STORAGE AT RD.
 251          RS       1    STOR       0
 252          SV     0.0   0.045   0.294   1.041   2.521   4.826   8.212
 253          SQ     0.0   190.2   517.0   938.6  1437.8  2003.0  2629.5
 254          SE  1835.9  1838.0  1840.0  1842.0  1844.0  1846.0  1848.0

 255          KK      46   BASIN
 256          BA   1.629
 257          LG    0.25    0.35    4.35    0.43      21
 258          UI     126     130     126     127     144     365     404     505     578     719
 259          UI     803     835     901     974     990    1103    1262    1441    1578    1238
 260          UI     954     886     841     766     735     728     681     646     625     585
 261          UI     562     549     504     484     454     417     393     356     336     306
 262          UI     315     291     289     280     267     241     213     206     188     167
 263          UI     161       0       0       0       0       0       0       0       0       0
 264          UI       0       0       0       0       0       0       0       0       0       0
 265          UI       0       0       0       0       0       0       0       0       0       0
 266          UI       0       0       0       0       0       0       0       0       0       0
 267          UI       0       0       0       0       0       0       0       0       0       0
 268          UI       0       0       0       0       0       0       0       0       0       0
 269          UI       0       0       0       0       0       0       0       0       0       0
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C7

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

 270          KK      42   BASIN
 271          BA   0.632
 272          LG    0.25    0.35    4.45    0.40      21
 273          UI      78      80      78     206     292     395     477     544     595     640
 274          UI     829     925     682     570     475     461     431     387     367     345
 275          UI     306     283     261     219     198     192     179     167     156     128
 276          UI     114     103      99      85      87      80      60      61      60      57
 277          UI      39      39      38      39      39      38      20      15      14      16
 278          UI      15       0       0       0       0       0       0       0       0       0
 279          UI       0       0       0       0       0       0       0       0       0       0
 280          UI       0       0       0       0       0       0       0       0       0       0

 281          KK    CO47
 282          KM        COMBINE S46 AND S42
 283          HC       2

 284          KK     R49   ROUTE   REACH
 285          KM        R49; ROUTE CO47 TO CO63
 286          RS       4    STOR      -1
 287          RC   0.065   0.041   0.065    6200  0.0125    0.00
 288          RX     0.0    12.0    24.0    36.0    79.5    85.5    91.5    97.5
 289          RY     9.0     6.0     3.0     0.0     0.0     3.0     6.0     9.0

 290          KK      48   BASIN
 291          BA   0.422
 292          LG    0.25    0.35    7.00    0.13      11
 293          UI      64      66     120     218     327     403     466     526     635     750
 294          UI     510     420     374     350     317     285     267     229     203     174
 295          UI     159     145     140     114     101      84      80      70      72      52
 296          UI      49      51      39      31      33      31      31      25      12      12
 297          UI      13      12      13      12      13      12      13      12      12      13
 298          UI       0       0       0       0       0       0       0       0       0       0
 299          UI       0       0       0       0       0       0       0       0       0       0

 300          KK    CO63
 301          KM        COMBINE S48 AND R49.  THIS IS TRIBUTARY 'C' TO PADELFORD WASH AT S.R.74
 302          HC       2

 303          KK    DR63
 304          KM        ROUTE CO63 THRU (3) 10 FT. (SPAN) X 10 FT. X 122.5 FT. LONG RCB'S
 305          KM        UNDER S.R.74 AND ASSOC. STORAGE AT RD.
 306          RS       1    STOR       0
 307          SV     0.0   0.027   0.355   1.210   3.189   6.826  12.377
 308          SQ     0.0   156.9   391.5   842.8  1403.6  2048.6  2773.1
 309          SE  1837.1  1838.0  1840.0  1842.0  1844.0  1846.0  1848.0

 310          KK    CO65
 311          KM        COMBINE CO61 AND CO63
 312          HC       2
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C8

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 313          KK    R123   ROUTE   REACH
 314          KM        R123; ROUTE CO65 TO CO127
 315          RS       1    STOR      -1
 316          RC   0.065   0.040   0.065    1400  0.0150    0.00
 317          RX     0.0     6.0    26.0    46.0    78.0    84.0    90.0    96.0
 318          RY     9.0     5.0     3.0     0.0     0.0     2.0     4.0     6.0

 319          KK      64   BASIN
 320          BA   0.437
 321          LG    0.25    0.35    4.30    0.44      20
 322          UI      69      71     144     254     386     445     523     608     771     698
 323          UI     495     430     383     360     321     286     267     225     185     176
 324          UI     160     148     126     107      89      86      76      72      55      53
 325          UI      53      35      34      34      35      32      13      14      13      14
 326          UI      13      14      13      14      13      13      14      13       0       0
 327          UI       0       0       0       0       0       0       0       0       0       0

 328          KK    DR64
 329          KM        ROUTE S64 THRU (1) 10 FT. (SPAN) X 6 FT. X 118.5 FT. RCB AND
 330          KM        (1) 10 FT. (SPAN) X 6 FT. X 118.5 FT. RCB AND (1) 6 FT. (SPAN)
 331          KM        X 5 FT. X 122 FT. RCB. UNDER S.R.74 AND ASSOC. STORAGE AT THE RD.
 332          RS       1    STOR       0
 333          SV     0.0   0.065   0.384   0.853   1.621   3.088   5.495   9.367  15.915
 334          SQ     0.0   103.9   215.9   459.4   759.8  1064.2  1297.2  1489.7  1660.8
 335          SE  1830.8  1832.0  1834.0  1836.0  1838.0  1840.0  1842.0  1844.0  1846.0

 336          KK    R121   ROUTE   REACH
 337          KM        R121; ROUTE S64 TO CO127
 338          RS       1    STOR      -1
 339          RC   0.065   0.040   0.065     700  0.0230    0.00
 340          RX     0.0    11.0    22.0    33.0    39.0    50.0    61.0    72.0
 341          RY     6.0     4.0     2.0     0.0     0.0     2.0     4.0     6.0

 342          KK   CO127
 343          KM        COMBINE R121 AND R123
 344          HC       2

 345          KK    R129   ROUTE   REACH
 346          KM        R129; ROUTE CO127 TO CO132
 347          RS       3    STOR      -1
 348          RC   0.065   0.038   0.065    5600  0.0120    0.00
 349          RX     0.0    10.0    50.0    56.0    97.0   111.0   116.5   123.5
 350          RY     6.0     3.0     3.0     0.0     0.0     3.5     5.0     7.0

 351          KK     132   BASIN
 352          BA   0.352
 353          LG    0.25    0.36    6.80    0.14       6
 354          UI      47      48      58     142     198     257     301     357     376     448
 355          UI     579     426     325     297     270     253     232     216     190     183
 356          UI     158     139     123     114     108     104      87      76      67      60
 357          UI      56      53      52      38      37      35      35      23      23      23
 358          UI      24      23      19      10       9       9       9       9       9       9
 359          UI       9       0       0       0       0       0       0       0       0       0
 360          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

 361          KK   CO132
 362          KM        COMBINE S132 AND R129.   THIS IS TRIBUTARY 'C' JUST U/S OF PADELFORD
 363          KM        WASH
 364          HC       2

 365          KK   CO133
 366          KM        COMBINE CO132 AND R149. THIS IS PADELFORD WASH D/S OF TRIB. 'C' CONFLUEN
 367          HC       2

 368          KK    R137   ROUTE   REACH
 369          KM        R137; ROUTE CO133 TO CO125
 370          RS       2    STOR      -1
 371          RC   0.065   0.037   0.065    1920  0.0089    0.00
 372          RX     0.0     4.0    24.0    40.0   100.0   112.0   192.0   202.0
 373          RY     8.0     5.0     4.0     0.0     0.0     3.5     3.5     8.0

 374          KK      10   BASIN
 375          BA   1.291
 376          LG    0.25    0.35    4.55    0.38      20
 377          UI     143     148     144     290     475     599     779     921    1000    1071
 378          UI    1236    1392    1737    1491    1071     944     880     818     766     737
 379          UI     674     624     605     538     480     455     384     359     354     330
 380          UI     304     295     236     231     189     183     173     162     157     146
 381          UI     113     110     110     113      80      70      73      70      70      73
 382          UI      70       0       0       0       0       0       0       0       0       0
 383          UI       0       0       0       0       0       0       0       0       0       0
 384          UI       0       0       0       0       0       0       0       0       0       0
 385          UI       0       0       0       0       0       0       0       0       0       0

 386          KK     R11   ROUTE   REACH
 387          KM         R11; ROUTE S10 TO CO17
 388          RS       2    STOR      -1
 389          RC   0.065   0.040   0.065    4600  0.0170    0.00
 390          RX     0.0     6.0    12.0    18.0    38.0    43.0    49.0    55.0
 391          RY     7.0     5.0     3.0     0.0     0.0     3.0     5.0     7.0

 392          KK      16   BASIN
 393          BA   0.653
 394          LG    0.25    0.40    6.00    0.20      15
 395          UI      99     103     186     337     505     624     720     814     982    1161
 396          UI     790     651     577     542     491     440     414     354     315     268
 397          UI     246     226     217     175     156     131     123     108     112      80
 398          UI      76      79      60      49      50      49      48      38      19      19
 399          UI      20      19      19      19      19      19      20      19      19      19
 400          UI       0       0       0       0       0       0       0       0       0       0
 401          UI       0       0       0       0       0       0       0       0       0       0

 402          KK    CO17
 403          KM        COMBINE R11 AND S16
 404          HC       2
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C10

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 405          KK     R19   ROUTE   REACH
 406          KM         R19; ROUTE CO17 TO CO25
 407          RS       3    STOR      -1
 408          RC   0.065   0.040   0.065    6200  0.0190    0.00
 409          RX     0.0     6.0    12.0    18.0    43.0    48.0    54.0    60.0
 410          RY     7.0     5.0     3.0     0.0     0.0     3.0     5.0     7.0

 411          KK      20   BASIN
 412          BA   1.499
 413          LG    0.25    0.35    4.35    0.43      21
 414          UI     172     178     173     385     593     748     989    1132    1241    1315
 415          UI    1569    1836    2069    1491    1200    1068    1050     950     869     851
 416          UI     770     702     685     600     532     477     436     415     403     365
 417          UI     343     295     269     221     227     199     188     193     156     132
 418          UI     137     132     122      87      84      84      87      85      84      65
 419          UI      33       0       0       0       0       0       0       0       0       0
 420          UI       0       0       0       0       0       0       0       0       0       0
 421          UI       0       0       0       0       0       0       0       0       0       0

 422          KK      24   BASIN
 423          BA   0.853
 424          LG    0.25    0.35    4.50    0.39      20
 425          UI      98     101      98     220     337     426     563     644     706     748
 426          UI     893    1045    1177     849     682     609     597     540     494     486
 427          UI     437     399     391     341     303     271     248     236     229     208
 428          UI     196     167     154     126     128     114     107     110      88      75
 429          UI      78      75      69      50      48      48      50      48      48      37
 430          UI      19       0       0       0       0       0       0       0       0       0
 431          UI       0       0       0       0       0       0       0       0       0       0
 432          UI       0       0       0       0       0       0       0       0       0       0

 433          KK    CO25
 434          KM         COMBINE S24, S20, AND R19
 435          HC       3

 436          KK     R27   ROUTE   REACH
 437          KM         R27; ROUTE CO25 TO CO31
 438          RS       6    STOR      -1
 439          RC   0.065   0.037   0.065   11200  0.0160    0.00
 440          RX     0.0    14.0    28.0    38.0    70.5    79.5    93.5   107.5
 441          RY     7.5     5.5     3.5     0.0     0.0     4.0     6.0     8.0

 442          KK      30   BASIN
 443          BA   0.396
 444          LG    0.25    0.32    7.60    0.10       7
 445          UI      39      40      39      45     114     138     171     225     240     270
 446          UI     294     311     350     428     474     358     297     261     234     232
 447          UI     218     200     191     182     164     163     149     133     126     110
 448          UI     103      98      91      89      86      82      63      65      56      49
 449          UI      51      46      43      44      42      31      31      29      30      31
 450          UI      20       0       0       0       0       0       0       0       0       0
 451          UI       0       0       0       0       0       0       0       0       0       0
 452          UI       0       0       0       0       0       0       0       0       0       0
 453          UI       0       0       0       0       0       0       0       0       0       0
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C11

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

 454          KK    CO31
 455          KM        COMBINE S30 AND R27. THIS IS TRIBUTARY 'B' AT S.R.74.
 456          HC       2

 457          KK    DR31
 458          KM        ROUTE CO31 THRU (4) 10 FT. (SPAN) X 10 FT. X 102.5 FT. RCB'S UNDER
 459          KM        S.R.74 AND ASSOC. STORAGE AT RD.
 460          RS       1    STOR       0
 461          SV     0.0   0.150   0.719   2.099   4.504   7.849  12.219  14.863
 462          SQ     0.0   435.5   934.9  1642.9  2470.1  3411.8  4441.5  4994.4
 463          SE  1857.7  1860.0  1862.0  1864.0  1866.0  1868.0  1870.0  1971.0

 464          KK    R113   ROUTE   REACH
 465          KM        R113; ROUTE CO31 TO CO115
 466          RS       1    STOR      -1
 467          RC   0.065   0.040   0.065    3300  0.0150    0.00
 468          RX     0.0     7.0    14.0    19.0    53.0    59.0    65.0    71.0
 469          RY     9.0     7.0     5.0     0.0     0.0     4.0     8.0    12.0

 470          KK      32   BASIN
 471          BA   0.081
 472          LG    0.25    0.30    8.00    0.09       7
 473          UI      17      23      56      92     122     138     190     146     109      94
 474          UI      84      75      63      54      43      39      37      27      22      21
 475          UI      18      14      13      11       9       8       9       5       3       4
 476          UI       3       3       3       3       4       3       0       0       0       0
 477          UI       0       0       0       0       0       0       0       0       0       0

 478          KK    DR32
 479          KM         ROUTE S32 THRU (1) 6 FT. X 5 FT X 110.5 FT. RCB UNDER S.R.74 AND
 480          KM         ASSOC. STORAGE AT RD.
 481          RS       1    STOR       0
 482          SV     0.0   0.105   0.147   0.218   0.346   0.673   1.555   3.049
 483          SQ     0.0    36.4   100.5   200.0   314.2   398.4   466.9   498.2
 484          SE  1856.5  1858.0  1860.0  1862.0  1864.0  1866.0  1868.0  1869.0

 485          KK    R111   ROUTE   REACH
 486          KM         ** R111; ROUTE S32 TO CO115
 487          RS       3    STOR      -1
 488          RC   0.065   0.040   0.065    3100  0.0170    0.00
 489          RX     0.0     7.0    14.0    21.0    26.0    33.0    40.0    47.0
 490          RY     6.0     4.0     2.0     0.0     0.0     2.0     4.0     6.0

 491          KK   CO115
 492          KM        COMBINE S32 AND R113
 493          HC       2

 494          KK    R117   ROUTE   REACH
 495          KM        *** R117; ROUTE CO115 TO CO119
 496          RS       1    STOR      -1
 497          RC   0.065   0.040   0.065    1000  0.0150    0.00
 498          RX     0.0     7.0    14.0    19.0    53.0    59.0    65.0    71.0
 499          RY     9.0     7.0     5.0     0.0     0.0     4.0     8.0    12.0
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C12

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 500          KK      34   BASIN
 501          KM          ***  SUBAREA 34. ALSO. TRIBUTARY 'A' TO PADELFORD WASH AT S.R. 74.
 502          BA   1.125
 503          LG    0.25    0.25    9.70    0.05       2
 504          UI      83      86      83      83      86     211     239     329     366     438
 505          UI     505     524     579     630     629     667     778     844     961    1053
 506          UI     762     645     594     538     514     507     470     445     444     415
 507          UI     394     388     359     336     335     311     287     272     254     221
 508          UI     226     202     202     198     191     180     180     164     137     141
 509          UI     132       0       0       0       0       0       0       0       0       0
 510          UI       0       0       0       0       0       0       0       0       0       0
 511          UI       0       0       0       0       0       0       0       0       0       0
 512          UI       0       0       0       0       0       0       0       0       0       0
 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          KK    DR34
 517          KM        ROUTE S34 THRU (3) 10 FT. X 8 FT. X 70 FT. LONG RCB'S UNDER S.R.74.
 518          KM        AND ASSOC. STORAGE AT RD.
 519          RS       1    STOR       0
 520          SV     0.0   0.054   0.425   1.622   4.256
 521          SQ     0.0    52.1   412.9   877.9  1443.8
 522          SE  1872.9  1874.0  1876.0  1878.0  1880.0

 523          KK    R107   ROUTE   REACH
 524          KM        *** R107; ROUTE S34 TO CO105
 525          RS       1    STOR      -1
 526          RC   0.065   0.040   0.065    1700  0.0160    0.00
 527          RX     0.0     6.0    12.0    18.0    45.0    49.0    81.0    85.0
 528          RY    12.0     8.0     4.0     0.0     0.0     2.0     3.0     5.0

 529          KK      38   BASIN
 530          BA   0.102
 531          LG    0.25    0.22   10.10    0.04       0
 532          UI      28      67     142     204     280     266     178     151     126     103
 533          UI      82      67      57      43      34      30      23      19      14      14
 534          UI      10       5       6       5       6       6       5       0       0       0
 535          UI       0       0       0       0       0       0       0       0       0       0

 536          KK    DR38
 537          KM        ROUTE S38 THRU (1) 6 FT. X 5 FT. X 127 FT. RCB UNDER S.R. 74
 538          KM         AND ASSOC. STORAGE AT RD.
 539          RS       1    STOR       0
 540          SV     0.0    0.09   0.319   0.733   1.502   2.768   4.887
 541          SQ     0.0    45.1   114.4   214.8   327.5   445.4   477.2
 542          SE  1874.2  1876.0  1878.0  1880.0  1882.0  1884.0  1886.0

 543          KK    R103   ROUTE   REACH
 544          KM        *** R103; ROUTE S38 TO CO105
 545          RS       2    STOR      -1
 546          RC   0.065   0.040   0.065    2560  0.0180    0.00
 547          RX     0.0    12.0    24.0    36.0    40.0    52.0    64.0    76.0
 548          RY     6.0     4.0     2.0     0.0     0.0     2.0     4.0     6.0
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C13

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

 549          KK   CO105
 550          KM         COMBINE R103 AND R107
 551          HC       2

 552          KK    R109   ROUTE   REACH
 553          KM         **** R109; ROUTE CO105 TO CO119
 554          RS       2    STOR      -1
 555          RC   0.065   0.040   0.065    3200  0.0160    0.00
 556          RX     0.0     6.0    12.0    18.0    45.0    49.0    81.0    85.0
 557          RY    12.0     8.0     4.0     0.0     0.0     2.0     3.0     5.0

 558          KK     102   BASIN
 559          BA   0.133
 560          LG    0.25    0.22   10.10    0.04       0
 561          UI      21      21      44      77     118     136     158     186     234     213
 562          UI     151     130     117     109      98      87      81      69      56      54
 563          UI      48      46      38      32      28      26      23      21      17      17
 564          UI      16      11      10      10      11       9       4       5       4       4
 565          UI       4       4       4       4       5       4       4       4       0       0
 566          UI       0       0       0       0       0       0       0       0       0       0

 567          KK     112   BASIN
 568          BA   0.217
 569          LG    0.25    0.29    8.40    0.08       0
 570          UI      51      94     210     317     408     537     484     327     284     243
 571          UI     214     177     133     127     104      83      68      57      49      41
 572          UI      34      25      26      25      10      10      10      10      10      10
 573          UI      10      10       0       0       0       0       0       0       0       0
 574          UI       0       0       0       0       0       0       0       0       0       0

 575          KK   CO119
 576          KM        COMBINE S102, S112, R109, AND R117
 577          HC       4

 578          KK    R118   ROUTE   REACH
 579          KM         *** R118; ROUTE CO119 TO CO125
 580          RS       3    STOR      -1
 581          RC   0.065   0.037   0.065    5400  0.0110    0.00
 582          RX     0.0     6.0    12.0    18.0    58.0    68.0   108.0   116.0
 583          RY     9.0     6.0     3.0     0.0     0.0     3.0     4.0     8.0

 584          KK     122   BASIN
 585          BA   0.493
 586          LG    0.25    0.32    7.60    0.10       2
 587          UI      86      89     227     362     537     608     700     954     884     612
 588          UI     536     472     423     393     341     293     253     215     199     193
 589          UI     145     125     114      98      96      73      67      66      44      43
 590          UI      42      43      30      16      17      17      16      17      17      16
 591          UI      17      17      16       0       0       0       0       0       0       0
 592          UI       0       0       0       0       0       0       0       0       0       0
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C14

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

 639          KK   R101A   ROUTE   REACH
 640          KM         *** R101A; ROUTE R101 TO CO191
 641          KM  M      *** THIS ROUTE STEP COMPLETES ROUTING OF S36 TO CO191
 642          RS       7    STOR      -1
 643          RC   0.065   0.040   0.065    4300  0.0130    0.00
 644          RX     0.0     2.0     4.0    16.0    33.0    40.0    64.0    80.0
 645          RY     6.0     5.0     4.0     0.0     0.0     1.0     1.5     8.0

 646          KK   CO191
 647          KM         COMBINE S106, R101A, AND CO125
 648          HC       3

 649          KK    R193   ROUTE   REACH
 650          KM         *** R193; ROUTE CO191 TO CO195
 651          RS       2    STOR      -1
 652          RC   0.065   0.037   0.065    2500  0.0100    0.00
 653          RX     0.0    40.0   153.0   331.0   405.0   445.0   485.0   525.0
 654          RY     5.5     3.0     2.0     0.0     0.0     2.0     3.0     5.5

 655          KK     192   BASIN
 656          BA   0.525
 657          LG    0.25    0.37    5.20    0.27       9
 658          UI     116     179     433     672     887    1047    1283     849     693     600
 659          UI     545     457     379     305     272     244     196     149     133     126
 660          UI      89      89      65      57      58      46      22      23      23      22
 661          UI      22      23      23      22       0       0       0       0       0       0
 662          UI       0       0       0       0       0       0       0       0       0       0

 663          KK   CO195
 664          KM         COMBINE S192 AND R193
 665          HC       2

 666          KK    R197   ROUTE   REACH
 667          KM        *** R197; ROUTE CO195 TO CO199
 668          RS       7    STOR      -1
 669          RC   0.065   0.037   0.065    4700  0.0110    0.00
 670          RX     0.0   148.0   297.0   365.0   482.0   550.0   699.0   847.0
 671          RY     5.5     3.0     2.0     0.0     0.0     2.0     3.0     5.5

 672          KK     198   BASIN
 673          BA   0.416
 674          LG    0.25    0.35    3.92    0.53      12
 675          UI      58      59      84     181     254     341     386     449     479     608
 676          UI     689     439     376     349     317     289     280     245     225     201
 677          UI     172     153     143     133     122     110      95      76      76      66
 678          UI      63      61      45      45      45      35      28      30      28      28
 679          UI      29      12      11      11      11      11      12      11      11      11
 680          UI      11       0       0       0       0       0       0       0       0       0
 681          UI       0       0       0       0       0       0       0       0       0       0
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C15

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

 682          KK   CO199
 683          KM        COMBINE S198 AND R197
 684          HC       2

 685          KK  SPLIT3
 686          KM        DIVERT AS 'MAIN3' THE FLOW TO PADELFORD WASH AND AS 'SPLIT3' THE
 687          KM        FLOW TO SPLIT3. FLOW SPLIT BASED ON A RATING CURVE OF ENERGY GRADE
 688          KM        VERSUS DISCHARGE FROM HEC-RAS MODEL ANALYSIS AT SEC. 32.443 OF
 689          KM        SPLIT3 AND SEC. 3.584 OF MAIN PADELFORD WASH.
 690          DT   MAIN3
 691          DI     0.0   164.0   380.0   597.0   952.0  1475.0  2215.0  3195.0  4384.0  5958.0
 692          DI   8608. 11401.0 14118.0
 693          DQ     0.0    34.0   167.0   300.0   431.0   669.0  1031.0  1568.0  2310.0  3318.0
 694          DQ  5233.0  7455.0  9318.0

 695          KK    R301   ROUTE   REACH
 696          KM         *** R301 ; ROUTE SPLIT3 TO CO215
 697          RS      10    STOR      -1
 698          RC   0.065   0.037   0.065    8920  0.0110    0.00
 699          RX     0.0    80.0   160.0   195.0   255.0   290.0   370.0   450.0
 700          RY     4.5     3.0     2.0     0.0     0.0     2.0     3.0     4.5

 701          KK     216   BASIN
 702          BA   0.198
 703          LG    0.25    0.35    3.85    0.56       0
 704          UI      28      28      40      86     121     162     184     213     228     290
 705          UI     328     209     179     166     151     137     133     117     107      96
 706          UI      82      72      69      63      58      52      46      36      36      32
 707          UI      30      28      22      21      22      16      14      14      13      14
 708          UI      14       5       5       6       5       5       6       5       5       5
 709          UI       6       0       0       0       0       0       0       0       0       0
 710          UI       0       0       0       0       0       0       0       0       0       0

 711          KK   CO215
 712          KM        COMBINE S216 AND R301 NEAR WHITE WING RD.
 713          HC       2

 714          KK   SPLT3
 715          KM        DIVERT AS 'SPLT3' FLOW TO SPLIT3 WASH AND AS 'SPLIT4'FLOW TO SPLIT4 WASH
 716          KM        FLOW SPLIT BASED ON RATING CURVE ANALYSIS BY HEC-RAS MODEL AT SEC. 30.71
 717          KM        OF SPLIT3 WASH AND SEC. 30.841 OF SPLIT4 WASH.
 718          DT  SPLIT4
 719          DI     0.0   448.0   780.0  1283.0  1892.0  2764.0  4240.0  5844.0
 720          DQ     0.0     0.0    51.0   131.0   212.0   380.0   663.0   931.0

 721          KK    R323   ROUTE   REACH
 722          KM         R323; ROUTE 'SPLIT3' TO CO219.
 723          RS       6    STOR      -1
 724          RC   0.065   0.037   0.065    3800  0.0110    0.00
 725          RX     0.0    40.0   160.0   188.0   228.0   256.0   376.0   416.0
 726          RY     4.2     3.0     2.0     0.0     0.0     2.0     3.0     4.2
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C16

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 727          KK     218   BASIN
 728          BA   0.174
 729          LG    0.25    0.35    4.10    0.49       0
 730          UI      29      29      69     114     169     196     225     276     346     231
 731          UI     191     165     154     143     124     111      98      80      72      69
 732          UI      60      51      46      36      34      33      27      23      22      18
 733          UI      14      15      14      14       8       5       6       6       5       6
 734          UI       6       5       6       6       5       6       0       0       0       0
 735          UI       0       0       0       0       0       0       0       0       0       0

 736          KK   CO219
 737          KM        COMBINE 'SPLT3' FLOW AT CAP CANAL, S218 AND R323.
 738          HC       2

 739          KK  SPLIT4
 740          KM        RETRIEVE 'SPLIT4' FLOW FROM NEAR WHITE WING RD.
 741          DR  SPLIT4

 742          KK    R321   ROUTE   REACH
 743          KM        R321; ROUTE'SPLIT4' TO CO217.
 744          RS       5    STOR      -1
 745          RC   0.065   0.037   0.065    3400  0.0100    0.00
 746          RX     0.0    57.0   115.0   160.0   190.0   235.0   293.0   350.0
 747          RY     4.0     3.0     2.0     0.0     0.0     2.0     3.0     4.0

 748          KK     214   BASIN
 749          BA   0.201
 750          LG    0.25    0.35    4.00    0.51       0
 751          UI      29      30      49      95     139     175     203     230     269     338
 752          UI     283     205     176     173     148     141     130     114     105      90
 753          UI      78      71      68      61      53      50      37      38      33      32
 754          UI      27      23      22      22      15      14      14      15      14       9
 755          UI       5       6       5       6       6       5       6       5       6       6
 756          UI       5       0       0       0       0       0       0       0       0       0
 757          UI       0       0       0       0       0       0       0       0       0       0

 758          KK   CO217
 759          KM        COMBINE S214 AND R321 AT CAP CANAL FOR 'SPLIT4' WASH AT CAP CANAL.
 760          HC       2

 761          KK   CO400
 762          KM         COMBINE 'SPLIT3' AND 'SPLIT4' WASHES AT CAP CANAL.
 763          HC       2      23

 764          KK   DR400
 765          KM         ROUTE CO400 THRU THE (1) CAP CANAL OVERCHUTE STRUCTURE AND ASSOC.
 766          KM         STORAGE TO WEST OF 163RD. AVE .
 767          KM         OVERFLOW TO EAST ACROSS THE 163RD AVE. WAS MODELED, STARTING AT EL.1553
 768          KM         IN THE FOLLOWING DIVERT ROUTINE.
 769          KM         NO OVERFLOW TO WEST WAS ASSUMED AT THIS TIME, ALTHOUGH POTENTIAL EXISTS
 770          KM         AT EL. 1549.0
 771          RS       1    STOR       0
 772          SV     0.0    0.10     1.7   10.87   20.82   35.22   78.92  108.77  144.27   223.4
 773          SV   244.0   250.0
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C17

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

 774          SQ     0.0    51.1   130.6   227.5   276.7   314.4   373.1   399.0   623.5  2618.5
 775          SQ  3529.1  5500.0
 776          SE  1541.1  1544.0  1546.0  1548.0  1549.0  1550.0  1552.0  1553.0  1554.0  1556.0
 777          SE  1556.5  1557.0

 778          KK   DV400
 779          KM        DIVERT AS"DV400" FLOW REMAINING ON WEST SIDE OF 163RD AVE. AND AS
 780          KM        "DV501" , FLOW WEIRING TO EAST OVER 163RD AVE.
 781          DT   DV501
 782          DI     0.0    51.1   130.6   227.5   276.7   314.4   373.1   399.0   623.5  2618.5
 783          DI  3529.1  5500.0
 784          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   200.0  2150.0
 785          DQ  3050.0  4050.0

 786          KK   MAIN3
 787          KM        RETRIEVE'MAIN3' FLOW
 788          DR   MAIN3

 789          KK  SPLIT2
 790          KM        DIVERT AS 'MAIN2' THE FLOW TO MAIN PADELFORD WASH AND AS 'SPLIT2'
 791          KM        THE FLOW TO SPLIT2 WASH.
 792          KM        THE FLOW SPLIT IS BASED ON A RATING CURVE ANALYSIS BY HEC-RAS MODEL
 793          KM        OF ENERGY GRADE EL. VERSUS DISCHARGE AT MAIN SEC.3.300 AND
 794          KM        SPLIT2 WASH SEC. 22.114
 795          DT   MAIN2
 796          DI     0.0   261.0   380.0   668.0  1015.0  1464.0  2108.0  2884.0  3789.0  4803.0
 797          DI  5926.0  7158.0  8365.0  9380.0
 798          DQ     0.0   261.0   348.0   570.0   850.0  1233.0  1718.0  2253.0  2825.0  3450.0
 799          DQ  4130.0  4887.0  5572.0  6028.0

 800          KK    R318   ROUTE   REACH
 801          KM        *** R318; ROUTE SPLIT2 TO CO410
 802          RS      15    STOR      -1
 803          RC   0.065   0.037   0.065   11200  0.0110    0.00
 804          RX     0.0    60.0   180.0   255.0   295.0   370.0   490.0   550.0
 805          RY     3.5     3.0     2.0     0.0     0.0     2.0     3.0     3.5

 806          KK     220   BASIN
 807          BA   0.242
 808          LG    0.25    0.35    4.00    0.51       0
 809          UI      21      22      21      22      47      64      82     100     125     132
 810          UI     147     154     166     186     204     241     267     184     158     142
 811          UI     131     126     123     113     108     103      99      88      88      82
 812          UI      75      71      65      56      55      52      49      51      45      45
 813          UI      39      35      35      27      27      27      26      23      23      24
 814          UI      19       0       0       0       0       0       0       0       0       0
 815          UI       0       0       0       0       0       0       0       0       0       0
 816          UI       0       0       0       0       0       0       0       0       0       0
 817          UI       0       0       0       0       0       0       0       0       0       0
 818          UI       0       0       0       0       0       0       0       0       0       0
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C18

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

 819          KK   CO410
 820          KM        COMBINE R318 AND S220 AS SPLIT2 AT CAP CANAL
 821          HC       2

 822          KK   MAIN2
 823          KM        RETRIEVE 'MAIN2' FLOW
 824          DR   MAIN2

 825          KK  SPLIT1
 826          KM         DIVERT AS 'MAIN1' THE FLOW TO MAIN PADELFORD WASH AND AS 'SPLIT1'
 827          KM         THE FLOW TO SPLIT1 WASH.
 828          KM         FLOW SPLIT BASED ON RATING CURVE ANALYSIS BY HEC-RAS MODEL OF ENERGY
 829          KM         GRADE VERSUS DISCHARGE AT SEC. 3.108 (MAIN) AND SEC. 12.019 (SPLIT1).
 830          DT   MAIN1
 831          DI     0.0   134.0   320.0   639.0  1031.0  1570.0  2329.0  3345.0  4905.0  6445.0
 832          DQ     0.0     0.0    55.0   113.0   171.0   300.0   516.0   826.0  1280.0  1695.0

 833          KK    R316   ROUTE   REACH
 834          KM         *** R316; ROUTE SPLIT1 TO CO208
 835          RS       7    STOR      -1
 836          RC   0.065   0.037   0.065    4520  0.0110    0.00
 837          RX     0.0   125.0   159.0   175.0   204.0   221.0   256.0   381.0
 838          RY     5.3     3.0     2.0     0.0     0.0     2.0     3.0     5.3

 839          KK     212   BASIN
 840          BA   0.218
 841          LG    0.25    0.35    4.00    0.51       4
 842          UI      34      35      73     126     193     222     261     303     385     348
 843          UI     247     214     192     179     160     143     133     112      93      87
 844          UI      80      74      63      53      45      43      37      36      28      26
 845          UI      27      17      17      17      18      16       6       7       7       6
 846          UI       7       7       6       7       7       6       7       7       0       0
 847          UI       0       0       0       0       0       0       0       0       0       0

 848          KK   CO208
 849          KM        COMBINE S212 AND R316
 850          HC       2

 851          KK   SPLT1
 852          KM        DIVERT AS "SPLT1" FLOW CONTINUING ALONG SPLIT1 WASH AND DIVERT
 853          KM        AS "MN1" FLOW WEIRING OVER BANK NEAR SPLIT1 SEC.11.523 AND RETURNING
 854          KM        TO PADELFORD WASH "MAIN1" WASH AT CO207.
 855          KM        THE SPLIT FLOW RELASHIONSHIP IS BASED ON DISCHARGE VS. Q AT SEC. 11.523,
 856          KM        AND WEIR FLOW FROM NORMAL DEPTH RECTANGULAR CHANN. WITH BOTT. WIDTH
 857          KM        OF 800 FT. N=0.055, S=0.02 FT./FT.
 858          DT     MN1
 859          DI     0.0   250.0   500.0   750.0  1000.0  1250.0  1500.0  1750.0  2021.0  2477.0
 860          DI  3163.0  3947.0  4725.0  5533.0  6450.0  8115.0  9279.0
 861          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0    21.0   227.0
 862          DQ   663.0  1197.0  1725.0  2283.0  2950.0  4365.0  5279.0
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C19

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 863           KK     210   BASIN
 864           BA   0.637
 865           LG    0.25    0.36    5.10    0.29       6
 866           UI      82      83      82     239     333     429     512     592     629     719
 867           UI     925     925     616     539     491     450     432     398     360     338
 868           UI     301     268     240     207     198     195     172     155     140     116
 869           UI     104     103      89      89      77      63      63      64      48      40
 870           UI      41      40      40      41      27      15      16      16      15      17
 871           UI      15       0       0       0       0       0       0       0       0       0
 872           UI       0       0       0       0       0       0       0       0       0       0
 873           UI       0       0       0       0       0       0       0       0       0       0

 874           KK   CO209
 875           KM        COMBINE S210, AND CO208
 876           HC       2

 877           KK   SPLT1
 878           KM        DIVERT AS "SPLT1" , FLOW TO SPLIT1 WASH AND AS "SPLIT5" TO SPLIT5
 879           KM        WASH. FLOW SPLITS WERE DERIVED BY DETAIL HEC-RAS MODEL ANALYSIS
 880           KM        TO DEVELOP FLOW SPLIT BASED ON E.G. ELEV. VS Q'S AT SEC. 11.093
 881           KM        OF SPLIT1 AND SEC. 51.088 OF SPLIT5.
 882           DT  SPLIT5
 883           DI     0.0   383.0   685.0  1100.0  1712.0  2853.0  4288.0  6240.0
 884           DQ     0.0   147.0   263.0   379.0   495.0  1000.0  1694.0  2548.0

 885           KK    R211   ROUTE   REACH
 886           KM        *** R211; ROUTE SPLT1  TO CO430
 887           RS       9    STOR      -1
 888           RC   0.065   0.037   0.065    6480  0.0100    0.00
 889           RX     0.0    81.0   162.0   184.5   204.5   227.0   308.0   389.0
 890           RY     4.8     3.0     2.0     0.0     0.0     2.0     3.0     4.8

 891           KK     226   BASIN
 892           BA   0.239
 893           LG    0.25    0.35    4.10    0.49       0
 894           UI      28      28      28      61      95     119     157     181     197     210
 895           UI     251     292     330     238     191     170     168     151     139     135
 896           UI     123     112     110      95      85      76      69      67      64      58
 897           UI      55      47      43      35      36      32      30      30      25      21
 898           UI      22      21      20      14      13      13      14      14      13      10
 899           UI       6       0       0       0       0       0       0       0       0       0
 900           UI       0       0       0       0       0       0       0       0       0       0
 901           UI       0       0       0       0       0       0       0       0       0       0

 902           KK   CO430
 903           KM        COMBINE R211 AND S226
 904           HC       2

 905           KK     230   BASIN
 906           BA   0.364
 907           LG    0.25    0.37    5.30    0.26      12
 908           UI      72      81     229     361     478     551     695     793     503     427
 909           UI     385     348     292     267     212     182     169     151     121     100
 910           UI      87      78      69      54      55      38      35      35      36      15
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C20

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

 911          UI      14      14      13      14      14      14      13      15      13       0
 912          UI       0       0       0       0       0       0       0       0       0       0
 913          UI       0       0       0       0       0       0       0       0       0       0

 914          KK    R231   ROUTE   REACH
 915          KM        *** R231; ROUTE S230 TO CO235
 916          RS       6    STOR      -1
 917          RC   0.065   0.040   0.065    4800  0.0130    0.00
 918          RX     0.0     4.0    40.0    44.0    52.0    56.0    91.0    96.0
 919          RY     5.0     4.0     2.0     0.0     0.0     2.0     4.0     5.0

 920          KK     240   BASIN
 921          BA   0.842
 922          LG    0.25    0.36    5.00    0.30      10
 923          UI     108     110     108     316     440     567     676     785     829     951
 924          UI    1223    1222     816     713     649     594     571     526     476     446
 925          UI     398     354     317     275     261     258     227     205     185     153
 926          UI     138     136     118     118     102      82      83      85      63      53
 927          UI      54      53      53      54      35      21      21      21      21      21
 928          UI      21       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          KK     232   BASIN
 932          BA   0.257
 933          LG    0.25    0.36    6.80    0.14       0
 934          UI      57      88     212     329     434     512     628     416     339     294
 935          UI     266     224     186     149     133     120      95      73      65      62
 936          UI      44      43      32      28      28      23      11      11      11      11
 937          UI      11      11      11      11       0       0       0       0       0       0
 938          UI       0       0       0       0       0       0       0       0       0       0

 939          KK   CO235
 940          KM         COMBINE S240, S230, AND R231
 941          HC       3

 942          KK    R237   ROUTE   REACH
 943          KM        *** R237; ROUTE CO235 TO CO247
 944          RS       3    STOR      -1
 945          RC   0.065   0.040   0.065    3760  0.0081    0.00
 946          RX     0.0     2.0    22.0    72.0   112.0   142.0   162.0   167.0
 947          RY    16.0    16.0    10.0     0.0     0.0    14.0    15.0    16.0

 948          KK     244   BASIN
 949          BA   0.185
 950          LG    0.25    0.35    4.20    0.47       4
 951          UI      57     151     317     424     627     399     317     265     219     161
 952          UI     136     110      81      68      53      43      32      27      25      11
 953          UI      11      11      11      11      10       0       0       0       0       0
 954          UI       0       0       0       0       0       0       0       0       0       0
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C21

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

 955          KK   CO247
 956          KM         COMBINE S244 AND R237
 957          HC       2

 958          KK     238   BASIN
 959          BA   0.360
 960          LG    0.25    0.35    4.15    0.48       0
 961          UI      46      47      46     136     188     242     290     335     355     406
 962          UI     522     524     348     305     277     254     244     225     204     190
 963          UI     171     151     136     117     111     111      97      88      79      65
 964          UI      59      58      51      50      43      36      36      36      27      22
 965          UI      24      22      23      23      15       9       9       9       9       9
 966          UI       9       0       0       0       0       0       0       0       0       0
 967          UI       0       0       0       0       0       0       0       0       0       0
 968          UI       0       0       0       0       0       0       0       0       0       0

 969          KK  SPLIT5
 970          KM        RETRIEVE SPLIT5 FLOW
 971          DR  SPLIT5

 972          KK    R251
 973          KM        ROUTE SPLIT5 FLOW ALONG WASH TO CAP CANAL TO CO255
 974          RS       5    FLOW      -1
 975          RC   0.065   0.037   0.065  5475.0   0.011
 976          RX     0.0    50.0   250.0   290.0   300.0   340.0   540.0   590.0
 977          RY      10       6       5       0       0       5       6      10

 978          KK   CO255
 979          KM        COMBINE R251 AND S238 AT CAP CANAL AS COMBINED SPLIT5 WASH FLOW
 980          HC       2

 981          KK   MAIN1
 982          KM         RETRIEVE 'MAIN1'FLOW.
 983          DR   MAIN1

 984          KK    R203   ROUTE   REACH
 985          KM         *** R203; ROUTE MAIN1 TO R205
 986          RS      10    STOR      -1
 987          RC   0.065   0.037   0.065    5600  0.0110    0.00
 988          RX     0.0   125.0   250.0   269.0   291.0   311.0   436.0   561.0
 989          RY     4.5     3.0     2.0     0.0     0.0     2.0     3.0     4.5

 990          KK     MN1
 991          KM         RETRIEVE 'MN1' FLOW FROM SPLIT1 WASH TO MAIN1 WASH AT CO207
 992          DR     MN1

 993          KK   CO207
 994          KM        COMBINE MN1 AND R203
 995          HC       2    19.1
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C22

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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 996          KK    R205   ROUTE   REACH
 997          KM         *** R205; ROUTE CO207 TO CO420 NEAR CAP CANAL AS MAIN1 OF PADELFORD WAS
 998          RS      11    STOR      -1
 999          RC   0.065   0.037   0.065    5600  0.0110    0.00
1000          RX     0.0   125.0   250.0   269.0   291.0   311.0   436.0   561.0
1001          RY     4.5     3.0     2.0     0.0     0.0     2.0     3.0     4.5

1002          KK     222   BASIN
1003          BA   0.515
1004          LG    0.25    0.35    4.10    0.49       0
1005          UI      49      51      49      49     141     168     208     273     294     334
1006          UI     367     375     421     504     586     543     396     347     310     301
1007          UI     280     258     261     235     218     215     196     184     173     149
1008          UI     137     133     119     115     116     104     103      86      81      73
1009          UI      64      63      60      55      54      53      45      38      37      39
1010          UI      38       0       0       0       0       0       0       0       0       0
1011          UI       0       0       0       0       0       0       0       0       0       0
1012          UI       0       0       0       0       0       0       0       0       0       0
1013          UI       0       0       0       0       0       0       0       0       0       0
1014          UI       0       0       0       0       0       0       0       0       0       0

1015          KK   CO420
1016          KM        COMBINE R203 AND S222 FOR MAIN1 WASH AT CAP CANAL
1017          HC       2

1018          KK   CO500
1019          KM         COMBINE CO255, CO247, CO430, CO420, AND CO410
1020          HC       5    23.0

1021          KK   DV501
1022          KM        RETRIEVE "DV501" , THE WEIR OVERFLOW FROM CO400, EAST ACROSS 163RD AVE
1023          DR   DV501

1024          KK   CO501
1025          KM        COMBINE CO500 AND DV501 AT CAP CANAL
1026          HC       2    23.0

1027          KK   DR501
1028          KM         ROUTE CO501 THRU THE (5) SETS OF CAP CANAL OVERCHUTE STRUCTURES
1029          KM         AND THE ASSOC. STORAGE EAST OF 163 RD AVE.
1030          RS       1    STOR       0
1031          SV     0.0    2.88    34.7  115.64  258.34   457.0  711.36 1026.64 1205.57 1398.37
1032          SQ     0.0   117.3   327.5   907.1  1738.6  2605.6  3180.2  3656.4  3873.5  4078.7
1033          SE  1539.4  1540.0  1542.0  1544.0  1546.0  1548.0  1550.0  1552.0  1553.0  1554.0

1034          KK   DV3-6
1035          KM        DIVERT AS"DV3-6" THE FLOW TO STRUCTURE I.D.'S 3-6 ALONG CAP CANAL
1036          KM        AND AS "DV2" THE FLOW TO STRUCTUE I.D.#2,A.K.A.,STA.253+00.
1037          DT     DV2
1038          DI     0.0   117.3   327.5   907.1  1738.6  2605.6  3180.2  3656.4  3873.5  4078.7
1039          DI  4459.8
1040          DQ     0.0     5.6    29.9    62.7   145.0   243.0   322.8   380.3   406.4   430.1
1041          DQ   474.5
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C23

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

1042          KK   DV4-6
1043          KM        DIVERT AS "DV4-6" THE FLOW TO STRUCTURE I.D.'S 4-6 ALONG CAP CANAL
1044          KM        AND AS "DV3" THE FLOW TO STRUC. I.D.#3,A.K.A.,STA.272+35.
1045          DT     DV3
1046          DI     0.0   111.7   297.6   844.4  1593.6  2362.6  2857.4  3276.1  3467.1  3648.6
1047          DQ     0.0    25.0    83.6   282.6   558.8   850.8  1050.0  1209.7  1282.4  1351.3

1048          KK   DV5-6
1049          KM        DIVERT AS "DV5-6" THE FLOW TO STRUCTURE I.D.'S 5-6 ALONG CAP CANAL
1050          KM        AND AS "DV4" THE FLOW TO STRUC. I.D.#4, A.K.A., STA.279+00.
1051          DT     DV4
1052          DI     0.0    86.7   214.0   561.8  1034.8  1511.8  1807.4  2066.4  2184.7  2297.3
1053          DQ     0.0    31.9    43.9   106.8   200.5   302.8   357.8   410.0   433.6   456.5

1054          KK     DV6
1055          KM        DIVERT AS "DV5" THE FLOW TO STRUCTURE I.D.#5, A.K.A.,STA.298+00, AND
1056          KM        AS "DV6" THE FLOW TO STRUCTURE I.D.#6, A.K.A. , STA.315+00.
1057          DT     DV5
1058          DI     0.0    54.8   170.1   455.0   834.3  1209.0  1449.6  1656.4  1751.1  1840.8
1059          DQ     0.0    23.1    49.0   111.3   205.5   300.3   360.4   412.3   436.0   458.6
1060          ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

   23         180
                .
                .
   35           .         168
                .           .
                .           .
   44       CO169............
                V
                V
   47        R171
                .
                .
   53           .          92
                .           V
                .           V
   59           .        DR92
                .           V
                .           V
   66           .        R161
                .           .
                .           .
   72           .           .         160
                .           .           .
                .           .           .
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C24

C25

```
 82      CO173.......................
             V
             V
 85       R175
             .
             .
 91          .         150
             .           .
             .           .
100          .           .          76
             .           .           V
             .           .           V
111          .           .        DR76
             .           .           V
             .           .           V
118          .           .        R153
             .           .           .
             .           .           .
124     CO155.......................
             .
             .
127          .          72
             .           V
             .           V
134          .        DR72
             .           .
             .           .
141          .           .          70
             .           .           V
             .           .           V
147          .           .        DR70
             .           .           .
             .           .           .
154          .           .           .          68
             .           .           .           V
             .           .           .           V
165          .           .           .         DR68
             .           .           .           .
             .           .           .           .
172          .       CO141.......................
             .           V
             .           V
175          .        R145
             .           .
             .           .
181          .           .         144
             .           .           .
             .           .           .
191     CO147.......................
             V
             V
194       R149
             .
             .
200          .          54
             .           V
             .           V
211          .         R55
             .           .
             .           .
217          .           .          56
             .           .           .
             .           .           .
227          .        CO57............
             .           V
             .           V
230          .         R59
             .           .
             .           .
236          .           .          50
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                .          .          .
                .          .          .
245             .       CO61...........
                .          V
                .          V
248             .       DR61
                .          .
                .          .
255             .          .         46
                .          .          .
                .          .          .
270             .          .          .         42
                .          .          .          .
                .          .          .          .
281             .          .      CO47...........
                .          .          V
                .          .          V
284             .          .       R49
                .          .          .
                .          .          .
290             .          .          .         48
                .          .          .          .
                .          .          .          .
300             .          .      CO63...........
                .          .          V
                .          .          V
303             .          .      DR63
                .          .          .
                .          .          .
310             .       CO65...........
                .          V
                .          V
313             .       R123
                .          .
                .          .
319             .          .         64
                .          .          V
                .          .          V
328             .          .      DR64
                .          .          V
                .          .          V
336             .          .      R121
                .          .          .
                .          .          .
342             .      CO127...........
                .          V
                .          V
345             .       R129
                .          .
                .          .
351             .          .        132
                .          .          .
                .          .          .
361             .      CO132...........
                .          .
                .          .
365        CO133...........
               V
               V
368         R137
               .
               .
374             .         10
                .          V
                .          V
386             .        R11
                .          .
                .          .
392             .          .         16
                .          .          .
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LED

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402          .        CO17............
             .           V
             .           V
405          .         R19
             .           .
             .           .
411          .           .          20
             .           .           .
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422          .           .           .          24
             .           .           .           .
             .           .           .           .
433          .        CO25........................
             .           V
             .           V
436          .         R27
             .           .
             .           .
442          .           .          30
             .           .           .
             .           .           .
454          .        CO31............
             .           V
             .           V
457          .        DR31
             .           V
             .           V
464          .        R113
             .           .
             .           .
470          .           .          32
             .           .           V
             .           .           V
478          .           .        DR32
             .           .           V
             .           .           V
485          .           .        R111
             .           .           .
             .           .           .
491          .       CO115............
             .           V
             .           V
494          .        R117
             .           .
             .           .
500          .           .          34
             .           .           V
             .           .           V
516          .           .        DR34
             .           .           V
             .           .           V
523          .           .        R107
             .           .           .
             .           .           .
529          .           .           .          38
             .           .           .           V
             .           .           .           V
536          .           .           .        DR38
             .           .           .           V
             .           .           .           V
543          .           .           .        R103
             .           .           .           .
             .           .           .           .
549          .           .       CO105............
             .           .           V
             .           .           V
552          .           .        R109
             .           .           .
             .           .           .
558          .           .           .         102
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567          .          .          .          .        112
             .          .          .          .          .
             .          .          .          .          .
575          .       CO119.......................................
             .          V
             .          V
578          .       R118
             .          .
             .          .
584          .          .        122
             .          .          .
             .          .          .
593          .       CO124............
             .          .
             .          .
597      CO125............
             .
             .
601          .        106
             .          .
             .          .
614          .          .         36
             .          .          V
             .          .          V
623          .          .       DR36
             .          .          V
             .          .          V
630          .          .       R101
             .          .          V
             .          .          V
639          .          .      R101A
             .          .          .
             .          .          .
646      CO191........................
             V
             V
649       R193
             .
             .
655          .        192
             .          .
             .          .
663      CO195............
             V
             V
666       R197
             .
             .
672          .        198
             .          .
             .          .
682      CO199............
             .
             .
690          .-------->   MAIN3
685     SPLIT3
             V
             V
695       R301
             .
             .
701          .        216
             .          .
             .          .
711      CO215............
             .
             .
718          .-------->  SPLIT4
714      SPLT3
             V
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C 39

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            V
721       R323
            .
            .
727         .         218
            .           .
            .           .
736     CO219............
            .
            .
741         .           .<-------  SPLIT4
739         .      SPLIT4
            .           V
            .           V
742         .        R321
            .           .
            .           .
748         .           .         214
            .           .           .
            .           .           .
758         .       CO217............
            .           .
            .           .
761     CO400............
            V
            V
764     DR400
            .
            .
781         .------->   DV501
778     DV400
            .
            .
788         .           .<-------   MAIN3
786         .       MAIN3
            .           .
            .           .
795         .           .------->   MAIN2
789         .      SPLIT2
            .           V
            .           V
800         .        R318
            .           .
            .           .
806         .           .         220
            .           .           .
            .           .           .
819         .       CO410............
            .           .
            .           .
824         .           .           .<-------   MAIN2
822         .           .       MAIN2
            .           .           .
            .           .           .
830         .           .           .------->   MAIN1
825         .           .      SPLIT1
            .           .           V
            .           .           V
833         .           .        R316
            .           .           .
            .           .           .
839         .           .           .         212
            .           .           .           .
            .           .           .           .
848         .           .       CO208............
            .           .           .
            .           .           .
858         .           .           .------->     MN1
851         .           .       SPLT1
            .           .           .
            .           .           .
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863                                  210
                                      .
                                      .
874                          CO209............
                                      .
                                      .
882                                   .-------> SPLIT5
877                          SPLT1
                                     V
                                     V
885                           R211
                                      .
                                      .
891                                  226
                                      .
                                      .
902                          CO430............
                                      .
                                      .
905                                  230
                                      V
                                      V
914                                 R231
                                      .
                                      .
920                                                240
                                                     .
                                                     .
931                                                        232
                                                            .
                                                            .
939                                 CO235......................
                                      V
                                      V
942                                 R237
                                      .
                                      .
948                                                244
                                                     .
                                                     .
955                                 CO247............
                                      .
                                      .
958                                                238
                                                     .
                                                     .
971                                                          .<-------  SPLIT5
969                                                     SPLIT5
                                                             V
                                                             V
972                                                       R251
                                                             .
                                                             .
978                                             CO255............
                                                     .
                                                     .
983                                                          .<-------   MAIN1
981                                                     MAIN1
                                                             V
                                                             V
984                                                       R203
                                                             .
                                                             .
992                                                          .           .<-------     MN1
990                                                          .        MN1
                                                             .           .
                                                             .           .
993                                                     CO207............
                                                             V
                                                             V
996                                                       R205
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1ED

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                .          .          .          .          .
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1002            .          .          .          .          .        222
                .          .          .          .          .          .
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1015            .          .          .          .      CO420............
                .          .          .          .          .
                .          .          .          .          .
1018            .      CO500..............................................
                .          .
                .          .
1023            .          .          .<-------   DV501
1021            .          .      DV501
                .          .          .
                .          .          .
1024            .      CO501............
                .          V
                .          V
1027            .      DR501
                .          .
                .          .
1037            .          .------->     DV2
1034            .      DV3-6
                .          .
                .          .
1045            .          .------->     DV3
1042            .      DV4-6
                .          .
                .          .
1051            .          .------->     DV4
1048            .      DV5-6
                .          .
                .          .
1057            .          .------->     DV5
1054            .        DV6
```

```
(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   03APR02  TIME  13:56:23  *
*                                      *
****************************************
```

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

```
Project ID: PADEL6D - Major Basin: 01 - Return Period: 100 Years
      PADELFORD WASH FLOODPLAIN DELINEATION STUDY,  FCDMC NO. 99-12
      PREPARED BY A-N WEST, INC. JOB.NO.7158-07, DATE;9/28/00,REV.11/10/00
      100-YR.  6. HR. STORM
      REVISED 11/10/00 TO CONVERT FROM CLARK TO S-GRAPH UNIT HYDROGRAPH
      METHOD.
      60 PERCENT REDUCTION OF 'BOOK'ROCK OUTCROP % AS RTIMP VALUES,
      MODELED IN THIS RUN.
      REVISED1/3/01 TO FLOW DISTRIBUTIONS PER REFINED HEC-RAS ANALYSIS
      AND REVISE CO500 HC RECORD TO SHOW 23 SQ. MI.D.A.

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

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

                COMPUTATION INTERVAL    0.03 HOURS
                     TOTAL TIME BASE   66.63 HOURS

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

 14 JD         INDEX STORM NO. 1
                     STRM        3.36  PRECIPITATION DEPTH
                     TRDA        0.01  TRANSPOSITION DRAINAGE AREA
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15 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

18 JD INDEX STORM NO. 2

STRM 3.32 PRECIPITATION DEPTH
TRDA 1.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

19 JD INDEX STORM NO. 3

STRM 3.23 PRECIPITATION DEPTH
TRDA 5.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

20 JD INDEX STORM NO. 4

STRM 3.16 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

21 JD INDEX STORM NO. 5

STRM 3.06 PRECIPITATION DEPTH

TRDA 20.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

22 JD INDEX STORM NO. 6

STRM 2.99 PRECIPITATION DEPTH

TRDA 30.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02
0.02	0.02	0.02	0.03	0.03	0.03	0.03	0.03	0.03	0.03
0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1

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

C35

	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	180	682.	4.37	135.	34.	12.	0.96		
+	HYDROGRAPH AT	168	469.	4.17	74.	18.	7.	0.50		
+	2 COMBINED AT	CO169	1090.	4.23	206.	52.	19.	1.46		
+	ROUTED TO	R171	1075.	4.33	206.	52.	19.	1.46		
+	HYDROGRAPH AT	92	93.	4.03	13.	3.	1.	0.09		
+	ROUTED TO	DR92	88.	4.07	13.	3.	1.	0.09		
+	ROUTED TO	R161	80.	4.37	13.	3.	1.	0.09		
+	HYDROGRAPH AT	160	480.	4.23	82.	21.	7.	0.55		

+	3 COMBINED AT	CO173	1595.	4.30	295.	74.	27.	2.10
+	ROUTED TO	R175	1562.	4.40	295.	74.	27.	2.10
+	HYDROGRAPH AT	150	790.	4.20	132.	33.	12.	0.88
+	HYDROGRAPH AT	76	715.	4.27	132.	33.	12.	0.94
+	ROUTED TO	DR76	712.	4.30	132.	33.	12.	0.94
+	ROUTED TO	R153	692.	4.47	132.	33.	12.	0.94
+	3 COMBINED AT	CO155	2815.	4.40	541.	136.	49.	3.92
+	HYDROGRAPH AT	72	148.	4.07	20.	5.	2.	0.14
+	ROUTED TO	DR72	145.	4.10	20.	5.	2.	0.14
+	HYDROGRAPH AT	70	101.	4.03	13.	3.	1.	0.09
+	ROUTED TO	DR70	94.	4.07	13.	3.	1.	0.09
+	HYDROGRAPH AT	68	449.	4.27	85.	21.	8.	0.60
+	ROUTED TO	DR68	448.	4.27	85.	21.	8.	0.60
+	3 COMBINED AT	CO141	652.	4.20	118.	30.	11.	0.83
+	ROUTED TO	R145	636.	4.37	118.	30.	11.	0.83
+	HYDROGRAPH AT	144	309.	4.20	51.	13.	5.	0.34
+	3 COMBINED AT	CO147	3646.	4.37	696.	175.	63.	5.09
+	ROUTED TO	R149	3635.	4.43	695.	175.	63.	5.09
+	HYDROGRAPH AT	54	883.	4.27	167.	42.	15.	1.17

+	ROUTED TO	R55	874.	4.33	167.	42.	15.	1.17
+	HYDROGRAPH AT	56	589.	4.23	109.	27.	10.	0.75
+	2 COMBINED AT	CO57	1421.	4.30	271.	68.	25.	1.92
+	ROUTED TO	R59	1405.	4.37	270.	68.	25.	1.92
+	HYDROGRAPH AT	50	203.	4.13	34.	8.	3.	0.23
+	2 COMBINED AT	CO61	1557.	4.37	302.	76.	27.	2.16
+	ROUTED TO	DR61	1555.	4.40	302.	76.	27.	2.16
+	HYDROGRAPH AT	46	962.	4.50	214.	54.	19.	1.63
+	HYDROGRAPH AT	42	489.	4.27	94.	24.	9.	0.63
+	2 COMBINED AT	CO47	1376.	4.40	304.	76.	28.	2.26
+	ROUTED TO	R49	1359.	4.57	303.	76.	28.	2.26
+	HYDROGRAPH AT	48	431.	4.20	78.	19.	7.	0.42
+	2 COMBINED AT	CO63	1669.	4.50	376.	95.	34.	2.68
+	ROUTED TO	DR63	1649.	4.57	376.	95.	34.	2.68
+	2 COMBINED AT	CO65	3079.	4.47	663.	168.	60.	4.84
+	ROUTED TO	R123	3071.	4.50	663.	168.	60.	4.84
+	HYDROGRAPH AT	64	359.	4.20	63.	16.	6.	0.44
+	ROUTED TO	DR64	358.	4.20	63.	16.	6.	0.44
+	ROUTED TO	R121	358.	4.23	63.	16.	6.	0.44

+	2 COMBINED AT	CO127	3322.	4.47	718.	182.	65.	5.28
+	ROUTED TO	R129	3265.	4.60	718.	182.	65.	5.28
+	HYDROGRAPH AT	132	333.	4.23	59.	15.	5.	0.35
+	2 COMBINED AT	CO132	3485.	4.57	771.	195.	70.	5.63
+	2 COMBINED AT	CO133	6708.	4.50	1405.	356.	128.	10.72
+	ROUTED TO	R137	6684.	4.57	1405.	356.	128.	10.72
+	HYDROGRAPH AT	10	954.	4.33	189.	47.	17.	1.29
+	ROUTED TO	R11	942.	4.40	188.	47.	17.	1.29
+	HYDROGRAPH AT	16	611.	4.20	107.	27.	10.	0.65
+	2 COMBINED AT	CO17	1471.	4.30	290.	73.	26.	1.94
+	ROUTED TO	R19	1455.	4.43	290.	73.	26.	1.94
+	HYDROGRAPH AT	20	1080.	4.30	213.	54.	19.	1.50
+	HYDROGRAPH AT	24	640.	4.30	125.	31.	11.	0.85
+	3 COMBINED AT	CO25	3031.	4.37	606.	153.	55.	4.30
+	ROUTED TO	R27	2961.	4.53	605.	153.	55.	4.30
+	HYDROGRAPH AT	30	356.	4.40	73.	18.	7.	0.40
+	2 COMBINED AT	CO31	3268.	4.53	673.	171.	61.	4.69
+	ROUTED TO	DR31	3247.	4.57	673.	171.	61.	4.69
+	ROUTED TO	R113	3224.	4.63	672.	171.	61.	4.69

+	HYDROGRAPH AT	32	97.	4.10	16.	4.	1.	0.08
+	ROUTED TO	DR32	97.	4.10	16.	4.	1.	0.08
+	ROUTED TO	R111	95.	4.23	16.	4.	1.	0.08
+	2 COMBINED AT	CO115	3281.	4.63	687.	174.	63.	4.77
+	ROUTED TO	R117	3281.	4.63	687.	174.	63.	4.77
+	HYDROGRAPH AT	34	970.	4.53	222.	56.	20.	1.13
+	ROUTED TO	DR34	964.	4.57	222.	56.	20.	1.13
+	ROUTED TO	R107	958.	4.63	222.	56.	20.	1.13
+	HYDROGRAPH AT	38	141.	4.07	24.	6.	2.	0.10
+	ROUTED TO	DR38	139.	4.10	24.	6.	2.	0.10
+	ROUTED TO	R103	135.	4.20	24.	6.	2.	0.10
+	2 COMBINED AT	CO105	1037.	4.57	245.	61.	22.	1.23
+	ROUTED TO	R109	1031.	4.67	245.	61.	22.	1.23
+	HYDROGRAPH AT	102	160.	4.17	31.	8.	3.	0.13
+	HYDROGRAPH AT	112	268.	4.07	42.	11.	4.	0.22
+	4 COMBINED AT	CO119	4422.	4.63	980.	248.	89.	6.35
+	ROUTED TO	R118	4378.	4.73	979.	248.	89.	6.35
+	HYDROGRAPH AT	122	543.	4.13	91.	23.	8.	0.49
+	2 COMBINED AT	CO124	4589.	4.70	1060.	268.	97.	6.84

+	2 COMBINED AT	CO125	10486.	4.63	2335.	592.	213.	17.56
+	HYDROGRAPH AT	106	410.	4.43	86.	22.	8.	0.45
+	HYDROGRAPH AT	36	166.	4.13	30.	7.	3.	0.14
+	ROUTED TO	DR36	163.	4.20	30.	7.	3.	0.14
+	ROUTED TO	R101	156.	4.60	30.	7.	3.	0.14
+	ROUTED TO	R101A	152.	4.83	30.	7.	3.	0.14
+	3 COMBINED AT	CO191	10911.	4.63	2430.	616.	222.	18.15
+	ROUTED TO	R193	10847.	4.70	2430.	616.	222.	18.15
+	HYDROGRAPH AT	192	519.	4.10	73.	18.	7.	0.52
+	2 COMBINED AT	CO195	10954.	4.67	2485.	630.	227.	18.67
+	ROUTED TO	R197	10857.	4.83	2484.	630.	227.	18.67
+	HYDROGRAPH AT	198	280.	4.23	46.	12.	4.	0.42
+	2 COMBINED AT	CO199	10911.	4.83	2517.	639.	230.	19.09
+	DIVERSION TO	MAIN3	7064.	4.83	1430.	360.	130.	19.09
+	HYDROGRAPH AT	SPLIT3	3847.	4.83	1086.	279.	101.	19.09
+	ROUTED TO	R301	3774.	5.17	1085.	279.	101.	19.09
+	HYDROGRAPH AT	216	113.	4.23	15.	4.	1.	0.20
+	2 COMBINED AT	CO215	3780.	5.17	1096.	282.	101.	19.29
+	DIVERSION TO	SPLIT4	575.	5.17	127.	32.	11.	19.29

+	HYDROGRAPH AT	SPLT3	3205.	5.17	969.	250.	90.	19.29
+	ROUTED TO	R323	3185.	5.33	968.	250.	90.	19.29
+	HYDROGRAPH AT	218	117.	4.17	15.	4.	1.	0.17
+	2 COMBINED AT	CO219	3186.	5.33	979.	253.	91.	19.46
+	HYDROGRAPH AT	SPLIT4	575.	5.17	127.	32.	11.	19.29
+	ROUTED TO	R321	569.	5.33	127.	32.	11.	19.29
+	HYDROGRAPH AT	214	124.	4.20	16.	4.	1.	0.20
+	2 COMBINED AT	CO217	665.	5.30	165.	41.	15.	0.20
+	2 COMBINED AT	CO400	3721.	5.37	1106.	284.	102.	23.00
+	ROUTED TO	DR400	2614.	5.97	948.	284.	102.	23.00
+	DIVERSION TO	DV501	2145.	5.97	534.	133.	48.	23.00
+	HYDROGRAPH AT	DV400	468.	6.00	414.	151.	54.	23.00
+	HYDROGRAPH AT	MAIN3	7064.	4.83	1430.	360.	130.	19.09
+	DIVERSION TO	MAIN2	4828.	4.83	1073.	270.	97.	19.09
+	HYDROGRAPH AT	SPLIT2	2236.	4.83	358.	89.	32.	19.09
+	ROUTED TO	R318	2111.	5.30	358.	89.	32.	19.09
+	HYDROGRAPH AT	220	115.	4.40	19.	5.	2.	0.24
+	2 COMBINED AT	CO410	2127.	5.30	371.	93.	33.	19.33
+	HYDROGRAPH AT	MAIN2	4828.	4.83	1073.	270.	97.	19.09

C41

+	DIVERSION TO	MAIN1	1257.	4.83	240.	60.	22.	19.09
+	HYDROGRAPH AT	SPLIT1	3571.	4.83	833.	210.	76.	19.09
+	ROUTED TO	R316	3514.	5.03	833.	210.	76.	19.09
+	HYDROGRAPH AT	212	146.	4.20	20.	5.	2.	0.22
+	2 COMBINED AT	CO208	3524.	5.03	848.	214.	77.	19.31
+	DIVERSION TO	MN1	909.	5.03	89.	22.	8.	19.31
+	HYDROGRAPH AT	SPLT1	2615.	5.03	759.	192.	69.	19.31
+	HYDROGRAPH AT	210	496.	4.27	81.	20.	7.	0.64
+	2 COMBINED AT	CO209	2719.	5.00	825.	209.	75.	19.95
+	DIVERSION TO	SPLIT5	941.	5.00	280.	71.	26.	19.95
+	HYDROGRAPH AT	SPLT1	1778.	5.00	545.	138.	50.	19.95
+	ROUTED TO	R211	1758.	5.33	545.	138.	50.	19.95
+	HYDROGRAPH AT	226	135.	4.30	20.	5.	2.	0.24
+	2 COMBINED AT	CO430	1767.	5.33	560.	142.	51.	20.18
+	HYDROGRAPH AT	230	354.	4.13	54.	14.	5.	0.36
+	ROUTED TO	R231	335.	4.37	54.	14.	5.	0.36
+	HYDROGRAPH AT	240	666.	4.27	114.	29.	10.	0.84
+	HYDROGRAPH AT	232	283.	4.10	41.	10.	4.	0.26
+	3 COMBINED AT	CO235	1208.	4.27	205.	52.	19.	1.46

C42

+	ROUTED TO	R237	1194.	4.37	205.	52.	19.	1.46
+	HYDROGRAPH AT	244	162.	4.07	18.	5.	2.	0.19
+	2 COMBINED AT	CO247	1276.	4.33	222.	56.	20.	1.65
+	HYDROGRAPH AT	238	216.	4.27	30.	8.	3.	0.36
+	HYDROGRAPH AT	SPLIT5	941.	5.00	280.	71.	26.	19.95
+	ROUTED TO	R251	933.	5.17	279.	71.	26.	19.95
+	2 COMBINED AT	CO255	1063.	5.07	344.	87.	31.	0.36
+	HYDROGRAPH AT	MAIN1	1257.	4.83	240.	60.	22.	19.09
+	ROUTED TO	R203	1199.	5.23	240.	60.	22.	19.09
+	HYDROGRAPH AT	MN1	909.	5.03	89.	22.	8.	19.31
+	2 COMBINED AT	CO207	2028.	5.10	329.	82.	30.	19.10
+	ROUTED TO	R205	1938.	5.43	329.	82.	30.	19.10
+	HYDROGRAPH AT	222	262.	4.40	41.	10.	4.	0.51
+	2 COMBINED AT	CO420	1954.	5.43	359.	90.	32.	19.61
+	5 COMBINED AT	CO500	6677.	5.37	1746.	441.	159.	23.00
+	HYDROGRAPH AT	DV501	2145.	5.97	534.	133.	48.	23.00
+	2 COMBINED AT	CO501	7682.	5.47	2280.	574.	207.	23.00
+	ROUTED TO	DR501	2938.	6.47	2030.	574.	207.	23.00
+	DIVERSION TO	DV2	289.	6.47	183.	51.	18.	23.00

+	HYDROGRAPH AT	DV3-6	2649.	6.47	1847.	524.	189.	23.00
+	DIVERSION TO	DV3	966.	6.47	659.	183.	66.	23.00
+	HYDROGRAPH AT	DV4-6	1683.	6.47	1189.	341.	123.	23.00
+	DIVERSION TO	DV4	335.	6.47	234.	69.	25.	23.00
+	HYDROGRAPH AT	DV5-6	1348.	6.47	954.	272.	98.	23.00
+	DIVERSION TO	DV5	335.	6.47	236.	69.	25.	23.00
+	HYDROGRAPH AT	DV6	1013.	6.47	718.	203.	73.	23.00

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

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1*****************************************
*                                       *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*              JUN   1998               *
*           VERSION 4.1                 *
*                                       *
*  RUN DATE   02APR02  TIME  09:29:28   *
*                                       *
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*                                       *
*    U.S. ARMY CORPS OF ENGINEERS       *
*    HYDROLOGIC ENGINEERING CENTER      *
*          609 SECOND STREET            *
*       DAVIS, CALIFORNIA 95616         *
*           (916) 756-1104              *
*                                       *
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X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     X  X        X              X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX         XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

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

  1           ID   Project ID: PADEL24D - Major Basin: 01 - Return Period: 100 Years
  2           ID         PADELFORD WASH FLOODPLAIN DELINEATION STUDY,  FCDMC NO. 99-12
  3           ID         PREPARED BY A-N WEST, INC. JOB.NO.7158-07, DATE;9/28/00,REV.11/10/00
  4           ID         100-YR. 24. HR. STORM
  5           ID         REVISED 11/10/00 TO CONVERT FROM CLARK TO S-GRAPH UNIT HYDROGRAPH
  6           ID         METHOD.
  7           ID         60 PERCENT REDUCTION OF 'BOOK'ROCK OUTCROP % AS RTIMP VALUES,
  8           ID         MODELED IN THIS RUN.
  9           ID         REVISED1/3/01 TO FLOW DISTRIBUTIONS PER REFINED HEC-RAS ANALYSIS
 10           ID         AND REVISE CO500 HC RECORD TO SHOW 23 SQ. MI.D.A.
              *DIAGRAM*
 11           IT       2                    2000
 12           IO       5
 13           IN      15
 14           JD    4.18    0.01
 15           PC   0.000   0.002   0.005   0.008   0.011   0.014   0.017   0.020   0.023   0.026
 16           PC   0.029   0.032   0.035   0.038   0.041   0.044   0.048   0.052   0.056   0.060
 17           PC   0.064   0.068   0.072   0.076   0.080   0.085   0.090   0.095   0.100   0.105
 18           PC   0.110   0.115   0.120   0.126   0.133   0.140   0.147   0.155   0.163   0.172
 19           PC   0.181   0.191   0.203   0.218   0.236   0.257   0.283   0.387   0.663   0.707
 20           PC   0.735   0.758   0.776   0.791   0.804   0.815   0.825   0.834   0.842   0.849
 21           PC   0.856   0.863   0.869   0.875   0.881   0.887   0.893   0.898   0.903   0.908
 22           PC   0.913   0.918   0.922   0.926   0.930   0.934   0.938   0.942   0.946   0.950
 23           PC   0.953   0.956   0.959   0.962   0.965   0.968   0.971   0.974   0.977   0.980
 24           PC   0.983   0.986   0.989   0.992   0.995   0.998   1.000
 25           JD   4.155    1.00
 26           JD   4.055    5.00
 27           JD   3.929   10.00
 28           JD   3.804   20.00
 29           JD   3.762   30.00

 30           KK     180   BASIN
 31           BA   0.959
 32           LG    0.25    0.35    4.60    0.36      17
 33           UI      96     100      96     130     287     360     450     585     619     684
 34           UI     748     805     924    1134    1122     793     682     615     572     564
 35           UI     516     482     467     425     399     388     338     309     287     254
 36           UI     236     237     223     207     209     159     160     138     124     123
 37           UI     114     106     105     100      74      75      76      74      66      49
 38           UI      48       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
 41           UI       0       0       0       0       0       0       0       0       0       0

 42           KK     168   BASIN
 43           BA   0.504
 44           LG    0.25    0.37    5.30    0.26      11
 45           UI      88      91     232     370     550     620     716     976     904     625
 46           UI     547     484     432     401     349     299     259     221     203     197
 47           UI     149     127     116     101      97      75      68      68      45      43
 48           UI      44      44      30      17      17      17      17      17      17      17
 49           UI      18      17      17       0       0       0       0       0       0       0
 50           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
  51          KK   CO169
  52          KM        COMBINE S180 AND S168
  53          HC       2

  54          KK    R171   ROUTE   REACH
  55          KM        ROUTE CO169 TO CO173
  56          RS       1    STOR      -1
  57          RC   0.065   0.037   0.065    1750  0.0067    0.00
  58          RX     0.0    10.0    37.5    45.0    70.0    77.5   105.0   115.0
  59          RY     7.0     5.0     3.0     0.0     0.0     3.0     5.0     7.0

  60          KK      92   BASIN
  61          BA   0.088
  62          LG    0.25    0.35    4.25    0.46      21
  63          UI      41     170     277     364     221     171     125      93      69      46
  64          UI      36      27      18      14       7       7       8       7       0       0
  65          UI       0       0       0       0       0       0       0       0       0       0

  66          KK    DR92
  67          KM        ROUTE S92 THRU THE 60 IN. I.D. X 114 FT. RCP CULVERT UNDER S.R.74
  68          KM    .   AND THE ASSOC. STORAGE AT THE RD.
  69          RS       1    STOR       0
  70          SV     0.0   0.209   0.617   1.241   2.080   3.134   4.404   5.890
  71          SQ     0.0    47.2   106.8   178.3   229.1   268.1   302.8   332.7
  72          SE  1935.2  1938.0  1940.0  1942.0  1944.0  1946.0  1948.0  1950.0

  73          KK    R161   ROUTE   REACH
  74          KM         RO161; ROUTE S92 TO CO173
  75          RS       8    STOR      -1
  76          RC   0.065   0.037   0.065    7950  0.0190    0.00
  77          RX     0.0     4.0    10.0    27.5    42.5    60.0    66.0    70.0
  78          RY     8.0     7.0     6.0     0.0     0.0     6.0     7.0     8.0

  79          KK     160   BASIN
  80          BA   0.549
  81          LG    0.25    0.39    5.70    0.22      10
  82          UI      76      79     111     239     334     450     510     592     632     803
  83          UI     909     579     496     461     419     381     369     324     296     266
  84          UI     227     201     190     176     161     144     126     100     101      87
  85          UI      84      80      59      58      60      46      37      39      37      37
  86          UI      39      15      15      15      15      14      15      15      15      15
  87          UI      14       0       0       0       0       0       0       0       0       0
  88          UI       0       0       0       0       0       0       0       0       0       0

  89          KK   CO173
  90          KM        COMBINE RO169, RO161, AND S160
  91          HC       3

  92          KK    R175   ROUTE   REACH
  93          KM        ROUTE CO173 TO CO155
  94          RS       2    STOR      -1
  95          RC   0.065   0.037   0.065    3200  0.0075    0.00
  96          RX     0.0     9.0    15.0    23.0    54.0    62.0    92.0   100.0
  97          RY     6.0     3.0     3.0     0.0     0.0     3.0     4.0     7.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 98           KK     150   BASIN
 99           BA   0.877
100           LG    0.25    0.37    5.20    0.27      14
101           UI     139     142     289     509     775     894    1049    1221    1547    1400
102           UI     994     863     769     721     645     573     536     452     371     352
103           UI     322     298     253     215     178     173     151     145     110     106
104           UI     107      70      69      68      71      64      27      28      26      27
105           UI      28      26      27      28      26      27      28      26       0       0
106           UI       0       0       0       0       0       0       0       0       0       0

107           KK      76   BASIN
108           BA   0.938
109           LG    0.25    0.35    4.55    0.38      17
110           UI     115     119     115     306     435     585     708     808     882     951
111           UI    1231    1372    1012     847     704     686     637     576     544     512
112           UI     454     420     388     326     293     284     267     247     231     191
113           UI     170     152     147     126     130     118      89      91      89      84
114           UI      58      57      57      58      57      57      29      22      22      23
115           UI      23       0       0       0       0       0       0       0       0       0
116           UI       0       0       0       0       0       0       0       0       0       0
117           UI       0       0       0       0       0       0       0       0       0       0

118           KK    DR76
119           KM        ROUTE S76 THRU 2-10 FT.(SPAN) X 8 FT. X 150 FT. (LONG) RCB'S UNDER S.R.7
120           KM        AND ASSOC. STOARGE AT RD.
121           RS       1    STOR       0
122           SV     0.0   0.453   1.145   2.152   3.474   5.575   8.917   13.50  19.324  26.389
123           SQ     0.0   324.7   642.2  1029.8  1473.8  1967.1  2390.8  2721.3  3017.8  3285.9
124           SE  1850.6  1854.0  1856.0  1858.0  1860.0  1862.0  1864.0  1866.0  1868.0  1870.0

125           KK    R153   ROUTE   REACH
126           KM        R153; ROUTE S76 TO CO155
127           RS       4    STOR      -1
128           RC   0.065   0.037   0.065    5200  0.0140    0.00
129           RX     0.0     6.0    12.0    18.0    43.0    46.0    76.0    82.0
130           RY    12.0     9.0     6.0     0.0     0.0     1.5     2.0     6.0

131           KK   CO155
132           KM         COMBINE R175, R153, AND S150
133           HC       3

134           KK      72   BASIN
135           BA   0.143
136           LG    0.25    0.35    4.70    0.34      14
137           UI      39      95     198     286     393     373     250     212     175     145
138           UI     116      94      78      61      48      42      32      27      19      20
139           UI      14       7       8       8       7       8       8       0       0       0
140           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
 141          KK    DR72
 142          KM        ROUTE S72 THRU (1) 8 FT. (SPAN) X 5 FT. X 147 FT RCB UNDER S.R.74
 143          KM        AND ASSOC. STORAGE AT RD.
 144          RS       1    STOR       0
 145          SV     0.0   0.024   0.259   0.736   1.455   2.416   3.619
 146          SQ     0.0    26.0   103.4   225.3   374.6   503.5   600.0
 147          SE  1839.1  1840.0  1842.0  1844.0  1846.0  1848.0  1850.0

 148          KK      70   BASIN
 149          BA   0.090
 150          LG    0.25    0.35    4.80    0.33      14
 151          UI      42     174     284     371     227     174     128      95      71      47
 152          UI      37      27      18      15       7       7       8       7       0       0
 153          UI       0       0       0       0       0       0       0       0       0       0

 154          KK    DR70
 155          KM        ROUTE S70 THRU (1) 54 IN. I.D. RCP X 118 FT. LONG AND (1) 42 IN. I.D.
 156          KM        RCP X 162 FT. LONG CULVERTS UNDER S.R. 74 AND ASSOC. STORAGE AR RD.
 157          RS       1    STOR       0
 158          SV     0.0   0.317   0.904   1.792   2.980   3.687
 159          SQ     0.0    25.6    99.0   142.4   192.9   226.0
 160          SE  1831.1  1834.0  1836.0  1838.0  1840.0  1841.0

 161          KK      68   BASIN
 162          BA   0.601
 163          LG    0.25    0.35    4.25    0.46      21
 164          UI      77      79      77     225     314     406     482     559     592     680
 165          UI     872     873     582     509     462     425     407     376     340     318
 166          UI     284     253     226     197     186     183     163     146     132     109
 167          UI      99      97      84      85      72      59      59      61      45      38
 168          UI      39      37      38      39      25      15      15      15      14      16
 169          UI      14       0       0       0       0       0       0       0       0       0
 170          UI       0       0       0       0       0       0       0       0       0       0
 171          UI       0       0       0       0       0       0       0       0       0       0

 172          KK    DR68
 173          KM        ROUTE S68 THRU (2) 8 FT.(SPAN) X 6 FT. X 72 FT LONG RCB'S UNDER
 174          KM         S.R.74 AND ASSOC. STORAGE AT RD.
 175          RS       1    STOR       0
 176          SV     0.0   0.052   0.310   0.784   1.474   2.326
 177          SQ     0.0    67.9   254.7   511.4   821.7   993.1
 178          SE  1832.6  1834.0  1836.0  1838.0  1840.0  1841.0

 179          KK   CO141
 180          KM        COMBINE S72, S70, AND S68
 181          HC       3

 182          KK    R145   ROUTE   REACH
 183          KM        R145; ROUTE CO141 TO CO147
 184          RS       5    STOR      -1
 185          RC   0.065   0.037   0.065    4910  0.0150    0.00
 186          RX     0.0    20.0    28.0    31.0    56.0    59.0    89.0   101.0
 187          RY     7.0     1.5     1.0     0.0     0.0     1.0     2.0     6.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 188          KK     144   BASIN
 189          BA   0.343
 190          LG    0.25    0.39    5.70    0.22       9
 191          UI      52      54      98     176     266     328     378     428     516     609
 192          UI     415     342     303     285     258     231     217     187     164     142
 193          UI     129     119     114      91      82      69      65      57      58      43
 194          UI      40      41      32      25      27      25      26      20      10      10
 195          UI      10      10      10      10      10      10      10      10      10      10
 196          UI       0       0       0       0       0       0       0       0       0       0
 197          UI       0       0       0       0       0       0       0       0       0       0

 198          KK   CO147
 199          KM        COMBINE S144, R145, AND CO155
 200          HC       3

 201          KK    R149   ROUTE   REACH
 202          KM          R149; ROUTE CO147 TO CO133
 203          RS       2    STOR      -1
 204          RC   0.065   0.037   0.065    2300  0.0110    0.00
 205          RX     0.0    10.0    50.0    57.5    97.5   105.0   125.0   131.0
 206          RY     6.5     3.5     3.0     0.0     0.0     3.0     7.0     9.0

 207          KK      54   BASIN
 208          BA   1.171
 209          LG    0.25    0.35    4.30    0.44      21
 210          UI     149     155     149     441     610     790     940    1091    1154    1322
 211          UI    1701    1700    1133     992     902     827     793     732     663     619
 212          UI     554     493     441     383     362     359     316     285     256     213
 213          UI     192     190     164     164     141     116     115     119      87      73
 214          UI      76      73      73      76      49      28      30      29      29      29
 215          UI      29       0       0       0       0       0       0       0       0       0
 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          KK     R55   ROUTE   REACH
 219          KM         R55; ROUTE S54 TO CO57
 220          RS       2    STOR      -1
 221          RC   0.065   0.037   0.065    3800  0.0170    0.00
 222          RX     0.0     9.0    18.0    27.0    57.0    63.0    69.0    75.0
 223          RY     9.0     6.0     3.0     0.0     0.0     4.0     8.0    12.0

 224          KK      56   BASIN
 225          BA   0.750
 226          LG    0.25    0.35    4.30    0.44      21
 227          UI     104     107     152     327     457     614     696     810     863    1097
 228          UI    1241     792     678     629     572     521     504     442     405     363
 229          UI     310     276     259     239     221     197     171     138     137     119
 230          UI     114     111      80      79      83      62      51      53      51      51
 231          UI      52      21      20      21      20      20      20      20      20      21
 232          UI      20       0       0       0       0       0       0       0       0       0
 233          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

 234          KK    CO57
 235          KM        COMBINE S56 AND R55
 236          HC       2

 237          KK     R59   ROUTE   REACH
 238          KM         R59; ROUTE CO57 TO CO61
 239          RS       3    STOR      -1
 240          RC   0.065   0.037   0.065    4500  0.0150    0.00
 241          RX     0.0    12.0    24.0    36.0    69.0    75.0    81.0    87.0
 242          RY     9.0     6.0     3.0     0.0     0.0     4.0     8.0    12.0

 243          KK      50   BASIN
 244          BA   0.235
 245          LG    0.25    0.35    4.25    0.46      21
 246          UI      44      44     129     200     284     320     383     520     351     281
 247          UI     251     222     202     182     148     128     114     101      92      75
 248          UI      61      55      50      45      33      35      28      21      22      21
 249          UI      19       8       9       8       9       8       8       9       8       9
 250          UI       8       0       0       0       0       0       0       0       0       0
 251          UI       0       0       0       0       0       0       0       0       0       0

 252          KK    CO61
 253          KM         COMBINE S50 AND R59
 254          HC       2

 255          KK    DR61
 256          KM        ROUTE CO61 THRU (2) 12 FT. (SPAN) X 10 FT. X 84.5 FT. RCB'S UNDER
 257          KM        S.R.74 AND ASSOC. STORAGE AT RD.
 258          RS      1    STOR      0
 259          SV     0.0   0.045   0.294   1.041   2.521   4.826   8.212
 260          SQ     0.0   190.2   517.0   938.6  1437.8  2003.0  2629.5
 261          SE  1835.9  1838.0  1840.0  1842.0  1844.0  1846.0  1848.0

 262          KK      46   BASIN
 263          BA   1.629
 264          LG    0.25    0.35    4.35    0.43      21
 265          UI     126     130     126     127     144     365     404     505     578     719
 266          UI     803     835     901     974     990    1103    1262    1441    1578    1238
 267          UI     954     886     841     766     735     728     681     646     625     585
 268          UI     562     549     504     484     454     417     393     356     336     306
 269          UI     315     291     289     280     267     241     213     206     188     167
 270          UI     161       0       0       0       0       0       0       0       0       0
 271          UI       0       0       0       0       0       0       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          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

 277          KK      42   BASIN
 278          BA   0.632
 279          LG    0.25    0.35    4.45    0.40      21
 280          UI      78      80      78     206     292     395     477     544     595     640
 281          UI     829     925     682     570     475     461     431     387     367     345
 282          UI     306     283     261     219     198     192     179     167     156     128
 283          UI     114     103      99      85      87      80      60      61      60      57
 284          UI      39      39      38      39      39      38      20      15      14      16
 285          UI      15       0       0       0       0       0       0       0       0       0
 286          UI       0       0       0       0       0       0       0       0       0       0
 287          UI       0       0       0       0       0       0       0       0       0       0

 288          KK    CO47
 289          KM        COMBINE S46 AND S42
 290          HC       2

 291          KK     R49   ROUTE   REACH
 292          KM        R49; ROUTE CO47 TO CO63
 293          RS       4    STOR      -1
 294          RC   0.065   0.041   0.065    6200  0.0125    0.00
 295          RX     0.0    12.0    24.0    36.0    79.5    85.5    91.5    97.5
 296          RY     9.0     6.0     3.0     0.0     0.0     3.0     6.0     9.0

 297          KK      48   BASIN
 298          BA   0.422
 299          LG    0.25    0.35    7.00    0.13      11
 300          UI      64      66     120     218     327     403     466     526     635     750
 301          UI     510     420     374     350     317     285     267     229     203     174
 302          UI     159     145     140     114     101      84      80      70      72      52
 303          UI      49      51      39      31      33      31      31      25      12      12
 304          UI      13      12      13      12      13      12      13      12      12      13
 305          UI       0       0       0       0       0       0       0       0       0       0
 306          UI       0       0       0       0       0       0       0       0       0       0

 307          KK    CO63
 308          KM        COMBINE S48 AND R49.  THIS IS TRIBUTARY 'C' TO PADELFORD WASH AT S.R.74
 309          HC       2

 310          KK    DR63
 311          KM        ROUTE CO63 THRU (3) 10 FT. (SPAN) X 10 FT. X 122.5 FT. LONG RCB'S
 312          KM        UNDER S.R.74 AND ASSOC. STORAGE AT RD.
 313          RS       1    STOR       0
 314          SV     0.0   0.027   0.355   1.210   3.189   6.826  12.377
 315          SQ     0.0   156.9   391.5   842.8  1403.6  2048.6  2773.1
 316          SE  1837.1  1838.0  1840.0  1842.0  1844.0  1846.0  1848.0

 317          KK    CO65
 318          KM        COMBINE CO61 AND CO63
 319          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 320          KK    R123   ROUTE   REACH
 321          KM        R123; ROUTE CO65 TO CO127
 322          RS       1    STOR      -1
 323          RC   0.065   0.040   0.065    1400  0.0150    0.00
 324          RX     0.0     6.0    26.0    46.0    78.0    84.0    90.0    96.0
 325          RY     9.0     5.0     3.0     0.0     0.0     2.0     4.0     6.0

 326          KK      64   BASIN
 327          BA   0.437
 328          LG    0.25    0.35    4.30    0.44      20
 329          UI      69      71     144     254     386     445     523     608     771     698
 330          UI     495     430     383     360     321     286     267     225     185     176
 331          UI     160     148     126     107      89      86      76      72      55      53
 332          UI      53      35      34      34      35      32      13      14      13      14
 333          UI      13      14      13      14      13      13      14      13       0       0
 334          UI       0       0       0       0       0       0       0       0       0       0

 335          KK    DR64
 336          KM        ROUTE S64 THRU (1) 10 FT. (SPAN) X 6 FT. X 118.5 FT. RCB AND
 337          KM        (1) 10 FT. (SPAN) X 6 FT. X 118.5 FT. RCB AND (1) 6 FT. (SPAN)
 338          KM        X 5 FT. X 122 FT. RCB. UNDER S.R.74 AND ASSOC. STORAGE AT THE RD.
 339          RS       1    STOR       0
 340          SV     0.0   0.065   0.384   0.853   1.621   3.088   5.495   9.367  15.915
 341          SQ     0.0   103.9   215.9   459.4   759.8  1064.2  1297.2  1489.7  1660.8
 342          SE  1830.8  1832.0  1834.0  1836.0  1838.0  1840.0  1842.0  1844.0  1846.0

 343          KK    R121   ROUTE   REACH
 344          KM        R121; ROUTE S64 TO CO127
 345          RS       1    STOR      -1
 346          RC   0.065   0.040   0.065     700  0.0230    0.00
 347          RX     0.0    11.0    22.0    33.0    39.0    50.0    61.0    72.0
 348          RY     6.0     4.0     2.0     0.0     0.0     2.0     4.0     6.0

 349          KK   CO127
 350          KM        COMBINE R121 AND R123
 351          HC       2

 352          KK    R129   ROUTE   REACH
 353          KM        R129; ROUTE CO127 TO CO132
 354          RS       3    STOR      -1
 355          RC   0.065   0.038   0.065    5600  0.0120    0.00
 356          RX     0.0    10.0    50.0    56.0    97.0   111.0   116.5   123.5
 357          RY     6.0     3.0     3.0     0.0     0.0     3.5     5.0     7.0

 358          KK     132   BASIN
 359          BA   0.352
 360          LG    0.25    0.36    6.80    0.14       6
 361          UI      47      48      58     142     198     257     301     357     376     448
 362          UI     579     426     325     297     270     253     232     216     190     183
 363          UI     158     139     123     114     108     104      87      76      67      60
 364          UI      56      53      52      38      37      35      35      23      23      23
 365          UI      24      23      19      10       9       9       9       9       9       9
 366          UI       9       0       0       0       0       0       0       0       0       0
 367          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

 368          KK   CO132
 369          KM        COMBINE S132 AND R129.   THIS IS TRIBUTARY 'C' JUST U/S OF PADELFORD
 370          KM        WASH
 371          HC       2

 372          KK   CO133
 373          KM        COMBINE CO132 AND R149. THIS IS PADELFORD WASH D/S OF TRIB. 'C' CONFLUEN
 374          HC       2

 375          KK    R137   ROUTE   REACH
 376          KM        R137; ROUTE CO133 TO CO125
 377          RS       2    STOR      -1
 378          RC   0.065   0.037   0.065    1920  0.0089    0.00
 379          RX     0.0     4.0    24.0    40.0   100.0   112.0   192.0   202.0
 380          RY     8.0     5.0     4.0     0.0     0.0     3.5     3.5     8.0

 381          KK      10   BASIN
 382          BA   1.291
 383          LG    0.25    0.35    4.55    0.38      20
 384          UI     143     148     144     290     475     599     779     921    1000    1071
 385          UI    1236    1392    1737    1491    1071     944     880     818     766     737
 386          UI     674     624     605     538     480     455     384     359     354     330
 387          UI     304     295     236     231     189     183     173     162     157     146
 388          UI     113     110     110     113      80      70      73      70      70      73
 389          UI      70       0       0       0       0       0       0       0       0       0
 390          UI       0       0       0       0       0       0       0       0       0       0
 391          UI       0       0       0       0       0       0       0       0       0       0
 392          UI       0       0       0       0       0       0       0       0       0       0

 393          KK     R11   ROUTE   REACH
 394          KM         R11; ROUTE S10 TO CO17
 395          RS       2    STOR      -1
 396          RC   0.065   0.040   0.065    4600  0.0170    0.00
 397          RX     0.0     6.0    12.0    18.0    38.0    43.0    49.0    55.0
 398          RY     7.0     5.0     3.0     0.0     0.0     3.0     5.0     7.0

 399          KK      16   BASIN
 400          BA   0.653
 401          LG    0.25    0.40    6.00    0.20      15
 402          UI      99     103     186     337     505     624     720     814     982    1161
 403          UI     790     651     577     542     491     440     414     354     315     268
 404          UI     246     226     217     175     156     131     123     108     112      80
 405          UI      76      79      60      49      50      49      48      38      19      19
 406          UI      20      19      19      19      19      19      20      19      19      19
 407          UI       0       0       0       0       0       0       0       0       0       0
 408          UI       0       0       0       0       0       0       0       0       0       0

 409          KK    CO17
 410          KM        COMBINE R11 AND S16
 411          HC       2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 412          KK     R19   ROUTE   REACH
 413          KM         R19; ROUTE CO17 TO CO25
 414          RS       3    STOR      -1
 415          RC   0.065   0.040   0.065    6200  0.0190    0.00
 416          RX     0.0     6.0    12.0    18.0    43.0    48.0    54.0    60.0
 417          RY     7.0     5.0     3.0     0.0     0.0     3.0     5.0     7.0

 418          KK      20   BASIN
 419          BA   1.499
 420          LG    0.25    0.35    4.35    0.43      21
 421          UI     172     178     173     385     593     748     989    1132    1241    1315
 422          UI    1569    1836    2069    1491    1200    1068    1050     950     869     851
 423          UI     770     702     685     600     532     477     436     415     403     365
 424          UI     343     295     269     221     227     199     188     193     156     132
 425          UI     137     132     122      87      84      84      87      85      84      65
 426          UI      33       0       0       0       0       0       0       0       0       0
 427          UI       0       0       0       0       0       0       0       0       0       0
 428          UI       0       0       0       0       0       0       0       0       0       0

 429          KK      24   BASIN
 430          BA   0.853
 431          LG    0.25    0.35    4.50    0.39      20
 432          UI      98     101      98     220     337     426     563     644     706     748
 433          UI     893    1045    1177     849     682     609     597     540     494     486
 434          UI     437     399     391     341     303     271     248     236     229     208
 435          UI     196     167     154     126     128     114     107     110      88      75
 436          UI      78      75      69      50      48      48      50      48      48      37
 437          UI      19       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          KK    CO25
 441          KM         COMBINE S24, S20, AND R19
 442          HC       3

 443          KK     R27   ROUTE   REACH
 444          KM         R27; ROUTE CO25 TO CO31
 445          RS       6    STOR      -1
 446          RC   0.065   0.037   0.065   11200  0.0160    0.00
 447          RX     0.0    14.0    28.0    38.0    70.5    79.5    93.5   107.5
 448          RY     7.5     5.5     3.5     0.0     0.0     4.0     6.0     8.0

 449          KK      30   BASIN
 450          BA   0.396
 451          LG    0.25    0.32    7.60    0.10       7
 452          UI      39      40      39      45     114     138     171     225     240     270
 453          UI     294     311     350     428     474     358     297     261     234     232
 454          UI     218     200     191     182     164     163     149     133     126     110
 455          UI     103      98      91      89      86      82      63      65      56      49
 456          UI      51      46      43      44      42      31      31      29      30      31
 457          UI      20       0       0       0       0       0       0       0       0       0
 458          UI       0       0       0       0       0       0       0       0       0       0
 459          UI       0       0       0       0       0       0       0       0       0       0
 460          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
 461          KK    CO31
 462          KM        COMBINE S30 AND R27. THIS IS TRIBUTARY 'B' AT S.R.74.
 463          HC       2

 464          KK    DR31
 465          KM        ROUTE CO31 THRU (4) 10 FT. (SPAN) X 10 FT. X 102.5 FT. RCB'S UNDER
 466          KM        S.R.74 AND ASSOC. STORAGE AT RD.
 467          RS       1    STOR       0
 468          SV     0.0   0.150   0.719   2.099   4.504   7.849  12.219  14.863
 469          SQ     0.0   435.5   934.9  1642.9  2470.1  3411.8  4441.5  4994.4
 470          SE  1857.7  1860.0  1862.0  1864.0  1866.0  1868.0  1870.0  1971.0

 471          KK    R113   ROUTE   REACH
 472          KM        R113; ROUTE CO31 TO CO115
 473          RS       1    STOR      -1
 474          RC   0.065   0.040   0.065    3300  0.0150    0.00
 475          RX     0.0     7.0    14.0    19.0    53.0    59.0    65.0    71.0
 476          RY     9.0     7.0     5.0     0.0     0.0     4.0     8.0    12.0

 477          KK      32   BASIN
 478          BA   0.081
 479          LG    0.25    0.30    8.00    0.09       7
 480          UI      17      23      56      92     122     138     190     146     109      94
 481          UI      84      75      63      54      43      39      37      27      22      21
 482          UI      18      14      13      11       9       8       9       5       3       4
 483          UI       3       3       3       3       4       3       0       0       0       0
 484          UI       0       0       0       0       0       0       0       0       0       0

 485          KK    DR32
 486          KM         ROUTE S32 THRU (1) 6 FT. X 5 FT X 110.5 FT. RCB UNDER S.R.74 AND
 487          KM         ASSOC. STORAGE AT RD.
 488          RS       1    STOR       0
 489          SV     0.0   0.105   0.147   0.218   0.346   0.673   1.555   3.049
 490          SQ     0.0    36.4   100.5   200.0   314.2   398.4   466.9   498.2
 491          SE  1856.5  1858.0  1860.0  1862.0  1864.0  1866.0  1868.0  1869.0

 492          KK    R111   ROUTE   REACH
 493          KM         ** R111; ROUTE S32 TO CO115
 494          RS       3    STOR      -1
 495          RC   0.065   0.040   0.065    3100  0.0170    0.00
 496          RX     0.0     7.0    14.0    21.0    26.0    33.0    40.0    47.0
 497          RY     6.0     4.0     2.0     0.0     0.0     2.0     4.0     6.0

 498          KK   CO115
 499          KM        COMBINE S32 AND R113
 500          HC       2

 501          KK    R117   ROUTE   REACH
 502          KM        *** R117; ROUTE CO115 TO CO119
 503          RS       1    STOR      -1
 504          RC   0.065   0.040   0.065    1000  0.0150    0.00
 505          RX     0.0     7.0    14.0    19.0    53.0    59.0    65.0    71.0
 506          RY     9.0     7.0     5.0     0.0     0.0     4.0     8.0    12.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 507          KK      34   BASIN
 508          KM         ***  SUBAREA 34. ALSO. TRIBUTARY 'A' TO PADELFORD WASH AT S.R. 74.
 509          BA   1.125
 510          LG    0.25    0.25    9.70    0.05       2
 511          UI      83      86      83      83      86     211     239     329     366     438
 512          UI     505     524     579     630     629     667     778     844     961    1053
 513          UI     762     645     594     538     514     507     470     445     444     415
 514          UI     394     388     359     336     335     311     287     272     254     221
 515          UI     226     202     202     198     191     180     180     164     137     141
 516          UI     132       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          KK    DR34
 524          KM        ROUTE S34 THRU (3) 10 FT. X 8 FT. X 70 FT. LONG RCB'S UNDER S.R.74.
 525          KM        AND ASSOC. STORAGE AT RD.
 526          RS       1    STOR       0
 527          SV     0.0   0.054   0.425   1.622   4.256
 528          SQ     0.0    52.1   412.9   877.9  1443.8
 529          SE  1872.9  1874.0  1876.0  1878.0  1880.0

 530          KK    R107   ROUTE   REACH
 531          KM        *** R107; ROUTE S34 TO CO105
 532          RS       1    STOR      -1
 533          RC   0.065   0.040   0.065    1700  0.0160    0.00
 534          RX     0.0     6.0    12.0    18.0    45.0    49.0    81.0    85.0
 535          RY    12.0     8.0     4.0     0.0     0.0     2.0     3.0     5.0

 536          KK      38   BASIN
 537          BA   0.102
 538          LG    0.25    0.22   10.10    0.04       0
 539          UI      28      67     142     204     280     266     178     151     126     103
 540          UI      82      67      57      43      34      30      23      19      14      14
 541          UI      10       5       6       5       6       6       5       0       0       0
 542          UI       0       0       0       0       0       0       0       0       0       0

 543          KK    DR38
 544          KM        ROUTE S38 THRU (1) 6 FT. X 5 FT. X 127 FT. RCB UNDER S.R. 74
 545          KM         AND ASSOC. STORAGE AT RD.
 546          RS       1    STOR       0
 547          SV     0.0    0.09   0.319   0.733   1.502   2.768   4.887
 548          SQ     0.0    45.1   114.4   214.8   327.5   445.4   477.2
 549          SE  1874.2  1876.0  1878.0  1880.0  1882.0  1884.0  1886.0

 550          KK    R103   ROUTE   REACH
 551          KM        *** R103; ROUTE S38 TO CO105
 552          RS       2    STOR      -1
 553          RC   0.065   0.040   0.065    2560  0.0180    0.00
 554          RX     0.0    12.0    24.0    36.0    40.0    52.0    64.0    76.0
 555          RY     6.0     4.0     2.0     0.0     0.0     2.0     4.0     6.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 556          KK   CO105
 557          KM         COMBINE R103 AND R107
 558          HC       2

 559          KK    R109   ROUTE   REACH
 560          KM         **** R109; ROUTE CO105 TO CO119
 561          RS       2    STOR      -1
 562          RC   0.065   0.040   0.065    3200  0.0160    0.00
 563          RX     0.0     6.0    12.0    18.0    45.0    49.0    81.0    85.0
 564          RY    12.0     8.0     4.0     0.0     0.0     2.0     3.0     5.0

 565          KK     102   BASIN
 566          BA   0.133
 567          LG    0.25    0.22   10.10    0.04       0
 568          UI      21      21      44      77     118     136     158     186     234     213
 569          UI     151     130     117     109      98      87      81      69      56      54
 570          UI      48      46      38      32      28      26      23      21      17      17
 571          UI      16      11      10      10      11       9       4       5       4       4
 572          UI       4       4       4       4       5       4       4       4       0       0
 573          UI       0       0       0       0       0       0       0       0       0       0

 574          KK     112   BASIN
 575          BA   0.217
 576          LG    0.25    0.29    8.40    0.08       0
 577          UI      51      94     210     317     408     537     484     327     284     243
 578          UI     214     177     133     127     104      83      68      57      49      41
 579          UI      34      25      26      25      10      10      10      10      10      10
 580          UI      10      10       0       0       0       0       0       0       0       0
 581          UI       0       0       0       0       0       0       0       0       0       0

 582          KK   CO119
 583          KM        COMBINE S102, S112, R109, AND R117
 584          HC       4

 585          KK    R118   ROUTE   REACH
 586          KM         *** R118; ROUTE CO119 TO CO125
 587          RS       3    STOR      -1
 588          RC   0.065   0.037   0.065    5400  0.0110    0.00
 589          RX     0.0     6.0    12.0    18.0    58.0    68.0   108.0   116.0
 590          RY     9.0     6.0     3.0     0.0     0.0     3.0     4.0     8.0

 591          KK     122   BASIN
 592          BA   0.493
 593          LG    0.25    0.32    7.60    0.10       2
 594          UI      86      89     227     362     537     608     700     954     884     612
 595          UI     536     472     423     393     341     293     253     215     199     193
 596          UI     145     125     114      98      96      73      67      66      44      43
 597          UI      42      43      30      16      17      17      16      17      17      16
 598          UI      17      17      16       0       0       0       0       0       0       0
 599          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

 600          KK   CO124
 601          KM        COMBINE S122 AND R118. THIS IS TRIB. 'C' JUST UPSTREAM OF PADELFORD
 602          KM        WASH
 603          HC       2

 604          KK   CO125
 605          KM        COMBINE CO124 AND R137. THIS IS PADELFORD WASH JUST DOWNSTREAM OF
 606          KM        TRIB. 'A' CONFLUENCE.
 607          HC       2

 608          KK     106   BASIN
 609          BA   0.452
 610          LG    0.25    0.27    8.80    0.07       0
 611          UI      41      42      40      41     100     129     160     203     241     261
 612          UI     291     302     321     371     419     503     447     314     282     270
 613          UI     246     233     226     211     198     193     178     167     164     145
 614          UI     134     131     107     104     103      95      93      91      86      70
 615          UI      69      63      52      54      52      46      46      45      45      32
 616          UI      31       0       0       0       0       0       0       0       0       0
 617          UI       0       0       0       0       0       0       0       0       0       0
 618          UI       0       0       0       0       0       0       0       0       0       0
 619          UI       0       0       0       0       0       0       0       0       0       0
 620          UI       0       0       0       0       0       0       0       0       0       0

 621          KK      36   BASIN
 622          BA   0.135
 623          LG    0.25    0.25    9.70    0.05       0
 624          UI      25      25      75     114     163     185     219     299     202     161
 625          UI     144     128     116     104      86      73      65      59      52      43
 626          UI      36      32      28      26      19      20      16      12      12      12
 627          UI      11       5       5       5       5       5       4       5       5       5
 628          UI       5       0       0       0       0       0       0       0       0       0
 629          UI       0       0       0       0       0       0       0       0       0       0

 630          KK    DR36
 631          KM        ROUTE S36 THRU (1) 6 FT. (SPAN) X 7 FT. X 110 FT. LONG RCB UNDER
 632          KM         S.R.74 AND ASSOC. STORAGE AT RD.
 633          RS       1    STOR       0
 634          SV     0.0   0.051   0.293   0.890   2.040
 635          SQ     0.0    43.0   133.0   246.0   373.0
 636          SE  1900.2  1902.0  1904.0  1906.0  1908.0

 637          KK    R101   ROUTE   REACH
 638          KM        *** R101; ROUTE S36 TO R101A
 639          KM        *** S36 OCCURS AT ADOT STA.620+35 (6'X7' RCB) ON S.R.74
 640          KM        *** END OF R101 IS AT S. EDGE SEC.36,T6N,R2W AND BEGINNING
 641          KM        *** OF R101A
 642          RS      12    STOR      -1
 643          RC   0.065   0.042   0.065    8460  0.0130    0.00
 644          RX     0.0     8.0    15.0    17.0    28.0    30.0    38.0    68.0
 645          RY     4.0     2.0     1.0     0.0     0.0     1.0     2.0     4.0
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 646          KK   R101A   ROUTE   REACH
 647          KM         *** R101A; ROUTE R101 TO CO191
 648          KM  M      *** THIS ROUTE STEP COMPLETES ROUTING OF S36 TO CO191
 649          RS       7    STOR      -1
 650          RC   0.065   0.040   0.065    4300  0.0130    0.00
 651          RX     0.0     2.0     4.0    16.0    33.0    40.0    64.0    80.0
 652          RY     6.0     5.0     4.0     0.0     0.0     1.0     1.5     8.0

 653          KK   CO191
 654          KM         COMBINE S106, R101A, AND CO125
 655          HC       3

 656          KK    R193   ROUTE   REACH
 657          KM         *** R193; ROUTE CO191 TO CO195
 658          RS       2    STOR      -1
 659          RC   0.065   0.037   0.065    2500  0.0100    0.00
 660          RX     0.0    40.0   153.0   331.0   405.0   445.0   485.0   525.0
 661          RY     5.5     3.0     2.0     0.0     0.0     2.0     3.0     5.5

 662          KK     192   BASIN
 663          BA   0.525
 664          LG    0.25    0.37    5.20    0.27       9
 665          UI     116     179     433     672     887    1047    1283     849     693     600
 666          UI     545     457     379     305     272     244     196     149     133     126
 667          UI      89      89      65      57      58      46      22      23      23      22
 668          UI      22      23      23      22       0       0       0       0       0       0
 669          UI       0       0       0       0       0       0       0       0       0       0

 670          KK   CO195
 671          KM         COMBINE S192 AND R193
 672          HC       2

 673          KK    R197   ROUTE   REACH
 674          KM        *** R197; ROUTE CO195 TO CO199
 675          RS       7    STOR      -1
 676          RC   0.065   0.037   0.065    4700  0.0110    0.00
 677          RX     0.0   148.0   297.0   365.0   482.0   550.0   699.0   847.0
 678          RY     5.5     3.0     2.0     0.0     0.0     2.0     3.0     5.5

 679          KK     198   BASIN
 680          BA   0.416
 681          LG    0.25    0.35    3.92    0.53      12
 682          UI      58      59      84     181     254     341     386     449     479     608
 683          UI     689     439     376     349     317     289     280     245     225     201
 684          UI     172     153     143     133     122     110      95      76      76      66
 685          UI      63      61      45      45      45      35      28      30      28      28
 686          UI      29      12      11      11      11      11      12      11      11      11
 687          UI      11       0       0       0       0       0       0       0       0       0
 688          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

 689          KK   CO199
 690          KM        COMBINE S198 AND R197
 691          HC       2

 692          KK  SPLIT3
 693          KM        DIVERT AS 'MAIN3' THE FLOW TO PADELFORD WASH AND AS 'SPLIT3' THE
 694          KM        FLOW TO SPLIT3. FLOW SPLIT BASED ON A RATING CURVE OF ENERGY GRADE
 695          KM        VERSUS DISCHARGE FROM HEC-RAS MODEL ANALYSIS AT SEC. 32.443 OF
 696          KM        SPLIT3 AND SEC. 3.584 OF MAIN PADELFORD WASH.
 697          DT   MAIN3
 698          DI     0.0   164.0   380.0   597.0   952.0  1475.0  2215.0  3195.0  4384.0  5958.0
 699          DI   8608. 11401.0 14118.0
 700          DQ     0.0    34.0   167.0   300.0   431.0   669.0  1031.0  1568.0  2310.0  3318.0
 701          DQ  5233.0  7455.0  9318.0

 702          KK    R301   ROUTE   REACH
 703          KM         *** R301 ; ROUTE SPLIT3 TO CO215
 704          RS      10    STOR      -1
 705          RC   0.065   0.037   0.065    8920  0.0110    0.00
 706          RX     0.0    80.0   160.0   195.0   255.0   290.0   370.0   450.0
 707          RY     4.5     3.0     2.0     0.0     0.0     2.0     3.0     4.5

 708          KK     216   BASIN
 709          BA   0.198
 710          LG    0.25    0.35    3.85    0.56       0
 711          UI      28      28      40      86     121     162     184     213     228     290
 712          UI     328     209     179     166     151     137     133     117     107      96
 713          UI      82      72      69      63      58      52      46      36      36      32
 714          UI      30      28      22      21      22      16      14      14      13      14
 715          UI      14       5       5       6       5       5       6       5       5       5
 716          UI       6       0       0       0       0       0       0       0       0       0
 717          UI       0       0       0       0       0       0       0       0       0       0

 718          KK   CO215
 719          KM        COMBINE S216 AND R301 NEAR WHITE WING RD.
 720          HC       2

 721          KK   SPLT3
 722          KM        DIVERT AS 'SPLT3' FLOW TO SPLIT3 WASH AND AS 'SPLIT4'FLOW TO SPLIT4 WASH
 723          KM        FLOW SPLIT BASED ON RATING CURVE ANALYSIS BY HEC-RAS MODEL AT SEC. 30.71
 724          KM        OF SPLIT3 WASH AND SEC. 30.841 OF SPLIT4 WASH.
 725          DT  SPLIT4
 726          DI     0.0   448.0   780.0  1283.0  1892.0  2764.0  4240.0  5844.0
 727          DQ     0.0     0.0    51.0   131.0   212.0   380.0   663.0   931.0

 728          KK    R323   ROUTE   REACH
 729          KM         R323; ROUTE 'SPLIT3' TO CO219.
 730          RS       6    STOR      -1
 731          RC   0.065   0.037   0.065    3800  0.0110    0.00
 732          RX     0.0    40.0   160.0   188.0   228.0   256.0   376.0   416.0
 733          RY     4.2     3.0     2.0     0.0     0.0     2.0     3.0     4.2
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
 734          KK     218   BASIN
 735          BA   0.174
 736          LG    0.25    0.35    4.10    0.49       0
 737          UI      29      29      69     114     169     196     225     276     346     231
 738          UI     191     165     154     143     124     111      98      80      72      69
 739          UI      60      51      46      36      34      33      27      23      22      18
 740          UI      14      15      14      14       8       5       6       6       5       6
 741          UI       6       5       6       6       5       6       0       0       0       0
 742          UI       0       0       0       0       0       0       0       0       0       0

 743          KK   CO219
 744          KM        COMBINE 'SPLT3' FLOW AT CAP CANAL, S218 AND R323.
 745          HC       2

 746          KK  SPLIT4
 747          KM        RETRIEVE 'SPLIT4' FLOW FROM NEAR WHITE WING RD.
 748          DR  SPLIT4

 749          KK    R321   ROUTE   REACH
 750          KM        R321; ROUTE'SPLIT4' TO CO217.
 751          RS       5    STOR      -1
 752          RC   0.065   0.037   0.065    3400  0.0100    0.00
 753          RX     0.0    57.0   115.0   160.0   190.0   235.0   293.0   350.0
 754          RY     4.0     3.0     2.0     0.0     0.0     2.0     3.0     4.0

 755          KK     214   BASIN
 756          BA   0.201
 757          LG    0.25    0.35    4.00    0.51       0
 758          UI      29      30      49      95     139     175     203     230     269     338
 759          UI     283     205     176     173     148     141     130     114     105      90
 760          UI      78      71      68      61      53      50      37      38      33      32
 761          UI      27      23      22      22      15      14      14      15      14       9
 762          UI       5       6       5       6       6       5       6       5       6       6
 763          UI       5       0       0       0       0       0       0       0       0       0
 764          UI       0       0       0       0       0       0       0       0       0       0

 765          KK   CO217
 766          KM        COMBINE S214 AND R321 AT CAP CANAL FOR 'SPLIT4' WASH AT CAP CANAL.
 767          HC       2

 768          KK   CO400
 769          KM         COMBINE 'SPLIT3' AND 'SPLIT4' WASHES AT CAP CANAL.
 770          HC       2      23

 771          KK   DR400
 772          KM         ROUTE CO400 THRU THE (1) CAP CANAL OVERCHUTE STRUCTURE AND ASSOC.
 773          KM         STORAGE TO WEST OF 163RD. AVE .
 774          KM         OVERFLOW TO EAST ACROSS THE 163RD AVE. WAS MODELED, STARTING AT EL.1553
 775          KM         IN THE FOLLOWING DIVERT ROUTINE.
 776          KM         NO OVERFLOW TO WEST WAS ASSUMED AT THIS TIME, ALTHOUGH POTENTIAL EXISTS
 777          KM         AT EL. 1549.0
 778          RS       1    STOR       0
 779          SV     0.0     0.10     1.7   10.87   20.82   35.22   78.92  108.77  144.27   223.4
 780          SV   244.0   250.0
```

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

 781          SQ     0.0    51.1   130.6   227.5   276.7   314.4   373.1   399.0   623.5  2618.5
 782          SQ  3529.1  5500.0
 783          SE  1541.1  1544.0  1546.0  1548.0  1549.0  1550.0  1552.0  1553.0  1554.0  1556.0
 784          SE  1556.5  1557.0

 785          KK   DV400
 786          KM        DIVERT AS"DV400" FLOW REMAINING ON WEST SIDE OF 163RD AVE. AND AS
 787          KM        "DV501" , FLOW WEIRING TO EAST OVER 163RD AVE.
 788          DT   DV501
 789          DI     0.0    51.1   130.6   227.5   276.7   314.4   373.1   399.0   623.5  2618.5
 790          DI  3529.1  5500.0
 791          DQ     0.0     0.0     0.0     0.0     0.0     0.0     0.0     0.0   200.0  2150.0
 792          DQ  3050.0  4050.0

 793          KK   MAIN3
 794          KM        RETRIEVE'MAIN3' FLOW
 795          DR   MAIN3

 796          KK  SPLIT2
 797          KM        DIVERT AS 'MAIN2' THE FLOW TO MAIN PADELFORD WASH AND AS 'SPLIT2'
 798          KM        THE FLOW TO SPLIT2 WASH.
 799          KM        THE FLOW SPLIT IS BASED ON A RATING CURVE ANALYSIS BY HEC-RAS MODEL
 800          KM        OF ENERGY GRADE EL. VERSUS DISCHARGE AT MAIN SEC.3.300 AND
 801          KM        SPLIT2 WASH SEC. 22.114
 802          DT   MAIN2
 803          DI     0.0   261.0   380.0   668.0  1015.0  1464.0  2108.0  2884.0  3789.0  4803.0
 804          DI  5926.0  7158.0  8365.0  9380.0
 805          DQ     0.0   261.0   348.0   570.0   850.0  1233.0  1718.0  2253.0  2825.0  3450.0
 806          DQ  4130.0  4887.0  5572.0  6028.0

 807          KK    R318   ROUTE   REACH
 808          KM        *** R318; ROUTE SPLIT2 TO CO410
 809          RS      15    STOR      -1
 810          RC   0.065   0.037   0.065   11200  0.0110    0.00
 811          RX     0.0    60.0   180.0   255.0   295.0   370.0   490.0   550.0
 812          RY     3.5     3.0     2.0     0.0     0.0     2.0     3.0     3.5

 813          KK     220   BASIN
 814          BA   0.242
 815          LG    0.25    0.35    4.00    0.51       0
 816          UI      21      22      21      22      47      64      82     100     125     132
 817          UI     147     154     166     186     204     241     267     184     158     142
 818          UI     131     126     123     113     108     103      99      88      88      82
 819          UI      75      71      65      56      55      52      49      51      45      45
 820          UI      39      35      35      27      27      27      26      23      23      24
 821          UI      19       0       0       0       0       0       0       0       0       0
 822          UI       0       0       0       0       0       0       0       0       0       0
 823          UI       0       0       0       0       0       0       0       0       0       0
 824          UI       0       0       0       0       0       0       0       0       0       0
 825          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

 962          KK   CO247
 963          KM         COMBINE S244 AND R237
 964          HC       2

 965          KK     238   BASIN
 966          BA   0.360
 967          LG    0.25    0.35    4.15    0.48       0
 968          UI      46      47      46     136     188     242     290     335     355     406
 969          UI     522     524     348     305     277     254     244     225     204     190
 970          UI     171     151     136     117     111     111      97      88      79      65
 971          UI      59      58      51      50      43      36      36      36      27      22
 972          UI      24      22      23      23      15       9       9       9       9       9
 973          UI       9       0       0       0       0       0       0       0       0       0
 974          UI       0       0       0       0       0       0       0       0       0       0
 975          UI       0       0       0       0       0       0       0       0       0       0

 976          KK  SPLIT5
 977          KM        RETRIEVE SPLIT5 FLOW
 978          DR  SPLIT5

 979          KK    R251
 980          KM        ROUTE SPLIT5 FLOW ALONG WASH TO CAP CANAL TO CO255
 981          RS       5    FLOW      -1
 982          RC   0.065   0.037   0.065  5475.0   0.011
 983          RX     0.0    50.0   250.0   290.0   300.0   340.0   540.0   590.0
 984          RY      10       6       5       0       0       5       6      10

 985          KK   CO255
 986          KM        COMBINE R251 AND S238 AT CAP CANAL AS COMBINED SPLIT5 WASH FLOW
 987          HC       2

 988          KK   MAIN1
 989          KM         RETRIEVE 'MAIN1'FLOW.
 990          DR   MAIN1

 991          KK    R203   ROUTE   REACH
 992          KM         *** R203; ROUTE MAIN1 TO R205
 993          RS      10    STOR      -1
 994          RC   0.065   0.037   0.065    5600  0.0110    0.00
 995          RX     0.0   125.0   250.0   269.0   291.0   311.0   436.0   561.0
 996          RY     4.5     3.0     2.0     0.0     0.0     2.0     3.0     4.5

 997          KK     MN1
 998          KM         RETRIEVE 'MN1' FLOW FROM SPLIT1 WASH TO MAIN1 WASH AT CO207
 999          DR     MN1

1000          KK   CO207
1001          KM        COMBINE MN1 AND R203
1002          HC       2    19.1
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1003          KK    R205   ROUTE   REACH
1004          KM         *** R205; ROUTE CO207 TO CO420 NEAR CAP CANAL AS MAIN1 OF PADELFORD WAS
1005          RS      11    STOR      -1
1006          RC   0.065   0.037   0.065    5600  0.0110    0.00
1007          RX     0.0   125.0   250.0   269.0   291.0   311.0   436.0   561.0
1008          RY     4.5     3.0     2.0     0.0     0.0     2.0     3.0     4.5

1009          KK     222   BASIN
1010          BA   0.515
1011          LG    0.25    0.35    4.10    0.49       0
1012          UI      49      51      49      49     141     168     208     273     294     334
1013          UI     367     375     421     504     586     543     396     347     310     301
1014          UI     280     258     261     235     218     215     196     184     173     149
1015          UI     137     133     119     115     116     104     103      86      81      73
1016          UI      64      63      60      55      54      53      45      38      37      39
1017          UI      38       0       0       0       0       0       0       0       0       0
1018          UI       0       0       0       0       0       0       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          KK   CO420
1023          KM        COMBINE R203 AND S222 FOR MAIN1 WASH AT CAP CANAL
1024          HC       2

1025          KK   CO500
1026          KM         COMBINE CO255, CO247, CO430, CO420, AND CO410
1027          HC       5    23.0

1028          KK   DV501
1029          KM        RETRIEVE "DV501" , THE WEIR OVERFLOW FROM CO400, EAST ACROSS 163RD AVE
1030          DR   DV501

1031          KK   CO501
1032          KM        COMBINE CO500 AND DV501 AT CAP CANAL
1033          HC       2    23.0

1034          KK   DR501
1035          KM         ROUTE CO501 THRU THE (5) SETS OF CAP CANAL OVERCHUTE STRUCTURES
1036          KM         AND THE ASSOC. STORAGE EAST OF 163 RD AVE.
1037          RS       1    STOR       0
1038          SV     0.0    2.88    34.7  115.64  258.34   457.0  711.36 1026.64 1205.57 1398.37
1039          SQ     0.0   117.3   327.5   907.1  1738.6  2605.6  3180.2  3656.4  3873.5  4078.7
1040          SE  1539.4  1540.0  1542.0  1544.0  1546.0  1548.0  1550.0  1552.0  1553.0  1554.0

1041          KK   DV3-6
1042          KM        DIVERT AS"DV3-6" THE FLOW TO STRUCTURE I.D.'S 3-6 ALONG CAP CANAL
1043          KM        AND AS "DV2" THE FLOW TO STRUCTUE I.D.#2,A.K.A.,STA.253+00.
1044          DT     DV2
1045          DI     0.0   117.3   327.5   907.1  1738.6  2605.6  3180.2  3656.4  3873.5  4078.7
1046          DI  4459.8
1047          DQ     0.0     5.6    29.9    62.7   145.0   243.0   322.8   380.3   406.4   430.1
1048          DQ   474.5
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1049          KK   DV4-6
1050          KM        DIVERT AS "DV4-6" THE FLOW TO STRUCTURE I.D.'S 4-6 ALONG CAP CANAL
1051          KM        AND AS "DV3" THE FLOW TO STRUC. I.D.#3,A.K.A.,STA.272+35.
1052          DT     DV3
1053          DI     0.0   111.7   297.6   844.4  1593.6  2362.6  2857.4  3276.1  3467.1  3648.6
1054          DQ     0.0    25.0    83.6   282.6   558.8   850.8  1050.0  1209.7  1282.4  1351.3

1055          KK   DV5-6
1056          KM        DIVERT AS "DV5-6" THE FLOW TO STRUCTURE I.D.'S 5-6 ALONG CAP CANAL
1057          KM        AND AS "DV4" THE FLOW TO STRUC. I.D.#4, A.K.A., STA.279+00.
1058          DT     DV4
1059          DI     0.0    86.7   214.0   561.8  1034.8  1511.8  1807.4  2066.4  2184.7  2297.3
1060          DQ     0.0    31.9    43.9   106.8   200.5   302.8   357.8   410.0   433.6   456.5

1061          KK     DV6
1062          KM        DIVERT AS "DV5" THE FLOW TO STRUCTURE I.D.#5, A.K.A.,STA.298+00, AND
1063          KM        AS "DV6" THE FLOW TO STRUCTURE I.D.#6, A.K.A. , STA.315+00.
1064          DT     DV5
1065          DI     0.0    54.8   170.1   455.0   834.3  1209.0  1449.6  1656.4  1751.1  1840.8
1066          DQ     0.0    23.1    49.0   111.3   205.5   300.3   360.4   412.3   436.0   458.6
1067          ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

  30         180
               .
               .
  42           .         168
               .           .
               .           .
  51       CO169............
               V
               V
  54        R171
               .
               .
  60           .          92
               .           V
               .           V
  66           .        DR92
               .           V
               .           V
  73           .        R161
               .           .
               .           .
  79           .           .        160
               .           .          .
               .           .          .
  89       CO173........................
               V
               V
  92        R175
               .
               .
  98           .         150
               .           .
               .           .
 107           .           .         76
               .           .          V
               .           .          V
 118           .           .       DR76
               .           .          V
               .           .          V
 125           .           .       R153
               .           .          .
               .           .          .
 131       CO155........................
               .
               .
 134           .          72
               .           V
               .           V
 141           .        DR72
               .           .
               .           .
 148           .           .         70
               .           .          V
               .           .          V
 154           .           .       DR70
               .           .          .
               .           .          .
 161           .           .          .          68
               .           .          .           V
               .           .          .           V
 172           .           .          .        DR68
               .           .          .           .
               .           .          .           .
 179           .       CO141........................
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```
                .          V
                .          V
182             .       R145
                .          .
                .          .
188             .          .        144
                .          .          .
                .          .          .
198         CO147.......................
                V
                V
201          R149
                .
                .
207             .         54
                .          V
                .          V
218             .        R55
                .          .
                .          .
224             .          .         56
                .          .          .
                .          .          .
234             .       CO57............
                .          V
                .          V
237             .        R59
                .          .
                .          .
243             .          .         50
                .          .          .
                .          .          .
252             .       CO61............
                .          V
                .          V
255             .       DR61
                .          .
                .          .
262             .          .         46
                .          .          .
                .          .          .
277             .          .          .          42
                .          .          .           .
                .          .          .           .
288             .          .      CO47............
                .          .         V
                .          .         V
291             .          .       R49
                .          .          .
                .          .          .
297             .          .          .          48
                .          .          .           .
                .          .          .           .
307             .          .      CO63............
                .          .         V
                .          .         V
310             .          .      DR63
                .          .          .
                .          .          .
317             .       CO65............
                .          V
                .          V
320             .       R123
                .          .
                .          .
326             .          .         64
                .          .          V
                .          .          V
335             .          .      DR64
                .          .          V
                .          .          V
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343          .           .        R121
             .           .           .
             .           .           .
349          .       CO127............
             .           V
             .           V
352          .        R129
             .           .
             .           .
358          .           .         132
             .           .           .
             .           .           .
368          .       CO132............
             .           .
             .           .
372      CO133............
             V
             V
375       R137
             .
             .
381          .          10
             .           V
             .           V
393          .         R11
             .           .
             .           .
399          .           .          16
             .           .           .
             .           .           .
409          .        CO17............
             .           V
             .           V
412          .         R19
             .           .
             .           .
418          .           .          20
             .           .           .
             .           .           .
429          .           .           .          24
             .           .           .           .
             .           .           .           .
440          .        CO25........................
             .           V
             .           V
443          .         R27
             .           .
             .           .
449          .           .          30
             .           .           .
             .           .           .
461          .        CO31............
             .           V
             .           V
464          .        DR31
             .           V
             .           V
471          .        R113
             .           .
             .           .
477          .           .          32
             .           .           V
             .           .           V
485          .           .        DR32
             .           .           V
             .           .           V
492          .           .        R111
             .           .           .
             .           .           .
498          .       CO115............
             .           V
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                .          V
501             .       R117
                .          .
                .          .
507             .          .         34
                .          .          V
                .          .          V
523             .          .       DR34
                .          .          V
                .          .          V
530             .          .       R107
                .          .          .
                .          .          .
536             .          .          .         38
                .          .          .          V
                .          .          .          V
543             .          .          .       DR38
                .          .          .          V
                .          .          .          V
550             .          .          .       R103
                .          .          .          .
                .          .          .          .
556             .          .      CO105...........
                .          .          V
                .          .          V
559             .          .       R109
                .          .          .
                .          .          .
565             .          .          .        102
                .          .          .          .
                .          .          .          .
574             .          .          .          .        112
                .          .          .          .          .
                .          .          .          .          .
582             .      CO119.................................
                .          V
                .          V
585             .       R118
                .          .
                .          .
591             .          .        122
                .          .          .
                .          .          .
600             .      CO124............
                .          .
                .          .
604         CO125............
                .
                .
608             .        106
                .          .
                .          .
621             .          .         36
                .          .          V
                .          .          V
630             .          .       DR36
                .          .          V
                .          .          V
637             .          .       R101
                .          .          V
                .          .          V
646             .          .      R101A
                .          .          .
                .          .          .
653         CO191......................
                V
                V
656          R193
                .
                .
662             .        192
```

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                .           .
                .           .
670        CO195............
                V
                V
673         R197
                .
                .
679             .         198
                .           .
                .           .
689        CO199............
                .
                .
697             .-------->   MAIN3
692       SPLIT3
                V
                V
702         R301
                .
                .
708             .         216
                .           .
                .           .
718        CO215............
                .
                .
725             .-------->  SPLIT4
721        SPLT3
                V
                V
728         R323
                .
                .
734             .         218
                .           .
                .           .
743        CO219............
                .
                .
748             .           .<-------  SPLIT4
746             .      SPLIT4
                .           V
                .           V
749             .        R321
                .           .
                .           .
755             .           .         214
                .           .           .
                .           .           .
765             .       CO217............
                .           .
                .           .
768        CO400............
                V
                V
771        DR400
                .
                .
788             .-------->   DV501
785        DV400
                .
                .
795             .           .<-------   MAIN3
793             .       MAIN3
                .           .
                .           .
802             .           .-------->   MAIN2
796             .      SPLIT2
                .           V
                .           V
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807          .        R318
             .           .
             .           .
813          .           .         220
             .           .           .
             .           .           .
826          .      CO410............
             .           .
             .           .
831          .           .           .<-------   MAIN2
829          .           .       MAIN2
             .           .           .
             .           .           .
837          .           .           .------->   MAIN1
832          .           .      SPLIT1
             .           .          V
             .           .          V
840          .           .        R316
             .           .           .
             .           .           .
846          .           .           .         212
             .           .           .           .
             .           .           .           .
855          .           .       CO208............
             .           .           .
             .           .           .
865          .           .           .------->     MN1
858          .           .       SPLT1
             .           .           .
             .           .           .
870          .           .           .         210
             .           .           .           .
             .           .           .           .
881          .           .       CO209............
             .           .           .
             .           .           .
889          .           .           .------->  SPLIT5
884          .           .       SPLT1
             .           .          V
             .           .          V
892          .           .        R211
             .           .           .
             .           .           .
898          .           .           .         226
             .           .           .           .
             .           .           .           .
909          .           .       CO430............
             .           .           .
             .           .           .
912          .           .           .         230
             .           .           .           V
             .           .           .           V
921          .           .           .        R231
             .           .           .           .
             .           .           .           .
927          .           .           .           .         240
             .           .           .           .           .
             .           .           .           .           .
938          .           .           .           .           .         232
             .           .           .           .           .           .
             .           .           .           .           .           .
946          .           .           .      CO235........................
             .           .           .           V
             .           .           .           V
949          .           .           .        R237
             .           .           .           .
             .           .           .           .
955          .           .           .           .         244
             .           .           .           .           .
             .           .           .           .           .
962          .           .           .      CO247............
```

```
965                                   238
978                                                .<-------  SPLIT5
976                                            SPLIT5
                                                   V
                                                   V
979                                             R251
                                                   .
                                                   .
985                                        CO255............
990                                                .<-------   MAIN1
988                                           MAIN1
                                                   V
                                                   V
991                                             R203
                                                   .
                                                   .
999                                                .          .<-------     MN1
997                                                .        MN1
                                                   .          .
                                                   .          .
1000                                          CO207............
                                                   V
                                                   V
1003                                            R205
                                                   .
                                                   .
1009                                               .        222
                                                   .          .
                                                   .          .
1022                                          CO420............
                                                   .
                                                   .
1025                 CO500.............................................
                         .
                         .
1030                     .           .<-------   DV501
1028                     .       DV501
                         .           .
                         .           .
1031                 CO501............
                         V
                         V
1034                 DR501
                         .
                         .
1044                     .-------->     DV2
1041                 DV3-6
                         .
                         .
1052                     .-------->     DV3
1049                 DV4-6
                         .
                         .
1058                     .-------->     DV4
1055                 DV5-6
                         .
                         .
1064                     .-------->     DV5
1061                   DV6
```

```
(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
****************************************
****************************************
 *                                      *                                                    *
*
 *   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   02APR02  TIME  09:29:28  *                                                    *          (916)
756-1104            *
 *                                      *                                                    *
*
 ****************************************
****************************************
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                    Project ID: PADEL24D - Major Basin: 01 - Return Period: 100 Years
                          PADELFORD WASH FLOODPLAIN DELINEATION STUDY,  FCDMC NO. 99-12
                          PREPARED BY A-N WEST, INC. JOB.NO.7158-07, DATE;9/28/00,REV.11/10/00
                          100-YR. 24. HR. STORM
                          REVISED 11/10/00 TO CONVERT FROM CLARK TO S-GRAPH UNIT HYDROGRAPH
                          METHOD.
                          60 PERCENT REDUCTION OF 'BOOK'ROCK OUTCROP % AS RTIMP VALUES,
                          MODELED IN THIS RUN.
                          REVISED1/3/01 TO FLOW DISTRIBUTIONS PER REFINED HEC-RAS ANALYSIS
                          AND REVISE CO500 HC RECORD TO SHOW 23 SQ. MI.D.A.

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

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

               COMPUTATION INTERVAL    0.03 HOURS
                    TOTAL TIME BASE   66.63 HOURS

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

14 JD          INDEX STORM NO. 1
                      STRM        4.18  PRECIPITATION DEPTH
                      TRDA        0.01  TRANSPOSITION DRAINAGE AREA
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INTENTIONALY
LEFT BLANK

15 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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25 JD          INDEX STORM NO. 2
                    STRM        4.16  PRECIPITATION DEPTH
                    TRDA        1.00  TRANSPOSITION DRAINAGE AREA

 0 PI           PRECIPITATION PATTERN
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0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

26 JD         INDEX STORM NO. 3
                STRM        4.05  PRECIPITATION DEPTH
                TRDA        5.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.03      0.04      0.04      0.04      0.04      0.04      0.04      0.04
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
```

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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27 JD          INDEX STORM NO. 4
                     STRM        3.93  PRECIPITATION DEPTH
                     TRDA       10.00  TRANSPOSITION DRAINAGE AREA

 0 PI            PRECIPITATION PATTERN
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0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

28 JD         INDEX STORM NO. 5
                  STRM        3.80  PRECIPITATION DEPTH
                  TRDA       20.00  TRANSPOSITION DRAINAGE AREA

 0 PI           PRECIPITATION PATTERN
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                0.00      0.00      0.00      0.00      0.00      0.01      0.01      0.01      0.01      0.01
                0.01      0.01      0.03      0.04      0.04      0.04      0.04      0.04      0.04      0.04
                0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00
```

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

29 JD INDEX STORM NO. 6

STRM	3.76	PRECIPITATION DEPTH
TRDA	30.00	TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO 1

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

		PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	BASIN AREA 24-HOUR	MAXIMUM STAGE 72-HOUR	TIME OF MAX STAGE
+ OPERATION	STATION						
HYDROGRAPH AT	180	1003.	12.30	144.	41.	15.	0.96
+ HYDROGRAPH AT	168	779.	12.13	77.	21.	8.	0.50
+ 2 COMBINED AT	CO169	1624.	12.23	220.	62.	22.	1.46
+ ROUTED TO	R171	1563.	12.27	220.	62.	22.	1.46
+ HYDROGRAPH AT	92	192.	12.03	14.	4.	1.	0.09
+ ROUTED TO	DR92	163.	12.07	14.	4.	1.	0.09
+ ROUTED TO	R161	136.	12.37	14.	4.	1.	0.09
+ HYDROGRAPH AT	160	742.	12.17	85.	23.	8.	0.55
+ 3 COMBINED AT	CO173	2347.	12.27	315.	88.	32.	2.10
+ ROUTED TO	R175	2256.	12.33	315.	88.	32.	2.10
+ HYDROGRAPH AT	150	1275.	12.13	138.	39.	14.	0.88
+ HYDROGRAPH AT	76	1112.	12.23	143.	41.	15.	0.94
+ ROUTED TO	DR76	1099.	12.27	143.	41.	15.	0.94
+ ROUTED TO	R153	1041.	12.40	143.	41.	15.	0.94
+ 3 COMBINED AT	CO155	3972.	12.30	583.	164.	59.	3.92
+ HYDROGRAPH AT	72	275.	12.07	22.	6.	2.	0.14
+ ROUTED TO	DR72	260.	12.10	22.	6.	2.	0.14
+ HYDROGRAPH AT	70	202.	12.03	14.	4.	1.	0.09
+ ROUTED TO	DR70	144.	12.10	14.	4.	1.	0.09
+ HYDROGRAPH AT	68	718.	12.20	93.	27.	10.	0.60
+ ROUTED TO	DR68	713.	12.23	93.	27.	10.	0.60
+ 3 COMBINED AT	CO141	1042.	12.17	128.	37.	13.	0.83
+ ROUTED TO	R145	989.	12.33	128.	37.	13.	0.83
+ HYDROGRAPH AT	144	489.	12.17	53.	14.	5.	0.34
3 COMBINED AT							

+	CO147	5263.	12.30	754.	212.	77.	5.09
+ ROUTED TO	R149	5210.	12.37	754.	212.	77.	5.09
+ HYDROGRAPH AT	54	1407.	12.20	182.	53.	19.	1.17
+ ROUTED TO	R55	1370.	12.27	182.	53.	19.	1.17
+ HYDROGRAPH AT	56	952.	12.17	118.	35.	12.	0.75
+ 2 COMBINED AT	CO57	2239.	12.23	296.	87.	31.	1.92
+ ROUTED TO	R59	2196.	12.33	296.	87.	31.	1.92
+ HYDROGRAPH AT	50	354.	12.13	37.	11.	4.	0.23
+ 2 COMBINED AT	CO61	2388.	12.30	332.	97.	35.	2.16
+ ROUTED TO	DR61	2381.	12.37	332.	97.	35.	2.16
+ HYDROGRAPH AT	46	1371.	12.43	233.	68.	25.	1.63
+ HYDROGRAPH AT	42	756.	12.23	100.	29.	11.	0.63
+ 2 COMBINED AT	CO47	1907.	12.37	330.	97.	35.	2.26
+ ROUTED TO	R49	1867.	12.47	330.	97.	35.	2.26
+ HYDROGRAPH AT	48	649.	12.17	74.	20.	7.	0.42
+ 2 COMBINED AT	CO63	2189.	12.43	401.	116.	42.	2.68
+ ROUTED TO	DR63	2135.	12.50	401.	116.	42.	2.68
+ 2 COMBINED AT	CO65	4353.	12.40	722.	210.	76.	4.84
+ ROUTED TO	R123	4338.	12.43	722.	210.	76.	4.84
+ HYDROGRAPH AT	64	602.	12.13	68.	20.	7.	0.44
+ ROUTED TO	DR64	593.	12.17	68.	20.	7.	0.44
+ ROUTED TO	R121	593.	12.20	68.	20.	7.	0.44
+ 2 COMBINED AT	CO127	4637.	12.43	784.	228.	82.	5.28
+ ROUTED TO	R129	4522.	12.53	784.	228.	82.	5.28
+ HYDROGRAPH AT	132	491.	12.20	57.	15.	5.	0.35
+ 2 COMBINED AT	CO132	4733.	12.53	835.	241.	87.	5.63
+ 2 COMBINED AT	CO133	9063.	12.43	1517.	434.	157.	10.72
+ ROUTED TO	R137	9016.	12.50	1517.	434.	157.	10.72
HYDROGRAPH AT							

+	10	1435.	12.27	201.	58.	21.	1.29
+ ROUTED TO	R11	1390.	12.33	201.	58.	21.	1.29
+ HYDROGRAPH AT	16	953.	12.17	108.	30.	11.	0.65
+ 2 COMBINED AT	CO17	2134.	12.27	306.	88.	32.	1.94
+ ROUTED TO	R19	2065.	12.37	306.	88.	32.	1.94
+ HYDROGRAPH AT	20	1671.	12.23	231.	68.	24.	1.50
+ HYDROGRAPH AT	24	973.	12.23	134.	39.	14.	0.85
+ 3 COMBINED AT	CO25	4452.	12.30	656.	190.	69.	4.30
+ ROUTED TO	R27	4250.	12.50	656.	190.	69.	4.30
+ HYDROGRAPH AT	30	472.	12.30	69.	18.	7.	0.40
+ 2 COMBINED AT	CO31	4624.	12.47	722.	207.	75.	4.69
+ ROUTED TO	DR31	4522.	12.53	722.	207.	75.	4.69
+ ROUTED TO	R113	4461.	12.57	722.	207.	75.	4.69
+ HYDROGRAPH AT	32	155.	12.10	15.	4.	1.	0.08
+ ROUTED TO	DR32	154.	12.10	15.	4.	1.	0.08
+ ROUTED TO	R111	146.	12.20	15.	4.	1.	0.08
+ 2 COMBINED AT	CO115	4517.	12.57	736.	211.	76.	4.77
+ ROUTED TO	R117	4506.	12.60	736.	211.	76.	4.77
+ HYDROGRAPH AT	34	1181.	12.47	213.	54.	19.	1.13
+ ROUTED TO	DR34	1163.	12.53	213.	54.	19.	1.13
+ ROUTED TO	R107	1150.	12.57	213.	54.	19.	1.13
+ HYDROGRAPH AT	38	231.	12.07	23.	6.	2.	0.10
+ ROUTED TO	DR38	219.	12.10	23.	6.	2.	0.10
+ ROUTED TO	R103	207.	12.17	23.	6.	2.	0.10
+ 2 COMBINED AT	CO105	1215.	12.57	236.	60.	21.	1.23
+ ROUTED TO	R109	1198.	12.63	236.	60.	21.	1.23
+ HYDROGRAPH AT	102	230.	12.13	30.	7.	3.	0.13
+ HYDROGRAPH AT	112	440.	12.07	40.	10.	4.	0.22
4 COMBINED AT							

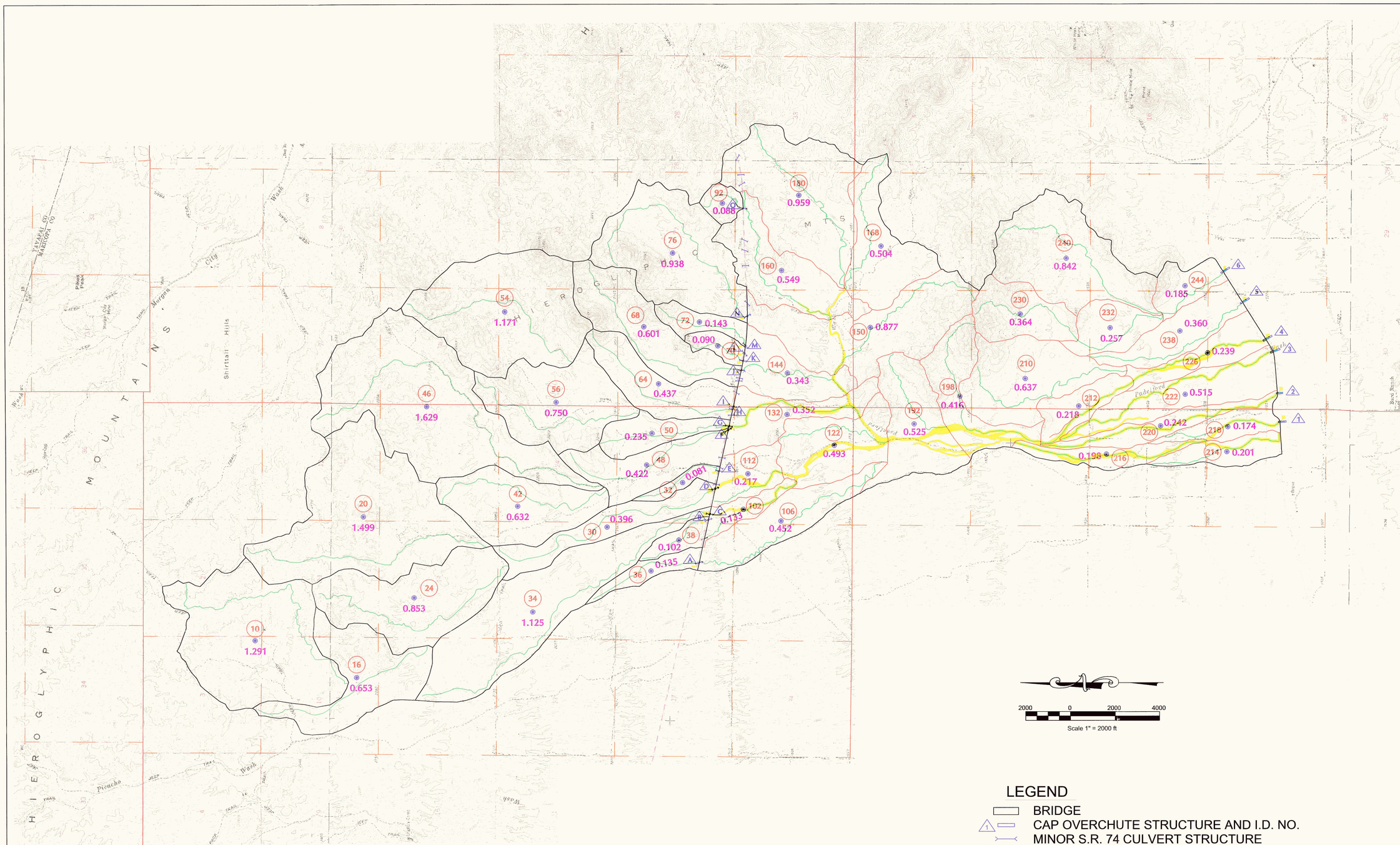
+		CO119	5722.	12.60	1014.	281.	101.	6.35
+	ROUTED TO	R118	5622.	12.70	1014.	281.	101.	6.35
+	HYDROGRAPH AT	122	842.	12.13	86.	22.	8.	0.49
+	2 COMBINED AT	CO124	5759.	12.67	1090.	300.	108.	6.84
+	2 COMBINED AT	CO125	13396.	12.57	2488.	701.	253.	17.56
+	HYDROGRAPH AT	106	525.	12.33	82.	20.	7.	0.45
+	HYDROGRAPH AT	36	250.	12.13	28.	7.	3.	0.14
+	ROUTED TO	DR36	238.	12.17	28.	7.	3.	0.14
+	ROUTED TO	R101	210.	12.57	28.	7.	3.	0.14
+	ROUTED TO	R101A	198.	12.80	28.	7.	3.	0.14
+	3 COMBINED AT	CO191	13824.	12.57	2579.	724.	262.	18.15
+	ROUTED TO	R193	13723.	12.63	2579.	724.	262.	18.15
+	HYDROGRAPH AT	192	914.	12.10	78.	21.	8.	0.52
+	2 COMBINED AT	CO195	13776.	12.63	2641.	741.	268.	18.67
+	ROUTED TO	R197	13599.	12.77	2641.	740.	268.	18.67
+	HYDROGRAPH AT	198	488.	12.17	55.	15.	6.	0.42
+	2 COMBINED AT	CO199	13671.	12.77	2685.	753.	272.	19.09
+	DIVERSION TO	MAIN3	9012.	12.77	1572.	410.	148.	19.09
+	HYDROGRAPH AT	SPLIT3	4660.	12.77	1113.	342.	124.	19.09
+	ROUTED TO	R301	4476.	13.10	1112.	342.	124.	19.09
+	HYDROGRAPH AT	216	214.	12.20	21.	5.	2.	0.20
+	2 COMBINED AT	CO215	4485.	13.10	1129.	346.	126.	19.29
+	DIVERSION TO	SPLIT4	704.	13.10	134.	34.	12.	19.29
+	HYDROGRAPH AT	SPLT3	3781.	13.10	995.	313.	114.	19.29
+	ROUTED TO	R323	3736.	13.27	995.	313.	114.	19.29
+	HYDROGRAPH AT	218	222.	12.13	19.	5.	2.	0.17
+	2 COMBINED AT	CO219	3738.	13.27	1011.	317.	115.	19.46
+	HYDROGRAPH AT	SPLIT4	704.	13.10	134.	34.	12.	19.29
	ROUTED TO							

+		R321	695.	13.27	134.	34.	12.	19.29
+	HYDROGRAPH AT	214	231.	12.17	22.	6.	2.	0.20
+	2 COMBINED AT	CO217	806.	13.23	176.	44.	16.	0.20
+	2 COMBINED AT	CO400	4405.	13.27	1157.	353.	128.	23.00
+	ROUTED TO	DR400	2940.	13.83	996.	353.	128.	23.00
+	DIVERSION TO	DV501	2468.	13.83	579.	145.	52.	23.00
+	HYDROGRAPH AT	DV400	472.	13.83	417.	208.	76.	23.00
+	HYDROGRAPH AT	MAIN3	9012.	12.77	1572.	410.	148.	19.09
+	DIVERSION TO	MAIN2	5862.	12.77	1146.	304.	110.	19.09
+	HYDROGRAPH AT	SPLIT2	3149.	12.77	426.	107.	38.	19.09
+	ROUTED TO	R318	2879.	13.27	426.	107.	38.	19.09
+	HYDROGRAPH AT	220	193.	12.37	25.	6.	2.	0.24
+	2 COMBINED AT	CO410	2904.	13.27	447.	112.	40.	19.33
+	HYDROGRAPH AT	MAIN2	5862.	12.77	1146.	304.	110.	19.09
+	DIVERSION TO	MAIN1	1538.	12.77	262.	65.	24.	19.09
+	HYDROGRAPH AT	SPLIT1	4324.	12.77	884.	238.	86.	19.09
+	ROUTED TO	R316	4255.	12.97	884.	238.	86.	19.09
+	HYDROGRAPH AT	212	271.	12.13	26.	7.	2.	0.22
+	2 COMBINED AT	CO208	4270.	12.97	905.	244.	88.	19.31
+	DIVERSION TO	MN1	1416.	12.97	139.	35.	13.	19.31
+	HYDROGRAPH AT	SPLT1	2854.	12.97	766.	209.	76.	19.31
+	HYDROGRAPH AT	210	780.	12.20	89.	23.	8.	0.64
+	2 COMBINED AT	CO209	2952.	12.93	842.	229.	83.	19.95
+	DIVERSION TO	SPLIT5	1048.	12.93	288.	79.	29.	19.95
+	HYDROGRAPH AT	SPLT1	1904.	12.93	554.	150.	54.	19.95
+	ROUTED TO	R211	1876.	13.30	554.	150.	54.	19.95
+	HYDROGRAPH AT	226	236.	12.23	26.	7.	2.	0.24
	2 COMBINED AT	CO430	1891.	13.27	576.	156.	56.	20.18
	HYDROGRAPH AT							

+	230	600.	12.10	57.	16.	6.	0.36
+ ROUTED TO	R231	521.	12.33	57.	16.	6.	0.36
+ HYDROGRAPH AT	240	1039.	12.20	123.	33.	12.	0.84
+ HYDROGRAPH AT	232	476.	12.10	40.	10.	4.	0.26
+ 3 COMBINED AT	CO235	1799.	12.20	217.	58.	21.	1.46
+ ROUTED TO	R237	1741.	12.30	217.	58.	21.	1.46
+ HYDROGRAPH AT	244	337.	12.07	22.	6.	2.	0.19
+ 2 COMBINED AT	CO247	1821.	12.30	239.	64.	23.	1.65
+ HYDROGRAPH AT	238	385.	12.20	40.	10.	4.	0.36
+ HYDROGRAPH AT	SPLIT5	1048.	12.93	288.	79.	29.	19.95
+ ROUTED TO	R251	1037.	13.10	288.	79.	29.	19.95
+ 2 COMBINED AT	CO255	1161.	13.03	357.	97.	35.	0.36
+ HYDROGRAPH AT	MAIN1	1538.	12.77	262.	65.	24.	19.09
+ ROUTED TO	R203	1471.	13.17	262.	65.	24.	19.09
+ HYDROGRAPH AT	MN1	1416.	12.97	139.	35.	13.	19.31
+ 2 COMBINED AT	CO207	2775.	13.03	401.	100.	36.	19.10
+ ROUTED TO	R205	2657.	13.37	401.	100.	36.	19.10
+ HYDROGRAPH AT	222	441.	12.33	55.	14.	5.	0.51
+ 2 COMBINED AT	CO420	2692.	13.37	446.	112.	40.	19.61
+ 5 COMBINED AT	CO500	8461.	13.30	1984.	519.	187.	23.00
+ HYDROGRAPH AT	DV501	2468.	13.83	579.	145.	52.	23.00
+ 2 COMBINED AT	CO501	9584.	13.40	2563.	663.	239.	23.00
+ ROUTED TO	DR501	3170.	14.40	2259.	663.	239.	23.00
+ DIVERSION TO	DV2	321.	14.40	210.	59.	21.	23.00
+ HYDROGRAPH AT	DV3-6	2849.	14.40	2049.	604.	218.	23.00
+ DIVERSION TO	DV3	1047.	14.40	736.	211.	76.	23.00
+ HYDROGRAPH AT	DV4-6	1802.	14.40	1313.	393.	142.	23.00
+ DIVERSION TO	DV4	357.	14.40	259.	80.	29.	23.00
HYDROGRAPH AT							

+		DV5-6	1446.	14.40	1054.	313.	113.	23.00
+	DIVERSION TO	DV5	359.	14.40	261.	80.	29.	23.00
+	HYDROGRAPH AT	DV6	1086.	14.40	793.	233.	84.	23.00

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



TOTAL WATERSHED DRAINAGE BDRY. = 23.535 SQ.ML.

LEGEND

- BRIDGE
- CAP OVERCHUTE STRUCTURE AND I.D. NO.
- MINOR S.R. 74 CULVERT STRUCTURE
- SIGNIFICANT S.R. 74 CULVERT AND I.D.
- (112) DRAINAGE SUBAREA I.D.
- CENTRIODS
- 0.867 SUBAREA SIZE SQUARE MILES
- SUBAREA DRAINAGE BDRY.
- TOTAL WATERSHED DRAINAGE BDRY.
- DRAINAGE / FLOWPATHS
- STUDY WASHES

CALL TWO WORKING DAYS BEFORE YOU DIG
263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

NO.	DATE	DESCRIPTION	BY

Registered Professional Engineer (Civil)
CERTIFICATE NO. 15290
GREGORY A. SCHUELKE
Date Signed
ARIZONA, U.S.A.

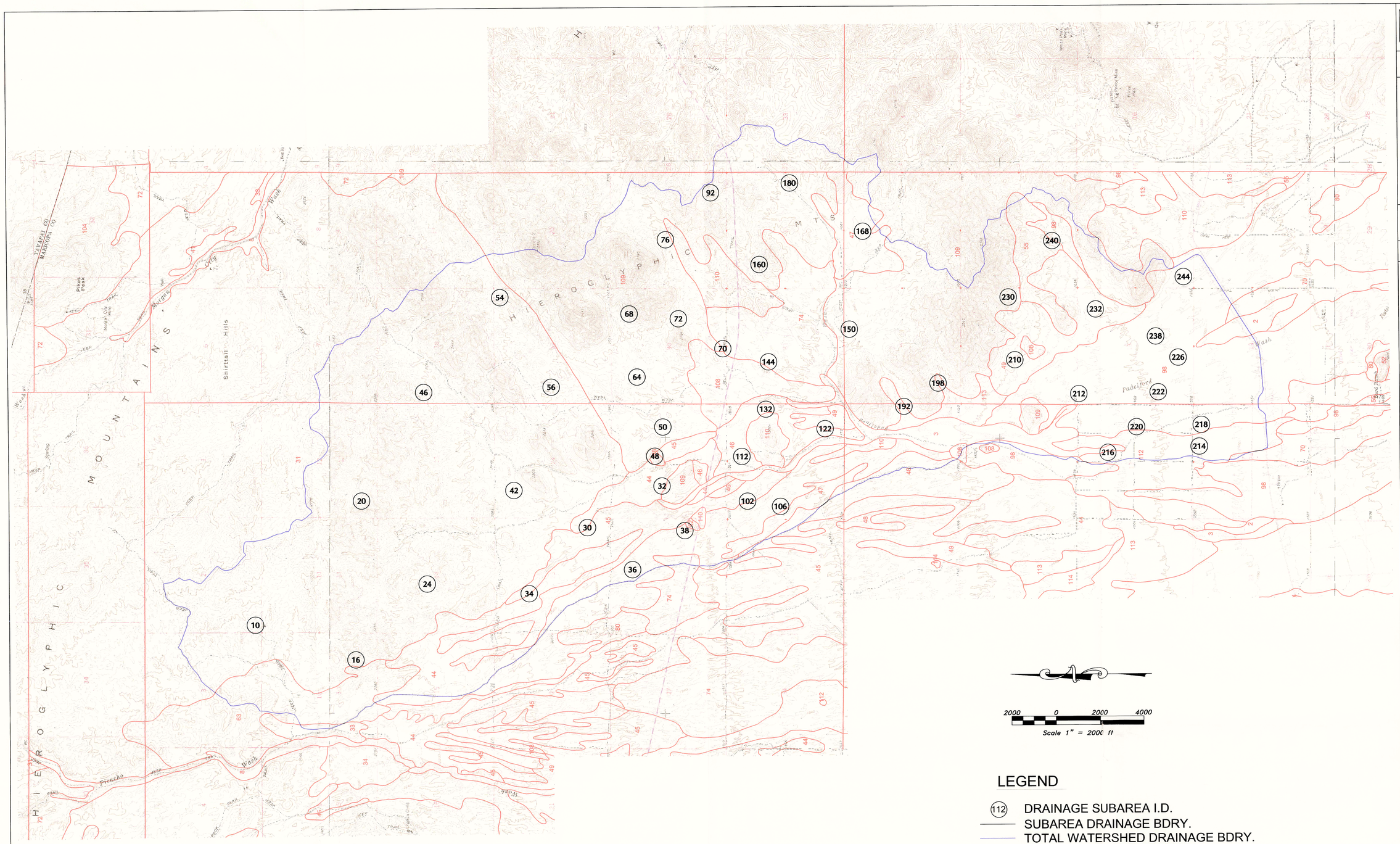
A-N WEST INC.
Consulting Engineers
7600 N. 15th Street, Suite 200
Phoenix, Arizona 85020
(602) 861-2200
phoenix@anwest.com

PROJECT TITLE
PADELFORD WASH FLOOD PLAIN DELINEATION STUDY
F.C.D. NO. 99-12

SHEET TITLE
EXHIBIT 1 - WATERSHED MAP
PADELFORD WASH FLOOD PLAIN DELINEATION STUDY

JOB NO.	7158-07	DESIGN	XXX	SCALE
DWG. ID.	715807MSTR	DRAWN	XXX	HORIZ. 1"=2000'
DATE	2/15/00	CHECK	XXX	VERT. N/A

SHEET 1 OF 1



LEGEND

- (112) DRAINAGE SUBAREA I.D.
- SUBAREA DRAINAGE BDRY.
- TOTAL WATERSHED DRAINAGE BDRY.
- SOILS CLASSIFICATION BDRY.
- 31 SOILS CLASSIFICATION I.D.

TOTAL WATERSHED DRAINAGE BDRY. = 23.523 SQ.ML.

CALL TWO WORKING DAYS BEFORE YOU DIG
2S6-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

NO.	DATE	DESCRIPTION	BY

Registered Professional Engineer (Civil)
CERTIFICATE NO. 15290
GREGORY A. SCHUELKE
(As Printed)
ARIZONA, U.S.A.

A-N WEST INC.
Consulting Engineers
7600 N. 15th Street, Suite 200
Phoenix, Arizona 85020
(602) 861-2200
phoenix@anwest.com

PROJECT TITLE
PADELFORD WASH FLOOD PLAIN DELINEATION STUDY
F.C.D. NO. 99-12

SHEET TITLE
EXHIBIT 2 - SOILS MAP
PADELFORD WASH FLOOD PLAIN DELINEATION STUDY

JOB NO.	7158-07	DESIGN	GAS
DWG. ID.	715807XH02	DRAWN	CMB
DATE	9/14/00	CHECK	XXX

SCALE	
HORIZ.	1"=2000'
VERT.	N/A

SHEET 1 OF 1

RESERVOIR ROUTING SUMMARY

HEC-1 INFLOW I.D.	HEC-1 OUTFLOW I.D.	STRUCTURE I.D.
36	DR 36	A
38	DR 38	B
34	DR 34	C
CO31	DR 31	D
32	DR 32	E
CO63	DR 63	F
CO61	DR 61	G
64	DR 64	H AND I
68	DR 68	J
70	DR 70	K AND L
72	DR 72	M
76	DR 76	N
92	DR 92	0
400	DR 400	1
500	DR 501	2 - 6

TOTAL WATERSHED DRAINAGE BDRY. = 23.535 SQ.ML.

LEGEND

- BRIDGE
- CAP OVERCHUTE STRUCTURE AND I.D. NO.
- MINOR S.R. 74 CULVERT STRUCTURE
- SIGNIFICANT S.R. 74 CULVERT AND I.D.
- (112) DRAINAGE SUBAREA I.D.
- 0.867 SUBAREA SIZE SQUARE MILES
- SUBAREA DRAINAGE BDRY.
- TOTAL WATERSHED DRAINAGE BDRY.
- DRAINAGE / FLOWPATHS
- STUDY WASHES
- (173) **COMBINE HYDROGRAPHS AND I.D.NO.**
- [171] **ROUTE HYDROGRAPH AND I.D.NO.**

CALL TWO WORKING DAYS BEFORE YOU DIG
263-1100
1-800-STAKE-IT
(OUTSIDE MARICOPA COUNTY)

NO.	DATE	DESCRIPTION	BY
	2/02/01	REVISED	

Registered Professional Engineer (Civil) CERTIFICATE NO. 15290 GREGORY A. SCHUELKE Date Signed 2/15/01 ARIZONA U.S.A.

A-N WEST INC.
Consulting Engineers
7600 N. 15th Street, Suite 200
Phoenix, Arizona 85020
(602) 861-2200
phoenix@anwest.com

PROJECT TITLE
PADELFORD WASH FLOOD PLAIN DELINEATION STUDY
F.C.D. NO. 99-12

SHEET TITLE
EXHIBIT 3 - HEC-1 SCHEMATIC MAP
PADELFORD WASH FLOOD PLAIN DELINEATION STUDY

JOB NO.	7158-07	DESIGN	XXX
DWG. ID.	71580MSTR	DRAWN	XXX
DATE	2/15/00	CHECK	XXX

SCALE HORIZ. 1"=2000' VERT. N/A

SHEET 1 OF 1