MEMORANDUM

REGIONAL FLOOD CONTROL DISTRICT
FLOODPLAIN MANAGEMENT DIVISION

DATE: July 8, 2010

TO: Floodplain Management Division Staff

FROM: Eric Shepp, P.E., Division Manager
Floodplain Management Division

SUBJECT: Update to Special Studies 18 and 33 – Soldier Canyon Wash

On June 10, 2010, the Chief Engineer approved the use of the floodplain delineations from the Technical Design Notebook for the Soldier Canyon Wash and its tributaries, prepared by Flood Control District staff.

This new study replaces the older Soldier Canyon Wash Study prepared by RGA Engineer, and sealed by Antonio Figueroa-Iturralde on 8/7/92, as well as Special Study 33 for Milagrosa Hills Wash, prepared by Simons, Li & Associates and sealed by John Wallace on March 13, 1998.

This study has been included in the Special Studies GIS layer.

Please let me know if you have any questions.

FLOODPLAIN ANALYSIS
FOR
MILAGROSA HILLS WASH
CALLE DE SAMUEL
TO
AGUA CALIENTE WASH CONFLUENCE

SUMMARY REPORT

Prepared for:

Pima County Department of Transportation and Flood Control District
201 North Stone Avenue, 4th Floor
Tucson, Arizona 85701

Prepared by:

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P.O. Box 2712
Tucson, Arizona 85702-2712

Registered Professional Engineer (Civil)
CERTIFICATE NO.
22922
JOHN M.
WALLACE
Date signed 3/13/98
ARIZONA, U.S.A.

March 13, 1998

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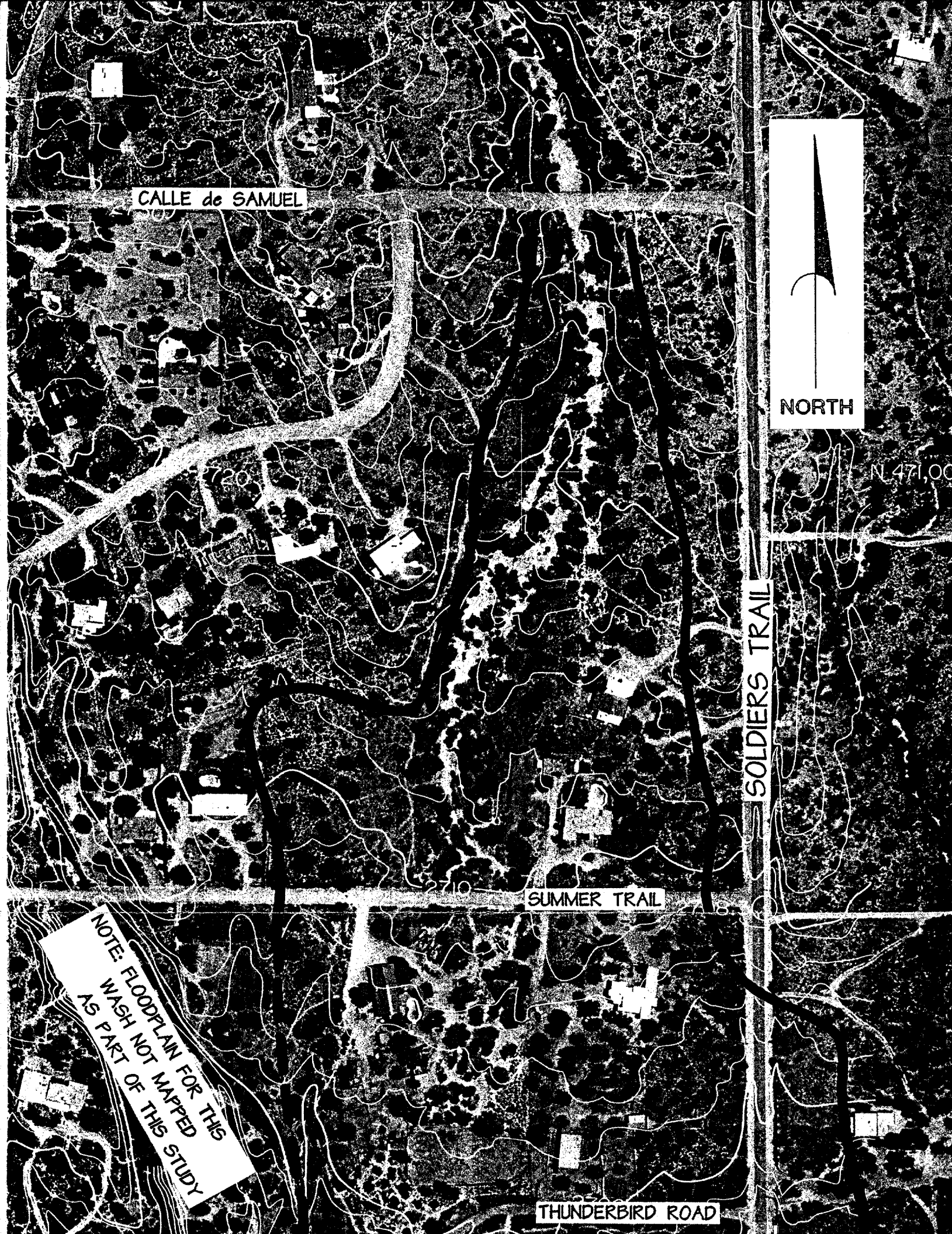
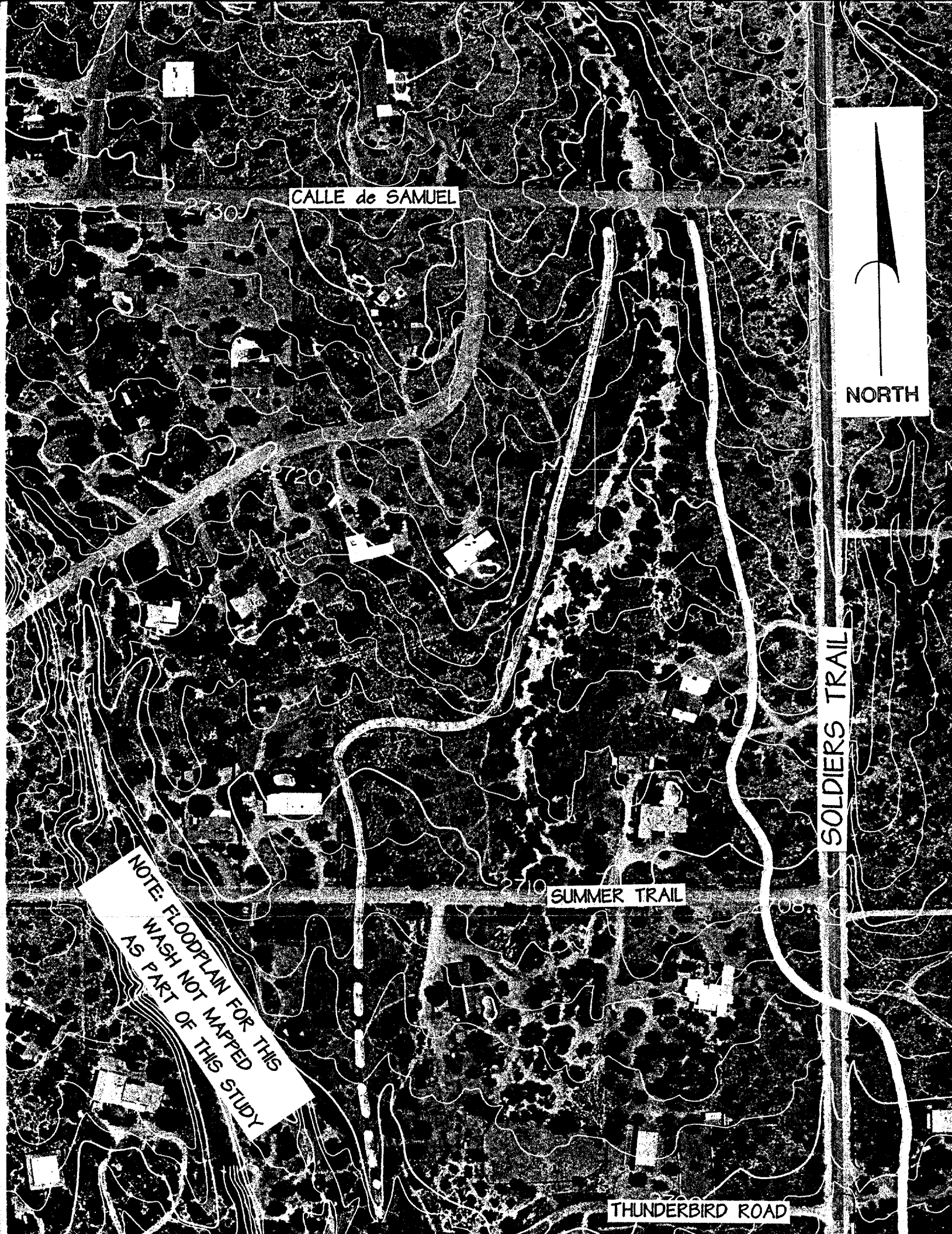
EXECUTIVE SUMMARY

This report documents the findings of a study of flooding potential along the Milagrosa Hills Wash performed for the Pima County Department of Transportation and Flood Control District. The Milagrosa Hills Wash is located in the northeast portion of the Tucson metropolitan area. The portion of the wash under study in this effort runs parallel to and immediately west of Soldier Trail between Calle de Samuel and the Agua Caliente Wash. In legal terms the wash segment under investigation is located within the east 1000 feet of Section 20 of Township 13 South, Range 16 East. Figures 1 and 2 of this report show the floodplain delineations developed from this study for the 100-year and 10-year flow events, respectively.

The studied segment of the Milagrosa Hills Wash is a well-defined sand bed channel at the upstream end (i.e, at Calle de Samuel). Results of the floodplain analysis performed as a part of this study show that flow depths for the 100-year event are in excess of two feet in the main channel at this end of the wash. At approximately the location where the wash crosses Summer Trail (about midway through the studied segment) topographic mapping used in this study shows that the terrain flattens out and the channel loses most of its definition. Survey of the Summer Trail roadway performed as a part of this study confirmed the data on the topographic mapping and showed that the elevations of the roadway where the main course of the channel crosses is actually higher than portions of the roadway to the east and west of the main crossing. From this point on downstream, flood flows on the wash spread out over a wide swath ranging in width from approximately 700 to 1000 feet. Results of the floodplain analysis performed as a part of this study indicate that in this reach (i.e, downstream of Summer Trail) 100-year flow depths are less than two feet in all locations, and less than one foot in most locations.

As flows approach the Summer Trail crossing, flow begins to spread out to both the east (toward Soldier Trail) and to the west (toward another wash). By the time the 100-year flow of 1801 cubic feet per second (cfs) has reached the Thunderbird Road alignment, approximately 800 cfs has flowed east into Soldier Trail and approximately 800 cfs has flowed west into the adjacent wash, leaving 200 cfs flowing within the area in between. As a part of this study the floodplain analysis provided a delineation of the floodplain associated with the flow along Soldiers Trail, however, separate floodplain mapping was not performed for the other wash to the west since analysis of that channel was considered beyond the scope of this effort. For this reason the floodplain boundary along the west edge of the downstream most portion of the floodplain mapping on Figures 1 and 2 is shown as a dashed line to indicate an uncertain floodplain limit associated with independent flooding along the other wash to the west.


CALLE de SAMUEL
NORTH
N 471,00
SOLDIERS TRAIL
SUMMER TRAIL
THUNDERBIRD ROAD
NOTE: FLOODPLAIN FOR THIS
WASH NOT MAPPED
AS PART OF THIS STUDY


CALLE de SAMUEL
2730
2720
2710
SUMMER TRAIL
2708
SOLDIERS TRAIL
THUNDERBIRD ROAD
NORTH
NOTE: FLOODPLAIN FOR THIS WASH NOT MAPPED AS PART OF THIS STUDY

I. INTRODUCTION

This report documents the findings of a study of flooding potential along the Milagrosa Hills Wash performed for the Pima County Department of Transportation and Flood Control District. The Milagrosa Hills Wash is located in the northeast portion of the Tucson metropolitan area. The portion of the wash under study in this effort runs parallel to and immediately west of Soldier Trail between Calle de Samuel and the Agua Caliente Wash and is located within the east 1000 feet of Section 20 of Township 13 South, Range 16 East, Gila and Salt River Meridian. Figures 1 and 2 of this report (included in the Executive Summary) show the floodplain delineations developed from this study for the 100-year and 10-year flow events, respectively.

II. FIELD INVESTIGATION AND DATA REVIEW

A site visit was made on February 23, 1998 to gain first hand working knowledge of the study reach. A minor amount of flow was occurring in the wash at the time of the site visit, presumably resulting from snow melt in the higher elevations of the watershed because it had not rained in the area over the previous few hours.

During the field investigation, the wash was observed as a fairly well defined sand bed watercourse at the upstream limit of the study reach (i.e., Calle de Samuel). The wash was next observed at the Summer Trail crossing, which is the next downstream dirt roadway crossing of the wash. At this location, the minor flow described above was observed arriving at the Summer Trail roadway at a single location and dividing into two flows traveling east and west, respectively. The easterly of the two flows traveled east along Summer Trail to the west edge of Soldier Trail Road where it turned abruptly and ran south along the west side of Soldier Trail. The other flow traveled west along Summer Trail until reaching a low spot a short distance past the driveway to the residence at 11,800 E. Summer Trail where the flow turned off the roadway and ran south down a small drainageway.

As a part of the field investigation a survey was made of the Summer Trail roadway centerline from Soldier Trail to a point approximately 1000 feet west of Soldier Trail. The results of this survey confirmed the grades suggested by the flow patterns observed, namely, that a high point exists along Summer Trail which corresponds to the point where flow was observed arriving at the roadway and that the roadway grades fall away from this location to the east and west. The results of the above described survey also compared well with grades shown on 1986 1"=200' scale aerial topography prepared by McLain Aerial Mapping and Survey, Inc. This aerial topographic mapping, which serves as the base map for Figures 1 and 2, shows the visibly defined portion of the channel practically disappearing as the wash crosses Summer Trail. The aerial topographic mapping also shows contours indicating low areas on either side of the path where the main channel would be expected to exist.

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The closely correlated evidence from the field investigation, survey and review of existing topographic mapping, indicates a condition where the sediment carrying capacity of the wash decreases markedly in the vicinity of Summer Trail, causing sediment deposition along the channel path and resulting in a higher lobe of material along this path. The result is the creation of overbank areas which are low relative to the channel and subject to overflow from the main channel.

III. HYDROLOGIC ANALYSIS

Hydrologic analysis for the Milagrosa Hills Wash was performed using the Pima County hydrology method as outlined in the document titled "Hydrology Manual for Engineering Design and Flood Plain Management within Pima County, Arizona", September 1979. Watershed boundaries were developed from the 7.5 minute Agua Caliente Hill, Arizona U.S.G.S. quadrangle, supplemented with 1986 1"=200' scale aerial topography prepared by McLain Aerial Mapping and Survey, Inc. The results of the hydrologic analysis indicate flood peak discharge estimates of 1801 and 832 cfs, respectively, for the 100-year and 10-year events. The hydrologic data sheets for this location, including a watershed location map and precipitation data, are contained in Appendix B of this report.

IV. FLOODPLAIN ANALYSIS

The floodplain analysis for the study reach of the Milagrosa Hills Wash was performed using the U.S. Army Corp of Engineers HEC-2 program (Version 4.6.2, May 1991). Topographic data used in the development of the floodplain model was taken from the 1986 1"=200' scale aerial topography by McLain Aerial Mapping and Survey, Inc. Figures 1 and 2 of this report (see Executive Summary) show the floodplain delineations developed from this study for the 100-year and 10-year flow events, respectively. Figures 3 and 4 provide overlays for Figures 1 and 2, respectively, showing cross-section locations and flow distribution results from the modeling effort.

Because of the unusual diverging nature of the flows as the wash approaches Summer Trail, as described in Section II, and the associated potential for overflow into the adjacent east and west overbank areas, an unusual modeling approach was employed for this study. Cross-sections were aligned along the wash perpendicular to flow as is normally done. However, because of the divergent nature of the flow patterns in the lower (i.e., downstream) portion of the study reach, the cross-section alignments were generally aligned in a manner somewhat concave in the direction of flow.

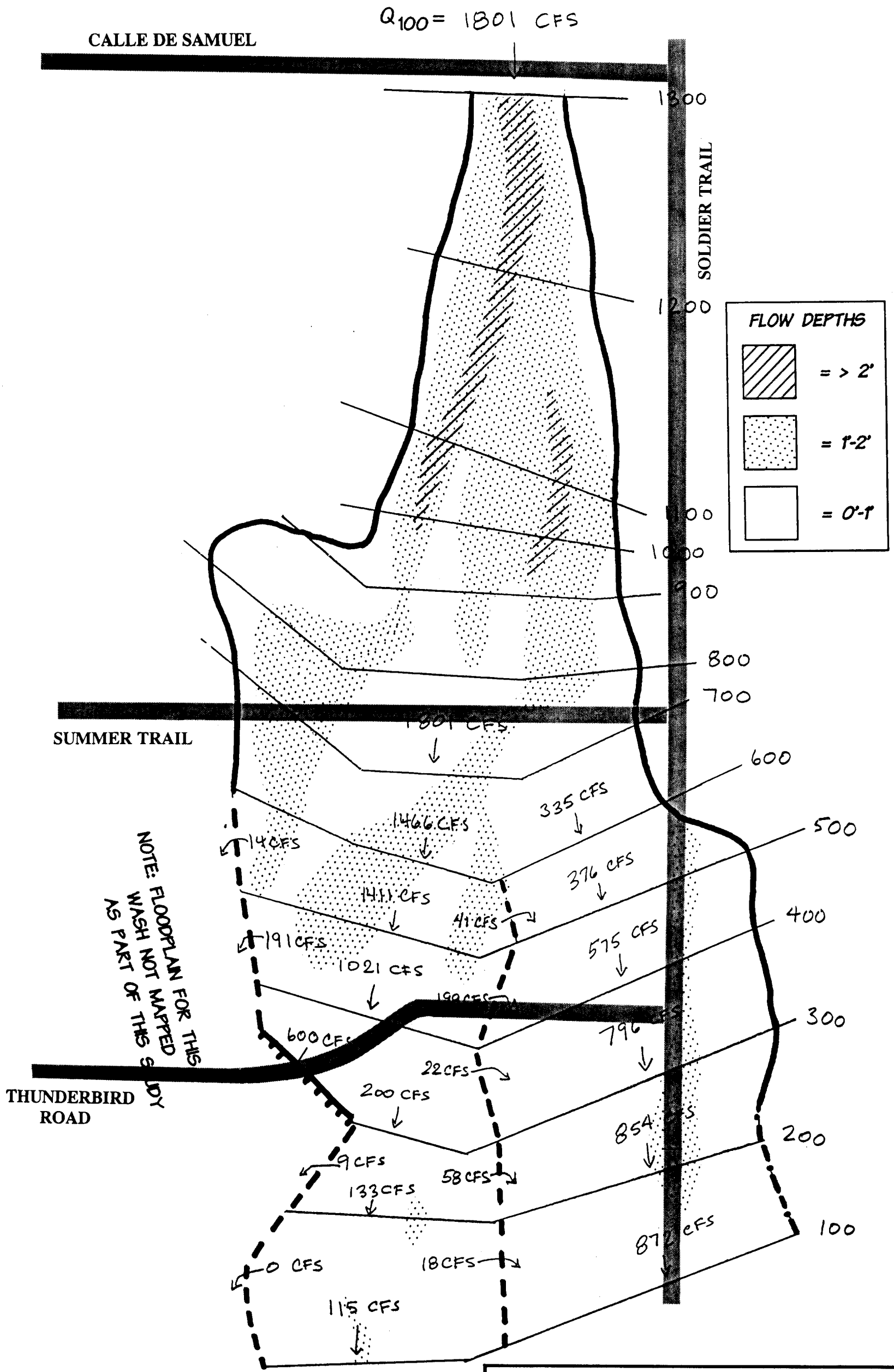


FIGURE 3

OVERLAY FOR FIGURE 1 SHOWING CROSS SECTIONS AND FLOW DISTRIBUTION FOR 100-YEAR FLOODPLAIN MILAGROSA HILLS WASH CALLE de SAMUEL TO AGUA CALIENTE WASH

sla SIMONS, LI & ASSOCIATES, INC.

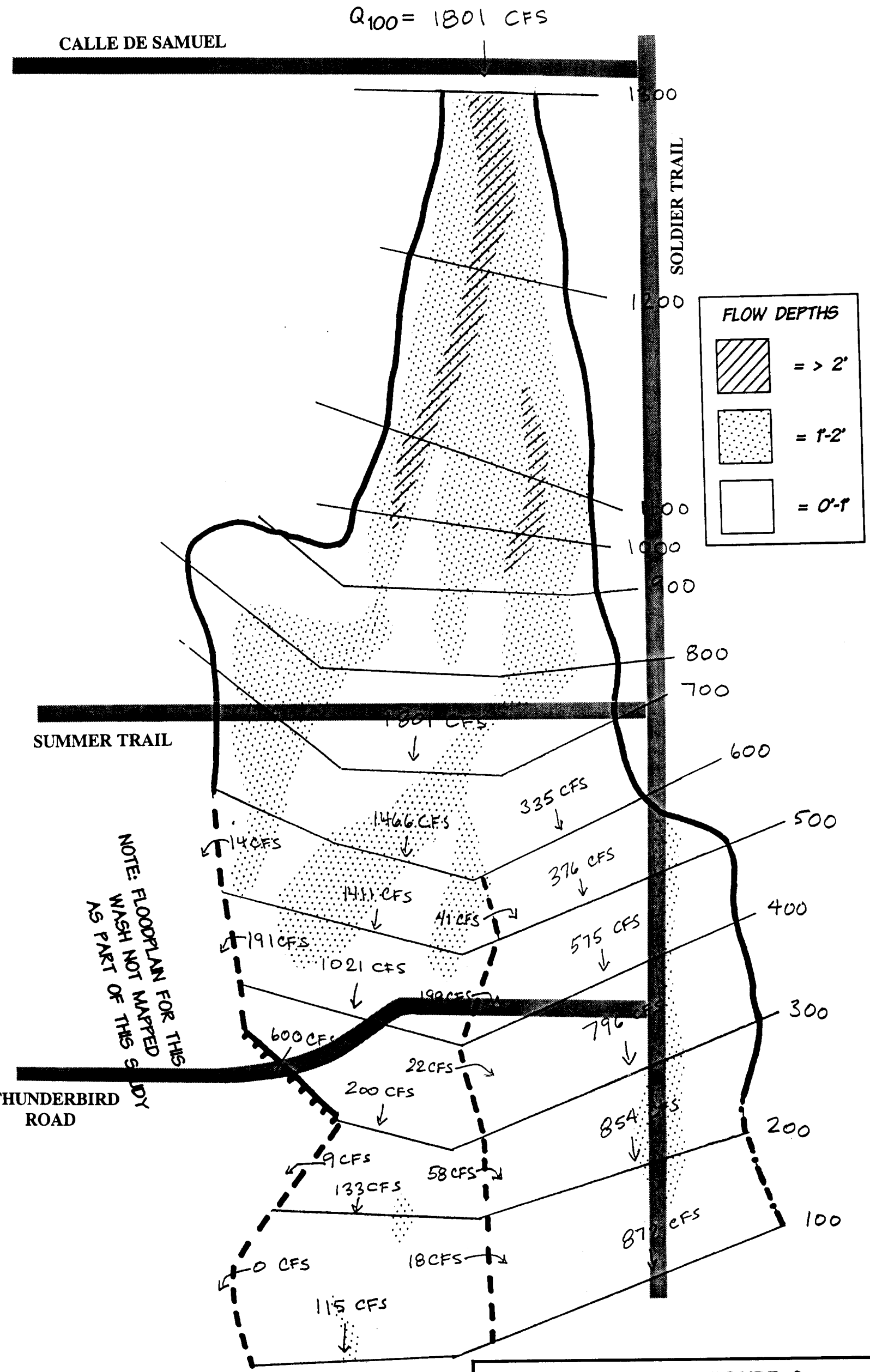


FIGURE 3

OVERLAY FOR FIGURE 1 SHOWING CROSS SECTIONS AND FLOW DISTRIBUTION FOR 100-YEAR FLOODPLAIN MILAGROSA HILLS WASH CALLE de SAMUEL TO AGUA CALIENTE WASH

sla SIMONS, LI & ASSOCIATES, INC.

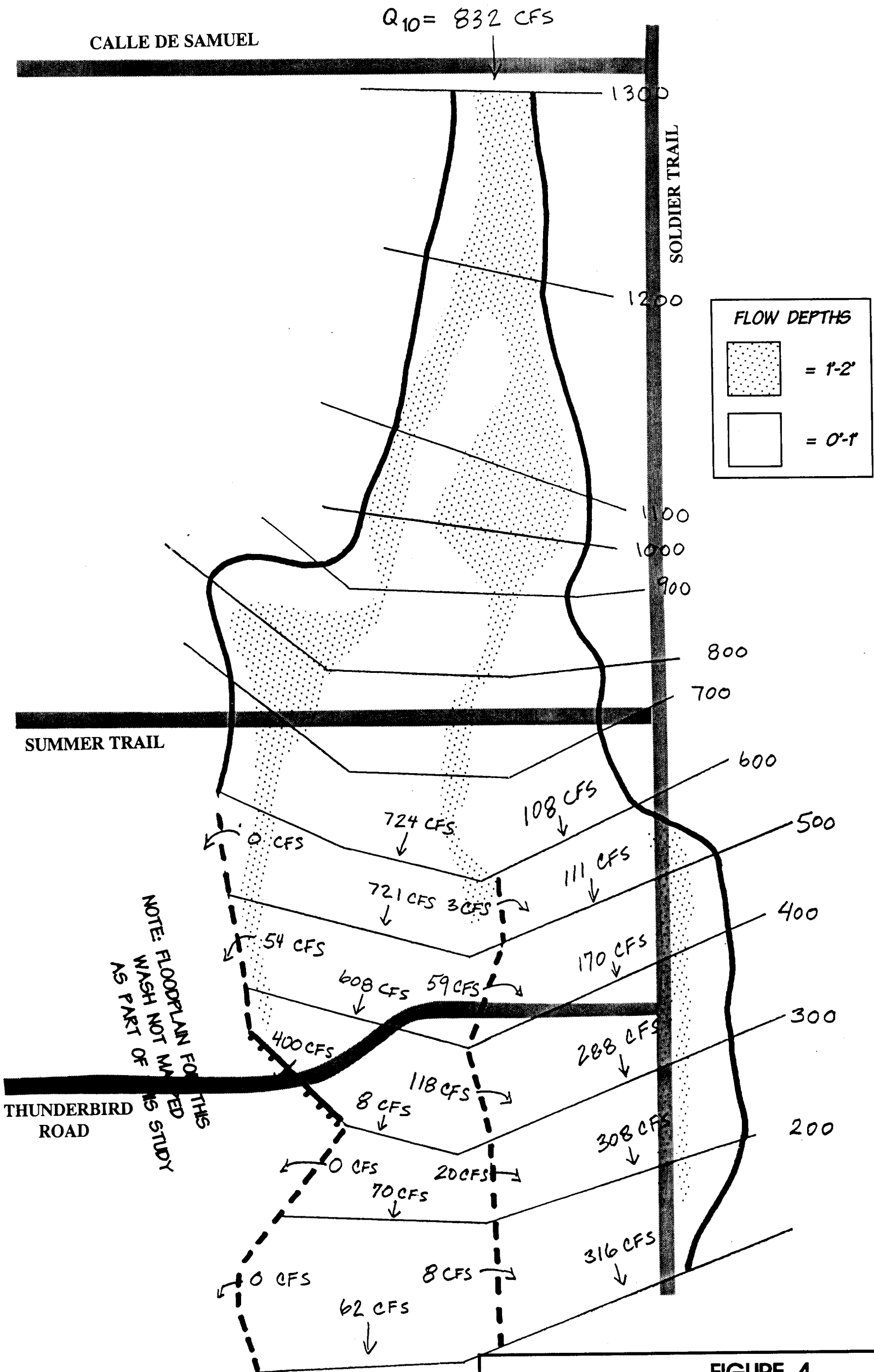


FIGURE 4

OVERLAY FOR FIGURE 2 SHOWING CROSS SECTIONS AND FLOW DISTRIBUTION FOR 10-YEAR FLOODPLAIN MILAGROSA HILLS WASH CALLE de SAMUEL TO AGUA CALIENTE WASH

The results of the initial modeling efforts indicated that low areas in the overbank areas were being treated as higher conveyance areas than the high ground associated with the main flow path. For this reason, the cross-sections in the area downstream of Summer Trail were modified to confine flow to the zone associated with the main flow path. Because this change artificially confines flow to the zone of the main flow path, the HEC-2 model was also revised to incorporate the split flow option to allow flow to exit the main flow path zone to the east or west as flow depths exceeded the ground elevation at the east or west edges of the main flow path zone. Because the HEC-2 split flow option only allows modeling of a split flow weir on one side of a floodplain at a time, two models were created which incorporated split flow weirs on the east and west sides of the main flow path zone, respectively. By iteratively running both models and adjusting the discharge input (i.e., QT records) of each model to reflect flow losses associated with the split flow weir not incorporated in the individual model, it was possible to determine a common profile with both models which reflected complementary weir flow discharges on the east and west sides between each HEC-2 cross-section. A poorly defined confluence of the Milagrosa Hills and the unnamed wash to the west occurs at the Thunderbird Road alignment. Because of this the segment of the Milagrosa Hills Wash downstream of this alignment was modeled separately to allow for abstraction of flow at the confluence. Appendix B of this report contains a listing of each of the HEC-2 models developed along with the input/output for each model.

The results of the above described modeling provide a detailed accounting of flow in the main flow path and the overbank areas. As flows approach the Summer Trail crossing, flow begins to spread out to both the east (toward Soldier Trail) and to the west (toward the unnamed wash). By the time the 100-year flow of 1801 cfs has reached the Thunderbird Road alignment, approximately 800 cfs has flowed east into Soldier Trail and approximately 800 cfs has flowed west into the adjacent unnamed wash, leaving 200 cfs flowing within what has been referred to above as the main flow path of the Milagrosa Hills Wash. As a part of this study the floodplain analysis provided a delineation of the floodplain associated with the flow along Soldiers Trail, however, separate floodplain mapping was not performed for the unnamed wash to the west since analysis of that channel was considered beyond the scope of this effort. For this reason the floodplain boundary along the west edge of the downstream most portion of the floodplain mapping on Figures 1 and 2 is shown as a dashed line to indicate an uncertain floodplain limit associated with independent flooding along the unnamed wash to the west.

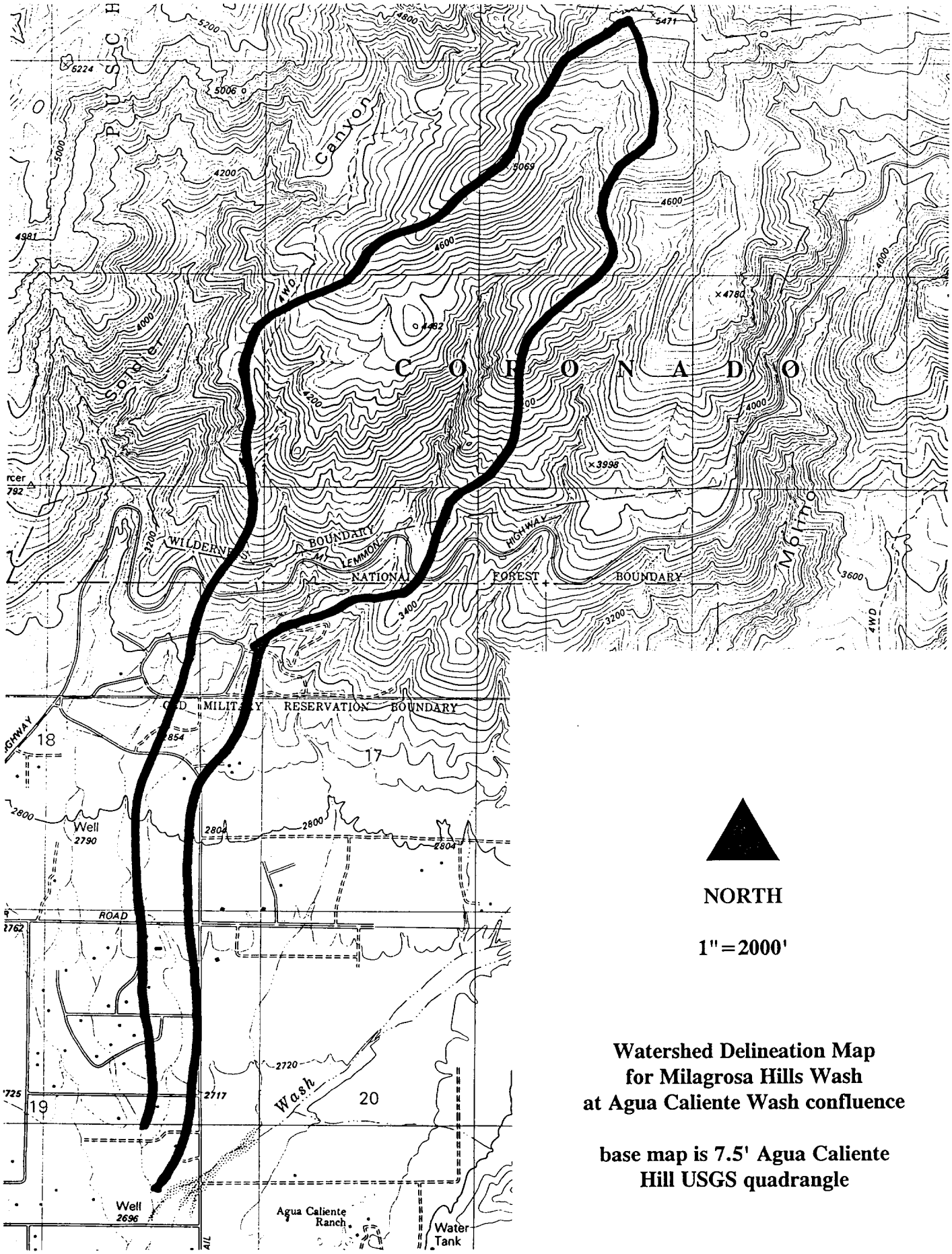
V. SUMMARY OF RESULTS

The results of the floodplain analysis of the Milagrosa Hills Wash provide floodplain delineations for the 100-year and 10-year events. The studied segment of the Milagrosa Hills Wash is a well-defined sand bed channel at the upstream end (i.e, at Calle de Samuel). Results of the floodplain analysis performed as a part of this study show that flow depths for the 100-year event are in excess of two feet in the main channel at this end of the wash. At approximately the location where the wash crosses Summer Trail (about midway through the studied segment) topographic mapping used in this study shows that the terrain flattens out and the channel loses most of its definition. Survey of the Summer Trail roadway performed as a part of this study confirmed the data on the topographic mapping and showed that the elevations of the roadway where the main course of the channel crosses is actually higher than portions of the roadway to the east and west of the main crossing. From this point on downstream, flood flows on the wash spread out over a wide swath ranging in width from approximately 700 to 1000 feet. Results of the floodplain analysis performed as a part of this study indicate that in this reach (i.e, downstream of Summer Trail) 100-year flow depths are less than two feet in all locations, and less than one foot in most locations. Figures 3 and 4 provide overlays for the 100-year and 10-year event floodplain models, respectively, showing cross-section locations and flow distribution results from the modeling effort.

As flows approach the Summer Trail crossing, flow begins to spread out to both the east (toward Soldier Trail) and to the west (toward another wash). By the time the 100-year flow of 1801 cubic feet per second (cfs) has reached the Thunderbird Road alignment, approximately 800 cfs has flowed east into Soldier Trail and approximately 800 cfs has flowed west into the adjacent wash, leaving 200 cfs flowing within the area in between. As a part of this study the floodplain analysis provided a delineation of the floodplain associated with the flow along Soldiers Trail, however, separate floodplain mapping was not performed for the other wash to the west since analysis of that channel was considered beyond the scope of this effort. For this reason the floodplain boundary along the west edge of the downstream most portion of the floodplain mapping on Figures 1 and 2 is shown as a dashed line to indicate an uncertain floodplain limit associated with independent flooding along the other wash to the west.

APPENDIX A

HYDROLOGIC DATA SHEETS



Watershed Delineation Map for Milagrosa Hills Wash at Agua Caliente Wash confluence

base map is 7.5' Agua Caliente Hill USGS quadrangle

PROJ: PAZ-PDOT-11.9: MILAGROSA HILLS WASH FLOODPLAIN MAPPING
DETAIL: HYDROLOGIC DATA

SOILS DATA

Scale of mapping used for area measurements: 1" = 2000 feet

	AREA	AREA	% SOIL TYPE			AREA BY SOIL TYPE		
SOIL #	"(sq in)	"(acres)	B	C	D	B	C	D
34, 10A	0.39	36	100			36	0	0
26B	0.39	36	50		50	18	0	18
28A	0.57	52	100			52	0	0
98H	0.76	70			100	0	0	70
NAT. FOR	6.57	603			100	0	0	603
TOTAL	8.68	797	% OF EACH SOIL TYPE:			13%	0%	87%

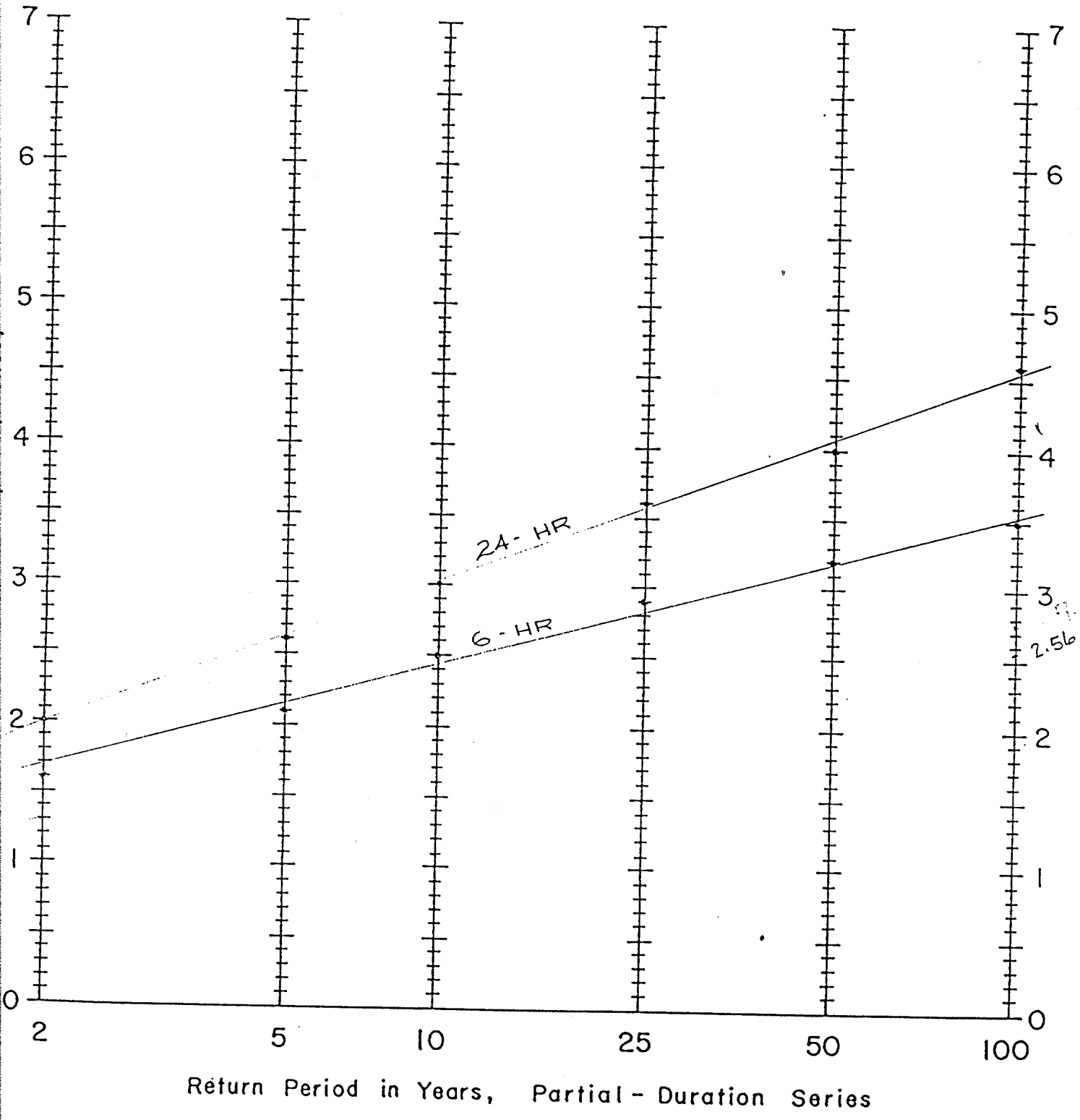
SLOPE BREAKS

Upstream Elev	Dwnstrm Elev	Hi (ft)	Li (ft)
5440	3000	2440	11800
3000	2800	200	3400
2800	2710	90	5800

IMPERVIOUS COVER

Land Use	%Imp	Area (ac)
<1RAC	10	191
Natural	0	606
Weighted % Imp =		2

Latitude 32° 20' Longitude 110° 45'



Precipitation Depth Versus Return Period For Partial-Duration Series

016

LONG 110° 45' LAT 32° 20'

Return Period (Years)	Precipitation Values (inches)			
	6 Hour Duration		24 Hour Duration	
	MAP VALUE	CORRECTED VALUE	MAP VALUE	CORRECTED VALUE
2	1.6	1.70	2.0	2.06
5	2.1	2.15	2.6	2.62
10	2.5	2.45	3.0	3.05
25	2.9	2.82	3.6	3.58
50	3.2	3.18	4.0	4.08
100	3.5	3.54	4.6	4.56

PROJECT NAME AND LOCATION: MILAGROSO HILLS WASH FLOODPLAIN MAPPING

DRAINAGE CONCENTRATION POINT: MILAGROSO HILLS @ AGUA CALIENTE WASH CONFLUENCE

WATERSHED AREA (A): 797.00 acres

LENGTH OF WATERCOURSE (Lc): 21000. ft

LENGTH TO CENTER OF GRAVITY (Lca): 12600. ft

Li - ft	Hi - ft	Nbi
11800.	2440.0	.0600
3400.	200.0	.0500
5800.	90.0	.0400

MEAN SLOPE (Sc): .0589 ft MEAN BASIN FACTOR (Nb): .0476

WATERSHED TYPE(S): FOOTHILLS/MOUNTAIN

RAINFALL VALUES

	EVENT					
	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
P 1	1.35	1.65	1.85	2.11	2.34	2.57
P 2	1.47	1.82	2.05	2.36	2.63	2.90
P 3	1.55	1.93	2.19	2.52	2.82	3.12
P 6	1.70	2.15	2.45	2.84	3.19	3.54
P24	2.00	2.63	3.05	3.59	4.08	4.56

SOIL GROUPS

13. % B, CN= 82, COVER TYPE= DESERT BRUSH , COVER DENSITY= 25 %
87. % D, CN= 91, COVER TYPE= HERBACEOUS , COVER DENSITY= 30 %

IMPERVIOUS COVER= 2. %

RAINFALL/RUNOFF AND PEAK DISCHARGE DATA

	EVENT					
	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
RUNOFF SUPPLY RATE (q/i):	.383	.495	.555	.616	.662	.698
Tc (FUNCTION OF i) :	87.56	79.01	75.52	72.40	70.38	68.89
SOLUTION OF Tc (MINUTES):	90	68	59	52	47	43
RAINFL INT. @ Tc (IN/HR):	.940	1.475	1.867	2.316	2.760	3.211
RUNOFF RATE @ Tc (IN/HR):	.360	.731	1.036	1.428	1.826	2.241
PEAK DISCHARGE (CFS) :	289.	587.	832.	1147.	1467.	1801.

APPENDIX B

HEC-2 MODEL LISTING
AND
HEC-2 MODEL INPUT/OUTPUT

MILAGROSA HILLS WASH FLOODPLAIN ANALAYIS
LISTING AND DESCRIPTION OF HEC-2 MODELS USED
(PAGE 1 OF 2)

100-YEAR EVENT MODELS

HEC2 FILE: SFEAST1.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 300 THROUGH 1300 WITH WEIR SECTION ON WEST EDGE FROM CROSS SECTIONS 300 TO 500.

HEC2 FILE: SFWEST1.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 300 THROUGH 1300 WITH WEIR SECTION ON EAST EDGE FROM CROSS SECTIONS 300 TO 500.

HEC2 FILE: SFEAST2.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 300 WITH WEIR SECTION ON EAST EDGE.

HEC2 FILE: SFWEST2.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 300 WITH WEIR SECTION ON WEST EDGE.

HEC2 FILE: EAST-OVERBANK2.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 500 WITH GR RECORDS EXTENDING FROM THE EASTERN FLOODPLAIN BOUNDARY TO THE EAST WEIR SECTION.

MILAGROSA HILLS WASH FLOODPLAIN ANALAYIS
LISTING AND DESCRIPTION OF HEC-2 MODELS USED
(PAGE 2 OF 2)

10-YEAR EVENT MODELS

HEC2 FILE: SFEAST1A.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 300 THROUGH 1300 WITH WEIR SECTION ON EAST EDGE FROM CROSS SECTIONS 300 TO 500.

HEC2 FILE: SFWEST1A.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 300 THROUGH 1300 WITH WEIR SECTION ON WEST EDGE FROM CROSS SECTIONS 300 TO 500.

HEC2 FILE: SFEAST2A.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 300 WITH WEIR SECTION ON EAST EDGE.

HEC2 FILE: SFWEST2A.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 300 WITH WEIR SECTION ON WEST EDGE.

HEC2 FILE: EAST-OVERBANK1.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 500 WITH GR RECORDS EXTENDING FROM THE EASTERN FLOODPLAIN BOUNDARY TO THE EAST WEIR SECTION.

HEC2 FILE: SFEAST1.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 300 THROUGH 1300 WITH WEIR SECTION ON WEST EDGE FROM CROSS SECTIONS 300 TO 500.

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1*****************************************
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 *  HEC-2 WATER SURFACE PROFILES            *                                          *  U.S. ARMY CORPS OF ENGINEERS
 *                                          *                                          *  HYDROLOGIC ENGINEERING CENTER
 *  Version   4.6.2;  May 1991              *                                          *  609 SECOND STREET, SUITE D
 *                                          *                                          *  DAVIS, CALIFORNIA 95616-4687
 *  RUN DATE    05MAR98    TIME   10:01:44  *                                          *          (916) 756-1104
 *****************************************
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X     X  XXXXXXX   XXXXX              XXXXX
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X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX              XXXXXXX
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1
   05MAR98      10:01:44                                                                                                PAGE    1


                                                                                THIS RUN EXECUTED 05MAR98    10:01:44
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************


 SPLIT FLOW BEING PERFORMED

 SF      SPLIT FLOW ALONG EAST EDGE OF FLOODPLAIN

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 500 AND  600
 WS     3     500     600      -1     2.7
 WC     0    2703      55    2704     130  2704.8

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 400 AND  500
 WS     3     400     500      -1     2.7
 WC     0    2700     150    2702     205    2703

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 300 AND 400
 WS     3     300     400      -1     2.7
 WC     0  2696.7      85    2698     180    2700
1
   05MAR98      10:01:44                                                                                                PAGE    2

 T1      SLA JOB #: PAZ-PDOT11-10;
 T2      MILAGROSA HILLS WASH FLOODPLAIN MAPPING, SPLIT FLOW ALONG EAST BANK
 T3      FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       -1       2                           -1.0                                    2697

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                                                      15

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43        1         3         26        8         4         25
      53        54

 NC    0.080     0.080     0.06      0.1       0.3
 QT        1      1260
 X1      300        10      1140      1395      160       180       140
 GR   2696.7       860    2696.4      1030    2696.5      1080    2696.8      1140    2696.0      1240
 GR   2696.0      1265    2696.5      1300    2696.0      1330    2696.0      1355    2698.0      1395

 QT        1      1261
 X1      400         8       900      1225      170        80       150
 GR   2700.0       900    2700.0      1020    2700.6      1080    2700.3      1125    2700.0      1225
 GR   2698.0      1290    2700.0      1320    2700.5      1330

 QT        1      1452
 X1      500        12       885      1175      170       170       160
 GR   2703.0       810    2702.0       885    2702.0       950    2702.6      1000    2702.6      1040
 GR   2702.0      1095    2701.7      1140    2702.0      1175    2702.0      1250    2700.0      1290
 GR   2702.0      1330    2702.6      1350

 QT        1      1801
 X1      600        14       810      1125      190       140       170
 GR   2706.0       450    2704.0       560    2705.0       620    2705.0       730    2704.8       810
 GR   2704.0       850    2704.0       890    2704.6       950    2704.6      1050    2704.0      1125
 GR   2704.9      1175    2704.8      1230    2704.0      1260    2705.7      1375

 X1      700        14       890      1090      190       140       160
 GR   2710.0       460    2708.0       610    2708.0       780    2708.5       810    2708.0       855
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GR   2707.3       890     2708.0       920     2708.0      1030     2708.5      1050     2708.0      1090
GR   2706.9      1220     2706.9      1285     2708.0      1370     2710.0      1470

NC    0.080     0.080       0.05       0.1        0.3
X1      800        12        930      1060        190       190       190
GR   2712.0       500     2710.0       660     2710.0       765     2710.4       850     2711.2       930
GR   2710.6       985     2710.6      1010     2710.9      1060     2710.0      1120     2710.0      1230
GR   2710.0      1330     2712.0      1500
1
   05MAR98      10:01:44                                                                          PAGE    3


X1      900         9        950      1050        160       160       160
GR   2714.0       520     2712.0       835     2712.0       890     2713.2       920     2713.2       950
GR   2712.0       980     2712.0      1000     2712.9      1050     2714.0      1260

NC    0.080     0.080       0.04       0.1        0.3
X1     1000        11        985      1050        150       160       150
GR   2716.0       600     2714.0       660     2714.0       920     2714.7       940     2714.7       960
GR   2714.0       985     2713.4      1000     2713.4      1030     2714.0      1050     2716.0      1085
GR   2718.0      1145

X1     1100        10        950      1070        330       330       330
GR   2718.0       655     2716.0       680     2716.0       815     2716.0       920     2716.4       950
GR   2716.0      1000     2716.0      1060     2718.0      1070     2720.0      1110     2722.0      1130

X1     1200         7        930      1025        330       330       330
GR   2724.0       750     2722.0       865     2721.5       930     2720.0      1000     2720.5      1025
GR   2722.0      1120     2724.0      1190

X1     1300         8        980      1000        330       330       330
GR   2730.0       850     2728.0       900     2726.0       940     2724.0       980     2724.0      1000
GR   2726.0      1070     2728.0      1100     2730.0      1140
1
   05MAR98      10:01:44                                                                          PAGE    4

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*PROF 1
0

CCHV=     .100 CEHV=     .300
*SECNO 300.000
3280 CROSS SECTION    300.00 EXTENDED       .18 FEET

3720 CRITICAL DEPTH ASSUMED
   300.000        .88   2696.88   2696.88   2697.00   2697.11       .23       .00       .00   2696.80
     796.5      198.8     597.7        .0      92.5     141.6        .0        .0        .0   2698.00
       .00       2.15      4.22       .00      .080      .060      .000      .000   2696.00    860.00
   .056307       160.      140.      180.         0        14         0       .00    512.68   1372.68


FLOW DISTRIBUTION FOR SECNO=    300.00          CWSEL=   2696.88

STA=      860.    1030.    1080.    1140.    1395.
  PER Q=      15.1      6.9      3.0     75.0
   AREA=      56.8     21.7     14.0    141.6
    VEL=       2.1      2.5      1.7      4.2
  DEPTH=        .3       .4       .2       .6

*SECNO 400.000
3280 CROSS SECTION    400.00 EXTENDED       .72 FEET


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.21

   400.000       2.72   2700.72   2700.49       .00   2700.88       .15      3.76       .01   2700.00
    1021.6         .0     414.7     606.9        .0     180.1     167.9        .9       1.6   2700.00
       .01        .00      2.30      3.61      .000      .060      .080      .000   2698.00    900.00
   .019048       170.      150.       80.        15        23         0       .00    430.00   1330.00


FLOW DISTRIBUTION FOR SECNO=    400.00          CWSEL=   2700.72

STA=      900.    1225.    1290.    1320.    1330.
  PER Q=      40.6     40.2     18.5       .7
   AREA=     180.1    111.7     51.5      4.7
    VEL=       2.3      3.7      3.7      1.5
  DEPTH=        .6      1.7      1.7       .5

1
   05MAR98      10:01:44                                                                          PAGE    5

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 500.000
3280 CROSS SECTION    500.00 EXTENDED       .46 FEET


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.80

   500.000       3.06   2703.06       .00       .00   2703.16       .10      2.28       .01   2702.00
    1410.8       55.7     646.3     708.8      41.8     263.3     259.1       2.6       3.4   2702.00
       .03       1.33      2.46      2.74      .080      .060      .080      .000   2700.00    810.00
   .011179       170.      160.      170.         6         0         0       .00    540.00   1350.00
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FLOW DISTRIBUTION FOR SECNO=    500.00          CWSEL=   2703.06

STA=      810.     885.    1175.    1250.    1290.    1330.    1350.
  PER Q=      3.9     45.8     11.5     18.5     18.5      1.7
   AREA=     41.8    263.3     79.3     82.3     82.3     15.2
    VEL=      1.3      2.5      2.0      3.2      3.2      1.6
  DEPTH=       .6       .9      1.1      2.1      2.1       .8

*SECNO 600.000
   600.000      1.39   2705.39       .00       .00   2705.52       .13      2.35       .01   2704.80
    1801.0     346.6    1089.4     365.0     188.0     320.8     171.3       5.0       6.1   2704.00
       .05      1.84      3.40      2.13      .080      .060      .080      .000   2704.00    483.65
  .018358      190.      170.      140.         5         0         0       .00    870.26   1353.91


FLOW DISTRIBUTION FOR SECNO=    600.00          CWSEL=   2705.39

STA=      484.     560.     620.     730.     810.    1125.    1175.    1230.    1260.    1354.
  PER Q=      5.8      6.9      3.2      3.4     60.5      6.3      2.7      4.1      7.1
   AREA=     53.0     53.3     42.7     39.1    320.8     46.9     29.6     29.6     65.2
    VEL=      2.0      2.3      1.3      1.6      3.4      2.4      1.7      2.5      2.0
  DEPTH=       .7       .9       .4       .5      1.0       .9       .5      1.0       .7

*SECNO 700.000
   700.000      1.68   2708.58       .00       .00   2708.71       .14      3.19       .00   2707.30
    1801.0     331.0     285.2    1184.8     170.0     112.4     362.0       7.4       9.4   2708.00
       .06      1.95      2.54      3.27      .080      .060      .080      .000   2706.90    566.15
  .022605      190.      160.      140.         4         0         0       .00    833.09   1399.24
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

FLOW DISTRIBUTION FOR SECNO=    700.00          CWSEL=   2708.58

STA=      566.     610.     780.     810.     855.     890.    1090.    1220.    1285.    1370.    1399.
  PER Q=       .9     10.8       .8      1.1      4.8     15.8     24.9     24.0     16.3       .6
   AREA=     12.8     99.4     10.0     15.1     32.7    112.4    147.5    109.5     96.5      8.5
    VEL=      1.2      2.0      1.3      1.3      2.7      2.5      3.0      4.0      3.0      1.2
  DEPTH=       .3       .6       .3       .3       .9       .6      1.1      1.7      1.1       .3

CCHV=     .100 CEHV=     .300
*SECNO 800.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.50

   800.000      1.40   2711.40       .00       .00   2711.47       .06      2.75       .01   2711.20
    1801.0     729.0     169.6     902.4     373.1      79.2     432.0      10.7      13.1   2710.90
       .09      1.95      2.14      2.09      .080      .050      .080      .000   2710.00    548.48
  .010044      190.      190.      190.         4         0         0       .00    900.02   1448.49


FLOW DISTRIBUTION FOR SECNO=    800.00          CWSEL=   2711.40

STA=      548.     660.     765.     850.     930.    1060.    1120.    1230.    1330.    1448.
  PER Q=      6.3     18.9     11.8      3.5      9.4      5.6     19.8     18.0      6.7
   AREA=     77.7    146.4    101.5     47.5     79.2     56.6    153.3    139.4     82.6
    VEL=      1.5      2.3      2.1      1.3      2.1      1.8      2.3      2.3      1.5
  DEPTH=       .7      1.4      1.2       .6       .6       .9      1.4      1.4       .7

*SECNO 900.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .64

   900.000      1.66   2713.66       .00       .00   2713.91       .25      2.38       .06   2713.20
    1801.0    1042.8     675.1      83.1     352.9     125.2      54.7      13.3      15.9   2712.90
       .10      2.96      5.39      1.52      .080      .050      .080      .000   2712.00    573.99
  .024388      160.      160.      160.         3         0         0       .00    620.58   1194.57


FLOW DISTRIBUTION FOR SECNO=    900.00          CWSEL=   2713.66

STA=      574.     835.     890.     920.     950.    1050.    1195.
  PER Q=     30.7     20.6      5.3      1.3     37.5      4.6
   AREA=    216.3     91.1     31.7     13.7    125.2     54.7
    VEL=      2.6      4.1      3.0      1.7      5.4      1.5
  DEPTH=       .8      1.7      1.1       .5      1.3       .4
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


CCHV=     .100 CEHV=     .300
*SECNO 1000.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.80

  1000.000      2.19   2715.59       .00       .00   2715.79       .20      1.87       .01   2714.00
    1801.0    1089.7     680.8      30.5     524.5     131.8      22.1      15.4      17.8   2714.00
       .11      2.08      5.17      1.38      .080      .040      .080      .000   2713.40    612.33
  .007538      150.      150.      160.         4         0         0       .00    465.47   1077.81


FLOW DISTRIBUTION FOR SECNO=   1000.00          CWSEL=   2715.59
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```
STA=      612.      660.      920.      940.      960.      985.    1050.     1078.
  PER Q=      2.9      50.4       2.6       1.5       3.2      37.8       1.7
   AREA=     37.9     413.1      24.8      17.8      31.0     131.8      22.1
    VEL=      1.4       2.2       1.9       1.5       1.9       5.2       1.4
  DEPTH=       .8       1.6       1.2        .9       1.2       2.0        .8

*SECNO 1100.000
  1100.000      1.81   2717.81       .00       .00   2717.95       .14      2.16       .01   2716.40
    1801.0    1025.9     775.1        .0     503.1     197.3        .0      20.6      21.1   2718.00
       .14      2.04      3.93       .00      .080      .040      .000      .000   2716.00    657.38
   .005716      330.      330.      330.         3         0         0       .00    411.67   1069.05


FLOW DISTRIBUTION FOR SECNO=   1100.00          CWSEL=   2717.81

STA=      657.      680.      815.      920.      950.     1070.
  PER Q=      1.5      28.3      22.0       5.2      43.0
   AREA=     20.5     244.3     190.0      48.3     197.3
    VEL=      1.3       2.1       2.1       1.9       3.9
  DEPTH=       .9       1.8       1.8       1.6       1.7

*SECNO 1200.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
1
   05MAR98      10:01:44                                                                                    PAGE    8

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

  1200.000      2.54   2722.54   2722.54       .00   2723.19       .64      2.97       .15   2721.50
    1801.0     112.8    1338.4     349.9      59.9     182.8     127.9      24.7      23.9   2720.50
       .16      1.88      7.32      2.74      .080      .040      .080      .000   2720.00    833.82
   .016244      330.      330.      330.        20        11         0       .00    305.16   1138.98


FLOW DISTRIBUTION FOR SECNO=   1200.00          CWSEL=   2722.54

STA=      834.      865.      930.     1025.     1120.     1139.
  PER Q=       .5       5.8      74.3      19.1        .3
   AREA=      8.5      51.5     182.8     122.8       5.1
    VEL=      1.0       2.0       7.3       2.8       1.0
  DEPTH=       .3        .8       1.9       1.3        .3

*SECNO 1300.000
  1300.000      3.43   2727.43       .00       .00   2728.14       .71      4.94       .02   2724.00
    1801.0     419.7     682.2     699.1     117.8      68.6     185.6      27.5      25.7   2724.00
       .17      3.56      9.94      3.77      .080      .040      .080      .000   2724.00    911.36
   .013822      330.      330.      330.         4         0         0       .00    180.12   1091.48


FLOW DISTRIBUTION FOR SECNO=   1300.00          CWSEL=   2727.43

STA=      911.      940.      980.     1000.     1070.     1091.
  PER Q=      2.0      21.3      37.9      37.3       1.5
   AREA=     20.5      97.3      68.6     170.2      15.4
    VEL=      1.7       3.9       9.9       3.9       1.7
  DEPTH=       .7       2.4       3.4       2.4        .7

1
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  TW      SPLIT FLOW WEIR BETWEEN SECTIONS 500 AND  600

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
   41.20      41.18        .07     41.20      41.18        .07          5  2703.058   2705.388    500.000    600.000


  TW      SPLIT FLOW WEIR BETWEEN SECTIONS 400 AND  500

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
  198.19     198.64        .23    239.39     239.82        .18          5  2700.724   2703.058    400.000    500.000


  TW      SPLIT FLOW WEIR BETWEEN SECTIONS 300 AND 400

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
  224.06     223.68        .17    463.46     463.50        .01          5  2696.884   2700.724    300.000    400.000

1
   05MAR98      10:01:44                                                                                    PAGE   10


                                                                                THIS RUN EXECUTED 05MAR98     10:01:44
 ************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


FEBRUARY 1998
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SUMMARY PRINTOUT

	SECNO	XLCH	ELMIN	Q	CWSEL	EG	VCH	DEPTH	TOPWID	AREA	SSTA	ENDST
*	300.000	.00	2696.00	796.54	2696.88	2697.11	4.22	.88	512.68	234.17	860.00	1372.68
*	400.000	150.00	2698.00	1021.61	2700.72	2700.88	2.30	2.72	430.00	347.99	900.00	1330.00
*	500.000	160.00	2700.00	1410.80	2703.06	2703.16	2.46	3.06	540.00	564.24	810.00	1350.00
	600.000	170.00	2704.00	1801.00	2705.39	2705.52	3.40	1.39	870.26	680.14	483.65	1353.91
	700.000	160.00	2706.90	1801.00	2708.58	2708.71	2.54	1.68	833.09	644.52	566.15	1399.24
*	800.000	190.00	2710.00	1801.00	2711.40	2711.47	2.14	1.40	900.02	884.34	548.48	1448.49
*	900.000	160.00	2712.00	1801.00	2713.66	2713.91	5.39	1.66	620.58	532.83	573.99	1194.57
*	1000.000	150.00	2713.40	1801.00	2715.59	2715.79	5.17	2.19	465.47	678.37	612.33	1077.81
	1100.000	330.00	2716.00	1801.00	2717.81	2717.95	3.93	1.81	411.67	700.39	657.38	1069.05
*	1200.000	330.00	2720.00	1801.00	2722.54	2723.19	7.32	2.54	305.16	370.62	833.82	1138.98
	1300.000	330.00	2724.00	1801.00	2727.43	2728.14	9.94	3.43	180.12	372.07	911.36	1091.48

1

05MAR98 10:01:44 PAGE 11

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 300.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 400.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 500.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 800.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 900.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1000.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1200.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1200.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1200.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

027

HEC2 FILE: SFWEST1.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 300 THROUGH 1300 WITH WEIR SECTION ON EAST EDGE FROM CROSS SECTIONS 300 TO 500.

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1*****************************************
****************************************
 *  HEC-2 WATER SURFACE PROFILES            *
*
 *                                          *
*
 *  Version   4.6.2;  May 1991              *
*
 *                                          *
*
 *  RUN DATE    05MAR98    TIME   10:05:35  *
*
 *****************************************
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 *  U.S. ARMY CORPS OF ENGINEERS
 *  HYDROLOGIC ENGINEERING CENTER
 *  609 SECOND STREET, SUITE D
 *  DAVIS, CALIFORNIA 95616-4687
 *          (916) 756-1104
```

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X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX              XXXXXXX
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1
   05MAR98      10:05:35                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 05MAR98    10:05:35
 ***************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ***************************************


 SPLIT FLOW BEING PERFORMED

 SF      SPLIT FLOW ALONG WEST EDGE OF FLOODPLAIN

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 500 AND 600
 WS     3     500     600      -1     2.7
 WC     0  2702.6      60  2704.0     190  2705.7

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 400 AND 500
 WS     3     400     500      -1     2.7
 WC     0  2700.5     160  2702.0     180  2702.6

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 300 AND 400
 WS     3     300     400      -1     2.7
 WC     0  2698.0      35  2700.0      85  2700.5
1
   05MAR98      10:05:35                                                                                    PAGE    2

 T1      SLA JOB #: PAZ-PDOT11-10;
 T2      MILAGROSA HILLS WASH FLOODPLAIN MAPPING, SPLIT FLOW ALONG WEST BANK
 T3      FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           -1.0                                    2697

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                  -1                                                                     15

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43         1         3        26         8         4        25
      53        54

 NC    0.080     0.080     0.06       0.1       0.3
 QT        1      1010
 X1      300        10      1140      1395       160       180       140
 GR   2696.7       860    2696.4      1030    2696.5      1080    2696.8      1140    2696.0      1240
 GR   2696.0      1265    2696.5      1300    2696.0      1330    2696.0      1355    2698.0      1395

 QT        1      1228
 X1      400         8       900      1225       170        80       150
 GR   2700.0       900    2700.0      1020    2700.6      1080    2700.3      1125    2700.0      1225
 GR   2698.0      1290    2700.0      1320    2700.5      1330

 QT        1      1425
 X1      500        12       885      1175       170       170       160
 GR   2703.0       810    2702.0       885    2702.0       950    2702.6      1000    2702.6      1040
 GR   2702.0      1095    2701.7      1140    2702.0      1175    2702.0      1250    2700.0      1290
 GR   2702.0      1330    2702.6      1350

 QT        1      1801
 X1      600        14       810      1125       190       140       170
 GR   2706.0       450    2704.0       560    2705.0       620    2705.0       730    2704.8       810
 GR   2704.0       850    2704.0       890    2704.6       950    2704.6      1050    2704.0      1125
 GR   2704.9      1175    2704.8      1230    2704.0      1260    2705.7      1375

 X1      700        14       890      1090       190       140       160
 GR   2710.0       460    2708.0       610    2708.0       780    2708.5       810    2708.0       855
```

029

HEC2 FILE: EAST-OVERBANK2.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 500 WITH GR RECORDS EXTENDING FROM THE EASTERN FLOODPLAIN BOUNDARY TO THE EAST WEIR SECTION.

```
FLOW DISTRIBUTION FOR SECNO=    500.00          CWSEL=   2703.06

STA=     810.     885.    1175.    1250.    1290.    1330.    1350.
  PER Q=       3.9      45.8      11.5      18.5      18.5       1.7
   AREA=      41.8     263.2      79.3      82.3      82.3      15.2
    VEL=       1.3       2.5       2.0       3.2       3.2       1.6
  DEPTH=        .6        .9       1.1       2.1       2.1        .8

*SECNO 600.000
   600.000      1.39   2705.39       .00       .00   2705.52       .13      2.35       .01   2704.80
    1801.0     346.6    1089.3     365.0     188.1     320.8     171.4       5.0       6.1   2704.00
       .05      1.84      3.40      2.13      .080      .060      .080      .000   2704.00    483.64
   .018341      190.      170.      140.         5         0         0       .00    870.29   1353.93


FLOW DISTRIBUTION FOR SECNO=    600.00          CWSEL=   2705.39

STA=     484.     560.     620.     730.     810.    1125.    1175.    1230.    1260.    1354.
  PER Q=       5.8       6.9       3.2       3.4      60.5       6.3       2.7       4.1       7.1
   AREA=      53.0      53.3      42.7      39.1     320.8      46.9      29.6      29.7      65.2
    VEL=       2.0       2.3       1.3       1.6       3.4       2.4       1.7       2.5       2.0
  DEPTH=        .7        .9        .4        .5       1.0        .9        .5       1.0        .7

*SECNO 700.000
   700.000      1.68   2708.58       .00       .00   2708.71       .14      3.19       .00   2707.30
    1801.0     330.8     285.0    1185.1     169.9     112.3     361.9       7.4       9.4   2708.00
       .06      1.95      2.54      3.27      .080      .060      .080      .000   2706.90    566.18
   .022646      190.      160.      140.         4         0         0       .00    833.03   1399.21
```



```
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

FLOW DISTRIBUTION FOR SECNO=    700.00          CWSEL=   2708.58

STA=     566.     610.     780.     810.     855.     890.    1090.    1220.    1285.    1370.    1399.
  PER Q=        .9      10.8        .7       1.1       4.8      15.8      24.9      24.1      16.3        .6
   AREA=      12.8      99.3      10.0      15.0      32.7     112.3     147.5     109.5      96.4       8.5
    VEL=       1.2       2.0       1.3       1.3       2.7       2.5       3.0       4.0       3.0       1.2
  DEPTH=        .3        .6        .3        .3        .9        .6       1.1       1.7       1.1        .3

CCHV=     .100 CEHV=     .300
*SECNO 800.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.50

   800.000      1.40   2711.40       .00       .00   2711.47       .06      2.75       .01   2711.20
    1801.0     729.0     169.7     902.3     373.3      79.3     432.2      10.7      13.1   2710.90
       .09      1.95      2.14      2.09      .080      .050      .080      .000   2710.00    548.44
   .010029      190.      190.      190.         4         0         0       .00    900.10   1448.54


FLOW DISTRIBUTION FOR SECNO=    800.00          CWSEL=   2711.40

STA=     548.     660.     765.     850.     930.    1060.    1120.    1230.    1330.    1449.
  PER Q=       6.3      18.9      11.8       3.5       9.4       5.6      19.8      18.0       6.7
   AREA=      77.8     146.4     101.5      47.6      79.3      56.7     153.4     139.5      82.7
    VEL=       1.5       2.3       2.1       1.3       2.1       1.8       2.3       2.3       1.5
  DEPTH=        .7       1.4       1.2        .6        .6        .9       1.4       1.4        .7

*SECNO 900.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .64

   900.000      1.66   2713.66       .00       .00   2713.91       .25      2.38       .06   2713.20
    1801.0    1042.8     675.2      83.0     352.7     125.2      54.7      13.3      15.9   2712.90
       .10      2.96      5.39      1.52      .080      .050      .080      .000   2712.00    574.06
   .024423      160.      160.      160.         3         0         0       .00    620.41   1194.47


FLOW DISTRIBUTION FOR SECNO=    900.00          CWSEL=   2713.66

STA=     574.     835.     890.     920.     950.    1050.    1194.
  PER Q=      30.7      20.6       5.3       1.3      37.5       4.6
   AREA=     216.2      91.1      31.7      13.7     125.2      54.7
    VEL=       2.6       4.1       3.0       1.7       5.4       1.5
  DEPTH=        .8       1.7       1.1        .5       1.3        .4
```



```
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


CCHV=     .100 CEHV=     .300
*SECNO 1000.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.80

  1000.000      2.19   2715.59       .00       .00   2715.79       .20      1.87       .01   2714.00
    1801.0    1089.8     680.7      30.5     524.7     131.8      22.1      15.4      17.8   2714.00
       .11      2.08      5.16      1.38      .080      .040      .080      .000   2713.40    612.32
   .007531      150.      150.      160.         4         0         0       .00    465.49   1077.81


FLOW DISTRIBUTION FOR SECNO=   1000.00          CWSEL=   2715.59
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```
STA=      612.      660.      920.      940.      960.      985.     1050.     1078.
  PER Q=      2.9      50.4       2.6       1.5       3.2      37.8       1.7
   AREA=     37.9     413.2      24.8      17.8      31.0     131.8      22.1
    VEL=      1.4       2.2       1.9       1.5       1.9       5.2       1.4
  DEPTH=       .8       1.6       1.2        .9       1.2       2.0        .8

*SECNO 1100.000
  1100.000      1.81   2717.81       .00       .00   2717.95       .14      2.16       .01   2716.40
    1801.0    1025.9     775.1        .0     503.0     197.2        .0      20.6      21.1   2718.00
       .14      2.04      3.93       .00      .080      .040      .000      .000   2716.00    657.38
   .005721      330.      330.      330.         3         0         0       .00    411.66   1069.05


FLOW DISTRIBUTION FOR SECNO=   1100.00          CWSEL=   2717.81

STA=      657.      680.      815.      920.      950.     1070.
  PER Q=      1.5      28.3      22.0       5.2      43.0
   AREA=     20.5     244.3     190.0      48.3     197.2
    VEL=      1.3       2.1       2.1       1.9       3.9
  DEPTH=       .9       1.8       1.8       1.6       1.7

*SECNO 1200.000

3301 HV CHANGED MORE THAN HVINS

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
1
   05MAR98      10:05:35                                                                                    PAGE    8

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

  1200.000      2.54   2722.54   2722.54       .00   2723.19       .64      2.97       .15   2721.50
    1801.0     112.8    1338.4     349.9      59.9     182.8     127.9      24.7      23.9   2720.50
       .16      1.88      7.32      2.74      .080      .040      .080      .000   2720.00    833.82
   .016244      330.      330.      330.        20        11         0       .00    305.16   1138.98


FLOW DISTRIBUTION FOR SECNO=   1200.00          CWSEL=   2722.54

STA=      834.      865.      930.     1025.     1120.     1139.
  PER Q=       .5       5.8      74.3      19.1       .3
   AREA=      8.5      51.5     182.8     122.8      5.1
    VEL=      1.0       2.0       7.3       2.8      1.0
  DEPTH=       .3        .8       1.9       1.3       .3

*SECNO 1300.000
  1300.000      3.43   2727.43       .00       .00   2728.14       .71      4.94       .02   2724.00
    1801.0     419.7     682.2     699.1     117.8      68.6     185.6      27.5      25.7   2724.00
       .17      3.56      9.94      3.77      .080      .040      .080      .000   2724.00    911.36
   .013822      330.      330.      330.         4         0         0       .00    180.12   1091.48


FLOW DISTRIBUTION FOR SECNO=   1300.00          CWSEL=   2727.43

STA=      911.      940.      980.     1000.     1070.     1091.
  PER Q=      2.0      21.3      37.9      37.3      1.5
   AREA=     20.5      97.3      68.6     170.2     15.4
    VEL=      1.7       3.9       9.9       3.9      1.7
  DEPTH=       .7       2.4       3.4       2.4       .7

1
   05MAR98      10:05:35                                                                                    PAGE    9


  TW      SPLIT FLOW WEIR BETWEEN SECTIONS 500 AND 600

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS      USWS      DSSNO      USSNO
     13.92     13.84       .60      13.92      13.84       .60          7  2703.058  2705.388   500.000    600.000


  TW      SPLIT FLOW WEIR BETWEEN SECTIONS 400 AND 500

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS      USWS      DSSNO      USSNO
    191.47    191.41       .03     205.39     205.25       .07          7  2700.724  2703.058   400.000    500.000


  TW      SPLIT FLOW WEIR BETWEEN SECTIONS 300 AND 400

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS      USWS      DSSNO      USSNO
       .73       .73       .22     206.12     205.98       .07          7  2696.888  2700.724   300.000    400.000

1
   05MAR98      10:05:35                                                                                    PAGE   10


                                                                                THIS RUN EXECUTED 05MAR98     10:05:36

 ************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


FEBRUARY 1998
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SUMMARY PRINTOUT

	SECNO	XLCH	ELMIN	Q	CWSEL	EG	VCH	DEPTH	TOPWID	AREA	SSTA	ENDST
*	300.000	.00	2696.00	803.88	2696.89	2697.11	4.23	.89	512.75	236.05	860.00	1372.75
*	400.000	150.00	2698.00	1022.61	2700.72	2700.88	2.30	2.72	430.00	348.51	900.00	1330.00
*	500.000	160.00	2700.00	1411.08	2703.06	2703.16	2.46	3.06	540.00	564.11	810.00	1350.00
	600.000	170.00	2704.00	1801.00	2705.39	2705.52	3.40	1.39	870.29	680.35	483.64	1353.93
	700.000	160.00	2706.90	1801.00	2708.58	2708.71	2.54	1.68	833.03	644.11	566.18	1399.21
*	800.000	190.00	2710.00	1801.00	2711.40	2711.47	2.14	1.40	900.10	884.78	548.44	1448.54
*	900.000	160.00	2712.00	1801.00	2713.66	2713.91	5.39	1.66	620.41	532.53	574.06	1194.47
*	1000.000	150.00	2713.40	1801.00	2715.59	2715.79	5.16	2.19	465.49	678.60	612.32	1077.81
	1100.000	330.00	2716.00	1801.00	2717.81	2717.95	3.93	1.81	411.66	700.19	657.38	1069.05
*	1200.000	330.00	2720.00	1801.00	2722.54	2723.19	7.32	2.54	305.16	370.62	833.82	1138.98
	1300.000	330.00	2724.00	1801.00	2727.43	2728.14	9.94	3.43	180.12	372.07	911.36	1091.48

1

05MAR98 10:05:35 PAGE 11

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 300.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 400.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 500.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 800.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 900.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1000.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1200.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1200.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1200.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

HEC2 FILE: SFEAST2.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 300 WITH WEIR SECTION ON EAST EDGE.

```
1*****************************************
*************************************
 *  HEC-2 WATER SURFACE PROFILES          *                                    *  U.S. ARMY CORPS OF ENGINEERS
 *                                        *                                    *  HYDROLOGIC ENGINEERING CENTER
 *  Version   4.6.2;  May 1991            *                                    *  609 SECOND STREET, SUITE D
 *                                        *                                    *  DAVIS, CALIFORNIA 95616-4687
 *  RUN DATE    05MAR98    TIME   10:46:11 *                                    *          (916) 756-1104
 *****************************************
*************************************

                                  X     X  XXXXXXX   XXXXX              XXXXX
                                  X     X  X        X     X            X     X
                                  X     X  X        X                        X
                                  XXXXXXX  XXXX     X          XXXXX    XXXXX
                                  X     X  X        X                  X
                                  X     X  X        X     X            X
                                  X     X  XXXXXXX   XXXXX             XXXXXXX
1
   05MAR98      10:46:11                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 05MAR98    10:46:11
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************


 SPLIT FLOW BEING PERFORMED


 SF       SPLIT FLOW ALONG EAST EDGE OF FLOODPLAIN


 TW       SPLIT FLOW WEIR BETWEEN SECTIONS 200 AND 300
 WS      3     200     300      -1     2.7
 WC      0  2694.2     100    2696     150  2696.7

 TW       SPLIT FLOW WEIR BETWEEN SECTIONS 100 AND 200
 WS      4     100     200      -1     2.7
 WC      0  2691.5      40    2692     210    2694     220  2694.2
1
   05MAR98      10:46:11                                                                                    PAGE    2


 T1       SLA JOB #: PAZ-PDOT11-10;
 T2       MILAGROSA HILLS WASH FLOODPLAIN MAPPING, SPLIT FLOW ALONG EAST BANK
 T3       FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       -1       2                           -1.0                                    2692

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                                                      15


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43         1         3        26         8         4        25
      53        54

 NC    0.080     0.080     0.08      0.1       0.3
 QT        1       191
 X1      100         7       865      1330       210       310       260
 GR   2691.5       865    2690.0       950    2689.5      1100    2688.9      1140    2689.5      1180
 GR   2690.0      1255    2690.5      1330

 QT        1       191
 X1      200         7       870      1275       210       310       260
 GR   2694.4       870    2694.4       930    2694.0       980    2693.6      1015    2694.0      1040
 GR   2694.3      1125    2694.6      1275

 QT        1       200
 X1      300         4       860      1140       160       180       140
 GR   2696.7       860    2696.4      1030    2696.5      1080    2696.8      1140
1
   05MAR98      10:46:11                                                                                    PAGE    3

     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 *PROF 1
0

 CCHV=      .100 CEHV=      .300
 *SECNO 100.000
```

```
3720 CRITICAL DEPTH ASSUMED
   100.000       .73   2689.63   2689.63   2692.00   2689.77       .14       .00       .00   2691.50
     115.8        .0     115.8        .0        .0      38.2        .0        .0        .0   2690.50
       .00       .00      3.03       .00      .000      .080      .000      .000   2688.90   1060.96
   .148252      210.      260.      310.         0        16         0       .00    138.56   1199.52

FLOW DISTRIBUTION FOR SECNO=    100.00          CWSEL=   2689.63

STA=    1061.    1330.
  PER Q=    100.0
   AREA=     38.2
    VEL=      3.0
  DEPTH=       .3

*SECNO 200.000
3280 CROSS SECTION    200.00 EXTENDED       .24 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  5.06

   200.000      1.03   2694.63       .00       .00   2694.65       .01      4.86       .01   2694.40
     133.6        .0     133.6        .0        .0     155.4        .0        .6       1.6   2694.60
       .08       .00       .86       .00      .000      .080      .000      .000   2693.60    870.00
   .007689      210.      260.      310.         5         0         0       .00    405.00   1275.00

FLOW DISTRIBUTION FOR SECNO=    200.00          CWSEL=   2694.63

STA=     870.    1275.
  PER Q=    100.0
   AREA=    155.4
    VEL=       .9
  DEPTH=       .4

1
   05MAR98      10:46:11                                                                          PAGE    4

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

*SECNO 300.000
3280 CROSS SECTION    300.00 EXTENDED       .24 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .70

   300.000       .53   2696.93       .00       .00   2696.99       .05      2.33       .01   2696.70
     200.0        .0     200.0        .0        .0     108.1        .0       1.0       2.7   2696.80
       .11       .00      1.85       .00      .000      .080      .000      .000   2696.40    860.00
   .035400      160.      140.      180.         3         0         0       .00    280.00   1140.00

FLOW DISTRIBUTION FOR SECNO=    300.00          CWSEL=   2696.93

STA=     860.    1140.
  PER Q=    100.0
   AREA=    108.1
    VEL=      1.9
  DEPTH=       .4

1
   05MAR98      10:46:11                                                                          PAGE    5

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 200 AND 300

    ASQ       QCOMP      ERRAC      TASQ       TCQ        TABER      NITER      DSWS       USWS       DSSNO      USSNO
    57.39     57.81        .74     57.39      57.81        .74          7   2694.634   2696.934    200.000    300.000

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 100 AND 200

    ASQ       QCOMP      ERRAC      TASQ       TCQ        TABER      NITER      DSWS       USWS       DSSNO      USSNO
    17.77     17.74        .14     75.15      75.55        .53          7   2689.630   2694.634    100.000    200.000

1
   05MAR98      10:46:11                                                                          PAGE    6

                                                                    THIS RUN EXECUTED 05MAR98    10:46:12
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FEBRUARY 1998

SUMMARY PRINTOUT

      SECNO      XLCH       ELMIN       Q          CWSEL      EG         VCH        DEPTH      TOPWID     AREA       SSTA       ENDST

*   100.000       .00    2688.90    115.85    2689.63    2689.77       3.03        .73     138.56      38.22    1060.96    1199.52

*   200.000    260.00    2693.60    133.61    2694.63    2694.65        .86       1.03     405.00     155.42     870.00    1275.00
```

*	300.000	140.00	2696.40	200.00	2696.93	2696.99	1.85	.53	280.00	108.06	860.00	1140.00

1

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 100.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 200.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 300.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

037

HEC2 FILE: SFWEST2.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 300 WITH WEIR SECTION ON WEST EDGE.

```
1*****************************************
*************************************
 *  HEC-2 WATER SURFACE PROFILES            *                                          *  U.S. ARMY CORPS OF ENGINEERS
 *                                          *                                          *  HYDROLOGIC ENGINEERING CENTER
 *  Version   4.6.2;  May 1991              *                                          *  609 SECOND STREET, SUITE D
 *                                          *                                          *  DAVIS, CALIFORNIA 95616-4687
 *  RUN DATE    05MAR98    TIME   10:45:15  *                                          *          (916) 756-1104
 *****************************************
*************************************
```

```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
```

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1
   05MAR98      10:45:15                                                                                    PAGE    1

                                                                                THIS RUN EXECUTED 05MAR98    10:45:15
 *************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 *************************************


 SPLIT FLOW BEING PERFORMED

 SF       SPLIT FLOW ALONG WEST EDGE OF FLOODPLAIN

 TW       SPLIT FLOW WEIR BETWEEN SECTIONS 200 AND 300
 WS      3     200      300       -1      2.7
 WC      0  2694.6      130     2696      210  2696.8

 TW       SPLIT FLOW WEIR BETWEEN SECTIONS 100 AND 200
 WS      4     100      200       -1      2.7
 WC      0  2690.5      115     2692      205     2694      315  2694.6
1
   05MAR98      10:45:15                                                                                    PAGE    2

 T1       SLA JOB #: PAZ-PDOT11-10;
 T2       MILAGROSA HILLS WASH FLOODPLAIN MAPPING, SPLIT FLOW ALONG WEST BANK
 T3       FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           -1.0                                    2692

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                                                      15

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43         1         3        26         8         4        25
      53        54

 NC    0.080     0.080      0.08       0.1       0.3
 QT        1       124
 X1      100         7       865      1330       210       310       260
 GR   2691.5       865    2690.0       950    2689.5      1100    2688.9      1140    2689.5      1180
 GR   2690.0      1255    2690.5      1330

 QT        1       142
 X1      200         7       870      1275       210       310       260
 GR   2694.4       870    2694.4       930    2694.0       980    2693.6      1015    2694.0      1040
 GR   2694.3      1125    2694.6      1275

 QT        1       200
 X1      300         4       860      1140       160       180       140
 GR   2696.7       860    2696.4      1030    2696.5      1080    2696.8      1140
1
   05MAR98      10:45:15                                                                                    PAGE    3

     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

 *PROF 1
0

 CCHV=     .100 CEHV=     .300
 *SECNO 100.000
```

```
3720 CRITICAL DEPTH ASSUMED
   100.000       .73   2689.63   2689.63   2692.00   2689.77       .14       .00       .00   2691.50
     114.7        .0     114.7        .0        .0      38.1        .0        .0        .0   2690.50
       .00       .00      3.01       .00      .000      .080      .000      .000   2688.90   1061.25
   .146485      210.      260.      310.         0        16         0       .00    138.12   1199.37

FLOW DISTRIBUTION FOR SECNO=    100.00          CWSEL=   2689.63

STA=    1061.    1330.
  PER Q=    100.0
   AREA=     38.1
    VEL=      3.0
  DEPTH=       .3

*SECNO 200.000
3280 CROSS SECTION    200.00 EXTENDED       .23 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  5.04

   200.000      1.03   2694.63       .00       .00   2694.64       .01      4.86       .01   2694.40
     132.7        .0     132.7        .0        .0     154.6        .0        .6       1.6   2694.60
       .08       .00       .86       .00      .000      .080      .000      .000   2693.60    870.00
   .007718      210.      260.      310.         5         0         0       .00    405.00   1275.00

FLOW DISTRIBUTION FOR SECNO=    200.00          CWSEL=   2694.63

STA=     870.    1275.
  PER Q=    100.0
   AREA=    154.6
    VEL=       .9
  DEPTH=       .4

1
   05MAR98      10:45:15                                                                          PAGE    4

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

*SECNO 300.000
3280 CROSS SECTION    300.00 EXTENDED       .24 FEET

   300.000       .53   2696.93       .00       .00   2696.99       .05      2.33       .01   2696.70
     200.0        .0     200.0        .0        .0     108.3        .0       1.0       2.7   2696.80
       .11       .00      1.85       .00      .000      .080      .000      .000   2696.40    860.00
   .035177      160.      140.      180.         3         0         0       .00    280.00   1140.00

FLOW DISTRIBUTION FOR SECNO=    300.00          CWSEL=   2696.93

STA=     860.    1140.
  PER Q=    100.0
   AREA=    108.3
    VEL=      1.8
  DEPTH=       .4

1
   05MAR98      10:45:15                                                                          PAGE    5

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 200 AND 300

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
   9.27        9.27        .07       9.27       9.27       .07         10   2694.628   2696.932    200.000    300.000

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 100 AND 200

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
    .01        .01        .84       9.28       9.29       .07         10   2689.629   2694.628    100.000    200.000

1
   05MAR98      10:45:15                                                                          PAGE    6


                                                                    THIS RUN EXECUTED 05MAR98    10:45:15
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FEBRUARY 1998

SUMMARY PRINTOUT

      SECNO      XLCH       ELMIN      Q          CWSEL      EG         VCH        DEPTH      TOPWID     AREA       SSTA       ENDST

*   100.000       .00   2688.90    114.72   2689.63   2689.77      3.01       .73    138.12      38.09   1061.25   1199.37

*   200.000    260.00   2693.60    132.73   2694.63   2694.64       .86      1.03    405.00     154.62    870.00   1275.00

    300.000    140.00   2696.40    200.00   2696.93   2696.99      1.85       .53    280.00     108.27    860.00   1140.00
```

040

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=    100.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
WARNING SECNO=    200.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

HEC2 FILE: EAST-OVERBANK2.OUT
EVENT: 100-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 500 WITH GR RECORDS EXTENDING FROM THE EASTERN FLOODPLAIN BOUNDARY TO THE EAST WEIR SECTION.

```
1*****************************************
****************************************
 *  HEC-2 WATER SURFACE PROFILES          *                                    *  U.S. ARMY CORPS OF ENGINEERS
 *                                        *                                    *  HYDROLOGIC ENGINEERING CENTER
 *  Version   4.6.2;  May 1991            *                                    *  609 SECOND STREET, SUITE D
 *                                        *                                    *  DAVIS, CALIFORNIA 95616-4687
 *  RUN DATE    05MAR98    TIME   14:01:33 *                                    *          (916) 756-1104
 *****************************************
****************************************

                                    X     X  XXXXXXX   XXXXX              XXXXX
                                    X     X  X        X     X            X     X
                                    X     X  X        X                        X
                                    XXXXXXX  XXXX     X          XXXXX    XXXXX
                                    X     X  X        X                  X
                                    X     X  X        X     X            X
                                    X     X  XXXXXXX   XXXXX             XXXXXXX
1
   05MAR98      14:01:33                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 05MAR98    14:01:33
 ***************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ***************************************


 T1      SLA JOB #: PAZ-PDOT11-10;
 T2      MILAGROSA HILLS WASH FLOODPLAIN MAPPING, EAST OVERBANK FLOW
 T3      FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       -1        2                           -1.0                              0       2690

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                                                      15


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43        1         3         26        8         4         25
      53        54

 QT        1       872
 NC    0.080     0.080      0.06       0.1       0.3
 X1      100         5       300       865         0         0         0
 GR   2691.0       300    2692.0       435    2690.6       520    2690.5       680    2691.5       865

 QT        1       854
 X1      200         7       470       810       200       200       200
 GR   2693.3       360    2692.0       470    2692.3       515    2693.0       560    2693.3       660
 GR   2694.0       765    2694.4       810

 QT        1       796
 X1      300         7       440       860       190       150       150
 GR   2696.0       280    2694.0       440    2694.0       490    2695.6       550    2695.5       670
 GR   2696.0       750    2696.7       860

 QT        1       575
 X1      400         9       460       900       180       180       180
 GR   2700.0       270    2699.0       460    2698.2       485    2700.0       520    2700.0       630
 GR   2699.3       660    2700.0       725    2699.0       800    2700.0       900

 QT        1       376
 X1      500         7       365       810       150       200       150
 GR   2704.0       210      2702       365    2701.0       440    2702.0       520    2703.0       665
 GR   2702.6       755    2703.0       810
1
   05MAR98      14:01:33                                                                                    PAGE    2


 QT        1       335
 X1      600         7       450       810       150       130       120
 GR   2708.0       310    2706.0       450    2704.0       560    2705.0       620    2705.0       730
 GR   2705.0       770    2704.8       810
1
   05MAR98      14:01:33                                                                                    PAGE    3

      SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
      Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
      TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
      SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 *PROF 1
0

 CCHV=      .100 CEHV=      .300
 *SECNO 100.000
```

043

```
3265 DIVIDED FLOW

3280 CROSS SECTION    100.00 EXTENDED       .33 FEET

3720 CRITICAL DEPTH ASSUMED
   100.000       .83   2691.33   2691.33   2690.00   2691.59       .27       .00       .00   2691.00
     872.0        .0     872.0        .0        .0     210.8        .0        .0        .0   2691.50
       .00       .00      4.14       .00      .000      .060      .000      .000   2690.50    300.00
   .065886        0.        0.        0.         0        12         0       .00    401.24    832.98


FLOW DISTRIBUTION FOR SECNO=    100.00          CWSEL=   2691.33

STA=     300.     865.
  PER Q=    100.0
   AREA=    210.8
    VEL=      4.1
  DEPTH=       .5

*SECNO 200.000
3280 CROSS SECTION    200.00 EXTENDED       .85 FEET


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.47

   200.000      2.15   2694.15       .00       .00   2694.20       .05      2.59       .02   2692.00
     854.0     291.5     562.5        .0     165.6     312.8        .0       1.6       1.9   2694.40
       .03      1.76      1.80       .00      .080      .060      .000      .000   2692.00    360.00
   .005263      200.      200.      200.         8         0         0       .00    422.45    782.45


FLOW DISTRIBUTION FOR SECNO=    200.00          CWSEL=   2694.15

STA=     360.     470.     810.
  PER Q=     34.1     65.9
   AREA=    165.6    312.8
    VEL=      1.8      1.8
  DEPTH=      1.5      1.0
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 300.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .42

   300.000      1.71   2695.71       .00       .00   2695.84       .13      1.61       .02   2694.00
     796.0     318.7     477.3        .0     117.4     163.6        .0       3.0       3.4   2696.70
       .05      2.71      2.92       .00      .080      .060      .000      .000   2694.00    302.95
   .026259      190.      150.      150.         5         0         0       .00    401.15    704.10


FLOW DISTRIBUTION FOR SECNO=    300.00          CWSEL=   2695.71

STA=     303.     440.     860.
  PER Q=     40.0     60.0
   AREA=    117.4    163.6
    VEL=      2.7      2.9
  DEPTH=       .9       .6

*SECNO 400.000

3265 DIVIDED FLOW

   400.000      1.78   2699.98   2699.72       .00   2700.05       .08      4.21       .00   2699.00
     575.0     147.9     427.1        .0      90.6     179.5        .0       4.2       5.3   2700.00
       .07      1.63      2.38       .00      .080      .060      .000      .000   2698.20    274.50
   .020127      180.      180.      180.        19        12         0       .00    507.68    897.63


FLOW DISTRIBUTION FOR SECNO=    400.00          CWSEL=   2699.98

STA=     274.     460.     900.
  PER Q=     25.7     74.3
   AREA=     90.6    179.5
    VEL=      1.6      2.4
  DEPTH=       .5       .6

*SECNO 500.000
   500.000      1.45   2702.45       .00       .00   2702.53       .08      2.48       .00   2702.00
     376.0       6.2     369.8        .0       8.0     162.9        .0       4.9       6.6   2703.00
       .09       .78      2.27       .00      .080      .060      .000      .000   2701.00    329.79
   .012612      150.      150.      200.         3         0         0       .00    256.09    585.88
```



```
    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


FLOW DISTRIBUTION FOR SECNO=    500.00          CWSEL=   2702.45

STA=     330.     365.     810.
  PER Q=      1.7     98.3
   AREA=      8.0    162.9
    VEL=       .8      2.3
```

```
  DEPTH=        .2        .7

*SECNO 600.000
3280 CROSS SECTION    600.00 EXTENDED       .36 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .41

   600.000      1.15   2705.15   2705.14       .00   2705.29       .14      2.74       .02   2706.00
     335.0        .0     335.0        .0        .0     110.2        .0       5.3       7.4   2704.80
       .10       .00      3.04       .00      .000      .060      .000      .000   2704.00    496.34
   .060854      150.      120.      130.         7        14         0       .00    313.66    810.00

FLOW DISTRIBUTION FOR SECNO=    600.00          CWSEL=   2705.15

STA=     496.     810.
  PER Q=    100.0
   AREA=    110.2
    VEL=      3.0
  DEPTH=       .4
```


THIS RUN EXECUTED 05MAR98 14:01:34

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*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FEBRUARY 1998

SUMMARY PRINTOUT

	SECNO	XLCH	ELMIN	Q	CWSEL	EG	VCH	DEPTH	TOPWID	AREA	SSTA	ENDST
*	100.000	.00	2690.50	872.00	2691.33	2691.59	4.14	.83	401.24	210.80	300.00	832.98
*	200.000	200.00	2692.00	854.00	2694.15	2694.20	1.80	2.15	422.45	478.38	360.00	782.45
*	300.000	150.00	2694.00	796.00	2695.71	2695.84	2.92	1.71	401.15	281.04	302.95	704.10
	400.000	180.00	2698.20	575.00	2699.98	2700.05	2.38	1.78	507.68	270.08	274.50	897.63
	500.000	150.00	2701.00	376.00	2702.45	2702.53	2.27	1.45	256.09	170.89	329.79	585.88
*	600.000	120.00	2704.00	335.00	2705.15	2705.29	3.04	1.15	313.66	110.21	496.34	810.00

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=    100.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
WARNING SECNO=    200.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    300.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
WARNING SECNO=    600.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
```

HEC2 FILE: SFEAST1A.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 300 THROUGH 1300 WITH WEIR SECTION ON EAST EDGE FROM CROSS SECTIONS 300 TO 500.

```
1*****************************************
****************************************
 *  HEC-2 WATER SURFACE PROFILES            *                                          *  U.S. ARMY CORPS OF ENGINEERS
 *                                          *                                          *  HYDROLOGIC ENGINEERING CENTER
 *                                          *
 *  Version   4.6.2;  May 1991              *                                          *  609 SECOND STREET, SUITE D
 *                                          *                                          *  DAVIS, CALIFORNIA 95616-4687
 *                                          *
 *  RUN DATE    05MAR98    TIME   11:03:16  *                                          *          (916) 756-1104
 *****************************************
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```
X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX              XXXXXXX
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1
   05MAR98      11:03:16                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 05MAR98    11:03:16
 ***************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ***************************************


 SPLIT FLOW BEING PERFORMED

 SF      SPLIT FLOW ALONG EAST EDGE OF FLOODPLAIN

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 500 AND  600
 WS     3     500      600      -1      2.7
 WC     0    2703       55    2704      130  2704.8

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 400 AND  500
 WS     3     400      500      -1      2.7
 WC     0    2700      150    2702      205    2703

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 300 AND 400
 WS     3     300      400      -1      2.7
 WC     0  2696.7       85    2698      180    2700
1
   05MAR98      11:03:16                                                                                    PAGE    2


 T1      SLA JOB #: PAZ-PDOT11-10;
 T2      MILAGROSA HILLS WASH FLOODPLAIN MAPPING, SPLIT FLOW ALONG EAST BANK
 T3      FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       -1       2                           -1.0                                    2697

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                                                      15

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43        1         3         26        8         4         25
      53        54

 NC    0.080     0.080     0.06      0.1       0.3
 QT        1       670
 X1      300        10      1140      1395      160       180       140
 GR   2696.7       860    2696.4      1030   2696.5      1080    2696.8      1140    2696.0      1240
 GR   2696.0      1265    2696.5      1300   2696.0      1330    2696.0      1355    2698.0      1395

 QT        1       670
 X1      400         8       900      1225      170        80       150
 GR   2700.0       900    2700.0      1020   2700.6      1080    2700.3      1125    2700.0      1225
 GR   2698.0      1290    2700.0      1320   2700.5      1330

 QT        1       723
 X1      500        12       885      1175      170       170       160
 GR   2703.0       810    2702.0       885   2702.0       950    2702.6      1000    2702.6      1040
 GR   2702.0      1095    2701.7      1140   2702.0      1175    2702.0      1250    2700.0      1290
 GR   2702.0      1330    2702.6      1350

 QT        1       832
 X1      600        14       810      1125      190       140       170
 GR   2706.0       450    2704.0       560   2705.0       620    2705.0       730    2704.8       810
 GR   2704.0       850    2704.0       890   2704.6       950    2704.6      1050    2704.0      1125
 GR   2704.9      1175    2704.8      1230   2704.0      1260    2705.7      1375

 X1      700        14       890      1090      190       140       160
 GR   2710.0       460    2708.0       610   2708.0       780    2708.5       810    2708.0       855
```

047

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GR   2707.3       890     2708.0       920     2708.0      1030     2708.5      1050     2708.0      1090
GR   2706.9      1220     2706.9      1285     2708.0      1370     2710.0      1470

NC    0.080     0.080       0.05       0.1        0.3
X1      800        12        930      1060        190       190       190
GR   2712.0       500     2710.0       660     2710.0       765     2710.4       850     2711.2       930
GR   2710.6       985     2710.6      1010     2710.9      1060     2710.0      1120     2710.0      1230
GR   2710.0      1330     2712.0      1500
1
   05MAR98      11:03:16                                                                          PAGE    3


X1      900         9        950      1050        160       160       160
GR   2714.0       520     2712.0       835     2712.0       890     2713.2       920     2713.2       950
GR   2712.0       980     2712.0      1000     2712.9      1050     2714.0      1260

NC    0.080     0.080       0.04       0.1        0.3
X1     1000        11        985      1050        150       160       150
GR   2716.0       600     2714.0       660     2714.0       920     2714.7       940     2714.7       960
GR   2714.0       985     2713.4      1000     2713.4      1030     2714.0      1050     2716.0      1085
GR   2718.0      1145

X1     1100        10        950      1070        330       330       330
GR   2718.0       655     2716.0       680     2716.0       815     2716.0       920     2716.4       950
GR   2716.0      1000     2716.0      1060     2718.0      1070     2720.0      1110     2722.0      1130

X1     1200         7        930      1025        330       330       330
GR   2724.0       750     2722.0       865     2721.5       930     2720.0      1000     2720.5      1025
GR   2722.0      1120     2724.0      1190

X1     1300         8        980      1000        330       330       330
GR   2730.0       850     2728.0       900     2726.0       940     2724.0       980     2724.0      1000
GR   2726.0      1070     2728.0      1100     2730.0      1140
1
   05MAR98      11:03:16                                                                          PAGE    4

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 *PROF 1
0

 CCHV=     .100 CEHV=     .300
 *SECNO 300.000

 3265 DIVIDED FLOW

 3280 CROSS SECTION    300.00 EXTENDED       .06 FEET

 3720 CRITICAL DEPTH ASSUMED
    300.000       .76   2696.76   2696.76   2697.00   2696.93       .17       .00       .00   2696.80
     491.8      90.2     401.6        .0      57.7     112.8        .0        .0        .0   2698.00
       .00      1.56      3.56       .00      .080      .060      .000      .000   2696.00    860.00
   .051918      160.      140.      180.         0        18         0       .00    496.85   1370.18


 FLOW DISTRIBUTION FOR SECNO=    300.00          CWSEL=   2696.76

 STA=     860.    1030.    1080.    1132.    1395.
   PER Q=     10.8      6.1      1.5     81.7
    AREA=     35.5     15.5      6.7    112.8
     VEL=      1.5      1.9      1.1      3.6
   DEPTH=       .2       .3       .1       .5

 *SECNO 400.000

 3265 DIVIDED FLOW

 3280 CROSS SECTION    400.00 EXTENDED       .44 FEET


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.99

    400.000      2.44   2700.44   2700.25       .00   2700.58       .14      3.65       .00   2700.00
      608.6        .0     150.8     457.7        .0      91.5     138.2        .6       1.5   2700.00
        .01       .00      1.65      3.31      .000      .060      .080      .000   2698.00    900.00
   .020051      170.      150.       80.        14        23         0       .00    387.45   1328.70


 FLOW DISTRIBUTION FOR SECNO=    400.00          CWSEL=   2700.44

1
   05MAR98      11:03:16                                                                          PAGE    5

    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 STA=     900.    1225.    1290.    1320.    1329.
   PER Q=     24.8     51.3     23.6       .3
    AREA=     91.5     93.3     43.1      1.9
     VEL=      1.6      3.3      3.3      1.0
   DEPTH=       .3      1.4      1.4       .2

 *SECNO 500.000
 3280 CROSS SECTION    500.00 EXTENDED       .10 FEET


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.70
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048

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   500.000      2.70   2702.70       .00       .00   2702.77       .06      2.18       .01   2702.00
     720.1      16.9     263.8     439.3      18.6     160.6     197.2       1.7       3.2   2702.00
       .04       .91      1.64      2.23      .080      .060      .080      .000   2700.00    832.21
   .009674      170.      160.      170.         5         0         0       .00    517.79   1350.00

 FLOW DISTRIBUTION FOR SECNO=    500.00          CWSEL=   2702.70

 STA=     832.     885.    1175.    1250.    1290.    1330.    1350.
   PER Q=      2.3     36.6     10.6     24.6     24.6      1.1
    AREA=     18.6    160.6     52.8     68.2     68.2      8.1
     VEL=       .9      1.6      1.4      2.6      2.6      1.0
   DEPTH=       .4       .6       .7      1.7      1.7       .4

 *SECNO 600.000
   600.000      1.01   2705.01       .00       .00   2705.11       .10      2.33       .01   2704.80
     832.0     111.0     561.5     159.5      69.2     202.3      90.0       3.1       5.8   2704.00
       .05      1.61      2.78      1.77      .080      .060      .080      .000   2704.00    504.34
   .022686      190.      170.      140.         4         0         0       .00    824.12   1328.46

 FLOW DISTRIBUTION FOR SECNO=    600.00          CWSEL=   2705.01

 STA=     504.     560.     620.     730.     810.    1125.    1175.    1230.    1260.    1328.
   PER Q=      6.0      6.6       .0       .7     67.5      6.4       .9      4.4      7.4
    AREA=     28.2     30.7      1.3      9.0    202.3     28.1      8.9     18.4     34.6
     VEL=      1.8      1.8       .1       .6      2.8      1.9       .8      2.0      1.8
   DEPTH=       .5       .5       .0       .1       .6       .6       .2       .6       .5

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   05MAR98      11:03:16                                                                          PAGE     6

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

 *SECNO 700.000

 3265 DIVIDED FLOW

   700.000      1.35   2708.25       .00       .00   2708.34       .09      3.23       .00   2707.30
     832.0      88.4      75.8     667.8      71.2      49.7     262.1       4.4       8.7   2708.00
       .07      1.24      1.52      2.55      .080      .060      .080      .000   2706.90    591.05
   .019568      190.      160.      140.         4         0         0       .00    724.81   1382.63

 FLOW DISTRIBUTION FOR SECNO=    700.00          CWSEL=   2708.25

 STA=     591.     610.     780.     795.     855.     890.    1090.    1220.    1285.    1370.    1383.
   PER Q=       .2      5.4       .2       .2      4.7      9.1     28.1     33.6     18.4       .1
    AREA=      2.4     43.0      1.9      2.9     21.1     49.7    104.4     87.9     68.2      1.6
     VEL=       .7      1.0       .7       .7      1.9      1.5      2.2      3.2      2.2       .7
   DEPTH=       .1       .3       .1       .0       .6       .3       .8      1.4       .8       .1

 CCHV=      .100 CEHV=      .300
 *SECNO 800.000

 3265 DIVIDED FLOW

   800.000       .97   2710.97       .00       .00   2711.01       .04      2.66       .00   2711.20
     832.0     345.4      29.6     457.0     217.9      25.4     271.4       6.4      12.0   2710.90
       .10      1.58      1.16      1.68      .080      .050      .080      .000   2710.00    583.20
   .010534      190.      190.      190.         4         0         0       .00    782.39   1411.60

 FLOW DISTRIBUTION FOR SECNO=    800.00          CWSEL=   2710.97

 STA=     583.     660.     765.     850.     906.    1060.    1120.    1230.    1330.    1412.
   PER Q=      5.2     22.5     12.3      1.5      3.6      4.5     23.5     21.4      5.5
    AREA=     36.9    100.8     64.6     15.7     25.4     30.6    105.6     96.0     39.2
     VEL=      1.2      1.9      1.6       .8      1.2      1.2      1.9      1.9      1.2
   DEPTH=       .5      1.0       .8       .3       .2       .5      1.0      1.0       .5

 *SECNO 900.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .69

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   05MAR98      11:03:16                                                                          PAGE     7

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

   900.000      1.25   2713.25       .00       .00   2713.39       .14      2.35       .03   2713.20
     832.0     497.5     325.3       9.2     209.3      83.4      11.0       7.9      14.3   2712.90
       .12      2.38      3.90       .84      .080      .050      .080      .000   2712.00    639.89
   .021962      160.      160.      160.         3         0         0       .00    474.79   1114.69

 FLOW DISTRIBUTION FOR SECNO=    900.00          CWSEL=   2713.25

 STA=     640.     835.     890.     920.     950.    1050.    1115.
   PER Q=     29.1     26.0      4.7       .0     39.1      1.1
    AREA=    120.8     68.1     19.2      1.2     83.4     11.0
     VEL=      2.0      3.2      2.0       .3      3.9       .8
   DEPTH=       .6      1.2       .6       .0       .8       .2

 CCHV=      .100 CEHV=      .300
 *SECNO 1000.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.77
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  1000.000      1.59   2714.99       .00       .00   2715.12       .13      1.72       .00   2714.00
     832.0     454.3     369.3       8.5     308.4      93.2       8.7       9.1      15.9   2714.00
       .14      1.47      3.96       .98      .080      .040      .080      .000   2713.40    630.15
   .007045      150.      150.      160.         4         0         0       .00    437.26   1067.41

FLOW DISTRIBUTION FOR SECNO=   1000.00          CWSEL=   2714.99

STA=     630.     660.     920.     940.     960.     985.    1050.    1067.
  PER Q=      1.7     48.3      1.8       .5      2.3     44.4      1.0
   AREA=     14.8    258.7     12.9      5.9     16.1     93.2      8.7
    VEL=      1.0      1.6      1.2       .7      1.2      4.0      1.0
  DEPTH=       .5      1.0       .6       .3       .6      1.4       .5

*SECNO 1100.000
  1100.000      1.16   2717.16       .00       .00   2717.24       .08      2.11       .01   2716.40
     832.0     481.2     350.8        .0     314.3     120.4        .0      12.3      19.0   2718.00
       .18      1.53      2.91       .00      .080      .040      .000      .000   2716.00    665.56
   .005844      330.      330.      330.         4         0         0       .00    400.22   1065.78
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST

FLOW DISTRIBUTION FOR SECNO=   1100.00          CWSEL=   2717.16

STA=     666.     680.     815.     920.     950.    1070.
  PER Q=      1.0     29.3     22.8      4.7     42.2
   AREA=      8.3    156.0    121.3     28.7    120.4
    VEL=      1.0      1.6      1.6      1.4      2.9
  DEPTH=       .6      1.2      1.2      1.0      1.0

*SECNO 1200.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  1200.000      1.84   2721.84   2721.84       .00   2722.34       .51      3.30       .13   2721.50
     832.0       6.0     709.7     116.2       7.3     115.7      56.5      14.7      21.4   2720.50
       .20       .82      6.14      2.06      .080      .040      .080      .000   2720.00    886.30
   .020978      330.      330.      330.        20        14         0       .00    223.33   1109.62

FLOW DISTRIBUTION FOR SECNO=   1200.00          CWSEL=   2721.84

STA=     886.     930.    1025.    1110.
  PER Q=       .7     85.3     14.0
   AREA=      7.3    115.7     56.5
    VEL=       .8      6.1      2.1
  DEPTH=       .2      1.2       .7

*SECNO 1300.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.44

  1300.000      2.61   2726.61       .00       .00   2727.01       .40      4.66       .01   2724.00
     832.0     168.8     370.7     292.5      68.2      52.2     115.6      16.2      22.8   2724.00
       .22      2.48      7.10      2.53      .080      .040      .080      .000   2724.00    927.77
   .010148      330.      330.      330.         4         0         0       .00    151.41   1079.17

FLOW DISTRIBUTION FOR SECNO=   1300.00          CWSEL=   2726.61

STA=     928.     940.     980.    1000.    1070.    1079.
  PER Q=       .4     19.9     44.6     34.9       .3
   AREA=      3.7     64.5     52.2    112.8      2.8
    VEL=       .8      2.6      7.1      2.6       .8
  DEPTH=       .3      1.6      2.6      1.6       .3
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 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 500 AND  600

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER     NITER     DSWS      USWS      DSSNO     USSNO
     2.92      3.07       5.00      2.92       3.07      5.00         21  2702.703  2705.010   500.000   600.000

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 400 AND  500

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER     NITER     DSWS      USWS      DSSNO     USSNO
    58.52     59.01        .84     61.44      62.09      1.04         21  2700.437  2702.703   400.000   500.000

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 300 AND 400

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER     NITER     DSWS      USWS      DSSNO     USSNO
   116.75    118.01       1.07    178.20     180.09      1.06         21  2696.759  2700.437   300.000   400.000
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                                                                                THIS RUN EXECUTED 05MAR98    11:03:17
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 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
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050

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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FEBRUARY 1998

SUMMARY PRINTOUT

	SECNO	XLCH	ELMIN	Q	CWSEL	EG	VCH	DEPTH	TOPWID	AREA	SSTA	ENDST
*	300.000	.00	2696.00	491.80	2696.76	2696.93	3.56	.76	496.85	170.52	860.00	1370.18
*	400.000	150.00	2698.00	608.56	2700.44	2700.58	1.65	2.44	387.45	229.76	900.00	1328.70
*	500.000	160.00	2700.00	720.08	2702.70	2702.77	1.64	2.70	517.79	376.36	832.21	1350.00
	600.000	170.00	2704.00	832.00	2705.01	2705.11	2.78	1.01	824.12	361.41	504.34	1328.46
	700.000	160.00	2706.90	832.00	2708.25	2708.34	1.52	1.35	724.81	383.05	591.05	1382.63
	800.000	190.00	2710.00	832.00	2710.97	2711.01	1.16	.97	782.39	514.73	583.20	1411.60
*	900.000	160.00	2712.00	832.00	2713.25	2713.39	3.90	1.25	474.79	303.65	639.89	1114.69
*	1000.000	150.00	2713.40	832.00	2714.99	2715.12	3.96	1.59	437.26	410.26	630.15	1067.41
	1100.000	330.00	2716.00	832.00	2717.16	2717.24	2.91	1.16	400.22	434.69	665.56	1065.78
*	1200.000	330.00	2720.00	832.00	2721.84	2722.34	6.14	1.84	223.33	179.57	886.30	1109.62
*	1300.000	330.00	2724.00	832.00	2726.61	2727.01	7.10	2.61	151.41	236.05	927.77	1079.17

1

05MAR98 11:03:16 PAGE 11

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 300.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 400.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 500.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 900.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1000.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1200.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1200.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1200.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 1300.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

051

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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FEBRUARY 1998

SUMMARY PRINTOUT

	SECNO	XLCH	ELMIN	Q	CWSEL	EG	VCH	DEPTH	TOPWID	AREA	SSTA	ENDST
*	300.000	.00	2696.00	491.80	2696.76	2696.93	3.56	.76	496.85	170.52	860.00	1370.18
*	400.000	150.00	2698.00	608.56	2700.44	2700.58	1.65	2.44	387.45	229.76	900.00	1328.70
*	500.000	160.00	2700.00	720.08	2702.70	2702.77	1.64	2.70	517.79	376.36	832.21	1350.00
	600.000	170.00	2704.00	832.00	2705.01	2705.11	2.78	1.01	824.12	361.41	504.34	1328.46
	700.000	160.00	2706.90	832.00	2708.25	2708.34	1.52	1.35	724.81	383.05	591.05	1382.63
	800.000	190.00	2710.00	832.00	2710.97	2711.01	1.16	.97	782.39	514.73	583.20	1411.60
*	900.000	160.00	2712.00	832.00	2713.25	2713.39	3.90	1.25	474.79	303.65	639.89	1114.69
*	1000.000	150.00	2713.40	832.00	2714.99	2715.12	3.96	1.59	437.26	410.26	630.15	1067.41
	1100.000	330.00	2716.00	832.00	2717.16	2717.24	2.91	1.16	400.22	434.69	665.56	1065.78
*	1200.000	330.00	2720.00	832.00	2721.84	2722.34	6.14	1.84	223.33	179.57	886.30	1109.62
*	1300.000	330.00	2724.00	832.00	2726.61	2727.01	7.10	2.61	151.41	236.05	927.77	1079.17

1

05MAR98 11:03:16 PAGE 11

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 300.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 400.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 500.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 900.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1000.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1200.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1200.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1200.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 1300.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

051

HEC2 FILE: SFWEST1A.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 300 THROUGH 1300 WITH WEIR SECTION ON WEST EDGE FROM CROSS SECTIONS 300 TO 500.

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1*****************************************
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 *  HEC-2 WATER SURFACE PROFILES            *                                    *  U.S. ARMY CORPS OF ENGINEERS
 *                                          *                                    *  HYDROLOGIC ENGINEERING CENTER
 *                                          *                                    *  609 SECOND STREET, SUITE D
 *  Version   4.6.2;  May 1991              *                                    *  DAVIS, CALIFORNIA 95616-4687
 *                                          *                                    *          (916) 756-1104
 *  RUN DATE    05MAR98    TIME   11:03:30  *
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X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
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1
   05MAR98      11:03:30                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 05MAR98    11:03:30
 ************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
 ************************************


 SPLIT FLOW BEING PERFORMED

 SF      SPLIT FLOW ALONG WEST EDGE OF FLOODPLAIN

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 500 AND 600
 WS     3     500     600      -1     2.7
 WC     0  2702.6      60  2704.0     190  2705.7

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 400 AND 500
 WS     3     400     500      -1     2.7
 WC     0  2700.5     160  2702.0     180  2702.6

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 300 AND 400
 WS     3     300     400      -1     2.7
 WC     0  2698.0      35  2700.0      85  2700.5
1
   05MAR98      11:03:30                                                                                    PAGE    2


 T1      SLA JOB #: PAZ-PDOT11-10;
 T2      MILAGROSA HILLS WASH FLOODPLAIN MAPPING, SPLIT FLOW ALONG WEST BANK
 T3      FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           -1.0                                    2697

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                  -1                                                                     15

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43         1         3        26         8         4        25
      53        54

 NC    0.080     0.080     0.06      0.1       0.3
 QT        1       544
 X1      300        10      1140      1395      160       180       140
 GR   2696.7       860    2696.4      1030   2696.5      1080    2696.8      1140    2696.0      1240
 GR   2696.0      1265    2696.5      1300   2696.0      1330    2696.0      1355    2698.0      1395

 QT        1       662
 X1      400         8       900      1225      170        80       150
 GR   2700.0       900    2700.0      1020   2700.6      1080    2700.3      1125    2700.0      1225
 GR   2698.0      1290    2700.0      1320   2700.5      1330

 QT        1       721
 X1      500        12       885      1175      170       170       160
 GR   2703.0       810    2702.0       885   2702.0       950    2702.6      1000    2702.6      1040
 GR   2702.0      1095    2701.7      1140   2702.0      1175    2702.0      1250    2700.0      1290
 GR   2702.0      1330    2702.6      1350

 QT        1       832
 X1      600        14       810      1125      190       140       170
 GR   2706.0       450    2704.0       560   2705.0       620    2705.0       730    2704.8       810
 GR   2704.0       850    2704.0       890   2704.6       950    2704.6      1050    2704.0      1125
 GR   2704.9      1175    2704.8      1230   2704.0      1260    2705.7      1375

 X1      700        14       890      1090      190       140       160
 GR   2710.0       460    2708.0       610   2708.0       780    2708.5       810    2708.0       855
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053

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GR   2707.3       890     2708.0       920     2708.0      1030     2708.5      1050     2708.0      1090
GR   2706.9      1220     2706.9      1285     2708.0      1370     2710.0      1470

NC    0.080     0.080       0.05       0.1        0.3
X1      800        12        930      1060        190       190       190
GR   2712.0       500     2710.0       660     2710.0       765     2710.4       850     2711.2       930
GR   2710.6       985     2710.6      1010     2710.9      1060     2710.0      1120     2710.0      1230
GR   2710.0      1330     2712.0      1500
1
   05MAR98      11:03:30                                                                                PAGE    3


X1      900         9        950      1050        160       160       160
GR   2714.0       520     2712.0       835     2712.0       890     2713.2       920     2713.2       950
GR   2712.0       980     2712.0      1000     2712.9      1050     2714.0      1260

NC    0.080     0.080       0.04       0.1        0.3
X1     1000        11        985      1050        150       160       150
GR   2716.0       600     2714.0       660     2714.0       920     2714.7       940     2714.7       960
GR   2714.0       985     2713.4      1000     2713.4      1030     2714.0      1050     2716.0      1085
GR   2718.0      1145

X1     1100        10        950      1070        330       330       330
GR   2718.0       655     2716.0       680     2716.0       815     2716.0       920     2716.4       950
GR   2716.0      1000     2716.0      1060     2718.0      1070     2720.0      1110     2722.0      1130

X1     1200         7        930      1025        330       330       330
GR   2724.0       750     2722.0       865     2721.5       930     2720.0      1000     2720.5      1025
GR   2722.0      1120     2724.0      1190

X1     1300         8        980      1000        330       330       330
GR   2730.0       850     2728.0       900     2726.0       940     2724.0       980     2724.0      1000
GR   2726.0      1070     2728.0      1100     2730.0      1140
1
   05MAR98      11:03:30                                                                                PAGE    4

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 *PROF 1
0

 CCHV=     .100 CEHV=     .300
 *SECNO 300.000

 3265 DIVIDED FLOW

 3280 CROSS SECTION    300.00 EXTENDED       .06 FEET

 3720 CRITICAL DEPTH ASSUMED
    300.000       .76   2696.76   2696.76   2697.00   2696.93       .17       .00       .00   2696.80
      489.6      89.4     400.2        .0      57.4     112.6        .0        .0        .0   2698.00
        .00      1.56      3.55       .00      .080      .060      .000      .000   2696.00    860.00
    .051838      160.      140.      180.         0        18         0       .00    496.52   1370.16


 FLOW DISTRIBUTION FOR SECNO=    300.00          CWSEL=   2696.76

 STA=     860.    1030.    1080.    1132.    1395.
   PER Q=     10.7      6.1      1.5     81.7
    AREA=     35.4     15.4      6.7    112.6
     VEL=      1.5      1.9      1.1      3.6
   DEPTH=       .2       .3       .1       .5

 *SECNO 400.000

 3265 DIVIDED FLOW

 3280 CROSS SECTION    400.00 EXTENDED       .43 FEET


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.99

    400.000      2.43   2700.43   2700.25       .00   2700.57       .14      3.65       .00   2700.00
      607.6        .0     150.2     457.5        .0      91.2     138.1        .6       1.5   2700.00
        .01       .00      1.65      3.31      .000      .060      .080      .000   2698.00    900.00
    .020090      170.      150.       80.        14        23         0       .00    387.12   1328.68


 FLOW DISTRIBUTION FOR SECNO=    400.00          CWSEL=   2700.43

1
   05MAR98      11:03:30                                                                                PAGE    5

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 STA=     900.    1225.    1290.    1320.    1329.
   PER Q=     24.7     51.3     23.7       .3
    AREA=     91.2     93.2     43.0      1.9
     VEL=      1.6      3.3      3.3       .9
   DEPTH=       .3      1.4      1.4       .2

 *SECNO 500.000
 3280 CROSS SECTION    500.00 EXTENDED       .10 FEET


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.71
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   500.000      2.70   2702.70       .00       .00   2702.77       .06      2.18       .01   2702.00
     720.7      16.9     264.1     439.6      18.6     160.7     197.2       1.7       3.2   2702.00
       .04       .91      1.64      2.23      .080      .060      .080      .000   2700.00    832.19
   .009681      170.      160.      170.         5         0         0       .00    517.81   1350.00


FLOW DISTRIBUTION FOR SECNO=    500.00          CWSEL=   2702.70

STA=     832.     885.    1175.    1250.    1290.    1330.    1350.
  PER Q=      2.4     36.7     10.6     24.6     24.6      1.1
   AREA=     18.6    160.7     52.8     68.2     68.2      8.1
    VEL=       .9      1.6      1.4      2.6      2.6      1.0
  DEPTH=       .4       .6       .7      1.7      1.7       .4

*SECNO 600.000
   600.000      1.01   2705.01       .00       .00   2705.11       .10      2.33       .01   2704.80
     832.0     111.0     561.5     159.5      69.2     202.3      90.0       3.1       5.8   2704.00
       .05      1.61      2.78      1.77      .080      .060      .080      .000   2704.00    504.34
   .022686      190.      170.      140.         4         0         0       .00    824.12   1328.46


FLOW DISTRIBUTION FOR SECNO=    600.00          CWSEL=   2705.01

STA=     504.     560.     620.     730.     810.    1125.    1175.    1230.    1260.    1328.
  PER Q=      6.0      6.6       .0       .7     67.5      6.4       .9      4.4      7.4
   AREA=     28.2     30.7      1.3      9.0    202.3     28.1      8.9     18.4     34.6
    VEL=      1.8      1.8       .1       .6      2.8      1.9       .8      2.0      1.8
  DEPTH=       .5       .5       .0       .1       .6       .6       .2       .6       .5

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   05MAR98      11:03:30                                                                                    PAGE    6

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 700.000

3265 DIVIDED FLOW

   700.000      1.35   2708.25       .00       .00   2708.34       .09      3.23       .00   2707.30
     832.0      88.4      75.8     667.8      71.2      49.7     262.1       4.4       8.7   2708.00
       .07      1.24      1.52      2.55      .080      .060      .080      .000   2706.90    591.05
   .019568      190.      160.      140.         4         0         0       .00    724.81   1382.63


FLOW DISTRIBUTION FOR SECNO=    700.00          CWSEL=   2708.25

STA=     591.     610.     780.     795.     855.     890.    1090.    1220.    1285.    1370.    1383.
  PER Q=       .2      5.4       .2       .2      4.7      9.1     28.1     33.6     18.4       .1
   AREA=      2.4     43.0      1.9      2.9     21.1     49.7    104.4     87.9     68.2      1.6
    VEL=       .7      1.0       .7       .7      1.9      1.5      2.2      3.2      2.2       .7
  DEPTH=       .1       .3       .1       .0       .6       .3       .8      1.4       .8       .1

CCHV=      .100 CEHV=      .300
*SECNO 800.000

3265 DIVIDED FLOW

   800.000       .97   2710.97       .00       .00   2711.01       .04      2.66       .00   2711.20
     832.0     345.4      29.6     457.0     217.9      25.4     271.4       6.4      12.0   2710.90
       .10      1.58      1.16      1.68      .080      .050      .080      .000   2710.00    583.20
   .010534      190.      190.      190.         4         0         0       .00    782.39   1411.60


FLOW DISTRIBUTION FOR SECNO=    800.00          CWSEL=   2710.97

STA=     583.     660.     765.     850.     906.    1060.    1120.    1230.    1330.    1412.
  PER Q=      5.2     22.5     12.3      1.5      3.6      4.5     23.5     21.4      5.5
   AREA=     36.9    100.8     64.6     15.7     25.4     30.6    105.6     96.0     39.2
    VEL=      1.2      1.9      1.6       .8      1.2      1.2      1.9      1.9      1.2
  DEPTH=       .5      1.0       .8       .3       .2       .5      1.0      1.0       .5

*SECNO 900.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =    .69

1
   05MAR98      11:03:30                                                                                    PAGE    7

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


   900.000      1.25   2713.25       .00       .00   2713.39       .14      2.35       .03   2713.20
     832.0     497.5     325.3       9.2     209.3      83.4      11.0       7.9      14.3   2712.90
       .12      2.38      3.90       .84      .080      .050      .080      .000   2712.00    639.89
   .021962      160.      160.      160.         3         0         0       .00    474.79   1114.69


FLOW DISTRIBUTION FOR SECNO=    900.00          CWSEL=   2713.25

STA=     640.     835.     890.     920.     950.    1050.    1115.
  PER Q=     29.1     26.0      4.7       .0     39.1      1.1
   AREA=    120.8     68.1     19.2      1.2     83.4     11.0
    VEL=      2.0      3.2      2.0       .3      3.9       .8
  DEPTH=       .6      1.2       .6       .0       .8       .2

CCHV=      .100 CEHV=      .300
*SECNO 1000.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.77
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  1000.000      1.59   2714.99       .00       .00   2715.12       .13      1.72       .00   2714.00
     832.0     454.3     369.3       8.5     308.4      93.2       8.7       9.1      15.9   2714.00
       .14      1.47      3.96       .98      .080      .040      .080      .000   2713.40    630.15
   .007045      150.      150.      160.         4         0         0       .00    437.26   1067.41

FLOW DISTRIBUTION FOR SECNO=   1000.00          CWSEL=   2714.99

STA=     630.     660.     920.     940.     960.     985.    1050.    1067.
  PER Q=      1.7     48.3      1.8       .5      2.3     44.4      1.0
   AREA=     14.8    258.7     12.9      5.9     16.1     93.2      8.7
    VEL=      1.0      1.6      1.2       .7      1.2      4.0      1.0
  DEPTH=       .5      1.0       .6       .3       .6      1.4       .5

*SECNO 1100.000
  1100.000      1.16   2717.16       .00       .00   2717.24       .08      2.11       .01   2716.40
     832.0     481.2     350.8        .0     314.3     120.4        .0      12.3      19.0   2718.00
       .18      1.53      2.91       .00      .080      .040      .000      .000   2716.00    665.56
   .005844      330.      330.      330.         4         0         0       .00    400.22   1065.78

1
   05MAR98      11:03:30                                                                          PAGE    8

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

FLOW DISTRIBUTION FOR SECNO=   1100.00          CWSEL=   2717.16

STA=     666.     680.     815.     920.     950.    1070.
  PER Q=      1.0     29.3     22.8      4.7     42.2
   AREA=      8.3    156.0    121.3     28.7    120.4
    VEL=      1.0      1.6      1.6      1.4      2.9
  DEPTH=       .6      1.2      1.2      1.0      1.0

*SECNO 1200.000
3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
  1200.000      1.84   2721.84   2721.84       .00   2722.34       .51      3.30       .13   2721.50
     832.0       6.0     709.7     116.2       7.3     115.7      56.5      14.7      21.4   2720.50
       .20       .82      6.14      2.06      .080      .040      .080      .000   2720.00    886.30
   .020978      330.      330.      330.        20        14         0       .00    223.33   1109.62

FLOW DISTRIBUTION FOR SECNO=   1200.00          CWSEL=   2721.84

STA=     886.     930.    1025.    1110.
  PER Q=       .7     85.3     14.0
   AREA=      7.3    115.7     56.5
    VEL=       .8      6.1      2.1
  DEPTH=       .2      1.2       .7

*SECNO 1300.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.44

  1300.000      2.61   2726.61       .00       .00   2727.01       .40      4.66       .01   2724.00
     832.0     168.8     370.7     292.5      68.2      52.2     115.6      16.2      22.8   2724.00
       .22      2.48      7.10      2.53      .080      .040      .080      .000   2724.00    927.77
   .010148      330.      330.      330.         4         0         0       .00    151.41   1079.17

FLOW DISTRIBUTION FOR SECNO=   1300.00          CWSEL=   2726.61

STA=     928.     940.     980.    1000.    1070.    1079.
  PER Q=       .4     19.9     44.6     34.9       .3
   AREA=      3.7     64.5     52.2    112.8      2.8
    VEL=       .8      2.6      7.1      2.6       .8
  DEPTH=       .3      1.6      2.6      1.6       .3

1
   05MAR98      11:03:30                                                                          PAGE    9

  TW      SPLIT FLOW WEIR BETWEEN SECTIONS 500 AND 600

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
     .33        .33       1.45       .33       .33        1.45         20  2702.703   2705.010    500.000    600.000

  TW      SPLIT FLOW WEIR BETWEEN SECTIONS 400 AND 500

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
   54.02      53.98        .08     54.35     54.30        .09         20  2700.435   2702.703    400.000    500.000

  TW      SPLIT FLOW WEIR BETWEEN SECTIONS 300 AND 400

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
     .00        .00        .00     54.35     54.30        .09         20  2696.758   2700.435    300.000    400.000

1
   05MAR98      11:03:30                                                                          PAGE   10

                                                                    THIS RUN EXECUTED 05MAR98     11:03:31
**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
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056

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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FEBRUARY 1998

SUMMARY PRINTOUT

	SECNO	XLCH	ELMIN	Q	CWSEL	EG	VCH	DEPTH	TOPWID	AREA	SSTA	ENDST
*	300.000	.00	2696.00	489.65	2696.76	2696.93	3.55	.76	496.52	170.03	860.00	1370.16
*	400.000	150.00	2698.00	607.65	2700.43	2700.57	1.65	2.43	387.12	229.29	900.00	1328.68
*	500.000	160.00	2700.00	720.67	2702.70	2702.77	1.64	2.70	517.81	376.49	832.19	1350.00
	600.000	170.00	2704.00	832.00	2705.01	2705.11	2.78	1.01	824.12	361.41	504.34	1328.46
	700.000	160.00	2706.90	832.00	2708.25	2708.34	1.52	1.35	724.81	383.05	591.05	1382.63
	800.000	190.00	2710.00	832.00	2710.97	2711.01	1.16	.97	782.39	514.73	583.20	1411.60
*	900.000	160.00	2712.00	832.00	2713.25	2713.39	3.90	1.25	474.79	303.65	639.89	1114.69
*	1000.000	150.00	2713.40	832.00	2714.99	2715.12	3.96	1.59	437.26	410.26	630.15	1067.41
	1100.000	330.00	2716.00	832.00	2717.16	2717.24	2.91	1.16	400.22	434.69	665.56	1065.78
*	1200.000	330.00	2720.00	832.00	2721.84	2722.34	6.14	1.84	223.33	179.57	886.30	1109.62
*	1300.000	330.00	2724.00	832.00	2726.61	2727.01	7.10	2.61	151.41	236.05	927.77	1079.17

1

05MAR98 11:03:30 PAGE 11

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 300.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 400.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 500.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 900.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 1000.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO= 1200.000 PROFILE= 1 CRITICAL DEPTH ASSUMED
CAUTION SECNO= 1200.000 PROFILE= 1 PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO= 1200.000 PROFILE= 1 20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO= 1300.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

HEC2 FILE: SFEAST2A.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 300 WITH WEIR SECTION ON EAST EDGE.

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1*****************************************
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 *  HEC-2 WATER SURFACE PROFILES          *                                    *  U.S. ARMY CORPS OF ENGINEERS
 *                                        *                                    *  HYDROLOGIC ENGINEERING CENTER
 *  Version   4.6.2;  May 1991            *                                    *  609 SECOND STREET, SUITE D
 *                                        *                                    *  DAVIS, CALIFORNIA 95616-4687
 *  RUN DATE    05MAR98    TIME   11:34:30 *                                    *          (916) 756-1104
 *****************************************
****************************************

                                    X     X  XXXXXXX   XXXXX              XXXXX
                                    X     X  X        X     X            X     X
                                    X     X  X        X                        X
                                    XXXXXXX  XXXX     X          XXXXX    XXXXX
                                    X     X  X        X                  X
                                    X     X  X        X     X            X
                                    X     X  XXXXXXX   XXXXX             XXXXXXX
1
   05MAR98      11:34:30                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 05MAR98    11:34:30
 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


 SPLIT FLOW BEING PERFORMED

 SF      SPLIT FLOW ALONG EAST EDGE OF FLOODPLAIN

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 200 AND 300
 WS     3     200     300      -1     2.7
 WC     0  2694.2     100    2696     150  2696.7

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 100 AND 200
 WS     4     100     200      -1     2.7
 WC     0  2691.5      40    2692     210    2694     220  2694.2
1
   05MAR98      11:34:30                                                                                    PAGE    2

 T1      SLA JOB #: PAZ-PDOT11-10;
 T2      MILAGROSA HILLS WASH FLOODPLAIN MAPPING, SPLIT FLOW ALONG EAST BANK
 T3      FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       -1       2                          -1.0                                    2692

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                                                      15

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43         1         3        26         8         4        25
      53        54

 NC    0.080     0.080     0.08      0.1       0.3
 QT        1        90
 X1      100         7       865      1330       210       310       260
 GR   2691.5       865    2690.0       950    2689.5      1100    2688.9      1140    2689.5      1180
 GR   2690.0      1255    2690.5      1330

 QT        1        90
 X1      200         7       870      1275       210       310       260
 GR   2694.4       870    2694.4       930    2694.0       980    2693.6      1015    2694.0      1040
 GR   2694.3      1125    2694.6      1275

 QT        1        90
 X1      300         4       860      1140       160       180       140
 GR   2696.7       860    2696.4      1030    2696.5      1080    2696.8      1140
1
   05MAR98      11:34:30                                                                                    PAGE    3

     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 *PROF 1
0

 CCHV=     .100 CEHV=     .300
 *SECNO 100.000
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059

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3720 CRITICAL DEPTH ASSUMED
   100.000       .56   2689.46   2689.46   2692.00   2689.60       .14       .00       .00   2691.50
      62.3        .0      62.3        .0        .0      20.5        .0        .0        .0   2690.50
       .00       .00      3.03       .00      .000      .080      .000      .000   2688.90   1102.99
   .147018      210.      260.      310.         0        20         0       .00     74.01   1177.01

FLOW DISTRIBUTION FOR SECNO=    100.00          CWSEL=   2689.46

STA=    1103.    1330.
  PER Q=    100.0
   AREA=     20.5
    VEL=      3.0
  DEPTH=       .3

*SECNO 200.000
3280 CROSS SECTION    200.00 EXTENDED       .09 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.93

   200.000       .90   2694.50       .00       .00   2694.50       .01      4.89       .01   2694.40
      69.9        .0      69.9        .0        .0      99.7        .0        .4       1.3   2694.60
       .10       .00       .70       .00      .000      .080      .000      .000   2693.60    870.00
   .007613      210.      260.      310.         5         0         0       .00    350.69   1220.69

FLOW DISTRIBUTION FOR SECNO=    200.00          CWSEL=   2694.50

STA=     870.    1275.
  PER Q=    100.0
   AREA=     99.7
    VEL=       .7
  DEPTH=       .3

1
   05MAR98      11:34:30                                                                          PAGE    4

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

*SECNO 300.000
3280 CROSS SECTION    300.00 EXTENDED       .08 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .56

   300.000       .38   2696.78       .00       .00   2696.81       .03      2.30       .01   2696.70
      90.0        .0      90.0        .0        .0      63.8        .0        .6       2.3   2696.80
       .13       .00      1.41       .00      .000      .080      .000      .000   2696.40    860.00
   .040722      160.      140.      180.         5         0         0       .00    276.24   1136.24

FLOW DISTRIBUTION FOR SECNO=    300.00          CWSEL=   2696.78

STA=     860.    1140.
  PER Q=    100.0
   AREA=     63.8
    VEL=      1.4
  DEPTH=       .2

1
   05MAR98      11:34:30                                                                          PAGE    5

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 200 AND 300

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
   20.12      20.21        .49      20.12      20.21        .49          6  2694.496   2696.781    200.000    300.000

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 100 AND 200

    ASQ       QCOMP      ERRAC      TASQ       TCQ       TABER      NITER      DSWS       USWS       DSSNO      USSNO
    7.62       7.60        .27      27.74      27.82        .28          6  2689.455   2694.496    100.000    200.000

1
   05MAR98      11:34:30                                                                          PAGE    6

                                                                    THIS RUN EXECUTED 05MAR98     11:34:31
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FEBRUARY 1998

SUMMARY PRINTOUT

      SECNO      XLCH       ELMIN       Q        CWSEL      EG         VCH        DEPTH      TOPWID     AREA       SSTA       ENDST

*   100.000       .00    2688.90     62.26    2689.46    2689.60      3.03        .56      74.01     20.54    1102.99    1177.01

*   200.000    260.00    2693.60     69.88    2694.50    2694.50       .70        .90     350.69     99.73     870.00    1220.69
```

060

*	300.000	140.00	2696.40	90.00	2696.78	2696.81	1.41	.38	276.24	63.80	860.00	1136.24

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 100.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 200.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 300.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

HEC2 FILE: SFWEST2A.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 300 WITH WEIR SECTION ON WEST EDGE.

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1*****************************************
*************************************
 *  HEC-2 WATER SURFACE PROFILES            *                                          *  U.S. ARMY CORPS OF ENGINEERS
 *                                          *                                          *  HYDROLOGIC ENGINEERING CENTER
 *
 *  Version   4.6.2;  May 1991              *                                          *  609 SECOND STREET, SUITE D
 *                                          *                                          *  DAVIS, CALIFORNIA 95616-4687
 *
 *  RUN DATE    05MAR98    TIME   11:35:42  *                                          *          (916) 756-1104
 *
 *****************************************
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X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
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1
   05MAR98      11:35:42                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 05MAR98    11:35:42
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************


 SPLIT FLOW BEING PERFORMED

 SF       SPLIT FLOW ALONG WEST EDGE OF FLOODPLAIN

 TW       SPLIT FLOW WEIR BETWEEN SECTIONS 200 AND 300
 WS     3     200     300      -1     2.7
 WC     0  2694.6     130    2696     210  2696.8

 TW       SPLIT FLOW WEIR BETWEEN SECTIONS 100 AND 200
 WS     4     100     200      -1     2.7
 WC     0  2690.5     115    2692     205    2694     315  2694.6
1
   05MAR98      11:35:42                                                                                    PAGE    2

 T1       SLA JOB #: PAZ-PDOT11-10;
 T2       MILAGROSA HILLS WASH FLOODPLAIN MAPPING, SPLIT FLOW ALONG WEST BANK
 T3       FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 2                           -1.0                                    2692

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                  -1                                                                     15

 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43         1         3        26         8         4        25
      53        54

 NC    0.080     0.080     0.08      0.1       0.3
 QT        1        62
 X1      100         7      865      1330       210       310       260
 GR   2691.5       865   2690.0       950    2689.5      1100    2688.9      1140    2689.5      1180
 GR   2690.0      1255   2690.5      1330

 QT        1        70
 X1      200         7      870      1275       210       310       260
 GR   2694.4       870   2694.4       930    2694.0       980    2693.6      1015    2694.0      1040
 GR   2694.3      1125   2694.6      1275

 QT        1        90
 X1      300         4      860      1140       160       180       140
 GR   2696.7       860   2696.4      1030    2696.5      1080    2696.8      1140
1
   05MAR98      11:35:42                                                                                    PAGE    3

     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 *PROF 1
0

 CCHV=     .100 CEHV=     .300
 *SECNO 100.000
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063

```
3720 CRITICAL DEPTH ASSUMED
   100.000       .56   2689.46   2689.46   2692.00   2689.60       .14       .00       .00   2691.50
      62.0        .0      62.0        .0        .0      20.9        .0        .0        .0   2690.50
       .00       .00      2.96       .00      .000      .080      .000      .000   2688.90   1102.65
   .138809      210.      260.      310.         0        23         0       .00     74.69   1177.35

FLOW DISTRIBUTION FOR SECNO=    100.00          CWSEL=   2689.46

STA=    1103.    1330.
  PER Q=    100.0
   AREA=     20.9
    VEL=      3.0
  DEPTH=       .3

*SECNO 200.000
3280 CROSS SECTION    200.00 EXTENDED       .09 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.78

   200.000       .89   2694.49       .00       .00   2694.50       .01      4.89       .01   2694.40
      70.0        .0      70.0        .0        .0      99.3        .0        .4       1.3   2694.60
       .10       .00       .70       .00      .000      .080      .000      .000   2693.60    870.00
   .007730      210.      260.      310.         5         0         0       .00    350.08   1220.08

FLOW DISTRIBUTION FOR SECNO=    200.00          CWSEL=   2694.49

STA=     870.    1275.
  PER Q=    100.0
   AREA=     99.3
    VEL=       .7
  DEPTH=       .3

1
   05MAR98      11:35:42                                                                          PAGE    4

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

*SECNO 300.000
3280 CROSS SECTION    300.00 EXTENDED       .08 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .56

   300.000       .38   2696.78       .00       .00   2696.81       .03      2.31       .01   2696.70
      90.0        .0      90.0        .0        .0      64.1        .0        .6       2.3   2696.80
       .13       .00      1.40       .00      .000      .080      .000      .000   2696.40    860.00
   .040060      160.      140.      180.         5         0         0       .00    276.48   1136.48

FLOW DISTRIBUTION FOR SECNO=    300.00          CWSEL=   2696.78

STA=     860.    1140.
  PER Q=    100.0
   AREA=     64.1
    VEL=      1.4
  DEPTH=       .2

1
   05MAR98      11:35:42                                                                          PAGE    5

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 200 AND 300

    ASQ       QCOMP      ERRAC      TASQ       TCQ        TABER      NITER      DSWS       USWS       DSSNO      USSNO
     .00        .00        .00        .00        .00        .00          2  2694.491   2696.784    200.000    300.000

 TW      SPLIT FLOW WEIR BETWEEN SECTIONS 100 AND 200

    ASQ       QCOMP      ERRAC      TASQ       TCQ        TABER      NITER      DSWS       USWS       DSSNO      USSNO
     .00        .00        .00        .00        .00        .00          2  2689.460   2694.491    100.000    200.000

1
   05MAR98      11:35:42                                                                          PAGE    6


                                                                    THIS RUN EXECUTED 05MAR98    11:35:42
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************

NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FEBRUARY 1998

SUMMARY PRINTOUT

      SECNO      XLCH       ELMIN       Q          CWSEL      EG         VCH        DEPTH      TOPWID     AREA       SSTA       ENDST

*   100.000       .00   2688.90      62.00   2689.46   2689.60       2.96       .56      74.69      20.93   1102.65   1177.35

*   200.000    260.00   2693.60      70.00   2694.49   2694.50        .70       .89     350.08      99.30    870.00   1220.08
```

064

*	300.000	140.00	2696.40	90.00	2696.78	2696.81	1.40	.38	276.48	64.14	860.00	1136.48

SUMMARY OF ERRORS AND SPECIAL NOTES

CAUTION SECNO= 100.000 PROFILE= 1 CRITICAL DEPTH ASSUMED

WARNING SECNO= 200.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO= 300.000 PROFILE= 1 CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

065

HEC2 FILE: EAST-OVERBANK1.OUT
EVENT: 10-YEAR
DESCRIPTION: CROSS SECTIONS 100 THROUGH 500 WITH GR RECORDS EXTENDING FROM THE EASTERN FLOODPLAIN BOUNDARY TO THE EAST WEIR SECTION.

0606

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1*****************************************
*************************************
 *  HEC-2 WATER SURFACE PROFILES            *                                          *  U.S. ARMY CORPS OF ENGINEERS
*
 *                                          *                                          *  HYDROLOGIC ENGINEERING CENTER
*
 *  Version   4.6.2;  May 1991              *                                          *  609 SECOND STREET, SUITE D
*
 *                                          *                                          *  DAVIS, CALIFORNIA 95616-4687
*
 *  RUN DATE    05MAR98    TIME   15:31:35  *                                          *          (916) 756-1104
*
 *****************************************
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X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                  X     X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX              XXXXXXX
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1
   05MAR98      15:31:35                                                                                    PAGE    1


                                                                                THIS RUN EXECUTED 05MAR98    15:31:35
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************


 T1      SLA JOB #: PAZ-PDOT11-10;
 T2      MILAGROSA HILLS WASH FLOODPLAIN MAPPING, EAST OVERBANK FLOW, 10-YEAR EVE
 T3      FEBRUARY 1998

 J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

       -1        2                           -1.0                              0      2690

 J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

       1                 -1                                                                      15


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

      38        39        42        43         1         3        26         8         4        25
      53        54

 QT        1       316
 NC    0.080     0.080      0.06       0.1       0.3
 X1      100         5       300       865         0         0         0
 GR   2691.0       300    2692.0       435    2690.6       520    2690.5       680    2691.5       865

 QT        1       308
 X1      200         7       470       810       200       200       200
 GR   2693.3       360    2692.0       470    2692.3       515    2693.0       560    2693.3       660
 GR   2694.0       765    2694.4       810

 QT        1       288
 X1      300         7       440       860       190       150       150
 GR   2696.0       280    2694.0       440    2694.0       490    2695.6       550    2695.5       670
 GR   2696.0       750    2696.7       860

 QT        1       170
 X1      400         9       460       900       180       180       180
 GR   2700.0       270    2699.0       460    2698.2       485    2700.0       520    2700.0       630
 GR   2699.3       660    2700.0       725    2699.0       800    2700.0       900

 QT        1       111
 X1      500         7       365       810       150       200       150
 GR   2704.0       210      2702       365    2701.0       440    2702.0       520    2703.0       665
 GR   2702.6       755    2703.0       810
1
   05MAR98      15:31:35                                                                                    PAGE    2


 QT        1       108
 X1      600         7       450       810       150       130       120
 GR   2708.0       310    2706.0       450    2704.0       560    2705.0       620    2705.0       730
 GR   2705.0       770    2704.8       810
1
   05MAR98      15:31:35                                                                                    PAGE    3

      SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
      Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
      TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
      SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 *PROF 1
0

 CCHV=     .100 CEHV=     .300
 *SECNO 100.000
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067

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3720 CRITICAL DEPTH ASSUMED
   100.000       .48   2690.98   2690.98   2690.00   2691.15       .17       .00       .00   2691.00
     316.0        .0     316.0        .0        .0      94.3        .0        .0        .0   2691.50
       .00       .00      3.35       .00      .000      .060      .000      .000   2690.50    496.96
   .074951        0.        0.        0.         0        15         0       .00    271.74    768.71

FLOW DISTRIBUTION FOR SECNO=    100.00          CWSEL=   2690.98

STA=     497.     865.
  PER Q=    100.0
   AREA=     94.3
    VEL=      3.3
  DEPTH=       .3

*SECNO 200.000
3280 CROSS SECTION    200.00 EXTENDED       .26 FEET

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.92

   200.000      1.56   2693.56       .00       .00   2693.58       .02      2.41       .02   2692.00
     308.0     117.8     190.2        .0      99.7     149.7        .0        .8       1.4   2694.40
       .04      1.18      1.27       .00      .080      .060      .000      .000   2692.00    360.00
   .004625      200.      200.      200.         7         0         0       .00    338.49    698.49

FLOW DISTRIBUTION FOR SECNO=    200.00          CWSEL=   2693.56

STA=     360.     470.     810.
  PER Q=     38.3     61.7
   AREA=     99.7    149.7
    VEL=      1.2      1.3
  DEPTH=       .9       .7

1
   05MAR98      15:31:35                                                                          PAGE     4

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

*SECNO 300.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .38

   300.000       .95   2694.95       .00       .00   2695.10       .15      1.48       .04   2694.00
     288.0      67.8     220.2        .0      35.7      64.0        .0       1.5       2.3   2696.70
       .06      1.90      3.44       .00      .080      .060      .000      .000   2694.00    364.38
   .028343      190.      150.      150.         5         0         0       .00    161.07    525.45

FLOW DISTRIBUTION FOR SECNO=    300.00          CWSEL=   2694.95

STA=     364.     440.     860.
  PER Q=     23.5     76.5
   AREA=     35.7     64.0
    VEL=      1.9      3.4
  DEPTH=       .5       .7

*SECNO 400.000

3265 DIVIDED FLOW

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .69

   400.000      1.36   2699.56       .00       .00   2699.61       .05      4.50       .01   2699.00
     170.0      32.1     137.9        .0      28.6      71.9        .0       1.9       3.3   2700.00
       .09      1.12      1.92       .00      .080      .060      .000      .000   2698.20    355.77
   .020516      180.      180.      180.         3         0         0       .00    285.19    854.86

FLOW DISTRIBUTION FOR SECNO=    400.00          CWSEL=   2699.56

STA=     356.     460.     900.
  PER Q=     18.9     81.1
   AREA=     28.6     71.9
    VEL=      1.1      1.9
  DEPTH=       .3       .4

*SECNO 500.000
   500.000       .95   2701.95       .00       .00   2701.99       .04      2.38       .00   2702.00
     111.0        .0     111.0        .0        .0      69.4        .0       2.2       4.0   2703.00
       .11       .00      1.60       .00      .000      .060      .000      .000   2701.00    369.01
   .011298      150.      150.      200.         5         0         0       .00    146.71    515.72

1
   05MAR98      15:31:35                                                                          PAGE     5

    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST

FLOW DISTRIBUTION FOR SECNO=    500.00          CWSEL=   2701.95

STA=     369.     810.
  PER Q=    100.0
   AREA=     69.4
    VEL=      1.6
  DEPTH=       .5
```

068

```
*SECNO 600.000
7185 MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED
   600.000       .74   2704.74   2704.74       .00   2704.92       .18      2.75       .04   2706.00
     108.0        .0     108.0        .0        .0      31.6        .0       2.3       4.3   2704.80
       .12       .00      3.42       .00      .000      .060      .000      .000   2704.00    519.23
   .071596      150.      120.      130.        19        18         0       .00     85.24    604.47

FLOW DISTRIBUTION FOR SECNO=    600.00          CWSEL=   2704.74

STA=      519.      810.
  PER Q=     100.0
   AREA=      31.6
    VEL=       3.4
  DEPTH=        .4
```


THIS RUN EXECUTED 05MAR98 15:31:35

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**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
**************************************
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST

FEBRUARY 1998

SUMMARY PRINTOUT

	SECNO	XLCH	ELMIN	Q	CWSEL	EG	VCH	DEPTH	TOPWID	AREA	SSTA	ENDST
*	100.000	.00	2690.50	316.00	2690.98	2691.15	3.35	.48	271.74	94.35	496.96	768.71
*	200.000	200.00	2692.00	308.00	2693.56	2693.58	1.27	1.56	338.49	249.42	360.00	698.49
*	300.000	150.00	2694.00	288.00	2694.95	2695.10	3.44	.95	161.07	99.76	364.38	525.45
*	400.000	180.00	2698.20	170.00	2699.56	2699.61	1.92	1.36	285.19	100.51	355.77	854.86
	500.000	150.00	2701.00	111.00	2701.95	2701.99	1.60	.95	146.71	69.43	369.01	515.72
*	600.000	120.00	2704.00	108.00	2704.74	2704.92	3.42	.74	85.24	31.59	519.23	604.47

SUMMARY OF ERRORS AND SPECIAL NOTES

```
CAUTION SECNO=    100.000  PROFILE=  1  CRITICAL DEPTH ASSUMED

WARNING SECNO=    200.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    300.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=    400.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=    600.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=    600.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY
```

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