McMicken Channel and Beardsley Canal Wash

Volume 1 of 2

1997

MC MICKEN CHANNEL AND BEARDSLEY CANAL WASH

SUMMARY OF PRELIMINARY PROPOSAL

OBJECT: A.To make a preliminary design of a channel to McMicken dam from the southwest that would convey a part of the runoff from the White Tanks mountains between McMicken dam and White Tanks #3. See Memorandum dated October 25, 1995 from Joe Tram.

Two alternative channels were considered. One is about 2 miles long and conveys the drainage from south of the White Tanks Regional Park to McMicken dam, and the second, which is about 2,000 feet long and conveys the runoff to the dam, from the hill that is located about 2,000 feet to the southwest.

B. Determine the affects of such a channel on Beardsley Canal Wash as well as the affects of new culverts at Olive and Northern Avenues, both with or without a channel to McMicken Dam.

BENEFITS: These channels would have benefits both to the immediate area and to areas downstream, including the Beardsly Canal Wash and White Tanks #3.

A. Recreational: The banks along the channels could be used for hiking, biking, or horseback trails, thus adding additional recreational possibilities to the area. The area above the channels could be dedicated for recreational purposes.

B. Flood Control:

1.The areas along the Beardsley Canal as well as White Tanks #3 flood retardation structure would be affected by lower flood flows caused by diverting flows to McMicken Dam.

2. Eliminating the overflows of Beardsley Canal, would remove some areas from the floodplain.

ANALYSIS: The analysis required the following steps:

I. Impact assessment
- A. PMP Analysis of Mc Micken Dam
- B. Analysis of remaining runoff from the White Tanks drainage.
  1. Long Channel
  2. Short Channel

II. Analysis of the long channel
- A. Determine an approximate alignment.
- B. Determine inflows along the alignment.
- C. Determine channel properties for the inflows.
- D. Develop cross section parameters for a HEC-2 model.
- E. Develop a HEC-2 model.
- F. Refine the HEC-2 model.
- G. Develop plots showing the channel cross sections.
- H. SPF flow analysis.

III. Analysis of the short channel

A. Determine approximate alignment.

B. Determine inflows for this channel.

C. Determine channel properties for the inflow.

D. Develop cross sections for a HEC-2 model.

E. Develop a HEC-2 model.

F. Develop plots of the channel cross sections.

G. SPF flow analysis.

IV. Beardsley Canal Wash (Wash 1)

A. No channel

1. Present condition

2. Present with no flow over Beardsley Canal

B. Long channel

1. Present condition

2. No flow over Beardsley Canal

C. Short Channel

1. Present condition

2. No flow over Beardsley Canal

I. Impact -

A. PMP analysis - Bing Zhao's report of December 30, 1997, Compares the conditions for McMicken dam with present inflow and with the inflow that would occur if one of the channels were built to divert the increased flows to the dam. He added an area to the HEC-1 model that actual is slightly larger than the diverted inflow. The results are:

1. The water surface in the reservoir rises 0.3 foot.
2. Maximum storage increases 880 acre-feet.
3. No flow over the dam.
4. Outflow from the dam would increase 6,700 cubic feet per second.
5. The time of the outflow would decrease by 0.25 hour.

B. Remaining runoff:

1. Long Channel - HEC-1 model WT3-B1-9 was developed by removing subbasins 1, 2 and 4 - 9 from the HEC-1 model WT3. See Table 1 for the results at selected points. Model WT3-B1-9 gives results for a drainage area slightly larger than the actual drainage. For final analysis, parameters need to be computed for subbasins 10B and 12B and used to replace those for subbasins 10 and 12 in the model. Doing this will lower the discharges for the area more than what the present model shows

a. This model indicates that the overflow of the Beardsley Canal at Olive Avenue is eliminated.

b. The overflow at Northern Avenue is reduced from 1,490 cfs to 330 cfs.

c. The water surface level in White Tanks #3 is decreased by about 1.7 foot and the maximum storage is decreased by about 200 acre feet.

2. Short Channel - HEC-1 Model WT3-B1&2 was developed by removing subbasins 1 and 2 from HEC-1 model WT3. See Table 1 for results at selected points.

a. This model shows that the overflow of Beardsley Canal at Olive Avenue is eliminated.

b. The overflow at Northern Avenue is reduced from 1,490 to 1,280 cfs.

c. The water surface level in White tanks #3 is decreased by about 0.8 foot and the maximum storage is decreased by about 100 acre feet.

II. Analysis of the Long Channel

A. Alignment - The topographic maps available from the White Tanks ADMS were used to lay out an approximate alignment for slopes of 0.001, 0.002, 0.004, and 0.006 feet per foot. From this, it was decided that a slope of 0.002 was probably the most logical for this study.

B. Inflows - The HEC-1 model from the White Tanks ADMS was used as the basis for developing the inflows. The subbasins pertaining to this study were determined, These were 1, 2, 3 through 9, 10, 11, and 12. Several of the subbasins (10, 11, and 12) were cut by the proposed channel alignment. New parameters were developed by Bing Zhao (See model MCMKRS1), for the portion of the subbasins which were above the channel, thus, pertinent to this study. They were designated 10A, 11A, and 12A. Routing parameters for the proposed channel were developed, and the new HEC-1 model, "WT3-MCH" was developed. This model gives flow accumulation along the proposed channel from south of White Tanks Park to the northeast toward McMicken Dam.

For subbasins that had more than one stream channel terminating at the downstream edge of the subbasin, an estimate was made of what percentage was contributed from each. Thus, flows could be developed for reaches along the proposed channel. The upper end of the channel was designed for 200 cubic feet per second with the outflow from the channel into McMicken dam being 5,600 cubic feet per second.

C. Channel properties - The mannings equation, for slope = 0.002 and 2:1 side slopes, was used to hand compute approximate channel sizes needed for various flow rates along the channel. A value of "n" = 0.045 was used, which assumes that growth will return in the excavated channel after completion. These values were then used in the mannings equation to determine approximate channel sizes required for different flow rates. These results were then used to select channel bottom widths for the HEC-2 model.

D. HEC-2 cross section parameters - A topographic map of the area was developed from the GIS file. The centerline of the approximate channel alignment used in A above was located on the map (see Figure 1) and locations for cross sections at 500 foot intervals along this center line alignment located. A corridor 1,000 foot wide was developed along the center line. Cross section orientations were then drawn along the 1,000 foot corridor going through the center line at the 500 foot intervals. Next HEC-2 GR data was developed for the cross sections at 10 foot intervals using the GIS files (See model RUN01).

E. HEC-2 model - The GR data developed from the GIS system was used as the base model. The CHIMP routine was then used for the channel excavation. A bottom elevation for the second cross section(the first cross section is within the reservoir) was determined, and a slope of 0.002 was used to determine bottom elevation for the remaining sections. Flow rates, “Q’s”, generated by the HEC-1 model described in B above, were determined for each cross section. For these flow rates, a channel bottom width was determined from the mannings equation analysis. A quick scan of the GR data was used to determine the center of the excavation. The channel bank location was determined based on the bottom width, the center line, and a scan of the GR data. The encroachment on the right bank was basically used as the channel bank and on the left bank a high point between the channel bank and the edge of the cross section data was used. The main channel distance between cross section was used as 500 feet for all sections. The left and right bank distances were determined by scaling the approximate distance from the GIS developed topographic map that contained the location of the cross sections. This information was used to develop a preliminary HEC-2 model designated “MCMCH1".

F. Refined model - The model developed above was run and the output and the plot of the cross sections reviewed. From this it was possible to change the starting elevation and begin shifting the excavated channel, by changing the center line. Whenever this was done the channel bank locations and the encroachment stations had to be reevaluated. It was also possible to evaluate the channel bottom width and channel side slopes, for a more efficient flow routing. This procedure was repeated several times in developing the final model which was designated “MCMCH”. In the final model a 4:1 side slope was used on the upstream (left bank) side, and the 2:1 side slope was continued for the right bank.

G. Plots - In order to prepare cross section plots of the channel, it was necessary to cut the excess GR data from the cross sections. This allowed the plots to be printed at a scale large enough to be interpreted reasonably. Thus, model designated “MCMCH-PL” was developed for this purpose.

H. SPF flow analysis -

1. The HEC-1 model “WT3-MCH”, was modified by Bing Zhao to develop SPF flows, and designated “WTMCHSPF”. This model develops a maximum flow entering the dam of 18,100 cubic feet per second.

2. The flow rates developed by the HEC-1 model were entered into the HEC-2 model “MCMCH” used for the 100-year flows. This new HEC-2 model was designated “MCMCHSPF”. It was found that these flows exceeded the 100-year channel by nearly 2.0 feet at many cross sections. Thus, The bottom elevation was lowered by 2.0 feet and the model rerun.

III. Analysis of the Short Channel

A. Alignment - The GIS developed topographic map developed for the long channel was used to determine an approximate alignment going the 2,000 feet from the dam to the hill. See Figure 2.

B. Inflows - HEC-1 model “WT3-MCH” was modified to only include subbasins 1 and 2. This new model was designated “WT3-MCHA”, and gives a runoff of nearly 2,300 cubic feet per second.

C. Channel properties - Based on the mannings equation analysis for the long channel, a channel with a bottom width of 100 feet, "n" = 0.045, slope = 0.004, and side slopes of 2:1 on the down slope side(right bank) and 10:1 on the up slope side (left bank) were used. It is assumed that the channel would need to be the same size for the entire length as a large portion of the flow comes in near the hill at the upper end of the channel.

D. HEC-2 cross section parameters - From the GIS developed topographic map, cross sections were layed out along the approximate alignment developed in above. New GR data was hand developed for these cross sections using the line developed in A above as the 500 foot station.

E. HEC-2 model and refinement - A review of the GR data and several modifications gave the center line that was used in the model "MCMCHA". This centerline, along with the "n" value, bottom width, channel slope and, side slopes described above were used to develop input for the CHIMP routine in the model. Distances between cross sections were scaled from the topographic map. Channel banks and encroachment stations were estimated and then modified from the plots after the first run of the model.

F. Plots: - Plots were developed from the HEC-2 analysis.

G. SPF flow analysis -

1. The HEC-1 model "WT3-MCHA", was modified to develop SPF flows, in the same manor that Bing Zhao had modified the model for the long channel. The new model was designated "WTMCHASP". This model develops a maximum flow entering the dam of 6,100 cubic feet per second.

2. The flow rates developed by the HEC-1 model were entered into the HEC-2 model "MCMCHA" used for the 100-year flows. This new HEC-2 model was designated "MCMCHASP".

IV. Beardsley Canal Wash

A. No Channels - The Beardsley Canal Wash overflows Beasrdsley Canal at Olive and Northern Avenues. These overflows cause an area on the east side of Beardsley Canal to be within a designated floodplain.

1. No culvert modification at Olive or Northern Avenues (do nothing) which leave these areas within the floodplain. This means a cost to the property owners for flood insurance and possible flood damages. HEC-1 model WT3 gives the flows, including diversions for this scenario. The floodplains for Beardsley Canal Wash were developed using HEC-2 model 1.2HI. (For this study the HEC-1 model was designated WTCH1 and had the floodway analysis removed). The HEC-1 and HEC-2 models were developed as a part of the White Tanks ADMS. See table 1 for the flow rates at selected locations along the wash.

2. Construct new culverts at both Olive and Northern avenues to contain the flows. This will increase the flows along the canal. The Hydrology was run (HEC-1 model WT3-) using model WT3 and removing the diversions. This gave larger flows below Olive Avenue. HEC-2 model WTCH1-N was developed by modifying model WTCH1. The new model "WTCH1-N" used the new discharges (see table 1) and included culverts at Olive and Northern Avenues large enough to pass the total flow. The culverts were assumed to be box culvert type. It was found that the Olive Avenue culvert would need to be 6 foot by 40 foot, with the Northern Avenue culvert being 9 foot by 60 foot to pass the increased flows. It was also shown that by increasing the flows for this alternative that the channel is at or above its capacity. Thus, there will be an increase in area within the floodplain to the west. Also, in other areas, there will possibly be overflow of the wash.

B. Long Channel - Beardsley Canal Wash was analyzed assuming that the Long Channel would be constructed. It was evaluated for no change in the culverts at Olive and Northern Avenues with possible overflow in these areas and for modification to the culverts to prevent these overflows.

1. The hydrology for the condition with possible overflow was determined by developing HEC-1 model WT3- B1-9. This was done by removing subbasins 1, 2, and 4 - 9 from model WT3. This new model shows no overflow at Olive Avenue and a reduction from 1,486 to 332 cubic feet per second at Northern Avenue. (See table 1). A new HEC-2 model designated WTCH1LC was developed by modifying the discharges in model WTCH1.

2. The hydrology for the condition of no overflow at Olive and Northern Avenues, was determined by developing HEC-1 model WT3-1-9, which removes the diversions at Olive and Northern Avenues from model WT3-B1-9. These discharges can are shown in Table 1.A new HEC-2 model WTCH1LCN was developed from model WTCH1LC by changing the discharges in the model and modifying the culvert at Northern Avenue. The new discharges are shown in Table 1 and the new culvert is capable of passing the total flow with no overflow of Beardsley Canal. It was found that a 6 foot by 20 foot box culvert would be capable of passing these flows.

. C. Short Channel - Beardsley Canal Wash was analyzed assuming that the short channel would be constructed. It was evaluated for the conditions of flow over Beardsley Canal and no flow over the canal at Olive and Northern Avenues.

1. The hydrology for the condition with possible flow over the canal was determined by developing HEC-1 model WT3-B1&2. This was done by removing subbasins 1 and 2 from model WT3. This new model was used to develop flows along the Beardsley Canal Wash with possible overflow of Beardsley Canal at Olive and Northern Avenues. These new discharges are shown in Table 1 and show no overflow at Olive Avenue, and a reduction in flow from 1,486 to 1,279 cubic feet per second at Northern Avenue. These new discharges were used to develop HEC-2 model WTCH1SC from model WTCH1.

2. The hydrology for the condition with no overflow of Beardsley canal was determined from HEC-1 model WT3-1&2. This new model was developed by removing the diversions at Olive and Northern Avenues from model WT3-B1&2. The new discharges can be seen in Table 1. A new HEC-2 model WTCH1SCN was developed by modifying model WTCH1SC. This was done by modifying the discharges in the model and modifying the culvert at Northern Avenue so that the entire flow would pass through the culvert. It was found that an 8 foot by 40 foot box culvert would be required to pass these flows.

RESULTS: The results for both channels and changes needed along Beardsley Canal Wash are described below.

A. Long Channel - Cross section 1.5 is within the pool behind the dam, thus no excavation is required. The beginning elevation for excavation at section 2.0 is 1355 feet with the 0.002 slope used to determine bottom elevations upstream from section 2.0. Section 2.0 being at the edge of the dam, will have velocities of 8.4 feet per second, which may require stabilization to prevent scour of the dam. All of the other cross sections have velocities of less than 4.5 feet per second, with depths of less than 5.0 feet. The upper end of the channel will have a bottom width of 30 feet and a flow of 200 cubic feet per second. At the outlet, entering the pool area, the channel will have a bottom width of 300 feet and a flow of 5,600 cubic feet per second. Cross sections 4.0 and 4.5, which are along the hill side 2,000 feet southwest of the dam, will require dikes along the right bank or very deep cuts into the steep hill side. For the diked reaches, a freeboard of 3.0 feet above the water surface elevation of the 100-year flow will be required.

1. All cross sections, except the two described above, are incised and have a freeboard of at least 2.4 foot above the design 100-year discharge. The total amount of excavation will be about 640,000 cubic yards, with this to be used as diking or fill along the right (downstream) bank.

2. For a design with the bottom elevation 1.0 foot higher(1356 feet at section 2.0), the freeboard would be less than 2.0 feet for most cross sections, and the total excavation would be about 555,000 cubic yards (See model MCMCHAPL).

3. For a design that raises the bottom elevation by 2.0 feet from that in 1 above (1357 feet at section 2.0), diking would be required to get freeboard at a number of cross sections, and about 475,000 cubic yards would need to be excavated (See model MCMCHBPL).

4. In order to pass SPF flows, the channel would need to be deepened by 2.0 feet, to an elevation of 1353 feet at section 2.0. This would allow the flow to remain within the channel without diking except for the area around the hill side, cross sections 4.0 and 4.5. At these sections, it would remain within a channel designed with a 3.0 foot freeboard, for the 100-year flow. The amount of material to be excavated for a channel deepened by 2.0 feet to pass the SPF flow would be 880,000 cubic yards.

5. The design will require that each of the inflow channels be modified at the entrance to the channel. They will need to be brought into the channel at an angle rather than perpendicular to avoid scour of the downstream (right) channel bank, because of the high velocities of the inflows. Channel protection and possible grade control structures will be required at each of the major inflows.

B. Short Channel - Cross section 1.5 for the short channel is the same section as in the long channel and is within the pool behind the dam. It will not require any excavation. The beginning elevation for excavation at section 1.8 is 1352.5 feet with the 0.004 slope used to determine bottom elevations upstream from section 1.8.

1. All cross sections, except 1.8, will have velocities less than 4.7 feet per second. Section 1.8 will have a velocity of 8.4 feet per second. This section is located near the top of the dam and will require stabilization. The depth of flow in the channel will be about 4.0 feet with a bottom width of 100 feet for the entire length. It was believed that the 10:1 side slope on the inflow side of the channel, with a narrower bottom width would be preferable to a wider bottom width and steeper side slope. All cross sections are incised and have a freeboard of 2.0 feet or greater above the 100-year discharge. The amount of material to be excavated for this channel would be about 152,000 cubic yards.

2. The channel developed for the 100-year flows will also contain the SPF flows at all cross sections.

3.The design will require that each of the inflow channels be modified at the entrance to the channel. They will need to be brought into the channel at an angle rather than perpendicular to avoid scour of the downstream(right) channel bank, because of the high velocities of the inflows. Channel protection and possible grade control structures will be required at each of the major inflows.

C. Beardsley Canal Wash - This wash was analyzed for no channels, the long channel and the short channel. The comparison of these results can be seen in Table 2. Thus, a cost comparison between construction of the long or short channels and the required culvert sizes at Olive and Northern Avenues can be made for each of the alternatives. It needs to be remembered that with new culverts at Olive and Northern Avenues and and no channels to McMicken Dam, that Beardsly Canal Wash is at or above maximum capacity. Thus, it may overflow in some areas and will cause an increase in the area within the floodplain to the west of the wash.

R.W. Cruff, P.E.
April 30, 1997

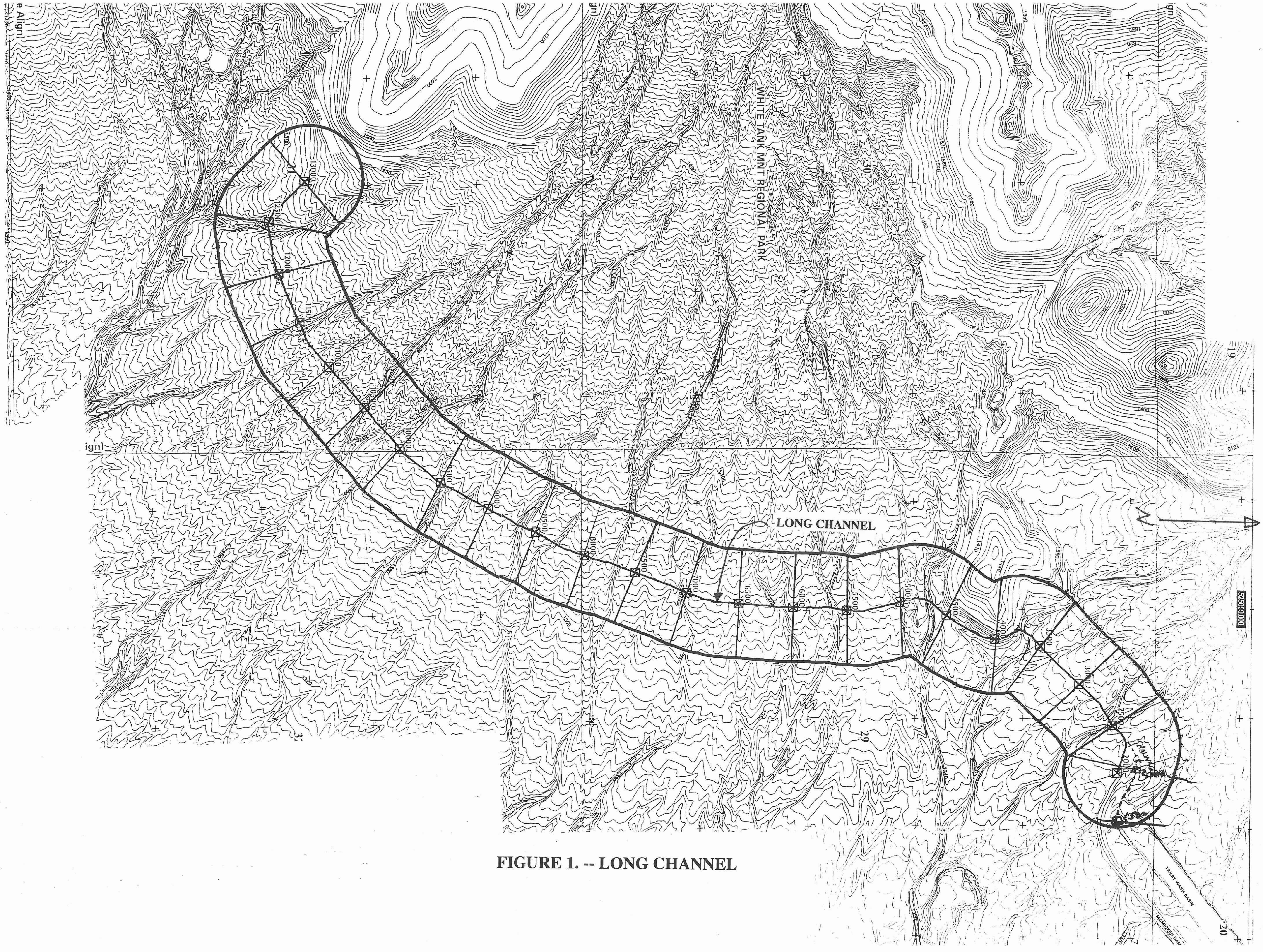


FIGURE 1. -- LONG CHANNEL

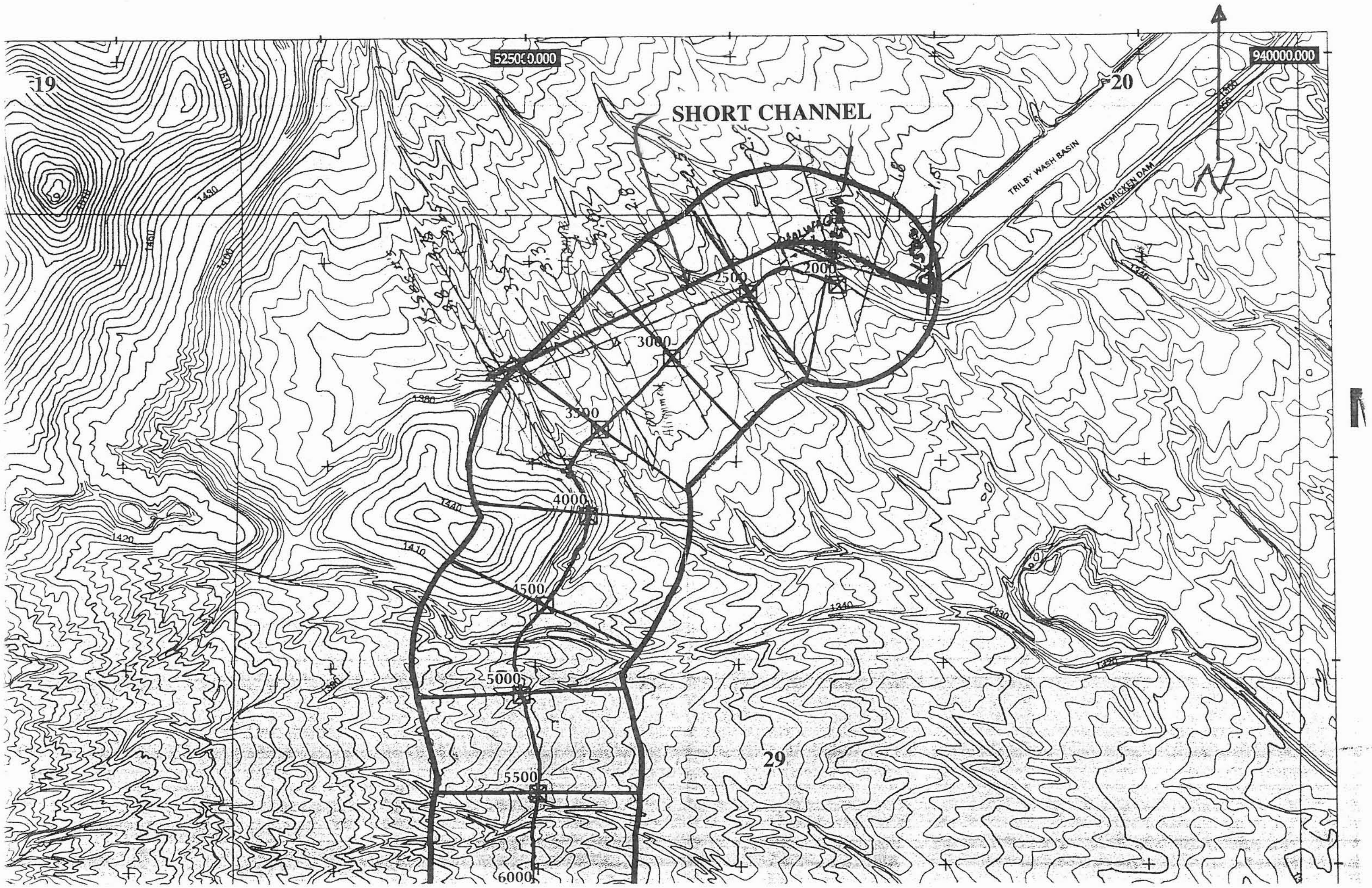


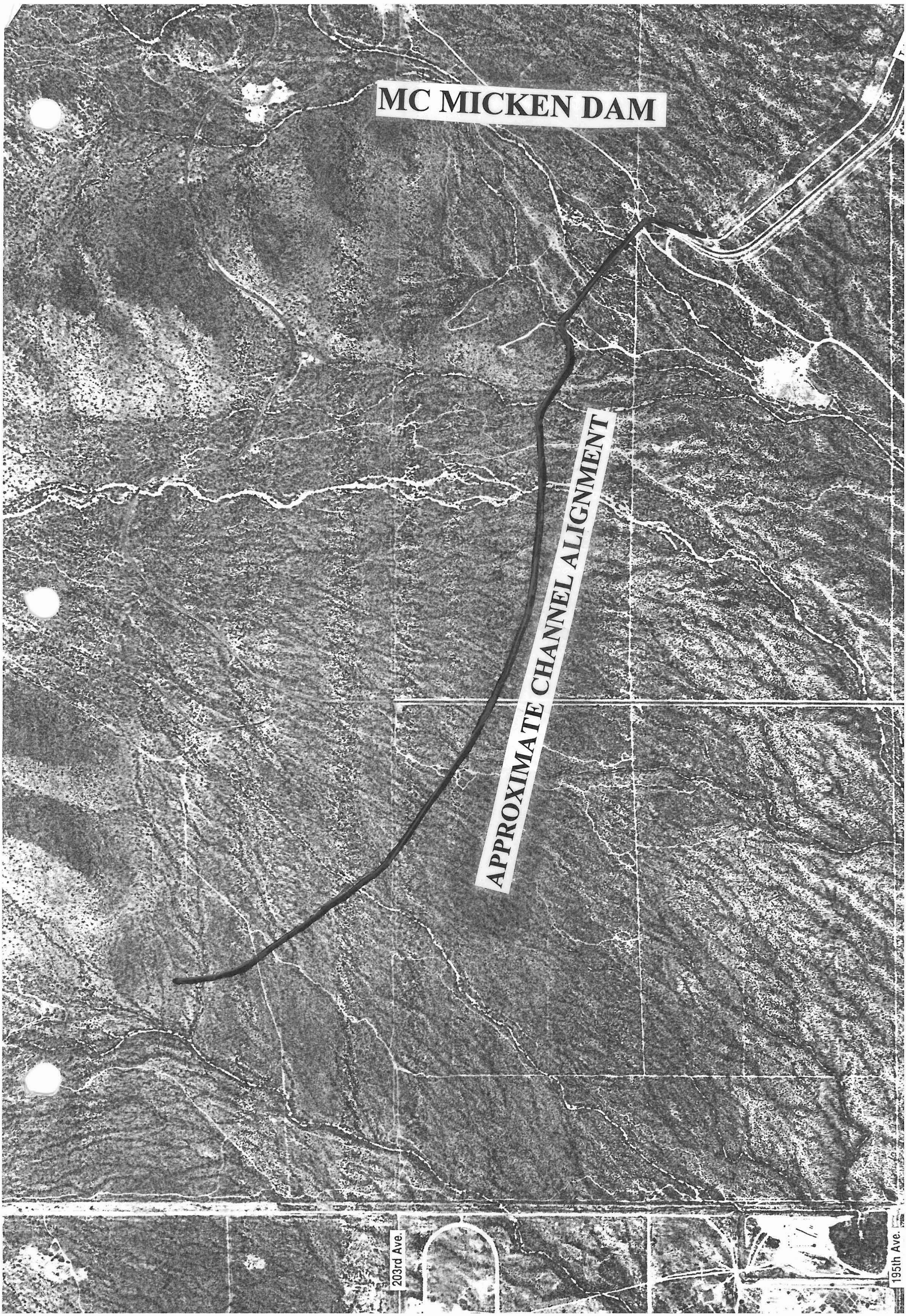
FIGURE 2. -- SHORT CHANNEL

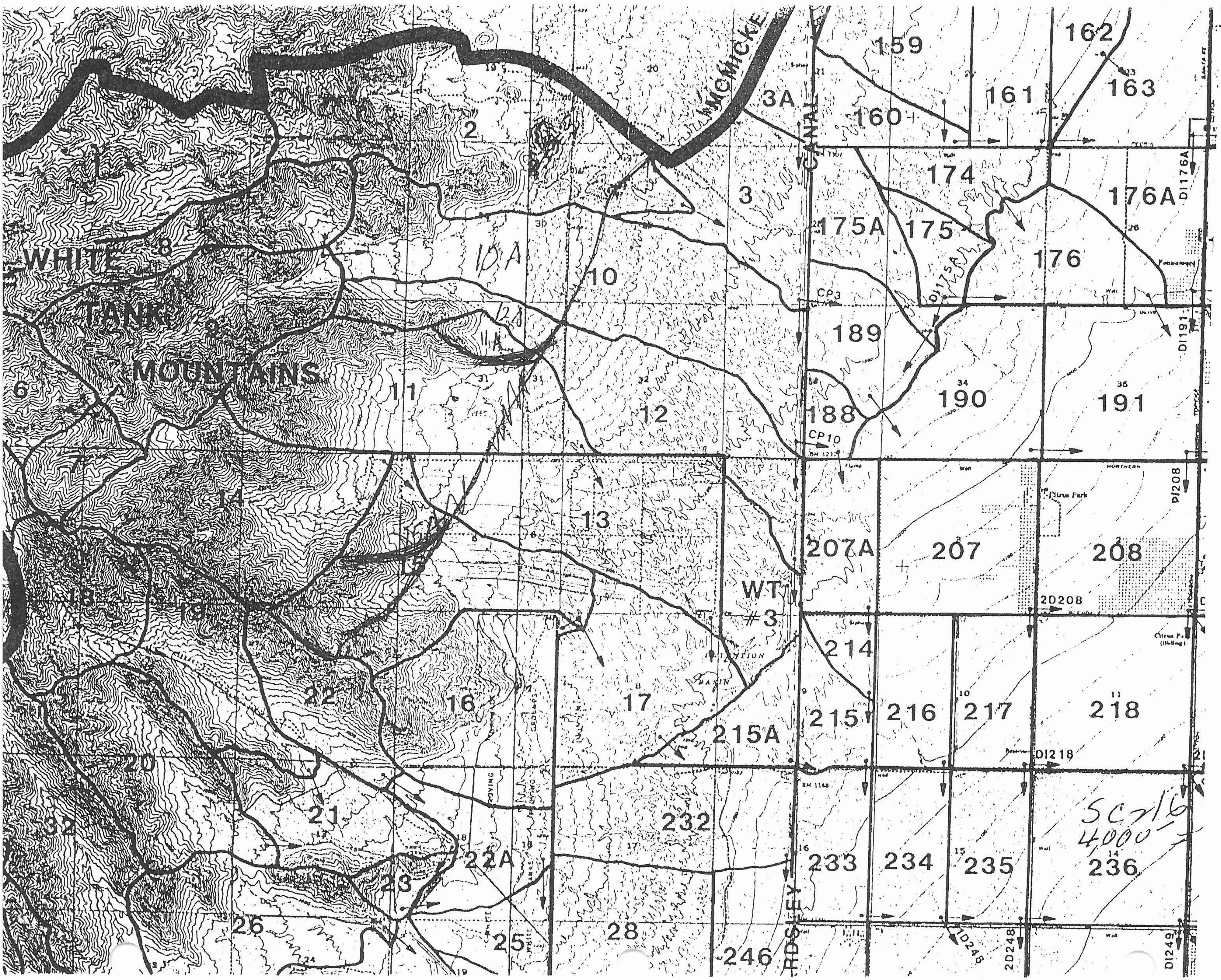
TABLE 1.- FLOWS ALONG BEARDSLEY CANAL TO WHITE TANKS #3

	NO CHANNEL		SHORT CHANNEL		LONG CHANNEL	
LOCATION	OVERFLOWS	NO OVERFLOW	OVERFLOWS	NO OVERFLOW	OVERFLOWS	NO OVERFLOW
AB. OLIVE	2,245	2.245	997	997	997	997
DIV @ OLIVE	490	0	1	0	1	0
BEL. OLIVE	1,755	2,245	996	997	996	997
AB CHOLLA W	1,647	2,108	818	819	818	819
AB NORTH.	5,141	5,504	4,504	4,505	1,862	1,862
DIV @ NORTH	1,486	0	1,279	0	332	0
BEL. NORTH.	3,655	5,504	3,225	4,505	1,530	1,862
AB. RESERV.	4,125	5,888	3,702	4,925	2,382	2,614
IN RESERV.	4,414	6,177	3,991	4,621	2,671	2,913
RESERVOIR						
INFLOW	6,649	8,115	6,412	7,323	5,526	5,724
ELEVATION	1,198.25	1,199.26	1,197..39	1,197.89	1,196.50	1,196.61
STORAGE	742	867	637	698	528	540

TABLE 2 - BEARDSLEY CANAL WASH

ITEM	NO CHANNELS OVERFLOW	NO CHANNELS NO OVERFLOW	SHORT CHANNEL OVERFLOW	SHORT CHANNEL NO OVERFLOW	LONG CHANNEL OVERFLOW	LONG CHANNEL NO OVERFLOW
HEC-1 MODEL	WT3	WT3-	WT3-B1&2	WT3-1&2	WT3-B1-9	WT3-1-9
HEC-2 model	WTCH1	WTCH1-N	WTCH1SC	WTCH1SCN	WTCH1LC	WTCH1LCN
OVERFLOW - OLIVE	490 CFS	0	0	0	0	0
OVERFLOW - NORTHERN	1,486 CFS	0	1,279	0	332	0
CULVERT - OLIVE	-	6' X 40'	-	-	-	-
CULVERT - NORTHERN	-	9' X 60'	-	8' X 40'	-	6' X 20'


MC MICKEN DAM
APPROXIMATE CHANNEL ALIGNMENT
203rd Ave.
195th Ave.



WHITE
TANK
MOUNTAINS
MCMICKE
CANAL
3A
159
160
161
162
163
174
176A
DI176A
1
2
3
175A
175
176
8
10A
10
DI175A
CP3
DI191
9
11A
12A
189
6
11
12
188
190
191
CP10
DI208
Citrus Park
14
13
207A
207
208
WT
#3
2D208
7
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22
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215A
DI218
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1D248
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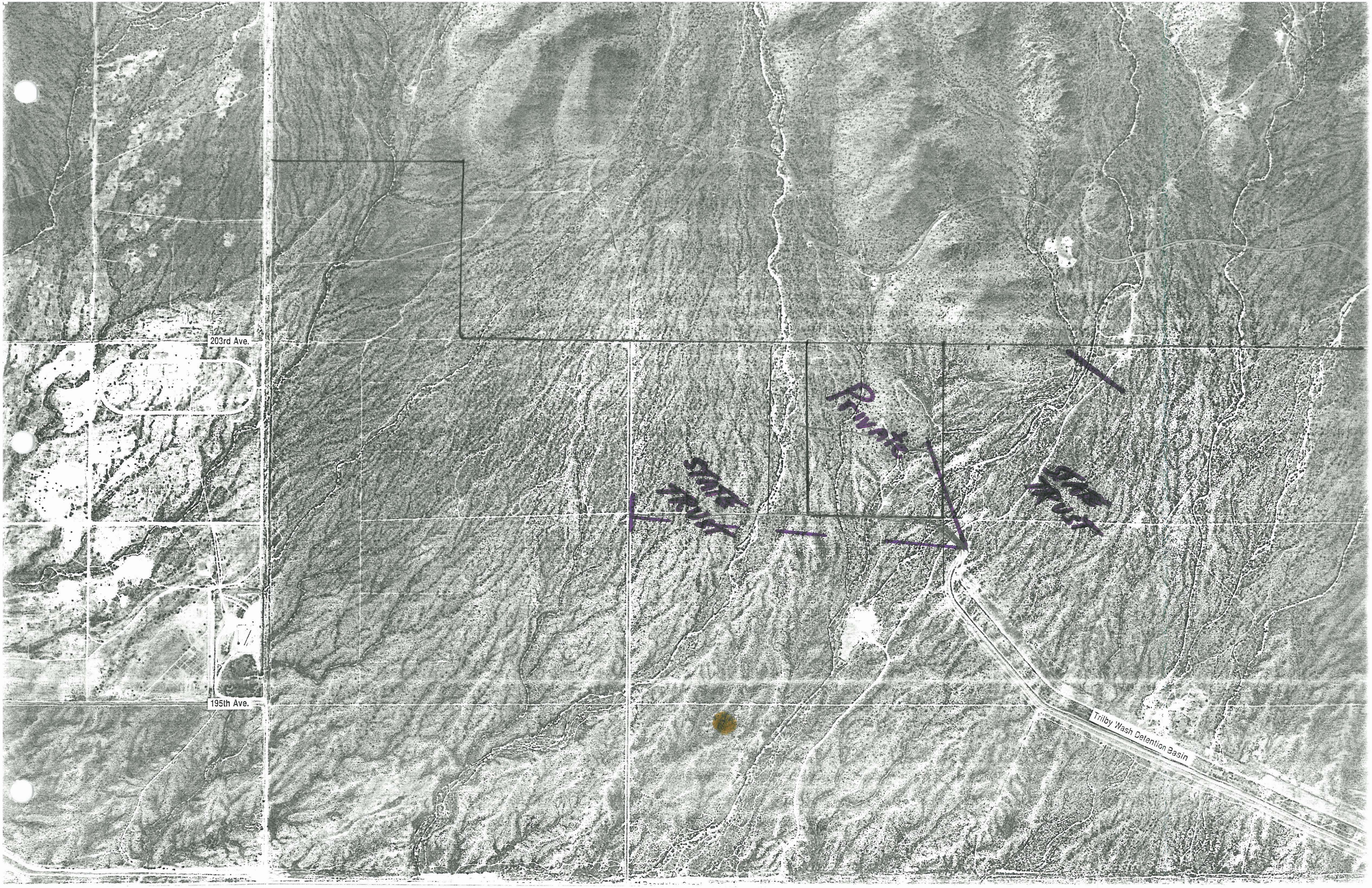
DI249


203rd Ave.
195th Ave.
Trilby Wash Detention Basin
Private
STATE TRUST
STATE TRUST

FLOOD CONTROL DISTRICT
of
Maricopa County
2801 West Durango Street • Phoenix, Arizona 85009
Telephone (602) 506-1501
Fax (602) 506-4601
TT (602) 506-5859

October 24, 1995

Memo to: DWM

From: JJT

Subject: Proposed Project

The following proposed project is being submitted for consideration and prioritization in the 5-year CIP.

PROJECT OVERVIEW

1. **Project**: McMicken Dam Inlet Channel (MIC)

The proposed project would consist of a two mile long interceptor channel extension of McMicken Dam to the Southwest. The goal of the project would be to convey the runoff between the current McMicken Dam and White Tanks #3 into McMicken Dam. The project would consist of an earth lined channel with the excavated fill stockpiled on the downstream side of the channel similar to the unlined portion of Signal Buttes Outlet Channel. The channel would have stabilized inlets for existing washes and be maintained in a high natural vegetative state; resulting in low velocities and minimal scour. Flow line location would be optimized by design hydraulics. Proposed N values could be as high as .065 on banks with .045 on bottom.

2. **Master Plan Element**

The project is a result of data obtained from the White Tanks ADMS. The project will reduce identified flooding, minimize or remove identified floodplains, negate or significantly reduce the construction costs of the White Tanks #3 Inlet Project, eliminate the reconstruction and modification of White Tanks #3 emergency spillway by SCS, increase capacity of White Tanks #3 and minimize repair to Jackrabbit and other McDOT's roads and Beardsley Canal.

Based upon preliminary alignment the channel could either be aligned entirely outside White Tank Park Land, or partially within it and on State Land. Figure 1.

Alignment would be based upon following a countour such that velocities would be such that they would convey sediment and runoff without adversely effecting the structure or increasing design costs.

3. **Agency Priority**

This is not applicable for a single project submittal.

4. **Hydrologic/Hydraulic Significance**

The structure when built will cut off peak discharges of 2300 cfs and 3500 cfs respectively from Waterfall and Cholla washes that cause flooding downstream. Since McMicken Dam has SPF capacity and a watershed in excess of 500 square miles, the impact of the additional runoff and volume from this 1-2 square mile watershed should have minimal impact to the integrity of it based upon the storm centering during SPF analysis.

a) The location of existing floodways are indicated on the enclosed map. Floodways downstream would be removed.

b) Peak discharges and frequency of flood events are available from the White Tanks ADMS.

c) The depths, velocities and duration of flows are available from the White Tanks ADMS.

d) The contributing watershed with the watershed characteristics is available within the White Tanks ADMS.

e) The existing outfall would be into McMicken Dam.

5. Area Protected

The following are some of the benefits to be provided by the project.

a) removal of approximately 6 miles of floodplain

b) increase of storage in White Tanks #3.

c) Reduce construction costs to reconstruct spillway of White Tanks #3

d) Reduction of sheetflow in the agricultural areas.

e) Reduction or elimination of the $9 million dollar White Tanks #3 Inlet Channel.

f) Improvement and increase in structure capacity of road drains

g) Reduction in future road drainage structural costs.

h) Eliminates/reduces overtopping repair of Beardsley Canal.

6. Level of Protection

The level of protection would be the SPF.

7. Environmental Quality/Areawide Benefits

a) vegetative outlets would be provided to maintain the riparian habitat and ecosystems along the proposed structure.

b) Water quality will be enhanced by the reduction of sediment movement and riparian destruction during rainfall/runoff events.

c) Groundwater would be recharged through retention behind McMicken, routing of flows in existing channels, and also in infiltration if flows eventually reached the Agua Fria.

d) Recreational uses could be constructed along the dam as well as hiking Trails into the White Tanks.

8. Total Project Cost

An Estimate of the Costs are as follows:

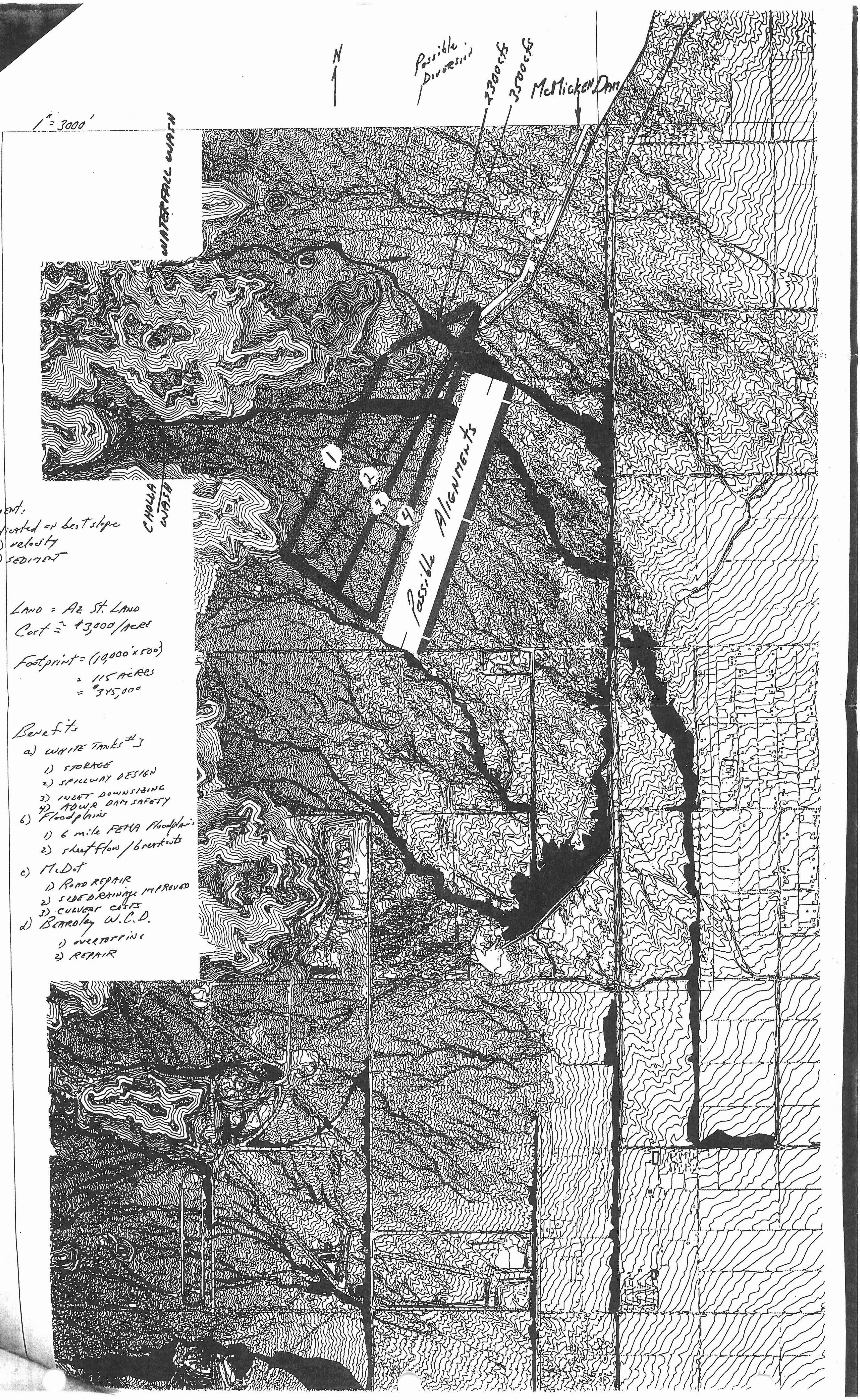
Land	115 acres	$400,000
Design		$100,000
Construction		2,000,000

9. Level of Local Participation

Monies that were allocated for the White Tanks #3 Inlet project and the White Tanks Spillway Reconstruction Project would be reallocated to this project with a net savings of approximately $8,000,000.

10. Operation and Maintenance Costs

The operation and maintenance costs would be at a minimum in that the channel would be designed for natural conditions with a high N value. Since the conveyance would be in a channel with the excavated material stockpiled on the downstream side, minimal maintenance would be required.



Alignment:
1) Predicated on best slope
a) velocity
b) SEDIMENT

LAND = AZ St. LAND
Cost ≅ $3,000/ACRE

Footprint = (10,000' x 500')
= 115 ACRES
= $345,000

Benefits
a) WHITE TANKS #3
1) STORAGE
2) SPILLWAY DESIGN
3) INLET DOWNSIZING
4) ADWR DAM SAFETY
b) Floodplains
1) 6 mile FEMA Floodplain
2) sheet flow / breakouts
c) McDot
1) ROAD REPAIR
2) SIDE DRAINAGE IMPROVED
3) CULVERT COSTS
d) Beardsley W.C.D.
1) OVERTOPPING
2) REPAIR

WHITE TANKS (MC MICKEN DAM) NEAR OLIVE AVENUE

LOOKING SOUTH END OF DAM FROM 400 FT. N.W. OF GATE. THIS WOULD BE APPROXIMATE LOCATION OF THE CHANNEL.

LOOKING SOUYHWEST FROM SOUTH END OF DAM, TOWARDS SMALL HILL.

WHITE TANKS (MC MICKEN DAM) NEAR OLIVE AVENUE

LOOKING TOWARDS THE END OF DAM FROM THE SMALL HILL ABOUT 1,500 FT. SOUTHWEST.

LOOKING AT SMALL CHANNEL ON NORTH SIDE OF SMALL HILL AND AT THE EAST SIDE OF SMALL HILL. THIS IS ABOUT 1,500 FT. FROM DAM.

WHITE TANKS (MC MICKEN DAM) NEAR OLIVE AVENUE

LOOKING WEST, UP THE DRAINAGE BASIN, FROM SOUTH OFTHE SMALL HILL.

LOOKING SOUTHWEST FROMEAST SIDE OF SMALL HILL. THIS WOULD BE ABOUT THE ALIGNMENT OF THE CHANNEL.

MCMICKEN CHANNEL

FILE =CH-Q'S.WPD

CHANNEL SPACINGS AND DISCHARGES

SITE	SUBBASIN	DIST. TO NEXT SITE	DIST. FROM DAM	100-YEAR DISCHARGE	SPF DISCHARGE
A	11A	1,000 FT	10,600 FT	180 CFS	300 CFS
B	11A	900	9,600	302	510
C	12A	500	8,700	740	1,500
D	12A	800	8,200	900	2,100
E	12A	500	7,400	930	2,200
F	10A	1,000	6,900	1,120	2,900
G	10A	2,000	5,900	1,900	5,600
H	10A	900	3,900	3,740	11,900
I	2	1,200	3,000	4,440	14,300
J	2	1,100	1,800	5,000	16,100
K	2	700	700	5,600	18,100
END	2			5,600	18,100

R.W. CRUFF. P.E.
APRIL 15, 1997

CHANNEL CHARACTERISTICS

FILE = CH-CHAR.WPD

```
\   _______________________   /
 \            |              / |
  \           | d           /__| 1
   \__________|____________/  2
   |--------- w -------------|
```

Q = (1.49/n)(A)(R2/3)(S1/2)

N = 0.045
S = 0.002
S1/2 = 0.045

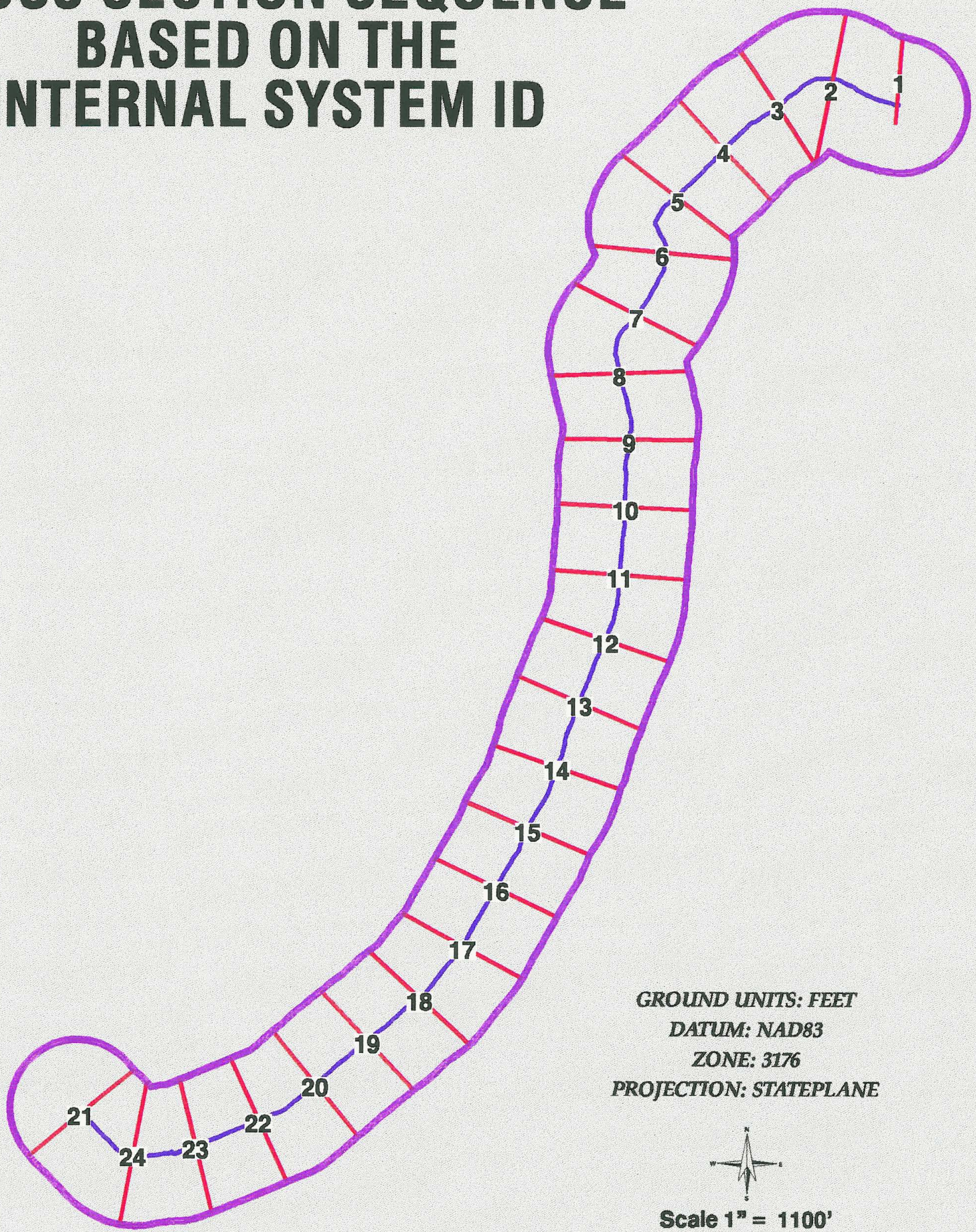
(1.49/n)(S1/2) = (1.49/0.045)(0.045) = 1.49

Q = (1.49A)(R2/3)

d, ft	W, ft	A, ft2	Wp, ft	R	R2/3	Q, cfs	V, fps
2.0	25	58	34.0	1.71	1.43	123	2.1
3.0	25	92	38.4	2.40	1.79	245	2.7
3.0	30	108	43.4	2.49	1.84	296	2.7
3.0	50	168	63.4	2.65	1.92	479	2.9
3.5	60	234	75.6	3.10	2.13	743	3.2
3.5	80	304	95.6	3.18	2.16	982	3.2
3.5	100	374	115.6	3.24	2.19	1,220	3.3
4.0	80	352	97.8	3.60	2.35	1,230	3.5
4.0	120	512	137.8	3.72	2.40	1,830	3.6
4.0	150	632	167.8	3.77	2.42	2,280	3.6
4.0	200	832	217.8	3.82	2.44	3,030	3.6
5.0	200	1,050	222.4	4.72	2.81	4,403	4.2
5.0	250	1,300	272.4	4.77	2.84	5,491	4.2

R.W. CRUFF, P.E.
JANUARY 29, 1997

CROSS SECTION SEQUENCE BASED ON THE INTERNAL SYSTEM ID



GROUND UNITS: FEET
DATUM: NAD83
ZONE: 3176
PROJECTION: STATEPLANE

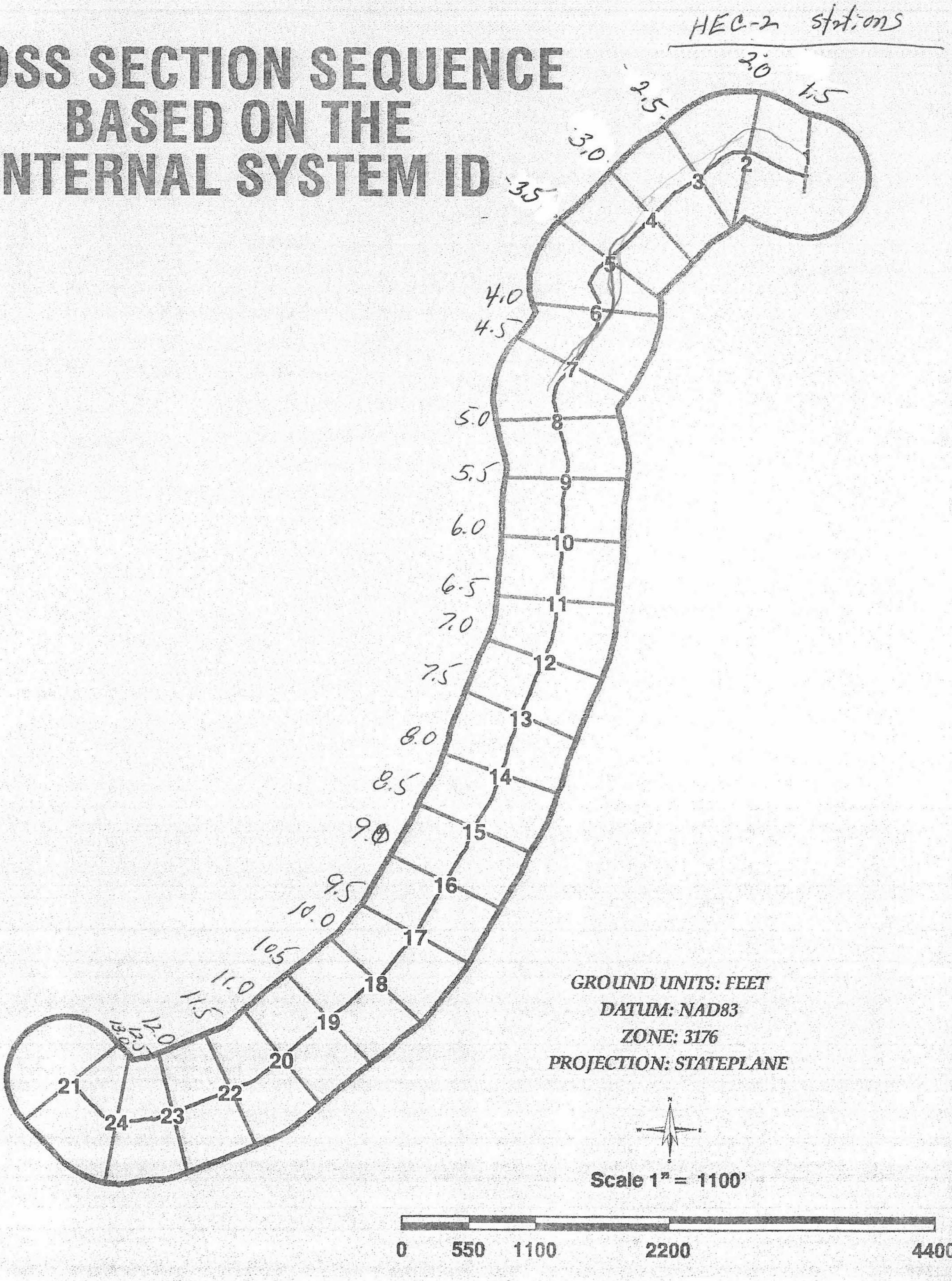
Scale 1" = 1100'

0 550 1100 2200 4400

/udd/adm.gc/pro s/crutt/basexsec.aml 02/19/97.12:37:30 Wed

"Long Channel"

CROSS SECTION SEQUENCE BASED ON THE INTERNAL SYSTEM ID



CHANNEL PROPERTIES

FILE = CH-PROP1.WPD

FOR MODEL "MCMCH1.DAT"

MCMICKEN CHANNEL

SEC	DISC	BOTTOM WID	BOTTOM CENT	XL	XR	XCH	STENL	RB & STENR	LB
1.5	5,600	300	10,000	0	0	0	9,600	10,210	9,600
2.0	5,600	300	9,330	460	530	500	9,100	9,510	9,100
2.5	5,600	250	9,320	650	200	500	9,080	9,480	9,140
3.0	5,000	250	9,310	540	460	500	9,050	9,480	9,170
3.5	5,000	250	9,330	530	440	500	9,170	9,490	9,170
4.0	4,500	250	9,650	600	280	500	9,090	9,820	9,390
4.5	4,500	250	9,300	390	590	500	9,026.1	9476.1	9,026.1
5.0	4,000	200	9,300	570	320	500	9,030.6	9440.6	9,150.6
5.5	4,000	200	9,300	500	500	500	9,050	9,460	9,140
6.0	2,000	180	9,300	500	500	500	9,049.8	9,429.8	9159.8
6.5	2,000	150	9,300	500	500	500	9,051.8	9,421.8	9,181.8
7.0	2,000	150	9,300	430	570	500	9,046.8	9,416.8	9,186.8
7.5	2,000	150	9,300	480	520	500	9,047.3	9,417.3	9,187.3
8.0	1,500	120	9,300	520	480	500	9,051.3	9,411.3	9,191.3
8.5	1,200	100	9,300	500	520	500	9,080	9,400	9,200
9.0	1,000	80	9,300	500	500	500	9,048.1	9,368.1	9,218.1
9.5	1,000	80	9,300	480	520	500	9,045	9,385	9,315
10.0	1,000	80	9,300	430	580	500	9,050	9,390	9,210
10.5	800	70	9,300	490	530	500	9,047.8	9,377.8	9,217.8
11.0	400	60	9,300	490	510	500	9,059.6	9,379.6	9,219.6
11.5	400	50	9,300	430	570	500	9,058.8	9,368.8	9,228.8
12.0	400	50	9,300	480	560	500	9,050.6	9,370.6	9,236.6
12.5	200	40	9,300	380	600	500	9,033.2	9,373.2	9,233.2
13.0	200	30	9,180	310	720	500	9,050	9,270	9,050

MCMICKEN CHANNEL

FILE = CH-PROP.WPD

CHANNEL PROPERTIES FOR MODEL MCMCH.DAT

		BOTTOM						RB &	
SEC	DISC	WID	CENT	XL	XR	XCH	STENL	STENR	LB
1.5	5,600	300	10,000	0	0	0	9,600	10,210	9,600
2.0	5,600	300	9,330	460	530	500	9,100	9,530	9,100
2.5	5,600	250	9,370	650	200	500	9,080	9,520	9,180
3.0	5,000	250	9,350	540	460	500	9,050	9,490	9,160
3.5	5,000	250	9,390	530	440	500	9,190	9,540	9,220
4.0	4,500	250	9,800	600	280	500	9,430	9,950	9,430
4.5	4,500	250	9,610	390	590	500	9,426.1	9,746.1	9,426.1
5.0	4,000	200	9,510	570	320	500	9,320.6	9,610.6	9,340.6
5.5	4,000	200	9,370	500	500	500	9,050	9,490	9,230
6.0	4,000	200	9,370	500	500	500	9,049.8	9,489.8	9,209.8
6.5	3,000	180	9,370	500	500	500	9,061.8	9,481.8	9,221.8
7.0	2,500	170	9,340	430	570	500	9,046.8	9,446.8	9,219.8
7.5	2,000	150	9,460	480	520	500	9,047.3	9,557.3	9,337.3
8.0	1,500	120	9,530	520	480	500	9,051.3	9,611.3	9,411.3
8.5	1,500	120	9,510	500	520	500	9,100	9,590	9,400
9.0	1,200	100	9,490	500	500	500	9,048.1	9,558.1	9,388.1
9.5	1,000	100	9,460	480	520	500	9,045	9,525	9,375
10.0	1,000	90	9,420	430	580	500	9,050	9,490	9,330
10.5	800	90	9,370	490	530	500	9,047.8	9,427.8	9,287.8
11.0	400	60	9,520	490	510	500	9,059.6	9,569.6	9,459.6
11.5	400	50	9,480	430	570	500	9,058.8	9,518.8	9,408.8
12.0	400	50	9,450	480	560	500	9,050.6	9,490.6	9,386.6
12.5	200	40	9,470	380	600	500	9,033.2	9,503.2	9,413.2
13.0	200	30	9,940	310	720	500	9,050	9,990	9,870

MCMICKEN CHANNEL

FILE = CH-PROPA.WPD

CHANNEL PROPERTIES FOR MODEL MCMCHA.DAT

SLOPE = 0.004

BOTTOM ELEVATION = 1352.5 AT SECTION 1.8

SEC	DISC	BOTTOM WID	BOTTOM CENT	XL	XR	XCH	STENL	RB & STENR	LB
1.5	2,300			0	0	0	9,600	10,210	9,600
1.8	2,300	100	515	260	320	320	370	590	400
2.0	2,300	100	400	350	20	250	220	470	260
2.2	2,300	100	360	210	200	220	10	430	180
2.5	2,300	100	370	300	150	250	100	450	150
2.8	2.300	100	400	300	250	290	80	490	130
3.0	2,300	100	420	200	220	210	140	510	140
3.3	2,300	100	420	300	300	310	110	500	150
3.5	2,300	100	420	200	180	190	180	500	180
3.65	2.300	100	420	150	190	170	100	500	210
3.75	2,300	100	460	90	70	80	200	540	260
3.8	0.01	.01	460	50	50	50	400	530	400

Flood Control District of Maricopa County
2801 West Durango Street
Phoenix, Arizona 85009
(602) 506-1501 fax (602) 506-4601

INTEROFFICE MEMO

Date: April 1, 1997

From: BZ

To: RWC

Via: AMM

Cc: JJT

Subject: SPF for a proposed channel in the McMicken Dam area

1. The HEC-1 file "spf.dat" which contains what you need for the SPF can be found in g:\rwc\projects\mcm-ch.

2. The developed SPF is based on pages 13-14, and Plates 15-18 in <Gila River Basin, New River, and Phoenix City Streams, Arizona, Design Memorandum No.2, Hydrology, Part I> by US Army Engineer District, 1974.

More specifically, the JD cards, PC cards, and LG cards in the 100-year, 24-hour HEC-1 model have been modified based on the aforementioned report.

3. The attached are my detailed notes, a copy of the SPF procedures, and the printout of "spf.dat." Let me know if you have any questions.

Bing Zhao - FCD

From: Amir Motamedi - FCD
To: Bing Zhao - FCD
Cc: Russ Cruff - FCD
Subject: McMicken Dam proposed Channels
Date: Monday, March 24, 1997 10:15AM

Bing, Russ requested that we investigate the SPF peak flows for the proposed channel on this project. The SPF rainfall should be used on the two sub-basins contributing to the channel ONLY, no need for including the areas contributing to MCMicken Dam. → more than 2
Please see me if you have any questions on what the SPF rainfall is for the area. Thanks

p.s. Due 4/1/97

Develop SPF (for the study requested by Russel Cruff)

→ a. Total Precipitation

To center SFS on each sub-basin, we need to use JD card

★ Follow P13-14 in «Gila River Basin New River and Phoenix City Streams Arizona, Design Memorandum No. 2 Hydrology Part I», 1974

The average rainfal depth over a watershed is = (10-yr-6-hr) × (Depth-area reduction factor for 10-yr-6-hr) × 3.178 = 2.1 × (Depth-area reduction factor for 10-yr-6-hr) × 3.178

JD's second element

Area :	
0.001	1.0
10	0.938
50	0.84
100	0.78
200	0.7

∴ JD cards' first element (2.1 × Reduction factor × 3.178) (inches) — JD's 2nd element (mi^2)

JD's first element (inches)	JD's 2nd element (mi^2)
6.67	0.001
6.26	10
5.61	50
5.21	100
4.67	200

0.001–10: enough ∵ Area < 6 mi^2

50–200: Not necessary

→ Intensity-Duration Relationships and Patterns

- For JD card: depth = 2.1 inches, Area = 0.001 mi^2

  use 1 mi^2, depth = 2.1 × 1 = 2.1 inches

  Plate 18 ⇒ pattern # = 2.2

For depth = 2.1 × 0.938 = 1.9698 = 1.97 inches, Area = 10 mi^2

Plate 18 ⇒ pattern # = 0.16 + 2.5 = 2.66 = 2.7

To find PC cards for Pattern #s = 2.2 and 2.7 from Plate 17.

Pattern # = 2.2
15 min interval

PC 0 0.5 1 1.1 2 2.5 3.1 4.1 5 6 7 8 9 10 11 12 14 17 22 33 60 79 87 92 95
97 98 99 100

Pattern # = 2.7 (15 min interval)

PC 0 0.5 1 1.6 2.8 3 4.6 5.5 6.6 7.6 9 10.6 11.5 13 14 15.2 17 20.2 26
35 60 77 85 90 93.5 96 97.5 98.5 100

∴

IT 5 300
CO 5
IN 15
JD 6.67 0.001
PC 0 0.5 1 1.1 2 2.5 3.1 4.1 5 6.
PC 7 8 9 10 11 12 14 17 22 33
PC 60 79 87 92 95 97 98 99 100
JD 6.26 10
PC 0 0.5 1 1.6 2.8 3 4.6 5.5 6.6 7.6
PC 9 10.6 11.5 13 14 15.2 17 20.2 26 35
PC 60 77 85 90 93.5 96 97.5 98.5 100

Also LG cards need to be modified
∵ SPF assumes 0.5" has occurred prior to SPF.
And all ~~LG~~ old LG cards' IA < 0.5" ∴ DTHETA = 0.0 (see Table 4.2 in Hydro-Manual
∴ need to ~~no~~ set all DTHETA in LG to zero
(2nd element in LG card)

MC MICKEN CHANNEL

The following models have been developed and are available on "G:\RWC\PROJECTS\MCM-CH".

HEC-1 MODEL:

WT3 - This is the model developed for subbasins 1 - 17, as a part of the White Tanks ADMS.

WT3- - The same as model WT3 except that the diversions are removed at Olive and Northern Avenues.

WT3-B1&2 - This model uses model WT3 and removes subbasins 1 and 2. Its purpose is to develop flows for the present drainage if the short channel were to be constructed to divert part of the flows from the White Tanks to McMicken Dam.

WT3-1&2 - The same as model WT3-B1&2 except that the diversions are removed at Olive and Northern Avenues.

WT3-B1-9 - This model uses model WT3 and removes subbasins 1, 2 and 4-9. Its purpose is to develop flows for the present drainage if the long channel were to be constructed to divert part of the flows from the White Tanks to McMicken Dam.

WT-3-1-9 - The same as model WT3-B1-9 except that the diversions are removed at Olive and Northern Avenues.

MCMKRSI - This is input data developed for the partial subbasins for use in model WT3-MCH.

WT3-MCH - This is a modification of a section of the model WT3 from the White Tanks ADMS. It covers the portion of the basin that would drain into the proposed long channel, and organizes the subbasins in a manner that would allow it to be collected by the channel in a downstream direction.

WT3-MCHA - This is a modification of model WT3-MCH to give flow values from subbasins 1 and 2 only. This would be used if only the flows between the dam and the hill about 2,000 feet south west were to be diverted to McMicken dam.

WTMCHSPF- This is a modification of model WT3-MCH to develop SPF flow rates.

WTMCHASP- This is a modification of model WT3MCHA to develop SPF flow rates for the short channel.

HEC-2 MODELS:

<u>CHANNELS:</u>

RUN01 - This is the GR data developed from the GIS data as the beginning input to the HEC-2 model.

MCMCH1 - This model is a first cut at designing the channel based on the GR data developed from the GIS data. The chimp routine was used to develop the long channel.

MCMCH - This is the final model developed for the long channel based on information gathered in developing model MCMCH1. Some of the items modified were the center of the channel and a revision of the discharges for some cross sections. For the cross sections where the discharge was modified, it required the modification of the channel width.

MCMCH-PL- This model uses model MCMCH and eliminates part of the GR data outside of the excavated channel. This was done so that plots could be generated at a reasonable scale.

MCMCHAPL- This model is model MCMCH-PL with the starting channel bottom raised 1.0 foot. Thus, it could be determined how much less material would need to be excavated.

MCMCHBPL- This model is the same as MCMCHAPL with the starting bottom elevation raised 2.0 feet.

MCMCHDEM-This model uses model MCMCH-PL and rearranges the output.

MCMCHSPF - This model uses model MCMCH and changes the flow rates from the 100-year values to the SPF values.

MCMCHA - This model was developed to be used for a short channel, that only goes to the hill about 2,000 feet southwest of the dam.

MCMCHASP - This model uses model MCMCHA and changes the flow rates from the 100-year values to the SPF values for the short channel.

HEC-2 MODELS(CONT.):

BEARDSLEY CANAL WASH:

1.2HI - This is the original model used for flood plain delineation of Beardsley Canal Wash.

WTCH1 - This is a duplicate of model 1.2HI with floodway analysis removed and output format modified.

WTCH1-N - This model uses model WTCH1 and modifies the Q's based on no overflow at Olive and Northern Avenues, and modifies the culverts at these two sites to be able to carry the flows.

WTCH1SC - This is a modification of model WTCH1 based on the flows with the short channel in place, but no modification of the culverts at Olive and Northern Avenues.

WTCH1SCN - This model uses model WTCH1SC and modifies the Q's based on no overflow at Olive and Northern Avenues, and modifies the culvert at Northern Avenue, to be able to carry the flows.

WTCH1LC - This is a modification of model WTCH1 based on the flows with the Long channel in place, but no modification of the culverts at Olive and Northern Avenues.

WTCH1LCN - This model uses model WTCH1LC and modifies the Q's based on no overflow at Olive and Northern Avenues, and modifies the culvert at Northern Avenue, to be able to carry the flows.

R.W. Cruff, P.E.
April 29, 1997

FILE = WT3

```
ID
ID
ID      FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
ID      100-YEAR, 24-HOUR STORM                                 WTADMS.24
ID
ID
ID
*DIAGRAM
IT      5                    300
IO      5
IN     15
JD   4.03     .001
PC   .000     .002     .005     .008     .011     .014     .017     .020     .023     .026
PC   .029     .032     .035     .038     .041     .044     .048     .052     .056     .060
PC   .064     .068     .072     .076     .080     .085     .090     .095     .100     .105
PC   .110     .115     .120     .126     .133     .140     .147     .155     .163     .172
PC   .181     .191     .203     .218     .236     .257     .283     .387     .663     .707
PC   .735     .758     .776     .791     .804     .815     .825     .834     .842     .849
PC   .856     .863     .869     .875     .881     .887     .893     .898     .903     .908
PC   .913     .918     .922     .926     .930     .934     .938     .942     .946     .950
PC   .953     .956     .959     .962     .965     .968     .971     .974     .977     .980
PC   .983     .986     .989     .992     .995     .998     1.00    1.000    1.000    1.000
JD   3.99       10
JD   3.83       50
JD   3.76      100
JD   3.70      200
KK      1
KM      RUNOFF HYDROGRAPH FROM SUB-BASIN 1.
BA   1.94
LG    .20      .34     3.21     1.14     9.90
UI   182.     326.     742.     974.    1186.    1502.    2185.    1957.    1537.    1243.
UI   989.     751.     417.     308.     230.     182.      64.      56.      56.      56.
UI    56.       0.       0.       0.       0.       0.       0.       0.       0.       0.
UI     0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
KK   RCP1
KM      ROUTE FLOW FROM CP1 TO CP2.
RL                        1     1428
RS      5                -1        0
RC    .06      .04      .06    17800    .0469
RX   1000     1125     1300     1390     1405     1490     1590     1750
RY   1440     1439     1437     1428     1428     1439     1442     1444
KK      2
KM      RUNOFF HYDROGRAPH FROM SUB-BASIN 2.
BA   1.82
LG    .18      .33     3.91      .70    11.70
UI   115.     115.     259.     442.     556.     642.     727.     849.    1013.    1346.
UI  1419.    1145.     985.     864.     735.     634.     545.     405.     268.     202.
UI   189.     144.     115.     103.      35.      35.      35.      35.      35.      35.
UI    35.       0.       0.       0.       0.       0.       0.       0.       0.       0.
UI     0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
KK    CP2
KM      ADD HYDROGRAPHS AT CP2.
HC      2
KK   RCP2
KM      ROUTE COMBINED HYDROGRAPHS AT CP2 TO CP3.
RL                      1.5     1298
RS      2                -1        0
RC    .06     .035      .06     4500    .0111
RX   1000     1100     1350     1705     1735     1780     1850     2000
RY   1304     1302     1302     1298     1298     1303     1302     1305
KK     3A
KM      RUNOFF HYDROGRAPH FROM SUB-BASIN 3A
BA    .29
LG    .15      .33     3.99      .59      .00
UI    34.      89.     165.     212.     286.     410.     314.     242.     182.     124.
UI    62.      48.      33.      10.      10.      10.      10.       0.       0.       0.
UI     0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
KK RCP3A
KM      ROUTE FLOW FROM CP3A TO CP3
RL                      1.5     1284
RS      2                -1        0
RC    .03      .03      .05     5300    .0060
RX   1000     1023     1032     1046     1058     1067     1250     1540
RY   1289     1288     1286     1284     1284     1286     1288     1291
```

```
KK      3
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 3.
BA    .81
LG    .15      .33    4.08      .54      .00
UI    91.     228.    430.     554.     725.    1088.     908.     700.     535.     396.
UI   205.     152.     95.      57.      28.      28.      28.       0.       0.       0.
UI     0.       0.      0.       0.       0.       0.       0.       0.       0.       0.
KK  I1CP3
KM       ADD HYDROGRAPHS AT CP3.
HC      2
KK    CP3
KM       ADD HYDROGRAPHS AT CP3.
HC      2
KK    CP3
KM       DIVERT FLOWS THAT WILL OVERTOP THE BEARDSLEY CANAL AT OLIVE AVENUE.  THE
KM       HEC-2 DIVERSION RATING CURVE MODELED BY THE FLOOD CONTROL DISTRICT IS
KM       INCORPORATED HERE.
DT   DCP3
DI      0     1000     2000     3000     5000     6000     6800     8000
DQ      0        0      435      660     1570     2070     2520     3260
KK   RCP3
KM       ROUTE THE REMAINING HYDROGRAPH AT CP3 TO CP10.
RL                        2     1245
RS      2                -1        0
RC    .05      .03      .05     5280    .0083
RX   1010     1015     1020     1050     1100     1275     1580     1750
RY   1251     1249     1249     1245     1245     1250     1250     1254
KK      4
KM       RUNOFF HYDROGRAPH FORM SUB-BASIN 4.
BA    .30
LG    .20      .30    3.87      .77     1.00
UI    48.     192.    287.     444.     512.     346.     236.     115.      67.      35.
UI    14.      14.      0.       0.       0.       0.       0.       0.       0.       0.
UI     0.       0.      0.       0.       0.       0.       0.       0.       0.       0.
KK      5
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 5.
BA    .72
LG    .20      .34    3.27     1.11     9.20
UI   110.     437.    658.     992.    1242.     849.     591.     315.     174.     101.
UI    34.      34.     34.       0.       0.       0.       0.       0.       0.       0.
UI     0.       0.      0.       0.       0.       0.       0.       0.       0.       0.
KK    CP5
KM       ADD HYDROGRAPHS AT CP5.
HC      2
KK   RCP5
KM       ROUTE COMBINED HYDROGRAPHS AT CP5 TO CP7.
RL                       .5     2800
RS      1                -1        0
RC    .08      .05      .08     4800    .0833
RX    955      970      985     1000     1020     1035     1050     1065
RY   2815     2810     2805     2800     2800     2805     2810     2815
KK      6
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 6.
BA    .45
LG    .20      .34    3.21     1.14    10.00
UI   204.     622.   1139.     837.     427.     155.      54.      33.       0.       0.
UI     0.       0.      0.       0.       0.       0.       0.       0.       0.       0.
KK  I1CP7
KM       ADD HYDROGRAPHS AT CP7.
HC      2
KK      7
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 7.
BA    .31
LG    .20      .34    3.21     1.14    10.00
UI   126.     387.    716.     606.     343.     129.      52.      22.       0.       0.
UI     0.       0.      0.       0.       0.       0.       0.       0.       0.       0.
KK    CP7
KM       ADD HYDROGRAPHS AT CP7.
HC      2
KK   RCP7
KM       ROUTE COMBINED HYDROGRAPHS AT CP7 TO CP9.
RL                       .5     1838
RS      3                -1        0
RC    .08      .05      .08    10200   .07745
RX   1000     1045     1120     1195     1230     1300     1350     1450
RY   1910     1880     1850     1838     1838     1850     1880     1910
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KK      9
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 9.
BA  1.40
LG   .20      .34    3.24    1.12    9.70
UI  155.     381.    727.    935.   1216.   1832.   1591.   1224.    938.    705.
UI  386.     261.    177.    115.     47.     47.     47.     47.      0.      0.
UI    0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
KK I1CP9
KM       ADD HYDROGRAPHS AT CP9.
HC      2
KK      8
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 8.
BA   .81
LG   .20      .34    3.21    1.14   10.00
UI  102.     313.    535.    703.   1054.   1140.    822.    608.    421.    208.
UI  147.      96.     31.     31.     31.      0.      0.      0.      0.      0.
UI    0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
KK    CP9
KM       ADD HYDROGRAPHS AT CP9.
HC      2
KK   RCP9
KM       ROUTE COMBINED HYDROGRAPHS AT CP9 TO CP10.
RL                    1.5    1308
RS      8              -1       0
RC   .06     .035     .06   19200   .0232
RX  1000     1085    1310    1395    1415    1450    1630    1665
RY  1317     1314    1311    1308    1308    1314    1314    1317
KK     10
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 10.
BA  2.02
LG   .16      .33    3.90     .66    3.30
UI  119.     119.    218.    427.    546.    632.    708.    812.    929.   1148.
UI 1499.    1393.   1156.   1006.    894.    765.    669.    577.    475.    325.
UI  210.     201.    193.    119.    119.     86.     36.     36.     36.     36.
UI   36.      36.     36.     36.      0.      0.      0.      0.      0.      0.
UI    0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
KKI1CP10
KM       ADD HYDROGRAPHS AT CP10
HC      2
KK   CP10
KM       ADD HYDROGRAPHS AT CP10
HC      2
KK   CP10
KM       FLOW TO WHITE TANKS #3 UNDER NORTHERN AVE.  THE HEC-2 DIVERSION RATING
KM       CURVE MODELED BY THE FLOOD CONTROL DISTRICT IS INCORPORATED HERE.
DT DCP10
DI      0     1000     3000    4497    5000    6000    8000   10000
DQ      0        0      770    1277    1450    1710    2470    3240
KK RCP10
KM       ROUTE REMAINING HYDROGRAPH AT CP10 TO CP12.
RL                    2.0    1211
RS      1              -1       0
RC   .03      .03     .05    3500   .0057
RX   995     1000    1020    1055    1085    1165    1250    1330
RY  1221     1220    1220    1211    1211    1218    1220    1222
KK     12
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 12.
BA  1.38
LG   .16      .32    4.18     .50    3.00
UI  111.     129.    393.    535.    636.    758.    930.   1311.   1277.   1008.
UI  850.     697.    574.    445.    264.    191.    169.    111.     92.     34.
UI   34.      34.     34.     34.     34.      0.      0.      0.      0.      0.
UI    0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
KK   CP12
KM       ADD HYDROGRAPHS AT CP12.
HC      2
KK RCP12
KM       ROUTE COMBINED HYDROGRAPHS AT CP12 TO CPWT3
RL                    2.0    1196
RS      2              -1       0
RC   .03      .03     .04    4800   .0031
RX   995     1000    1020    1080    1200    1530    1665    1760
RY  1211     1211    1210    1196    1196    1200    1204    1204
KK     11
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 11.
BA  1.56
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LG   .18      .32    3.98     .67    6.80
UI  143.     245.    571.    755.    913.   1142.   1648.   1623.   1254.   1026.
UI  821.     643.    394.    248.    210.    143.     86.     44.     44.     44.
UI   44.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI    0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
KK RCP11
KM      ROUTE HYROGRAPH FROM CP11 TO CP13.
RL                    1.5    1196
RS     3              -1       0
RC    .06     .035    .06   10200   .0098
RX  1000     1070    1300    1480    1510    1525    1555    1600
RY  1233     1232    1230    1222    1222    1230    1232    1233
KK    13
KM      RUNOFF HYDROGRAPH FROM SUB-BASIN 13.
BA  1.30
LG   .15      .33    4.14     .51     .00
UI  120.     210.    485.    639.    774.    973.   1416.   1333.   1039.    847.
UI  674.     527.    303.    206.    167.    120.     60.     37.     37.     37.
UI   37.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI    0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
KK  CP13
KM      ADD HYDROGRAPHS AT CP13.
HC     2
KK RCP13
KM      ROUTE COMBINED HYDROGRAPHS AT CP13 TO CP17
RL                    1.5    1222
RS     2              -1       0
RC    .03      .03    .04    2400   .0042
RX  1000     1025    1040    1065    1085    1110    1175    1200
RY  1206     1198    1196    1194    1194    1198    1198    1201
KK    14
KM      RUNOFF HYDROGRAPH FROM SUB-BASIN 14.
BA  1.47
LG   .20      .34    3.24    1.12    9.00
UI  166.     421.    790.   1019.   1341.   1998.   1636.   1264.    961.    699.
UI  362.     274.    166.     93.     51.     51.     51.      0.      0.      0.
UI    0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
KK RCP14
KM      ROUTE FLOW FROM CP14 TO CP15.
RL                    2.0    1194
RS     4              -1       0
RC    .06     .035    .06    8800  .02556
RX  1000     1030    1075    1200    1220    1280    1415    1480
RY  1296     1295    1294    1288    1288    1294    1296    1300
KK    15
KM      RUNOFF HYDROGRAPH FROM SUB-BASIN 15.
BA  1.26
LG   .18      .33    3.58     .86    6.40
UI  130.     281.    577.    747.    938.   1321.   1552.   1156.    920.    713.
UI  519.     277.    217.    138.     93.     40.     40.     40.     40.      0.
UI    0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI    0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
KKI1CP15
KM      ADD HYDROGRAPHS AT CP15
HC     2
KK    16
KM      RUNOFF HYDROGRAPH FROM SUB-BASIN 16.
BA  1.13
LG   .17      .32    4.08     .41   11.10
UI  115.     240.    503.    652.    814.   1126.   1393.   1049.    839.    655.
UI  497.     268.    194.    137.    101.     35.     35.     35.     35.      0.
UI    0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
UI    0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
KK  SR16
KM      STORAGE ROUTE THROUGH THE CATERPILLAR DETENTION BASIN IN SUBWATERSHED 16
RS     1    STOR       0       0
SV     0       1      31     114     270     502     807    1319    1776    1908
SQ     0                                                                    4050
SE  1198    1200    1210    1220    1230    1240    1250    1260    1266    1267
KK  CP15
KM      ADD HYDROGRAPHS AT CP15.
HC     2
KK RCP15
KM      ROUTE COMBINED HYDROGRAPHS AT CP15 TO CP17.
RL                    2.0    1226
RS     3              -1       0
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RC   .06     .035      .06     6800   .0079
RX  1000     1310     1380     1540    1640     1670     1700     1910
RY  1234     1232     1228     1226    1226     1228     1232     1235
KK    17
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 17.
BA  1.07
LG   .19      .33     4.04      .54     .10
UI  117.     254.     572.     810.   1052.    1196.     753.     635.     540.     450.
UI  353.     287.     254.     194.    149.     129.     103.      90.      64.      57.
UI   57.      26.      22.      22.     22.      22.      22.      22.       0.       0.
UI    0.       0.       0.       0.      0.       0.       0.       0.       0.       0.
KKI1CP17
KM       ADD HYDROGRAPHS AT CP17.
HC     2
KK  CP17
KM       ADD HYDROGRAPHS AT CP17.
HC     2
KK RCP17
KM       ROUTE FLOW FROM CP17 TO CPWT3
RL                     2.0     1182
RS     2                -1        0
RC   .06      .04      .04     1600   .0022
RX  1000     1220     1280     1470    1530     1660     1680     1685
RY  1196     1194     1190     1182    1182     1210     1211     1212
KK   WT3
KM       RUNOFF HYDROGRAPH FROM SUB-BASIN WT3
BA   .44
LG   .35      .32     3.91      .33     .00
UI   36.      44.     128.     175.    207.     249.     308.     436.     399.     318.
UI  267.     220.     179.     133.     78.      61.      49.      36.      23.      11.
UI   11.      11.      11.      11.      0.       0.       0.       0.       0.       0.
UI    0.       0.       0.       0.      0.       0.       0.       0.       0.       0.
KKI1CWT3
KM       ADD HYDROGRAPHS AT CPWT3
HC     2
KK CPWT3
KM       ADD HYDROGRAPHS AT CPWT3
HC     2
KK SRWT3
KM       STORAGE ROUTE THROUGH WHITE TANKS STRUCTURE #3.
RS     1     STOR        0        0
SV     0        1       14       42      91      203      466      958     1704     2716
SV  3012     3325     3657     4006
SQ     0        0        0        0       0        0        0        0        0        0
SQ     0     3550     9000    17600
SE  1174     1176     1180     1184    1188     1192     1196     1200     1204     1208
SE  1209     1210     1211     1212
SS  1209        0        0        0
ST1212.1     7667      2.2      1.5
SW  1000     1995     3000     4000    4988     6008     7007
SE1212.1  1212.4 1212.63 1213.32 1214.72 1214.94   1214.8
ZZ
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FILE = WT3.OUT

1***************************************
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 *                                      *                                                    *
*
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                                    *    U.S. ARMY CORPS OF ENGINEERS
*
 *           SEPTEMBER 1990             *                                                    *    HYDROLOGIC ENGINEERING CENTER
*
 *             VERSION 4.0              *                                                    *          609 SECOND STREET
*
 *                                      *                                                    *        DAVIS, CALIFORNIA 95616
*
 *  RUN DATE  06/20/1996  TIME  07:13:28 *                                                   *            (916) 756-1104
*
 *                                      *                                                    *
*
 ***************************************
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X     X  XXXXXXX   XXXXX         X
X     X  X        X     X       XX
X     X  X        X              X
XXXXXXX  XXXX     X       XXXXX  X
X     X  X        X              X
X     X  X        X     X        X
X     X  XXXXXXX   XXXXX        XXX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

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

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

        1         ID
        2         ID
        3         ID        FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
        4         ID        100-YEAR, 24-HOUR STORM                                  WTADMS.24
        5         ID
        6         ID
        7         ID
                  *DIAGRAM
        8         IT       5                 300
        9         IO       5
       10         IN      15
       11         JD    4.03    .001
       12         PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
       13         PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
       14         PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
       15         PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
       16         PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
       17         PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
       18         PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
       19         PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
       20         PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
       21         PC    .983    .986    .989    .992    .995    .998    1.00   1.000   1.000   1.000
       22         JD    3.99      10
       23         JD    3.83      50
       24         JD    3.76     100
       25         JD    3.70     200

       26         KK       1
       27         KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 1.
       28         BA    1.94
       29         LG     .20     .34    3.21    1.14    9.90
       30         UI    182.    326.    742.    974.   1186.   1502.   2185.   1957.   1537.   1243.
       31         UI    989.    751.    417.    308.    230.    182.     64.     56.     56.     56.
       32         UI     56.      0.      0.      0.      0.      0.      0.      0.      0.      0.
       33         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

       34         KK    RCP1
       35         KM         ROUTE FLOW FROM CP1 TO CP2.
       36         RL                       1    1428
       37         RS       5              -1       0
       38         RC     .06     .04     .06   17800   .0469
       39         RX    1000    1125    1300    1390    1405    1490    1590    1750
       40         RY    1440    1439    1437    1428    1428    1439    1442    1444

       41         KK       2
       42         KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 2.
       43         BA    1.82
       44         LG     .18     .33    3.91     .70   11.70
       45         UI    115.    115.    259.    442.    556.    642.    727.    849.   1013.   1346.
       46         UI   1419.   1145.    985.    864.    735.    634.    545.    405.    268.    202.
       47         UI    189.    144.    115.    103.     35.     35.     35.     35.     35.     35.
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  48          UI     35.      0.      0.      0.      0.      0.      0.      0.      0.      0.
  49          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                          HEC-1 INPUT                                        PAGE  2

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


  50          KK     CP2
  51          KM        ADD HYDROGRAPHS AT CP2.
  52          HC       2

  53          KK    RCP2
  54          KM        ROUTE COMBINED HYDROGRAPHS AT CP2 TO CP3.
  55          RL                     1.5    1298
  56          RS       2              -1       0
  57          RC     .06    .035     .06    4500   .0111
  58          RX    1000    1100    1350    1705    1735    1780    1850    2000
  59          RY    1304    1302    1302    1298    1298    1303    1302    1305

  60          KK      3A
  61          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 3A
  62          BA     .29
  63          LG     .15     .33    3.99     .59     .00
  64          UI     34.     89.    165.    212.    286.    410.    314.    242.    182.    124.
  65          UI     62.     48.     33.     10.     10.     10.     10.      0.      0.      0.
  66          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  67          KK   RCP3A
  68          KM        ROUTE FLOW FROM CP3A TO CP3
  69          RL                     1.5    1284
  70          RS       2              -1       0
  71          RC     .03     .03     .05    5300   .0060
  72          RX    1000    1023    1032    1046    1058    1067    1250    1540
  73          RY    1289    1288    1286    1284    1284    1286    1288    1291

  74          KK       3
  75          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 3.
  76          BA     .81
  77          LG     .15     .33    4.08     .54     .00
  78          UI     91.    228.    430.    554.    725.   1088.    908.    700.    535.    396.
  79          UI    205.    152.     95.     57.     28.     28.     28.      0.      0.      0.
  80          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  81          KK   I1CP3
  82          KM        ADD HYDROGRAPHS AT CP3.
  83          HC       2

  84          KK     CP3
  85          KM        ADD HYDROGRAPHS AT CP3.
  86          HC       2

  87          KK     CP3
  88          KM        DIVERT FLOWS THAT WILL OVERTOP THE BEARDSLEY CANAL AT OLIVE AVENUE.  THE
  89          KM        HEC-2 DIVERSION RATING CURVE MODELED BY THE FLOOD CONTROL DISTRICT IS
  90          KM        INCORPORATED HERE.
  91          DT    DCP3
  92          DI       0    1000    2000    3000    5000    6000    6800    8000
  93          DQ       0       0     435     660    1570    2070    2520    3260
1                                          HEC-1 INPUT                                        PAGE  3

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


  94          KK    RCP3
  95          KM        ROUTE THE REMAINING HYDROGRAPH AT CP3 TO CP10.
  96          RL                       2    1245
  97          RS       2              -1       0
  98          RC     .05     .03     .05    5280   .0083
  99          RX    1010    1015    1020    1050    1100    1275    1580    1750
 100          RY    1251    1249    1249    1245    1245    1250    1250    1254

 101          KK       4
 102          KM        RUNOFF HYDROGRAPH FORM SUB-BASIN 4.
 103          BA     .30
 104          LG     .20     .30    3.87     .77    1.00
 105          UI     48.    192.    287.    444.    512.    346.    236.    115.     67.     35.
 106          UI     14.     14.      0.      0.      0.      0.      0.      0.      0.      0.
 107          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 108          KK       5
 109          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 5.
 110          BA     .72
 111          LG     .20     .34    3.27    1.11    9.20
 112          UI    110.    437.    658.    992.   1242.    849.    591.    315.    174.    101.
 113          UI     34.     34.     34.      0.      0.      0.      0.      0.      0.      0.
 114          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 115          KK     CP5
 116          KM        ADD HYDROGRAPHS AT CP5.
 117          HC       2

 118          KK    RCP5
 119          KM        ROUTE COMBINED HYDROGRAPHS AT CP5 TO CP7.
 120          RL                      .5    2800
 121          RS       1              -1       0
 122          RC     .08     .05     .08    4800   .0833
 123          RX     955     970     985    1000    1020    1035    1050    1065
 124          RY    2815    2810    2805    2800    2800    2805    2810    2815

 125          KK       6
 126          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 6.
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 127          BA     .45
 128          LG     .20      .34     3.21     1.14    10.00
 129          UI    204.     622.    1139.     837.     427.     155.      54.      33.       0.       0.
 130          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

 131          KK   I1CP7
 132          KM         ADD HYDROGRAPHS AT CP7.
 133          HC       2

 134          KK       7
 135          KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 7.
 136          BA     .31
 137          LG     .20      .34     3.21     1.14    10.00
 138          UI    126.     387.     716.     606.     343.     129.      52.      22.       0.       0.
 139          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
1                                     HEC-1 INPUT                                                      PAGE  4

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


 140          KK     CP7
 141          KM         ADD HYDROGRAPHS AT CP7.
 142          HC       2

 143          KK    RCP7
 144          KM         ROUTE COMBINED HYDROGRAPHS AT CP7 TO CP9.
 145          RL                          .5     1838
 146          RS       3                  -1        0
 147          RC     .08      .05      .08    10200   .07745
 148          RX    1000     1045     1120     1195     1230     1300     1350     1450
 149          RY    1910     1880     1850     1838     1838     1850     1880     1910

 150          KK       9
 151          KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 9.
 152          BA    1.40
 153          LG     .20      .34     3.24     1.12     9.70
 154          UI    155.     381.     727.     935.    1216.    1832.    1591.    1224.     938.     705.
 155          UI    386.     261.     177.     115.      47.      47.      47.      47.       0.       0.
 156          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

 157          KK   I1CP9
 158          KM         ADD HYDROGRAPHS AT CP9.
 159          HC       2

 160          KK       8
 161          KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 8.
 162          BA     .81
 163          LG     .20      .34     3.21     1.14    10.00
 164          UI    102.     313.     535.     703.    1054.    1140.     822.     608.     421.     208.
 165          UI    147.      96.      31.      31.      31.       0.       0.       0.       0.       0.
 166          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

 167          KK     CP9
 168          KM         ADD HYDROGRAPHS AT CP9.
 169          HC       2

 170          KK    RCP9
 171          KM         ROUTE COMBINED HYDROGRAPHS AT CP9 TO CP10.
 172          RL                         1.5     1308
 173          RS       8                  -1        0
 174          RC     .06     .035      .06    19200    .0232
 175          RX    1000     1085     1310     1395     1415     1450     1630     1665
 176          RY    1317     1314     1311     1308     1308     1314     1314     1317

 177          KK      10
 178          KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 10.
 179          BA    2.02
 180          LG     .16      .33     3.90      .66     3.30
 181          UI    119.     119.     218.     427.     546.     632.     708.     812.     929.    1148.
 182          UI   1499.    1393.    1156.    1006.     894.     765.     669.     577.     475.     325.
 183          UI    210.     201.     193.     119.     119.      86.      36.      36.      36.      36.
 184          UI     36.      36.      36.      36.       0.       0.       0.       0.       0.       0.
 185          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
1                                     HEC-1 INPUT                                                      PAGE  5

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


 186          KK  I1CP10
 187          KM         ADD HYDROGRAPHS AT CP10
 188          HC       2

 189          KK    CP10
 190          KM         ADD HYDROGRAPHS AT CP10
 191          HC       2

 192          KK    CP10
 193          KM         FLOW TO WHITE TANKS #3 UNDER NORTHERN AVE.  THE HEC-2 DIVERSION RATING
 194          KM         CURVE MODELED BY THE FLOOD CONTROL DISTRICT IS INCORPORATED HERE.
 195          DT   DCP10
 196          DI       0     1000     3000     4497     5000     6000     8000    10000
 197          DQ       0        0      770     1277     1450     1710     2470     3240

 198          KK   RCP10
 199          KM         ROUTE REMAINING HYDROGRAPH AT CP10 TO CP12.
 200          RL                         2.0     1211
 201          RS       1                  -1        0
 202          RC     .03      .03      .05     3500    .0057
 203          RX     995     1000     1020     1055     1085     1165     1250     1330
 204          RY    1221     1220     1220     1211     1211     1218     1220     1222
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 205          KK      12
 206          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 12.
 207          BA    1.38
 208          LG     .16     .32    4.18     .50    3.00
 209          UI    111.    129.    393.    535.    636.    758.    930.   1311.   1277.   1008.
 210          UI    850.    697.    574.    445.    264.    191.    169.    111.     92.     34.
 211          UI     34.     34.     34.     34.     34.      0.      0.      0.      0.      0.
 212          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 213          KK    CP12
 214          KM        ADD HYDROGRAPHS AT CP12.
 215          HC       2

 216          KK   RCP12
 217          KM        ROUTE COMBINED HYDROGRAPHS AT CP12 TO CPWT3
 218          RL                     2.0    1196
 219          RS       2              -1       0
 220          RC     .03     .03     .04    4800   .0031
 221          RX     995    1000    1020    1080    1200    1530    1665    1760
 222          RY    1211    1211    1210    1196    1196    1200    1204    1204

 223          KK      11
 224          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 11.
 225          BA    1.56
 226          LG     .18     .32    3.98     .67    6.80
 227          UI    143.    245.    571.    755.    913.   1142.   1648.   1623.   1254.   1026.
 228          UI    821.    643.    394.    248.    210.    143.     86.     44.     44.     44.
 229          UI     44.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 230          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                          HEC-1 INPUT                                          PAGE  6

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


 231          KK   RCP11
 232          KM        ROUTE HYROGRAPH FROM CP11 TO CP13.
 233          RL                     1.5    1196
 234          RS       3              -1       0
 235          RC     .06    .035     .06   10200   .0098
 236          RX    1000    1070    1300    1480    1510    1525    1555    1600
 237          RY    1233    1232    1230    1222    1222    1230    1232    1233

 238          KK      13
 239          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 13.
 240          BA    1.30
 241          LG     .15     .33    4.14     .51     .00
 242          UI    120.    210.    485.    639.    774.    973.   1416.   1333.   1039.    847.
 243          UI    674.    527.    303.    206.    167.    120.     60.     37.     37.     37.
 244          UI     37.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 245          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 246          KK    CP13
 247          KM        ADD HYDROGRAPHS AT CP13.
 248          HC       2

 249          KK   RCP13
 250          KM        ROUTE COMBINED HYDROGRAPHS AT CP13 TO CP17
 251          RL                     1.5    1222
 252          RS       2              -1       0
 253          RC     .03     .03     .04    2400   .0042
 254          RX    1000    1025    1040    1065    1085    1110    1175    1200
 255          RY    1206    1198    1196    1194    1194    1198    1198    1201

 256          KK      14
 257          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 14.
 258          BA    1.47
 259          LG     .20     .34    3.24    1.12    9.00
 260          UI    166.    421.    790.   1019.   1341.   1998.   1636.   1264.    961.    699.
 261          UI    362.    274.    166.     93.     51.     51.     51.      0.      0.      0.
 262          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 263          KK   RCP14
 264          KM        ROUTE FLOW FROM CP14 TO CP15.
 265          RL                     2.0    1194
 266          RS       4              -1       0
 267          RC     .06    .035     .06    8800  .02556
 268          RX    1000    1030    1075    1200    1220    1280    1415    1480
 269          RY    1296    1295    1294    1288    1288    1294    1296    1300

 270          KK      15
 271          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 15.
 272          BA    1.26
 273          LG     .18     .33    3.58     .86    6.40
 274          UI    130.    281.    577.    747.    938.   1321.   1552.   1156.    920.    713.
 275          UI    519.    277.    217.    138.     93.     40.     40.     40.     40.      0.
 276          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 277          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                          HEC-1 INPUT                                          PAGE  7

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


 278          KK  I1CP15
 279          KM        ADD HYDROGRAPHS AT CP15
 280          HC       2

 281          KK      16
 282          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 16.
 283          BA    1.13
 284          LG     .17     .32    4.08     .41   11.10
 285          UI    115.    240.    503.    652.    814.   1126.   1393.   1049.    839.    655.
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           286            UI    497.     268.     194.     137.     101.      35.      35.      35.      35.       0.
           287            UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
           288            UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.

           289            KK    SR16
           290            KM         STORAGE ROUTE THROUGH THE CATERPILLAR DETENTION BASIN IN SUBWATERSHED 16
           291            RS       1    STOR        0        0
           292            SV       0       1       31      114      270      502      807     1319     1776     1908
           293            SQ       0                                                                         4050
           294            SE    1198    1200     1210     1220     1230     1240     1250     1260     1266     1267

           295            KK    CP15
           296            KM         ADD HYDROGRAPHS AT CP15.
           297            HC       2

           298            KK   RCP15
           299            KM         ROUTE COMBINED HYDROGRAPHS AT CP15 TO CP17.
           300            RL                        2.0     1226
           301            RS       3                 -1        0
           302            RC     .06    .035      .06     6800    .0079
           303            RX    1000    1310     1380     1540     1640     1670     1700     1910
           304            RY    1234    1232     1228     1226     1226     1228     1232     1235

           305            KK      17
           306            KM         RUNOFFF HYDROGRAPH FROM SUB-BASIN 17.
           307            BA    1.07
           308            LG     .19     .33     4.04      .54      .10
           309            UI    117.    254.     572.     810.    1052.    1196.     753.     635.     540.     450.
           310            UI    353.    287.     254.     194.     149.     129.     103.      90.      64.      57.
           311            UI     57.     26.      22.      22.      22.      22.      22.      22.       0.       0.
           312            UI      0.      0.       0.       0.       0.       0.       0.       0.       0.       0.

           313            KK   I1CP17
           314            KM         ADD HYDROGRAPHS AT CP17.
           315            HC       2

           316            KK    CP17
           317            KM         ADD HYDROGRAPHS AT CP17.
           318            HC       2
1                                                   HEC-1 INPUT                                                  PAGE  8

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


           319            KK   RCP17
           320            KM         ROUTE FLOW FROM CP17 TO CPWT3
           321            RL                        2.0     1182
           322            RS       2                 -1        0
           323            RC     .06     .04      .04     1600    .0022
           324            RX    1000    1220     1280     1470     1530     1660     1680     1685
           325            RY    1196    1194     1190     1182     1182     1210     1211     1212

           326            KK     WT3
           327            KM         RUNOFF HYDROGRAPH FROM SUB-BASIN WT3
           328            BA     .44
           329            LG     .35     .32     3.91      .33      .00
           330            UI     36.     44.     128.     175.     207.     249.     308.     436.     399.     318.
           331            UI    267.    220.     179.     133.      78.      61.      49.      36.      23.      11.
           332            UI     11.     11.      11.      11.       0.       0.       0.       0.       0.       0.
           333            UI      0.      0.       0.       0.       0.       0.       0.       0.       0.       0.

           334            KK   I1CWT3
           335            KM         ADD HYDROGRAPHS AT CPWT3
           336            HC       2

           337            KK   CPWT3
           338            KM         ADD HYDROGRAPHS AT CPWT3
           339            HC       2

           340            KK   SRWT3
           341            KM         STORAGE ROUTE THROUGH WHITE TANKS STRUCTURE #3.
           342            RS       1    STOR        0        0
           343            SV       0       1       14       42       91      203      466      958     1704     2716
           344            SV    3012    3325     3657     4006
           345            SQ       0       0        0        0        0        0        0        0        0        0
           346            SQ       0    3550     9000    17600
           347            SE    1174    1176     1180     1184     1188     1192     1196     1200     1204     1208
           348            SE    1209    1210     1211     1212
           349            SS    1209       0        0        0
           350            ST  1212.1    7667      2.2      1.5
           351            SW    1000    1995     3000     4000     4988     6008     7007
           352            SE  1212.1  1212.4  1212.63  1213.32  1214.72  1214.94  1214.8
           353            ZZ
1
           SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

    26           1
                 V
                 V
    34         RCP1
                 .
                 .
    41           .           2
                 .           .
                 .           .
    50          CP2...........
                 V
```

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             V
  53      RCP2
             .
             .
  60         .          3A
             .           V
             .           V
  67         .       RCP3A
             .           .
             .           .
  74         .           .           3
             .           .           .
             .           .           .
  81         .       I1CP3............
             .           .
             .           .
  84       CP3............
             .
             .
  91         .------->    DCP3
  87       CP3
             V
             V
  94      RCP3
             .
             .
 101         .           4
             .           .
             .           .
 108         .           .           5
             .           .           .
             .           .           .
 115         .         CP5............
             .           V
             .           V
 118         .        RCP5
             .           .
             .           .
 125         .           .           6
             .           .           .
             .           .           .
 131         .       I1CP7............
             .           .
             .           .
 134         .           .           7
             .           .           .
             .           .           .
 140         .         CP7............
             .           V
             .           V
 143         .        RCP7
             .           .
             .           .
 150         .           .           9
             .           .           .
             .           .           .
 157         .       I1CP9............
             .           .
             .           .
 160         .           .           8
             .           .           .
             .           .           .
 167         .         CP9............
             .           V
             .           V
 170         .        RCP9
             .           .
             .           .
 177         .           .          10
             .           .           .
             .           .           .
 186         .      I1CP10............
             .           .
             .           .
 189      CP10............
             .
             .
 195         .------->    DCP10
 192      CP10
             V
             V
 198     RCP10
             .
             .
 205         .          12
             .           .
             .           .
 213      CP12............
             V
             V
 216     RCP12
             .
             .
 223         .          11
             .           V
             .           V
 231         .       RCP11
             .           .
             .           .
 238         .           .          13
             .           .           .
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 246          .        CP13...........
              .           V
              .           V
 249          .       RCP13
              .           .
              .           .
 256          .           .        14
              .           .         V
              .           .         V
 263          .           .     RCP14
              .           .         .
              .           .         .
 270          .           .         .           15
              .           .         .            .
              .           .         .            .
 278          .           .    I1CP15............
              .           .         .
              .           .         .
 281          .           .         .           16
              .           .         .            V
              .           .         .            V
 289          .           .         .         SR16
              .           .         .            .
              .           .         .            .
 295          .           .      CP15............
              .           .         V
              .           .         V
 298          .           .     RCP15
              .           .         .
              .           .         .
 305          .           .         .           17
              .           .         .            .
              .           .         .            .
 313          .           .    I1CP17............
              .           .         .
              .           .         .
 316          .        CP17............
              .           V
              .           V
 319          .       RCP17
              .           .
              .           .
 326          .           .       WT3
              .           .         .
              .           .         .
 334          .     I1CWT3............
              .           .
              .           .
 337      CPWT3............
              V
              V
 340      SRWT3

 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************
*****************************************
 *                                        *           *
*
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *           *   U.S. ARMY CORPS OF ENGINEERS
*
 *           SEPTEMBER 1990               *           *   HYDROLOGIC ENGINEERING CENTER
*
 *             VERSION 4.0                *           *         609 SECOND STREET
*
 *                                        *           *      DAVIS, CALIFORNIA 95616
*
 *  RUN DATE  06/20/1996  TIME  07:13:28  *           *         (916) 756-1104
*
 *                                        *           *
*
 *****************************************
*****************************************


              FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
              100-YEAR, 24-HOUR STORM                                  WTADMS.24


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

   IT         HYDROGRAPH TIME DATA
                    NMIN          5  MINUTES IN COMPUTATION INTERVAL
                   IDATE      1   0  STARTING DATE
                   ITIME       0000  STARTING TIME
                      NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                  NDDATE      2   0  ENDING DATE
                  NDTIME       0055  ENDING TIME
                   ICENT         19  CENTURY MARK

          COMPUTATION INTERVAL     .08 HOURS
```

TOTAL TIME BASE 24.92 HOURS

ENGLISH UNITS

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

11 JD INDEX STORM NO. 1

STRM 4.03 PRECIPITATION DEPTH

TRDA .00 TRANSPOSITION DRAINAGE AREA

12 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.01	.00	.01
.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.01	.01	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00		

22 JD INDEX STORM NO. 2

STRM 3.99 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.01	.00	.01
.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
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23 JD INDEX STORM NO. 3

STRM 3.83 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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.03	.09	.09	.09	.01	.01	.01	.01	.01	.01

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24 JD INDEX STORM NO. 4

STRM 3.76 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
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25 JD INDEX STORM NO. 5

STRM 3.70 PRECIPITATION DEPTH

TRDA 200.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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.01	.01	.01	.01	.01	.01	.01	.01	.03	.03
.03	.09	.09	.09	.01	.01	.01	.01	.01	.01
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1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+					6-HOUR	24-HOUR	72-HOUR			
	HYDROGRAPH AT									
+		1	1342.	12.50	175.	50.	48.	1.94		
	ROUTED TO									
+		RCP1	1114.	12.75	165.	42.	40.	1.94		
	HYDROGRAPH AT									
+		2	1174.	12.75	206.	58.	56.	1.82		

+	2 COMBINED AT	CP2	2284.	12.75	370.	100.	96.	3.76
+	ROUTED TO	RCP2	2048.	12.92	358.	92.	88.	3.76
+	HYDROGRAPH AT	3A	296.	12.33	29.	7.	7.	.29
+	ROUTED TO	RCP3A	229.	12.58	27.	7.	7.	.29
+	HYDROGRAPH AT	3	828.	12.33	83.	21.	20.	.81
+	2 COMBINED AT	I1CP3	997.	12.42	110.	28.	27.	1.10
+	2 COMBINED AT	CP3	2245.	12.92	468.	119.	115.	4.86
+	DIVERSION TO	DCP3	490.	12.92	60.	15.	14.	4.86
+	HYDROGRAPH AT	CP3	1755.	12.92	408.	104.	100.	4.86
+	ROUTED TO	RCP3	1647.	13.08	391.	98.	94.	4.86
+	HYDROGRAPH AT	4	339.	12.25	26.	7.	6.	.30
+	HYDROGRAPH AT	5	716.	12.25	65.	18.	18.	.72
+	2 COMBINED AT	CP5	1053.	12.25	90.	25.	24.	1.02
+	ROUTED TO	RCP5	973.	12.33	89.	24.	23.	1.02
+	HYDROGRAPH AT	6	591.	12.08	41.	12.	11.	.45
+	2 COMBINED AT	I1CP7	1289.	12.17	130.	35.	34.	1.47
+	HYDROGRAPH AT	7	390.	12.08	28.	8.	8.	.31
+	2 COMBINED AT	CP7	1668.	12.17	158.	43.	41.	1.78
+	ROUTED TO	RCP7	1435.	12.33	151.	38.	36.	1.78
+	HYDROGRAPH AT	9	1096.	12.42	127.	36.	35.	1.40
+	2 COMBINED AT	I1CP9	2527.	12.33	277.	74.	71.	3.18
+	HYDROGRAPH AT	8	704.	12.33	73.	21.	20.	.81
+	2 COMBINED AT	CP9	3227.	12.33	350.	94.	91.	3.99
+	ROUTED TO	RCP9	2648.	12.75	326.	81.	78.	3.99
+	HYDROGRAPH AT	10	1173.	12.75	201.	52.	50.	2.02
+	2 COMBINED AT	I1CP10	3816.	12.75	525.	133.	129.	6.01
+	2 COMBINED AT	CP10	5141.	12.75	911.	230.	222.	10.87
+	DIVERSION TO	DCP10	1486.	12.75	193.	48.	46.	10.87
+	HYDROGRAPH AT	CP10	3655.	12.75	718.	182.	175.	10.87
+	ROUTED TO	RCP10	3503.	12.92	711.	178.	171.	10.87
+	HYDROGRAPH AT	12	1149.	12.58	156.	40.	39.	1.38
+	2 COMBINED AT	CP12	4125.	12.83	861.	217.	209.	12.25
+	ROUTED TO	RCP12	3696.	13.08	822.	205.	198.	12.25
+	HYDROGRAPH AT	11	1313.	12.50	165.	44.	43.	1.56

+	ROUTED TO	RCP11	1011.	12.75	164.	44.	43.	1.56
+	HYDROGRAPH AT	13	1170.	12.42	137.	34.	33.	1.30
+	2 COMBINED AT	CP13	1743.	12.58	301.	78.	76.	2.86
+	ROUTED TO	RCP13	1719.	12.67	301.	78.	75.	2.86
+	HYDROGRAPH AT	14	1163.	12.33	130.	37.	35.	1.47
+	ROUTED TO	RCP14	1041.	12.58	130.	37.	35.	1.47
+	HYDROGRAPH AT	15	1039.	12.42	117.	32.	30.	1.26
+	2 COMBINED AT	I1CP15	1920.	12.50	246.	68.	66.	2.73
+	HYDROGRAPH AT	16	1255.	12.42	155.	43.	41.	1.13
+	ROUTED TO	SR16	0.	.08	0.	0.	0.	1.13
+	2 COMBINED AT	CP15	1920.	12.50	246.	68.	66.	3.86
+	ROUTED TO	RCP15	1453.	12.83	211.	53.	51.	3.86
+	HYDROGRAPH AT	17	929.	12.25	110.	27.	26.	1.07
+	2 COMBINED AT	I1CP17	1738.	12.75	321.	80.	77.	4.93
+	2 COMBINED AT	CP17	3428.	12.75	621.	158.	153.	7.79
+	ROUTED TO	RCP17	3377.	12.83	614.	154.	148.	7.79
+	HYDROGRAPH AT	WT3	413.	12.50	54.	14.	13.	.44
+	2 COMBINED AT	I1CWT3	3605.	12.83	668.	167.	161.	8.23
+	2 COMBINED AT	CPWT3	6649.	12.92	1450.	362.	349.	20.48
+	ROUTED TO	SRWT3	0.	.08	0.	0.	0.	20.48

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION SRWT3

(PEAKS SHOWN ARE FOR INTERNAL TIME STEP USED DURING BREACH FORMATION)

PLAN 1 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1198.35	.00	755.	0.	.00	.00	.00

PLAN 2 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1198.25	.00	742.	0.	.00	.00	.00

PLAN 3 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.82	.00	690.	0.	.00	.00	.00

PLAN 4 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.64	.00	668.	0.	.00	.00	.00

PLAN 5 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.48	.00	648.	0.	.00	.00	.00

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

FILE = WT3-B1&2.OUT

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1***************************************
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 *                                     *                                                  *
*
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                                 *   U.S. ARMY CORPS OF ENGINEERS
*
 *              MAY   1991              *                                                 *   HYDROLOGIC ENGINEERING CENTER
*
 *           VERSION 4.0.1E             *                                                 *        609 SECOND STREET
*
 *     Lahey F77L-EM/32 version 5.01    *                                                 *      DAVIS, CALIFORNIA 95616
*
 *       Dodson & Associates, Inc.      *                                                 *          (916) 551-1748
*
 *  RUN DATE  04/23/97  TIME  09:49:21  *                                                 *
*
 ***************************************
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                    X     X  X        X     X        XX
                    X     X  X        X               X
                    XXXXXXX  XXXX     X        XXXXX  X
                    X     X  X        X               X
                    X     X  X        X     X         X
                    X     X  XXXXXXX   XXXXX         XXX


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

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

1                                              HEC-1 INPUT                                          PAGE  1

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

        1           ID
        2           ID         MODEL = WT3-B1&2.DAT IS TAKEN FROM WT3.DAT WHICH IS FROM THE
        3           ID         FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
        4           ID         100-YEAR, 24-HOUR STORM                                    WTADMS.24
        5           ID
        6           ID            MODEL WT3-B1&2 REMOVES SUBBASINS 1 AND 2 FROM MODEL WT3
        7           ID
        8           ID                    R.W. CRUFF, P.E.         APRIL 23, 1997
        9           ID
                    *DIAGRAM
       10           IT      5                    300
       11           IO      5
       12           IN     15
       13           JD   4.03    .001
       14           PC   .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
       15           PC   .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
       16           PC   .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
       17           PC   .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
       18           PC   .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
       19           PC   .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
       20           PC   .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
       21           PC   .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
       22           PC   .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
       23           PC   .983    .986    .989    .992    .995    .998    1.00   1.000   1.000   1.000
       24           JD   3.99      10
       25           JD   3.83      50
       26           JD   3.76     100
       27           JD   3.70     200

       28           KK     3A
       29           KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 3A
       30           BA    .29
       31           LG    .15     .33    3.99     .59     .00
       32           UI    34.     89.    165.    212.    286.    410.    314.    242.    182.    124.
       33           UI    62.     48.     33.     10.     10.     10.     10.      0.      0.      0.
       34           UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

       35           KK  RCP3A
       36           KM         ROUTE FLOW FROM CP3A TO CP3
       37           RL                    1.5    1284
       38           RS      2              -1       0
       39           RC    .03     .03     .05    5300   .0060
       40           RX   1000    1023    1032    1046    1058    1067    1250    1540
       41           RY   1289    1288    1286    1284    1284    1286    1288    1291

       42           KK      3
       43           KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 3.
       44           BA    .81
       45           LG    .15     .33    4.08     .54     .00
       46           UI    91.    228.    430.    554.    725.   1088.    908.    700.    535.    396.
       47           UI   205.    152.     95.     57.     28.     28.     28.      0.      0.      0.
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 48          UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                      HEC-1 INPUT                                                   PAGE  2

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


 49          KK   I1CP3
 50          KM       ADD HYDROGRAPHS AT CP3.
 51          HC       2

 52          KK     CP3
 53          KM       DIVERT FLOWS THAT WILL OVERTOP THE BEARDSLEY CANAL AT OLIVE AVENUE.  THE
 54          KM       HEC-2 DIVERSION RATING CURVE MODELED BY THE FLOOD CONTROL DISTRICT IS
 55          KM       INCORPORATED HERE.
 56          DT    DCP3
 57          DI       0    1000    2000    3000    5000    6000    6800    8000
 58          DQ       0       0     435     660    1570    2070    2520    3260

 59          KK    RCP3
 60          KM       ROUTE THE REMAINING HYDROGRAPH AT CP3 TO CP10.
 61          RL                       2    1245
 62          RS       2              -1       0
 63          RC     .05     .03     .05    5280   .0083
 64          RX    1010    1015    1020    1050    1100    1275    1580    1750
 65          RY    1251    1249    1249    1245    1245    1250    1250    1254

 66          KK       4
 67          KM       RUNOFF HYDROGRAPH FORM SUB-BASIN 4.
 68          BA     .30
 69          LG     .20     .30    3.87     .77    1.00
 70          UI     48.    192.    287.    444.    512.    346.    236.    115.     67.     35.
 71          UI     14.     14.      0.      0.      0.      0.      0.      0.      0.      0.
 72          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 73          KK       5
 74          KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 5.
 75          BA     .72
 76          LG     .20     .34    3.27    1.11    9.20
 77          UI    110.    437.    658.    992.   1242.    849.    591.    315.    174.    101.
 78          UI     34.     34.     34.      0.      0.      0.      0.      0.      0.      0.
 79          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 80          KK     CP5
 81          KM       ADD HYDROGRAPHS AT CP5.
 82          HC       2

 83          KK    RCP5
 84          KM       ROUTE COMBINED HYDROGRAPHS AT CP5 TO CP7.
 85          RL                      .5    2800
 86          RS       1              -1       0
 87          RC     .08     .05     .08    4800   .0833
 88          RX     955     970     985    1000    1020    1035    1050    1065
 89          RY    2815    2810    2805    2800    2800    2805    2810    2815

 90          KK       6
 91          KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 6.
 92          BA     .45
 93          LG     .20     .34    3.21    1.14   10.00
 94          UI    204.    622.   1139.    837.    427.    155.     54.     33.      0.      0.
 95          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                      HEC-1 INPUT                                                   PAGE  3

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


 96          KK   I1CP7
 97          KM       ADD HYDROGRAPHS AT CP7.
 98          HC       2

 99          KK       7
100          KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 7.
101          BA     .31
102          LG     .20     .34    3.21    1.14   10.00
103          UI    126.    387.    716.    606.    343.    129.     52.     22.      0.      0.
104          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

105          KK     CP7
106          KM       ADD HYDROGRAPHS AT CP7.
107          HC       2

108          KK    RCP7
109          KM       ROUTE COMBINED HYDROGRAPHS AT CP7 TO CP9.
110          RL                      .5    1838
111          RS       3              -1       0
112          RC     .08     .05     .08   10200  .07745
113          RX    1000    1045    1120    1195    1230    1300    1350    1450
114          RY    1910    1880    1850    1838    1838    1850    1880    1910

115          KK       9
116          KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 9.
117          BA    1.40
118          LG     .20     .34    3.24    1.12    9.70
119          UI    155.    381.    727.    935.   1216.   1832.   1591.   1224.    938.    705.
120          UI    386.    261.    177.    115.     47.     47.     47.     47.      0.      0.
121          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

122          KK   I1CP9
123          KM       ADD HYDROGRAPHS AT CP9.
124          HC       2

125          KK       8
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 126        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 8.
 127        BA     .81
 128        LG     .20     .34    3.21    1.14   10.00
 129        UI    102.    313.    535.    703.   1054.   1140.    822.    608.    421.    208.
 130        UI    147.     96.     31.     31.     31.      0.      0.      0.      0.      0.
 131        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 132        KK     CP9
 133        KM       ADD HYDROGRAPHS AT CP9.
 134        HC       2

 135        KK    RCP9
 136        KM       ROUTE COMBINED HYDROGRAPHS AT CP9 TO CP10.
 137        RL                     1.5    1308
 138        RS       8              -1       0
 139        RC     .06    .035     .06   19200   .0232
 140        RX    1000    1085    1310    1395    1415    1450    1630    1665
 141        RY    1317    1314    1311    1308    1308    1314    1314    1317
1                                      HEC-1 INPUT                                               PAGE  4

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


 142        KK      10
 143        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 10.
 144        BA    2.02
 145        LG     .16     .33    3.90     .66    3.30
 146        UI    119.    119.    218.    427.    546.    632.    708.    812.    929.   1148.
 147        UI   1499.   1393.   1156.   1006.    894.    765.    669.    577.    475.    325.
 148        UI    210.    201.    193.    119.    119.     86.     36.     36.     36.     36.
 149        UI     36.     36.     36.     36.      0.      0.      0.      0.      0.      0.
 150        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 151        KK  I1CP10
 152        KM       ADD HYDROGRAPHS AT CP10
 153        HC       2

 154        KK    CP10
 155        KM       ADD HYDROGRAPHS AT CP10
 156        HC       2

 157        KK    CP10
 158        KM       FLOW TO WHITE TANKS #3 UNDER NORTHERN AVE.  THE HEC-2 DIVERSION RATING
 159        KM       CURVE MODELED BY THE FLOOD CONTROL DISTRICT IS INCORPORATED HERE.
 160        DT   DCP10
 161        DI       0    1000    3000    4497    5000    6000    8000   10000
 162        DQ       0       0     770    1277    1450    1710    2470    3240

 163        KK   RCP10
 164        KM       ROUTE REMAINING HYDROGRAPH AT CP10 TO CP12.
 165        RL                     2.0    1211
 166        RS       1              -1       0
 167        RC     .03     .03     .05    3500   .0057
 168        RX     995    1000    1020    1055    1085    1165    1250    1330
 169        RY    1221    1220    1220    1211    1211    1218    1220    1222

 170        KK      12
 171        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 12.
 172        BA    1.38
 173        LG     .16     .32    4.18     .50    3.00
 174        UI    111.    129.    393.    535.    636.    758.    930.   1311.   1277.   1008.
 175        UI    850.    697.    574.    445.    264.    191.    169.    111.     92.     34.
 176        UI     34.     34.     34.     34.     34.      0.      0.      0.      0.      0.
 177        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 178        KK    CP12
 179        KM       ADD HYDROGRAPHS AT CP12.
 180        HC       2

 181        KK   RCP12
 182        KM       ROUTE COMBINED HYDROGRAPHS AT CP12 TO CPWT3
 183        RL                     2.0    1196
 184        RS       2              -1       0
 185        RC     .03     .03     .04    4800   .0031
 186        RX     995    1000    1020    1080    1200    1530    1665    1760
 187        RY    1211    1211    1210    1196    1196    1200    1204    1204
1                                      HEC-1 INPUT                                               PAGE  5

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


 188        KK      11
 189        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 11.
 190        BA    1.56
 191        LG     .18     .32    3.98     .67    6.80
 192        UI    143.    245.    571.    755.    913.   1142.   1648.   1623.   1254.   1026.
 193        UI    821.    643.    394.    248.    210.    143.     86.     44.     44.     44.
 194        UI     44.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 195        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 196        KK   RCP11
 197        KM       ROUTE HYROGRAPH FROM CP11 TO CP13.
 198        RL                     1.5    1196
 199        RS       3              -1       0
 200        RC     .06    .035     .06   10200   .0098
 201        RX    1000    1070    1300    1480    1510    1525    1555    1600
 202        RY    1233    1232    1230    1222    1222    1230    1232    1233

 203        KK      13
 204        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 13.
 205        BA    1.30
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 206          LG     .15     .33    4.14     .51     .00
 207          UI    120.    210.    485.    639.    774.    973.   1416.   1333.   1039.    847.
 208          UI    674.    527.    303.    206.    167.    120.     60.     37.     37.     37.
 209          UI     37.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 210          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 211          KK    CP13
 212          KM        ADD HYDROGRAPHS AT CP13.
 213          HC       2

 214          KK   RCP13
 215          KM        ROUTE COMBINED HYDROGRAPHS AT CP13 TO CP17
 216          RL                     1.5    1222
 217          RS       2              -1       0
 218          RC     .03     .03     .04    2400   .0042
 219          RX    1000    1025    1040    1065    1085    1110    1175    1200
 220          RY    1206    1198    1196    1194    1194    1198    1198    1201

 221          KK      14
 222          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 14.
 223          BA    1.47
 224          LG     .20     .34    3.24    1.12    9.00
 225          UI    166.    421.    790.   1019.   1341.   1998.   1636.   1264.    961.    699.
 226          UI    362.    274.    166.     93.     51.     51.     51.      0.      0.      0.
 227          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 228          KK   RCP14
 229          KM        ROUTE FLOW FROM CP14 TO CP15.
 230          RL                     2.0    1194
 231          RS       4              -1       0
 232          RC     .06    .035     .06    8800  .02556
 233          RX    1000    1030    1075    1200    1220    1280    1415    1480
 234          RY    1296    1295    1294    1288    1288    1294    1296    1300
1                                          HEC-1 INPUT                                              PAGE  6

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


 235          KK      15
 236          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 15.
 237          BA    1.26
 238          LG     .18     .33    3.58     .86    6.40
 239          UI    130.    281.    577.    747.    938.   1321.   1552.   1156.    920.    713.
 240          UI    519.    277.    217.    138.     93.     40.     40.     40.     40.      0.
 241          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 242          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 243          KK  I1CP15
 244          KM        ADD HYDROGRAPHS AT CP15
 245          HC       2

 246          KK      16
 247          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 16.
 248          BA    1.13
 249          LG     .17     .32    4.08     .41   11.10
 250          UI    115.    240.    503.    652.    814.   1126.   1393.   1049.    839.    655.
 251          UI    497.    268.    194.    137.    101.     35.     35.     35.     35.      0.
 252          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 253          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 254          KK    SR16
 255          KM        STORAGE ROUTE THROUGH THE CATERPILLAR DETENTION BASIN IN SUBWATERSHED 16
 256          RS       1    STOR       0       0
 257          SV       0       1      31     114     270     502     807    1319    1776    1908
 258          SQ       0                                                                    4050
 259          SE    1198    1200    1210    1220    1230    1240    1250    1260    1266    1267

 260          KK    CP15
 261          KM        ADD HYDROGRAPHS AT CP15.
 262          HC       2

 263          KK   RCP15
 264          KM        ROUTE COMBINED HYDROGRAPHS AT CP15 TO CP17.
 265          RL                     2.0    1226
 266          RS       3              -1       0
 267          RC     .06    .035     .06    6800   .0079
 268          RX    1000    1310    1380    1540    1640    1670    1700    1910
 269          RY    1234    1232    1228    1226    1226    1228    1232    1235

 270          KK      17
 271          KM        RUNOFFF HYDROGRAPH FROM SUB-BASIN 17.
 272          BA    1.07
 273          LG     .19     .33    4.04     .54     .10
 274          UI    117.    254.    572.    810.   1052.   1196.    753.    635.    540.    450.
 275          UI    353.    287.    254.    194.    149.    129.    103.     90.     64.     57.
 276          UI     57.     26.     22.     22.     22.     22.     22.     22.      0.      0.
 277          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                          HEC-1 INPUT                                              PAGE  7

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


 278          KK  I1CP17
 279          KM        ADD HYDROGRAPHS AT CP17.
 280          HC       2

 281          KK    CP17
 282          KM        ADD HYDROGRAPHS AT CP17.
 283          HC       2

 284          KK   RCP17
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285        KM         ROUTE FLOW FROM CP17 TO CPWT3
286        RL                          2.0     1182
287        RS       2                   -1        0
288        RC     .06      .04         .04     1600    .0022
289        RX    1000     1220        1280     1470     1530     1660     1680     1685
290        RY    1196     1194        1190     1182     1182     1210     1211     1212

291        KK     WT3
292        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN WT3
293        BA     .44
294        LG     .35      .32        3.91      .33      .00
295        UI     36.      44.        128.     175.     207.     249.     308.     436.     399.     318.
296        UI    267.     220.        179.     133.      78.      61.      49.      36.      23.      11.
297        UI     11.      11.         11.      11.       0.       0.       0.       0.       0.       0.
298        UI      0.       0.          0.       0.       0.       0.       0.       0.       0.       0.

299        KK  I1CWT3
300        KM         ADD HYDROGRAPHS AT CPWT3
301        HC       2

302        KK   CPWT3
303        KM         ADD HYDROGRAPHS AT CPWT3
304        HC       2

305        KK   SRWT3
306        KM         STORAGE ROUTE THROUGH WHITE TANKS STRUCTURE #3.
307        RS       1     STOR           0        0
308        SV       0        1          14       42       91      203      466      958     1704     2716
309        SV    3012     3325        3657     4006
310        SQ       0        0           0        0        0        0        0        0        0        0
311        SQ       0     3550        9000    17600
312        SE    1174     1176        1180     1184     1188     1192     1196     1200     1204     1208
313        SE    1209     1210        1211     1212
314        SS    1209        0           0        0
315        ST  1212.1     7667         2.2      1.5
316        SW    1000     1995        3000     4000     4988     6008     7007
317        SE  1212.1   1212.4 1212.63 1213.32 1214.72 1214.94   1214.8
318        ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   28         3A
              V
              V
   35      RCP3A
              .
              .
   42         .            3
              .            .
              .            .
   49       I1CP3...........
              .
              .
   56         .------->    DCP3
   52        CP3
              V
              V
   59       RCP3
              .
              .
   66         .            4
              .            .
              .            .
   73         .            .            5
              .            .            .
              .            .            .
   80         .           CP5...........
              .            V
              .            V
   83         .          RCP5
              .            .
              .            .
   90         .            .            6
              .            .            .
              .            .            .
   96         .         I1CP7...........
              .            .
              .            .
   99         .            .            7
              .            .            .
              .            .            .
  105         .           CP7...........
              .            V
              .            V
  108         .          RCP7
              .            .
              .            .
  115         .            .            9
              .            .            .
              .            .            .
  122         .         I1CP9...........
              .            .
              .            .
  125         .            .            8
              .            .            .
              .            .            .
  132         .           CP9...........
```

```
              .           V
              .           V
135           .        RCP9
              .           .
              .           .
142           .           .          10
              .           .           .
              .           .           .
151           .      I1CP10............
              .           .
              .           .
154        CP10............
              .
              .
160           .------->   DCP10
157        CP10
              V
              V
163       RCP10
              .
              .
170           .          12
              .           .
              .           .
178        CP12............
              V
              V
181       RCP12
              .
              .
188           .          11
              .           V
              .           V
196           .       RCP11
              .           .
              .           .
203           .           .          13
              .           .           .
              .           .           .
211           .        CP13............
              .           V
              .           V
214           .       RCP13
              .           .
              .           .
221           .           .          14
              .           .           V
              .           .           V
228           .           .       RCP14
              .           .           .
              .           .           .
235           .           .           .          15
              .           .           .           .
              .           .           .           .
243           .           .      I1CP15............
              .           .           .
              .           .           .
246           .           .           .          16
              .           .           .           V
              .           .           .           V
254           .           .           .        SR16
              .           .           .           .
              .           .           .           .
260           .           .        CP15............
              .           .           V
              .           .           V
263           .           .       RCP15
              .           .           .
              .           .           .
270           .           .           .          17
              .           .           .           .
              .           .           .           .
278           .           .      I1CP17............
              .           .           .
              .           .           .
281           .        CP17............
              .           V
              .           V
284           .       RCP17
              .           .
              .           .
291           .           .         WT3
              .           .           .
              .           .           .
299           .      I1CWT3............
              .           .
              .           .
302       CPWT3............
              V
              V
305       SRWT3

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************
****************************************
 *                                       *                                                   *
*
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                                   *   U.S. ARMY CORPS OF ENGINEERS
*
 *             MAY   1991                *                                                   *   HYDROLOGIC ENGINEERING CENTER
*
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 *          VERSION 4.0.1E              *                                                   *         609 SECOND STREET
*
 *    Lahey F77L-EM/32 version 5.01     *                                                   *      DAVIS, CALIFORNIA 95616
*
 *      Dodson & Associates, Inc.       *                                                   *          (916) 551-1748
*
 *  RUN DATE  04/23/97  TIME  09:49:21  *                                                   *
*
 ****************************************
**************************************


                         MODEL = WT3-B1&2.DAT IS TAKEN FROM WT3.DAT WHICH IS FROM THE
                         FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
                         100-YEAR, 24-HOUR STORM                                 WTADMS.24

                            MODEL WT3-B1&2 REMOVES SUBBASINS 1 AND 2 FROM MODEL WT3

                                    R.W. CRUFF, P.E.        APRIL 23, 1997

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

    IT        HYDROGRAPH TIME DATA
                     NMIN           5  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1    0  STARTING DATE
                    ITIME        0000  STARTING TIME
                       NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      2    0  ENDING DATE
                   NDTIME        0055  ENDING TIME
                    ICENT          19  CENTURY MARK

                COMPUTATION INTERVAL   0.08 HOURS
                     TOTAL TIME BASE  24.92 HOURS

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

 13 JD        INDEX STORM NO. 1
                     STRM        4.03  PRECIPITATION DEPTH
                     TRDA        0.00  TRANSPOSITION DRAINAGE AREA

 14 PI          PRECIPITATION PATTERN
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.01      0.00      0.01
                   0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.03      0.03
                   0.03      0.09      0.09      0.09      0.01      0.01      0.01      0.01      0.01      0.01
                   0.01      0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                   0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

 24 JD        INDEX STORM NO. 2
                     STRM        3.99  PRECIPITATION DEPTH
                     TRDA       10.00  TRANSPOSITION DRAINAGE AREA

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

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

25 JD INDEX STORM NO. 3

STRM 3.83 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

26 JD INDEX STORM NO. 4

STRM 3.76 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

27 JD INDEX STORM NO. 5

STRM 3.70 PRECIPITATION DEPTH

TRDA 200.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	3A	296.	12.33	29.	7.	7.	0.29		
+	ROUTED TO	RCP3A	229.	12.58	27.	7.	7.	0.29		
+	HYDROGRAPH AT	3	828.	12.33	83.	21.	20.	0.81		
+	2 COMBINED AT	I1CP3	997.	12.42	110.	28.	27.	1.10		
+	DIVERSION TO	DCP3	1.	12.42	0.	0.	0.	1.10		
+	HYDROGRAPH AT	CP3	996.	12.42	110.	28.	27.	1.10		
+	ROUTED TO	RCP3	818.	12.58	102.	26.	25.	1.10		
+	HYDROGRAPH AT	4	339.	12.25	26.	7.	6.	0.30		
+	HYDROGRAPH AT	5	716.	12.25	65.	18.	18.	0.72		
+	2 COMBINED AT	CP5	1053.	12.25	90.	25.	24.	1.02		
+	ROUTED TO	RCP5	973.	12.33	89.	24.	23.	1.02		
+	HYDROGRAPH AT	6	591.	12.08	41.	12.	11.	0.45		
+	2 COMBINED AT	I1CP7	1289.	12.17	130.	35.	34.	1.47		
+	HYDROGRAPH AT	7	390.	12.08	28.	8.	8.	0.31		
+	2 COMBINED AT	CP7	1668.	12.17	158.	43.	41.	1.78		
+	ROUTED TO	RCP7	1435.	12.33	151.	38.	36.	1.78		
+	HYDROGRAPH AT	9	1096.	12.42	127.	36.	35.	1.40		
+	2 COMBINED AT	I1CP9	2527.	12.33	277.	74.	71.	3.18		
+	HYDROGRAPH AT	8	704.	12.33	73.	21.	20.	0.81		
+	2 COMBINED AT	CP9	3227.	12.33	350.	94.	91.	3.99		
+	ROUTED TO	RCP9	2648.	12.75	326.	81.	78.	3.99		
+	HYDROGRAPH AT	10	1173.	12.75	201.	52.	50.	2.02		
+	2 COMBINED AT	I1CP10	3816.	12.75	525.	133.	129.	6.01		

+	2 COMBINED AT	CP10	4504.	12.75	627.	159.	153.	7.11
+	DIVERSION TO	DCP10	1279.	12.75	123.	31.	30.	7.11
+	HYDROGRAPH AT	CP10	3225.	12.75	504.	128.	123.	7.11
+	ROUTED TO	RCP10	3037.	12.83	497.	124.	120.	7.11
+	HYDROGRAPH AT	12	1149.	12.58	156.	40.	39.	1.38
+	2 COMBINED AT	CP12	3702.	12.83	652.	164.	158.	8.49
+	ROUTED TO	RCP12	3266.	13.00	618.	154.	149.	8.49
+	HYDROGRAPH AT	11	1313.	12.50	165.	44.	43.	1.56
+	ROUTED TO	RCP11	1011.	12.75	164.	44.	43.	1.56
+	HYDROGRAPH AT	13	1170.	12.42	137.	34.	33.	1.30
+	2 COMBINED AT	CP13	1743.	12.58	301.	78.	76.	2.86
+	ROUTED TO	RCP13	1719.	12.67	301.	78.	75.	2.86
+	HYDROGRAPH AT	14	1163.	12.33	130.	37.	35.	1.47
+	ROUTED TO	RCP14	1041.	12.58	130.	37.	35.	1.47
+	HYDROGRAPH AT	15	1039.	12.42	117.	32.	30.	1.26
+	2 COMBINED AT	I1CP15	1920.	12.50	246.	68.	66.	2.73
+	HYDROGRAPH AT	16	1255.	12.42	155.	43.	41.	1.13
+	ROUTED TO	SR16	0.	0.08	0.	0.	0.	1.13
+	2 COMBINED AT	CP15	1920.	12.50	246.	68.	66.	3.86
+	ROUTED TO	RCP15	1453.	12.83	211.	53.	51.	3.86
+	HYDROGRAPH AT	17	929.	12.25	110.	27.	26.	1.07
+	2 COMBINED AT	I1CP17	1738.	12.75	321.	80.	77.	4.93
+	2 COMBINED AT	CP17	3428.	12.75	621.	158.	153.	7.79
+	ROUTED TO	RCP17	3377.	12.83	614.	154.	148.	7.79
+	HYDROGRAPH AT	WT3	413.	12.50	54.	14.	13.	0.44
+	2 COMBINED AT	I1CWT3	3605.	12.83	668.	167.	161.	8.23
+	2 COMBINED AT	CPWT3	6412.	12.92	1255.	314.	302.	16.72
+	ROUTED TO	SRWT3	0.	0.08	0.	0.	0.	16.72

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION SRWT3

(PEAKS SHOWN ARE FOR INTERNAL TIME STEP USED DURING BREACH FORMATION)

PLAN 1		INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
	ELEVATION	1174.00	1209.00	1212.10
	STORAGE	0.	3012.	4041.
	OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.49	0.00	649.	0.	0.00	0.00	0.00

PLAN 2 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.39	0.00	637.	0.	0.00	0.00	0.00

PLAN 3 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.02	0.00	591.	0.	0.00	0.00	0.00

PLAN 4 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1196.85	0.00	571.	0.	0.00	0.00	0.00

PLAN 5 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1196.71	0.00	553.	0.	0.00	0.00	0.00

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

FILE = WT3-B1-9.OUT

```
1*****************************************
***************************************
*                                        *
*                                        
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)     *
*                                        
*           MAY   1991                   *
*                                        
*         VERSION 4.0.1E                 *
*                                        
*    Lahey F77L-EM/32 version 5.01       *
*                                        
*      Dodson & Associates, Inc.         *
*                                        
*  RUN DATE  04/23/97  TIME  11:46:41    *
*                                        
*****************************************
***************************************
```

```
*
*   U.S. ARMY CORPS OF ENGINEERS
*   HYDROLOGIC ENGINEERING CENTER
*        609 SECOND STREET
*     DAVIS, CALIFORNIA 95616
*          (916) 551-1748
*
```

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

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

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


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

   1           ID
   2           ID         MODEL = WT3-B1-9.DAT IS TAKEN FROM WT3.DAT WHICH IS FROM THE
   3           ID         FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
   4           ID         100-YEAR, 24-HOUR STORM                                   WTADMS.24
   5           ID
   6           ID            MODEL WT3-B1-9 REMOVES SUBBASINS 1, 2, & 4-9 FROM MODEL WT3
   7           ID
   8           ID                    R.W. CRUFF, P.E.        APRIL 23, 1997
   9           ID
               *DIAGRAM
  10           IT       5                     300
  11           IO       5
  12           IN      15
  13           JD    4.03    .001
  14           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
  15           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
  16           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
  17           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
  18           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
  19           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
  20           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
  21           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
  22           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
  23           PC    .983    .986    .989    .992    .995    .998    1.00   1.000   1.000   1.000
  24           JD    3.99      10
  25           JD    3.83      50
  26           JD    3.76     100
  27           JD    3.70     200

  28           KK      3A
  29           KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 3A
  30           BA     .29
  31           LG     .15     .33    3.99     .59     .00
  32           UI     34.     89.    165.    212.    286.    410.    314.    242.    182.    124.
  33           UI     62.     48.     33.     10.     10.     10.     10.      0.      0.      0.
  34           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  35           KK   RCP3A
  36           KM         ROUTE FLOW FROM CP3A TO CP3
  37           RL                     1.5    1284
  38           RS       2              -1       0
  39           RC     .03     .03     .05    5300   .0060
  40           RX    1000    1023    1032    1046    1058    1067    1250    1540
  41           RY    1289    1288    1286    1284    1284    1286    1288    1291

  42           KK       3
  43           KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 3.
  44           BA     .81
  45           LG     .15     .33    4.08     .54     .00
  46           UI     91.    228.    430.    554.    725.   1088.    908.    700.    535.    396.
  47           UI    205.    152.     95.     57.     28.     28.     28.      0.      0.      0.
```

```
 48        UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                      HEC-1 INPUT                                              PAGE  2

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


 49        KK   I1CP3
 50        KM       ADD HYDROGRAPHS AT CP3.
 51        HC      2

 52        KK     CP3
 53        KM       DIVERT FLOWS THAT WILL OVERTOP THE BEARDSLEY CANAL AT OLIVE AVENUE.  THE
 54        KM       HEC-2 DIVERSION RATING CURVE MODELED BY THE FLOOD CONTROL DISTRICT IS
 55        KM       INCORPORATED HERE.
 56        DT   DCP3
 57        DI      0    1000    2000    3000    5000    6000    6800    8000
 58        DQ      0       0     435     660    1570    2070    2520    3260

 59        KK   RCP3
 60        KM       ROUTE THE REMAINING HYDROGRAPH AT CP3 TO CP10.
 61        RL                      2    1245
 62        RS      2              -1       0
 63        RC    .05     .03     .05    5280   .0083
 64        RX   1010    1015    1020    1050    1100    1275    1580    1750
 65        RY   1251    1249    1249    1245    1245    1250    1250    1254

 66        KK     10
 67        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 10.
 68        BA   2.02
 69        LG    .16     .33    3.90     .66    3.30
 70        UI   119.    119.    218.    427.    546.    632.    708.    812.    929.   1148.
 71        UI  1499.   1393.   1156.   1006.    894.    765.    669.    577.    475.    325.
 72        UI   210.    201.    193.    119.    119.     86.     36.     36.     36.     36.
 73        UI    36.     36.     36.     36.      0.      0.      0.      0.      0.      0.
 74        UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 75        KK   CP10
 76        KM       ADD HYDROGRAPHS AT CP10
 77        HC      2

 78        KK   CP10
 79        KM       FLOW TO WHITE TANKS #3 UNDER NORTHERN AVE.  THE HEC-2 DIVERSION RATING
 80        KM       CURVE MODELED BY THE FLOOD CONTROL DISTRICT IS INCORPORATED HERE.
 81        DT   DCP10
 82        DI      0    1000    3000    4497    5000    6000    8000   10000
 83        DQ      0       0     770    1277    1450    1710    2470    3240

 84        KK   RCP10
 85        KM       ROUTE REMAINING HYDROGRAPH AT CP10 TO CP12.
 86        RL                    2.0    1211
 87        RS      1              -1       0
 88        RC    .03     .03     .05    3500   .0057
 89        RX    995    1000    1020    1055    1085    1165    1250    1330
 90        RY   1221    1220    1220    1211    1211    1218    1220    1222
1                                      HEC-1 INPUT                                              PAGE  3

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


 91        KK     12
 92        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 12.
 93        BA   1.38
 94        LG    .16     .32    4.18     .50    3.00
 95        UI   111.    129.    393.    535.    636.    758.    930.   1311.   1277.   1008.
 96        UI   850.    697.    574.    445.    264.    191.    169.    111.     92.     34.
 97        UI    34.     34.     34.     34.     34.      0.      0.      0.      0.      0.
 98        UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 99        KK   CP12
100        KM       ADD HYDROGRAPHS AT CP12.
101        HC      2

102        KK   RCP12
103        KM       ROUTE COMBINED HYDROGRAPHS AT CP12 TO CPWT3
104        RL                    2.0    1196
105        RS      2              -1       0
106        RC    .03     .03     .04    4800   .0031
107        RX    995    1000    1020    1080    1200    1530    1665    1760
108        RY   1211    1211    1210    1196    1196    1200    1204    1204

109        KK     11
110        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 11.
111        BA   1.56
112        LG    .18     .32    3.98     .67    6.80
113        UI   143.    245.    571.    755.    913.   1142.   1648.   1623.   1254.   1026.
114        UI   821.    643.    394.    248.    210.    143.     86.     44.     44.     44.
115        UI    44.      0.      0.      0.      0.      0.      0.      0.      0.      0.
116        UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

117        KK   RCP11
118        KM       ROUTE HYROGRAPH FROM CP11 TO CP13.
119        RL                    1.5    1196
120        RS      3              -1       0
121        RC    .06    .035     .06   10200   .0098
122        RX   1000    1070    1300    1480    1510    1525    1555    1600
123        RY   1233    1232    1230    1222    1222    1230    1232    1233

124        KK     13
125        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 13.
126        BA   1.30
127        LG    .15     .33    4.14     .51     .00
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 128      UI    120.   210.   485.   639.   774.   973.  1416.  1333.  1039.   847.
 129      UI    674.   527.   303.   206.   167.   120.    60.    37.    37.    37.
 130      UI     37.     0.     0.     0.     0.     0.     0.     0.     0.     0.
 131      UI      0.     0.     0.     0.     0.     0.     0.     0.     0.     0.

 132      KK    CP13
 133      KM         ADD HYDROGRAPHS AT CP13.
 134      HC      2
1                                 HEC-1 INPUT                                          PAGE  4

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


 135      KK   RCP13
 136      KM         ROUTE COMBINED HYDROGRAPHS AT CP13 TO CP17
 137      RL                        1.5   1222
 138      RS      2                  -1      0
 139      RC     .03     .03     .04   2400  .0042
 140      RX    1000    1025    1040   1065   1085   1110   1175   1200
 141      RY    1206    1198    1196   1194   1194   1198   1198   1201

 142      KK     14
 143      KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 14.
 144      BA    1.47
 145      LG     .20     .34    3.24   1.12   9.00
 146      UI    166.   421.   790.  1019.  1341.  1998.  1636.  1264.   961.   699.
 147      UI    362.   274.   166.    93.    51.    51.    51.     0.     0.     0.
 148      UI      0.     0.     0.     0.     0.     0.     0.     0.     0.     0.

 149      KK   RCP14
 150      KM         ROUTE FLOW FROM CP14 TO CP15.
 151      RL                        2.0   1194
 152      RS      4                  -1      0
 153      RC     .06    .035     .06   8800 .02556
 154      RX    1000    1030    1075   1200   1220   1280   1415   1480
 155      RY    1296    1295    1294   1288   1288   1294   1296   1300

 156      KK     15
 157      KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 15.
 158      BA    1.26
 159      LG     .18     .33    3.58    .86   6.40
 160      UI    130.   281.   577.   747.   938.  1321.  1552.  1156.   920.   713.
 161      UI    519.   277.   217.   138.    93.    40.    40.    40.    40.     0.
 162      UI      0.     0.     0.     0.     0.     0.     0.     0.     0.     0.
 163      UI      0.     0.     0.     0.     0.     0.     0.     0.     0.     0.

 164      KK  I1CP15
 165      KM         ADD HYDROGRAPHS AT CP15
 166      HC      2

 167      KK     16
 168      KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 16.
 169      BA    1.13
 170      LG     .17     .32    4.08    .41  11.10
 171      UI    115.   240.   503.   652.   814.  1126.  1393.  1049.   839.   655.
 172      UI    497.   268.   194.   137.   101.    35.    35.    35.    35.     0.
 173      UI      0.     0.     0.     0.     0.     0.     0.     0.     0.     0.
 174      UI      0.     0.     0.     0.     0.     0.     0.     0.     0.     0.

 175      KK    SR16
 176      KM         STORAGE ROUTE THROUGH THE CATERPILLAR DETENTION BASIN IN SUBWATERSHED 16
 177      RS      1    STOR      0      0
 178      SV      0       1     31    114    270    502    807   1319   1776   1908
 179      SQ      0                                                                 4050
 180      SE    1198    1200   1210   1220   1230   1240   1250   1260   1266   1267
1                                 HEC-1 INPUT                                          PAGE  5

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


 181      KK    CP15
 182      KM         ADD HYDROGRAPHS AT CP15.
 183      HC      2

 184      KK   RCP15
 185      KM         ROUTE COMBINED HYDROGRAPHS AT CP15 TO CP17.
 186      RL                        2.0   1226
 187      RS      3                  -1      0
 188      RC     .06    .035     .06   6800  .0079
 189      RX    1000    1310    1380   1540   1640   1670   1700   1910
 190      RY    1234    1232    1228   1226   1226   1228   1232   1235

 191      KK     17
 192      KM         RUNOFFF HYDROGRAPH FROM SUB-BASIN 17.
 193      BA    1.07
 194      LG     .19     .33    4.04    .54    .10
 195      UI    117.   254.   572.   810.  1052.  1196.   753.   635.   540.   450.
 196      UI    353.   287.   254.   194.   149.   129.   103.    90.    64.    57.
 197      UI     57.    26.    22.    22.    22.    22.    22.    22.     0.     0.
 198      UI      0.     0.     0.     0.     0.     0.     0.     0.     0.     0.

 199      KK  I1CP17
 200      KM         ADD HYDROGRAPHS AT CP17.
 201      HC      2

 202      KK    CP17
 203      KM         ADD HYDROGRAPHS AT CP17.
 204      HC      2

 205      KK   RCP17
 206      KM         ROUTE FLOW FROM CP17 TO CPWT3
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     207          RL                      2.0     1182
     208          RS        2              -1        0
     209          RC      .06      .04    .04     1600    .0022
     210          RX     1000     1220   1280     1470     1530     1660     1680     1685
     211          RY     1196     1194   1190     1182     1182     1210     1211     1212

     212          KK      WT3
     213          KM          RUNOFF HYDROGRAPH FROM SUB-BASIN WT3
     214          BA      .44
     215          LG      .35      .32    3.91     .33      .00
     216          UI      36.      44.    128.    175.     207.     249.     308.     436.     399.     318.
     217          UI     267.     220.    179.    133.      78.      61.      49.      36.      23.      11.
     218          UI      11.      11.     11.     11.       0.       0.       0.       0.       0.       0.
     219          UI       0.       0.      0.      0.       0.       0.       0.       0.       0.       0.

     220          KK   I1CWT3
     221          KM          ADD HYDROGRAPHS AT CPWT3
     222          HC        2
```



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

     223          KK    CPWT3
     224          KM          ADD HYDROGRAPHS AT CPWT3
     225          HC        2

     226          KK    SRWT3
     227          KM          STORAGE ROUTE THROUGH WHITE TANKS STRUCTURE #3.
     228          RS        1     STOR       0        0
     229          SV        0        1      14       42       91      203      466      958     1704     2716
     230          SV     3012     3325    3657     4006
     231          SQ        0        0       0        0        0        0        0        0        0        0
     232          SQ        0     3550    9000    17600
     233          SE     1174     1176    1180     1184     1188     1192     1196     1200     1204     1208
     234          SE     1209     1210    1211     1212
     235          SS     1209        0       0        0
     236          ST   1212.1     7667     2.2      1.5
     237          SW     1000     1995    3000     4000     4988     6008     7007
     238          SE   1212.1   1212.4 1212.63 1213.32 1214.72 1214.94   1214.8
     239          ZZ
```

```
1
               SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   28        3A
             V
             V
   35      RCP3A
             .
             .
   42        .            3
             .            .
             .            .
   49      I1CP3...........
             .
             .
   56        .------->   DCP3
   52       CP3
             V
             V
   59       RCP3
             .
             .
   66        .           10
             .            .
             .            .
   75       CP10...........
             .
             .
   81        .------->  DCP10
   78       CP10
             V
             V
   84      RCP10
             .
             .
   91        .           12
             .            .
             .            .
   99       CP12...........
             V
             V
  102      RCP12
             .
             .
  109        .           11
             .            V
             .            V
  117        .          RCP11
             .            .
             .            .
  124        .            .           13
             .            .            .
             .            .            .
  132        .          CP13...........
             .            V
             .            V
```

```
135         .      RCP13
            .        .
            .        .
142         .        .           14
            .        .           V
            .        .           V
149         .        .        RCP14
            .        .           .
            .        .           .
156         .        .           .           15
            .        .           .           .
            .        .           .           .
164         .        .       I1CP15...........
            .        .           .
            .        .           .
167         .        .           .           16
            .        .           .           V
            .        .           .           V
175         .        .           .         SR16
            .        .           .           .
            .        .           .           .
181         .        .         CP15...........
            .        .           V
            .        .           V
184         .        .        RCP15
            .        .           .
            .        .           .
191         .        .           .           17
            .        .           .           .
            .        .           .           .
199         .        .       I1CP17...........
            .        .           .
            .        .           .
202         .      CP17...........
            .        V
            .        V
205         .      RCP17
            .        .
            .        .
212         .        .          WT3
            .        .           .
            .        .           .
220         .     I1CWT3...........
            .        .
            .        .
223     CPWT3............
            V
            V
226     SRWT3
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1***************************************
***************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *            MAY   1991                *
 *          VERSION 4.0.1E              *
 *     Lahey F77L-EM/32 version 5.01    *
 *       Dodson & Associates, Inc.      *
 *  RUN DATE  04/23/97  TIME  11:46:41  *
 *                                      *
***************************************
***************************************
```

```
*
*   U.S. ARMY CORPS OF ENGINEERS
*   HYDROLOGIC ENGINEERING CENTER
*         609 SECOND STREET
*     DAVIS, CALIFORNIA 95616
*          (916) 551-1748
*
```

```
                MODEL = WT3-B1-9.DAT IS TAKEN FROM WT3.DAT WHICH IS FROM THE
                FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
                100-YEAR, 24-HOUR STORM                              WTADMS.24

                   MODEL WT3-B1-9 REMOVES SUBBASINS 1, 2, & 4-9 FROM MODEL WT3

                           R.W. CRUFF, P.E.        APRIL 23, 1997


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

   IT          HYDROGRAPH TIME DATA
                      NMIN           5  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1    0  STARTING DATE
                     ITIME        0000  STARTING TIME
                        NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      2    0  ENDING DATE
                    NDTIME        0055  ENDING TIME
                     ICENT          19  CENTURY MARK

                 COMPUTATION INTERVAL    0.08 HOURS
                      TOTAL TIME BASE   24.92 HOURS
```

ENGLISH UNITS

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

13 JD INDEX STORM NO. 1

STRM 4.03 PRECIPITATION DEPTH

TRDA 0.00 TRANSPOSITION DRAINAGE AREA

14 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

24 JD INDEX STORM NO. 2

STRM 3.99 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

25 JD INDEX STORM NO. 3

STRM 3.83 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

26 JD INDEX STORM NO. 4
STRM 3.76 PRECIPITATION DEPTH
TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

27 JD INDEX STORM NO. 5
STRM 3.70 PRECIPITATION DEPTH
TRDA 200.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	3A	296.	12.33	29.	7.	7.	0.29		
+	ROUTED TO	RCP3A	229.	12.58	27.	7.	7.	0.29		
+	HYDROGRAPH AT	3	828.	12.33	83.	21.	20.	0.81		
	2 COMBINED AT									

+		I1CP3	997.	12.42	110.	28.	27.	1.10
+	DIVERSION TO	DCP3	1.	12.42	0.	0.	0.	1.10
+	HYDROGRAPH AT	CP3	996.	12.42	110.	28.	27.	1.10
+	ROUTED TO	RCP3	818.	12.58	102.	26.	25.	1.10
+	HYDROGRAPH AT	10	1173.	12.75	201.	52.	50.	2.02
+	2 COMBINED AT	CP10	1862.	12.75	302.	78.	75.	3.12
+	DIVERSION TO	DCP10	332.	12.75	26.	7.	6.	3.12
+	HYDROGRAPH AT	CP10	1530.	12.75	276.	71.	69.	3.12
+	ROUTED TO	RCP10	1470.	12.83	270.	67.	65.	3.12
+	HYDROGRAPH AT	12	1149.	12.58	156.	40.	39.	1.38
+	2 COMBINED AT	CP12	2382.	12.58	425.	108.	104.	4.50
+	ROUTED TO	RCP12	2060.	12.92	397.	99.	96.	4.50
+	HYDROGRAPH AT	11	1313.	12.50	165.	44.	43.	1.56
+	ROUTED TO	RCP11	1011.	12.75	164.	44.	43.	1.56
+	HYDROGRAPH AT	13	1170.	12.42	137.	34.	33.	1.30
+	2 COMBINED AT	CP13	1743.	12.58	301.	78.	76.	2.86
+	ROUTED TO	RCP13	1719.	12.67	301.	78.	75.	2.86
+	HYDROGRAPH AT	14	1163.	12.33	130.	37.	35.	1.47
+	ROUTED TO	RCP14	1041.	12.58	130.	37.	35.	1.47
+	HYDROGRAPH AT	15	1039.	12.42	117.	32.	30.	1.26
+	2 COMBINED AT	I1CP15	1920.	12.50	246.	68.	66.	2.73
+	HYDROGRAPH AT	16	1255.	12.42	155.	43.	41.	1.13
+	ROUTED TO	SR16	0.	0.08	0.	0.	0.	1.13
+	2 COMBINED AT	CP15	1920.	12.50	246.	68.	66.	3.86
+	ROUTED TO	RCP15	1453.	12.83	211.	53.	51.	3.86
+	HYDROGRAPH AT	17	929.	12.25	110.	27.	26.	1.07
+	2 COMBINED AT	I1CP17	1738.	12.75	321.	80.	77.	4.93
+	2 COMBINED AT	CP17	3428.	12.75	621.	158.	153.	7.79
+	ROUTED TO	RCP17	3377.	12.83	614.	154.	148.	7.79
+	HYDROGRAPH AT	WT3	413.	12.50	54.	14.	13.	0.44
+	2 COMBINED AT	I1CWT3	3605.	12.83	668.	167.	161.	8.23
+	2 COMBINED AT	CPWT3	5526.	12.83	1052.	263.	253.	12.73
+	ROUTED TO	SRWT3	0.	0.08	0.	0.	0.	12.73

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION SRWT3

(PEAKS SHOWN ARE FOR INTERNAL TIME STEP USED DURING BREACH FORMATION)

PLAN 1 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1196.58	0.00	537.	0.	0.00	0.00	0.00

PLAN 2 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1196.50	0.00	528.	0.	0.00	0.00	0.00

PLAN 3 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1196.19	0.00	489.	0.	0.00	0.00	0.00

PLAN 4 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS

1.00	1196.05	0.00	472.	0.	0.00	0.00	0.00

PLAN 5 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1195.87	0.00	457.	0.	0.00	0.00	0.00

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

No Channels but remove diversions @ Olive & Northern

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                 FILE = WT3-.OUT

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

  1              ID
  2              ID
  3              ID          FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
  4              ID          100-YEAR, 24-HOUR STORM                                WTADMS.24
  5              ID
  6              ID
  7              ID
                 *DIAGRAM
  8              IT       5                   300
  9              IO       5
 10              IN      15
 11              JD    4.03    .001
 12              PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 13              PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 14              PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 15              PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 16              PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 17              PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 18              PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 19              PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 20              PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 21              PC    .983    .986    .989    .992    .995    .998    1.00   1.000   1.000   1.000
 22              JD    3.99      10
 23              JD    3.83      50
 24              JD    3.76     100
 25              JD    3.70     200

 26              KK       1
 27              KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 1.
 28              BA    1.94
 29              LG     .20     .34    3.21    1.14    9.90
 30              UI    182.    326.    742.    974.   1186.   1502.   2185.   1957.   1537.   1243.
 31              UI    989.    751.    417.    308.    230.    182.     64.     56.     56.     56.
 32              UI     56.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 33              UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 34              KK    RCP1
 35              KM          ROUTE FLOW FROM CP1 TO CP2.
 36              RL                       1    1428
 37              RS       5              -1       0
 38              RC     .06     .04     .06   17800   .0469
 39              RX    1000    1125    1300    1390    1405    1490    1590    1750
 40              RY    1440    1439    1437    1428    1428    1439    1442    1444

 41              KK       2
 42              KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 2.
 43              BA    1.82
 44              LG     .18     .33    3.91     .70   11.70
 45              UI    115.    115.    259.    442.    556.    642.    727.    849.   1013.   1346.
 46              UI   1419.   1145.    985.    864.    735.    634.    545.    405.    268.    202.
 47              UI    189.    144.    115.    103.     35.     35.     35.     35.     35.     35.
 48              UI     35.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 49              UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                             HEC-1 INPUT                                                  PAGE  2

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


 50              KK     CP2
 51              KM          ADD HYDROGRAPHS AT CP2.
 52              HC       2

 53              KK    RCP2
 54              KM          ROUTE COMBINED HYDROGRAPHS AT CP2 TO CP3.
 55              RL                     1.5    1298
 56              RS       2              -1       0
 57              RC     .06    .035     .06    4500   .0111
 58              RX    1000    1100    1350    1705    1735    1780    1850    2000
 59              RY    1304    1302    1302    1298    1298    1303    1302    1305

 60              KK      3A
 61              KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 3A
 62              BA     .29
 63              LG     .15     .33    3.99     .59     .00
 64              UI     34.     89.    165.    212.    286.    410.    314.    242.    182.    124.
 65              UI     62.     48.     33.     10.     10.     10.     10.      0.      0.      0.
 66              UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 67              KK   RCP3A
 68              KM          ROUTE FLOW FROM CP3A TO CP3
 69              RL                     1.5    1284
 70              RS       2              -1       0
 71              RC     .03     .03     .05    5300   .0060
 72              RX    1000    1023    1032    1046    1058    1067    1250    1540
 73              RY    1289    1288    1286    1284    1284    1286    1288    1291

 74              KK       3
 75              KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 3.
 76              BA     .81
 77              LG     .15     .33    4.08     .54     .00
 78              UI     91.    228.    430.    554.    725.   1088.    908.    700.    535.    396.
 79              UI    205.    152.     95.     57.     28.     28.     28.      0.      0.      0.
 80              UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 81              KK    I1CP3
 82              KM          ADD HYDROGRAPHS AT CP3.
 83              HC       2
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3.76

1.10

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 84         KK      CP3
 85         KM         ADD HYDROGRAPHS AT CP3.
 86         HC        2

 87         KK      RCP3
 88         KM         ROUTE THE REMAINING HYDROGRAPH AT CP3 TO CP10.
 89         RL                        2    1245
 90         RS        2              -1       0
 91         RC      .05     .03     .05    5280   .0083
 92         RX     1010    1015    1020    1050    1100    1275    1580    1750
 93         RY     1251    1249    1249    1245    1245    1250    1250    1254
1                                       HEC-1 INPUT                                              PAGE 3

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


 94         KK        4
 95         KM         RUNOFF HYDROGRAPH FORM SUB-BASIN 4.
 96         BA      .30
 97         LG      .20     .30    3.87     .77    1.00
 98         UI      48.    192.    287.    444.    512.    346.    236.    115.     67.     35.
 99         UI      14.     14.      0.      0.      0.      0.      0.      0.      0.      0.
100         UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

101         KK        5
102         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 5.
103         BA      .72
104         LG      .20     .34    3.27    1.11    9.20
105         UI     110.    437.    658.    992.   1242.    849.    591.    315.    174.    101.
106         UI      34.     34.     34.      0.      0.      0.      0.      0.      0.      0.
107         UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

108         KK      CP5
109         KM         ADD HYDROGRAPHS AT CP5.
110         HC        2

111         KK      RCP5
112         KM         ROUTE COMBINED HYDROGRAPHS AT CP5 TO CP7.
113         RL                       .5    2800
114         RS        1              -1       0
115         RC      .08     .05     .08    4800   .0833
116         RX      955     970     985    1000    1020    1035    1050    1065
117         RY     2815    2810    2805    2800    2800    2805    2810    2815

118         KK        6
119         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 6.
120         BA      .45
121         LG      .20     .34    3.21    1.14   10.00
122         UI     204.    622.   1139.    837.    427.    155.     54.     33.      0.      0.
123         UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

124         KK     I1CP7
125         KM         ADD HYDROGRAPHS AT CP7.
126         HC        2

127         KK        7
128         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 7.
129         BA      .31
130         LG      .20     .34    3.21    1.14   10.00
131         UI     126.    387.    716.    606.    343.    129.     52.     22.      0.      0.
132         UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

133         KK      CP7
134         KM         ADD HYDROGRAPHS AT CP7.
135         HC        2
1                                       HEC-1 INPUT                                              PAGE 4

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


136         KK      RCP7
137         KM         ROUTE COMBINED HYDROGRAPHS AT CP7 TO CP9.
138         RL                       .5    1838
139         RS        3              -1       0
140         RC      .08     .05     .08   10200  .07745
141         RX     1000    1045    1120    1195    1230    1300    1350    1450
142         RY     1910    1880    1850    1838    1838    1850    1880    1910

143         KK        9
144         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 9.
145         BA     1.40
146         LG      .20     .34    3.24    1.12    9.70
147         UI     155.    381.    727.    935.   1216.   1832.   1591.   1224.    938.    705.
148         UI     386.    261.    177.    115.     47.     47.     47.     47.      0.      0.
149         UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

150         KK     I1CP9
151         KM         ADD HYDROGRAPHS AT CP9.
152         HC        2

153         KK        8
154         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 8.
155         BA      .81
156         LG      .20     .34    3.21    1.14   10.00
157         UI     102.    313.    535.    703.   1054.   1140.    822.    608.    421.    208.
158         UI     147.     96.     31.     31.     31.      0.      0.      0.      0.      0.
159         UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

160         KK      CP9
161         KM         ADD HYDROGRAPHS AT CP9.
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3.99

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 162        HC       2

 163        KK    RCP9
 164        KM         ROUTE COMBINED HYDROGRAPHS AT CP9 TO CP10.
 165        RL                     1.5    1308
 166        RS       8              -1       0
 167        RC     .06    .035     .06   19200   .0232
 168        RX    1000    1085    1310    1395    1415    1450    1630    1665
 169        RY    1317    1314    1311    1308    1308    1314    1314    1317

 170        KK      10
 171        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 10.
 172        BA    2.02
 173        LG     .16     .33    3.90     .66    3.30
 174        UI    119.    119.    218.    427.    546.    632.    708.    812.    929.   1148.
 175        UI   1499.   1393.   1156.   1006.    894.    765.    669.    577.    475.    325.
 176        UI    210.    201.    193.    119.    119.     86.     36.     36.     36.     36.
 177        UI     36.     36.     36.     36.      0.      0.      0.      0.      0.      0.
 178        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                         HEC-1 INPUT                                          PAGE  5

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


 179        KK   I1CP10
 180        KM         ADD HYDROGRAPHS AT CP10
 181        HC       2

 182        KK    CP10
 183        KM         ADD HYDROGRAPHS AT CP10
 184        HC       2

 185        KK   RCP10
 186        KM         ROUTE REMAINING HYDROGRAPH AT CP10 TO CP12.
 187        RL                     2.0    1211
 188        RS       1              -1       0
 189        RC     .03     .03     .05    3500   .0057
 190        RX     995    1000    1020    1055    1085    1165    1250    1330
 191        RY    1221    1220    1220    1211    1211    1218    1220    1222

 192        KK      12
 193        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 12.
 194        BA    1.38
 195        LG     .16     .32    4.18     .50    3.00
 196        UI    111.    129.    393.    535.    636.    758.    930.   1311.   1277.   1008.
 197        UI    850.    697.    574.    445.    264.    191.    169.    111.     92.     34.
 198        UI     34.     34.     34.     34.     34.      0.      0.      0.      0.      0.
 199        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 200        KK    CP12
 201        KM         ADD HYDROGRAPHS AT CP12.
 202        HC       2

 203        KK   RCP12
 204        KM         ROUTE COMBINED HYDROGRAPHS AT CP12 TO CPWT3
 205        RL                     2.0    1196
 206        RS       2              -1       0
 207        RC     .03     .03     .04    4800   .0031
 208        RX     995    1000    1020    1080    1200    1530    1665    1760
 209        RY    1211    1211    1210    1196    1196    1200    1204    1204

 210        KK      11
 211        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 11.
 212        BA    1.56
 213        LG     .18     .32    3.98     .67    6.80
 214        UI    143.    245.    571.    755.    913.   1142.   1648.   1623.   1254.   1026.
 215        UI    821.    643.    394.    248.    210.    143.     86.     44.     44.     44.
 216        UI     44.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 217        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 218        KK   RCP11
 219        KM         ROUTE HYROGRAPH FROM CP11 TO CP13.
 220        RL                     1.5    1196
 221        RS       3              -1       0
 222        RC     .06    .035     .06   10200   .0098
 223        RX    1000    1070    1300    1480    1510    1525    1555    1600
 224        RY    1233    1232    1230    1222    1222    1230    1232    1233
1                                         HEC-1 INPUT                                          PAGE  6

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


 225        KK      13
 226        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 13.
 227        BA    1.30
 228        LG     .15     .33    4.14     .51     .00
 229        UI    120.    210.    485.    639.    774.    973.   1416.   1333.   1039.    847.
 230        UI    674.    527.    303.    206.    167.    120.     60.     37.     37.     37.
 231        UI     37.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 232        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 233        KK    CP13
 234        KM         ADD HYDROGRAPHS AT CP13.
 235        HC       2

 236        KK   RCP13
 237        KM         ROUTE COMBINED HYDROGRAPHS AT CP13 TO CP17
 238        RL                     1.5    1222
 239        RS       2              -1       0
 240        RC     .03     .03     .04    2400   .0042
 241        RX    1000    1025    1040    1065    1085    1110    1175    1200
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3.40

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242          RY     1206    1198    1196    1194    1194    1198    1198    1201

243          KK       14
244          KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 14.
245          BA     1.47
246          LG      .20     .34    3.24    1.12    9.00
247          UI     166.    421.    790.   1019.   1341.   1998.   1636.   1264.    961.    699.
248          UI     362.    274.    166.     93.     51.     51.     51.      0.      0.      0.
249          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

250          KK    RCP14
251          KM          ROUTE FLOW FROM CP14 TO CP15.
252          RL                      2.0    1194
253          RS        4              -1       0
254          RC      .06    .035     .06    8800  .02556
255          RX     1000    1030    1075    1200    1220    1280    1415    1480
256          RY     1296    1295    1294    1288    1288    1294    1296    1300

257          KK       15
258          KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 15.
259          BA     1.26
260          LG      .18     .33    3.58     .86    6.40
261          UI     130.    281.    577.    747.    938.   1321.   1552.   1156.    920.    713.
262          UI     519.    277.    217.    138.     93.     40.     40.     40.     40.      0.
263          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
264          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

265          KK   I1CP15
266          KM          ADD HYDROGRAPHS AT CP15
267          HC        2
1                                        HEC-1 INPUT                                            PAGE  7

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

268          KK       16
269          KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 16.
270          BA     1.13
271          LG      .17     .32    4.08     .41   11.10
272          UI     115.    240.    503.    652.    814.   1126.   1393.   1049.    839.    655.
273          UI     497.    268.    194.    137.    101.     35.     35.     35.     35.      0.
274          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
275          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

276          KK     SR16
277          KM          STORAGE ROUTE THROUGH THE CATERPILLAR DETENTION BASIN IN SUBWATERSHED 16
278          RS        1    STOR       0       0
279          SV        0       1      31     114     270     502     807    1319    1776    1908
280          SQ        0                                                                    4050
281          SE     1198    1200    1210    1220    1230    1240    1250    1260    1266    1267

282          KK     CP15
283          KM          ADD HYDROGRAPHS AT CP15.
284          HC        2

285          KK    RCP15
286          KM          ROUTE COMBINED HYDROGRAPHS AT CP15 TO CP17.
287          RL                      2.0    1226
288          RS        3              -1       0
289          RC      .06    .035     .06    6800   .0079
290          RX     1000    1310    1380    1540    1640    1670    1700    1910
291          RY     1234    1232    1228    1226    1226    1228    1232    1235

292          KK       17
293          KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 17.
294          BA     1.07
295          LG      .19     .33    4.04     .54     .10
296          UI     117.    254.    572.    810.   1052.   1196.    753.    635.    540.    450.
297          UI     353.    287.    254.    194.    149.    129.    103.     90.     64.     57.
298          UI      57.     26.     22.     22.     22.     22.     22.     22.      0.      0.
299          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

300          KK   I1CP17
301          KM          ADD HYDROGRAPHS AT CP17.
302          HC        2

303          KK     CP17
304          KM          ADD HYDROGRAPHS AT CP17.
305          HC        2

306          KK    RCP17
307          KM          ROUTE FLOW FROM CP17 TO CPWT3
308          RL                      2.0    1182
309          RS        2              -1       0
310          RC      .06     .04     .04    1600   .0022
311          RX     1000    1220    1280    1470    1530    1660    1680    1685
312          RY     1196    1194    1190    1182    1182    1210    1211    1212
1                                        HEC-1 INPUT                                            PAGE  8

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

313          KK      WT3
314          KM          RUNOFF HYDROGRAPH FROM SUB-BASIN WT3
315          BA      .44
316          LG      .35     .32    3.91     .33     .00
317          UI      36.     44.    128.    175.    207.    249.    308.    436.    399.    318.
318          UI     267.    220.    179.    133.     78.     61.     49.     36.     23.     11.
319          UI      11.     11.     11.     11.      0.      0.      0.      0.      0.      0.
320          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
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7.79

.44

20.5

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 321          KK   I1CWT3
 322          KM        ADD HYDROGRAPHS AT CPWT3
 323          HC        2

 324          KK    CPWT3
 325          KM        ADD HYDROGRAPHS AT CPWT3
 326          HC        2

 327          KK    SRWT3
 328          KM        STORAGE ROUTE THROUGH WHITE TANKS STRUCTURE #3.
 329          RS        1     STOR       0       0
 330          SV        0        1      14      42      91     203     466     958    1704    2716
 331          SV     3012     3325    3657    4006
 332          SQ        0        0       0       0       0       0       0       0       0       0
 333          SQ        0     3550    9000   17600
 334          SE     1174     1176    1180    1184    1188    1192    1196    1200    1204    1208
 335          SE     1209     1210    1211    1212
 336          SS     1209        0       0       0
 337          ST   1212.1     7667     2.2     1.5
 338          SW     1000     1995    3000    4000    4988    6008    7007
 339          SE   1212.1   1212.4 1212.63 1213.32 1214.72 1214.94  1214.8
 340          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   26          1
               V
               V
   34        RCP1
               .
               .
   41          .           2
               .           .
               .           .
   50         CP2...........
               V
               V
   53        RCP2
               .
               .
   60          .          3A
               .           V
               .           V
   67          .        RCP3A
               .           .
               .           .
   74          .           .           3
               .           .           .
               .           .           .
   81          .        I1CP3...........
               .           .
               .           .
   84         CP3...........
               V
               V
   87        RCP3
               .
               .
   94          .           4
               .           .
               .           .
  101          .           .           5
               .           .           .
               .           .           .
  108          .          CP5...........
               .           V
               .           V
  111          .         RCP5
               .           .
               .           .
  118          .           .           6
               .           .           .
               .           .           .
  124          .        I1CP7...........
               .           .
               .           .
  127          .           .           7
               .           .           .
               .           .           .
  133          .          CP7...........
               .           V
               .           V
  136          .         RCP7
               .           .
               .           .
  143          .           .           9
               .           .           .
               .           .           .
  150          .        I1CP9...........
               .           .
               .           .
  153          .           .           8
               .           .           .
               .           .           .
  160          .          CP9...........
               .           V
               .           V
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  163            .        RCP9
                 .           .
                 .           .
  170            .           .          10
                 .           .           .
                 .           .           .
  179            .      I1CP10............
                 .           .
                 .           .
  182         CP10............
                 V
                 V
  185        RCP10
                 .
                 .
  192            .          12
                 .           .
                 .           .
  200         CP12............
                 V
                 V
  203        RCP12
                 .
                 .
  210            .          11
                 .           V
                 .           V
  218            .       RCP11
                 .           .
                 .           .
  225            .           .          13
                 .           .           .
                 .           .           .
  233            .        CP13............
                 .           V
                 .           V
  236            .       RCP13
                 .           .
                 .           .
  243            .           .          14
                 .           .           V
                 .           .           V
  250            .           .       RCP14
                 .           .           .
                 .           .           .
  257            .           .           .          15
                 .           .           .           .
                 .           .           .           .
  265            .           .      I1CP15............
                 .           .           .
                 .           .           .
  268            .           .           .          16
                 .           .           .           V
                 .           .           .           V
  276            .           .           .        SR16
                 .           .           .           .
                 .           .           .           .
  282            .           .        CP15............
                 .           .           V
                 .           .           V
  285            .           .       RCP15
                 .           .           .
                 .           .           .
  292            .           .           .          17
                 .           .           .           .
                 .           .           .           .
  300            .           .      I1CP17............
                 .           .           .
                 .           .           .
  303            .        CP17............
                 .           V
                 .           V
  306            .       RCP17
                 .           .
                 .           .
  313            .           .         WT3
                 .           .           .
                 .           .           .
  321            .      I1CWT3............
                 .           .
                 .           .
  324        CPWT3............
                 V
                 V
  327        SRWT3
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*****************************************
****************************************
*                                        *                  *
*
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *                  *   U.S. ARMY CORPS OF ENGINEERS
*
*              MAY   1991                *                  *   HYDROLOGIC ENGINEERING CENTER
*
*            VERSION 4.0.1E              *                  *         609 SECOND STREET
*
*     Lahey F77L-EM/32 version 5.01      *                  *      DAVIS, CALIFORNIA 95616
*
*       Dodson & Associates, Inc.        *                  *          (916) 551-1748
*
```

```
 * RUN DATE  04/24/97  TIME  14:14:37   *                                               *
*
 ****************************************
****************************************
```

FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
100-YEAR, 24-HOUR STORM WTADMS.24

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

    IT          HYDROGRAPH TIME DATA
                       NMIN           5  MINUTES IN COMPUTATION INTERVAL
                      IDATE      1    0  STARTING DATE
                      ITIME        0000  STARTING TIME
                         NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE      2    0  ENDING DATE
                     NDTIME        0055  ENDING TIME
                      ICENT          19  CENTURY MARK

                  COMPUTATION INTERVAL    0.08 HOURS
                       TOTAL TIME BASE   24.92 HOURS

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

 11 JD          INDEX STORM NO. 1
                       STRM        4.03  PRECIPITATION DEPTH
                       TRDA        0.00  TRANSPOSITION DRAINAGE AREA

 12 PI            PRECIPITATION PATTERN
```

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

```
 22 JD          INDEX STORM NO. 2
                       STRM        3.99  PRECIPITATION DEPTH
                       TRDA       10.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
```

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

23 JD INDEX STORM NO. 3

STRM 3.83 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

24 JD INDEX STORM NO. 4

STRM 3.76 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

25 JD INDEX STORM NO. 5

STRM 3.70 PRECIPITATION DEPTH

TRDA 200.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03

0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	1	1342.	12.50	175.	50.	48.	1.94		
+	ROUTED TO	RCP1	1114.	12.75	165.	42.	40.	1.94		
+	HYDROGRAPH AT	2	1174.	12.75	206.	58.	56.	1.82		
+	2 COMBINED AT	CP2	2284.	12.75	370.	100.	96.	3.76		
+	ROUTED TO	RCP2	2048.	12.92	358.	92.	88.	3.76		
+	HYDROGRAPH AT	3A	296.	12.33	29.	7.	7.	0.29		
+	ROUTED TO	RCP3A	229.	12.58	27.	7.	7.	0.29		
+	HYDROGRAPH AT	3	828.	12.33	83.	21.	20.	0.81		
+	2 COMBINED AT	I1CP3	997.	12.42	110.	28.	27.	1.10		
+	2 COMBINED AT	CP3	2245.	12.92	468.	119.	115.	4.86		
+	ROUTED TO	RCP3	2108.	13.08	450.	113.	108.	4.86		
+	HYDROGRAPH AT	4	339.	12.25	26.	7.	6.	0.30		
+	HYDROGRAPH AT	5	716.	12.25	65.	18.	18.	0.72		
+	2 COMBINED AT	CP5	1053.	12.25	90.	25.	24.	1.02		
+	ROUTED TO	RCP5	973.	12.33	89.	24.	23.	1.02		
+	HYDROGRAPH AT	6	591.	12.08	41.	12.	11.	0.45		
+	2 COMBINED AT	I1CP7	1289.	12.17	130.	35.	34.	1.47		
+	HYDROGRAPH AT	7	390.	12.08	28.	8.	8.	0.31		
+	2 COMBINED AT	CP7	1668.	12.17	158.	43.	41.	1.78		
+	ROUTED TO	RCP7	1435.	12.33	151.	38.	36.	1.78		
+	HYDROGRAPH AT	9	1096.	12.42	127.	36.	35.	1.40		
+	2 COMBINED AT	I1CP9	2527.	12.33	277.	74.	71.	3.18		
+	HYDROGRAPH AT	8	704.	12.33	73.	21.	20.	0.81		
+	2 COMBINED AT	CP9	3227.	12.33	350.	94.	91.	3.99		
+	ROUTED TO	RCP9	2648.	12.75	326.	81.	78.	3.99		
+	HYDROGRAPH AT	10	1173.	12.75	201.	52.	50.	2.02		

+	2 COMBINED AT	I1CP10	3816.	12.75	525.	133.	129.	6.01
+	2 COMBINED AT	CP10	5504.	12.83	970.	245.	236.	10.87
+	ROUTED TO	RCP10	5318.	12.92	962.	241.	232.	10.87
+	HYDROGRAPH AT	12	1149.	12.58	156.	40.	39.	1.38
+	2 COMBINED AT	CP12	5888.	12.83	1110.	279.	269.	12.25
+	ROUTED TO	RCP12	5343.	13.08	1070.	268.	258.	12.25
+	HYDROGRAPH AT	11	1313.	12.50	165.	44.	43.	1.56
+	ROUTED TO	RCP11	1011.	12.75	164.	44.	43.	1.56
+	HYDROGRAPH AT	13	1170.	12.42	137.	34.	33.	1.30
+	2 COMBINED AT	CP13	1743.	12.58	301.	78.	76.	2.86
+	ROUTED TO	RCP13	1719.	12.67	301.	78.	75.	2.86
+	HYDROGRAPH AT	14	1163.	12.33	130.	37.	35.	1.47
+	ROUTED TO	RCP14	1041.	12.58	130.	37.	35.	1.47
+	HYDROGRAPH AT	15	1039.	12.42	117.	32.	30.	1.26
+	2 COMBINED AT	I1CP15	1920.	12.50	246.	68.	66.	2.73
+	HYDROGRAPH AT	16	1255.	12.42	155.	43.	41.	1.13
+	ROUTED TO	SR16	0.	0.08	0.	0.	0.	1.13
+	2 COMBINED AT	CP15	1920.	12.50	246.	68.	66.	3.86
+	ROUTED TO	RCP15	1453.	12.83	211.	53.	51.	3.86
+	HYDROGRAPH AT	17	929.	12.25	110.	27.	26.	1.07
+	2 COMBINED AT	I1CP17	1738.	12.75	321.	80.	77.	4.93
+	2 COMBINED AT	CP17	3428.	12.75	621.	158.	153.	7.79
+	ROUTED TO	RCP17	3377.	12.83	614.	154.	148.	7.79
+	HYDROGRAPH AT	WT3	413.	12.50	54.	14.	13.	0.44
+	2 COMBINED AT	I1CWT3	3605.	12.83	668.	167.	161.	8.23
+	2 COMBINED AT	CPWT3	8115.	13.00	1688.	422.	407.	20.48
+	ROUTED TO	SRWT3	0.	0.08	0.	0.	0.	20.48

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION SRWT3

(PEAKS SHOWN ARE FOR INTERNAL TIME STEP USED DURING BREACH FORMATION)

PLAN 1		INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
	ELEVATION	1174.00	1209.00	1212.10
	STORAGE	0.	3012.	4041.
	OUTFLOW	0.	0.	18460.

RATIO	MAXIMUM	MAXIMUM	MAXIMUM	MAXIMUM	DURATION	TIME OF	TIME OF

OF PMF	RESERVOIR W.S.ELEV	DEPTH OVER DAM	STORAGE AC-FT	OUTFLOW CFS	OVER TOP HOURS	MAX OUTFLOW HOURS	FAILURE HOURS
1.00	1199.40	0.00	884.	0.	0.00	0.00	0.00

PLAN 2 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1199.26	0.00	867.	0.	0.00	0.00	0.00

PLAN 3 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1198.72	0.00	800.	0.	0.00	0.00	0.00

PLAN 4 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1198.48	0.00	771.	0.	0.00	0.00	0.00

PLAN 5 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1198.28	0.00	747.	0.	0.00	0.00	0.00

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

Short Channel & remove Diversions @ Olive & Northern

FILE = WT3-1&2.OUT

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

  1            ID
  2            ID        MODEL = WT3-B1&2.DAT IS TAKEN FROM WT3.DAT WHICH IS FROM THE
  3            ID        FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
  4            ID        100-YEAR, 24-HOUR STORM                               WTADMS.24
  5            ID
  6            ID           MODEL WT3-B1&2 REMOVES SUBBASINS 1 AND 2 FROM MODEL WT3
  7            ID
  8            ID                   R.W. CRUFF, P.E.        APRIL 23, 1997
  9            ID
               *DIAGRAM
 10            IT       5                   300
 11            IO       5
 12            IN      15
 13            JD    4.03    .001
 14            PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 15            PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 16            PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 17            PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 18            PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 19            PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 20            PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 21            PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 22            PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 23            PC    .983    .986    .989    .992    .995    .998    1.00   1.000   1.000   1.000
 24            JD    3.99      10
 25            JD    3.83      50
 26            JD    3.76     100
 27            JD    3.70     200

 28            KK      3A
 29            KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 3A
 30            BA     .29
 31            LG     .15     .33    3.99     .59     .00
 32            UI     34.     89.    165.    212.    286.    410.    314.    242.    182.    124.
 33            UI     62.     48.     33.     10.     10.     10.     10.      0.      0.      0.
 34            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 35            KK   RCP3A
 36            KM        ROUTE FLOW FROM CP3A TO CP3
 37            RL                     1.5    1284
 38            RS       2              -1       0
 39            RC     .03     .03     .05    5300   .0060
 40            RX    1000    1023    1032    1046    1058    1067    1250    1540
 41            RY    1289    1288    1286    1284    1284    1286    1288    1291

 42            KK       3
 43            KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 3.
 44            BA     .81
 45            LG     .15     .33    4.08     .54     .00
 46            UI     91.    228.    430.    554.    725.   1088.    908.    700.    535.    396.
 47            UI    205.    152.     95.     57.     28.     28.     28.      0.      0.      0.
 48            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                          HEC-1 INPUT                                            PAGE  2

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

 49            KK   I1CP3
 50            KM        ADD HYDROGRAPHS AT CP3.
 51            HC       2

 52            KK    RCP3
 53            KM        ROUTE THE REMAINING HYDROGRAPH AT CP3 TO CP10.
 54            RL                       2    1245
 55            RS       2              -1       0
 56            RC     .05     .03     .05    5280   .0083
 57            RX    1010    1015    1020    1050    1100    1275    1580    1750
 58            RY    1251    1249    1249    1245    1245    1250    1250    1254

 59            KK       4
 60            KM        RUNOFF HYDROGRAPH FORM SUB-BASIN 4.
 61            BA     .30
 62            LG     .20     .30    3.87     .77    1.00
 63            UI     48.    192.    287.    444.    512.    346.    236.    115.     67.     35.
 64            UI     14.     14.      0.      0.      0.      0.      0.      0.      0.      0.
 65            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 66            KK       5
 67            KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 5.
 68            BA     .72
 69            LG     .20     .34    3.27    1.11    9.20
 70            UI    110.    437.    658.    992.   1242.    849.    591.    315.    174.    101.
 71            UI     34.     34.     34.      0.      0.      0.      0.      0.      0.      0.
 72            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 73            KK     CP5
 74            KM        ADD HYDROGRAPHS AT CP5.
 75            HC       2

 76            KK    RCP5
 77            KM        ROUTE COMBINED HYDROGRAPHS AT CP5 TO CP7.
 78            RL                      .5    2800
 79            RS       1              -1       0
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   80          RC      .08     .05     .08    4800   .0833
   81          RX      955     970     985    1000    1020    1035    1050    1065
   82          RY     2815    2810    2805    2800    2800    2805    2810    2815

   83          KK        6
   84          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 6.
   85          BA      .45
   86          LG      .20     .34    3.21    1.14   10.00
   87          UI     204.    622.   1139.    837.    427.    155.     54.     33.      0.      0.
   88          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

   89          KK    I1CP7
   90          KM        ADD HYDROGRAPHS AT CP7.
   91          HC        2
1                                        HEC-1 INPUT                                              PAGE  3

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


   92          KK        7
   93          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 7.
   94          BA      .31
   95          LG      .20     .34    3.21    1.14   10.00
   96          UI     126.    387.    716.    606.    343.    129.     52.     22.      0.      0.
   97          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

   98          KK      CP7
   99          KM        ADD HYDROGRAPHS AT CP7.
  100          HC        2

  101          KK     RCP7
  102          KM        ROUTE COMBINED HYDROGRAPHS AT CP7 TO CP9.
  103          RL                       .5    1838
  104          RS        3              -1       0
  105          RC      .08     .05     .08   10200  .07745
  106          RX     1000    1045    1120    1195    1230    1300    1350    1450
  107          RY     1910    1880    1850    1838    1838    1850    1880    1910

  108          KK        9
  109          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 9.
  110          BA     1.40
  111          LG      .20     .34    3.24    1.12    9.70
  112          UI     155.    381.    727.    935.   1216.   1832.   1591.   1224.    938.    705.
  113          UI     386.    261.    177.    115.     47.     47.     47.     47.      0.      0.
  114          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  115          KK    I1CP9
  116          KM        ADD HYDROGRAPHS AT CP9.
  117          HC        2

  118          KK        8
  119          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 8.
  120          BA      .81
  121          LG      .20     .34    3.21    1.14   10.00
  122          UI     102.    313.    535.    703.   1054.   1140.    822.    608.    421.    208.
  123          UI     147.     96.     31.     31.     31.      0.      0.      0.      0.      0.
  124          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  125          KK      CP9
  126          KM        ADD HYDROGRAPHS AT CP9.
  127          HC        2

  128          KK     RCP9
  129          KM        ROUTE COMBINED HYDROGRAPHS AT CP9 TO CP10.
  130          RL                      1.5    1308
  131          RS        8              -1       0
  132          RC      .06    .035     .06   19200   .0232
  133          RX     1000    1085    1310    1395    1415    1450    1630    1665
  134          RY     1317    1314    1311    1308    1308    1314    1314    1317
1                                        HEC-1 INPUT                                              PAGE  4

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


  135          KK       10
  136          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 10.
  137          BA     2.02
  138          LG      .16     .33    3.90     .66    3.30
  139          UI     119.    119.    218.    427.    546.    632.    708.    812.    929.   1148.
  140          UI    1499.   1393.   1156.   1006.    894.    765.    669.    577.    475.    325.
  141          UI     210.    201.    193.    119.    119.     86.     36.     36.     36.     36.
  142          UI      36.     36.     36.     36.      0.      0.      0.      0.      0.      0.
  143          UI       0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  144          KK   I1CP10
  145          KM        ADD HYDROGRAPHS AT CP10
  146          HC        2

  147          KK     CP10
  148          KM        ADD HYDROGRAPHS AT CP10
  149          HC        2

  150          KK    RCP10
  151          KM        ROUTE REMAINING HYDROGRAPH AT CP10 TO CP12.
  152          RL                      2.0    1211
  153          RS        1              -1       0
  154          RC      .03     .03     .05    3500   .0057
  155          RX      995    1000    1020    1055    1085    1165    1250    1330
  156          RY     1221    1220    1220    1211    1211    1218    1220    1222

  157          KK       12
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  158         KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 12.
  159         BA    1.38
  160         LG     .16     .32    4.18     .50    3.00
  161         UI    111.    129.    393.    535.    636.    758.    930.   1311.   1277.   1008.
  162         UI    850.    697.    574.    445.    264.    191.    169.    111.     92.     34.
  163         UI     34.     34.     34.     34.     34.      0.      0.      0.      0.      0.
  164         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  165         KK    CP12
  166         KM        ADD HYDROGRAPHS AT CP12.
  167         HC       2

  168         KK   RCP12
  169         KM        ROUTE COMBINED HYDROGRAPHS AT CP12 TO CPWT3
  170         RL                     2.0    1196
  171         RS       2              -1       0
  172         RC     .03     .03     .04    4800   .0031
  173         RX     995    1000    1020    1080    1200    1530    1665    1760
  174         RY    1211    1211    1210    1196    1196    1200    1204    1204

  175         KK      11
  176         KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 11.
  177         BA    1.56
  178         LG     .18     .32    3.98     .67    6.80
  179         UI    143.    245.    571.    755.    913.   1142.   1648.   1623.   1254.   1026.
  180         UI    821.    643.    394.    248.    210.    143.     86.     44.     44.     44.
  181         UI     44.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                      HEC-1 INPUT                                               PAGE  5

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

  182         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  183         KK   RCP11
  184         KM        ROUTE HYROGRAPH FROM CP11 TO CP13.
  185         RL                     1.5    1196
  186         RS       3              -1       0
  187         RC     .06    .035     .06   10200   .0098
  188         RX    1000    1070    1300    1480    1510    1525    1555    1600
  189         RY    1233    1232    1230    1222    1222    1230    1232    1233

  190         KK      13
  191         KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 13.
  192         BA    1.30
  193         LG     .15     .33    4.14     .51     .00
  194         UI    120.    210.    485.    639.    774.    973.   1416.   1333.   1039.    847.
  195         UI    674.    527.    303.    206.    167.    120.     60.     37.     37.     37.
  196         UI     37.      0.      0.      0.      0.      0.      0.      0.      0.      0.
  197         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  198         KK    CP13
  199         KM        ADD HYDROGRAPHS AT CP13.
  200         HC       2

  201         KK   RCP13
  202         KM        ROUTE COMBINED HYDROGRAPHS AT CP13 TO CP17
  203         RL                     1.5    1222
  204         RS       2              -1       0
  205         RC     .03     .03     .04    2400   .0042
  206         RX    1000    1025    1040    1065    1085    1110    1175    1200
  207         RY    1206    1198    1196    1194    1194    1198    1198    1201

  208         KK      14
  209         KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 14.
  210         BA    1.47
  211         LG     .20     .34    3.24    1.12    9.00
  212         UI    166.    421.    790.   1019.   1341.   1998.   1636.   1264.    961.    699.
  213         UI    362.    274.    166.     93.     51.     51.     51.      0.      0.      0.
  214         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  215         KK   RCP14
  216         KM        ROUTE FLOW FROM CP14 TO CP15.
  217         RL                     2.0    1194
  218         RS       4              -1       0
  219         RC     .06    .035     .06    8800  .02556
  220         RX    1000    1030    1075    1200    1220    1280    1415    1480
  221         RY    1296    1295    1294    1288    1288    1294    1296    1300

  222         KK      15
  223         KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 15.
  224         BA    1.26
  225         LG     .18     .33    3.58     .86    6.40
  226         UI    130.    281.    577.    747.    938.   1321.   1552.   1156.    920.    713.
  227         UI    519.    277.    217.    138.     93.     40.     40.     40.     40.      0.
  228         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
  229         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                      HEC-1 INPUT                                               PAGE  6

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

  230         KK   I1CP15
  231         KM        ADD HYDROGRAPHS AT CP15
  232         HC       2

  233         KK      16
  234         KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 16.
  235         BA    1.13
  236         LG     .17     .32    4.08     .41   11.10
  237         UI    115.    240.    503.    652.    814.   1126.   1393.   1049.    839.    655.
  238         UI    497.    268.    194.    137.    101.     35.     35.     35.     35.      0.
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 239          UI     0.     0.     0.     0.     0.     0.     0.     0.     0.     0.
 240          UI     0.     0.     0.     0.     0.     0.     0.     0.     0.     0.

 241          KK    SR16
 242          KM        STORAGE ROUTE THROUGH THE CATERPILLAR DETENTION BASIN IN SUBWATERSHED 16
 243          RS      1   STOR      0      0
 244          SV      0      1     31    114    270    502    807   1319   1776   1908
 245          SQ      0                                                          4050
 246          SE   1198   1200   1210   1220   1230   1240   1250   1260   1266   1267

 247          KK    CP15
 248          KM        ADD HYDROGRAPHS AT CP15.
 249          HC      2

 250          KK   RCP15
 251          KM        ROUTE COMBINED HYDROGRAPHS AT CP15 TO CP17.
 252          RL                   2.0   1226
 253          RS      3             -1      0
 254          RC    .06   .035    .06   6800  .0079
 255          RX   1000   1310   1380   1540   1640   1670   1700   1910
 256          RY   1234   1232   1228   1226   1226   1228   1232   1235

 257          KK      17
 258          KM        RUNOFFF HYDROGRAPH FROM SUB-BASIN 17.
 259          BA   1.07
 260          LG    .19    .33   4.04    .54    .10
 261          UI   117.   254.   572.   810.  1052.  1196.   753.   635.   540.   450.
 262          UI   353.   287.   254.   194.   149.   129.   103.    90.    64.    57.
 263          UI    57.    26.    22.    22.    22.    22.    22.    22.     0.     0.
 264          UI     0.     0.     0.     0.     0.     0.     0.     0.     0.     0.

 265          KK  I1CP17
 266          KM        ADD HYDROGRAPHS AT CP17.
 267          HC      2

 268          KK    CP17
 269          KM        ADD HYDROGRAPHS AT CP17.
 270          HC      2
1                                     HEC-1 INPUT                                                      PAGE  7

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


 271          KK   RCP17
 272          KM        ROUTE FLOW FROM CP17 TO CPWT3
 273          RL                   2.0   1182
 274          RS      2             -1      0
 275          RC    .06    .04    .04   1600  .0022
 276          RX   1000   1220   1280   1470   1530   1660   1680   1685
 277          RY   1196   1194   1190   1182   1182   1210   1211   1212

 278          KK     WT3
 279          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN WT3
 280          BA    .44
 281          LG    .35    .32   3.91    .33    .00
 282          UI    36.    44.   128.   175.   207.   249.   308.   436.   399.   318.
 283          UI   267.   220.   179.   133.    78.    61.    49.    36.    23.    11.
 284          UI    11.    11.    11.    11.     0.     0.     0.     0.     0.     0.
 285          UI     0.     0.     0.     0.     0.     0.     0.     0.     0.     0.

 286          KK  I1CWT3
 287          KM        ADD HYDROGRAPHS AT CPWT3
 288          HC      2

 289          KK   CPWT3
 290          KM        ADD HYDROGRAPHS AT CPWT3
 291          HC      2

 292          KK   SRWT3
 293          KM        STORAGE ROUTE THROUGH WHITE TANKS STRUCTURE #3.
 294          RS      1   STOR      0      0
 295          SV      0      1     14     42     91    203    466    958   1704   2716
 296          SV   3012   3325   3657   4006
 297          SQ      0      0      0      0      0      0      0      0      0      0
 298          SQ      0   3550   9000  17600
 299          SE   1174   1176   1180   1184   1188   1192   1196   1200   1204   1208
 300          SE   1209   1210   1211   1212
 301          SS   1209      0      0      0
 302          ST 1212.1   7667    2.2    1.5
 303          SW   1000   1995   3000   4000   4988   6008   7007
 304          SE 1212.1 1212.4 1212.63 1213.32 1214.72 1214.94 1214.8
 305          ZZ
1
          SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE     (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   28        3A
             V
             V
   35      RCP3A
             .
             .
   42        .          3
             .          .
             .          .
   49      I1CP3.........
             V
             V
```

```
  52       RCP3
              .
              .
  59          .            4
              .            .
              .            .
  66          .            .            5
              .            .            .
              .            .            .
  73          .          CP5............
              .            V
              .            V
  76          .         RCP5
              .            .
              .            .
  83          .            .            6
              .            .            .
              .            .            .
  89          .        I1CP7............
              .            .
              .            .
  92          .            .            7
              .            .            .
              .            .            .
  98          .          CP7............
              .            V
              .            V
 101          .         RCP7
              .            .
              .            .
 108          .            .            9
              .            .            .
              .            .            .
 115          .        I1CP9............
              .            .
              .            .
 118          .            .            8
              .            .            .
              .            .            .
 125          .          CP9............
              .            V
              .            V
 128          .         RCP9
              .            .
              .            .
 135          .            .           10
              .            .            .
              .            .            .
 144          .       I1CP10............
              .            .
              .            .
 147       CP10............
              V
              V
 150      RCP10
              .
              .
 157          .           12
              .            .
              .            .
 165       CP12............
              V
              V
 168      RCP12
              .
              .
 175          .           11
              .            V
              .            V
 183          .        RCP11
              .            .
              .            .
 190          .            .           13
              .            .            .
              .            .            .
 198          .         CP13............
              .            V
              .            V
 201          .        RCP13
              .            .
              .            .
 208          .            .           14
              .            .            V
              .            .            V
 215          .            .        RCP14
              .            .            .
              .            .            .
 222          .            .            .           15
              .            .            .            .
              .            .            .            .
 230          .            .       I1CP15............
              .            .            .
              .            .            .
 233          .            .            .           16
              .            .            .            V
              .            .            .            V
 241          .            .            .         SR16
              .            .            .            .
              .            .            .            .
 247          .            .         CP15............
              .            .            V
```

```
                                         V
250            .           .           RCP15
               .           .             .
               .           .             .
257            .           .             .           17
               .           .             .            .
               .           .             .            .
265            .           .          I1CP17...........
               .           .             .
               .           .             .
268            .         CP17...........
               .           V
               .           V
271            .         RCP17
               .           .
               .           .
278            .           .             WT3
               .           .              .
               .           .              .
286            .       I1CWT3...........
               .           .
               .           .
289          CPWT3...........
               V
               V
292          SRWT3

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
```

```
1*****************************************
***************************************
*                                         *                                                   *
*
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)     *                                                   *   U.S. ARMY CORPS OF ENGINEERS
*
*              MAY   1991                 *                                                   *   HYDROLOGIC ENGINEERING CENTER
*
*           VERSION 4.0.1E                *                                                   *         609 SECOND STREET
*
*     Lahey F77L-EM/32 version 5.01       *                                                   *      DAVIS, CALIFORNIA 95616
*
*       Dodson & Associates, Inc.         *                                                   *         (916) 551-1748
*
*  RUN DATE  04/24/97  TIME  13:53:40     *                                                   *
*
*****************************************
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                 MODEL = WT3-B1&2.DAT IS TAKEN FROM WT3.DAT WHICH IS FROM THE
                 FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
                 100-YEAR, 24-HOUR STORM                           WTADMS.24

                    MODEL WT3-B1&2 REMOVES SUBBASINS 1 AND 2 FROM MODEL WT3

                            R.W. CRUFF, P.E.        APRIL 23, 1997
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11 IO          OUTPUT CONTROL VARIABLES
                     IPRNT          5  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE

   IT          HYDROGRAPH TIME DATA
                      NMIN          5  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1   0  STARTING DATE
                     ITIME       0000  STARTING TIME
                        NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      2   0  ENDING DATE
                    NDTIME       0055  ENDING TIME
                     ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL    0.08 HOURS
                      TOTAL TIME BASE   24.92 HOURS

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

13 JD           INDEX STORM NO. 1
                      STRM       4.03  PRECIPITATION DEPTH
                      TRDA       0.00  TRANSPOSITION DRAINAGE AREA

14 PI            PRECIPITATION PATTERN
```

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

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

24 JD INDEX STORM NO. 2

STRM 3.99 PRECIPITATION DEPTH

TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

25 JD INDEX STORM NO. 3

STRM 3.83 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

26 JD INDEX STORM NO. 4

STRM 3.76 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

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

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

27 JD INDEX STORM NO. 5
STRM 3.70 PRECIPITATION DEPTH
TRDA 200.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	3A	296.	12.33	29.	7.	7.	0.29		
+	ROUTED TO	RCP3A	229.	12.58	27.	7.	7.	0.29		
+	HYDROGRAPH AT	3	828.	12.33	83.	21.	20.	0.81		
+	2 COMBINED AT	I1CP3	997.	12.42	110.	28.	27.	1.10		
+	ROUTED TO	RCP3	819.	12.58	102.	26.	25.	1.10		
+	HYDROGRAPH AT	4	339.	12.25	26.	7.	6.	0.30		
+	HYDROGRAPH AT	5	716.	12.25	65.	18.	18.	0.72		
+	2 COMBINED AT	CP5	1053.	12.25	90.	25.	24.	1.02		
+	ROUTED TO	RCP5	973.	12.33	89.	24.	23.	1.02		
+	HYDROGRAPH AT	6	591.	12.08	41.	12.	11.	0.45		
+	2 COMBINED AT	I1CP7	1289.	12.17	130.	35.	34.	1.47		

+	HYDROGRAPH AT	7	390.	12.08	28.	8.	8.	0.31
+	2 COMBINED AT	CP7	1668.	12.17	158.	43.	41.	1.78
+	ROUTED TO	RCP7	1435.	12.33	151.	38.	36.	1.78
+	HYDROGRAPH AT	9	1096.	12.42	127.	36.	35.	1.40
+	2 COMBINED AT	I1CP9	2527.	12.33	277.	74.	71.	3.18
+	HYDROGRAPH AT	8	704.	12.33	73.	21.	20.	0.81
+	2 COMBINED AT	CP9	3227.	12.33	350.	94.	91.	3.99
+	ROUTED TO	RCP9	2648.	12.75	326.	81.	78.	3.99
+	HYDROGRAPH AT	10	1173.	12.75	201.	52.	50.	2.02
+	2 COMBINED AT	I1CP10	3816.	12.75	525.	133.	129.	6.01
+	2 COMBINED AT	CP10	4504.	12.75	627.	159.	153.	7.11
+	ROUTED TO	RCP10	4262.	12.83	620.	155.	149.	7.11
+	HYDROGRAPH AT	12	1149.	12.58	156.	40.	39.	1.38
+	2 COMBINED AT	CP12	4925.	12.83	775.	195.	188.	8.49
+	ROUTED TO	RCP12	4322.	13.00	740.	185.	178.	8.49
+	HYDROGRAPH AT	11	1313.	12.50	165.	44.	43.	1.56
+	ROUTED TO	RCP11	1011.	12.75	164.	44.	43.	1.56
+	HYDROGRAPH AT	13	1170.	12.42	137.	34.	33.	1.30
+	2 COMBINED AT	CP13	1743.	12.58	301.	78.	76.	2.86
+	ROUTED TO	RCP13	1719.	12.67	301.	78.	75.	2.86
+	HYDROGRAPH AT	14	1163.	12.33	130.	37.	35.	1.47
+	ROUTED TO	RCP14	1041.	12.58	130.	37.	35.	1.47
+	HYDROGRAPH AT	15	1039.	12.42	117.	32.	30.	1.26
+	2 COMBINED AT	I1CP15	1920.	12.50	246.	68.	66.	2.73
+	HYDROGRAPH AT	16	1255.	12.42	155.	43.	41.	1.13
+	ROUTED TO	SR16	0.	0.08	0.	0.	0.	1.13
+	2 COMBINED AT	CP15	1920.	12.50	246.	68.	66.	3.86
+	ROUTED TO	RCP15	1453.	12.83	211.	53.	51.	3.86
+	HYDROGRAPH AT	17	929.	12.25	110.	27.	26.	1.07
+	2 COMBINED AT	I1CP17	1738.	12.75	321.	80.	77.	4.93
+	2 COMBINED AT	CP17	3428.	12.75	621.	158.	153.	7.79
+	ROUTED TO	RCP17	3377.	12.83	614.	154.	148.	7.79
+	HYDROGRAPH AT	WT3	413.	12.50	54.	14.	13.	0.44
+	2 COMBINED AT	I1CWT3	3605.	12.83	668.	167.	161.	8.23

2 COMBINED AT							
+	CPWT3	7323.	12.92	1372.	343.	331.	16.72
ROUTED TO							
+	SRWT3	0.	0.08	0.	0.	0.	16.72

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION SRWT3

(PEAKS SHOWN ARE FOR INTERNAL TIME STEP USED DURING BREACH FORMATION)

PLAN 1 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.99	0.00	711.	0.	0.00	0.00	0.00

PLAN 2 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.89	0.00	698.	0.	0.00	0.00	0.00

PLAN 3 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.45	0.00	644.	0.	0.00	0.00	0.00

PLAN 4 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.25	0.00	620.	0.	0.00	0.00	0.00

PLAN 5 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1197.09	0.00	601.	0.	0.00	0.00	0.00

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

Long Channel & remove Diversions @ Olive & Northern

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                  FILE = WT3-1-9.OUT

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

  1           ID
  2           ID        MODEL = WT3-B1-9.DAT IS TAKEN FROM WT3.DAT WHICH IS FROM THE
  3           ID        FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
  4           ID        100-YEAR, 24-HOUR STORM                                WTADMS.24
  5           ID
  6           ID           MODEL WT3-B1-9 REMOVES SUBBASINS 1, 2, & 4-9 FROM MODEL WT3
  7           ID
  8           ID                   R.W. CRUFF, P.E.        APRIL 23, 1997
  9           ID
              *DIAGRAM
 10           IT       5                       300
 11           IO       5
 12           IN      15
 13           JD    4.03    .001
 14           PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
 15           PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
 16           PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
 17           PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
 18           PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
 19           PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
 20           PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
 21           PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
 22           PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
 23           PC    .983    .986    .989    .992    .995    .998    1.00   1.000   1.000   1.000
 24           JD    3.99      10
 25           JD    3.83      50
 26           JD    3.76     100
 27           JD    3.70     200

 28           KK      3A
 29           KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 3A
 30           BA     .29
 31           LG     .15     .33    3.99     .59     .00
 32           UI     34.     89.    165.    212.    286.    410.    314.    242.    182.    124.
 33           UI     62.     48.     33.     10.     10.     10.     10.      0.      0.      0.
 34           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 35           KK   RCP3A
 36           KM        ROUTE FLOW FROM CP3A TO CP3
 37           RL                     1.5    1284
 38           RS       2              -1       0
 39           RC     .03     .03     .05    5300   .0060
 40           RX    1000    1023    1032    1046    1058    1067    1250    1540
 41           RY    1289    1288    1286    1284    1284    1286    1288    1291

 42           KK       3
 43           KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 3.
 44           BA     .81
 45           LG     .15     .33    4.08     .54     .00
 46           UI     91.    228.    430.    554.    725.   1088.    908.    700.    535.    396.
 47           UI    205.    152.     95.     57.     28.     28.     28.      0.      0.      0.
 48           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                            HEC-1 INPUT                                          PAGE  2

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


 49           KK   I1CP3
 50           KM        ADD HYDROGRAPHS AT CP3.
 51           HC       2

 52           KK    RCP3
 53           KM        ROUTE THE REMAINING HYDROGRAPH AT CP3 TO CP10.
 54           RL                       2    1245
 55           RS       2              -1       0
 56           RC     .05     .03     .05    5280   .0083
 57           RX    1010    1015    1020    1050    1100    1275    1580    1750
 58           RY    1251    1249    1249    1245    1245    1250    1250    1254

 59           KK      10
 60           KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 10.
 61           BA    2.02
 62           LG     .16     .33    3.90     .66    3.30
 63           UI    119.    119.    218.    427.    546.    632.    708.    812.    929.   1148.
 64           UI   1499.   1393.   1156.   1006.    894.    765.    669.    577.    475.    325.
 65           UI    210.    201.    193.    119.    119.     86.     36.     36.     36.     36.
 66           UI     36.     36.     36.     36.      0.      0.      0.      0.      0.      0.
 67           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 68           KK    CP10
 69           KM        ADD HYDROGRAPHS AT CP10
 70           HC       2

 71           KK   RCP10
 72           KM        ROUTE REMAINING HYDROGRAPH AT CP10 TO CP12.
 73           RL                     2.0    1211
 74           RS       1              -1       0
 75           RC     .03     .03     .05    3500   .0057
 76           RX     995    1000    1020    1055    1085    1165    1250    1330
 77           RY    1221    1220    1220    1211    1211    1218    1220    1222

 78           KK      12
 79           KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 12.
 80           BA    1.38
 81           LG     .16     .32    4.18     .50    3.00
 82           UI    111.    129.    393.    535.    636.    758.    930.   1311.   1277.   1008.
 83           UI    850.    697.    574.    445.    264.    191.    169.    111.     92.     34.
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  84         UI     34.     34.     34.     34.     34.      0.      0.      0.      0.      0.
  85         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

  86         KK    CP12
  87         KM         ADD HYDROGRAPHS AT CP12.
  88         HC       2

  89         KK   RCP12
  90         KM         ROUTE COMBINED HYDROGRAPHS AT CP12 TO CPWT3
  91         RL                     2.0    1196
  92         RS       2              -1       0
  93         RC     .03     .03     .04    4800   .0031
  94         RX     995    1000    1020    1080    1200    1530    1665    1760
  95         RY    1211    1211    1210    1196    1196    1200    1204    1204
1                                         HEC-1 INPUT                                              PAGE  3

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


  96         KK      11
  97         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 11.
  98         BA    1.56
  99         LG     .18     .32    3.98     .67    6.80
 100         UI    143.    245.    571.    755.    913.   1142.   1648.   1623.   1254.   1026.
 101         UI    821.    643.    394.    248.    210.    143.     86.     44.     44.     44.
 102         UI     44.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 103         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 104         KK   RCP11
 105         KM         ROUTE HYROGRAPH FROM CP11 TO CP13.
 106         RL                     1.5    1196
 107         RS       3              -1       0
 108         RC     .06    .035     .06   10200   .0098
 109         RX    1000    1070    1300    1480    1510    1525    1555    1600
 110         RY    1233    1232    1230    1222    1222    1230    1232    1233

 111         KK      13
 112         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 13.
 113         BA    1.30
 114         LG     .15     .33    4.14     .51     .00
 115         UI    120.    210.    485.    639.    774.    973.   1416.   1333.   1039.    847.
 116         UI    674.    527.    303.    206.    167.    120.     60.     37.     37.     37.
 117         UI     37.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 118         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 119         KK    CP13
 120         KM         ADD HYDROGRAPHS AT CP13.
 121         HC       2

 122         KK   RCP13
 123         KM         ROUTE COMBINED HYDROGRAPHS AT CP13 TO CP17
 124         RL                     1.5    1222
 125         RS       2              -1       0
 126         RC     .03     .03     .04    2400   .0042
 127         RX    1000    1025    1040    1065    1085    1110    1175    1200
 128         RY    1206    1198    1196    1194    1194    1198    1198    1201

 129         KK      14
 130         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 14.
 131         BA    1.47
 132         LG     .20     .34    3.24    1.12    9.00
 133         UI    166.    421.    790.   1019.   1341.   1998.   1636.   1264.    961.    699.
 134         UI    362.    274.    166.     93.     51.     51.     51.      0.      0.      0.
 135         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 136         KK   RCP14
 137         KM         ROUTE FLOW FROM CP14 TO CP15.
 138         RL                     2.0    1194
 139         RS       4              -1       0
 140         RC     .06    .035     .06    8800  .02556
 141         RX    1000    1030    1075    1200    1220    1280    1415    1480
 142         RY    1296    1295    1294    1288    1288    1294    1296    1300
1                                         HEC-1 INPUT                                              PAGE  4

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


 143         KK      15
 144         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 15.
 145         BA    1.26
 146         LG     .18     .33    3.58     .86    6.40
 147         UI    130.    281.    577.    747.    938.   1321.   1552.   1156.    920.    713.
 148         UI    519.    277.    217.    138.     93.     40.     40.     40.     40.      0.
 149         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 150         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 151         KK  I1CP15
 152         KM         ADD HYDROGRAPHS AT CP15
 153         HC       2

 154         KK      16
 155         KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 16.
 156         BA    1.13
 157         LG     .17     .32    4.08     .41   11.10
 158         UI    115.    240.    503.    652.    814.   1126.   1393.   1049.    839.    655.
 159         UI    497.    268.    194.    137.    101.     35.     35.     35.     35.      0.
 160         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 161         UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 162         KK    SR16
 163         KM         STORAGE ROUTE THROUGH THE CATERPILLAR DETENTION BASIN IN SUBWATERSHED 16
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   164          RS      1  STOR      0      0
   165          SV      0     1     31    114    270    502    807   1319   1776   1908
   166          SQ      0                                                         4050
   167          SE   1198  1200   1210   1220   1230   1240   1250   1260   1266   1267

   168          KK   CP15
   169          KM        ADD HYDROGRAPHS AT CP15.
   170          HC      2

   171          KK  RCP15
   172          KM        ROUTE COMBINED HYDROGRAPHS AT CP15 TO CP17.
   173          RL                 2.0   1226
   174          RS      3           -1      0
   175          RC    .06  .035    .06   6800  .0079
   176          RX   1000  1310   1380   1540   1640   1670   1700   1910
   177          RY   1234  1232   1228   1226   1226   1228   1232   1235

   178          KK     17
   179          KM        RUNOFFF HYDROGRAPH FROM SUB-BASIN 17.
   180          BA   1.07
   181          LG    .19   .33   4.04    .54    .10
   182          UI   117.  254.   572.   810.  1052.  1196.   753.   635.   540.   450.
   183          UI   353.  287.   254.   194.   149.   129.   103.    90.    64.    57.
   184          UI    57.   26.    22.    22.    22.    22.    22.    22.     0.     0.
   185          UI     0.    0.     0.     0.     0.     0.     0.     0.     0.     0.
1                                          HEC-1 INPUT                                         PAGE  5

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


   186          KK  I1CP17
   187          KM        ADD HYDROGRAPHS AT CP17.
   188          HC      2

   189          KK   CP17
   190          KM        ADD HYDROGRAPHS AT CP17.
   191          HC      2

   192          KK  RCP17
   193          KM        ROUTE FLOW FROM CP17 TO CPWT3
   194          RL                 2.0   1182
   195          RS      2           -1      0
   196          RC    .06   .04    .04   1600  .0022
   197          RX   1000  1220   1280   1470   1530   1660   1680   1685
   198          RY   1196  1194   1190   1182   1182   1210   1211   1212

   199          KK    WT3
   200          KM        RUNOFF HYDROGRAPH FROM SUB-BASIN WT3
   201          BA    .44
   202          LG    .35   .32   3.91    .33    .00
   203          UI    36.   44.   128.   175.   207.   249.   308.   436.   399.   318.
   204          UI   267.  220.   179.   133.    78.    61.    49.    36.    23.    11.
   205          UI    11.   11.    11.    11.     0.     0.     0.     0.     0.     0.
   206          UI     0.    0.     0.     0.     0.     0.     0.     0.     0.     0.

   207          KK  I1CWT3
   208          KM        ADD HYDROGRAPHS AT CPWT3
   209          HC      2

   210          KK  CPWT3
   211          KM        ADD HYDROGRAPHS AT CPWT3
   212          HC      2

   213          KK  SRWT3
   214          KM        STORAGE ROUTE THROUGH WHITE TANKS STRUCTURE #3.
   215          RS      1  STOR      0      0
   216          SV      0     1     14     42     91    203    466    958   1704   2716
   217          SV   3012  3325   3657   4006
   218          SQ      0     0      0      0      0      0      0      0      0      0
   219          SQ      0  3550   9000  17600
   220          SE   1174  1176   1180   1184   1188   1192   1196   1200   1204   1208
   221          SE   1209  1210   1211   1212
   222          SS   1209     0      0      0
   223          ST 1212.1  7667    2.2    1.5
   224          SW   1000  1995   3000   4000   4988   6008   7007
   225          SE 1212.1 1212.4 1212.63 1213.32 1214.72 1214.94  1214.8
   226          ZZ
1
          SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE     (V) ROUTING         (--->) DIVERSION OR PUMP FLOW

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

  28         3A
             V
             V
  35       RCP3A
             .
             .
  42         .          3
             .          .
             .          .
  49      I1CP3............
             V
             V
  52        RCP3
             .
             .
  59         .         10
             .          .
```

```
                 .           .
    68       CP10............
                 V
                 V
    71      RCP10
                 .
                 .
    78           .          12
                 .           .
                 .           .
    86       CP12............
                 V
                 V
    89      RCP12
                 .
                 .
    96           .          11
                 .           V
                 .           V
   104           .       RCP11
                 .           .
                 .           .
   111           .           .          13
                 .           .           .
                 .           .           .
   119           .        CP13............
                 .           V
                 .           V
   122           .       RCP13
                 .           .
                 .           .
   129           .           .          14
                 .           .           V
                 .           .           V
   136           .           .       RCP14
                 .           .           .
                 .           .           .
   143           .           .           .          15
                 .           .           .           .
                 .           .           .           .
   151           .           .      I1CP15............
                 .           .           .
                 .           .           .
   154           .           .           .          16
                 .           .           .           V
                 .           .           .           V
   162           .           .           .        SR16
                 .           .           .           .
                 .           .           .           .
   168           .           .        CP15............
                 .           .           V
                 .           .           V
   171           .           .       RCP15
                 .           .           .
                 .           .           .
   178           .           .           .          17
                 .           .           .           .
                 .           .           .           .
   186           .           .      I1CP17............
                 .           .           .
                 .           .           .
   189           .        CP17............
                 .           V
                 .           V
   192           .       RCP17
                 .           .
                 .           .
   199           .           .         WT3
                 .           .           .
                 .           .           .
   207           .      I1CWT3............
                 .           .
                 .           .
   210      CPWT3............
                 V
                 V
   213      SRWT3
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*****************************************
***************************************
 *                                       *
*
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *
*
 *              MAY   1991               *
*
 *           VERSION 4.0.1E              *
*
 *     Lahey F77L-EM/32 version 5.01     *
*
 *       Dodson & Associates, Inc.       *
*
 *  RUN DATE  04/24/97  TIME  13:55:02   *
*
 *****************************************
***************************************
```

```
*
*    U.S. ARMY CORPS OF ENGINEERS
*    HYDROLOGIC ENGINEERING CENTER
*          609 SECOND STREET
*       DAVIS, CALIFORNIA 95616
*           (916) 551-1748
*
```

```
                    MODEL = WT3-B1-9.DAT IS TAKEN FROM WT3.DAT WHICH IS FROM THE
                    FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
                    100-YEAR, 24-HOUR STORM                              WTADMS.24

                       MODEL WT3-B1-9 REMOVES SUBBASINS 1, 2, & 4-9 FROM MODEL WT3

                                 R.W. CRUFF, P.E.        APRIL 23, 1997


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

   IT           HYDROGRAPH TIME DATA
                       NMIN          5  MINUTES IN COMPUTATION INTERVAL
                      IDATE     1    0  STARTING DATE
                      ITIME       0000  STARTING TIME
                         NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE     2    0  ENDING DATE
                     NDTIME       0055  ENDING TIME
                     ICENT ,        19  CENTURY MARK

                  COMPUTATION INTERVAL    0.08 HOURS
                       TOTAL TIME BASE   24.92 HOURS

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

 13 JD          INDEX STORM NO. 1
                       STRM       4.03  PRECIPITATION DEPTH
                       TRDA       0.00  TRANSPOSITION DRAINAGE AREA

 14 PI            PRECIPITATION PATTERN
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.01      0.00      0.01
                     0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.03      0.03
                     0.03      0.09      0.09      0.09      0.01      0.01      0.01      0.01      0.01      0.01
                     0.01      0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00

 24 JD          INDEX STORM NO. 2
                       STRM       3.99  PRECIPITATION DEPTH
                       TRDA      10.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.01      0.00      0.01
                     0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.01      0.03      0.03
                     0.03      0.09      0.09      0.09      0.01      0.01      0.01      0.01      0.01      0.01
                     0.01      0.01      0.01      0.01      0.01      0.01      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                     0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
```

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

25 JD INDEX STORM NO. 3

STRM 3.83 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

26 JD INDEX STORM NO. 4

STRM 3.76 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

27 JD INDEX STORM NO. 5

STRM 3.70 PRECIPITATION DEPTH

TRDA 200.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	3A	296.	12.33	29.	7.	7.	0.29		
+	ROUTED TO	RCP3A	229.	12.58	27.	7.	7.	0.29		
+	HYDROGRAPH AT	3	828.	12.33	83.	21.	20.	0.81		
+	2 COMBINED AT	I1CP3	997.	12.42	110.	28.	27.	1.10		
+	ROUTED TO	RCP3	819.	12.58	102.	26.	25.	1.10		
+	HYDROGRAPH AT	10	1173.	12.75	201.	52.	50.	2.02		
+	2 COMBINED AT	CP10	1862.	12.75	302.	78.	75.	3.12		
+	ROUTED TO	RCP10	1774.	12.83	296.	74.	71.	3.12		
+	HYDROGRAPH AT	12	1149.	12.58	156.	40.	39.	1.38		
+	2 COMBINED AT	CP12	2614.	12.67	451.	114.	110.	4.50		
+	ROUTED TO	RCP12	2300.	12.92	423.	106.	102.	4.50		
+	HYDROGRAPH AT	11	1313.	12.50	165.	44.	43.	1.56		
+	ROUTED TO	RCP11	1011.	12.75	164.	44.	43.	1.56		
+	HYDROGRAPH AT	13	1170.	12.42	137.	34.	33.	1.30		
+	2 COMBINED AT	CP13	1743.	12.58	301.	78.	76.	2.86		
+	ROUTED TO	RCP13	1719.	12.67	301.	78.	75.	2.86		
+	HYDROGRAPH AT	14	1163.	12.33	130.	37.	35.	1.47		
+	ROUTED TO	RCP14	1041.	12.58	130.	37.	35.	1.47		
+	HYDROGRAPH AT	15	1039.	12.42	117.	32.	30.	1.26		
+	2 COMBINED AT	I1CP15	1920.	12.50	246.	68.	66.	2.73		
+	HYDROGRAPH AT	16	1255.	12.42	155.	43.	41.	1.13		
+	ROUTED TO	SR16	0.	0.08	0.	0.	0.	1.13		
+	2 COMBINED AT	CP15	1920.	12.50	246.	68.	66.	3.86		
+	ROUTED TO	RCP15	1453.	12.83	211.	53.	51.	3.86		
+	HYDROGRAPH AT	17	929.	12.25	110.	27.	26.	1.07		
+	2 COMBINED AT	I1CP17	1738.	12.75	321.	80.	77.	4.93		
+	2 COMBINED AT	CP17	3428.	12.75	621.	158.	153.	7.79		
+	ROUTED TO	RCP17	3377.	12.83	614.	154.	148.	7.79		

+ HYDROGRAPH AT	WT3	413.	12.50	54.	14.	13.	0.44
+ 2 COMBINED AT	I1CWT3	3605.	12.83	668.	167.	161.	8.23
+ 2 COMBINED AT	CPWT3	5724.	12.83	1077.	269.	259.	12.73
+ ROUTED TO	SRWT3	0.	0.08	0.	0.	0.	12.73

1 SUMMARY OF DAM OVERTOPPING/BREACH ANALYSIS FOR STATION SRWT3

(PEAKS SHOWN ARE FOR INTERNAL TIME STEP USED DURING BREACH FORMATION)

PLAN 1 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1196.69	0.00	551.	0.	0.00	0.00	0.00

PLAN 2 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1196.61	0.00	540.	0.	0.00	0.00	0.00

PLAN 3 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1196.27	0.00	499.	0.	0.00	0.00	0.00

PLAN 4 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10

STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1196.12	0.00	480.	0.	0.00	0.00	0.00

PLAN 5 ....

	INITIAL VALUE	SPILLWAY CREST	TOP OF DAM
ELEVATION	1174.00	1209.00	1212.10
STORAGE	0.	3012.	4041.
OUTFLOW	0.	0.	18460.

RATIO OF PMF	MAXIMUM RESERVOIR W.S.ELEV	MAXIMUM DEPTH OVER DAM	MAXIMUM STORAGE AC-FT	MAXIMUM OUTFLOW CFS	DURATION OVER TOP HOURS	TIME OF MAX OUTFLOW HOURS	TIME OF FAILURE HOURS
1.00	1195.98	0.00	465.	0.	0.00	0.00	0.00

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

FILE = MCMKRA1.DAT

INPUT HEC-1 DATA FOR PARTIAL SUBBSAINS
(10A, 11A, AND 12A USED IN THIS STUDY)

BY: BING ZHAO

```
KK 10A
KM BASIN 10A
KM  THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM  L=      1.9  Lca=       .9   S=  231.6  Kn= .030  LAG=  18.5
KM  PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
BA   .92
LG   .35     .35    4.65     .31   19.00
UI  223.    767.   1185.   1904.   1346.    870.    391.    212.
  83.     51.
UI   51.      0.
KK 11A
KM BASIN 11A
KM  THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM  L=       .7  Lca=       .3   S=  823.5  Kn= .030  LAG=   6.9
KM  PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
BA   .12
LG   .35     .37    5.30     .23   21.00
UI  232.    540.    149.     22.      0.
KK 12A
KM BASIN 12A
KM  THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM  L=      1.4  Lca=       .8   S=  272.1  Kn= .030  LAG=  15.4
KM  PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
BA   .34
LG   .35     .35    4.65     .31   37.00
UI  127.    397.    723.    693.    407.    165.     77.     23.
  23.     0.
KK 15A
KM BASIN 15A
KM  THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
KM  L=       .6  Lca=       .3   S=  229.5  Kn= .030  LAG=   8.1
KM  PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
BA   .26
LG   .35     .35    4.35     .38   31.00
UI  370.   1052.    503.     99.      0.
```

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                          FILE = WT3-MCH.OUT
1**************************************                                     **************************************
*                                      *                                     *                                    *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                     *   U.S. ARMY CORPS OF ENGINEERS     *
*              MAY  1991               *                                     *   HYDROLOGIC ENGINEERING CENTER    *
*           VERSION 4.0.1E             *                                     *         609 SECOND STREET          *
*   Lahey F77L-EM/32 version 5.01      *                                     *      DAVIS, CALIFORNIA 95616       *
*      Dodson & Associates, Inc.       *                                     *          (916) 551-1748            *
* RUN DATE  03/24/97  TIME  11:18:59   *                                     *                                    *
****************************************                                     **************************************


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


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

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

1                                            HEC-1 INPUT                                                     PAGE  1

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

        1           ID
        2           ID                     FILE = MODEL WT3-MCH.DAT
        3           ID
        4           ID         FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
        5           ID         100-YEAR, 24-HOUR STORM
        6           ID
        7           ID         RUSS CRUFF     DEC.31, 1996      MODIFY INPUT TO MODEL WT3 FOR
        8           ID                                          SUBBASINS 10A, 11A, & 12A WHICH
        9           ID                                          ARE THE UPPER PORTION OF SUBASINS
       10           ID                                          10, 11, & 12.
       11           ID
                    *DIAGRAM
       12           IT      5                 300
       13           IO      5
       14           IN     15
       15           JD   4.03     .001
       16           PC   .000     .002    .005    .008    .011    .014    .017    .020    .023    .026
       17           PC   .029     .032    .035    .038    .041    .044    .048    .052    .056    .060
       18           PC   .064     .068    .072    .076    .080    .085    .090    .095    .100    .105
       19           PC   .110     .115    .120    .126    .133    .140    .147    .155    .163    .172
       20           PC   .181     .191    .203    .218    .236    .257    .283    .387    .663    .707
       21           PC   .735     .758    .776    .791    .804    .815    .825    .834    .842    .849
       22           PC   .856     .863    .869    .875    .881    .887    .893    .898    .903    .908
       23           PC   .913     .918    .922    .926    .930    .934    .938    .942    .946    .950
       24           PC   .953     .956    .959    .962    .965    .968    .971    .974    .977    .980
       25           PC   .983     .986    .989    .992    .995    .998    1.00   1.000   1.000   1.000
       26           JD   3.99       10
       27           JD   3.83       50
       28           JD   3.76      100
       29           JD   3.70      200

       30           KK    11A
       31           KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 11A.
       32           KM        L = 0.7     Lca = 0.3      S = 823.5   Kn = 0.030   lAG = 6.9
       33           BA    .12
       34           LG    .35      .37    5.30     .23   21.00
       35           UI   232.     540.    149.     22.      0.

       36           KK  RCP11A
       37           KM         ROUTE HYDROGRAGH FROM SUB-BASIN 11A TO CP12A.
       38           RL                     1.5    1370
       39           RS      2               -1       0
       40           RC  0.060    0.045   0.060    3200   0.002
       41           RX    950      980    1000    1020    1100    1120    1140    1170
       42           RY   1378     1377    1375    1370    1370    1375    1377    1379

       43           KK    12A
       44           KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 12A.
       45           KM        L = 1.4     Lca = 0.8     S = 272.1     Kn = 0.030   LAG = 15.4
       46           BA   0.34
       47           LG    .35      .35    4.65     .31   37.00
       48           UI   127.     397.    723.    693.    407.    165.     77.     23.     23.      0.
1                                            HEC-1 INPUT                                                     PAGE  2

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


       49           KK   CP12A
       50           KM         ADD HYDROGRAPHS AT CP12A.
       51           HC      2

       52           KK  RCP12A
       53           KM         ROUTE COMBINED HYDROGRAPHS AT CP12A TO CP10A
       54           RL                     1.5    1367
       55           RS      2               -1       0
       56           RC   .060     .045     .06    3600    .002
       57           RX    950      980    1000    1010    1160    1170    1190    1220
       58           RY   1377     1376    1375    1367    1367    1375    1376    1377

       59           KK      4
       60           KM         RUNOFF HYDROGRAPH FORM SUB-BASIN 4.
       61           BA    .30
       62           LG    .20      .30    3.87     .77    1.00
       63           UI    48.     192.    287.    444.    512.    346.    236.    115.     67.     35.
       64           UI    14.      14.      0.      0.      0.      0.      0.      0.      0.      0.
       65           UI     0.       0.      0.      0.      0.      0.      0.      0.      0.      0.

       66           KK      5
       67           KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 5.
       68           BA    .72
       69           LG    .20      .34    3.27    1.11    9.20
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 70        UI    110.    437.    658.    992.   1242.    849.    591.    315.    174.    101.
 71        UI     34.     34.     34.      0.      0.      0.      0.      0.      0.      0.
 72        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 73        KK     CP5
 74        KM        ADD HYDROGRAPHS AT CP5.
 75        HC       2

 76        KK    RCP5
 77        KM        ROUTE COMBINED HYDROGRAPHS AT CP5 TO CP7.
 78        RL                      .5    2800
 79        RS       1              -1       0
 80        RC     .08     .05     .08    4800   .0833
 81        RX     955     970     985    1000    1020    1035    1050    1065
 82        RY    2815    2810    2805    2800    2800    2805    2810    2815

 83        KK       6
 84        KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 6.
 85        BA     .45
 86        LG     .20     .34    3.21    1.14   10.00
 87        UI    204.    622.   1139.    837.    427.    155.     54.     33.      0.      0.
 88        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 89        KK   I1CP7
 90        KM        ADD HYDROGRAPHS AT CP7.
 91        HC       2
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 92        KK       7
 93        KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 7.
 94        BA     .31
 95        LG     .20     .34    3.21    1.14   10.00
 96        UI    126.    387.    716.    606.    343.    129.     52.     22.      0.      0.
 97        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

 98        KK     CP7
 99        KM        ADD HYDROGRAPHS AT CP7.
100        HC       2

101        KK    RCP7
102        KM        ROUTE COMBINED HYDROGRAPHS AT CP7 TO CP9.
103        RL                      .5    1838
104        RS       3              -1       0
105        RC     .08     .05     .08   10200  .07745
106        RX    1000    1045    1120    1195    1230    1300    1350    1450
107        RY    1910    1880    1850    1838    1838    1850    1880    1910

108        KK       9
109        KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 9.
110        BA    1.40
111        LG     .20     .34    3.24    1.12    9.70
112        UI    155.    381.    727.    935.   1216.   1832.   1591.   1224.    938.    705.
113        UI    386.    261.    177.    115.     47.     47.     47.     47.      0.      0.
114        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

115        KK   I1CP9
116        KM        ADD HYDROGRAPHS AT CP9.
117        HC       2

118        KK       8
119        KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 8.
120        BA     .81
121        LG     .20     .34    3.21    1.14   10.00
122        UI    102.    313.    535.    703.   1054.   1140.    822.    608.    421.    208.
123        UI    147.     96.     31.     31.     31.      0.      0.      0.      0.      0.
124        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

125        KK     CP9
126        KM        ADD HYDROGRAPHS AT CP9.
127        HC       2

128        KK    RCP9
129        KM        ROUTE COMBINED HYDROGRAPHS AT CP9 TO CP10.
130        RL                     1.5    1308
131        RS       8              -1       0
132        RC     .06    .035     .06    8800   .0232
133        RX    1000    1085    1310    1395    1415    1450    1630    1665
134        RY    1317    1314    1311    1308    1308    1314    1314    1317
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135        KK     10A
136        KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 10A.
137        KM        L = 1.9    Lca = 0.9     S = 231.6    Kn = 0.030     LAG = 18.5
138        BA     .92
139        LG     .35     .35    4.65     .31   19.00
140        UI    223.    767.   1185.   1904.   1346.    870.    391.    212.     83.     51.
141        UI     51.      0.

142        KK  I1CP10
143        KM        ADD HYDROGRAPHS AT CP10A
144        HC       2

145        KK   CP10A
146        KM        ADD HYDROGRAPHS AT CP10A
147        HC       2

148        KK  RCP10A
149        KM        ROUTE COMBINED HYDROGRAPHS AT CP10A TO CP2.
150        RL                     1.5    1360
151        RS       2              -1       0
152        RC     .06    .045     .06    3200    .002
153        RX     950     980    1000    1015    1265    1280    1300    1320
154        RY    1370    1368    1367    1360    1360    1367    1368    1370

155        KK       1
156        KM        RUNOFF HYDROGRAPH FROM SUB-BASIN 1.
157        BA    1.94
158        LG     .20     .34    3.21    1.14    9.90
159        UI    182.    326.    742.    974.   1186.   1502.   2185.   1957.   1537.   1243.
160        UI    989.    751.    417.    308.    230.    182.     64.     56.     56.     56.
161        UI     56.      0.      0.      0.      0.      0.      0.      0.      0.      0.
162        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

163        KK    RCP1
164        KM        ROUTE FLOW FROM CP1 TO CP2.
165        RL                       1    1428
```

```
         166          RS        5              -1       0
         167          RC      .06      .04    .06   17800   .0469
         168          RX     1000     1125   1300    1390    1405    1490    1590    1750
         169          RY     1440     1439   1437    1428    1428    1439    1442    1444

         170          KK        2
         171          KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 2.
         172          BA     1.82
         173          LG      .18      .33   3.91     .70   11.70
         174          UI     115.     115.   259.    442.    556.    642.    727.    849.   1013.   1346.
         175          UI    1419.    1145.   985.    864.    735.    634.    545.    405.    268.    202.
         176          UI     189.     144.   115.    103.     35.     35.     35.     35.     35.     35.
         177          UI      35.       0.     0.      0.      0.      0.      0.      0.      0.      0.
         178          UI       0.       0.     0.      0.      0.      0.      0.      0.      0.      0.
1                                               HEC-1 INPUT                                               PAGE  5

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


         179          KK    I1CP2
         180          KM          ADD HYDROGRAPHS AT CP2.
         181          HC        2

         182          KK      CP2
         183          KM          ADD HYDROGRAPHS AT CP2.
         184          HC        2

         185          KK     RCP2
         186          KM          ROUTE COMBINED HYDROGRAPHS AT CP2 TO DAM.
         187          RL                      1.5    1355
         188          RS        2              -1       0
         189          RC      .06     .045    .06     700    .002
         190          RX      950      980   1000    1015    1265    1280    1300    1330
         191          RY     1364     1363   1362    1355    1355    1362    1363    1364
         192          ZZ
1
             SCHEMATIC DIAGRAM OF STREAM NETWORK
INPUT
 LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   30        11A
              V
              V
   36      RCP11A
              .
              .
   43         .        12A
              .         .
              .         .
   49       CP12A.........
              V
              V
   52      RCP12A
              .
              .
   59         .         4
              .         .
              .         .
   66         .         .          5
              .         .          .
              .         .          .
   73         .        CP5..........
              .         V
              .         V
   76         .       RCP5
              .         .
              .         .
   83         .         .          6
              .         .          .
              .         .          .
   89         .      I1CP7..........
              .         .
              .         .
   92         .         .          7
              .         .          .
              .         .          .
   98         .        CP7..........
              .         V
              .         V
  101         .       RCP7
              .         .
              .         .
  108         .         .          9
              .         .          .
              .         .          .
  115         .      I1CP9..........
              .         .
              .         .
  118         .         .          8
              .         .          .
              .         .          .
  125         .        CP9..........
              .         V
              .         V
  128         .       RCP9
              .         .
              .         .
  135         .         .         10A
              .         .          .
              .         .          .
  142         .     I1CP10..........
              .         .
              .         .
  145       CP10A.........
              V
              V
  148      RCP10A
              .
              .
  155         .         1
              .         V
              .         V
  163         .       RCP1
              .         .
              .         .
  170         .         .          2
              .         .          .
              .         .          .
  179         .      I1CP2..........
              .         .
```

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 182        CP2...........
              V
              V
 185        RCP2

 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************                           ****************************************
*                                       *                           *                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                           *   U.S. ARMY CORPS OF ENGINEERS       *
*              MAY  1991                *                           *   HYDROLOGIC ENGINEERING CENTER      *
*            VERSION 4.0.1E             *                           *          609 SECOND STREET           *
*    Lahey F77L-EM/32 version 5.01      *                           *       DAVIS, CALIFORNIA 95616        *
*       Dodson & Associates, Inc.       *                           *           (916) 551-1748             *
*  RUN DATE  03/24/97  TIME  11:18:59   *                           *                                      *
****************************************                            ****************************************


                                  FILE = MODEL WT3-MCH.DAT

                      FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
                      100-YEAR, 24-HOUR STORM

                      RUSS CRUFF     DEC.31, 1996      MODIFY INPUT TO MODEL WT3 FOR
                                                       SUBBASINS 10A, 11A, & 12A WHICH
                                                       ARE THE UPPER PORTION OF SUBASINS
                                                       10, 11, & 12.

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

    IT          HYDROGRAPH TIME DATA
                      NMIN           5  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1    0  STARTING DATE
                     ITIME        0000  STARTING TIME
                        NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      2    0  ENDING DATE
                    NDTIME        0055  ENDING TIME
                     ICENT          19  CENTURY MARK

                  COMPUTATION INTERVAL    0.08 HOURS
                       TOTAL TIME BASE   24.92 HOURS

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

 15 JD          INDEX STORM NO. 1
                      STRM        4.03  PRECIPITATION DEPTH
                      TRDA        0.00  TRANSPOSITION DRAINAGE AREA

 16 PI            PRECIPITATION PATTERN
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.01     0.00     0.01
                   0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.03     0.03
                   0.03     0.09     0.09     0.09     0.01     0.01     0.01     0.01     0.01     0.01
                   0.01     0.01     0.01     0.01     0.01     0.01     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00

 26 JD          INDEX STORM NO. 2
                      STRM        3.99  PRECIPITATION DEPTH
                      TRDA       10.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.01     0.00     0.01
                   0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.01     0.03     0.03
                   0.03     0.09     0.09     0.09     0.01     0.01     0.01     0.01     0.01     0.01
                   0.01     0.01     0.01     0.01     0.01     0.01     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
                   0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00     0.00
```

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

27 JD INDEX STORM NO. 3

STRM 3.83 PRECIPITATION DEPTH

TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

28 JD INDEX STORM NO. 4

STRM 3.76 PRECIPITATION DEPTH

TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

29 JD INDEX STORM NO. 5

STRM 3.70 PRECIPITATION DEPTH

TRDA 200.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD			BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+					6-HOUR	24-HOUR	72-HOUR			
	HYDROGRAPH AT									
+		11A	302.	12.00	20.	6.	6.	0.12		

+	ROUTED TO	RCP11A	116.	12.25	14.	4.	3.	0.12
+	HYDROGRAPH AT	12A	659.	12.08	64.	20.	19.	0.34
+	2 COMBINED AT	CP12A	734.	12.17	78.	24.	23.	0.46
+	ROUTED TO	RCP12A	416.	12.42	61.	15.	15.	0.46
+	HYDROGRAPH AT	4	339.	12.25	26.	7.	6.	0.30
+	HYDROGRAPH AT	5	716.	12.25	65.	18.	18.	0.72
+	2 COMBINED AT	CP5	1053.	12.25	90.	25.	24.	1.02
+	ROUTED TO	RCP5	973.	12.33	89.	24.	23.	1.02
+	HYDROGRAPH AT	6	591.	12.08	41.	12.	11.	0.45
+	2 COMBINED AT	I1CP7	1289.	12.17	130.	35.	34.	1.47
+	HYDROGRAPH AT	7	390.	12.08	28.	8.	8.	0.31
+	2 COMBINED AT	CP7	1668.	12.17	158.	43.	41.	1.78
+	ROUTED TO	RCP7	1435.	12.33	151.	38.	36.	1.78
+	HYDROGRAPH AT	9	1096.	12.42	127.	36.	35.	1.40
+	2 COMBINED AT	I1CP9	2527.	12.33	277.	74.	71.	3.18
+	HYDROGRAPH AT	8	704.	12.33	73.	21.	20.	0.81
+	2 COMBINED AT	CP9	3227.	12.33	350.	94.	91.	3.99
+	ROUTED TO	RCP9	3051.	12.50	339.	86.	83.	3.99
+	HYDROGRAPH AT	10A	1533.	12.17	141.	41.	39.	0.92
+	2 COMBINED AT	I1CP10	3339.	12.50	480.	127.	122.	4.91
+	2 COMBINED AT	CP10A	3733.	12.50	540.	142.	137.	5.37
+	ROUTED TO	RCP10A	3413.	12.67	511.	128.	123.	5.37
+	HYDROGRAPH AT	1	1342.	12.50	175.	50.	48.	1.94
+	ROUTED TO	RCP1	1114.	12.75	165.	42.	40.	1.94
+	HYDROGRAPH AT	2	1174.	12.75	206.	58.	56.	1.82
+	2 COMBINED AT	I1CP2	2284.	12.75	370.	100.	96.	3.76
+	2 COMBINED AT	CP2	5543.	12.67	880.	227.	219.	9.13
+	ROUTED TO	RCP2	5540.	12.75	874.	221.	213.	9.13

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

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                         FILE = WT3-MCHA.OUT
1*****************************************
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 *                                       *                                      *
*
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                      *   U.S. ARMY CORPS OF ENGINEERS
*
 *             MAY  1991                 *                                      *   HYDROLOGIC ENGINEERING CENTER
*
 *           VERSION 4.0.1E              *                                      *          609 SECOND STREET
*
 *     Lahey F77L-EM/32 version 5.01     *                                      *        DAVIS, CALIFORNIA 95616
*
 *       Dodson & Associates, Inc.       *                                      *            (916) 551-1748
*
 *  RUN DATE  03/24/97  TIME  10:41:13   *                                      *
*
 *****************************************
****************************************


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


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

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


1                                          HEC-1 INPUT                                           PAGE  1

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

            1          ID
            2          ID       FILE = WT3-MCHA.DAT
            3          ID
            4          ID
            5          ID       FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
            6          ID       100-YEAR, 24-HOUR STORM
            7          ID
            8          ID       RUSS CRUFF     MAR. 24, 1997     MODIFY INPUT TO MODEL WTS-MCH
            9          ID                                        TO ONLY INCLUDE SUBBASINS 1 & 2
           10          ID
                       *DIAGRAM
           11          IT       5                300
           12          IO       5
           13          IN      15
           14          JD    4.03    .001
           15          PC    .000    .002    .005    .008    .011    .014    .017    .020    .023    .026
           16          PC    .029    .032    .035    .038    .041    .044    .048    .052    .056    .060
           17          PC    .064    .068    .072    .076    .080    .085    .090    .095    .100    .105
           18          PC    .110    .115    .120    .126    .133    .140    .147    .155    .163    .172
           19          PC    .181    .191    .203    .218    .236    .257    .283    .387    .663    .707
           20          PC    .735    .758    .776    .791    .804    .815    .825    .834    .842    .849
           21          PC    .856    .863    .869    .875    .881    .887    .893    .898    .903    .908
           22          PC    .913    .918    .922    .926    .930    .934    .938    .942    .946    .950
           23          PC    .953    .956    .959    .962    .965    .968    .971    .974    .977    .980
           24          PC    .983    .986    .989    .992    .995    .998    1.00   1.000   1.000   1.000
           25          JD    3.99      10
           26          JD    3.83      50
           27          JD    3.76     100
           28          JD    3.70     200

           29          KK       1
           30          KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 1.
           31          BA    1.94
           32          LG     .20     .34    3.21    1.14    9.90
           33          UI    182.    326.    742.    974.   1186.   1502.   2185.   1957.   1537.   1243.
           34          UI    989.    751.    417.    308.    230.    182.     64.     56.     56.     56.
           35          UI     56.      0.      0.      0.      0.      0.      0.      0.      0.      0.
           36          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

           37          KK    RCP1
           38          KM       ROUTE FLOW FROM CP1 TO CP2.
           39          RL                       1    1428
           40          RS       5              -1       0
           41          RC     .06     .04     .06   17800   .0469
           42          RX    1000    1125    1300    1390    1405    1490    1590    1750
           43          RY    1440    1439    1437    1428    1428    1439    1442    1444

           44          KK       2
           45          KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 2.
           46          BA    1.82
           47          LG     .18     .33    3.91     .70   11.70
           48          UI    115.    115.    259.    442.    556.    642.    727.    849.   1013.   1346.
```

```
             49            UI   1419.   1145.    985.    864.    735.    634.    545.    405.    268.    202.
             50            UI    189.    144.    115.    103.     35.     35.     35.     35.     35.     35.
             51            UI     35.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                                  HEC-1 INPUT                                                 PAGE  2

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

             52            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

             53            KK   I1CP2
             54            KM        ADD HYDROGRAPHS AT CP2.
             55            HC      2
             56            ZZ
1
                  SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE        (V) ROUTING         (--->) DIVERSION OR PUMP FLOW

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

   29              1
                   V
                   V
   37            RCP1
                   .
                   .
   44              .          2
                   .          .
                   .          .
   53           I1CP2............

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1***************************************
****************************************
*                                       *                                                  *
*
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)    *                                                  *  U.S. ARMY CORPS OF ENGINEERS
*
*              MAY  1991                *                                                  *  HYDROLOGIC ENGINEERING CENTER
*
*           VERSION 4.0.1E              *                                                  *        609 SECOND STREET
*
*    Lahey F77L-EM/32 version 5.01      *                                                  *     DAVIS, CALIFORNIA 95616
*
*      Dodson & Associates, Inc.        *                                                  *         (916) 551-1748
*
*  RUN DATE  03/24/97  TIME  10:41:13   *                                                  *
*
****************************************
****************************************



                                  FILE = WT3-MCMA.DAT

                                  FINAL HYDROLOGY RUN FOR WHITE TANKS ADMS ---- ENTIRE WATERSHED
                                  100-YEAR, 24-HOUR STORM

                                  RUSS CRUFF     MAR. 24, 1997     MODIFY INPUT TO MODEL WTS-MCH
                                                                   TO ONLY INCLUDE SUBBASINS 1 & 2


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

      IT          HYDROGRAPH TIME DATA
                         NMIN           5  MINUTES IN COMPUTATION INTERVAL
                        IDATE       1   0  STARTING DATE
                        ITIME        0000  STARTING TIME
                           NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                       NDDATE       2   0  ENDING DATE
                       NDTIME        0055  ENDING TIME
                        ICENT          19  CENTURY MARK

                COMPUTATION INTERVAL    0.08 HOURS
                     TOTAL TIME BASE   24.92 HOURS

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

   14 JD           INDEX STORM NO. 1
                         STRM        4.03  PRECIPITATION DEPTH
                         TRDA        0.00  TRANSPOSITION DRAINAGE AREA

   15 PI            PRECIPITATION PATTERN
                      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
                      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00      0.00
```

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

25 JD INDEX STORM NO. 2

STRM 3.99 PRECIPITATION DEPTH
TRDA 10.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

26 JD INDEX STORM NO. 3

STRM 3.83 PRECIPITATION DEPTH
TRDA 50.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

27 JD INDEX STORM NO. 4

STRM 3.76 PRECIPITATION DEPTH
TRDA 100.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

28 JD INDEX STORM NO. 5

STRM 3.70 PRECIPITATION DEPTH

TRDA 200.00 TRANSPOSITION DRAINAGE AREA

0 PI PRECIPITATION PATTERN

0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03	0.03
0.03	0.09	0.09	0.09	0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

1

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

+	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	1	1342.	12.50	175.	50.	48.	1.94		
+	ROUTED TO	RCP1	1114.	12.75	165.	42.	40.	1.94		
+	HYDROGRAPH AT	2	1174.	12.75	206.	58.	56.	1.82		
+	2 COMBINED AT	I1CP2	2284.	12.75	370.	100.	96.	3.76		

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

```
FILE = WTMCHSPF.OUT

1****************************************          ****************************************
 *                                      *          *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *          *   U.S. ARMY CORPS OF ENGINEERS       *
 *              MAY  1991               *          *   HYDROLOGIC ENGINEERING CENTER      *
 *            VERSION 4.0.1E            *          *         609 SECOND STREET            *
 *    Lahey F77L-EM/32 version 5.01     *          *      DAVIS, CALIFORNIA 95616         *
 *       Dodson & Associates, Inc.      *          *          (916) 551-1748              *
 *  RUN DATE  04/02/97  TIME  09:47:36  *          *                                      *
 ****************************************          ****************************************


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


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

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


1                                              HEC-1 INPUT                                              PAGE  1

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

            1           ID
            2           ID                      FILE = WTMCHSPF.DAT
            3           ID
            4           ID              THIS IS A MODIFICATION OF MODEL WT3-MCH
            5           ID              TO RUN SPF FLOWS
            6           ID                   MODIFICATION FOR SPF BY: BING ZHAO  4-1-97
            7           ID                   ROUTING CHANNEL MODIFIED BY:  R.W. CRUFF
            8           ID
                        *DIAGRAM
            9           IT       5                      300
           10           IO       5
           11           IN      15
           12           JD    6.67    .001
           13           PC       0     0.5       1     1.1       2     2.5     3.1     4.1       5       6
           14           PC       7       8       9      10      11      12      14      17      22      33
           15           PC      60      79      87      92      95      97      98      99     100     100
           16           JD    6.26      10
           17           PC       0     0.5       1     1.6     2.8       3     4.6     5.5     6.6     7.6
           18           PC       9    10.6    11.5      13      14    15.2      17    20.2      26      35
           19           PC      60      77      85      90    93.5      96    97.5    98.5     100     100
                        *

           20           KK     11A
           21           KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 11A.
           22           KM        L = 0.7     Lca = 0.3      S = 823.5   Kn = 0.030    lAG = 6.9
           23           BA     .12
           24           LG     .35     .00    5.30     .23   21.00
           25           UI    232.    540.    149.     22.      0.

           26           KK  RCP11A
           27           KM         ROUTE HYDROGRAGH FROM SUB-BASIN 11A TO CP12A.
           28           RL                     1.5    1370
           29           RS       2              -1       0
           30           RC   0.080   0.045   0.080    3200   0.002
           31           RX     950     980    1000    1020    1120    1140    1160    1190
           32           RY    1378    1377    1375    1370    1370    1375    1377    1379

           33           KK     12A
           34           KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 12A.
           35           KM        L = 1.4      Lca = 0.8     S = 272.1     Kn = 0.030    LAG = 15.4
           36           BA    0.34
           37           LG     .35     .00    4.65     .31   37.00
           38           UI    127.    397.    723.    693.    407.    165.     77.     23.     23.      0.

           39           KK   CP12A
           40           KM         ADD HYDROGRAPHS AT CP12A.
           41           HC       2

           42           KK  RCP12A
           43           KM         ROUTE COMBINED HYDROGRAPHS AT CP12A TO CP10A
           44           RL                     1.5    1367
           45           RS       2              -1       0
           46           RC    .080    .045     .08    3600    .002
           47           RX     950     980    1000    1010    1210    1220    1240    1270
           48           RY    1377    1376    1375    1367    1367    1375    1376    1377
1                                              HEC-1 INPUT                                              PAGE  2

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


           49           KK       4
           50           KM         RUNOFF HYDROGRAPH FORM SUB-BASIN 4.
           51           BA     .30
           52           LG     .20     .00    3.87     .77    1.00
           53           UI     48.    192.    287.    444.    512.    346.    236.    115.     67.     35.
           54           UI     14.     14.      0.      0.      0.      0.      0.      0.      0.      0.
           55           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

           56           KK       5
           57           KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 5.
           58           BA     .72
           59           LG     .20     .00    3.27    1.11    9.20
           60           UI    110.    437.    658.    992.   1242.    849.    591.    315.    174.    101.
           61           UI     34.     34.     34.      0.      0.      0.      0.      0.      0.      0.
           62           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

           63           KK     CP5
           64           KM         ADD HYDROGRAPHS AT CP5.
           65           HC       2

           66           KK    RCP5
           67           KM         ROUTE COMBINED HYDROGRAPHS AT CP5 TO CP7.
```

```
  68        RL                    .5    2800
  69        RS      1             -1       0
  70        RC    .08     .05    .08    4800   .0833
  71        RX    955     970    985    1000    1020    1035    1050    1065
  72        RY   2815    2810   2805    2800    2800    2805    2810    2815

  73        KK      6
  74        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 6.
  75        BA    .45
  76        LG    .20     .00   3.21    1.14   10.00
  77        UI   204.    622.  1139.    837.    427.    155.     54.     33.      0.      0.
  78        UI     0.      0.     0.      0.      0.      0.      0.      0.      0.      0.

  79        KK  I1CP7
  80        KM         ADD HYDROGRAPHS AT CP7.
  81        HC      2

  82        KK      7
  83        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 7.
  84        BA    .31
  85        LG    .20     .00   3.21    1.14   10.00
  86        UI   126.    387.   716.    606.    343.    129.     52.     22.      0.      0.
  87        UI     0.      0.     0.      0.      0.      0.      0.      0.      0.      0.

  88        KK    CP7
  89        KM         ADD HYDROGRAPHS AT CP7.
  90        HC      2
1                                    HEC-1 INPUT                                              PAGE  3

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

  91        KK   RCP7
  92        KM         ROUTE COMBINED HYDROGRAPHS AT CP7 TO CP9.
  93        RL                    .5    1838
  94        RS      3             -1       0
  95        RC    .08     .05    .08   10200  .07745
  96        RX   1000    1045   1120    1195    1230    1300    1350    1450
  97        RY   1910    1880   1850    1838    1838    1850    1880    1910

  98        KK      9
  99        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 9.
 100        BA   1.40
 101        LG    .20     .00   3.24    1.12    9.70
 102        UI   155.    381.   727.    935.   1216.   1832.   1591.   1224.    938.    705.
 103        UI   386.    261.   177.    115.     47.     47.     47.     47.      0.      0.
 104        UI     0.      0.     0.      0.      0.      0.      0.      0.      0.      0.

 105        KK  I1CP9
 106        KM         ADD HYDROGRAPHS AT CP9.
 107        HC      2

 108        KK      8
 109        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 8.
 110        BA    .81
 111        LG    .20     .00   3.21    1.14   10.00
 112        UI   102.    313.   535.    703.   1054.   1140.    822.    608.    421.    208.
 113        UI   147.     96.    31.     31.     31.      0.      0.      0.      0.      0.
 114        UI     0.      0.     0.      0.      0.      0.      0.      0.      0.      0.

 115        KK    CP9
 116        KM         ADD HYDROGRAPHS AT CP9.
 117        HC      2

 118        KK   RCP9
 119        KM         ROUTE COMBINED HYDROGRAPHS AT CP9 TO CP10.
 120        RL                   1.5    1308
 121        RS      8             -1       0
 122        RC    .06    .035    .06    8800   .0232
 123        RX   1000    1085   1310    1395    1415    1450    1630    1665
 124        RY   1317    1314   1311    1308    1308    1314    1314    1317

 125        KK    10A
 126        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 10A.
 127        KM         L = 1.9     Lca = 0.9      S = 231.6     Kn = 0.030     LAG = 18.5
 128        BA    .92
 129        LG    .35     .00   4.65     .31   19.00
 130        UI   223.    767.  1185.   1904.   1346.    870.    391.    212.     83.     51.
 131        UI    51.      0.

 132        KK I1CP10
 133        KM         ADD HYDROGRAPHS AT CP10A
 134        HC      2
1                                    HEC-1 INPUT                                              PAGE  4

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

 135        KK  CP10A
 136        KM         ADD HYDROGRAPHS AT CP10A
 137        HC      2

 138        KK RCP10A
 139        KM         ROUTE COMBINED HYDROGRAPHS AT CP10A TO CP2.
 140        RL                   1.5    1360
 141        RS      2             -1       0
 142        RC    .08    .045    .08    3200    .002
 143        RX    850     980   1000    1015    1415    1430    1450    1570
 144        RY   1370    1368   1367    1360    1360    1367    1368    1370

 145        KK      1
 146        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 1.
 147        BA   1.94
 148        LG    .20     .00   3.21    1.14    9.90
 149        UI   182.    326.   742.    974.   1186.   1502.   2185.   1957.   1537.   1243.
 150        UI   989.    751.   417.    308.    230.    182.     64.     56.     56.     56.
 151        UI    56.      0.     0.      0.      0.      0.      0.      0.      0.      0.
 152        UI     0.      0.     0.      0.      0.      0.      0.      0.      0.      0.

 153        KK   RCP1
 154        KM         ROUTE FLOW FROM CP1 TO CP2.
 155        RL                     1    1428
 156        RS      5             -1       0
 157        RC    .06     .04    .06   17800   .0469
 158        RX   1000    1125   1300    1390    1405    1490    1590    1750
 159        RY   1440    1439   1437    1428    1428    1439    1442    1444

 160        KK      2
 161        KM         RUNOFF HYDROGRAPH FROM SUB-BASIN 2.
 162        BA   1.82
 163        LG    .18     .00   3.91     .70   11.70
 164        UI   115.    115.   259.    442.    556.    642.    727.    849.   1013.   1346.
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          165          UI   1419.   1145.    985.    864.    735.    634.    545.    405.    268.    202.
          166          UI    189.    144.    115.    103.     35.     35.     35.     35.     35.     35.
          167          UI     35.      0.      0.      0.      0.      0.      0.      0.      0.      0.
          168          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

          169          KK   I1CP2
          170          KM         ADD HYDROGRAPHS AT CP2.
          171          HC      2

          172          KK     CP2
          173          KM         ADD HYDROGRAPHS AT CP2.
          174          HC      2

          175          KK    RCP2
          176          KM         ROUTE COMBINED HYDROGRAPHS AT CP2 TO DAM.
          177          RL                    1.5    1355
          178          RS      2              -1       0
          179          RC    .08    .045     .08     700    .002
          180          RX    850     980    1000    1015    1615    1630    1650    1780
          181          RY   1364    1363    1362    1355    1355    1362    1363    1364
1                                                HEC-1 INPUT                                               PAGE  5

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

          182          ZZ
1
               SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   20         11A
               V
               V
   26       RCP11A
               .
               .
   33          .           12A
               .            .
               .            .
   39        CP12A...........
               V
               V
   42       RCP12A
               .
               .
   49          .            4
               .            .
               .            .
   56          .            .           5
               .            .           .
               .            .           .
   63          .           CP5...........
               .            V
               .            V
   66          .          RCP5
               .            .
               .            .
   73          .            .           6
               .            .           .
               .            .           .
   79          .         I1CP7...........
               .            .
               .            .
   82          .            .           7
               .            .           .
               .            .           .
   88          .           CP7...........
               .            V
               .            V
   91          .          RCP7
               .            .
               .            .
   98          .            .           9
               .            .           .
               .            .           .
  105          .         I1CP9...........
               .            .
               .            .
  108          .            .           8
               .            .           .
               .            .           .
  115          .           CP9...........
               .            V
               .            V
  118          .          RCP9
               .            .
               .            .
  125          .            .          10A
               .            .           .
               .            .           .
  132          .        I1CP10...........
               .            .
               .            .
  135        CP10A...........
               V
               V
  138       RCP10A
               .
               .
  145          .            1
               .            V
               .            V
  153          .          RCP1
               .            .
               .            .
  160          .            .           2
               .            .           .
               .            .           .
  169          .         I1CP2...........
               .            .
               .            .
  172          CP2...........
               V
               V
  175         RCP2

 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*****************************************                                         ****************************************
 *                                       *                                         *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                                         *   U.S. ARMY CORPS OF ENGINEERS       *
```

```
*          MAY  1991              *
*       VERSION 4.0.1E            *
*  Lahey F77L-EM/32 version 5.01  *
*    Dodson & Associates, Inc.    *
*  RUN DATE 04/02/97  TIME 09:47:36  *
**************************************
```

```
*  HYDROLOGIC ENGINEERING CENTER  *
*       609 SECOND STREET         *
*    DAVIS, CALIFORNIA 95616      *
*        (916) 551-1748           *
*                                 *
***********************************
```

FILE = WTMCHSPF.DAT

THIS IS A MODIFICATION OF MODEL WT3-MCH
TO RUN SPF FLOWS
MODIFICATION FOR SPF BY: BING ZHAO 4-1-97
ROUTING CHANNEL MODIFIED BY: R.W. CRUFF

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

   IT           HYDROGRAPH TIME DATA
                      NMIN            5  MINUTES IN COMPUTATION INTERVAL
                      IDATE      1    0  STARTING DATE
                      ITIME        0000  STARTING TIME
                         NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE      2    0  ENDING DATE
                     NDTIME        0055  ENDING TIME
                      ICENT          19  CENTURY MARK

                  COMPUTATION INTERVAL    0.08 HOURS
                       TOTAL TIME BASE   24.92 HOURS

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

12 JD           INDEX STORM NO. 1
                      STRM        6.67  PRECIPITATION DEPTH
                      TRDA        0.00  TRANSPOSITION DRAINAGE AREA
```

13 PI PRECIPITATION PATTERN

0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.03	0.03	0.30
0.30	0.30	0.17	0.17	0.17	0.20	0.20	0.20	0.33	0.33
0.33	0.30	0.30	0.30	0.33	0.33	0.33	0.33	0.33	0.33
0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
0.33	0.33	0.33	0.33	0.33	0.67	0.67	0.67	1.00	1.00
1.00	1.67	1.67	1.67	3.67	3.67	3.67	9.00	9.00	9.00
6.33	6.33	6.33	2.67	2.67	2.67	1.67	1.67	1.67	1.00
1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33
0.33	0.33	0.33	0.33						

```
16 JD           INDEX STORM NO. 2
                      STRM        6.26  PRECIPITATION DEPTH
                      TRDA       10.00  TRANSPOSITION DRAINAGE AREA
```

17 PI PRECIPITATION PATTERN

0.17	0.17	0.17	0.17	0.17	0.17	0.20	0.20	0.20	0.40
0.40	0.40	0.07	0.07	0.07	0.53	0.53	0.53	0.30	0.30
0.30	0.37	0.37	0.37	0.33	0.33	0.33	0.47	0.47	0.47
0.53	0.53	0.53	0.30	0.30	0.30	0.50	0.50	0.50	0.33
0.33	0.33	0.40	0.40	0.40	0.60	0.60	0.60	1.07	1.07
1.07	1.93	1.93	1.93	3.00	3.00	3.00	8.33	8.33	8.33
5.67	5.67	5.67	2.67	2.67	2.67	1.67	1.67	1.67	1.17
1.17	1.17	0.83	0.83	0.83	0.50	0.50	0.50	0.33	0.33
0.33	0.50	0.50	0.50						

1

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

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	11A	506.	5.00	68.	17.	17.	0.12		
ROUTED TO	RCP11A	355.	5.33	58.	14.	14.	0.12		
HYDROGRAPH AT	12A	1218.	5.17	190.	48.	46.	0.34		
2 COMBINED AT	CP12A	1506.	5.17	245.	62.	60.	0.46		
ROUTED TO	RCP12A	1242.	5.50	218.	54.	52.	0.46		
HYDROGRAPH AT	4	867.	5.25	113.	28.	27.	0.30		
HYDROGRAPH AT	5	1923.	5.33	247.	62.	60.	0.72		
2 COMBINED AT	CP5	2752.	5.33	355.	89.	86.	1.02		
ROUTED TO	RCP5	2718.	5.33	354.	89.	85.	1.02		
HYDROGRAPH AT	6	1382.	5.17	155.	39.	37.	0.45		
2 COMBINED AT	I1CP7	3741.	5.33	502.	126.	121.	1.47		
HYDROGRAPH AT	7	952.	5.17	107.	27.	26.	0.31		
2 COMBINED AT	CP7	4542.	5.25	603.	151.	146.	1.78		

	ROUTED TO							
+		RCP7	4433.	5.42	596.	149.	144.	1.78
	HYDROGRAPH AT							
+		9	3231.	5.42	474.	119.	115.	1.40
	2 COMBINED AT							
+		I1CP9	7546.	5.42	1054.	264.	255.	3.18
	HYDROGRAPH AT							
+		8	1990.	5.33	275.	69.	67.	0.81
	2 COMBINED AT							
+		CP9	9405.	5.42	1314.	330.	318.	3.99
	ROUTED TO							
+		RCP9	9178.	5.58	1299.	326.	314.	3.99
	HYDROGRAPH AT							
+		10A	3046.	5.25	474.	119.	115.	0.92
	2 COMBINED AT							
+		I1CP10	10785.	5.58	1756.	441.	425.	4.91
	2 COMBINED AT							
+		CP10A	11882.	5.58	1962.	493.	475.	5.37
	ROUTED TO							
+		RCP10A	11516.	5.67	1911.	478.	461.	5.37
	HYDROGRAPH AT							
+		1	4060.	5.50	647.	163.	157.	1.94
	ROUTED TO							
+		RCP1	3823.	5.75	634.	159.	153.	1.94
	HYDROGRAPH AT							
+		2	3431.	5.75	743.	187.	180.	1.82
	2 COMBINED AT							
+		I1CP2	7143.	5.75	1358.	342.	329.	3.76
	2 COMBINED AT							
+		CP2	18016.	5.67	3223.	809.	779.	9.13
	ROUTED TO							
+		RCP2	18100.	5.75	3208.	804.	774.	9.13

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

```
FILE = WTMCHASP.OUT

1****************************************                    ****************************************
 *                                      *                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
 *              MAY   1991              *                    *   HYDROLOGIC ENGINEERING CENTER      *
 *           VERSION 4.0.1E             *                    *        609 SECOND STREET             *
 *    Lahey F77L-EM/32 version 5.01     *                    *     DAVIS, CALIFORNIA 95616          *
 *      Dodson & Associates, Inc.       *                    *          (916) 551-1748              *
 *  RUN DATE  04/02/97  TIME  09:48:13  *                    *                                      *
 ****************************************                    ****************************************


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


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

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

1                                        HEC-1 INPUT                                        PAGE  1

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

           1        ID
           2        ID       FILE = WTMCHASP.DAT
           3        ID
           4        ID
           5        ID
           6        ID       SPF STORM
           7        ID
           8        ID       RUSS CRUFF     APR. 2, 1997     MODIFY INPUT TO MODEL WTS-MCHA
           9        ID                                       WHICH ONLY INCLUDE SUBBASINS 1 & 2
          10        ID                                       FOR SPF FLOW
                    *DIAGRAM
          11        IT      5                 300
          12        IO      5
          13        IN     15
          14        JD   6.67    .001
          15        PC   .000     0.5       1     1.1       2     2.5     3.1     4.1       5       6
          16        PC      7       8       9      10      11      12      14      17      22      33
          17        PC     60      79      87      92      95      97      98      99     100     100
          18        JD   6.26      10
          19        PC      0     0.5       1     1.6     2.8       3     4.6     5.5     6.6     7.6
          20        PC      9    10.6    11.5      13      14    15.2      17    20.2      26      35
          21        PC     60      77      85      90    93.5      96    97.5    98.5     100     100
                    *

          22        KK      1
          23        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 1.
          24        BA   1.94
          25        LG    .20     .34    3.21    1.14    9.90
          26        UI   182.    326.    742.    974.   1186.   1502.   2185.   1957.   1537.   1243.
          27        UI   989.    751.    417.    308.    230.    182.     64.     56.     56.     56.
          28        UI    56.      0.      0.      0.      0.      0.      0.      0.      0.      0.
          29        UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

          30        KK   RCP1
          31        KM       ROUTE FLOW FROM CP1 TO CP2.
          32        RL                      1    1428
          33        RS      5              -1       0
          34        RC    .06     .04     .06   17800   .0469
          35        RX   1000    1125    1300    1390    1405    1490    1590    1750
          36        RY   1440    1439    1437    1428    1428    1439    1442    1444

          37        KK      2
          38        KM       RUNOFF HYDROGRAPH FROM SUB-BASIN 2.
          39        BA   1.82
          40        LG    .18     .33    3.91     .70   11.70
          41        UI   115.    115.    259.    442.    556.    642.    727.    849.   1013.   1346.
          42        UI  1419.   1145.    985.    864.    735.    634.    545.    405.    268.    202.
          43        UI   189.    144.    115.    103.     35.     35.     35.     35.     35.     35.
          44        UI    35.      0.      0.      0.      0.      0.      0.      0.      0.      0.
          45        UI     0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                        HEC-1 INPUT                                        PAGE  2

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


          46        KK   I1CP2
          47        KM       ADD HYDROGRAPHS AT CP2.
          48        HC      2
          49        ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
 LINE      (V) ROUTING           (--->) DIVERSION OR PUMP FLOW

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

  22          1
              V
              V
  30        RCP1
              .
              .
  37          .         2
              .         .
              .         .
  46        I1CP2...........

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************                    ****************************************
 *                                      *                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                    *   U.S. ARMY CORPS OF ENGINEERS       *
 *              MAY   1991              *                    *   HYDROLOGIC ENGINEERING CENTER      *
```

```
*          VERSION 4.0.1E               *                          *           609 SECOND STREET          *
*    Lahey F77L-EM/32 version 5.01      *                          *        DAVIS, CALIFORNIA 95616       *
*       Dodson & Associates, Inc.       *                          *            (916) 551-1748            *
*  RUN DATE 04/02/97  TIME  09:48:13    *                          *                                      *
*****************************************                          ****************************************
```

```
                                FILE = WTMCHASP.DAT

                                SPF STORM

                                RUSS CRUFF     APR. 2, 1997     MODIFY INPUT TO MODEL WTS-MCHA
                                                                WHICH ONLY INCLUDE SUBBASINS 1 & 2
                                                                FOR SPF FLOW

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

     IT              HYDROGRAPH TIME DATA
                          NMIN            5  MINUTES IN COMPUTATION INTERVAL
                          IDATE       1   0  STARTING DATE
                          ITIME        0000  STARTING TIME
                             NQ         300  NUMBER OF HYDROGRAPH ORDINATES
                         NDDATE       2   0  ENDING DATE
                         NDTIME        0055  ENDING TIME
                          ICENT          19  CENTURY MARK

                       COMPUTATION INTERVAL    0.08 HOURS
                            TOTAL TIME BASE   24.92 HOURS

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

  14 JD              INDEX STORM NO. 1
                          STRM         6.67  PRECIPITATION DEPTH
                          TRDA         0.00  TRANSPOSITION DRAINAGE AREA

  15 PI                PRECIPITATION PATTERN
                         0.17      0.17      0.17      0.17      0.17      0.17      0.03      0.03      0.03      0.30
                         0.30      0.30      0.17      0.17      0.17      0.20      0.20      0.20      0.33      0.33
                         0.33      0.30      0.30      0.30      0.33      0.33      0.33      0.33      0.33      0.33
                         0.33      0.33      0.33      0.33      0.33      0.33      0.33      0.33      0.33      0.33
                         0.33      0.33      0.33      0.33      0.33      0.67      0.67      0.67      1.00      1.00
                         1.00      1.67      1.67      1.67      3.67      3.67      3.67      9.00      9.00      9.00
                         6.33      6.33      6.33      2.67      2.67      2.67      1.67      1.67      1.67      1.00
                         1.00      1.00      0.67      0.67      0.67      0.33      0.33      0.33      0.33      0.33
                         0.33      0.33      0.33      0.33

  18 JD              INDEX STORM NO. 2
                          STRM         6.26  PRECIPITATION DEPTH
                          TRDA        10.00  TRANSPOSITION DRAINAGE AREA

  19 PI                PRECIPITATION PATTERN
                         0.17      0.17      0.17      0.17      0.17      0.17      0.20      0.20      0.20      0.40
                         0.40      0.40      0.07      0.07      0.07      0.53      0.53      0.53      0.30      0.30
                         0.30      0.37      0.37      0.37      0.33      0.33      0.33      0.47      0.47      0.47
                         0.53      0.53      0.53      0.30      0.30      0.30      0.50      0.50      0.50      0.33
                         0.33      0.33      0.40      0.40      0.40      0.60      0.60      0.60      1.07      1.07
                         1.07      1.93      1.93      1.93      3.00      3.00      3.00      8.33      8.33      8.33
                         5.67      5.67      5.67      2.67      2.67      2.67      1.67      1.67      1.67      1.17
                         1.17      1.17      0.83      0.83      0.83      0.50      0.50      0.50      0.33      0.33
                         0.33      0.50      0.50      0.50
1
```

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	1	3440.	5.50	520.	131.	126.	1.94		
+	ROUTED TO	RCP1	3184.	5.83	508.	127.	123.	1.94		
+	HYDROGRAPH AT	2	2967.	5.83	608.	153.	148.	1.82		
+	2 COMBINED AT	I1CP2	6047.	5.83	1097.	276.	266.	3.76		

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

```
FILE = WTMCHASP.OUT

1***************************************                    ***************************************
 *                                       *                  *                                     *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                  *   U.S. ARMY CORPS OF ENGINEERS      *
 *              MAY  1991                *                  *   HYDROLOGIC ENGINEERING CENTER     *
 *            VERSION 4.0.1E             *                  *         609 SECOND STREET           *
 *     Lahey F77L-EM/32 version 5.01     *                  *      DAVIS, CALIFORNIA 95616        *
 *       Dodson & Associates, Inc.       *                  *          (916) 551-1748             *
 *  RUN DATE  04/02/97  TIME  09:48:13   *                  *                                     *
 ***************************************                    ***************************************


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


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

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

1                                       HEC-1 INPUT                                              PAGE  1

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

           1           ID
           2           ID       FILE = WTMCHASP.DAT
           3           ID
           4           ID
           5           ID
           6           ID       SPF STORM
           7           ID
           8           ID       RUSS CRUFF     APR. 2, 1997     MODIFY INPUT TO MODEL WTS-MCHA
           9           ID                                       WHICH ONLY INCLUDE SUBBASINS 1 & 2
          10           ID                                       FOR SPF FLOW
                       *DIAGRAM
          11           IT       5                     300
          12           IO       5
          13           IN      15
          14           JD    6.67    .001
          15           PC    .000     0.5       1     1.1       2     2.5     3.1     4.1       5       6
          16           PC       7       8       9      10      11      12      14      17      22      33
          17           PC      60      79      87      92      95      97      98      99     100     100
          18           JD    6.26      10
          19           PC       0     0.5       1     1.6     2.8       3     4.6     5.5     6.6     7.6
          20           PC       9    10.6    11.5      13      14    15.2      17    20.2      26      35
          21           PC      60      77      85      90    93.5      96    97.5    98.5     100     100
                       *

          22           KK       1
          23           KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 1.
          24           BA    1.94
          25           LG     .20     .34    3.21    1.14    9.90
          26           UI    182.    326.    742.    974.   1186.   1502.   2185.   1957.   1537.   1243.
          27           UI    989.    751.    417.    308.    230.    182.     64.     56.     56.     56.
          28           UI     56.      0.      0.      0.      0.      0.      0.      0.      0.      0.
          29           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.

          30           KK    RCP1
          31           KM          ROUTE FLOW FROM CP1 TO CP2.
          32           RL                       1    1428
          33           RS       5              -1       0
          34           RC     .06     .04     .06   17800   .0469
          35           RX    1000    1125    1300    1390    1405    1490    1590    1750
          36           RY    1440    1439    1437    1428    1428    1439    1442    1444

          37           KK       2
          38           KM          RUNOFF HYDROGRAPH FROM SUB-BASIN 2.
          39           BA    1.82
          40           LG     .18     .33    3.91     .70   11.70
          41           UI    115.    115.    259.    442.    556.    642.    727.    849.   1013.   1346.
          42           UI   1419.   1145.    985.    864.    735.    634.    545.    405.    268.    202.
          43           UI    189.    144.    115.    103.     35.     35.     35.     35.     35.     35.
          44           UI     35.      0.      0.      0.      0.      0.      0.      0.      0.      0.
          45           UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
1                                       HEC-1 INPUT                                              PAGE  2

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


          46           KK   I1CP2
          47           KM          ADD HYDROGRAPHS AT CP2.
          48           HC       2
          49           ZZ
1
                 SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
 LINE      (V) ROUTING            (--->) DIVERSION OR PUMP FLOW

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

   22          1
               V
               V
   30        RCP1
               .
               .
   37          .          2
               .          .
               .          .
   46        I1CP2...........

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1***************************************                    ***************************************
 *                                       *                  *                                     *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)   *                  *   U.S. ARMY CORPS OF ENGINEERS      *
 *              MAY  1991                *                  *   HYDROLOGIC ENGINEERING CENTER     *
```

```
*      VERSION 4.0.1E                *                              *        609 SECOND STREET         *
*   Lahey F77L-EM/32 version 5.01    *                              *     DAVIS, CALIFORNIA 95616      *
*      Dodson & Associates, Inc.     *                              *         (916) 551-1748           *
*  RUN DATE  04/02/97  TIME  09:48:13  *                            *                                  *
**************************************                              ************************************
```

FILE = WTMCHASP.DAT

SPF STORM

RUSS CRUFF APR. 2, 1997 MODIFY INPUT TO MODEL WTS-MCHA
WHICH ONLY INCLUDE SUBBASINS 1 & 2
FOR SPF FLOW

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

   IT          HYDROGRAPH TIME DATA
                     NMIN          5  MINUTES IN COMPUTATION INTERVAL
                    IDATE      1   0  STARTING DATE
                    ITIME       0000  STARTING TIME
                       NQ        300  NUMBER OF HYDROGRAPH ORDINATES
                   NDDATE      2   0  ENDING DATE
                   NDTIME       0055  ENDING TIME
                    ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL    0.08 HOURS
                      TOTAL TIME BASE   24.92 HOURS

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

14 JD          INDEX STORM NO. 1
                     STRM       6.67  PRECIPITATION DEPTH
                     TRDA       0.00  TRANSPOSITION DRAINAGE AREA

15 PI            PRECIPITATION PATTERN
```

0.17	0.17	0.17	0.17	0.17	0.17	0.03	0.03	0.03	0.30
0.30	0.30	0.17	0.17	0.17	0.20	0.20	0.20	0.33	0.33
0.33	0.30	0.30	0.30	0.33	0.33	0.33	0.33	0.33	0.33
0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
0.33	0.33	0.33	0.33	0.33	0.67	0.67	0.67	1.00	1.00
1.00	1.67	1.67	1.67	3.67	3.67	3.67	9.00	9.00	9.00
6.33	6.33	6.33	2.67	2.67	2.67	1.67	1.67	1.67	1.00
1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33	0.33	0.33
0.33	0.33	0.33	0.33						

```
18 JD          INDEX STORM NO. 2
                     STRM       6.26  PRECIPITATION DEPTH
                     TRDA      10.00  TRANSPOSITION DRAINAGE AREA

19 PI            PRECIPITATION PATTERN
```

0.17	0.17	0.17	0.17	0.17	0.17	0.20	0.20	0.20	0.40
0.40	0.40	0.07	0.07	0.07	0.53	0.53	0.53	0.30	0.30
0.30	0.37	0.37	0.37	0.33	0.33	0.33	0.47	0.47	0.47
0.53	0.53	0.53	0.30	0.30	0.30	0.50	0.50	0.50	0.33
0.33	0.33	0.40	0.40	0.40	0.60	0.60	0.60	1.07	1.07
1.07	1.93	1.93	1.93	3.00	3.00	3.00	8.33	8.33	8.33
5.67	5.67	5.67	2.67	2.67	2.67	1.67	1.67	1.67	1.17
1.17	1.17	0.83	0.83	0.83	0.50	0.50	0.50	0.33	0.33
0.33	0.50	0.50	0.50						

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	1	3440.	5.50	520.	131.	126.	1.94		
+	ROUTED TO	RCP1	3184.	5.83	508.	127.	123.	1.94		
+	HYDROGRAPH AT	2	2967.	5.83	608.	153.	148.	1.82		
+	2 COMBINED AT	I1CP2	6047.	5.83	1097.	276.	266.	3.76		

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

FILE = RUN01.DAT

GR HATA FOR HEC-2 INPUT DEVELOPED FROM GIS

```
1.5  x1  1.00       66
     GR1357.7   9570.0   1357.8   9580.0   1357.9   9590.0   1358.0   9600.0   1357.9   9610.0
     GR1357.9   9620.0   1357.9   9630.0   1357.8   9640.0   1357.6   9650.0   1357.5   9660.0
     GR1357.3   9670.0   1357.2   9680.0   1357.0   9690.0   1356.8   9700.0   1356.6   9710.0
     GR1356.4   9720.0   1356.2   9730.0   1356.0   9740.0   1355.4   9750.0   1354.8   9760.0
     GR1354.4   9770.0   1354.0   9780.0   1351.4   9790.0   1349.9   9800.0   1349.7   9810.0
     GR1349.6   9820.0   1349.7   9830.0   1349.8   9840.0   1350.0   9850.0   1350.1   9860.0
     GR1350.2   9870.0   1350.4   9880.0   1350.5   9890.0   1350.7   9900.0   1350.6   9910.0
     GR1350.5   9920.0   1350.3   9930.0   1350.2   9940.0   1350.0   9950.0   1349.5   9960.0
     GR1349.0   9970.0   1348.5   9980.0   1348.1   9990.0   1348.0  10000.0   1348.0  10010.0
     GR1348.0  10020.0   1348.0  10030.0   1348.0  10040.0   1348.0  10050.0   1348.0  10060.0
     GR1348.0  10070.0   1348.5  10080.0   1349.0  10090.0   1349.3  10100.0   1349.7  10110.0
     GR1350.4  10120.0   1351.7  10130.0   1352.3  10140.0   1352.6  10150.0   1353.0  10160.0
     GR1353.3  10170.0   1353.6  10180.0   1354.2  10190.0   1356.2  10200.0   1358.2  10210.0
     GR1360.0  10219.2
2.0  x1  2.00      116
     GR1365.7   8890.0   1365.5   8900.0   1365.2   8910.0   1364.9   8920.0   1364.4   8930.0
     GR1363.8   8940.0   1363.5   8950.0   1363.1   8960.0   1362.6   8970.0   1362.0   8980.0
     GR1362.0   8990.0   1361.7   9000.0   1361.1   9010.0   1360.6   9020.0   1360.0   9030.0
     GR1360.0   9040.0   1360.1   9050.0   1360.5   9060.0   1360.8   9070.0   1361.2   9080.0
     GR1361.4   9090.0   1361.5   9100.0   1360.9   9110.0   1360.3   9120.0   1360.0   9130.0
     GR1360.0   9140.0   1360.0   9150.0   1360.6   9160.0   1361.5   9170.0   1362.0   9180.0
     GR1362.0   9190.0   1362.0   9200.0   1362.0   9210.0   1362.0   9220.0   1362.0   9230.0
     GR1362.0   9240.0   1361.8   9250.0   1361.4   9260.0   1361.8   9270.0   1362.0   9280.0
     GR1362.0   9290.0   1362.0   9300.0   1362.0   9310.0   1362.0   9320.0   1361.5   9330.0
     GR1361.0   9340.0   1360.5   9350.0   1360.0   9360.0   1360.0   9370.0   1360.0   9380.0
     GR1360.0   9390.0   1360.0   9400.0   1360.0   9410.0   1360.0   9420.0   1360.3   9430.0
     GR1360.6   9440.0   1360.9   9450.0   1361.2   9460.0   1361.6   9470.0   1361.9   9480.0
     GR1362.0   9490.0   1362.0   9500.0   1362.0   9510.0   1361.6   9520.0   1361.0   9530.0
     GR1360.6   9540.0   1360.4   9550.0   1360.2   9560.0   1359.9   9570.0   1359.8   9580.0
     GR1359.6   9590.0   1359.5   9600.0   1359.3   9610.0   1359.2   9620.0   1359.1   9630.0
     GR1359.1   9640.0   1359.1   9650.0   1359.1   9660.0   1359.2   9670.0   1359.2   9680.0
     GR1359.2   9690.0   1359.1   9700.0   1359.1   9710.0   1359.0   9720.0   1359.0   9730.0
     GR1358.9   9740.0   1358.9   9750.0   1358.9   9760.0   1358.9   9770.0   1358.7   9780.0
     GR1358.5   9790.0   1358.2   9800.0   1357.9   9810.0   1357.8   9820.0   1357.6   9830.0
     GR1357.4   9840.0   1357.3   9850.0   1357.2   9860.0   1357.2   9870.0   1357.1   9880.0
     GR1357.1   9890.0   1357.1   9900.0   1357.1   9910.0   1357.2   9920.0   1357.3   9930.0
     GR1357.4   9940.0   1357.5   9950.0   1357.3   9960.0   1357.1   9970.0   1356.9   9980.0
     GR1356.1   9990.0   1354.0  10000.0   1354.0  10010.0   1354.0  10020.0   1354.0  10030.0
     GR1354.0  10031.8
2.5  x1  3.00      103
     GR1370.0   9040.0   1370.0   9050.0   1370.0   9060.0   1370.0   9070.0   1370.0   9080.0
     GR1369.8   9090.0   1369.6   9100.0   1369.2   9110.0   1368.8   9120.0   1368.5   9130.0
     GR1368.2   9140.0   1368.0   9150.0   1368.0   9160.0   1368.0   9170.0   1368.0   9180.0
     GR1368.0   9190.0   1368.0   9200.0   1368.0   9210.0   1368.0   9220.0   1368.0   9230.0
     GR1368.0   9240.0   1368.0   9250.0   1368.0   9260.0   1368.0   9270.0   1368.0   9280.0
     GR1367.8   9290.0   1367.4   9300.0   1367.4   9310.0   1367.4   9320.0   1367.4   9330.0
     GR1367.5   9340.0   1367.4   9350.0   1367.4   9360.0   1367.3   9370.0   1367.3   9380.0
     GR1367.3   9390.0   1367.4   9400.0   1367.3   9410.0   1367.2   9420.0   1367.2   9430.0
     GR1367.2   9440.0   1367.1   9450.0   1366.9   9460.0   1366.8   9470.0   1366.8   9480.0
     GR1366.5   9490.0   1366.0   9500.0   1365.9   9510.0   1365.8   9520.0   1365.9   9530.0
     GR1366.0   9540.0   1366.0   9550.0   1366.0   9560.0   1366.0   9570.0   1366.0   9580.0
     GR1366.0   9590.0   1366.0   9600.0   1365.9   9610.0   1365.4   9620.0   1364.9   9630.0
     GR1364.8   9640.0   1364.7   9650.0   1364.5   9660.0   1364.3   9670.0   1364.1   9680.0
     GR1363.9   9690.0   1363.7   9700.0   1363.4   9710.0   1363.4   9720.0   1363.3   9730.0
     GR1363.0   9740.0   1362.9   9750.0   1362.6   9760.0   1362.4   9770.0   1362.1   9780.0
     GR1361.7   9790.0   1361.3   9800.0   1361.1   9810.0   1361.0   9820.0   1361.0   9830.0
     GR1360.9   9840.0   1360.7   9850.0   1360.5   9860.0   1360.2   9870.0   1360.0   9880.0
     GR1360.0   9890.0   1360.0   9900.0   1360.0   9910.0   1360.0   9920.0   1360.0   9930.0
     GR1359.7   9940.0   1359.0   9950.0   1358.4   9960.0   1358.0   9970.0   1356.3   9980.0
     GR1355.0   9990.0   1354.0  10000.0   1354.0  10010.0   1354.0  10020.0   1354.0  10030.0
     GR1354.0  10040.0   1354.0  10050.0   1354.0  10050.9
3.0  x1  4.00      102
     GR1375.0   9000.0   1374.9   9010.0   1374.8   9020.0   1374.5   9030.0   1374.1   9040.0
     GR1374.0   9050.0   1374.0   9060.0   1374.0   9070.0   1373.9   9080.0   1373.7   9090.0
     GR1373.6   9100.0   1373.4   9110.0   1373.2   9120.0   1373.0   9130.0   1372.8   9140.0
     GR1372.5   9150.0   1372.3   9160.0   1372.1   9170.0   1371.9   9180.0   1371.7   9190.0
     GR1371.5   9200.0   1371.3   9210.0   1371.2   9220.0   1371.0   9230.0   1370.8   9240.0
     GR1370.6   9250.0   1370.4   9260.0   1370.2   9270.0   1370.0   9280.0   1369.8   9290.0
     GR1369.5   9300.0   1369.2   9310.0   1368.8   9320.0   1368.5   9330.0   1368.2   9340.0
     GR1368.0   9350.0   1367.9   9360.0   1367.7   9370.0   1367.5   9380.0   1367.2   9390.0
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GR1367.1   9400.0   1366.8   9410.0   1366.6   9420.0   1366.4   9430.0   1366.2   9440.0
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GR1364.8   9500.0   1364.4   9510.0   1364.1   9520.0   1364.0   9530.0   1364.0   9540.0
GR1364.0   9550.0   1364.0   9560.0   1364.0   9570.0   1364.0   9580.0   1364.0   9590.0
GR1364.0   9600.0   1364.0   9610.0   1363.9   9620.0   1363.7   9630.0   1363.5   9640.0
GR1363.3   9650.0   1363.1   9660.0   1362.9   9670.0   1362.7   9680.0   1362.5   9690.0
GR1362.3   9700.0   1362.1   9710.0   1362.0   9720.0   1362.0   9730.0   1361.6   9740.0
GR1361.3   9750.0   1360.9   9760.0   1360.6   9770.0   1360.3   9780.0   1360.0   9790.0
GR1360.0   9800.0   1359.9   9810.0   1359.7   9820.0   1359.6   9830.0   1359.4   9840.0
GR1359.3   9850.0   1359.1   9860.0   1359.0   9870.0   1358.8   9880.0   1358.7   9890.0
GR1358.5   9900.0   1358.3   9910.0   1358.2   9920.0   1358.0   9930.0   1358.0   9940.0
GR1357.9   9950.0   1357.5   9960.0   1357.1   9970.0   1356.7   9980.0   1356.4   9990.0
GR1356.0  10000.0   1356.0  10004.1
3.5 x1  5.00      106
GR1369.2   9100.0   1369.2   9110.0   1369.3   9120.0   1369.2   9130.0   1369.5   9140.0
GR1370.2   9150.0   1370.6   9160.0   1371.1   9170.0   1371.2   9180.0   1371.1   9190.0
GR1371.0   9200.0   1370.7   9210.0   1370.4   9220.0   1370.0   9230.0   1369.8   9240.0
GR1369.5   9250.0   1369.2   9260.0   1369.2   9270.0   1369.1   9280.0   1369.0   9290.0
GR1369.0   9300.0   1368.9   9310.0   1368.8   9320.0   1368.8   9330.0   1368.7   9340.0
GR1368.7   9350.0   1368.6   9360.0   1368.4   9370.0   1368.2   9380.0   1368.1   9390.0
GR1368.0   9400.0   1368.0   9410.0   1368.0   9420.0   1368.0   9430.0   1367.9   9440.0
GR1367.8   9450.0   1367.6   9460.0   1367.4   9470.0   1367.2   9480.0   1367.0   9490.0
GR1366.8   9500.0   1366.6   9510.0   1366.4   9520.0   1366.1   9530.0   1365.9   9540.0
GR1365.7   9550.0   1365.6   9560.0   1365.4   9570.0   1365.2   9580.0   1365.0   9590.0
GR1364.8   9600.0   1364.6   9610.0   1364.4   9620.0   1364.3   9630.0   1364.1   9640.0
GR1363.9   9650.0   1363.6   9660.0   1363.4   9670.0   1363.2   9680.0   1362.9   9690.0
GR1362.7   9700.0   1362.4   9710.0   1362.1   9720.0   1361.9   9730.0   1361.6   9740.0
GR1361.2   9750.0   1360.9   9760.0   1360.5   9770.0   1360.2   9780.0   1360.0   9790.0
GR1359.8   9800.0   1359.1   9810.0   1358.4   9820.0   1358.0   9830.0   1358.0   9840.0
GR1358.0   9850.0   1358.0   9860.0   1358.0   9870.0   1358.0   9880.0   1358.2   9890.0
GR1359.1   9900.0   1359.9   9910.0   1360.0   9920.0   1359.8   9930.0   1359.3   9940.0
GR1358.7   9950.0   1358.0   9960.0   1357.5   9970.0   1357.2   9980.0   1357.0   9990.0
GR1356.7  10000.0   1357.0  10010.0   1357.7  10020.0   1358.0  10030.0   1358.0  10040.0
GR1358.0  10050.0   1358.0  10060.0   1358.0  10070.0   1358.0  10080.0   1358.0  10090.0
GR1358.0  10100.0   1358.0  10110.0   1357.9  10120.0   1357.5  10130.0   1357.1  10140.0
GR1356.9  10147.3
4.0 x1  6.00      108
GR1425.1   9090.0   1424.6   9100.0   1424.1   9110.0   1423.0   9120.0   1422.7   9130.0
GR1422.7   9140.0   1422.4   9150.0   1421.3   9160.0   1419.7   9170.0   1418.7   9180.0
GR1418.8   9190.0   1418.9   9200.0   1419.0   9210.0   1418.7   9220.0   1418.7   9230.0
GR1418.9   9240.0   1419.2   9250.0   1419.4   9260.0   1419.6   9270.0   1419.9   9280.0
GR1420.1   9290.0   1420.5   9300.0   1420.0   9310.0   1420.0   9320.0   1420.0   9330.0
GR1420.0   9340.0   1420.0   9350.0   1420.0   9360.0   1420.0   9370.0   1420.0   9380.0
GR1420.0   9390.0   1420.0   9400.0   1420.0   9410.0   1420.0   9420.0   1420.0   9430.0
GR1419.1   9440.0   1417.9   9450.0   1415.0   9460.0   1411.9   9470.0   1407.3   9480.0
GR1401.3   9490.0   1397.6   9500.0   1394.5   9510.0   1392.3   9520.0   1390.2   9530.0
GR1387.8   9540.0   1385.3   9550.0   1382.8   9560.0   1379.7   9570.0   1377.9   9580.0
GR1376.5   9590.0   1375.0   9600.0   1374.0   9610.0   1374.0   9620.0   1372.3   9630.0
GR1369.7   9640.0   1368.4   9650.0   1367.0   9660.0   1365.6   9670.0   1364.5   9680.0
GR1363.6   9690.0   1363.0   9700.0   1362.3   9710.0   1361.7   9720.0   1361.0   9730.0
GR1360.3   9740.0   1359.8   9750.0   1359.6   9760.0   1359.3   9770.0   1359.0   9780.0
GR1358.7   9790.0   1358.5   9800.0   1358.2   9810.0   1358.0   9820.0   1358.0   9830.0
GR1357.5   9840.0   1357.0   9850.0   1356.5   9860.0   1356.0   9870.0   1356.0   9880.0
GR1356.0   9890.0   1355.5   9900.0   1355.0   9910.0   1354.5   9920.0   1354.0   9930.0
GR1353.6   9940.0   1353.0   9950.0   1352.4   9960.0   1352.0   9970.0   1351.9   9980.0
GR1351.4   9990.0   1351.0  10000.0   1351.4  10010.0   1351.4  10020.0   1351.3  10030.0
GR1351.3  10040.0   1351.4  10050.0   1351.5  10060.0   1351.7  10070.0   1351.9  10080.0
GR1352.1  10090.0   1352.1  10100.0   1352.0  10110.0   1352.0  10120.0   1352.2  10130.0
GR1352.5  10140.0   1352.9  10150.0   1352.9  10150.8
4.5 x1  7.00      104
GR1423.4   8976.1   1424.2   8986.1   1425.0   8996.1   1425.3   9006.1   1425.4   9016.1
GR1425.1   9026.1   1424.9   9036.1   1424.4   9046.1   1424.0   9056.1   1423.3   9066.1
GR1422.5   9076.1   1421.8   9086.1   1421.0   9096.1   1420.3   9106.1   1419.4   9116.1
GR1418.1   9126.1   1416.4   9136.1   1414.7   9146.1   1413.0   9156.1   1411.3   9166.1
GR1409.7   9176.1   1408.0   9186.1   1405.8   9196.1   1403.6   9206.1   1401.3   9216.1
GR1399.5   9226.1   1398.3   9236.1   1397.1   9246.1   1395.8   9256.1   1394.3   9266.1
GR1392.8   9276.1   1391.2   9286.1   1389.5   9296.1   1387.7   9306.1   1386.1   9316.1
GR1384.4   9326.1   1382.5   9336.1   1380.6   9346.1   1379.2   9356.1   1377.9   9366.1
GR1377.1   9376.1   1376.3   9386.1   1375.2   9396.1   1374.2   9406.1   1374.0   9416.1
GR1374.0   9426.1   1373.1   9436.1   1371.5   9446.1   1370.0   9456.1   1369.6   9466.1
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GR1366.0   9576.1   1366.0   9586.1   1366.0   9596.1   1366.0   9606.1   1365.4   9616.1
GR1365.1   9626.1   1365.0   9636.1   1364.8   9646.1   1365.0   9656.1   1365.0   9666.1
GR1364.4   9676.1   1364.0   9686.1   1364.0   9696.1   1364.0   9706.1   1364.0   9716.1
GR1364.0   9726.1   1363.9   9736.1   1363.7   9746.1   1363.5   9756.1   1363.3   9766.1
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GR1363.2   9776.1   1363.0   9786.1   1362.2   9796.1   1362.0   9806.1   1362.0   9816.1
GR1362.0   9826.1   1361.8   9836.1   1361.7   9846.1   1361.7   9856.1   1361.1   9866.1
GR1360.6   9876.1   1360.0   9886.1   1360.0   9896.1   1360.0   9906.1   1360.0   9916.1
GR1360.0   9926.1   1359.8   9936.1   1359.2   9946.1   1358.5   9956.1   1357.8   9966.1
GR1357.1   9976.1   1356.3   9986.1   1355.8   9996.1   1355.7 10000.0
5.0 x1  8.00     103
GR1381.0   8980.6   1380.7   8990.6   1380.5   9000.6   1380.3   9010.6   1380.1   9020.6
GR1380.0   9030.6   1380.0   9040.6   1380.0   9050.6   1380.0   9060.6   1380.0   9070.6
GR1379.6   9080.6   1379.1   9090.6   1378.5   9100.6   1378.3   9110.6   1378.0   9120.6
GR1378.0   9130.6   1377.9   9140.6   1377.7   9150.6   1377.5   9160.6   1377.3   9170.6
GR1377.3   9180.6   1377.3   9190.6   1377.1   9200.6   1376.8   9210.6   1376.6   9220.6
GR1376.3   9230.6   1376.1   9240.6   1376.0   9250.6   1376.0   9260.6   1375.9   9270.6
GR1375.5   9280.6   1375.1   9290.6   1374.7   9300.6   1374.3   9310.6   1374.0   9320.6
GR1373.7   9330.6   1373.4   9340.6   1373.1   9350.6   1372.8   9360.6   1372.5   9370.6
GR1372.2   9380.6   1371.9   9390.6   1371.4   9400.6   1370.9   9410.6   1370.4   9420.6
GR1370.0   9430.6   1370.0   9440.6   1370.0   9450.6   1369.9   9460.6   1369.1   9470.6
GR1368.2   9480.6   1368.0   9490.6   1368.0   9500.6   1367.7   9510.6   1367.2   9520.6
GR1366.8   9530.6   1366.8   9540.6   1367.1   9550.6   1367.5   9560.6   1367.6   9570.6
GR1367.8   9580.6   1367.9   9590.6   1368.0   9600.6   1368.1   9610.6   1367.9   9620.6
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GR1366.6   9680.6   1366.5   9690.6   1366.3   9700.6   1366.2   9710.6   1366.0   9720.6
GR1365.4   9730.6   1364.4   9740.6   1363.4   9750.6   1362.8   9760.6   1362.5   9770.6
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GR1363.2   9830.6   1363.3   9840.6   1363.4   9850.6   1363.2   9860.6   1363.0   9870.6
GR1362.9   9880.6   1363.0   9890.6   1363.0   9900.6   1362.9   9910.6   1362.8   9920.6
GR1362.7   9930.6   1362.5   9940.6   1362.4   9950.6   1362.1   9960.6   1361.8   9970.6
GR1361.5   9980.6   1361.2   9990.6   1360.9 10000.0
5.5 x1  9.00     102
GR1378.4   9000.0   1378.7   9010.0   1378.8   9020.0   1378.5   9030.0   1378.1   9040.0
GR1378.0   9050.0   1377.5   9060.0   1377.0   9070.0   1376.5   9080.0   1376.2   9090.0
GR1376.0   9100.0   1376.0   9110.0   1376.0   9120.0   1376.0   9130.0   1375.4   9140.0
GR1374.8   9150.0   1374.3   9160.0   1374.0   9170.0   1374.0   9180.0   1373.7   9190.0
GR1373.3   9200.0   1372.8   9210.0   1372.6   9220.0   1372.0   9230.0   1372.0   9240.0
GR1372.0   9250.0   1372.0   9260.0   1371.9   9270.0   1371.5   9280.0   1371.1   9290.0
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GR1370.0   9350.0   1369.7   9360.0   1369.0   9370.0   1368.4   9380.0   1368.0   9390.0
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GR1370.0   9798.1   1369.9   9808.1   1369.8   9818.1   1369.4   9828.1   1369.2   9838.1
GR1369.0   9848.1   1368.6   9858.1   1368.2   9868.1   1368.0   9878.1   1367.8   9888.1
GR1367.0   9898.1   1366.3   9908.1   1365.9   9918.1   1365.6   9928.1   1365.3   9938.1
GR1365.0   9948.1   1364.7   9958.1   1364.4   9968.1   1364.1   9978.1   1364.0   9988.1
GR1363.8   9998.1   1363.7 10000.0
9.5 x1 17.00      102
GR1391.6   8995.0   1391.2   9005.0   1390.9   9015.0   1390.6   9025.0   1390.2   9035.0
GR1390.0   9045.0   1389.7   9055.0   1389.3   9065.0   1388.9   9075.0   1388.5   9085.0
GR1388.1   9095.0   1388.0   9105.0   1387.5   9115.0   1386.6   9125.0   1386.0   9135.0
GR1385.7   9145.0   1385.1   9155.0   1384.6   9165.0   1384.1   9175.0   1384.0   9185.0
GR1384.0   9195.0   1384.0   9205.0   1383.4   9215.0   1383.2   9225.0   1383.1   9235.0
GR1382.9   9245.0   1382.3   9255.0   1381.8   9265.0   1381.3   9275.0   1381.2   9285.0
GR1380.9   9295.0   1380.5   9305.0   1380.1   9315.0   1379.6   9325.0   1379.3   9335.0
GR1378.7   9345.0   1378.1   9355.0   1377.8   9365.0   1377.4   9375.0   1376.4   9385.0
GR1376.1   9395.0   1376.0   9405.0   1375.5   9415.0   1374.9   9425.0   1374.0   9435.0
GR1374.0   9445.0   1374.0   9455.0   1374.0   9465.0   1374.0   9475.0   1374.2   9485.0
GR1374.7   9495.0   1375.1   9505.0   1375.5   9515.0   1375.8   9525.0   1375.5   9535.0
GR1375.4   9545.0   1375.1   9555.0   1374.8   9565.0   1374.5   9575.0   1374.1   9585.0
GR1374.0   9595.0   1373.7   9605.0   1373.3   9615.0   1372.9   9625.0   1372.5   9635.0
GR1372.1   9645.0   1372.0   9655.0   1372.0   9665.0   1372.0   9675.0   1371.6   9685.0
GR1370.7   9695.0   1370.0   9705.0   1370.0   9715.0   1370.0   9725.0   1370.0   9735.0
GR1370.0   9745.0   1370.0   9755.0   1370.0   9765.0   1370.0   9775.0   1370.0   9785.0
GR1369.7   9795.0   1369.3   9805.0   1369.0   9815.0   1368.8   9825.0   1368.5   9835.0
GR1368.2   9845.0   1368.0   9855.0   1367.8   9865.0   1367.5   9875.0   1367.2   9885.0
GR1367.0   9895.0   1366.6   9905.0   1366.3   9915.0   1366.0   9925.0   1365.5   9935.0
GR1365.2   9945.0   1364.8   9955.0   1364.3   9965.0   1363.9   9975.0   1363.5   9985.0
GR1363.1   9995.0   1362.9 10000.0
10.0 x1 18.00      103
GR1387.8   8990.0   1387.6   9000.0   1387.3   9010.0   1386.8   9020.0   1386.0   9030.0
GR1386.0   9040.0   1386.0   9050.0   1385.9   9060.0   1386.0   9070.0   1385.9   9080.0
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GR1385.8   9090.0   1385.5   9100.0   1385.2   9110.0   1385.1   9120.0   1384.9   9130.0
GR1384.6   9140.0   1384.3   9150.0   1384.1   9160.0   1384.0   9170.0   1384.0   9180.0
GR1384.0   9190.0   1384.0   9200.0   1383.8   9210.0   1383.6   9220.0   1383.5   9230.0
GR1383.7   9240.0   1383.9   9250.0   1384.1   9260.0   1384.2   9270.0   1384.0   9280.0
GR1383.8   9290.0   1383.7   9300.0   1383.4   9310.0   1383.2   9320.0   1382.8   9330.0
GR1382.4   9340.0   1382.1   9350.0   1382.0   9360.0   1381.8   9370.0   1381.6   9380.0
GR1381.0   9390.0   1380.0   9400.0   1380.0   9410.0   1380.0   9420.0   1379.7   9430.0
GR1379.3   9440.0   1379.0   9450.0   1378.7   9460.0   1378.4   9470.0   1378.0   9480.0
GR1377.8   9490.0   1377.2   9500.0   1376.6   9510.0   1376.0   9520.0   1376.0   9530.0
GR1375.8   9540.0   1375.7   9550.0   1376.0   9560.0   1376.1   9570.0   1375.8   9580.0
GR1375.6   9590.0   1375.5   9600.0   1375.4   9610.0   1375.2   9620.0   1375.1   9630.0
GR1374.9   9640.0   1374.7   9650.0   1374.5   9660.0   1374.2   9670.0   1373.9   9680.0
GR1373.6   9690.0   1373.3   9700.0   1373.0   9710.0   1372.7   9720.0   1372.4   9730.0
GR1372.0   9740.0   1371.7   9750.0   1371.3   9760.0   1370.9   9770.0   1370.6   9780.0
GR1370.2   9790.0   1369.7   9800.0   1369.2   9810.0   1368.7   9820.0   1368.2   9830.0
GR1367.8   9840.0   1367.5   9850.0   1367.1   9860.0   1366.8   9870.0   1366.5   9880.0
GR1366.2   9890.0   1365.8   9900.0   1365.4   9910.0   1364.9   9920.0   1364.4   9930.0
GR1364.0   9940.0   1364.0   9950.0   1364.0   9960.0   1363.7   9970.0   1363.3   9980.0
GR1363.3   9990.0   1363.2  10000.0   1363.2  10007.0
10.5 x1 19.00   102
GR1395.6   8997.8   1394.9   9007.8   1394.4   9017.8   1394.3   9027.8   1394.0   9037.8
GR1393.8   9047.8   1393.4   9057.8   1393.0   9067.8   1392.6   9077.8   1392.2   9087.8
GR1392.0   9097.8   1391.4   9107.8   1391.0   9117.8   1390.6   9127.8   1390.0   9137.8
GR1390.0   9147.8   1390.0   9157.8   1390.0   9167.8   1390.0   9177.8   1389.9   9187.8
GR1389.2   9197.8   1388.3   9207.8   1388.0   9217.8   1387.1   9227.8   1386.4   9237.8
GR1385.4   9247.8   1383.9   9257.8   1383.1   9267.8   1382.5   9277.8   1381.5   9287.8
GR1380.0   9297.8   1380.0   9307.8   1380.0   9317.8   1380.0   9327.8   1380.0   9337.8
GR1380.0   9347.8   1380.0   9357.8   1378.7   9367.8   1378.0   9377.8   1378.0   9387.8
GR1378.0   9397.8   1378.0   9407.8   1378.0   9417.8   1378.0   9427.8   1376.8   9437.8
GR1376.6   9447.8   1376.4   9457.8   1376.3   9467.8   1376.2   9477.8   1376.2   9487.8
GR1376.2   9497.8   1376.0   9507.8   1376.0   9517.8   1376.0   9527.8   1376.0   9537.8
GR1376.0   9547.8   1375.5   9557.8   1375.5   9567.8   1375.6   9577.8   1375.7   9587.8
GR1375.7   9597.8   1375.4   9607.8   1375.3   9617.8   1375.2   9627.8   1375.1   9637.8
GR1375.2   9647.8   1374.9   9657.8   1374.7   9667.8   1374.2   9677.8   1374.0   9687.8
GR1373.8   9697.8   1373.5   9707.8   1373.2   9717.8   1372.7   9727.8   1372.2   9737.8
GR1372.1   9747.8   1372.0   9757.8   1372.0   9767.8   1372.0   9777.8   1372.0   9787.8
GR1371.6   9797.8   1371.0   9807.8   1370.8   9817.8   1370.6   9827.8   1370.4   9837.8
GR1370.2   9847.8   1369.8   9857.8   1369.4   9867.8   1369.0   9877.8   1368.7   9887.8
GR1368.4   9897.8   1368.1   9907.8   1368.0   9917.8   1367.7   9927.8   1367.4   9937.8
GR1367.1   9947.8   1366.8   9957.8   1366.3   9967.8   1366.0   9977.8   1366.0   9987.8
GR1365.7   9997.8   1365.6  10000.0
11.0 x1 20.00   102
GR1394.7   8999.6   1394.6   9009.6   1394.6   9019.6   1394.7   9029.6   1394.2   9039.6
GR1394.0   9049.6   1394.0   9059.6   1394.0   9069.6   1394.0   9079.6   1393.5   9089.6
GR1393.1   9099.6   1392.0   9109.6   1392.0   9119.6   1391.8   9129.6   1390.4   9139.6
GR1390.0   9149.6   1389.8   9159.6   1388.2   9169.6   1388.0   9179.6   1388.0   9189.6
GR1388.7   9199.6   1389.0   9209.6   1389.2   9219.6   1388.6   9229.6   1388.0   9239.6
GR1388.0   9249.6   1388.0   9259.6   1388.0   9269.6   1388.0   9279.6   1388.0   9289.6
GR1387.9   9299.6   1387.6   9309.6   1387.0   9319.6   1386.4   9329.6   1386.0   9339.6
GR1385.8   9349.6   1385.3   9359.6   1384.7   9369.6   1384.0   9379.6   1384.0   9389.6
GR1383.6   9399.6   1383.0   9409.6   1382.5   9419.6   1382.0   9429.6   1382.0   9439.6
GR1381.5   9449.6   1380.9   9459.6   1380.6   9469.6   1380.7   9479.6   1380.7   9489.6
GR1380.6   9499.6   1380.4   9509.6   1380.2   9519.6   1380.0   9529.6   1379.8   9539.6
GR1379.5   9549.6   1379.2   9559.6   1378.8   9569.6   1378.3   9579.6   1377.6   9589.6
GR1377.1   9599.6   1376.7   9609.6   1376.6   9619.6   1376.4   9629.6   1376.3   9639.6
GR1376.0   9649.6   1376.0   9659.6   1376.0   9669.6   1376.0   9679.6   1376.0   9689.6
GR1375.6   9699.6   1375.2   9709.6   1374.8   9719.6   1374.4   9729.6   1374.0   9739.6
GR1374.0   9749.6   1374.0   9759.6   1374.0   9769.6   1373.8   9779.6   1373.4   9789.6
GR1373.0   9799.6   1372.5   9809.6   1372.1   9819.6   1371.6   9829.6   1371.2   9839.6
GR1370.6   9849.6   1370.1   9859.6   1369.5   9869.6   1368.9   9879.6   1368.2   9889.6
GR1368.0   9899.6   1368.0   9909.6   1367.8   9919.6   1367.2   9929.6   1366.6   9939.6
GR1366.0   9949.6   1366.0   9959.6   1366.0   9969.6   1366.0   9979.6   1365.4   9989.6
GR1364.2   9999.6   1364.2  10000.0
13.0 x1 21.00   102
GR1403.9   9000.0   1404.6   9010.0   1405.3   9020.0   1405.9   9030.0   1405.6   9040.0
GR1405.0   9050.0   1404.4   9060.0   1403.8   9070.0   1403.4   9080.0   1402.9   9090.0
GR1402.4   9100.0   1401.9   9110.0   1401.2   9120.0   1400.5   9130.0   1399.9   9140.0
GR1399.3   9150.0   1398.6   9160.0   1398.0   9170.0   1398.0   9180.0   1398.0   9190.0
GR1398.0   9200.0   1399.2   9210.0   1400.5   9220.0   1401.9   9230.0   1402.0   9240.0
GR1402.0   9250.0   1402.2   9260.0   1401.9   9270.0   1401.7   9280.0   1401.8   9290.0
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GR1398.0   9500.0   1397.9   9510.0   1397.6   9520.0   1397.3   9530.0   1397.0   9540.0
GR1396.6   9550.0   1396.2   9560.0   1395.8   9570.0   1395.3   9580.0   1394.9   9590.0
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GR1391.0   9750.0   1390.9   9760.0   1390.7   9770.0   1390.5   9780.0   1390.4   9790.0
GR1390.4   9800.0   1390.3   9810.0   1390.2   9820.0   1390.0   9830.0   1389.8   9840.0
GR1389.5   9850.0   1389.3   9860.0   1389.0   9870.0   1388.8   9880.0   1388.5   9890.0
GR1388.3   9900.0   1388.0   9910.0   1387.5   9920.0   1387.0   9930.0   1386.5   9940.0
GR1386.0   9950.0   1385.5   9960.0   1385.0   9970.0   1384.5   9980.0   1384.2   9990.0
GR1384.0  10000.0   1384.0  10001.0
11.5
x1 22.00      102
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GR1390.0   9048.8   1390.0   9058.8   1390.0   9068.8   1390.0   9078.8   1389.9   9088.8
GR1389.3   9098.8   1388.7   9108.8   1388.5   9118.8   1388.4   9128.8   1388.3   9138.8
GR1388.2   9148.8   1388.1   9158.8   1388.0   9168.8   1387.6   9178.8   1387.3   9188.8
GR1387.7   9198.8   1388.0   9208.8   1388.3   9218.8   1388.5   9228.8   1388.4   9238.8
GR1388.2   9248.8   1388.0   9258.8   1387.8   9268.8   1387.3   9278.8   1386.8   9288.8
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GR1368.0   9948.8   1368.0   9958.8   1367.8   9968.8   1367.6   9978.8   1367.3   9988.8
GR1367.0   9998.8   1367.0  10000.0
12.0
x1 23.00      102
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GR1393.5   9090.6   1393.1   9100.6   1392.9   9110.6   1392.7   9120.6   1392.6   9130.6
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GR1384.4   9390.6   1384.0   9400.6   1383.8   9410.6   1383.5   9420.6   1383.2   9430.6
GR1382.9   9440.6   1382.5   9450.6   1382.1   9460.6   1381.7   9470.6   1381.4   9480.6
GR1381.0   9490.6   1380.6   9500.6   1380.3   9510.6   1379.9   9520.6   1379.5   9530.6
GR1379.2   9540.6   1378.8   9550.6   1378.5   9560.6   1378.1   9570.6   1377.7   9580.6
GR1377.3   9590.6   1376.8   9600.6   1376.5   9610.6   1376.1   9620.6   1375.6   9630.6
GR1375.0   9640.6   1374.5   9650.6   1373.9   9660.6   1373.5   9670.6   1373.0   9680.6
GR1372.4   9690.6   1371.9   9700.6   1371.3   9710.6   1370.7   9720.6   1370.2   9730.6
GR1370.0   9740.6   1370.0   9750.6   1370.0   9760.6   1370.0   9770.6   1369.5   9780.6
GR1369.1   9790.6   1368.9   9800.6   1368.7   9810.6   1368.5   9820.6   1368.2   9830.6
GR1367.6   9840.6   1366.9   9850.6   1366.3   9860.6   1366.1   9870.6   1366.0   9880.6
GR1366.0   9890.6   1366.0   9900.6   1365.2   9910.6   1364.7   9920.6   1364.3   9930.6
GR1364.0   9940.6   1364.0   9950.6   1364.0   9960.6   1364.0   9970.6   1364.0   9980.6
GR1363.6   9990.6   1362.7  10000.0
12.5
x1 24.00      108
GR1401.6   8933.2   1401.2   8943.2   1400.7   8953.2   1400.3   8963.2   1400.0   8973.2
GR1400.0   8983.2   1399.8   8993.2   1398.9   9003.2   1398.4   9013.2   1397.8   9023.2
GR1397.2   9033.2   1396.1   9043.2   1395.4   9053.2   1395.0   9063.2   1394.6   9073.2
GR1394.2   9083.2   1393.8   9093.2   1393.4   9103.2   1392.7   9113.2   1392.1   9123.2
GR1391.1   9133.2   1390.2   9143.2   1389.1   9153.2   1388.2   9163.2   1387.9   9173.2
GR1386.9   9183.2   1386.3   9193.2   1386.4   9203.2   1387.2   9213.2   1387.6   9223.2
GR1388.0   9233.2   1388.5   9243.2   1388.5   9253.2   1388.4   9263.2   1388.0   9273.2
GR1388.0   9283.2   1388.0   9293.2   1387.7   9303.2   1387.2   9313.2   1386.9   9323.2
GR1386.6   9333.2   1386.3   9343.2   1386.0   9353.2   1386.0   9363.2   1385.7   9373.2
GR1385.2   9383.2   1384.8   9393.2   1384.5   9403.2   1384.3   9413.2   1384.3   9423.2
GR1384.2   9433.2   1383.9   9443.2   1383.7   9453.2   1383.0   9463.2   1382.9   9473.2
GR1382.7   9483.2   1382.0   9493.2   1381.6   9503.2   1381.2   9513.2   1380.7   9523.2
GR1380.2   9533.2   1379.4   9543.2   1378.6   9553.2   1377.9   9563.2   1377.0   9573.2
GR1376.1   9583.2   1375.3   9593.2   1374.4   9603.2   1374.0   9613.2   1374.0   9623.2
GR1374.0   9633.2   1374.3   9643.2   1374.6   9653.2   1374.6   9663.2   1374.7   9673.2
GR1374.8   9683.2   1374.7   9693.2   1374.4   9703.2   1374.1   9713.2   1373.8   9723.2
GR1373.4   9733.2   1373.1   9743.2   1373.3   9753.2   1374.0   9763.2   1374.2   9773.2
GR1374.2   9783.2   1374.2   9793.2   1374.1   9803.2   1373.9   9813.2   1373.5   9823.2
GR1373.1   9833.2   1372.7   9843.2   1372.3   9853.2   1372.0   9863.2   1371.5   9873.2
GR1371.1   9883.2   1370.6   9893.2   1370.2   9903.2   1369.9   9913.2   1369.5   9923.2
GR1369.0   9933.2   1368.4   9943.2   1367.7   9953.2   1367.1   9963.2   1366.4   9973.2
GR1366.0   9983.2   1366.0   9993.2   1365.7  10000.0
```

FILE = MCMCH1.DAT

```
C
C       2
C     1.5     WITHIN MCMICKEN RESERVOIR
C    13.0     UPPER END OF CHANNEL
T1            MCMICKEN CHANNEL DESIGN
T2            100-YEAR FLOW  - RUSS CRUFF 2-19-97
T3            SECTIONS 1.5 TO 13.0
J1              2                               .002
J2      1               -2
J3     38      43        1      26       8      30       4
J3     38      43       53      54      64      65
NC   .045    .045    0.045      .1      .3
QT      1    5600
X1   1.50      65     9600   10210       0       0       0
CI 10000     1352                2       2     300
GR1357.7  9570.0  1357.8  9580.0  1357.9  9590.0  1358.0  9600.0  1357.9  9610.0
GR1357.9  9620.0  1357.9  9630.0  1357.8  9640.0  1357.6  9650.0  1357.5  9660.0
GR1357.3  9670.0  1357.2  9680.0  1357.0  9690.0  1356.8  9700.0  1356.6  9710.0
GR1356.4  9720.0  1356.2  9730.0  1356.0  9740.0  1355.4  9750.0  1354.8  9760.0
GR1354.4  9770.0  1354.0  9780.0  1351.4  9790.0  1349.9  9800.0  1349.7  9810.0
GR1349.6  9820.0  1349.7  9830.0  1349.8  9840.0  1350.0  9850.0  1350.1  9860.0
GR1350.2  9870.0  1350.4  9880.0  1350.5  9890.0  1350.7  9900.0  1350.6  9910.0
GR1350.5  9920.0  1350.3  9930.0  1350.2  9940.0  1350.0  9950.0  1349.5  9960.0
GR1349.0  9970.0  1348.5  9980.0  1348.1  9990.0  1348.0 10000.0  1348.0 10010.0
GR1348.0 10020.0  1348.0 10030.0  1348.0 10040.0  1348.0 10050.0  1348.0 10060.0
GR1348.0 10070.0  1348.5 10080.0  1349.0 10090.0  1349.3 10100.0  1349.7 10110.0
GR1350.4 10120.0  1351.7 10130.0  1352.3 10140.0  1352.6 10150.0  1353.0 10160.0
GR1353.3 10170.0  1353.6 10180.0  1354.2 10190.0  1356.2 10200.0  1358.2 10210.0
X1   2.00      90     9100    9510     460     530     500
CI   9330   0.002
X3                            9100             9510
GR1360.0  9040.0  1360.1  9050.0  1360.5  9060.0  1360.8  9070.0  1361.2  9080.0
GR1361.4  9090.0  1361.5  9100.0  1360.9  9110.0  1360.3  9120.0  1360.0  9130.0
GR1360.0  9140.0  1360.0  9150.0  1360.6  9160.0  1361.5  9170.0  1362.0  9180.0
GR1362.0  9190.0  1362.0  9200.0  1362.0  9210.0  1362.0  9220.0  1362.0  9230.0
GR1362.0  9240.0  1361.8  9250.0  1361.4  9260.0  1361.8  9270.0  1362.0  9280.0
GR1362.0  9290.0  1362.0  9300.0  1362.0  9310.0  1362.0  9320.0  1361.5  9330.0
GR1361.0  9340.0  1360.5  9350.0  1360.0  9360.0  1360.0  9370.0  1360.0  9380.0
GR1360.0  9390.0  1360.0  9400.0  1360.0  9410.0  1360.0  9420.0  1360.3  9430.0
GR1360.6  9440.0  1360.9  9450.0  1361.2  9460.0  1361.6  9470.0  1361.9  9480.0
GR1362.0  9490.0  1362.0  9500.0  1362.0  9510.0  1361.6  9520.0  1361.0  9530.0
GR1360.6  9540.0  1360.4  9550.0  1360.2  9560.0  1359.9  9570.0  1359.8  9580.0
GR1359.6  9590.0  1359.5  9600.0  1359.3  9610.0  1359.2  9620.0  1359.1  9630.0
GR1359.1  9640.0  1359.1  9650.0  1359.1  9660.0  1359.2  9670.0  1359.2  9680.0
GR1359.2  9690.0  1359.1  9700.0  1359.1  9710.0  1359.0  9720.0  1359.0  9730.0
GR1358.9  9740.0  1358.9  9750.0  1358.9  9760.0  1358.9  9770.0  1358.7  9780.0
GR1358.5  9790.0  1358.2  9800.0  1357.9  9810.0  1357.8  9820.0  1357.6  9830.0
GR1357.4  9840.0  1357.3  9850.0  1357.2  9860.0  1357.2  9870.0  1357.1  9880.0
GR1357.1  9890.0  1357.1  9900.0  1357.1  9910.0  1357.2  9920.0  1357.3  9930.0
X1   2.50      90     9160    9480     650     200     500
CI   9320                                      250
X3                            9080             9480
GR1370.0  9040.0  1370.0  9050.0  1370.0  9060.0  1370.0  9070.0  1370.0  9080.0
GR1369.8  9090.0  1369.6  9100.0  1369.2  9110.0  1368.8  9120.0  1368.5  9130.0
GR1368.2  9140.0  1368.0  9150.0  1368.0  9160.0  1368.0  9170.0  1368.0  9180.0
GR1368.0  9190.0  1368.0  9200.0  1368.0  9210.0  1368.0  9220.0  1368.0  9230.0
GR1368.0  9240.0  1368.0  9250.0  1368.0  9260.0  1368.0  9270.0  1368.0  9280.0
GR1367.8  9290.0  1367.4  9300.0  1367.4  9310.0  1367.4  9320.0  1367.4  9330.0
GR1367.5  9340.0  1367.4  9350.0  1367.4  9360.0  1367.3  9370.0  1367.3  9380.0
GR1367.3  9390.0  1367.4  9400.0  1367.3  9410.0  1367.2  9420.0  1367.2  9430.0
GR1367.2  9440.0  1367.1  9450.0  1366.9  9460.0  1366.8  9470.0  1366.8  9480.0
GR1366.5  9490.0  1366.0  9500.0  1365.9  9510.0  1365.8  9520.0  1365.9  9530.0
GR1366.0  9540.0  1366.0  9550.0  1366.0  9560.0  1366.0  9570.0  1366.0  9580.0
GR1366.0  9590.0  1366.0  9600.0  1365.9  9610.0  1365.4  9620.0  1364.9  9630.0
GR1364.8  9640.0  1364.7  9650.0  1364.5  9660.0  1364.3  9670.0  1364.1  9680.0
GR1363.9  9690.0  1363.7  9700.0  1363.4  9710.0  1363.4  9720.0  1363.3  9730.0
GR1363.0  9740.0  1362.9  9750.0  1362.6  9760.0  1362.4  9770.0  1362.1  9780.0
GR1361.7  9790.0  1361.3  9800.0  1361.1  9810.0  1361.0  9820.0  1361.0  9830.0
GR1360.9  9840.0  1360.7  9850.0  1360.5  9860.0  1360.2  9870.0  1360.0  9880.0
GR1360.0  9890.0  1360.0  9900.0  1360.0  9910.0  1360.0  9920.0  1360.0  9930.0
QT      1    5000
X1   3.00      90     9140    9480     540     460     500
CI   9310
X3                            9050             9480
```

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GR1374.0   9050.0   1374.0   9060.0   1374.0   9070.0   1373.9   9080.0   1373.7   9090.0
GR1373.6   9100.0   1373.4   9110.0   1373.2   9120.0   1373.0   9130.0   1372.8   9140.0
GR1372.5   9150.0   1372.3   9160.0   1372.1   9170.0   1371.9   9180.0   1371.7   9190.0
GR1371.5   9200.0   1371.3   9210.0   1371.2   9220.0   1371.0   9230.0   1370.8   9240.0
GR1370.6   9250.0   1370.4   9260.0   1370.2   9270.0   1370.0   9280.0   1369.8   9290.0
GR1369.5   9300.0   1369.2   9310.0   1368.8   9320.0   1368.5   9330.0   1368.2   9340.0
GR1368.0   9350.0   1367.9   9360.0   1367.7   9370.0   1367.5   9380.0   1367.2   9390.0
GR1367.1   9400.0   1366.8   9410.0   1366.6   9420.0   1366.4   9430.0   1366.2   9440.0
GR1366.0   9450.0   1366.0   9460.0   1365.9   9470.0   1365.5   9480.0   1365.2   9490.0
GR1364.8   9500.0   1364.4   9510.0   1364.1   9520.0   1364.0   9530.0   1364.0   9540.0
GR1364.0   9550.0   1364.0   9560.0   1364.0   9570.0   1364.0   9580.0   1364.0   9590.0
GR1364.0   9600.0   1364.0   9610.0   1363.9   9620.0   1363.7   9630.0   1363.5   9640.0
GR1363.3   9650.0   1363.1   9660.0   1362.9   9670.0   1362.7   9680.0   1362.5   9690.0
GR1362.3   9700.0   1362.1   9710.0   1362.0   9720.0   1362.0   9730.0   1361.6   9740.0
GR1361.3   9750.0   1360.9   9760.0   1360.6   9770.0   1360.3   9780.0   1360.0   9790.0
GR1360.0   9800.0   1359.9   9810.0   1359.7   9820.0   1359.6   9830.0   1359.4   9840.0
GR1359.3   9850.0   1359.1   9860.0   1359.0   9870.0   1358.8   9880.0   1358.7   9890.0
GR1358.5   9900.0   1358.3   9910.0   1358.2   9920.0   1358.0   9930.0   1358.0   9940.0
X1   3.50      90     9170     9490      530      440      500
CI   9330
X3                             9170              9490
GR1370.2   9150.0   1370.6   9160.0   1371.1   9170.0   1371.2   9180.0   1371.1   9190.0
GR1371.0   9200.0   1370.7   9210.0   1370.4   9220.0   1370.0   9230.0   1369.8   9240.0
GR1369.5   9250.0   1369.2   9260.0   1369.2   9270.0   1369.1   9280.0   1369.0   9290.0
GR1369.0   9300.0   1368.9   9310.0   1368.8   9320.0   1368.8   9330.0   1368.7   9340.0
GR1368.7   9350.0   1368.6   9360.0   1368.4   9370.0   1368.2   9380.0   1368.1   9390.0
GR1368.0   9400.0   1368.0   9410.0   1368.0   9420.0   1368.0   9430.0   1367.9   9440.0
GR1367.8   9450.0   1367.6   9460.0   1367.4   9470.0   1367.2   9480.0   1367.0   9490.0
GR1366.8   9500.0   1366.6   9510.0   1366.4   9520.0   1366.1   9530.0   1365.9   9540.0
GR1365.7   9550.0   1365.6   9560.0   1365.4   9570.0   1365.2   9580.0   1365.0   9590.0
GR1364.8   9600.0   1364.6   9610.0   1364.4   9620.0   1364.3   9630.0   1364.1   9640.0
GR1363.9   9650.0   1363.6   9660.0   1363.4   9670.0   1363.2   9680.0   1362.9   9690.0
GR1362.7   9700.0   1362.4   9710.0   1362.1   9720.0   1361.9   9730.0   1361.6   9740.0
GR1361.2   9750.0   1360.9   9760.0   1360.5   9770.0   1360.2   9780.0   1360.0   9790.0
GR1359.8   9800.0   1359.1   9810.0   1358.4   9820.0   1358.0   9830.0   1358.0   9840.0
GR1358.0   9850.0   1358.0   9860.0   1358.0   9870.0   1358.0   9880.0   1358.2   9890.0
GR1359.1   9900.0   1359.9   9910.0   1360.0   9920.0   1359.8   9930.0   1359.3   9940.0
GR1358.7   9950.0   1358.0   9960.0   1357.5   9970.0   1357.2   9980.0   1357.0   9990.0
GR1356.7  10000.0   1357.0  10010.0   1357.7  10020.0   1358.0  10030.0   1358.0  10040.0
QT      1    4500
X1   4.00      90     9390     9820      600      280      500
CI   9650
X3                             9090              9820
GR1425.1   9090.0   1424.6   9100.0   1424.1   9110.0   1423.0   9120.0   1422.7   9130.0
GR1422.7   9140.0   1422.4   9150.0   1421.3   9160.0   1419.7   9170.0   1418.7   9180.0
GR1418.8   9190.0   1418.9   9200.0   1419.0   9210.0   1418.7   9220.0   1418.7   9230.0
GR1418.9   9240.0   1419.2   9250.0   1419.4   9260.0   1419.6   9270.0   1419.9   9280.0
GR1420.1   9290.0   1420.5   9300.0   1420.0   9310.0   1420.0   9320.0   1420.0   9330.0
GR1420.0   9340.0   1420.0   9350.0   1420.0   9360.0   1420.0   9370.0   1420.0   9380.0
GR1420.0   9390.0   1420.0   9400.0   1420.0   9410.0   1420.0   9420.0   1420.0   9430.0
GR1419.1   9440.0   1417.9   9450.0   1415.0   9460.0   1411.9   9470.0   1407.3   9480.0
GR1401.3   9490.0   1397.6   9500.0   1394.5   9510.0   1392.3   9520.0   1390.2   9530.0
GR1387.8   9540.0   1385.3   9550.0   1382.8   9560.0   1379.7   9570.0   1377.9   9580.0
GR1376.5   9590.0   1375.0   9600.0   1374.0   9610.0   1374.0   9620.0   1372.3   9630.0
GR1369.7   9640.0   1368.4   9650.0   1367.0   9660.0   1365.6   9670.0   1364.5   9680.0
GR1363.6   9690.0   1363.0   9700.0   1362.3   9710.0   1361.7   9720.0   1361.0   9730.0
GR1360.3   9740.0   1359.8   9750.0   1359.6   9760.0   1359.3   9770.0   1359.0   9780.0
GR1358.7   9790.0   1358.5   9800.0   1358.2   9810.0   1358.0   9820.0   1358.0   9830.0
GR1357.5   9840.0   1357.0   9850.0   1356.5   9860.0   1356.0   9870.0   1356.0   9880.0
GR1356.0   9890.0   1355.5   9900.0   1355.0   9910.0   1354.5   9920.0   1354.0   9930.0
GR1353.6   9940.0   1353.0   9950.0   1352.4   9960.0   1352.0   9970.0   1351.9   9980.0
X1   4.50      90   9026.1   9476.1      390      590      500
CI   9300
X3                           9026.1            9476.1
GR1425.1   9026.1   1424.9   9036.1   1424.4   9046.1   1424.0   9056.1   1423.3   9066.1
GR1422.5   9076.1   1421.8   9086.1   1421.0   9096.1   1420.3   9106.1   1419.4   9116.1
GR1418.1   9126.1   1416.4   9136.1   1414.7   9146.1   1413.0   9156.1   1411.3   9166.1
GR1409.7   9176.1   1408.0   9186.1   1405.8   9196.1   1403.6   9206.1   1401.3   9216.1
GR1399.5   9226.1   1398.3   9236.1   1397.1   9246.1   1395.8   9256.1   1394.3   9266.1
GR1392.8   9276.1   1391.2   9286.1   1389.5   9296.1   1387.7   9306.1   1386.1   9316.1
GR1384.4   9326.1   1382.5   9336.1   1380.6   9346.1   1379.2   9356.1   1377.9   9366.1
GR1377.1   9376.1   1376.3   9386.1   1375.2   9396.1   1374.2   9406.1   1374.0   9416.1
GR1374.0   9426.1   1373.1   9436.1   1371.5   9446.1   1370.0   9456.1   1369.6   9466.1
GR1369.2   9476.1   1368.9   9486.1   1368.5   9496.1   1368.1   9506.1   1367.7   9516.1
GR1367.3   9526.1   1367.0   9536.1   1366.6   9546.1   1366.2   9556.1   1366.0   9566.1
GR1366.0   9576.1   1366.0   9586.1   1366.0   9596.1   1366.0   9606.1   1365.4   9616.1
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GR1365.1  9626.1  1365.0  9636.1  1364.8  9646.1  1365.0  9656.1  1365.0  9666.1
GR1364.4  9676.1  1364.0  9686.1  1364.0  9696.1  1364.0  9706.1  1364.0  9716.1
GR1364.0  9726.1  1363.9  9736.1  1363.7  9746.1  1363.5  9756.1  1363.3  9766.1
GR1363.2  9776.1  1363.0  9786.1  1362.2  9796.1  1362.0  9806.1  1362.0  9816.1
GR1362.0  9826.1  1361.8  9836.1  1361.7  9846.1  1361.7  9856.1  1361.1  9866.1
GR1360.6  9876.1  1360.0  9886.1  1360.0  9896.1  1360.0  9906.1  1360.0  9916.1
QT     1    4000
X1   5.0      90  9150.6  9440.6     570     320     500
CI                                           200
X3                        9030.6          9440.6
GR1380.0  9030.6  1380.0  9040.6  1380.0  9050.6  1380.0  9060.6  1380.0  9070.6
GR1379.6  9080.6  1379.1  9090.6  1378.5  9100.6  1378.3  9110.6  1378.0  9120.6
GR1378.0  9130.6  1377.9  9140.6  1377.7  9150.6  1377.5  9160.6  1377.3  9170.6
GR1377.3  9180.6  1377.3  9190.6  1377.1  9200.6  1376.8  9210.6  1376.6  9220.6
GR1376.3  9230.6  1376.1  9240.6  1376.0  9250.6  1376.0  9260.6  1375.9  9270.6
GR1375.5  9280.6  1375.1  9290.6  1374.7  9300.6  1374.3  9310.6  1374.0  9320.6
GR1373.7  9330.6  1373.4  9340.6  1373.1  9350.6  1372.8  9360.6  1372.5  9370.6
GR1372.2  9380.6  1371.9  9390.6  1371.4  9400.6  1370.9  9410.6  1370.4  9420.6
GR1370.0  9430.6  1370.0  9440.6  1370.0  9450.6  1369.9  9460.6  1369.1  9470.6
GR1368.2  9480.6  1368.0  9490.6  1368.0  9500.6  1367.7  9510.6  1367.2  9520.6
GR1366.8  9530.6  1366.8  9540.6  1367.1  9550.6  1367.5  9560.6  1367.6  9570.6
GR1367.8  9580.6  1367.9  9590.6  1368.0  9600.6  1368.1  9610.6  1367.9  9620.6
GR1367.6  9630.6  1367.3  9640.6  1367.2  9650.6  1367.1  9660.6  1366.8  9670.6
GR1366.6  9680.6  1366.5  9690.6  1366.3  9700.6  1366.2  9710.6  1366.0  9720.6
GR1365.4  9730.6  1364.4  9740.6  1363.4  9750.6  1362.8  9760.6  1362.5  9770.6
GR1362.6  9780.6  1362.6  9790.6  1362.6  9800.6  1362.8  9810.6  1363.0  9820.6
GR1363.2  9830.6  1363.3  9840.6  1363.4  9850.6  1363.2  9860.6  1363.0  9870.6
GR1362.9  9880.6  1363.0  9890.6  1363.0  9900.6  1362.9  9910.6  1362.8  9920.6
X1  5.50      90    9140    9460     500     500     500
CI
X3                          9050            9460
GR1378.0  9050.0  1377.5  9060.0  1377.0  9070.0  1376.5  9080.0  1376.2  9090.0
GR1376.0  9100.0  1376.0  9110.0  1376.0  9120.0  1376.0  9130.0  1375.4  9140.0
GR1374.8  9150.0  1374.3  9160.0  1374.0  9170.0  1374.0  9180.0  1373.7  9190.0
GR1373.3  9200.0  1372.8  9210.0  1372.6  9220.0  1372.0  9230.0  1372.0  9240.0
GR1372.0  9250.0  1372.0  9260.0  1371.9  9270.0  1371.5  9280.0  1371.1  9290.0
GR1370.7  9300.0  1370.4  9310.0  1370.3  9320.0  1370.2  9330.0  1370.1  9340.0
GR1370.0  9350.0  1369.7  9360.0  1369.0  9370.0  1368.4  9380.0  1368.0  9390.0
GR1368.0  9400.0  1368.0  9410.0  1368.0  9420.0  1368.3  9430.0  1368.8  9440.0
GR1369.3  9450.0  1369.9  9460.0  1370.0  9470.0  1370.0  9480.0  1370.0  9490.0
GR1369.9  9500.0  1369.6  9510.0  1369.4  9520.0  1369.1  9530.0  1368.9  9540.0
GR1368.6  9550.0  1368.4  9560.0  1368.1  9570.0  1367.9  9580.0  1367.6  9590.0
GR1367.3  9600.0  1367.1  9610.0  1366.8  9620.0  1366.5  9630.0  1366.2  9640.0
GR1366.0  9650.0  1365.9  9660.0  1365.7  9670.0  1365.4  9680.0  1365.2  9690.0
GR1365.0  9700.0  1364.8  9710.0  1364.6  9720.0  1364.4  9730.0  1364.2  9740.0
GR1364.0  9750.0  1364.0  9760.0  1364.0  9770.0  1363.8  9780.0  1363.4  9790.0
GR1362.9  9800.0  1362.5  9810.0  1362.1  9820.0  1362.0  9830.0  1362.0  9840.0
GR1362.0  9850.0  1361.8  9860.0  1361.6  9870.0  1361.4  9880.0  1361.2  9890.0
GR1361.1  9900.0  1360.9  9910.0  1360.8  9920.0  1360.6  9930.0  1360.4  9940.0
QT     1    2000
X1  6.00      90  9159.8  9429.8     500     500     500
CI                                           180
X3                        9049.8          9429.8
GR1381.1  9049.8  1380.9  9059.8  1380.7  9069.8  1380.5  9079.8  1380.1  9089.8
GR1380.0  9099.8  1380.0  9109.8  1380.0  9119.8  1380.0  9129.8  1379.6  9139.8
GR1379.2  9149.8  1378.8  9159.8  1378.4  9169.8  1378.0  9179.8  1378.0  9189.8
GR1378.0  9199.8  1378.0  9209.8  1378.0  9219.8  1378.0  9229.8  1378.0  9239.8
GR1377.9  9249.8  1377.3  9259.8  1376.6  9269.8  1376.0  9279.8  1376.0  9289.8
GR1376.0  9299.8  1376.0  9309.8  1376.0  9319.8  1376.0  9329.8  1375.9  9339.8
GR1375.6  9349.8  1375.4  9359.8  1375.2  9369.8  1375.0  9379.8  1374.7  9389.8
GR1374.4  9399.8  1374.1  9409.8  1373.4  9419.8  1372.9  9429.8  1372.5  9439.8
GR1372.0  9449.8  1371.7  9459.8  1371.5  9469.8  1371.2  9479.8  1370.9  9489.8
GR1370.6  9499.8  1370.4  9509.8  1370.1  9519.8  1369.8  9529.8  1369.5  9539.8
GR1369.4  9549.8  1369.2  9559.8  1369.1  9569.8  1369.0  9579.8  1368.8  9589.8
GR1368.6  9599.8  1368.4  9609.8  1368.2  9619.8  1368.0  9629.8  1368.0  9639.8
GR1368.0  9649.8  1367.6  9659.8  1367.2  9669.8  1366.8  9679.8  1366.3  9689.8
GR1365.8  9699.8  1365.3  9709.8  1364.8  9719.8  1364.3  9729.8  1363.6  9739.8
GR1362.9  9749.8  1362.0  9759.8  1360.6  9769.8  1360.0  9779.8  1360.0  9789.8
GR1359.3  9799.8  1358.5  9809.8  1358.0  9819.8  1358.1  9829.8  1358.3  9839.8
GR1358.6  9849.8  1358.8  9859.8  1359.1  9869.8  1359.3  9879.8  1359.5  9889.8
GR1359.7  9899.8  1359.9  9909.8  1359.8  9919.8  1359.5  9929.8  1358.5  9939.8
X1  6.50      90  9181.8  9421.8     500     500     500
CI                                           150
X3                        9051.8          9421.8
GR1382.0  9051.8  1382.0  9061.8  1382.0  9071.8  1381.7  9081.8  1381.4  9091.8
GR1381.0  9101.8  1380.7  9111.8  1380.4  9121.8  1380.1  9131.8  1380.0  9141.8
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GR1380.0  9151.8  1380.0  9161.8  1379.9  9171.8  1379.7  9181.8  1379.5  9191.8
GR1379.3  9201.8  1379.0  9211.8  1378.8  9221.8  1378.5  9231.8  1378.3  9241.8
GR1378.0  9251.8  1377.3  9261.8  1376.7  9271.8  1376.1  9281.8  1376.0  9291.8
GR1376.0  9301.8  1376.0  9311.8  1375.7  9321.8  1375.5  9331.8  1375.2  9341.8
GR1375.0  9351.8  1374.7  9361.8  1374.5  9371.8  1374.3  9381.8  1374.0  9391.8
GR1374.0  9401.8  1373.9  9411.8  1373.5  9421.8  1373.1  9431.8  1372.8  9441.8
GR1372.4  9451.8  1372.1  9461.8  1372.0  9471.8  1371.9  9481.8  1371.5  9491.8
GR1371.2  9501.8  1370.8  9511.8  1370.5  9521.8  1370.1  9531.8  1369.8  9541.8
GR1369.3  9551.8  1368.8  9561.8  1368.4  9571.8  1368.0  9581.8  1368.0  9591.8
GR1368.0  9601.8  1367.8  9611.8  1367.5  9621.8  1367.2  9631.8  1366.9  9641.8
GR1366.6  9651.8  1366.3  9661.8  1366.0  9671.8  1366.0  9681.8  1366.0  9691.8
GR1366.0  9701.8  1366.0  9711.8  1365.9  9721.8  1365.7  9731.8  1365.5  9741.8
GR1365.3  9751.8  1365.0  9761.8  1364.8  9771.8  1364.6  9781.8  1364.3  9791.8
GR1364.1  9801.8  1364.0  9811.8  1364.0  9821.8  1363.8  9831.8  1363.5  9841.8
GR1363.2  9851.8  1363.0  9861.8  1362.8  9871.8  1362.6  9881.8  1362.3  9891.8
GR1362.0  9901.8  1362.0  9911.8  1362.0  9921.8  1362.0  9931.8  1362.0  9941.8
X1  7.00      90  9186.8  9416.8     430     570     500
CI
X3                        9046.8          9416.8
GR1383.9  9046.8  1383.7  9056.8  1383.5  9066.8  1383.0  9076.8  1382.2  9086.8
GR1382.0  9096.8  1382.0  9106.8  1382.0  9116.8  1382.0  9126.8  1382.0  9136.8
GR1382.0  9146.8  1381.7  9156.8  1381.2  9166.8  1380.8  9176.8  1380.3  9186.8
GR1379.6  9196.8  1378.8  9206.8  1378.3  9216.8  1377.6  9226.8  1376.5  9236.8
GR1376.0  9246.8  1376.0  9256.8  1376.0  9266.8  1376.0  9276.8  1376.0  9286.8
GR1375.3  9296.8  1374.6  9306.8  1374.6  9316.8  1374.6  9326.8  1374.4  9336.8
GR1374.5  9346.8  1374.3  9356.8  1374.1  9366.8  1374.0  9376.8  1374.0  9386.8
GR1374.0  9396.8  1374.0  9406.8  1373.7  9416.8  1373.4  9426.8  1373.0  9436.8
GR1372.6  9446.8  1372.3  9456.8  1372.0  9466.8  1372.0  9476.8  1371.9  9486.8
GR1371.5  9496.8  1371.1  9506.8  1370.6  9516.8  1370.2  9526.8  1369.8  9536.8
GR1369.3  9546.8  1369.0  9556.8  1368.7  9566.8  1368.4  9576.8  1368.1  9586.8
GR1367.2  9596.8  1366.1  9606.8  1366.0  9616.8  1366.0  9626.8  1366.0  9636.8
GR1366.0  9646.8  1366.1  9656.8  1366.5  9666.8  1367.0  9676.8  1367.0  9686.8
GR1367.1  9696.8  1367.3  9706.8  1367.1  9716.8  1366.9  9726.8  1366.6  9736.8
GR1366.4  9746.8  1366.2  9756.8  1366.0  9766.8  1365.8  9776.8  1365.7  9786.8
GR1365.6  9796.8  1365.5  9806.8  1365.4  9816.8  1365.2  9826.8  1365.1  9836.8
GR1364.8  9846.8  1364.4  9856.8  1364.0  9866.8  1363.7  9876.8  1363.3  9886.8
GR1363.2  9896.8  1363.0  9906.8  1362.8  9916.8  1362.6  9926.8  1362.4  9936.8
X1  7.50      90  9187.3  9417.8     480     520     500
CI
X3                        9047.3          9417.8
GR1386.0  9047.3  1385.8  9057.3  1385.4  9067.3  1385.0  9077.3  1384.7  9087.3
GR1384.4  9097.3  1384.1  9107.3  1384.0  9117.3  1384.0  9127.3  1383.8  9137.3
GR1383.0  9147.3  1382.4  9157.3  1382.0  9167.3  1382.0  9177.3  1381.7  9187.3
GR1381.3  9197.3  1380.9  9207.3  1380.7  9217.3  1380.4  9227.3  1380.2  9237.3
GR1380.0  9247.3  1380.0  9257.3  1380.0  9267.3  1380.0  9277.3  1379.4  9287.3
GR1378.9  9297.3  1378.1  9307.3  1378.0  9317.3  1378.0  9327.3  1378.0  9337.3
GR1378.0  9347.3  1378.0  9357.3  1377.7  9367.3  1377.2  9377.3  1376.8  9387.3
GR1376.4  9397.3  1376.1  9407.3  1376.0  9417.3  1375.9  9427.3  1375.8  9437.3
GR1375.7  9447.3  1375.6  9457.3  1375.4  9467.3  1375.2  9477.3  1375.1  9487.3
GR1375.0  9497.3  1374.6  9507.3  1374.3  9517.3  1374.0  9527.3  1373.8  9537.3
GR1373.4  9547.3  1373.1  9557.3  1372.8  9567.3  1372.5  9577.3  1372.2  9587.3
GR1372.0  9597.3  1371.7  9607.3  1371.4  9617.3  1371.3  9627.3  1371.2  9637.3
GR1371.0  9647.3  1370.7  9657.3  1370.5  9667.3  1370.3  9677.3  1370.0  9687.3
GR1370.0  9697.3  1369.8  9707.3  1369.5  9717.3  1369.3  9727.3  1369.1  9737.3
GR1368.9  9747.3  1368.7  9757.3  1368.4  9767.3  1368.2  9777.3  1368.0  9787.3
GR1367.6  9797.3  1367.2  9807.3  1366.7  9817.3  1366.3  9827.3  1365.9  9837.3
GR1365.7  9847.3  1365.4  9857.3  1365.1  9867.3  1364.8  9877.3  1364.5  9887.3
GR1364.3  9897.3  1364.0  9907.3  1363.8  9917.3  1363.5  9927.3  1363.3  9937.3
QT     1    1500
X1  8.00      90  9191.3  9411.3     520     480     500
CI                                           120
X3                        9051.3          9411.3
GR1390.4  9051.3  1390.2  9061.3  1390.0  9071.3  1389.6  9081.3  1389.1  9091.3
GR1388.6  9101.3  1388.2  9111.3  1388.0  9121.3  1387.6  9131.3  1387.3  9141.3
GR1386.9  9151.3  1386.5  9161.3  1386.1  9171.3  1385.7  9181.3  1385.3  9191.3
GR1384.9  9201.3  1384.6  9211.3  1384.4  9221.3  1384.1  9231.3  1384.0  9241.3
GR1384.0  9251.3  1383.9  9261.3  1383.8  9271.3  1383.7  9281.3  1383.6  9291.3
GR1383.5  9301.3  1383.1  9311.3  1382.8  9321.3  1382.4  9331.3  1382.1  9341.3
GR1382.0  9351.3  1382.0  9361.3  1381.9  9371.3  1381.4  9381.3  1380.9  9391.3
GR1380.5  9401.3  1380.0  9411.3  1380.0  9421.3  1380.0  9431.3  1380.0  9441.3
GR1379.7  9451.3  1379.4  9461.3  1379.0  9471.3  1378.6  9481.3  1378.3  9491.3
GR1378.0  9501.3  1378.0  9511.3  1377.5  9521.3  1377.0  9531.3  1376.5  9541.3
GR1376.2  9551.3  1376.0  9561.3  1376.0  9571.3  1376.0  9581.3  1375.6  9591.3
GR1375.1  9601.3  1374.5  9611.3  1374.1  9621.3  1374.0  9631.3  1374.0  9641.3
GR1373.6  9651.3  1373.2  9661.3  1372.9  9671.3  1372.5  9681.3  1372.1  9691.3
GR1371.9  9701.3  1371.7  9711.3  1371.5  9721.3  1371.4  9731.3  1371.1  9741.3
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GR1370.8  9751.3  1370.5  9761.3  1370.3  9771.3  1370.0  9781.3  1370.0  9791.3
GR1370.0  9801.3  1370.0  9811.3  1369.8  9821.3  1369.6  9831.3  1369.4  9841.3
GR1369.3  9851.3  1369.2  9861.3  1368.9  9871.3  1368.6  9881.3  1368.3  9891.3
GR1368.1  9901.3  1367.6  9911.3  1367.1  9921.3  1366.6  9931.3  1366.0  9941.3
QT     1    1200
X1  8.50      90    9200    9400     500     520     500
CI                                     100
X3                          9080            9400
GR1386.0  9070.0  1386.0  9080.0  1384.9  9090.0  1383.8  9100.0  1383.5  9110.0
GR1383.3  9120.0  1383.1  9130.0  1383.2  9140.0  1383.2  9150.0  1383.3  9160.0
GR1383.4  9170.0  1383.5  9180.0  1383.6  9190.0  1383.6  9200.0  1383.6  9210.0
GR1383.7  9220.0  1383.6  9230.0  1383.6  9240.0  1383.5  9250.0  1383.4  9260.0
GR1383.4  9270.0  1383.4  9280.0  1383.4  9290.0  1383.4  9300.0  1383.3  9310.0
GR1383.2  9320.0  1383.0  9330.0  1382.5  9340.0  1382.1  9350.0  1381.8  9360.0
GR1381.4  9370.0  1381.1  9380.0  1380.8  9390.0  1380.3  9400.0  1380.0  9410.0
GR1379.8  9420.0  1379.5  9430.0  1379.1  9440.0  1378.7  9450.0  1378.4  9460.0
GR1378.1  9470.0  1377.9  9480.0  1377.6  9490.0  1377.3  9500.0  1377.0  9510.0
GR1376.8  9520.0  1376.7  9530.0  1376.6  9540.0  1376.5  9550.0  1376.3  9560.0
GR1376.1  9570.0  1375.6  9580.0  1374.9  9590.0  1374.3  9600.0  1374.0  9610.0
GR1374.0  9620.0  1373.8  9630.0  1373.4  9640.0  1373.1  9650.0  1372.8  9660.0
GR1372.7  9670.0  1372.5  9680.0  1372.4  9690.0  1372.3  9700.0  1372.4  9710.0
GR1372.3  9720.0  1372.0  9730.0  1372.0  9740.0  1372.0  9750.0  1372.0  9760.0
GR1372.0  9770.0  1372.0  9780.0  1372.0  9790.0  1372.0  9800.0  1371.4  9810.0
GR1371.1  9820.0  1370.7  9830.0  1370.3  9840.0  1370.0  9850.0  1369.2  9860.0
GR1368.9  9870.0  1368.6  9880.0  1368.2  9890.0  1367.9  9900.0  1367.3  9910.0
GR1366.6  9920.0  1365.9  9930.0  1365.4  9940.0  1364.8  9950.0  1364.3  9960.0
QT     1    1000
X1  9.00      90  9218.1  9378.1     500     500     500
CI                                      80
X3                        9048.1          9378.1
GR1391.0  9048.1  1390.7  9058.1  1390.5  9068.1  1390.2  9078.1  1390.0  9088.1
GR1389.8  9098.1  1389.3  9108.1  1388.9  9118.1  1388.4  9128.1  1388.0  9138.1
GR1388.0  9148.1  1388.0  9158.1  1387.9  9168.1  1387.7  9178.1  1387.4  9188.1
GR1387.2  9198.1  1386.9  9208.1  1386.7  9218.1  1386.5  9228.1  1386.2  9238.1
GR1386.0  9248.1  1385.7  9258.1  1385.4  9268.1  1385.1  9278.1  1384.8  9288.1
GR1384.5  9298.1  1384.2  9308.1  1384.0  9318.1  1383.7  9328.1  1383.4  9338.1
GR1383.1  9348.1  1382.8  9358.1  1382.4  9368.1  1382.1  9378.1  1381.8  9388.1
GR1381.4  9398.1  1381.1  9408.1  1380.8  9418.1  1380.4  9428.1  1380.1  9438.1
GR1379.6  9448.1  1379.2  9458.1  1378.7  9468.1  1378.2  9478.1  1377.9  9488.1
GR1377.6  9498.1  1377.2  9508.1  1376.9  9518.1  1376.7  9528.1  1376.4  9538.1
GR1376.1  9548.1  1375.8  9558.1  1375.5  9568.1  1375.2  9578.1  1375.0  9588.1
GR1374.7  9598.1  1374.5  9608.1  1374.3  9618.1  1374.1  9628.1  1374.0  9638.1
GR1373.5  9648.1  1373.4  9658.1  1372.6  9668.1  1372.2  9678.1  1372.0  9688.1
GR1371.6  9698.1  1371.3  9708.1  1370.8  9718.1  1370.4  9728.1  1370.0  9738.1
GR1370.0  9748.1  1370.0  9758.1  1370.0  9768.1  1370.0  9778.1  1370.0  9788.1
GR1370.0  9798.1  1369.9  9808.1  1369.8  9818.1  1369.4  9828.1  1369.2  9838.1
GR1369.0  9848.1  1368.6  9858.1  1368.2  9868.1  1368.0  9878.1  1367.8  9888.1
GR1367.0  9898.1  1366.3  9908.1  1365.9  9918.1  1365.6  9928.1  1365.3  9938.1
X1  9.50      90    9215    9385     480     520     500
CI
X3                          9045            9385
GR1390.0  9045.0  1389.7  9055.0  1389.3  9065.0  1388.9  9075.0  1388.5  9085.0
GR1388.1  9095.0  1388.0  9105.0  1387.5  9115.0  1386.6  9125.0  1386.0  9135.0
GR1385.7  9145.0  1385.1  9155.0  1384.6  9165.0  1384.1  9175.0  1384.0  9185.0
GR1384.0  9195.0  1384.0  9205.0  1383.4  9215.0  1383.2  9225.0  1383.1  9235.0
GR1382.9  9245.0  1382.3  9255.0  1381.8  9265.0  1381.3  9275.0  1381.2  9285.0
GR1380.9  9295.0  1380.5  9305.0  1380.1  9315.0  1379.6  9325.0  1379.3  9335.0
GR1378.7  9345.0  1378.1  9355.0  1377.8  9365.0  1377.4  9375.0  1376.4  9385.0
GR1376.1  9395.0  1376.0  9405.0  1375.5  9415.0  1374.9  9425.0  1374.0  9435.0
GR1374.0  9445.0  1374.0  9455.0  1374.0  9465.0  1374.0  9475.0  1374.2  9485.0
GR1374.7  9495.0  1375.1  9505.0  1375.5  9515.0  1375.8  9525.0  1375.5  9535.0
GR1375.4  9545.0  1375.1  9555.0  1374.8  9565.0  1374.5  9575.0  1374.1  9585.0
GR1374.0  9595.0  1373.7  9605.0  1373.3  9615.0  1372.9  9625.0  1372.5  9635.0
GR1372.1  9645.0  1372.0  9655.0  1372.0  9665.0  1372.0  9675.0  1371.6  9685.0
GR1370.7  9695.0  1370.0  9705.0  1370.0  9715.0  1370.0  9725.0  1370.0  9735.0
GR1370.0  9745.0  1370.0  9755.0  1370.0  9765.0  1370.0  9775.0  1370.0  9785.0
GR1369.7  9795.0  1369.3  9805.0  1369.0  9815.0  1368.8  9825.0  1368.5  9835.0
GR1368.2  9845.0  1368.0  9855.0  1367.8  9865.0  1367.5  9875.0  1367.2  9885.0
GR1367.0  9895.0  1366.6  9905.0  1366.3  9915.0  1366.0  9925.0  1365.5  9935.0
X1 10.00      90    9210    9390     430     580     500
CI
X3                          9050            9390
GR1386.0  9040.0  1386.0  9050.0  1385.9  9060.0  1386.0  9070.0  1385.9  9080.0
GR1385.8  9090.0  1385.5  9100.0  1385.2  9110.0  1385.1  9120.0  1384.9  9130.0
GR1384.6  9140.0  1384.3  9150.0  1384.1  9160.0  1384.0  9170.0  1384.0  9180.0
GR1384.0  9190.0  1384.0  9200.0  1383.8  9210.0  1383.6  9220.0  1383.5  9230.0
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GR1383.7  9240.0  1383.9  9250.0  1384.1  9260.0  1384.2  9270.0  1384.0  9280.0
GR1383.8  9290.0  1383.7  9300.0  1383.4  9310.0  1383.2  9320.0  1382.8  9330.0
GR1382.4  9340.0  1382.1  9350.0  1382.0  9360.0  1381.8  9370.0  1381.6  9380.0
GR1381.0  9390.0  1380.0  9400.0  1380.0  9410.0  1380.0  9420.0  1379.7  9430.0
GR1379.3  9440.0  1379.0  9450.0  1378.7  9460.0  1378.4  9470.0  1378.0  9480.0
GR1377.8  9490.0  1377.2  9500.0  1376.6  9510.0  1376.0  9520.0  1376.0  9530.0
GR1375.8  9540.0  1375.7  9550.0  1376.0  9560.0  1376.1  9570.0  1375.8  9580.0
GR1375.6  9590.0  1375.5  9600.0  1375.4  9610.0  1375.2  9620.0  1375.1  9630.0
GR1374.9  9640.0  1374.7  9650.0  1374.5  9660.0  1374.2  9670.0  1373.9  9680.0
GR1373.6  9690.0  1373.3  9700.0  1373.0  9710.0  1372.7  9720.0  1372.4  9730.0
GR1372.0  9740.0  1371.7  9750.0  1371.3  9760.0  1370.9  9770.0  1370.6  9780.0
GR1370.2  9790.0  1369.7  9800.0  1369.2  9810.0  1368.7  9820.0  1368.2  9830.0
GR1367.8  9840.0  1367.5  9850.0  1367.1  9860.0  1366.8  9870.0  1366.5  9880.0
GR1366.2  9890.0  1365.8  9900.0  1365.4  9910.0  1364.9  9920.0  1364.4  9930.0
QT     1     800
X1 10.50      90  9217.8  9377.8     490     530     500
CI                                            70
X3                        9047.8          9377.8
GR1393.8  9047.8  1393.4  9057.8  1393.0  9067.8  1392.6  9077.8  1392.2  9087.8
GR1392.0  9097.8  1391.4  9107.8  1391.0  9117.8  1390.6  9127.8  1390.0  9137.8
GR1390.0  9147.8  1390.0  9157.8  1390.0  9167.8  1390.0  9177.8  1389.9  9187.8
GR1389.2  9197.8  1388.3  9207.8  1388.0  9217.8  1387.1  9227.8  1386.4  9237.8
GR1385.4  9247.8  1383.9  9257.8  1383.1  9267.8  1382.5  9277.8  1381.5  9287.8
GR1380.0  9297.8  1380.0  9307.8  1380.0  9317.8  1380.0  9327.8  1380.0  9337.8
GR1380.0  9347.8  1380.0  9357.8  1378.7  9367.8  1378.0  9377.8  1378.0  9387.8
GR1378.0  9397.8  1378.0  9407.8  1378.0  9417.8  1378.0  9427.8  1376.8  9437.8
GR1376.6  9447.8  1376.4  9457.8  1376.3  9467.8  1376.2  9477.8  1376.2  9487.8
GR1376.2  9497.8  1376.0  9507.8  1376.0  9517.8  1376.0  9527.8  1376.0  9537.8
GR1376.0  9547.8  1375.5  9557.8  1375.5  9567.8  1375.6  9577.8  1375.7  9587.8
GR1375.7  9597.8  1375.4  9607.8  1375.3  9617.8  1375.2  9627.8  1375.1  9637.8
GR1375.2  9647.8  1374.9  9657.8  1374.7  9667.8  1374.2  9677.8  1374.0  9687.8
GR1373.8  9697.8  1373.5  9707.8  1373.2  9717.8  1372.7  9727.8  1372.2  9737.8
GR1372.1  9747.8  1372.0  9757.8  1372.0  9767.8  1372.0  9777.8  1372.0  9787.8
GR1371.6  9797.8  1371.0  9807.8  1370.8  9817.8  1370.6  9827.8  1370.4  9837.8
GR1370.2  9847.8  1369.8  9857.8  1369.4  9867.8  1369.0  9877.8  1368.7  9887.8
GR1368.4  9897.8  1368.1  9907.8  1368.0  9917.8  1367.7  9927.8  1367.4  9937.8
QT     1     400
X1 11.00      90  9219.6  9379.6     490     510     500
CI                                            60
X3                        9059.6          9379.6
GR1394.0  9049.6  1394.0  9059.6  1394.0  9069.6  1394.0  9079.6  1393.5  9089.6
GR1393.1  9099.6  1392.0  9109.6  1392.0  9119.6  1391.8  9129.6  1390.4  9139.6
GR1390.0  9149.6  1389.8  9159.6  1388.2  9169.6  1388.0  9179.6  1388.0  9189.6
GR1388.7  9199.6  1389.0  9209.6  1389.2  9219.6  1388.6  9229.6  1388.0  9239.6
GR1388.0  9249.6  1388.0  9259.6  1388.0  9269.6  1388.0  9279.6  1388.0  9289.6
GR1387.9  9299.6  1387.6  9309.6  1387.0  9319.6  1386.4  9329.6  1386.0  9339.6
GR1385.8  9349.6  1385.3  9359.6  1384.7  9369.6  1384.0  9379.6  1384.0  9389.6
GR1383.6  9399.6  1383.0  9409.6  1382.5  9419.6  1382.0  9429.6  1382.0  9439.6
GR1381.5  9449.6  1380.9  9459.6  1380.6  9469.6  1380.7  9479.6  1380.7  9489.6
GR1380.6  9499.6  1380.4  9509.6  1380.2  9519.6  1380.0  9529.6  1379.8  9539.6
GR1379.5  9549.6  1379.2  9559.6  1378.8  9569.6  1378.3  9579.6  1377.6  9589.6
GR1377.1  9599.6  1376.7  9609.6  1376.6  9619.6  1376.4  9629.6  1376.3  9639.6
GR1376.0  9649.6  1376.0  9659.6  1376.0  9669.6  1376.0  9679.6  1376.0  9689.6
GR1375.6  9699.6  1375.2  9709.6  1374.8  9719.6  1374.4  9729.6  1374.0  9739.6
GR1374.0  9749.6  1374.0  9759.6  1374.0  9769.6  1373.8  9779.6  1373.4  9789.6
GR1373.0  9799.6  1372.5  9809.6  1372.1  9819.6  1371.6  9829.6  1371.2  9839.6
GR1370.6  9849.6  1370.1  9859.6  1369.5  9869.6  1368.9  9879.6  1368.2  9889.6
GR1368.0  9899.6  1368.0  9909.6  1367.8  9919.6  1367.2  9929.6  1366.6  9939.6
X1 11.50      90  9228.8  9368.8     430     570     500
CI                                            50
X3                        9058.8          9368.8
GR1390.0  9048.8  1390.0  9058.8  1390.0  9068.8  1390.0  9078.8  1389.9  9088.8
GR1389.3  9098.8  1388.7  9108.8  1388.5  9118.8  1388.4  9128.8  1388.3  9138.8
GR1388.2  9148.8  1388.1  9158.8  1388.0  9168.8  1387.6  9178.8  1387.3  9188.8
GR1387.7  9198.8  1388.0  9208.8  1388.3  9218.8  1388.5  9228.8  1388.4  9238.8
GR1388.2  9248.8  1388.0  9258.8  1387.8  9268.8  1387.3  9278.8  1386.8  9288.8
GR1386.3  9298.8  1386.0  9308.8  1386.0  9318.8  1386.0  9328.8  1386.0  9338.8
GR1386.0  9348.8  1386.0  9358.8  1385.7  9368.8  1385.5  9378.8  1385.0  9388.8
GR1384.7  9398.8  1384.3  9408.8  1384.0  9418.8  1383.6  9428.8  1383.3  9438.8
GR1382.9  9448.8  1382.6  9458.8  1382.5  9468.8  1382.1  9478.8  1381.6  9488.8
GR1381.1  9498.8  1380.6  9508.8  1380.0  9518.8  1379.5  9528.8  1379.2  9538.8
GR1378.7  9548.8  1378.2  9558.8  1377.7  9568.8  1377.2  9578.8  1376.5  9588.8
GR1376.0  9598.8  1376.0  9608.8  1375.1  9618.8  1374.0  9628.8  1373.5  9638.8
GR1373.4  9648.8  1373.4  9658.8  1372.8  9668.8  1372.4  9678.8  1372.0  9688.8
GR1372.0  9698.8  1371.9  9708.8  1370.7  9718.8  1370.0  9728.8  1370.0  9738.8
GR1370.0  9748.8  1370.0  9758.8  1370.0  9768.8  1370.0  9778.8  1369.3  9788.8
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GR1369.1  9798.8  1369.2  9808.8  1369.1  9818.8  1369.0  9828.8  1369.3  9838.8
GR1369.8  9848.8  1370.1  9858.8  1370.2  9868.8  1370.0  9878.8  1370.0  9888.8
GR1370.0  9898.8  1369.9  9908.8  1369.4  9918.8  1368.9  9928.8  1368.4  9938.8
X1 12.00      90  9230.6  9370.6     480     560     500
CI
X3                        9050.6          9370.6
GR1395.5  9040.6  1395.0  9050.6  1394.6  9060.6  1394.2  9070.6  1393.8  9080.6
GR1393.5  9090.6  1393.1  9100.6  1392.9  9110.6  1392.7  9120.6  1392.6  9130.6
GR1392.6  9140.6  1392.5  9150.6  1392.4  9160.6  1392.2  9170.6  1392.0  9180.6
GR1391.7  9190.6  1391.4  9200.6  1391.1  9210.6  1390.7  9220.6  1390.3  9230.6
GR1390.0  9240.6  1390.0  9250.6  1390.0  9260.6  1390.0  9270.6  1389.7  9280.6
GR1389.1  9290.6  1388.5  9300.6  1388.0  9310.6  1387.5  9320.6  1387.1  9330.6
GR1386.6  9340.6  1386.2  9350.6  1385.7  9360.6  1385.2  9370.6  1384.8  9380.6
GR1384.4  9390.6  1384.0  9400.6  1383.8  9410.6  1383.5  9420.6  1383.2  9430.6
GR1382.9  9440.6  1382.5  9450.6  1382.1  9460.6  1381.7  9470.6  1381.4  9480.6
GR1381.0  9490.6  1380.6  9500.6  1380.3  9510.6  1379.9  9520.6  1379.5  9530.6
GR1379.2  9540.6  1378.8  9550.6  1378.5  9560.6  1378.1  9570.6  1377.7  9580.6
GR1377.3  9590.6  1376.8  9600.6  1376.5  9610.6  1376.1  9620.6  1375.6  9630.6
GR1375.0  9640.6  1374.5  9650.6  1373.9  9660.6  1373.5  9670.6  1373.0  9680.6
GR1372.4  9690.6  1371.9  9700.6  1371.3  9710.6  1370.7  9720.6  1370.2  9730.6
GR1370.0  9740.6  1370.0  9750.6  1370.0  9760.6  1370.0  9770.6  1369.5  9780.6
GR1369.1  9790.6  1368.9  9800.6  1368.7  9810.6  1368.5  9820.6  1368.2  9830.6
GR1367.6  9840.6  1366.9  9850.6  1366.3  9860.6  1366.1  9870.6  1366.0  9880.6
GR1366.0  9890.6  1366.0  9900.6  1365.2  9910.6  1364.7  9920.6  1364.3  9930.6
QT     1     200
X1 12.50      90  9233.2  9733.2     380     600     500
CI                                            40
X3                        9033.2          9373.2
GR1397.2  9033.2  1396.1  9043.2  1395.4  9053.2  1395.0  9063.2  1394.6  9073.2
GR1394.2  9083.2  1393.8  9093.2  1393.4  9103.2  1392.7  9113.2  1392.1  9123.2
GR1391.1  9133.2  1390.2  9143.2  1389.1  9153.2  1388.2  9163.2  1387.9  9173.2
GR1386.9  9183.2  1386.3  9193.2  1386.4  9203.2  1387.2  9213.2  1387.6  9223.2
GR1388.0  9233.2  1388.5  9243.2  1388.5  9253.2  1388.4  9263.2  1388.0  9273.2
GR1388.0  9283.2  1388.0  9293.2  1387.7  9303.2  1387.2  9313.2  1386.9  9323.2
GR1386.6  9333.2  1386.3  9343.2  1386.0  9353.2  1386.0  9363.2  1385.7  9373.2
GR1385.2  9383.2  1384.8  9393.2  1384.5  9403.2  1384.3  9413.2  1384.3  9423.2
GR1384.2  9433.2  1383.9  9443.2  1383.7  9453.2  1383.0  9463.2  1382.9  9473.2
GR1382.7  9483.2  1382.0  9493.2  1381.6  9503.2  1381.2  9513.2  1380.7  9523.2
GR1380.2  9533.2  1379.4  9543.2  1378.6  9553.2  1377.9  9563.2  1377.0  9573.2
GR1376.1  9583.2  1375.3  9593.2  1374.4  9603.2  1374.0  9613.2  1374.0  9623.2
GR1374.0  9633.2  1374.3  9643.2  1374.6  9653.2  1374.6  9663.2  1374.7  9673.2
GR1374.8  9683.2  1374.7  9693.2  1374.4  9703.2  1374.1  9713.2  1373.8  9723.2
GR1373.4  9733.2  1373.1  9743.2  1373.3  9753.2  1374.0  9763.2  1374.2  9773.2
GR1374.2  9783.2  1374.2  9793.2  1374.1  9803.2  1373.9  9813.2  1373.5  9823.2
GR1373.1  9833.2  1372.7  9843.2  1372.3  9853.2  1372.0  9863.2  1371.5  9873.2
GR1371.1  9883.2  1370.6  9893.2  1370.2  9903.2  1369.9  9913.2  1369.5  9923.2
X1 13.00      90    9050    9270     310     720     500
CI  9180                                      30
X3                          9050            9270
GR1405.0  9050.0  1404.4  9060.0  1403.8  9070.0  1403.4  9080.0  1402.9  9090.0
GR1402.4  9100.0  1401.9  9110.0  1401.2  9120.0  1400.5  9130.0  1399.9  9140.0
GR1399.3  9150.0  1398.6  9160.0  1398.0  9170.0  1398.0  9180.0  1398.0  9190.0
GR1398.0  9200.0  1399.2  9210.0  1400.5  9220.0  1401.9  9230.0  1402.0  9240.0
GR1402.0  9250.0  1402.2  9260.0  1401.9  9270.0  1401.7  9280.0  1401.8  9290.0
GR1402.0  9300.0  1402.2  9310.0  1402.5  9320.0  1402.7  9330.0  1402.7  9340.0
GR1402.4  9350.0  1402.1  9360.0  1401.5  9370.0  1400.9  9380.0  1400.2  9390.0
GR1399.8  9400.0  1399.5  9410.0  1398.9  9420.0  1398.2  9430.0  1397.4  9440.0
GR1397.3  9450.0  1397.4  9460.0  1398.0  9470.0  1398.0  9480.0  1398.0  9490.0
GR1398.0  9500.0  1397.9  9510.0  1397.6  9520.0  1397.3  9530.0  1397.0  9540.0
GR1396.6  9550.0  1396.2  9560.0  1395.8  9570.0  1395.3  9580.0  1394.9  9590.0
GR1394.5  9600.0  1394.1  9610.0  1393.9  9620.0  1393.9  9630.0  1394.0  9640.0
GR1394.0  9650.0  1394.0  9660.0  1393.9  9670.0  1393.6  9680.0  1393.4  9690.0
GR1393.1  9700.0  1392.8  9710.0  1392.5  9720.0  1392.1  9730.0  1391.6  9740.0
GR1391.0  9750.0  1390.9  9760.0  1390.7  9770.0  1390.5  9780.0  1390.4  9790.0
GR1390.4  9800.0  1390.3  9810.0  1390.2  9820.0  1390.0  9830.0  1389.8  9840.0
GR1389.5  9850.0  1389.3  9860.0  1389.0  9870.0  1388.8  9880.0  1388.5  9890.0
GR1388.3  9900.0  1388.0  9910.0  1387.5  9920.0  1387.0  9930.0  1386.5  9940.0
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FILE = MCMCH1.OUT

FEBRUARY 27, 1997

R. W. CRUFF

THIS IS THE FIRST ATTEMPT AT DESIGN OF THE CHANNEL TO ROUTE WATER FROM THE WHITE TANKS AREA TO MCMICKEN DAM

SUMMARY PRINTOUT

SECNO	Q	CWSEL	VCH	DEPTH	BW	TOPWID
1.500	5600.00	1353.75	3.63	5.75	300.00	401.58
2.000	5600.00	1355.47	7.44	2.47	300.00	309.88
2.500	5600.00	1358.69	4.60	4.69	250.00	268.75
3.000	5000.00	1359.89	3.93	4.89	250.00	269.57
3.500	5000.00	1360.81	4.00	4.81	250.00	269.24
4.000	4500.00	1361.73	3.33	9.83	250.00	304.45
4.500	4500.00	1362.51	3.85	4.51	250.00	268.04
5.000	4000.00	1363.53	4.22	4.53	200.00	218.13
5.500	4000.00	1364.66	4.10	4.66	200.00	218.65
6.000	2000.00	1365.55	2.33	7.55	180.00	198.18
6.500	2000.00	1366.00	3.16	4.00	150.00	166.01
7.000	2000.00	1366.83	3.31	4.43	150.00	165.33
7.500	2000.00	1367.76	3.37	4.46	150.00	165.05
8.000	1500.00	1368.71	3.18	3.71	120.00	134.82
8.500	1200.00	1369.61	3.10	5.31	100.00	114.43
9.000	1000.00	1370.54	3.24	5.24	80.00	94.16
9.500	1000.00	1371.55	3.23	6.05	80.00	94.21
10.000	1000.00	1372.55	3.22	8.15	80.00	94.24
10.500	800.00	1373.52	2.95	6.12	70.00	84.06
11.000	400.00	1374.24	1.86	7.64	60.00	72.96
11.500	400.00	1374.77	2.60	6.37	50.00	61.09
12.000	400.00	1375.73	2.65	11.43	50.00	60.89
12.500	200.00	1376.54	1.74	7.04	40.00	50.18
13.000	200.00	1377.24	2.59	2.24	30.00	38.96

SUMMARY PRINTOUT

SECNO	Q	SSTA	ENDST	VEXR	VEXT
1.500	5600.00	9780.95	10182.54	.00	.00
2.000	5600.00	9175.06	9484.94	24.30	24.30
2.500	5600.00	9185.62	9454.38	59.09	83.39
3.000	5000.00	9175.22	9444.78	71.38	154.77
3.500	5000.00	9195.38	9464.62	69.57	224.34

	4.000	4500.00	9515.55	9820.00	89.56	313.90
	4.500	4500.00	9165.98	9434.02	164.63	478.53
	5.000	4000.00	9190.94	9409.06	141.34	619.88
	5.500	4000.00	9190.67	9409.33	55.53	675.40
	6.000	2000.00	9200.91	9399.09	52.26	727.67
*	6.500	2000.00	9216.99	9383.01	53.90	781.57
	7.000	2000.00	9217.34	9382.66	44.42	825.99
	7.500	2000.00	9217.48	9382.52	45.40	871.40
	8.000	1500.00	9232.59	9367.41	51.14	922.53
	8.500	1200.00	9242.79	9357.21	47.26	969.79
	9.000	1000.00	9252.92	9347.08	39.70	1009.50
	9.500	1000.00	9252.90	9347.10	31.01	1040.51
	10.000	1000.00	9252.88	9347.12	26.73	1067.24
	10.500	800.00	9257.97	9342.03	24.51	1091.75
	11.000	400.00	9263.52	9336.48	24.07	1115.82
	11.500	400.00	9269.45	9330.55	24.83	1140.64
	12.000	400.00	9269.55	9330.45	22.51	1163.15
	12.500	200.00	9274.91	9325.09	20.06	1183.21
	13.000	200.00	9160.52	9199.48	26.56	1209.76

FILE = MCMCH.DAT

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C
C      2
C    1.5      WITHIN MCMICKEN RESERVOIR
C   13.0      UPPER END OF CHANNEL
*
*               MODEL = MCMCH.DAT
*
*               THIS IS THE SECOND ATTEMPT AT DESGN OF THE CHANNEL
*                  FOR THE CHIMP ROUTINE, SLOPE = 0.002, &
*                  BOTTOM ELEVATION = 1355 AT SECTION 2.0
T1            MCMICKEN CHANNEL DESIGN
T2            100-YEAR FLOW  - RUSS CRUFF 3-17-97
T3            SECTIONS 1.5 TO 13.0
J1                2                         .002
J2     1                   -2
J3    38         43         1        26         8        30         4
J3    38         43        53        54        64        65
NC  .045       .045     0.045        .1        .3
QT     1       5600
X1  1.50         65      9600     10210         0         0         0
GR1357.7   9570.0    1357.8    9580.0    1357.9    9590.0    1358.0    9600.0    1357.9    9610.0
GR1357.9   9620.0    1357.9    9630.0    1357.8    9640.0    1357.6    9650.0    1357.5    9660.0
GR1357.3   9670.0    1357.2    9680.0    1357.0    9690.0    1356.8    9700.0    1356.6    9710.0
GR1356.4   9720.0    1356.2    9730.0    1356.0    9740.0    1355.4    9750.0    1354.8    9760.0
GR1354.4   9770.0    1354.0    9780.0    1351.4    9790.0    1349.9    9800.0    1349.7    9810.0
GR1349.6   9820.0    1349.7    9830.0    1349.8    9840.0    1350.0    9850.0    1350.1    9860.0
GR1350.2   9870.0    1350.4    9880.0    1350.5    9890.0    1350.7    9900.0    1350.6    9910.0
GR1350.5   9920.0    1350.3    9930.0    1350.2    9940.0    1350.0    9950.0    1349.5    9960.0
GR1349.0   9970.0    1348.5    9980.0    1348.1    9990.0    1348.0 10000.0    1348.0 10010.0
GR1348.0 10020.0    1348.0 10030.0    1348.0 10040.0    1348.0 10050.0    1348.0 10060.0
GR1348.0 10070.0    1348.5 10080.0    1349.0 10090.0    1349.3 10100.0    1349.7 10110.0
GR1350.4 10120.0    1351.7 10130.0    1352.3 10140.0    1352.6 10150.0    1353.0 10160.0
GR1353.3 10170.0    1353.6 10180.0    1354.2 10190.0    1356.2 10200.0    1358.2 10210.0
X1  2.00         90      9100      9500       460       530       500
CI  9330       1355                   4         2       300
X3                                 9100                9500
GR1360.0   9040.0    1360.1    9050.0    1360.5    9060.0    1360.8    9070.0    1361.2    9080.0
GR1361.4   9090.0    1361.5    9100.0    1360.9    9110.0    1360.3    9120.0    1360.0    9130.0
GR1360.0   9140.0    1360.0    9150.0    1360.6    9160.0    1361.5    9170.0    1362.0    9180.0
GR1362.0   9190.0    1362.0    9200.0    1362.0    9210.0    1362.0    9220.0    1362.0    9230.0
GR1362.0   9240.0    1361.8    9250.0    1361.4    9260.0    1361.8    9270.0    1362.0    9280.0
GR1362.0   9290.0    1362.0    9300.0    1362.0    9310.0    1362.0    9320.0    1361.5    9330.0
GR1361.0   9340.0    1360.5    9350.0    1360.0    9360.0    1360.0    9370.0    1360.0    9380.0
GR1360.0   9390.0    1360.0    9400.0    1360.0    9410.0    1360.0    9420.0    1360.3    9430.0
GR1360.6   9440.0    1360.9    9450.0    1361.2    9460.0    1361.6    9470.0    1361.9    9480.0
GR1362.0   9490.0    1362.0    9500.0    1362.0    9510.0    1361.6    9520.0    1361.0    9530.0
GR1360.6   9540.0    1360.4    9550.0    1360.2    9560.0    1359.9    9570.0    1359.8    9580.0
GR1359.6   9590.0    1359.5    9600.0    1359.3    9610.0    1359.2    9620.0    1359.1    9630.0
GR1359.1   9640.0    1359.1    9650.0    1359.1    9660.0    1359.2    9670.0    1359.2    9680.0
GR1359.2   9690.0    1359.1    9700.0    1359.1    9710.0    1359.0    9720.0    1359.0    9730.0
GR1358.9   9740.0    1358.9    9750.0    1358.9    9760.0    1358.9    9770.0    1358.7    9780.0
GR1358.5   9790.0    1358.2    9800.0    1357.9    9810.0    1357.8    9820.0    1357.6    9830.0
GR1357.4   9840.0    1357.3    9850.0    1357.2    9860.0    1357.2    9870.0    1357.1    9880.0
GR1357.1   9890.0    1357.1    9900.0    1357.1    9910.0    1357.2    9920.0    1357.3    9930.0
X1  2.50         90      9180      9520       650       200       500
CI  9370      0.002                                       250
X3                                 9080                9520
GR1370.0   9040.0    1370.0    9050.0    1370.0    9060.0    1370.0    9070.0    1370.0    9080.0
GR1369.8   9090.0    1369.6    9100.0    1369.2    9110.0    1368.8    9120.0    1368.5    9130.0
GR1368.2   9140.0    1368.0    9150.0    1368.0    9160.0    1368.0    9170.0    1368.0    9180.0
GR1368.0   9190.0    1368.0    9200.0    1368.0    9210.0    1368.0    9220.0    1368.0    9230.0
GR1368.0   9240.0    1368.0    9250.0    1368.0    9260.0    1368.0    9270.0    1368.0    9280.0
GR1367.8   9290.0    1367.4    9300.0    1367.4    9310.0    1367.4    9320.0    1367.4    9330.0
GR1367.5   9340.0    1367.4    9350.0    1367.4    9360.0    1367.3    9370.0    1367.3    9380.0
GR1367.3   9390.0    1367.4    9400.0    1367.3    9410.0    1367.2    9420.0    1367.2    9430.0
GR1367.2   9440.0    1367.1    9450.0    1366.9    9460.0    1366.8    9470.0    1366.8    9480.0
GR1366.5   9490.0    1366.0    9500.0    1365.9    9510.0    1365.8    9520.0    1365.9    9530.0
GR1366.0   9540.0    1366.0    9550.0    1366.0    9560.0    1366.0    9570.0    1366.0    9580.0
GR1366.0   9590.0    1366.0    9600.0    1365.9    9610.0    1365.4    9620.0    1364.9    9630.0
GR1364.8   9640.0    1364.7    9650.0    1364.5    9660.0    1364.3    9670.0    1364.1    9680.0
GR1363.9   9690.0    1363.7    9700.0    1363.4    9710.0    1363.4    9720.0    1363.3    9730.0
GR1363.0   9740.0    1362.9    9750.0    1362.6    9760.0    1362.4    9770.0    1362.1    9780.0
GR1361.7   9790.0    1361.3    9800.0    1361.1    9810.0    1361.0    9820.0    1361.0    9830.0
GR1360.9   9840.0    1360.7    9850.0    1360.5    9860.0    1360.2    9870.0    1360.0    9880.0
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GR1360.0  9890.0  1360.0  9900.0  1360.0  9910.0  1360.0  9920.0  1360.0  9930.0
QT     1    5000
X1  3.00      90    9160    9490     540     460     500
CI  9350
X3                        9050            9490
GR1374.0  9050.0  1374.0  9060.0  1374.0  9070.0  1373.9  9080.0  1373.7  9090.0
GR1373.6  9100.0  1373.4  9110.0  1373.2  9120.0  1373.0  9130.0  1372.8  9140.0
GR1372.5  9150.0  1372.3  9160.0  1372.1  9170.0  1371.9  9180.0  1371.7  9190.0
GR1371.5  9200.0  1371.3  9210.0  1371.2  9220.0  1371.0  9230.0  1370.8  9240.0
GR1370.6  9250.0  1370.4  9260.0  1370.2  9270.0  1370.0  9280.0  1369.8  9290.0
GR1369.5  9300.0  1369.2  9310.0  1368.8  9320.0  1368.5  9330.0  1368.2  9340.0
GR1368.0  9350.0  1367.9  9360.0  1367.7  9370.0  1367.5  9380.0  1367.2  9390.0
GR1367.1  9400.0  1366.8  9410.0  1366.6  9420.0  1366.4  9430.0  1366.2  9440.0
GR1366.0  9450.0  1366.0  9460.0  1365.9  9470.0  1365.5  9480.0  1365.2  9490.0
GR1364.8  9500.0  1364.4  9510.0  1364.1  9520.0  1364.0  9530.0  1364.0  9540.0
GR1364.0  9550.0  1364.0  9560.0  1364.0  9570.0  1364.0  9580.0  1364.0  9590.0
GR1364.0  9600.0  1364.0  9610.0  1363.9  9620.0  1363.7  9630.0  1363.5  9640.0
GR1363.3  9650.0  1363.1  9660.0  1362.9  9670.0  1362.7  9680.0  1362.5  9690.0
GR1362.3  9700.0  1362.1  9710.0  1362.0  9720.0  1362.0  9730.0  1361.6  9740.0
GR1361.3  9750.0  1360.9  9760.0  1360.6  9770.0  1360.3  9780.0  1360.0  9790.0
GR1360.0  9800.0  1359.9  9810.0  1359.7  9820.0  1359.6  9830.0  1359.4  9840.0
GR1359.3  9850.0  1359.1  9860.0  1359.0  9870.0  1358.8  9880.0  1358.7  9890.0
GR1358.5  9900.0  1358.3  9910.0  1358.2  9920.0  1358.0  9930.0  1358.0  9940.0
X1  3.50      90    9220    9540     530     440     500
CI  9390
X3                        9190            9540
GR1370.2  9150.0  1370.6  9160.0  1371.1  9170.0  1371.2  9180.0  1371.1  9190.0
GR1371.0  9200.0  1370.7  9210.0  1370.4  9220.0  1370.0  9230.0  1369.8  9240.0
GR1369.5  9250.0  1369.2  9260.0  1369.2  9270.0  1369.1  9280.0  1369.0  9290.0
GR1369.0  9300.0  1368.9  9310.0  1368.8  9320.0  1368.8  9330.0  1368.7  9340.0
GR1368.7  9350.0  1368.6  9360.0  1368.4  9370.0  1368.2  9380.0  1368.1  9390.0
GR1368.0  9400.0  1368.0  9410.0  1368.0  9420.0  1368.0  9430.0  1367.9  9440.0
GR1367.8  9450.0  1367.6  9460.0  1367.4  9470.0  1367.2  9480.0  1367.0  9490.0
GR1366.8  9500.0  1366.6  9510.0  1366.4  9520.0  1366.1  9530.0  1365.9  9540.0
GR1365.7  9550.0  1365.6  9560.0  1365.4  9570.0  1365.2  9580.0  1365.0  9590.0
GR1364.8  9600.0  1364.6  9610.0  1364.4  9620.0  1364.3  9630.0  1364.1  9640.0
GR1363.9  9650.0  1363.6  9660.0  1363.4  9670.0  1363.2  9680.0  1362.9  9690.0
GR1362.7  9700.0  1362.4  9710.0  1362.1  9720.0  1361.9  9730.0  1361.6  9740.0
GR1361.2  9750.0  1360.9  9760.0  1360.5  9770.0  1360.2  9780.0  1360.0  9790.0
GR1359.8  9800.0  1359.1  9810.0  1358.4  9820.0  1358.0  9830.0  1358.0  9840.0
GR1358.0  9850.0  1358.0  9860.0  1358.0  9870.0  1358.0  9880.0  1358.2  9890.0
GR1359.1  9900.0  1359.9  9910.0  1360.0  9920.0  1359.8  9930.0  1359.3  9940.0
GR1358.7  9950.0  1358.0  9960.0  1357.5  9970.0  1357.2  9980.0  1357.0  9990.0
GR1356.7 10000.0  1357.0 10010.0  1357.7 10020.0  1358.0 10030.0  1358.0 10040.0
QT     1    4500
X1  4.00      90    9430    9950     600     280     500
CI  9800
X3                        9430            9950
GR1425.1  9090.0  1424.6  9100.0  1424.1  9110.0  1423.0  9120.0  1422.7  9130.0
GR1422.7  9140.0  1422.4  9150.0  1421.3  9160.0  1419.7  9170.0  1418.7  9180.0
GR1418.8  9190.0  1418.9  9200.0  1419.0  9210.0  1418.7  9220.0  1418.7  9230.0
GR1418.9  9240.0  1419.2  9250.0  1419.4  9260.0  1419.6  9270.0  1419.9  9280.0
GR1420.1  9290.0  1420.5  9300.0  1420.0  9310.0  1420.0  9320.0  1420.0  9330.0
GR1420.0  9340.0  1420.0  9350.0  1420.0  9360.0  1420.0  9370.0  1420.0  9380.0
GR1420.0  9390.0  1420.0  9400.0  1420.0  9410.0  1420.0  9420.0  1420.0  9430.0
GR1419.1  9440.0  1417.9  9450.0  1415.0  9460.0  1411.9  9470.0  1407.3  9480.0
GR1401.3  9490.0  1397.6  9500.0  1394.5  9510.0  1392.3  9520.0  1390.2  9530.0
GR1387.8  9540.0  1385.3  9550.0  1382.8  9560.0  1379.7  9570.0  1377.9  9580.0
GR1376.5  9590.0  1375.0  9600.0  1374.0  9610.0  1374.0  9620.0  1372.3  9630.0
GR1369.7  9640.0  1368.4  9650.0  1367.0  9660.0  1365.6  9670.0  1364.5  9680.0
GR1363.6  9690.0  1363.0  9700.0  1362.3  9710.0  1361.7  9720.0  1361.0  9730.0
GR1360.3  9740.0  1359.8  9750.0  1359.6  9760.0  1359.3  9770.0  1359.0  9780.0
GR1358.7  9790.0  1358.5  9800.0  1358.2  9810.0  1358.0  9820.0  1358.0  9830.0
GR1357.5  9840.0  1357.0  9850.0  1356.5  9860.0  1356.0  9870.0  1356.0  9880.0
GR1356.0  9890.0  1355.5  9900.0  1355.0  9910.0  1354.5  9920.0  1354.0  9930.0
GR1353.6  9940.0  1353.0  9950.0  1352.4  9960.0  1352.0  9970.0  1351.9  9980.0
X1  4.50      90  9426.1  9746.1     390     590     500
CI  9610
X3                      9426.1          9746.1
GR1425.1  9026.1  1424.9  9036.1  1424.4  9046.1  1424.0  9056.1  1423.3  9066.1
GR1422.5  9076.1  1421.8  9086.1  1421.0  9096.1  1420.3  9106.1  1419.4  9116.1
GR1418.1  9126.1  1416.4  9136.1  1414.7  9146.1  1413.0  9156.1  1411.3  9166.1
GR1409.7  9176.1  1408.0  9186.1  1405.8  9196.1  1403.6  9206.1  1401.3  9216.1
GR1399.5  9226.1  1398.3  9236.1  1397.1  9246.1  1395.8  9256.1  1394.3  9266.1
GR1392.8  9276.1  1391.2  9286.1  1389.5  9296.1  1387.7  9306.1  1386.1  9316.1
GR1384.4  9326.1  1382.5  9336.1  1380.6  9346.1  1379.2  9356.1  1377.9  9366.1
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GR1377.1  9376.1  1376.3  9386.1  1375.2  9396.1  1374.2  9406.1  1374.0  9416.1
GR1374.0  9426.1  1373.1  9436.1  1371.5  9446.1  1370.0  9456.1  1369.6  9466.1
GR1369.2  9476.1  1368.9  9486.1  1368.5  9496.1  1368.1  9506.1  1367.7  9516.1
GR1367.3  9526.1  1367.0  9536.1  1366.6  9546.1  1366.2  9556.1  1366.0  9566.1
GR1366.0  9576.1  1366.0  9586.1  1366.0  9596.1  1366.0  9606.1  1365.4  9616.1
GR1365.1  9626.1  1365.0  9636.1  1364.8  9646.1  1365.0  9656.1  1365.0  9666.1
GR1364.4  9676.1  1364.0  9686.1  1364.0  9696.1  1364.0  9706.1  1364.0  9716.1
GR1364.0  9726.1  1363.9  9736.1  1363.7  9746.1  1363.5  9756.1  1363.3  9766.1
GR1363.2  9776.1  1363.0  9786.1  1362.2  9796.1  1362.0  9806.1  1362.0  9816.1
GR1362.0  9826.1  1361.8  9836.1  1361.7  9846.1  1361.7  9856.1  1361.1  9866.1
GR1360.6  9876.1  1360.0  9886.1  1360.0  9896.1  1360.0  9906.1  1360.0  9916.1
QT     1    4000
X1   5.0      90  9340.6  9610.6     570     320     500
CI  9490                                     200
X3                        9320.6          9610.6
GR1380.0  9030.6  1380.0  9040.6  1380.0  9050.6  1380.0  9060.6  1380.0  9070.6
GR1379.6  9080.6  1379.1  9090.6  1378.5  9100.6  1378.3  9110.6  1378.0  9120.6
GR1378.0  9130.6  1377.9  9140.6  1377.7  9150.6  1377.5  9160.6  1377.3  9170.6
GR1377.3  9180.6  1377.3  9190.6  1377.1  9200.6  1376.8  9210.6  1376.6  9220.6
GR1376.3  9230.6  1376.1  9240.6  1376.0  9250.6  1376.0  9260.6  1375.9  9270.6
GR1375.5  9280.6  1375.1  9290.6  1374.7  9300.6  1374.3  9310.6  1374.0  9320.6
GR1373.7  9330.6  1373.4  9340.6  1373.1  9350.6  1372.8  9360.6  1372.5  9370.6
GR1372.2  9380.6  1371.9  9390.6  1371.4  9400.6  1370.9  9410.6  1370.4  9420.6
GR1370.0  9430.6  1370.0  9440.6  1370.0  9450.6  1369.9  9460.6  1369.1  9470.6
GR1368.2  9480.6  1368.0  9490.6  1368.0  9500.6  1367.7  9510.6  1367.2  9520.6
GR1366.8  9530.6  1366.8  9540.6  1367.1  9550.6  1367.5  9560.6  1367.6  9570.6
GR1367.8  9580.6  1367.9  9590.6  1368.0  9600.6  1368.1  9610.6  1367.9  9620.6
GR1367.6  9630.6  1367.3  9640.6  1367.2  9650.6  1367.1  9660.6  1366.8  9670.6
GR1366.6  9680.6  1366.5  9690.6  1366.3  9700.6  1366.2  9710.6  1366.0  9720.6
GR1365.4  9730.6  1364.4  9740.6  1363.4  9750.6  1362.8  9760.6  1362.5  9770.6
GR1362.6  9780.6  1362.6  9790.6  1362.6  9800.6  1362.8  9810.6  1363.0  9820.6
GR1363.2  9830.6  1363.3  9840.6  1363.4  9850.6  1363.2  9860.6  1363.0  9870.6
GR1362.9  9880.6  1363.0  9890.6  1363.0  9900.6  1362.9  9910.6  1362.8  9920.6
X1  5.50      90    9230    9490     500     500     500
CI  9370                                     200
X3                          9050            9490
GR1378.0  9050.0  1377.5  9060.0  1377.0  9070.0  1376.5  9080.0  1376.2  9090.0
GR1376.0  9100.0  1376.0  9110.0  1376.0  9120.0  1376.0  9130.0  1375.4  9140.0
GR1374.8  9150.0  1374.3  9160.0  1374.0  9170.0  1374.0  9180.0  1373.7  9190.0
GR1373.3  9200.0  1372.8  9210.0  1372.6  9220.0  1372.0  9230.0  1372.0  9240.0
GR1372.0  9250.0  1372.0  9260.0  1371.9  9270.0  1371.5  9280.0  1371.1  9290.0
GR1370.7  9300.0  1370.4  9310.0  1370.3  9320.0  1370.2  9330.0  1370.1  9340.0
GR1370.0  9350.0  1369.7  9360.0  1369.0  9370.0  1368.4  9380.0  1368.0  9390.0
GR1368.0  9400.0  1368.0  9410.0  1368.0  9420.0  1368.3  9430.0  1368.8  9440.0
GR1369.3  9450.0  1369.9  9460.0  1370.0  9470.0  1370.0  9480.0  1370.0  9490.0
GR1369.9  9500.0  1369.6  9510.0  1369.4  9520.0  1369.1  9530.0  1368.9  9540.0
GR1368.6  9550.0  1368.4  9560.0  1368.1  9570.0  1367.9  9580.0  1367.6  9590.0
GR1367.3  9600.0  1367.1  9610.0  1366.8  9620.0  1366.5  9630.0  1366.2  9640.0
GR1366.0  9650.0  1365.9  9660.0  1365.7  9670.0  1365.4  9680.0  1365.2  9690.0
GR1365.0  9700.0  1364.8  9710.0  1364.6  9720.0  1364.4  9730.0  1364.2  9740.0
GR1364.0  9750.0  1364.0  9760.0  1364.0  9770.0  1363.8  9780.0  1363.4  9790.0
GR1362.9  9800.0  1362.5  9810.0  1362.1  9820.0  1362.0  9830.0  1362.0  9840.0
GR1362.0  9850.0  1361.8  9860.0  1361.6  9870.0  1361.4  9880.0  1361.2  9890.0
GR1361.1  9900.0  1360.9  9910.0  1360.8  9920.0  1360.6  9930.0  1360.4  9940.0
X1  6.00      90  9209.8  9489.8     500     500     500
CI
X3                        9049.8          9489-.8
GR1381.1  9049.8  1380.9  9059.8  1380.7  9069.8  1380.5  9079.8  1380.1  9089.8
GR1380.0  9099.8  1380.0  9109.8  1380.0  9119.8  1380.0  9129.8  1379.6  9139.8
GR1379.2  9149.8  1378.8  9159.8  1378.4  9169.8  1378.0  9179.8  1378.0  9189.8
GR1378.0  9199.8  1378.0  9209.8  1378.0  9219.8  1378.0  9229.8  1378.0  9239.8
GR1377.9  9249.8  1377.3  9259.8  1376.6  9269.8  1376.0  9279.8  1376.0  9289.8
GR1376.0  9299.8  1376.0  9309.8  1376.0  9319.8  1376.0  9329.8  1375.9  9339.8
GR1375.6  9349.8  1375.4  9359.8  1375.2  9369.8  1375.0  9379.8  1374.7  9389.8
GR1374.4  9399.8  1374.1  9409.8  1373.4  9419.8  1372.9  9429.8  1372.5  9439.8
GR1372.0  9449.8  1371.7  9459.8  1371.5  9469.8  1371.2  9479.8  1370.9  9489.8
GR1370.6  9499.8  1370.4  9509.8  1370.1  9519.8  1369.8  9529.8  1369.5  9539.8
GR1369.4  9549.8  1369.2  9559.8  1369.1  9569.8  1369.0  9579.8  1368.8  9589.8
GR1368.6  9599.8  1368.4  9609.8  1368.2  9619.8  1368.0  9629.8  1368.0  9639.8
GR1368.0  9649.8  1367.6  9659.8  1367.2  9669.8  1366.8  9679.8  1366.3  9689.8
GR1365.8  9699.8  1365.3  9709.8  1364.8  9719.8  1364.3  9729.8  1363.6  9739.8
GR1362.9  9749.8  1362.0  9759.8  1360.6  9769.8  1360.0  9779.8  1360.0  9789.8
GR1359.3  9799.8  1358.5  9809.8  1358.0  9819.8  1358.1  9829.8  1358.3  9839.8
GR1358.6  9849.8  1358.8  9859.8  1359.1  9869.8  1359.3  9879.8  1359.5  9889.8
GR1359.7  9899.8  1359.9  9909.8  1359.8  9919.8  1359.5  9929.8  1358.5  9939.8
QT     1    3000
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X1   6.50       90   9221.8   9481.8      500      500      500
CI                                                 180
X3                            9061.8               9481.8
GR1382.0   9051.8   1382.0   9061.8   1382.0   9071.8   1381.7   9081.8   1381.4   9091.8
GR1381.0   9101.8   1380.7   9111.8   1380.4   9121.8   1380.1   9131.8   1380.0   9141.8
GR1380.0   9151.8   1380.0   9161.8   1379.9   9171.8   1379.7   9181.8   1379.5   9191.8
GR1379.3   9201.8   1379.0   9211.8   1378.8   9221.8   1378.5   9231.8   1378.3   9241.8
GR1378.0   9251.8   1377.3   9261.8   1376.7   9271.8   1376.1   9281.8   1376.0   9291.8
GR1376.0   9301.8   1376.0   9311.8   1375.7   9321.8   1375.5   9331.8   1375.2   9341.8
GR1375.0   9351.8   1374.7   9361.8   1374.5   9371.8   1374.3   9381.8   1374.0   9391.8
GR1374.0   9401.8   1373.9   9411.8   1373.5   9421.8   1373.1   9431.8   1372.8   9441.8
GR1372.4   9451.8   1372.1   9461.8   1372.0   9471.8   1371.9   9481.8   1371.5   9491.8
GR1371.2   9501.8   1370.8   9511.8   1370.5   9521.8   1370.1   9531.8   1369.8   9541.8
GR1369.3   9551.8   1368.8   9561.8   1368.4   9571.8   1368.0   9581.8   1368.0   9591.8
GR1368.0   9601.8   1367.8   9611.8   1367.5   9621.8   1367.2   9631.8   1366.9   9641.8
GR1366.6   9651.8   1366.3   9661.8   1366.0   9671.8   1366.0   9681.8   1366.0   9691.8
GR1366.0   9701.8   1366.0   9711.8   1365.9   9721.8   1365.7   9731.8   1365.5   9741.8
GR1365.3   9751.8   1365.0   9761.8   1364.8   9771.8   1364.6   9781.8   1364.3   9791.8
GR1364.1   9801.8   1364.0   9811.8   1364.0   9821.8   1363.8   9831.8   1363.5   9841.8
GR1363.2   9851.8   1363.0   9861.8   1362.8   9871.8   1362.6   9881.8   1362.3   9891.8
GR1362.0   9901.8   1362.0   9911.8   1362.0   9921.8   1362.0   9931.8   1362.0   9941.8
QT      1     2500
X1   7.00       90   9196.8   9446.8      430      570      500
CI   9340                                          170
X3                            9046.8               9446.8
GR1383.9   9046.8   1383.7   9056.8   1383.5   9066.8   1383.0   9076.8   1382.2   9086.8
GR1382.0   9096.8   1382.0   9106.8   1382.0   9116.8   1382.0   9126.8   1382.0   9136.8
GR1382.0   9146.8   1381.7   9156.8   1381.2   9166.8   1380.8   9176.8   1380.3   9186.8
GR1379.6   9196.8   1378.8   9206.8   1378.3   9216.8   1377.6   9226.8   1376.5   9236.8
GR1376.0   9246.8   1376.0   9256.8   1376.0   9266.8   1376.0   9276.8   1376.0   9286.8
GR1375.3   9296.8   1374.6   9306.8   1374.6   9316.8   1374.6   9326.8   1374.4   9336.8
GR1374.5   9346.8   1374.3   9356.8   1374.1   9366.8   1374.0   9376.8   1374.0   9386.8
GR1374.0   9396.8   1374.0   9406.8   1373.7   9416.8   1373.4   9426.8   1373.0   9436.8
GR1372.6   9446.8   1372.3   9456.8   1372.0   9466.8   1372.0   9476.8   1371.9   9486.8
GR1371.5   9496.8   1371.1   9506.8   1370.6   9516.8   1370.2   9526.8   1369.8   9536.8
GR1369.3   9546.8   1369.0   9556.8   1368.7   9566.8   1368.4   9576.8   1368.1   9586.8
GR1367.2   9596.8   1366.1   9606.8   1366.0   9616.8   1366.0   9626.8   1366.0   9636.8
GR1366.0   9646.8   1366.1   9656.8   1366.5   9666.8   1367.0   9676.8   1367.0   9686.8
GR1367.1   9696.8   1367.3   9706.8   1367.1   9716.8   1366.9   9726.8   1366.6   9736.8
GR1366.4   9746.8   1366.2   9756.8   1366.0   9766.8   1365.8   9776.8   1365.7   9786.8
GR1365.6   9796.8   1365.5   9806.8   1365.4   9816.8   1365.2   9826.8   1365.1   9836.8
GR1364.8   9846.8   1364.4   9856.8   1364.0   9866.8   1363.7   9876.8   1363.3   9886.8
GR1363.2   9896.8   1363.0   9906.8   1362.8   9916.8   1362.6   9926.8   1362.4   9936.8
QT      1     2000
X1   7.50       90   9337.3   9557.8      480      520      500
CI   9460                                          150
X3                            9047.3               9557.8
GR1386.0   9047.3   1385.8   9057.3   1385.4   9067.3   1385.0   9077.3   1384.7   9087.3
GR1384.4   9097.3   1384.1   9107.3   1384.0   9117.3   1384.0   9127.3   1383.8   9137.3
GR1383.0   9147.3   1382.4   9157.3   1382.0   9167.3   1382.0   9177.3   1381.7   9187.3
GR1381.3   9197.3   1380.9   9207.3   1380.7   9217.3   1380.4   9227.3   1380.2   9237.3
GR1380.0   9247.3   1380.0   9257.3   1380.0   9267.3   1380.0   9277.3   1379.4   9287.3
GR1378.9   9297.3   1378.1   9307.3   1378.0   9317.3   1378.0   9327.3   1378.0   9337.3
GR1378.0   9347.3   1378.0   9357.3   1377.7   9367.3   1377.2   9377.3   1376.8   9387.3
GR1376.4   9397.3   1376.1   9407.3   1376.0   9417.3   1375.9   9427.3   1375.8   9437.3
GR1375.7   9447.3   1375.6   9457.3   1375.4   9467.3   1375.2   9477.3   1375.1   9487.3
GR1375.0   9497.3   1374.6   9507.3   1374.3   9517.3   1374.0   9527.3   1373.8   9537.3
GR1373.4   9547.3   1373.1   9557.3   1372.8   9567.3   1372.5   9577.3   1372.2   9587.3
GR1372.0   9597.3   1371.7   9607.3   1371.4   9617.3   1371.3   9627.3   1371.2   9637.3
GR1371.0   9647.3   1370.7   9657.3   1370.5   9667.3   1370.3   9677.3   1370.0   9687.3
GR1370.0   9697.3   1369.8   9707.3   1369.5   9717.3   1369.3   9727.3   1369.1   9737.3
GR1368.9   9747.3   1368.7   9757.3   1368.4   9767.3   1368.2   9777.3   1368.0   9787.3
GR1367.6   9797.3   1367.2   9807.3   1366.7   9817.3   1366.3   9827.3   1365.9   9837.3
GR1365.7   9847.3   1365.4   9857.3   1365.1   9867.3   1364.8   9877.3   1364.5   9887.3
GR1364.3   9897.3   1364.0   9907.3   1363.8   9917.3   1363.5   9927.3   1363.3   9937.3
QT      1     1500
X1   8.00       90   9411.3   9611.3      520      480      500
CI   9530                                          120
X3                            9051.3               9611.3
GR1390.4   9051.3   1390.2   9061.3   1390.0   9071.3   1389.6   9081.3   1389.1   9091.3
GR1388.6   9101.3   1388.2   9111.3   1388.0   9121.3   1387.6   9131.3   1387.3   9141.3
GR1386.9   9151.3   1386.5   9161.3   1386.1   9171.3   1385.7   9181.3   1385.3   9191.3
GR1384.9   9201.3   1384.6   9211.3   1384.4   9221.3   1384.1   9231.3   1384.0   9241.3
GR1384.0   9251.3   1383.9   9261.3   1383.8   9271.3   1383.7   9281.3   1383.6   9291.3
GR1383.5   9301.3   1383.1   9311.3   1382.8   9321.3   1382.4   9331.3   1382.1   9341.3
GR1382.0   9351.3   1382.0   9361.3   1381.9   9371.3   1381.4   9381.3   1380.9   9391.3
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GR1380.5   9401.3   1380.0   9411.3   1380.0   9421.3   1380.0   9431.3   1380.0   9441.3
GR1379.7   9451.3   1379.4   9461.3   1379.0   9471.3   1378.6   9481.3   1378.3   9491.3
GR1378.0   9501.3   1378.0   9511.3   1377.5   9521.3   1377.0   9531.3   1376.5   9541.3
GR1376.2   9551.3   1376.0   9561.3   1376.0   9571.3   1376.0   9581.3   1375.6   9591.3
GR1375.1   9601.3   1374.5   9611.3   1374.1   9621.3   1374.0   9631.3   1374.0   9641.3
GR1373.6   9651.3   1373.2   9661.3   1372.9   9671.3   1372.5   9681.3   1372.1   9691.3
GR1371.9   9701.3   1371.7   9711.3   1371.5   9721.3   1371.4   9731.3   1371.1   9741.3
GR1370.8   9751.3   1370.5   9761.3   1370.3   9771.3   1370.0   9781.3   1370.0   9791.3
GR1370.0   9801.3   1370.0   9811.3   1369.8   9821.3   1369.6   9831.3   1369.4   9841.3
GR1369.3   9851.3   1369.2   9861.3   1368.9   9871.3   1368.6   9881.3   1368.3   9891.3
GR1368.1   9901.3   1367.6   9911.3   1367.1   9921.3   1366.6   9931.3   1366.0   9941.3
X1  8.50       90     9400     9590      500      520      500
CI  9510
X3                             9080               9590
GR1386.0   9070.0   1386.0   9080.0   1384.9   9090.0   1383.8   9100.0   1383.5   9110.0
GR1383.3   9120.0   1383.1   9130.0   1383.2   9140.0   1383.2   9150.0   1383.3   9160.0
GR1383.4   9170.0   1383.5   9180.0   1383.6   9190.0   1383.6   9200.0   1383.6   9210.0
GR1383.7   9220.0   1383.6   9230.0   1383.6   9240.0   1383.5   9250.0   1383.4   9260.0
GR1383.4   9270.0   1383.4   9280.0   1383.4   9290.0   1383.4   9300.0   1383.3   9310.0
GR1383.2   9320.0   1383.0   9330.0   1382.5   9340.0   1382.1   9350.0   1381.8   9360.0
GR1381.4   9370.0   1381.1   9380.0   1380.8   9390.0   1380.3   9400.0   1380.0   9410.0
GR1379.8   9420.0   1379.5   9430.0   1379.1   9440.0   1378.7   9450.0   1378.4   9460.0
GR1378.1   9470.0   1377.9   9480.0   1377.6   9490.0   1377.3   9500.0   1377.0   9510.0
GR1376.8   9520.0   1376.7   9530.0   1376.6   9540.0   1376.5   9550.0   1376.3   9560.0
GR1376.1   9570.0   1375.6   9580.0   1374.9   9590.0   1374.3   9600.0   1374.0   9610.0
GR1374.0   9620.0   1373.8   9630.0   1373.4   9640.0   1373.1   9650.0   1372.8   9660.0
GR1372.7   9670.0   1372.5   9680.0   1372.4   9690.0   1372.3   9700.0   1372.4   9710.0
GR1372.3   9720.0   1372.0   9730.0   1372.0   9740.0   1372.0   9750.0   1372.0   9760.0
GR1372.0   9770.0   1372.0   9780.0   1372.0   9790.0   1372.0   9800.0   1371.4   9810.0
GR1371.1   9820.0   1370.7   9830.0   1370.3   9840.0   1370.0   9850.0   1369.2   9860.0
GR1368.9   9870.0   1368.6   9880.0   1368.2   9890.0   1367.9   9900.0   1367.3   9910.0
GR1366.6   9920.0   1365.9   9930.0   1365.4   9940.0   1364.8   9950.0   1364.3   9960.0
QT     1     1200
X1  9.00       90   9388.1   9558.1      500      500      500
CI  9490                                          100
X3                           9048.1             9558.1
GR1391.0   9048.1   1390.7   9058.1   1390.5   9068.1   1390.2   9078.1   1390.0   9088.1
GR1389.8   9098.1   1389.3   9108.1   1388.9   9118.1   1388.4   9128.1   1388.0   9138.1
GR1388.0   9148.1   1388.0   9158.1   1387.9   9168.1   1387.7   9178.1   1387.4   9188.1
GR1387.2   9198.1   1386.9   9208.1   1386.7   9218.1   1386.5   9228.1   1386.2   9238.1
GR1386.0   9248.1   1385.7   9258.1   1385.4   9268.1   1385.1   9278.1   1384.8   9288.1
GR1384.5   9298.1   1384.2   9308.1   1384.0   9318.1   1383.7   9328.1   1383.4   9338.1
GR1383.1   9348.1   1382.8   9358.1   1382.4   9368.1   1382.1   9378.1   1381.8   9388.1
GR1381.4   9398.1   1381.1   9408.1   1380.8   9418.1   1380.4   9428.1   1380.1   9438.1
GR1379.6   9448.1   1379.2   9458.1   1378.7   9468.1   1378.2   9478.1   1377.9   9488.1
GR1377.6   9498.1   1377.2   9508.1   1376.9   9518.1   1376.7   9528.1   1376.4   9538.1
GR1376.1   9548.1   1375.8   9558.1   1375.5   9568.1   1375.2   9578.1   1375.0   9588.1
GR1374.7   9598.1   1374.5   9608.1   1374.3   9618.1   1374.1   9628.1   1374.0   9638.1
GR1373.5   9648.1   1373.4   9658.1   1372.6   9668.1   1372.2   9678.1   1372.0   9688.1
GR1371.6   9698.1   1371.3   9708.1   1370.8   9718.1   1370.4   9728.1   1370.0   9738.1
GR1370.0   9748.1   1370.0   9758.1   1370.0   9768.1   1370.0   9778.1   1370.0   9788.1
GR1370.0   9798.1   1369.9   9808.1   1369.8   9818.1   1369.4   9828.1   1369.2   9838.1
GR1369.0   9848.1   1368.6   9858.1   1368.2   9868.1   1368.0   9878.1   1367.8   9888.1
GR1367.0   9898.1   1366.3   9908.1   1365.9   9918.1   1365.6   9928.1   1365.3   9938.1
QT     1     1000
X1  9.50       90     9375     9525      480      520      500
CI  9460                                          100
X3                             9045               9525
GR1390.0   9045.0   1389.7   9055.0   1389.3   9065.0   1388.9   9075.0   1388.5   9085.0
GR1388.1   9095.0   1388.0   9105.0   1387.5   9115.0   1386.6   9125.0   1386.0   9135.0
GR1385.7   9145.0   1385.1   9155.0   1384.6   9165.0   1384.1   9175.0   1384.0   9185.0
GR1384.0   9195.0   1384.0   9205.0   1383.4   9215.0   1383.2   9225.0   1383.1   9235.0
GR1382.9   9245.0   1382.3   9255.0   1381.8   9265.0   1381.3   9275.0   1381.2   9285.0
GR1380.9   9295.0   1380.5   9305.0   1380.1   9315.0   1379.6   9325.0   1379.3   9335.0
GR1378.7   9345.0   1378.1   9355.0   1377.8   9365.0   1377.4   9375.0   1376.4   9385.0
GR1376.1   9395.0   1376.0   9405.0   1375.5   9415.0   1374.9   9425.0   1374.0   9435.0
GR1374.0   9445.0   1374.0   9455.0   1374.0   9465.0   1374.0   9475.0   1374.2   9485.0
GR1374.7   9495.0   1375.1   9505.0   1375.5   9515.0   1375.8   9525.0   1375.5   9535.0
GR1375.4   9545.0   1375.1   9555.0   1374.8   9565.0   1374.5   9575.0   1374.1   9585.0
GR1374.0   9595.0   1373.7   9605.0   1373.3   9615.0   1372.9   9625.0   1372.5   9635.0
GR1372.1   9645.0   1372.0   9655.0   1372.0   9665.0   1372.0   9675.0   1371.6   9685.0
GR1370.7   9695.0   1370.0   9705.0   1370.0   9715.0   1370.0   9725.0   1370.0   9735.0
GR1370.0   9745.0   1370.0   9755.0   1370.0   9765.0   1370.0   9775.0   1370.0   9785.0
GR1369.7   9795.0   1369.3   9805.0   1369.0   9815.0   1368.8   9825.0   1368.5   9835.0
GR1368.2   9845.0   1368.0   9855.0   1367.8   9865.0   1367.5   9875.0   1367.2   9885.0
GR1367.0   9895.0   1366.6   9905.0   1366.3   9915.0   1366.0   9925.0   1365.5   9935.0
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X1 10.00	90	9330	9490	430	580	500			
CI 9420					90				
X3			9050		9490				
GR1386.0	9040.0	1386.0	9050.0	1385.9	9060.0	1386.0	9070.0	1385.9	9080.0
GR1385.8	9090.0	1385.5	9100.0	1385.2	9110.0	1385.1	9120.0	1384.9	9130.0
GR1384.6	9140.0	1384.3	9150.0	1384.1	9160.0	1384.0	9170.0	1384.0	9180.0
GR1384.0	9190.0	1384.0	9200.0	1383.8	9210.0	1383.6	9220.0	1383.5	9230.0
GR1383.7	9240.0	1383.9	9250.0	1384.1	9260.0	1384.2	9270.0	1384.0	9280.0
GR1383.8	9290.0	1383.7	9300.0	1383.4	9310.0	1383.2	9320.0	1382.8	9330.0
GR1382.4	9340.0	1382.1	9350.0	1382.0	9360.0	1381.8	9370.0	1381.6	9380.0
GR1381.0	9390.0	1380.0	9400.0	1380.0	9410.0	1380.0	9420.0	1379.7	9430.0
GR1379.3	9440.0	1379.0	9450.0	1378.7	9460.0	1378.4	9470.0	1378.0	9480.0
GR1377.8	9490.0	1377.2	9500.0	1376.6	9510.0	1376.0	9520.0	1376.0	9530.0
GR1375.8	9540.0	1375.7	9550.0	1376.0	9560.0	1376.1	9570.0	1375.8	9580.0
GR1375.6	9590.0	1375.5	9600.0	1375.4	9610.0	1375.2	9620.0	1375.1	9630.0
GR1374.9	9640.0	1374.7	9650.0	1374.5	9660.0	1374.2	9670.0	1373.9	9680.0
GR1373.6	9690.0	1373.3	9700.0	1373.0	9710.0	1372.7	9720.0	1372.4	9730.0
GR1372.0	9740.0	1371.7	9750.0	1371.3	9760.0	1370.9	9770.0	1370.6	9780.0
GR1370.2	9790.0	1369.7	9800.0	1369.2	9810.0	1368.7	9820.0	1368.2	9830.0
GR1367.8	9840.0	1367.5	9850.0	1367.1	9860.0	1366.8	9870.0	1366.5	9880.0
GR1366.2	9890.0	1365.8	9900.0	1365.4	9910.0	1364.9	9920.0	1364.4	9930.0
QT 1	800								
X1 10.50	90	9287.8	9427.8	490	530	500			
CI 9370									
X3			9047.8		9427.8				
GR1393.8	9047.8	1393.4	9057.8	1393.0	9067.8	1392.6	9077.8	1392.2	9087.8
GR1392.0	9097.8	1391.4	9107.8	1391.0	9117.8	1390.6	9127.8	1390.0	9137.8
GR1390.0	9147.8	1390.0	9157.8	1390.0	9167.8	1390.0	9177.8	1389.9	9187.8
GR1389.2	9197.8	1388.3	9207.8	1388.0	9217.8	1387.1	9227.8	1386.4	9237.8
GR1385.4	9247.8	1383.9	9257.8	1383.1	9267.8	1382.5	9277.8	1381.5	9287.8
GR1380.0	9297.8	1380.0	9307.8	1380.0	9317.8	1380.0	9327.8	1380.0	9337.8
GR1380.0	9347.8	1380.0	9357.8	1378.7	9367.8	1378.0	9377.8	1378.0	9387.8
GR1378.0	9397.8	1378.0	9407.8	1378.0	9417.8	1378.0	9427.8	1376.8	9437.8
GR1376.6	9447.8	1376.4	9457.8	1376.3	9467.8	1376.2	9477.8	1376.2	9487.8
GR1376.2	9497.8	1376.0	9507.8	1376.0	9517.8	1376.0	9527.8	1376.0	9537.8
GR1376.0	9547.8	1375.5	9557.8	1375.5	9567.8	1375.6	9577.8	1375.7	9587.8
GR1375.7	9597.8	1375.4	9607.8	1375.3	9617.8	1375.2	9627.8	1375.1	9637.8
GR1375.2	9647.8	1374.9	9657.8	1374.7	9667.8	1374.2	9677.8	1374.0	9687.8
GR1373.8	9697.8	1373.5	9707.8	1373.2	9717.8	1372.7	9727.8	1372.2	9737.8
GR1372.1	9747.8	1372.0	9757.8	1372.0	9767.8	1372.0	9777.8	1372.0	9787.8
GR1371.6	9797.8	1371.0	9807.8	1370.8	9817.8	1370.6	9827.8	1370.4	9837.8
GR1370.2	9847.8	1369.8	9857.8	1369.4	9867.8	1369.0	9877.8	1368.7	9887.8
GR1368.4	9897.8	1368.1	9907.8	1368.0	9917.8	1367.7	9927.8	1367.4	9937.8
QT 1	400								
X1 11.00	90	9459.6	9569.6	490	510	500			
CI 9520					60				
X3			9059.6		9569.6				
GR1394.0	9049.6	1394.0	9059.6	1394.0	9069.6	1394.0	9079.6	1393.5	9089.6
GR1393.1	9099.6	1392.0	9109.6	1392.0	9119.6	1391.8	9129.6	1390.4	9139.6
GR1390.0	9149.6	1389.8	9159.6	1388.2	9169.6	1388.0	9179.6	1388.0	9189.6
GR1388.7	9199.6	1389.0	9209.6	1389.2	9219.6	1388.6	9229.6	1388.0	9239.6
GR1388.0	9249.6	1388.0	9259.6	1388.0	9269.6	1388.0	9279.6	1388.0	9289.6
GR1387.9	9299.6	1387.6	9309.6	1387.0	9319.6	1386.4	9329.6	1386.0	9339.6
GR1385.8	9349.6	1385.3	9359.6	1384.7	9369.6	1384.0	9379.6	1384.0	9389.6
GR1383.6	9399.6	1383.0	9409.6	1382.5	9419.6	1382.0	9429.6	1382.0	9439.6
GR1381.5	9449.6	1380.9	9459.6	1380.6	9469.6	1380.7	9479.6	1380.7	9489.6
GR1380.6	9499.6	1380.4	9509.6	1380.2	9519.6	1380.0	9529.6	1379.8	9539.6
GR1379.5	9549.6	1379.2	9559.6	1378.8	9569.6	1378.3	9579.6	1377.6	9589.6
GR1377.1	9599.6	1376.7	9609.6	1376.6	9619.6	1376.4	9629.6	1376.3	9639.6
GR1376.0	9649.6	1376.0	9659.6	1376.0	9669.6	1376.0	9679.6	1376.0	9689.6
GR1375.6	9699.6	1375.2	9709.6	1374.8	9719.6	1374.4	9729.6	1374.0	9739.6
GR1374.0	9749.6	1374.0	9759.6	1374.0	9769.6	1373.8	9779.6	1373.4	9789.6
GR1373.0	9799.6	1372.5	9809.6	1372.1	9819.6	1371.6	9829.6	1371.2	9839.6
GR1370.6	9849.6	1370.1	9859.6	1369.5	9869.6	1368.9	9879.6	1368.2	9889.6
GR1368.0	9899.6	1368.0	9909.6	1367.8	9919.6	1367.2	9929.6	1366.6	9939.6
X1 11.50	90	9408.8	9518.8	430	570	500			
CI 9480					50				
X3			9058.8		9518.8				
GR1390.0	9048.8	1390.0	9058.8	1390.0	9068.8	1390.0	9078.8	1389.9	9088.8
GR1389.3	9098.8	1388.7	9108.8	1388.5	9118.8	1388.4	9128.8	1388.3	9138.8
GR1388.2	9148.8	1388.1	9158.8	1388.0	9168.8	1387.6	9178.8	1387.3	9188.8
GR1387.7	9198.8	1388.0	9208.8	1388.3	9218.8	1388.5	9228.8	1388.4	9238.8
GR1388.2	9248.8	1388.0	9258.8	1387.8	9268.8	1387.3	9278.8	1386.8	9288.8
GR1386.3	9298.8	1386.0	9308.8	1386.0	9318.8	1386.0	9328.8	1386.0	9338.8
GR1386.0	9348.8	1386.0	9358.8	1385.7	9368.8	1385.5	9378.8	1385.0	9388.8
GR1384.7	9398.8	1384.3	9408.8	1384.0	9418.8	1383.6	9428.8	1383.3	9438.8

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GR1382.9  9448.8  1382.6  9458.8  1382.5  9468.8  1382.1  9478.8  1381.6  9488.8
GR1381.1  9498.8  1380.6  9508.8  1380.0  9518.8  1379.5  9528.8  1379.2  9538.8
GR1378.7  9548.8  1378.2  9558.8  1377.7  9568.8  1377.2  9578.8  1376.5  9588.8
GR1376.0  9598.8  1376.0  9608.8  1375.1  9618.8  1374.0  9628.8  1373.5  9638.8
GR1373.4  9648.8  1373.4  9658.8  1372.8  9668.8  1372.4  9678.8  1372.0  9688.8
GR1372.0  9698.8  1371.9  9708.8  1370.7  9718.8  1370.0  9728.8  1370.0  9738.8
GR1370.0  9748.8  1370.0  9758.8  1370.0  9768.8  1370.0  9778.8  1369.3  9788.8
GR1369.1  9798.8  1369.2  9808.8  1369.1  9818.8  1369.0  9828.8  1369.3  9838.8
GR1369.8  9848.8  1370.1  9858.8  1370.2  9868.8  1370.0  9878.8  1370.0  9888.8
GR1370.0  9898.8  1369.9  9908.8  1369.4  9918.8  1368.9  9928.8  1368.4  9938.8
X1 12.00      90  9386.6  9490.6     480     560     500
CI  9450
X3                        9050.6          9490.6
GR1395.5  9040.6  1395.0  9050.6  1394.6  9060.6  1394.2  9070.6  1393.8  9080.6
GR1393.5  9090.6  1393.1  9100.6  1392.9  9110.6  1392.7  9120.6  1392.6  9130.6
GR1392.6  9140.6  1392.5  9150.6  1392.4  9160.6  1392.2  9170.6  1392.0  9180.6
GR1391.7  9190.6  1391.4  9200.6  1391.1  9210.6  1390.7  9220.6  1390.3  9230.6
GR1390.0  9240.6  1390.0  9250.6  1390.0  9260.6  1390.0  9270.6  1389.7  9280.6
GR1389.1  9290.6  1388.5  9300.6  1388.0  9310.6  1387.5  9320.6  1387.1  9330.6
GR1386.6  9340.6  1386.2  9350.6  1385.7  9360.6  1385.2  9370.6  1384.8  9380.6
GR1384.4  9390.6  1384.0  9400.6  1383.8  9410.6  1383.5  9420.6  1383.2  9430.6
GR1382.9  9440.6  1382.5  9450.6  1382.1  9460.6  1381.7  9470.6  1381.4  9480.6
GR1381.0  9490.6  1380.6  9500.6  1380.3  9510.6  1379.9  9520.6  1379.5  9530.6
GR1379.2  9540.6  1378.8  9550.6  1378.5  9560.6  1378.1  9570.6  1377.7  9580.6
GR1377.3  9590.6  1376.8  9600.6  1376.5  9610.6  1376.1  9620.6  1375.6  9630.6
GR1375.0  9640.6  1374.5  9650.6  1373.9  9660.6  1373.5  9670.6  1373.0  9680.6
GR1372.4  9690.6  1371.9  9700.6  1371.3  9710.6  1370.7  9720.6  1370.2  9730.6
GR1370.0  9740.6  1370.0  9750.6  1370.0  9760.6  1370.0  9770.6  1369.5  9780.6
GR1369.1  9790.6  1368.9  9800.6  1368.7  9810.6  1368.5  9820.6  1368.2  9830.6
GR1367.6  9840.6  1366.9  9850.6  1366.3  9860.6  1366.1  9870.6  1366.0  9880.6
GR1366.0  9890.6  1366.0  9900.6  1365.2  9910.6  1364.7  9920.6  1364.3  9930.6
QT     1     200
X1 12.50      90  9413.2  9503.2     380     600     500
CI  9470                                      40
X3                        9033.2          9503.2
GR1397.2  9033.2  1396.1  9043.2  1395.4  9053.2  1395.0  9063.2  1394.6  9073.2
GR1394.2  9083.2  1393.8  9093.2  1393.4  9103.2  1392.7  9113.2  1392.1  9123.2
GR1391.1  9133.2  1390.2  9143.2  1389.1  9153.2  1388.2  9163.2  1387.9  9173.2
GR1386.9  9183.2  1386.3  9193.2  1386.4  9203.2  1387.2  9213.2  1387.6  9223.2
GR1388.0  9233.2  1388.5  9243.2  1388.5  9253.2  1388.4  9263.2  1388.0  9273.2
GR1388.0  9283.2  1388.0  9293.2  1387.7  9303.2  1387.2  9313.2  1386.9  9323.2
GR1386.6  9333.2  1386.3  9343.2  1386.0  9353.2  1386.0  9363.2  1385.7  9373.2
GR1385.2  9383.2  1384.8  9393.2  1384.5  9403.2  1384.3  9413.2  1384.3  9423.2
GR1384.2  9433.2  1383.9  9443.2  1383.7  9453.2  1383.0  9463.2  1382.9  9473.2
GR1382.7  9483.2  1382.0  9493.2  1381.6  9503.2  1381.2  9513.2  1380.7  9523.2
GR1380.2  9533.2  1379.4  9543.2  1378.6  9553.2  1377.9  9563.2  1377.0  9573.2
GR1376.1  9583.2  1375.3  9593.2  1374.4  9603.2  1374.0  9613.2  1374.0  9623.2
GR1374.0  9633.2  1374.3  9643.2  1374.6  9653.2  1374.6  9663.2  1374.7  9673.2
GR1374.8  9683.2  1374.7  9693.2  1374.4  9703.2  1374.1  9713.2  1373.8  9723.2
GR1373.4  9733.2  1373.1  9743.2  1373.3  9753.2  1374.0  9763.2  1374.2  9773.2
GR1374.2  9783.2  1374.2  9793.2  1374.1  9803.2  1373.9  9813.2  1373.5  9823.2
GR1373.1  9833.2  1372.7  9843.2  1372.3  9853.2  1372.0  9863.2  1371.5  9873.2
GR1371.1  9883.2  1370.6  9893.2  1370.2  9903.2  1369.9  9913.2  1369.5  9923.2
X1 13.00      90    9870    9990     310     720     500
CI  9940                                      30
X3                          9050            9990
GR1402.4  9100.0  1401.9  9110.0  1401.2  9120.0  1400.5  9130.0  1399.9  9140.0
GR1399.3  9150.0  1398.6  9160.0  1398.0  9170.0  1398.0  9180.0  1398.0  9190.0
GR1398.0  9200.0  1399.2  9210.0  1400.5  9220.0  1401.9  9230.0  1402.0  9240.0
GR1402.0  9250.0  1402.2  9260.0  1401.9  9270.0  1401.7  9280.0  1401.8  9290.0
GR1402.0  9300.0  1402.2  9310.0  1402.5  9320.0  1402.7  9330.0  1402.7  9340.0
GR1402.4  9350.0  1402.1  9360.0  1401.5  9370.0  1400.9  9380.0  1400.2  9390.0
GR1399.8  9400.0  1399.5  9410.0  1398.9  9420.0  1398.2  9430.0  1397.4  9440.0
GR1397.3  9450.0  1397.4  9460.0  1398.0  9470.0  1398.0  9480.0  1398.0  9490.0
GR1398.0  9500.0  1397.9  9510.0  1397.6  9520.0  1397.3  9530.0  1397.0  9540.0
GR1396.6  9550.0  1396.2  9560.0  1395.8  9570.0  1395.3  9580.0  1394.9  9590.0
GR1394.5  9600.0  1394.1  9610.0  1393.9  9620.0  1393.9  9630.0  1394.0  9640.0
GR1394.0  9650.0  1394.0  9660.0  1393.9  9670.0  1393.6  9680.0  1393.4  9690.0
GR1393.1  9700.0  1392.8  9710.0  1392.5  9720.0  1392.1  9730.0  1391.6  9740.0
GR1391.0  9750.0  1390.9  9760.0  1390.7  9770.0  1390.5  9780.0  1390.4  9790.0
GR1390.4  9800.0  1390.3  9810.0  1390.2  9820.0  1390.0  9830.0  1389.8  9840.0
GR1389.5  9850.0  1389.3  9860.0  1389.0  9870.0  1388.8  9880.0  1388.5  9890.0
GR1388.3  9900.0  1388.0  9910.0  1387.5  9920.0  1387.0  9930.0  1386.5  9940.0
GR1386.0  9950.0  1385.5  9960.0  1385.0  9970.0  1384.5  9980.0  1384.2  9990.0
*
EJ
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*
ER

FILE = MCMCH.OUT

APRIL 2, 1997

R.W. CRUFF, P.E.

MODEL = MCMCH.DAT

THIS IS THE SECOND ATTEMPT AT DESGN OF THE CHANNEL
FOR THE CHIMP ROUTINE, SLOPE = 0.002, &
BOTTOM ELEVATION = 1355 AT SECTION 2.0

T1 MCMICKEN CHANNEL DESIGN
T2 100-YEAR FLOW - RUSS CRUFF 3-17-97
T3 SECTIONS 1.5 TO 13.0

SUMMARY PRINTOUT

SECNO	Q	CWSEL	VCH	DEPTH	BW	TOPWID
1.500	5600.00	1353.77	3.63	5.77	.01	401.88
2.000	5600.00	1357.19	8.35	2.19	300.00	313.13
2.500	5600.00	1360.79	4.42	4.79	250.00	278.76
3.000	5000.00	1361.91	3.85	4.91	250.00	279.43
3.500	5000.00	1362.81	3.93	6.11	250.00	278.86
4.000	4500.00	1363.48	2.63	11.58	250.00	292.92
4.500	4500.00	1363.94	4.35	3.94	250.00	276.88
5.000	4000.00	1365.36	4.31	4.36	200.00	226.13
5.500	4000.00	1366.59	4.08	6.19	200.00	227.55
6.000	4000.00	1367.67	4.01	9.67	200.00	228.00
6.500	3000.00	1368.64	3.34	6.64	180.00	207.82
7.000	2500.00	1369.37	3.12	6.97	170.00	196.24
7.500	2000.00	1370.09	3.02	6.79	150.00	174.52
8.000	1500.00	1370.83	2.98	4.83	120.00	142.95
8.500	1500.00	1371.65	3.14	7.35	120.00	141.90
9.000	1200.00	1372.56	3.04	7.26	100.00	121.37
9.500	1000.00	1373.41	2.66	7.91	100.00	120.45
10.000	1000.00	1374.25	3.10	9.85	90.00	109.42
10.500	800.00	1375.18	2.53	7.78	90.00	109.09
11.000	400.00	1375.87	2.03	9.27	60.00	77.24
11.500	400.00	1376.60	2.67	8.20	50.00	65.58
12.000	400.00	1377.66	2.60	13.36	50.00	65.95
12.500	200.00	1378.49	1.69	8.99	40.00	54.95
13.000	200.00	1379.20	2.49	2.20	30.00	43.17

SUMMARY PRINTOUT

SECNO	Q	SSTA	ENDST	VEXR	VEXT
1.500	5600.00	9780.90	10182.78	.00	.00
2.000	5600.00	9171.25	9484.38	.00	.00
2.500	5600.00	9225.83	9504.58	48.33	48.33
3.000	5000.00	9205.38	9484.81	60.53	108.86
3.500	5000.00	9245.76	9524.62	57.35	166.21
4.000	4500.00	9657.08	9950.00	31.40	197.61
4.500	4500.00	9469.22	9746.10	19.99	217.60
5.000	4000.00	9372.58	9598.71	32.56	250.16
5.500	4000.00	9251.64	9479.18	33.66	283.82
6.000	4000.00	9251.34	9479.33	42.60	326.41
6.500	3000.00	9261.45	9469.27	47.84	374.25
7.000	2500.00	9237.50	9433.75	40.30	414.55
7.500	2000.00	9368.66	9543.17	34.80	449.35
8.000	1500.00	9454.70	9597.65	31.06	480.40
8.500	1500.00	9435.40	9577.30	28.18	508.59
9.000	1200.00	9425.76	9547.12	24.62	533.21
9.500	1000.00	9396.37	9516.82	16.45	549.66
10.000	1000.00	9362.05	9471.47	15.33	564.99
10.500	800.00	9312.28	9421.36	17.56	582.55
11.000	400.00	9478.51	9555.75	12.78	595.33
11.500	400.00	9444.61	9510.19	11.14	606.47
12.000	400.00	9414.37	9480.32	11.00	617.47
12.500	200.00	9440.03	9494.98	9.44	626.91
13.000	200.00	9916.22	9959.39	9.72	636.63

FILE = MCMCH-PL.DAT

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C
C      2
C    1.5      WITHIN MCMICKEN RESERVOIR
C   13.0      UPPER END OF CHANNEL
*
*               FILE = MCMCH-PL.DAT
*
*          THIS IS A CUTTING OF GR DATA TO BE USED FOR PLOTS OF THE CHANNEL
*            FOR CHIMP ROUTINE SLOPE = 0.002 - BOTTOM ELEV = 1355 @ STA. 2.00
*
T1            MCMICKEN CHANNEL DESIGN- PLOT
T2            100-YEAR FLOW  - RUSS CRUFF 3-18-97
T3            SECTIONS 1.5 TO 13.0
J1                2                                .002
J2      1                  -2
J3     38        43         1        26         8        30         4
J3     38        43        53        54        64        65
NC   .045      .045     0.045        .1        .3
QT      1      5600
X1   1.50        65      9600     10210         0         0         0
GR1357.7    9570.0    1357.8    9580.0    1357.9    9590.0    1358.0    9600.0    1357.9    9610.0
GR1357.9    9620.0    1357.9    9630.0    1357.8    9640.0    1357.6    9650.0    1357.5    9660.0
GR1357.3    9670.0    1357.2    9680.0    1357.0    9690.0    1356.8    9700.0    1356.6    9710.0
GR1356.4    9720.0    1356.2    9730.0    1356.0    9740.0    1355.4    9750.0    1354.8    9760.0
GR1354.4    9770.0    1354.0    9780.0    1351.4    9790.0    1349.9    9800.0    1349.7    9810.0
GR1349.6    9820.0    1349.7    9830.0    1349.8    9840.0    1350.0    9850.0    1350.1    9860.0
GR1350.2    9870.0    1350.4    9880.0    1350.5    9890.0    1350.7    9900.0    1350.6    9910.0
GR1350.5    9920.0    1350.3    9930.0    1350.2    9940.0    1350.0    9950.0    1349.5    9960.0
GR1349.0    9970.0    1348.5    9980.0    1348.1    9990.0    1348.0   10000.0    1348.0   10010.0
GR1348.0   10020.0    1348.0   10030.0    1348.0   10040.0    1348.0   10050.0    1348.0   10060.0
GR1348.0   10070.0    1348.5   10080.0    1349.0   10090.0    1349.3   10100.0    1349.7   10110.0
GR1350.4   10120.0    1351.7   10130.0    1352.3   10140.0    1352.6   10150.0    1353.0   10160.0
GR1353.3   10170.0    1353.6   10180.0    1354.2   10190.0    1356.2   10200.0    1358.2   10210.0
X1   2.00        90      9100      9500       460       530       500
CI   9330      1355                   4         2       300
X3                                 9100                9500
GR1360.0    9040.0    1360.1    9050.0    1360.5    9060.0    1360.8    9070.0    1361.2    9080.0
GR1361.4    9090.0    1361.5    9100.0    1360.9    9110.0    1360.3    9120.0    1360.0    9130.0
GR1360.0    9140.0    1360.0    9150.0    1360.6    9160.0    1361.5    9170.0    1362.0    9180.0
GR1362.0    9190.0    1362.0    9200.0    1362.0    9210.0    1362.0    9220.0    1362.0    9230.0
GR1362.0    9240.0    1361.8    9250.0    1361.4    9260.0    1361.8    9270.0    1362.0    9280.0
GR1362.0    9290.0    1362.0    9300.0    1362.0    9310.0    1362.0    9320.0    1361.5    9330.0
GR1361.0    9340.0    1360.5    9350.0    1360.0    9360.0    1360.0    9370.0    1360.0    9380.0
GR1360.0    9390.0    1360.0    9400.0    1360.0    9410.0    1360.0    9420.0    1360.3    9430.0
GR1360.6    9440.0    1360.9    9450.0    1361.2    9460.0    1361.6    9470.0    1361.9    9480.0
GR1362.0    9490.0    1362.0    9500.0    1362.0    9510.0    1361.6    9520.0    1361.0    9530.0
GR1360.6    9540.0    1360.4    9550.0    1360.2    9560.0    1359.9    9570.0    1359.8    9580.0
GR1359.6    9590.0    1359.5    9600.0    1359.3    9610.0    1359.2    9620.0    1359.1    9630.0
GR1359.1    9640.0    1359.1    9650.0    1359.1    9660.0    1359.2    9670.0    1359.2    9680.0
GR1359.2    9690.0    1359.1    9700.0    1359.1    9710.0    1359.0    9720.0    1359.0    9730.0
GR1358.9    9740.0    1358.9    9750.0    1358.9    9760.0    1358.9    9770.0    1358.7    9780.0
GR1358.5    9790.0    1358.2    9800.0    1357.9    9810.0    1357.8    9820.0    1357.6    9830.0
GR1357.4    9840.0    1357.3    9850.0    1357.2    9860.0    1357.2    9870.0    1357.1    9880.0
GR1357.1    9890.0    1357.1    9900.0    1357.1    9910.0    1357.2    9920.0    1357.3    9930.0
X1   2.50        55      9180      9520       650       200       500
CI   9370     0.002                                       250
X3                                 9090                9520
GR1369.8    9090.0    1369.6    9100.0    1369.2    9110.0    1368.8    9120.0    1368.5    9130.0
GR1368.2    9140.0    1368.0    9150.0    1368.0    9160.0    1368.0    9170.0    1368.0    9180.0
GR1368.0    9190.0    1368.0    9200.0    1368.0    9210.0    1368.0    9220.0    1368.0    9230.0
GR1368.0    9240.0    1368.0    9250.0    1368.0    9260.0    1368.0    9270.0    1368.0    9280.0
GR1367.8    9290.0    1367.4    9300.0    1367.4    9310.0    1367.4    9320.0    1367.4    9330.0
GR1367.5    9340.0    1367.4    9350.0    1367.4    9360.0    1367.3    9370.0    1367.3    9380.0
GR1367.3    9390.0    1367.4    9400.0    1367.3    9410.0    1367.2    9420.0    1367.2    9430.0
GR1367.2    9440.0    1367.1    9450.0    1366.9    9460.0    1366.8    9470.0    1366.8    9480.0
GR1366.5    9490.0    1366.0    9500.0    1365.9    9510.0    1365.8    9520.0    1365.9    9530.0
GR1366.0    9540.0    1366.0    9550.0    1366.0    9560.0    1366.0    9570.0    1366.0    9580.0
GR1366.0    9590.0    1366.0    9600.0    1365.9    9610.0    1365.4    9620.0    1364.9    9630.0
QT      1      5000
X1   3.00        50      9160      9490       540       460       500
CI   9350
X3                                 9100                9490
GR1373.6    9100.0    1373.4    9110.0    1373.2    9120.0    1373.0    9130.0    1372.8    9140.0
GR1372.5    9150.0    1372.3    9160.0    1372.1    9170.0    1371.9    9180.0    1371.7    9190.0
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GR1371.5  9200.0  1371.3  9210.0  1371.2  9220.0  1371.0  9230.0  1370.8  9240.0
GR1370.6  9250.0  1370.4  9260.0  1370.2  9270.0  1370.0  9280.0  1369.8  9290.0
GR1369.5  9300.0  1369.2  9310.0  1368.8  9320.0  1368.5  9330.0  1368.2  9340.0
GR1368.0  9350.0  1367.9  9360.0  1367.7  9370.0  1367.5  9380.0  1367.2  9390.0
GR1367.1  9400.0  1366.8  9410.0  1366.6  9420.0  1366.4  9430.0  1366.2  9440.0
GR1366.0  9450.0  1366.0  9460.0  1365.9  9470.0  1365.5  9480.0  1365.2  9490.0
GR1364.8  9500.0  1364.4  9510.0  1364.1  9520.0  1364.0  9530.0  1364.0  9540.0
GR1364.0  9550.0  1364.0  9560.0  1364.0  9570.0  1364.0  9580.0  1364.0  9590.0
X1  3.50      55    9220    9540     530     440     500
CI  9390
X3                          9200            9540
GR1371.0  9200.0  1370.7  9210.0  1370.4  9220.0  1370.0  9230.0  1369.8  9240.0
GR1369.5  9250.0  1369.2  9260.0  1369.2  9270.0  1369.1  9280.0  1369.0  9290.0
GR1369.0  9300.0  1368.9  9310.0  1368.8  9320.0  1368.8  9330.0  1368.7  9340.0
GR1368.7  9350.0  1368.6  9360.0  1368.4  9370.0  1368.2  9380.0  1368.1  9390.0
GR1368.0  9400.0  1368.0  9410.0  1368.0  9420.0  1368.0  9430.0  1367.9  9440.0
GR1367.8  9450.0  1367.6  9460.0  1367.4  9470.0  1367.2  9480.0  1367.0  9490.0
GR1366.8  9500.0  1366.6  9510.0  1366.4  9520.0  1366.1  9530.0  1365.9  9540.0
GR1365.7  9550.0  1365.6  9560.0  1365.4  9570.0  1365.2  9580.0  1365.0  9590.0
GR1364.8  9600.0  1364.6  9610.0  1364.4  9620.0  1364.3  9630.0  1364.1  9640.0
GR1363.9  9650.0  1363.6  9660.0  1363.4  9670.0  1363.2  9680.0  1362.9  9690.0
GR1362.7  9700.0  1362.4  9710.0  1362.1  9720.0  1361.9  9730.0  1361.6  9740.0
QT     1    4500
X1  4.00      60    9430    9950     600     280     500
CI  9800
X3                          9390            9950
GR1419.2    9250  1419.2    9251  1419.4    9260  1419.6    9270  1419.9    9280
GR1420.0  9390.0  1420.0  9400.0  1420.0  9410.0  1420.0  9420.0  1420.0  9430.0
GR1419.1  9440.0  1417.9  9450.0  1415.0  9460.0  1411.9  9470.0  1407.3  9480.0
GR1401.3  9490.0  1397.6  9500.0  1394.5  9510.0  1392.3  9520.0  1390.2  9530.0
GR1387.8  9540.0  1385.3  9550.0  1382.8  9560.0  1379.7  9570.0  1377.9  9580.0
GR1376.5  9590.0  1375.0  9600.0  1374.0  9610.0  1374.0  9620.0  1372.3  9630.0
GR1369.7  9640.0  1368.4  9650.0  1367.0  9660.0  1365.6  9670.0  1364.5  9680.0
GR1363.6  9690.0  1363.0  9700.0  1362.3  9710.0  1361.7  9720.0  1361.0  9730.0
GR1360.3  9740.0  1359.8  9750.0  1359.6  9760.0  1359.3  9770.0  1359.0  9780.0
GR1358.7  9790.0  1358.5  9800.0  1358.2  9810.0  1358.0  9820.0  1358.0  9830.0
GR1357.5  9840.0  1357.0  9850.0  1356.5  9860.0  1356.0  9870.0  1356.0  9880.0
GR1356.0  9890.0  1355.5    9900    1355    9910    1354    9930    1353    9950
X1  4.50      40  9426.1  9746.1     390     590     500
CI  9610
X3                        9426.1          9746.1
GR  1375    9400    1375    9401    1375    9402  1374.2  9406.1    1374  9416.1
GR1374.0  9426.1  1373.1  9436.1  1371.5  9446.1  1370.0  9456.1  1369.6  9466.1
GR1369.2  9476.1  1368.9  9486.1  1368.5  9496.1  1368.1  9506.1  1367.7  9516.1
GR1367.3  9526.1  1367.0  9536.1  1366.6  9546.1  1366.2  9556.1  1366.0  9566.1
GR1366.0  9576.1  1366.0  9586.1  1366.0  9596.1  1366.0  9606.1  1365.4  9616.1
GR1365.1  9626.1  1365.0  9636.1  1364.8  9646.1  1365.0  9656.1  1365.0  9666.1
GR1364.4  9676.1  1364.0  9686.1  1364.0  9696.1  1364.0  9706.1  1364.0  9716.1
GR1364.0  9726.1  1363.9  9736.1  1363.7  9746.1  1363.5  9756.1  1363.3  9766.1
QT     1    4000
X1   5.0      32  9340.6  9610.6     570     320     500
CI  9490                                    200
X3                        9340.6          9610.6
GR1373.7  9330.6  1373.4  9340.6  1373.1  9350.6  1372.8  9360.6  1372.5  9370.6
GR1372.2  9380.6  1371.9  9390.6  1371.4  9400.6  1370.9  9410.6  1370.4  9420.6
GR1370.0  9430.6  1370.0  9440.6  1370.0  9450.6  1369.9  9460.6  1369.1  9470.6
GR1368.2  9480.6  1368.0  9490.6  1368.0  9500.6  1367.7  9510.6  1367.2  9520.6
GR1366.8  9530.6  1366.8  9540.6  1367.1  9550.6  1367.5  9560.6  1367.6  9570.6
GR1367.8  9580.6  1367.9  9590.6  1368.0  9600.6  1368.1  9610.6  1367.9  9620.6
GR1367.6  9630.6  1367.3  9640.6
X1  5.50      36    9230    9490     500     500     500
CI  9370                                    200
X3                          9200            9490
GR1373.3  9200.0  1372.8  9210.0  1372.6  9220.0  1372.0  9230.0  1372.0  9240.0
GR1372.0  9250.0  1372.0  9260.0  1371.9  9270.0  1371.5  9280.0  1371.1  9290.0
GR1370.7  9300.0  1370.4  9310.0  1370.3  9320.0  1370.2  9330.0  1370.1  9340.0
GR1370.0  9350.0  1369.7  9360.0  1369.0  9370.0  1368.4  9380.0  1368.0  9390.0
GR1368.0  9400.0  1368.0  9410.0  1368.0  9420.0  1368.3  9430.0  1368.8  9440.0
GR1369.3  9450.0  1369.9  9460.0  1370.0  9470.0  1370.0  9480.0  1370.0  9490.0
GR1369.9  9500.0  1369.6  9510.0  1369.4  9520.0  1369.1  9530.0  1368.9  9540.0
GR1368.6  9550.0
X1  6.00      35  9209.8  9489.8     500     500     500
CI
X3                        9209.8          9489.8
GR  1378    9200    1378  9209.8    1378  9219.8    1378  9229.8    1378  9239.8
GR1377.9  9249.8  1377.3  9259.8  1376.6  9269.8  1376.0  9279.8  1376.0  9289.8
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```
GR1376.0  9299.8  1376.0  9309.8  1376.0  9319.8  1376.0  9329.8  1375.9  9339.8
GR1375.6  9349.8  1375.4  9359.8  1375.2  9369.8  1375.0  9379.8  1374.7  9389.8
GR1374.4  9399.8  1374.1  9409.8  1373.4  9419.8  1372.9  9429.8  1372.5  9439.8
GR1372.0  9449.8  1371.7  9459.8  1371.5  9469.8  1371.2  9479.8  1370.9  9489.8
GR1370.6  9499.8  1370.4  9509.8  1370.1  9519.8  1369.8  9529.8  1369.5  9539.8
QT     1    3000
X1  6.50      35  9221.8  9481.8     500     500     500
CI                                           180
X3                        9201.8          9481.8
GR1379.3  9201.8  1379.0  9211.8  1378.8  9221.8  1378.5  9231.8  1378.3  9241.8
GR1378.0  9251.8  1377.3  9261.8  1376.7  9271.8  1376.1  9281.8  1376.0  9291.8
GR1376.0  9301.8  1376.0  9311.8  1375.7  9321.8  1375.5  9331.8  1375.2  9341.8
GR1375.0  9351.8  1374.7  9361.8  1374.5  9371.8  1374.3  9381.8  1374.0  9391.8
GR1374.0  9401.8  1373.9  9411.8  1373.5  9421.8  1373.1  9431.8  1372.8  9441.8
GR1372.4  9451.8  1372.1  9461.8  1372.0  9471.8  1371.9  9481.8  1371.5  9491.8
GR1371.2  9501.8  1370.8  9511.8  1370.5  9521.8  1370.1  9531.8  1369.8  9541.8
QT     1    2500
X1  7.00      35  9196.8  9446.8     430     570     500
CI  9340                                     170
X3                        9186.8          9446.8
GR  1382  9150.8  1381.7  9156.8  1381.2  9166.8  1380.8  9176.8  1380.3  9186.8
GR1379.6  9196.8  1378.8  9206.8  1378.3  9216.8  1377.6  9226.8  1376.5  9236.8
GR1376.0  9246.8  1376.0  9256.8  1376.0  9266.8  1376.0  9276.8  1376.0  9286.8
GR1375.3  9296.8  1374.6  9306.8  1374.6  9316.8  1374.6  9326.8  1374.4  9336.8
GR1374.5  9346.8  1374.3  9356.8  1374.1  9366.8  1374.0  9376.8  1374.0  9386.8
GR1374.0  9396.8  1374.0  9406.8  1373.7  9416.8  1373.4  9426.8  1373.0  9436.8
GR1372.6  9446.8  1372.3  9456.8  1372.0  9466.8  1372.0  9476.8  1371.9  9486.8
QT     1    2000
X1  7.50      35  9337.3  9557.3     480     520     500
CI  9460                                     150
X3                        9327.3          9557.3
GR1378.5    9300  1378.1  9307.3    1378  9317.3    1378  9327.3    1378  9337.3
GR1378.0  9347.3  1378.0  9357.3  1377.7  9367.3  1377.2  9377.3  1376.8  9387.3
GR1376.4  9397.3  1376.1  9407.3  1376.0  9417.3  1375.9  9427.3  1375.8  9437.3
GR1375.7  9447.3  1375.6  9457.3  1375.4  9467.3  1375.2  9477.3  1375.1  9487.3
GR1375.0  9497.3  1374.6  9507.3  1374.3  9517.3  1374.0  9527.3  1373.8  9537.3
GR1373.4  9547.3  1373.1  9557.3  1372.8  9567.3  1372.5  9577.3  1372.2  9587.3
GR1372.0  9597.3  1371.7  9607.3  1371.4  9617.3  1371.3  9627.3  1371.2  9637.3
QT     1    1500
X1  8.00      35  9411.3  9611.3     520     480     500
CI  9530                                     120
X3                        9401.3          9611.3
GR1380.5  9401.3  1380.0  9411.3  1380.0  9421.3  1380.0  9431.3  1380.0  9441.3
GR1379.7  9451.3  1379.4  9461.3  1379.0  9471.3  1378.6  9481.3  1378.3  9491.3
GR1378.0  9501.3  1378.0  9511.3  1377.5  9521.3  1377.0  9531.3  1376.5  9541.3
GR1376.2  9551.3  1376.0  9561.3  1376.0  9571.3  1376.0  9581.3  1375.6  9591.3
GR1375.1  9601.3  1374.5  9611.3  1374.1  9621.3  1374.0  9631.3  1374.0  9641.3
GR1373.6  9651.3  1373.2  9661.3  1372.9  9671.3  1372.5  9681.3  1372.1  9691.3
GR1371.9  9701.3  1371.7  9711.3  1371.5  9721.3  1371.4  9731.3  1371.1  9741.3
X1  8.50      34    9400    9590     500     520     500
CI  9510
X3                          9370            9590
GR1381.4    9370  1381.1    9380  1380.8    9390  1380.3    9400  1380.0    9410
GR1379.8  9420.0  1379.5  9430.0  1379.1  9440.0  1378.7  9450.0  1378.4  9460.0
GR1378.1  9470.0  1377.9  9480.0  1377.6  9490.0  1377.3  9500.0  1377.0  9510.0
GR1376.8  9520.0  1376.7  9530.0  1376.6  9540.0  1376.5  9550.0  1376.3  9560.0
GR1376.1  9570.0  1375.6  9580.0  1374.9  9590.0  1374.3  9600.0  1374.0  9610.0
GR1374.0  9620.0  1373.8  9630.0  1373.4  9640.0  1373.1  9650.0  1372.8  9660.0
GR1372.7  9670.0  1372.5  9680.0  1372.4  9690.0  1372.3  9700.0
QT     1    1200
X1  9.00      36  9388.1  9558.1     500     500     500
CI  9490                                     100
X3                        9368.1          9558.1
GR1383.0  9350.1  1382.8  9358.1  1382.4  9368.1  1382.1  9378.1  1381.8  9388.1
GR1381.4  9398.1  1381.1  9408.1  1380.8  9418.1  1380.4  9428.1  1380.1  9438.1
GR1379.6  9448.1  1379.2  9458.1  1378.7  9468.1  1378.2  9478.1  1377.9  9488.1
GR1377.6  9498.1  1377.2  9508.1  1376.9  9518.1  1376.7  9528.1  1376.4  9538.1
GR1376.1  9548.1  1375.8  9558.1  1375.5  9568.1  1375.2  9578.1  1375.0  9588.1
GR1374.7  9598.1  1374.5  9608.1  1374.3  9618.1  1374.1  9628.1  1374.0  9638.1
GR1373.5  9648.1  1373.4  9658.1  1372.6  9668.1  1372.2  9678.1  1372.0  9688.1
GR1371.6  9698.1
QT     1    1000
X1  9.50      25    9375    9525     480     520     500
CI  9460                                     100
X3                          9375            9525
GR1378.7  9350.0  1378.1  9355.0  1377.8  9365.0  1377.4  9375.0  1376.4  9385.0
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GR1376.1  9395.0  1376.0  9405.0  1375.5  9415.0  1374.9  9425.0  1374.0  9435.0
GR1374.0  9445.0  1374.0  9455.0  1374.0  9465.0  1374.0  9475.0  1374.2  9485.0
GR1374.7  9495.0  1375.1  9505.0  1375.5  9515.0  1375.8  9525.0  1375.5  9535.0
GR1375.4  9545.0  1375.1  9555.0  1374.8  9565.0  1374.5  9575.0  1374.1  9585.0
X1 10.00      30    9330    9490     430     580     500
CI  9420                                      90
X3                        9320            9490
GR1383.7    9300  1383.5    9305  1383.4    9310  1383.2    9320  1382.8    9330
GR1382.4  9340.0  1382.1  9350.0  1382.0  9360.0  1381.8  9370.0  1381.6  9380.0
GR1381.0  9390.0  1380.0  9400.0  1380.0  9410.0  1380.0  9420.0  1379.7  9430.0
GR1379.3  9440.0  1379.0  9450.0  1378.7  9460.0  1378.4  9470.0  1378.0  9480.0
GR1377.8  9490.0  1377.2  9500.0  1376.6  9510.0  1376.0  9520.0  1376.0  9530.0
GR1375.8  9540.0  1375.7  9550.0  1376.0  9560.0  1376.1  9570.0  1375.8  9580.0
QT     1     800
X1 10.50      30  9287.8  9427.8     490     530     500
CI  9370
X3                      9267.8          9427.8
GR  1385    9250  1383.9  9257.8  1383.1  9267.8  1382.5  9277.8  1381.5  9287.8
GR  1380  9297.8    1380  9307.8    1380  9317.8    1380  9327.8    1380  9337.8
GR1380.0  9347.8  1380.0  9357.8  1378.7  9367.8  1378.0  9377.8  1378.0  9387.8
GR1378.0  9397.8  1378.0  9407.8  1378.0  9417.8  1378.0  9427.8  1376.8  9437.8
GR1376.6  9447.8  1376.4  9457.8  1376.3  9467.8  1376.2  9477.8  1376.2  9487.8
GR1376.2  9497.8  1376.0  9507.8  1376.0  9517.8  1376.0  9527.8  1376.0  9537.8
QT     1     400
X1 11.00      15  9459.6  9569.6     490     510     500
CI  9520                                      60
X3                      9459.6          9569.6
GR1381.0  9450.6  1380.9  9459.6  1380.6  9469.6  1380.7  9479.6  1380.7  9489.6
GR1380.6  9499.6  1380.4  9509.6  1380.2  9519.6  1380.0  9529.6  1379.8  9539.6
GR1379.5  9549.6  1379.2  9559.6  1378.8  9569.6  1378.3  9579.6  1377.6  9589.6
X1 11.50      16  9408.8  9518.8     430     570     500
CI  9480                                      50
X3                      9408.8          9518.8
GR1384.7  9400.8  1384.3  9408.8  1384.0  9418.8  1383.6  9428.8  1383.3  9438.8
GR1382.9  9448.8  1382.6  9458.8  1382.5  9468.8  1382.1  9478.8  1381.6  9488.8
GR1381.1  9498.8  1380.6  9508.8  1380.0  9518.8  1379.5  9528.8  1379.2  9538.8
GR1378.7  9548.8
X1 12.00      17  9380.6  9490.6     480     560     500
CI  9450
X3                      9350.6          9490.6
GR1386.3    9350  1386.2  9350.6  1385.7  9360.6  1385.2  9370.6  1384.8  9380.6
GR1384.4  9390.6  1384.0  9400.6  1383.8  9410.6  1383.5  9420.6  1383.2  9430.6
GR1382.9  9440.6  1382.5  9450.6  1382.1  9460.6  1381.7  9470.6  1381.4  9480.6
GR1381.0  9490.6  1380.6  9500.0
QT     1     200
X1 12.50      17  9413.2  9503.2     380     600     500
CI  9470                                      40
X3                      9403.2          9503.2
GR1384.7  9400.0  1384.6  9403.1  1384.5  9403.2  1384.3  9413.2  1384.3  9423.2
GR1384.2  9433.2  1383.9  9443.2  1383.7  9453.2  1383.0  9463.2  1382.9  9473.2
GR1382.7  9483.2  1382.0  9493.2  1381.6  9503.2  1381.2  9513.2  1380.7  9523.2
GR1380.2  9533.2  1379.4  9543.2
X1 13.00      16    9870    9990     310     720     500
CI  9940                                      30
X3                        9850            9990
GR1389.5  9850.0  1389.3  9860.0  1389.0  9870.0  1388.8  9880.0  1388.5  9890.0
GR1388.3  9900.0  1388.0  9910.0  1387.5  9920.0  1387.0  9930.0  1386.5  9940.0
GR1386.0  9950.0  1385.5  9960.0  1385.0  9970.0  1384.5  9980.0  1384.2  9990.0
GR1384.0   10000
*
EJ
*
ER
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FILE = MCMCH-PL.OUT

APRIL 2, 1997

R.W. CRUFF, P.E.

FILE = MCMCH-PL.DAT

THIS IS A CUTTING OF GR DATA TO BE USED FOR PLOTS OF THE CHANNEL
FOR CHIMP ROUTINE SLOPE = 0.002 - BOTTOM ELEV = 1355 @ STA. 2.00

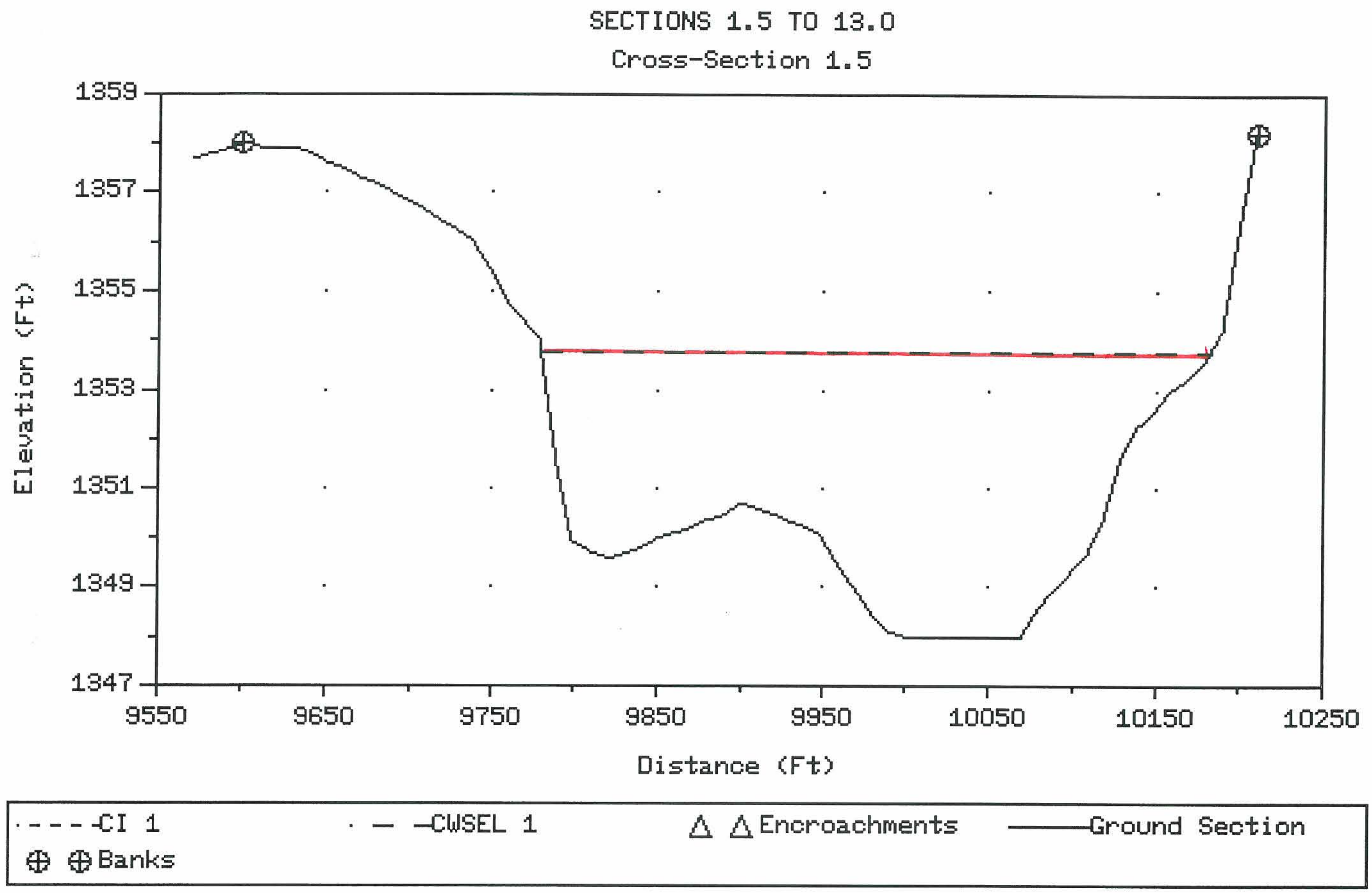
T1 MCMICKEN CHANNEL DESIGN- PLOT
T2 100-YEAR FLOW - RUSS CRUFF 3-18-97
T3 SECTIONS 1.5 TO 13.0

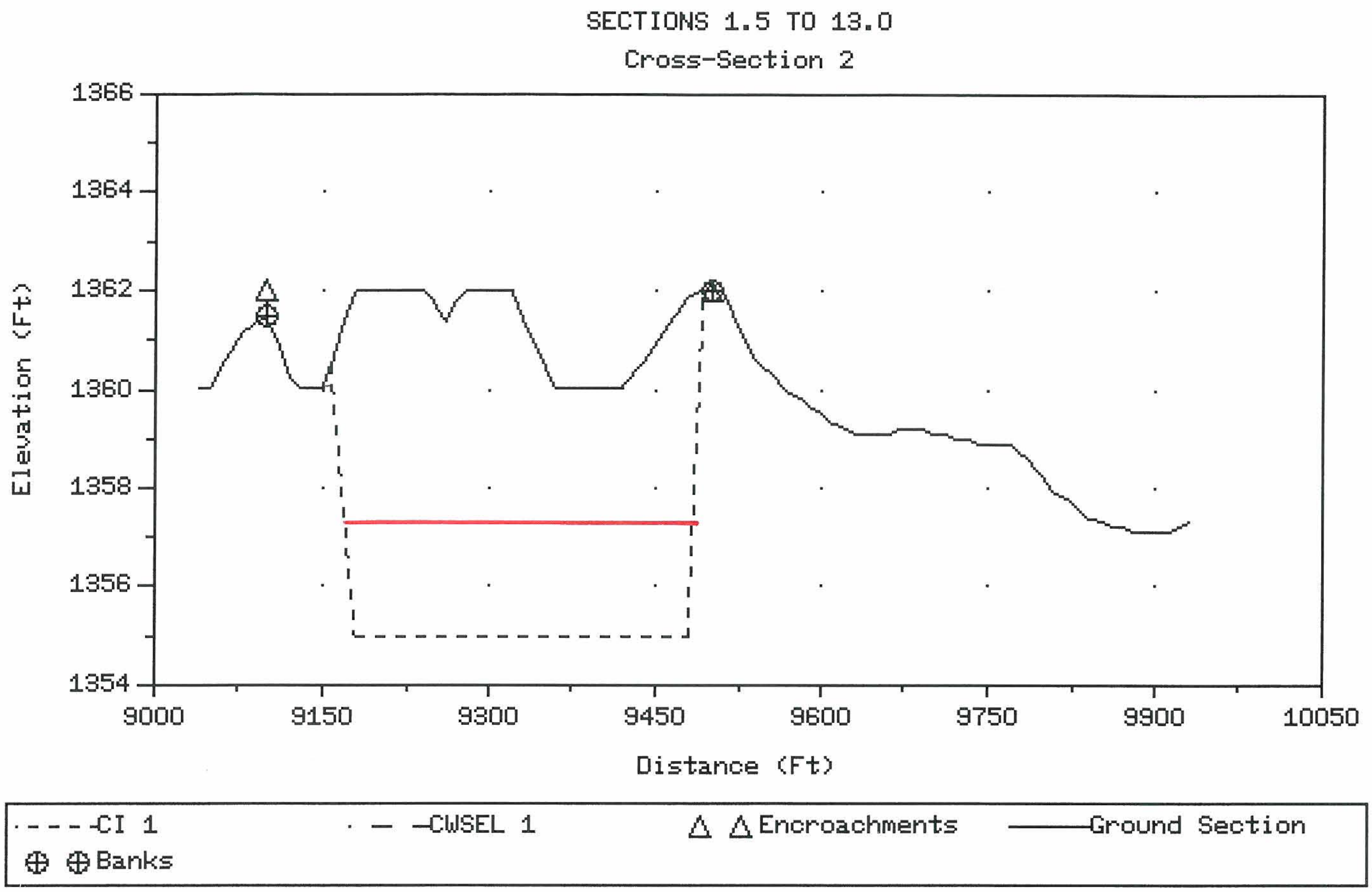
SUMMARY PRINTOUT

SECNO	Q	CWSEL	VCH	DEPTH	BW	TOPWID
1.500	5600.00	1353.77	3.63	5.77	.01	401.88
2.000	5600.00	1357.19	8.35	2.19	300.00	313.13
2.500	5600.00	1360.79	4.42	4.79	250.00	278.76
3.000	5000.00	1361.91	3.85	4.91	250.00	279.43
3.500	5000.00	1362.81	3.93	4.81	250.00	278.86
4.000	4500.00	1363.48	2.63	10.48	250.00	292.91
4.500	4500.00	1363.94	4.36	3.94	250.00	276.87
5.000	4000.00	1365.36	4.31	4.36	200.00	226.12
5.500	4000.00	1366.59	4.08	4.59	200.00	227.54
6.000	4000.00	1367.67	4.01	4.67	200.00	228.00
6.500	3000.00	1368.64	3.34	4.64	180.00	207.82
7.000	2500.00	1369.37	3.12	4.37	170.00	196.24
7.500	2000.00	1370.09	3.02	4.09	150.00	174.52
8.000	1500.00	1370.83	2.98	3.83	120.00	142.95
8.500	1500.00	1371.65	3.14	3.65	120.00	141.90
9.000	1200.00	1372.56	3.04	3.56	100.00	121.37
9.500	1000.00	1373.41	2.66	3.41	100.00	120.45
10.000	1000.00	1374.25	3.10	3.25	90.00	109.42
10.500	800.00	1375.18	2.53	3.18	90.00	109.09
11.000	400.00	1375.87	2.03	2.87	60.00	77.24
11.500	400.00	1376.60	2.67	2.60	50.00	65.58
12.000	400.00	1377.66	2.60	2.66	50.00	65.95
12.500	200.00	1378.49	1.69	2.49	40.00	54.95
13.000	200.00	1379.20	2.49	2.20	30.00	43.17

SUMMARY PRINTOUT

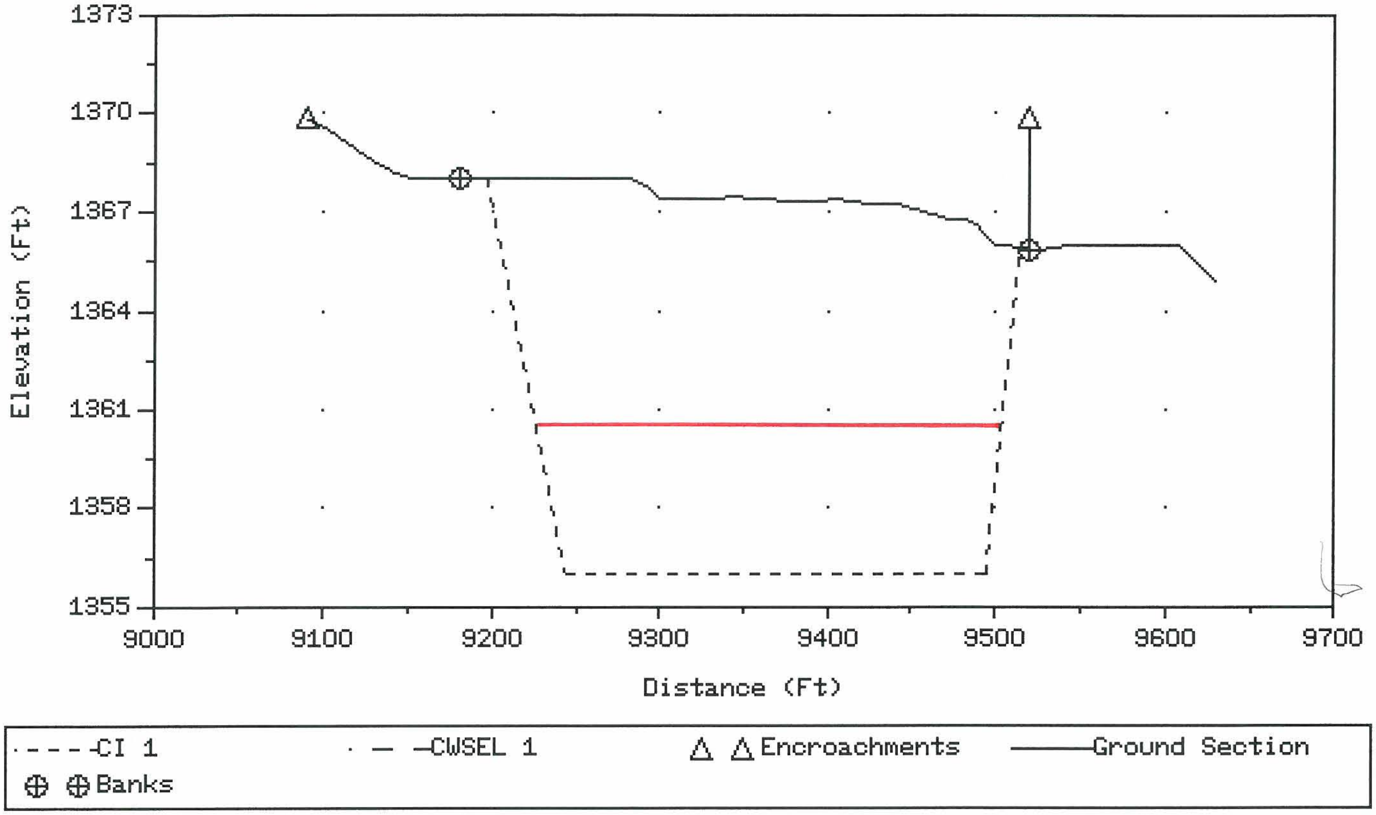
SECNO	Q	SSTA	ENDST	VEXR	VEXT
1.500	5600.00	9780.90	10182.78	.00	.00
2.000	5600.00	9171.25	9484.38	.00	.00
2.500	5600.00	9225.83	9504.58	48.33	48.33
3.000	5000.00	9205.38	9484.81	60.53	108.86
3.500	5000.00	9245.76	9524.62	57.35	166.21
4.000	4500.00	9657.08	9950.00	31.40	197.61
4.500	4500.00	9469.23	9746.10	19.99	217.60
5.000	4000.00	9372.58	9598.71	32.56	250.16
5.500	4000.00	9251.64	9479.18	33.66	283.82
6.000	4000.00	9251.33	9479.33	42.60	326.41
6.500	3000.00	9261.45	9469.27	47.84	374.25
7.000	2500.00	9237.51	9433.75	40.30	414.55
7.500	2000.00	9368.66	9543.17	34.80	449.35
8.000	1500.00	9454.70	9597.65	31.06	480.40
8.500	1500.00	9435.40	9577.30	28.18	508.59
9.000	1200.00	9425.76	9547.12	24.62	533.21
9.500	1000.00	9396.37	9516.82	16.45	549.66
10.000	1000.00	9362.05	9471.47	15.33	564.99
10.500	800.00	9312.28	9421.36	17.56	582.55
11.000	400.00	9478.51	9555.75	12.78	595.33
11.500	400.00	9444.61	9510.19	11.14	606.47
12.000	400.00	9414.37	9480.32	11.00	617.47
12.500	200.00	9440.03	9494.98	9.44	626.91
13.000	200.00	9916.22	9959.39	9.72	636.63

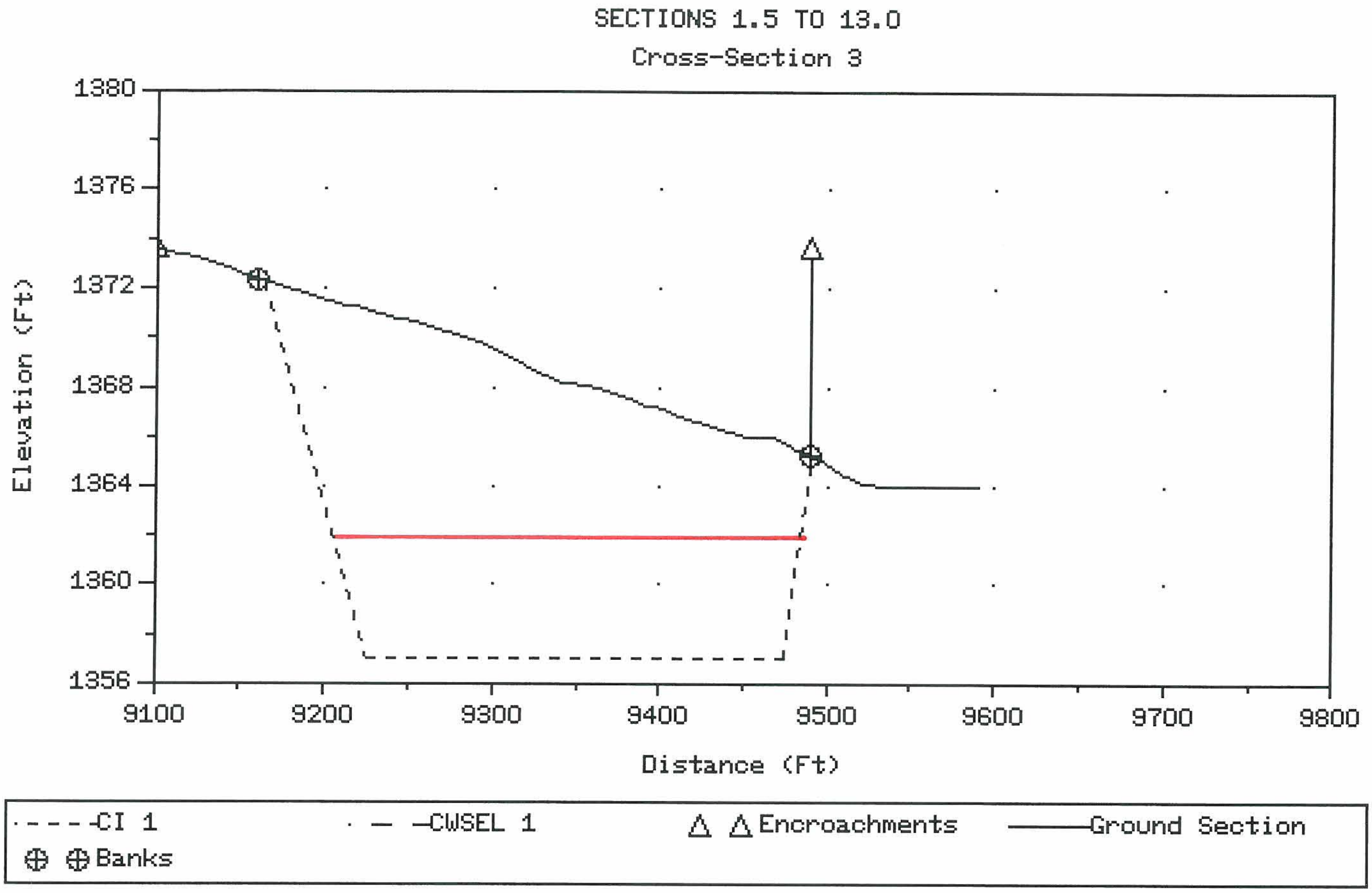

SECTIONS 1.5 TO 13.0
Cross-Section 1.5
Elevation (Ft)
1359
1357
1355
1353
1351
1349
1347
9550
9650
9750
9850
9950
10050
10150
10250
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks



SECTIONS 1.5 TO 13.0
Cross-Section 2
1366
1364
1362
1360
1358
1356
1354
Elevation (Ft)
9000
9150
9300
9450
9600
9750
9900
10050
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

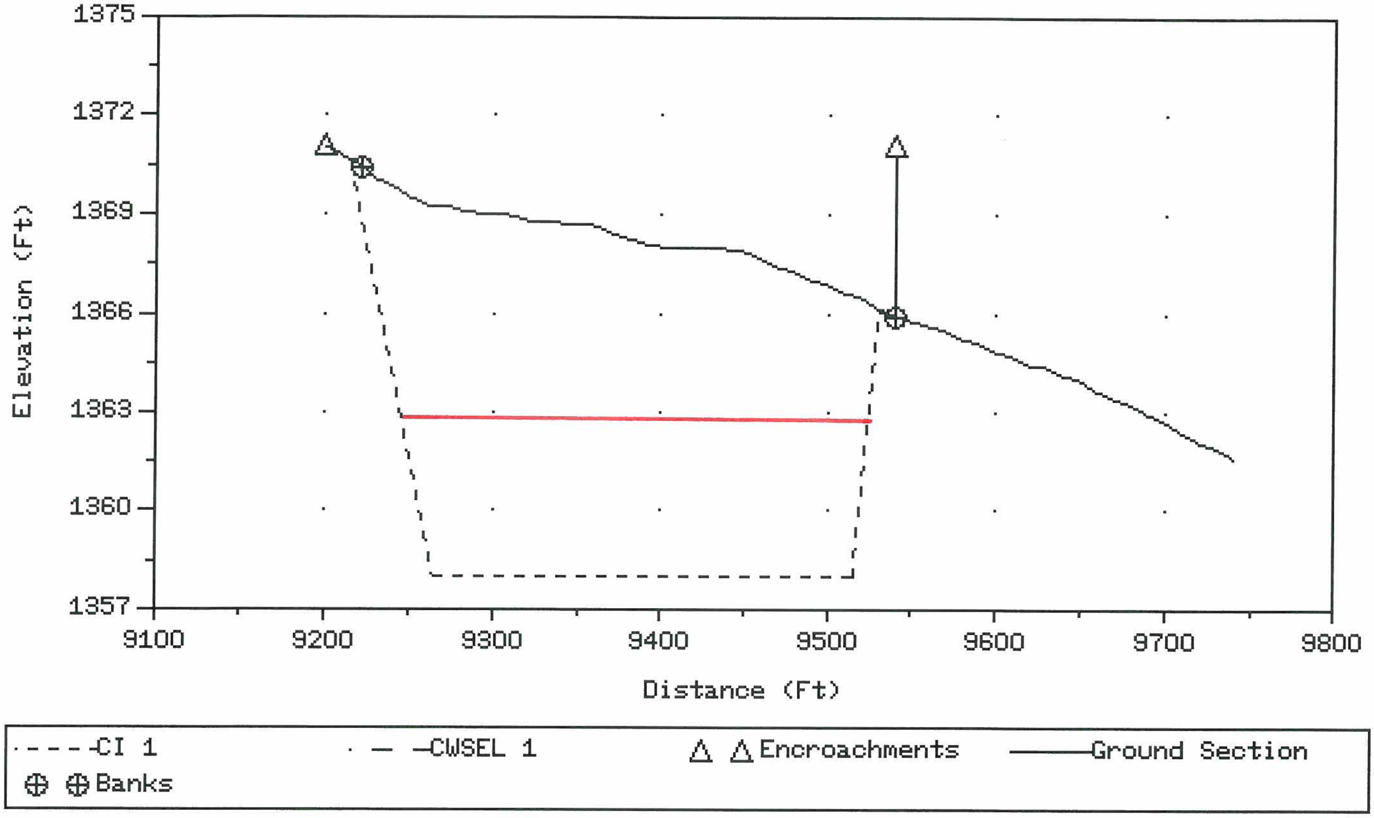
SECTIONS 1.5 TO 13.0
Cross-Section 2.5

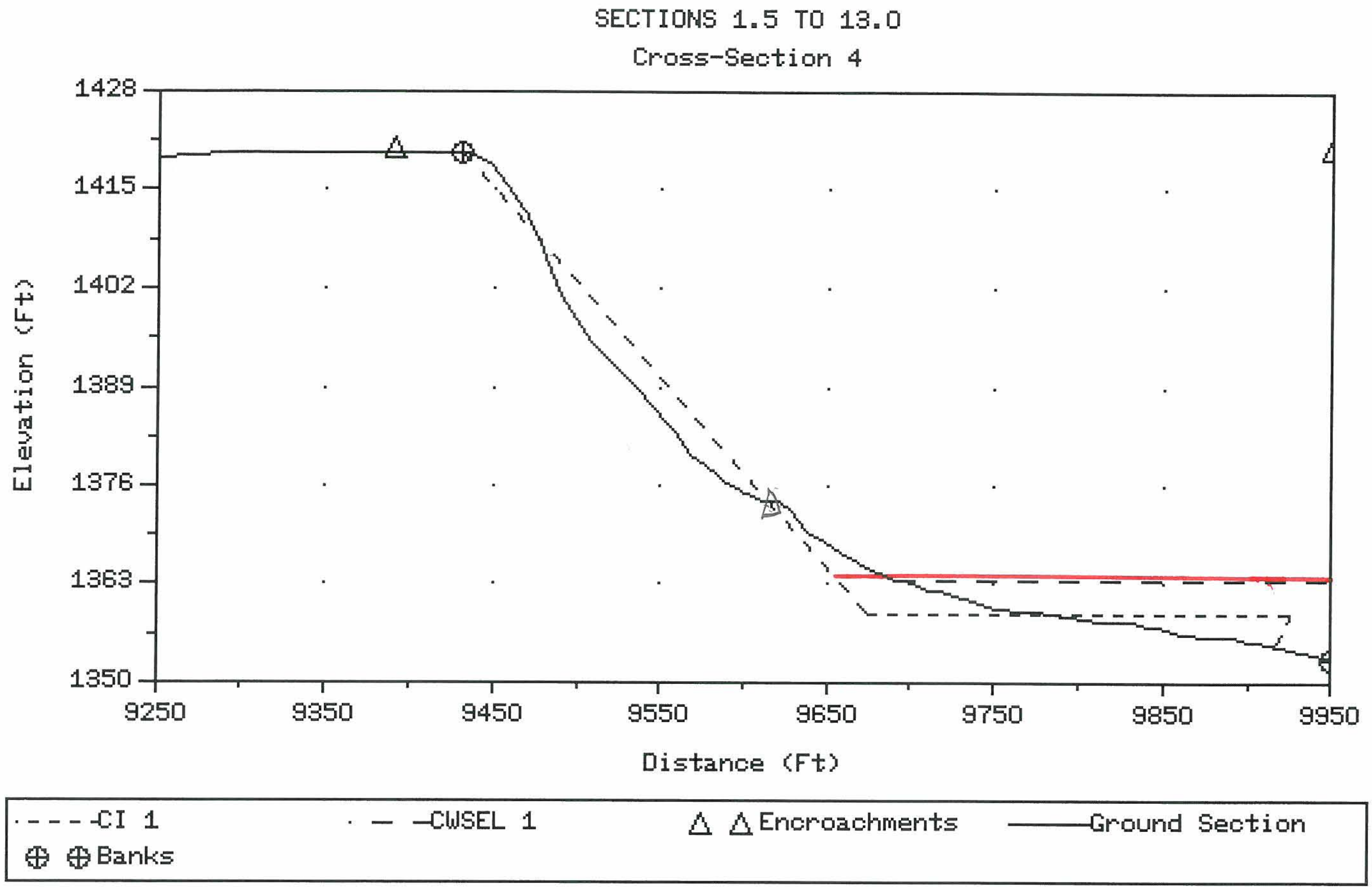


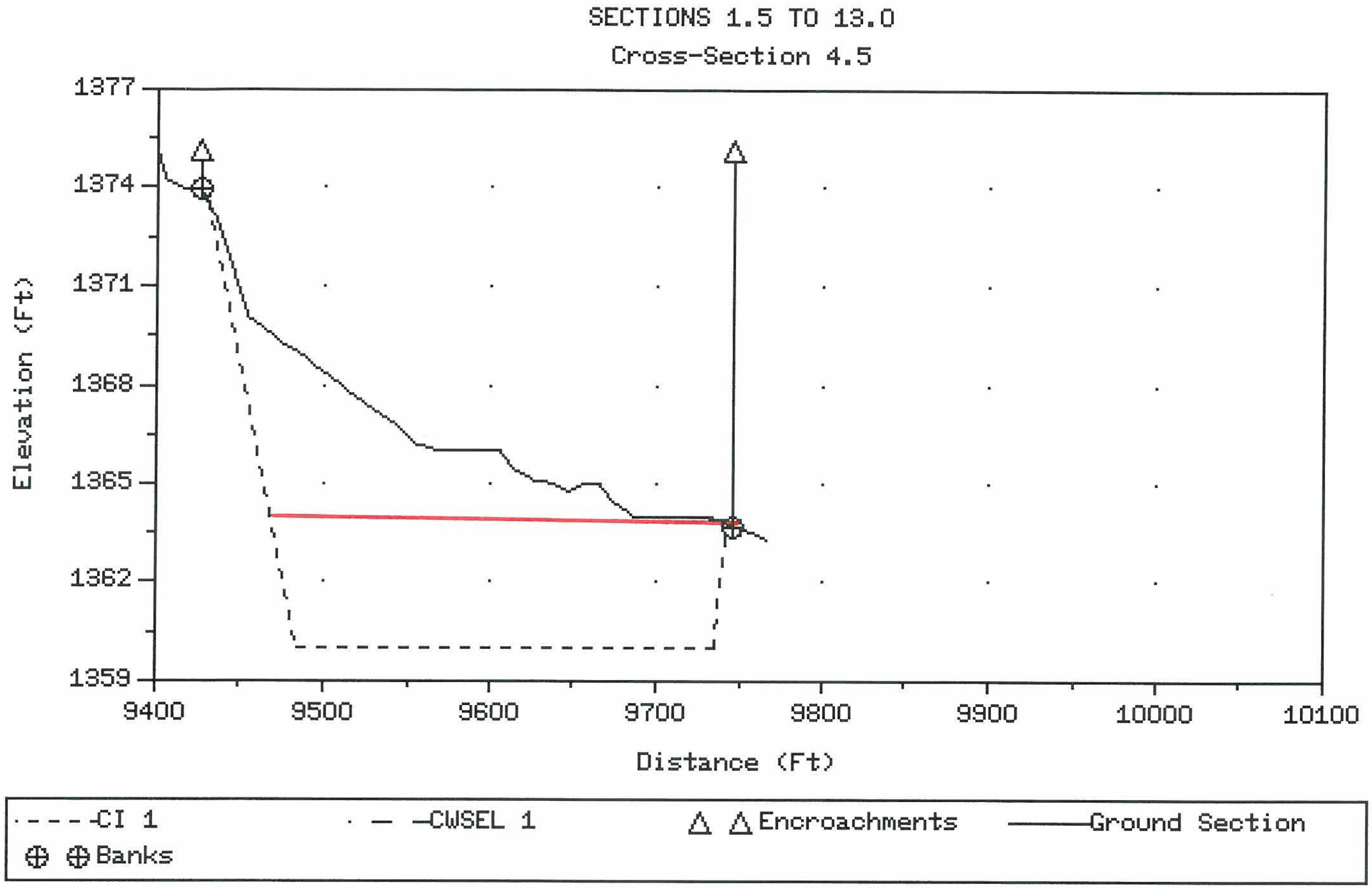


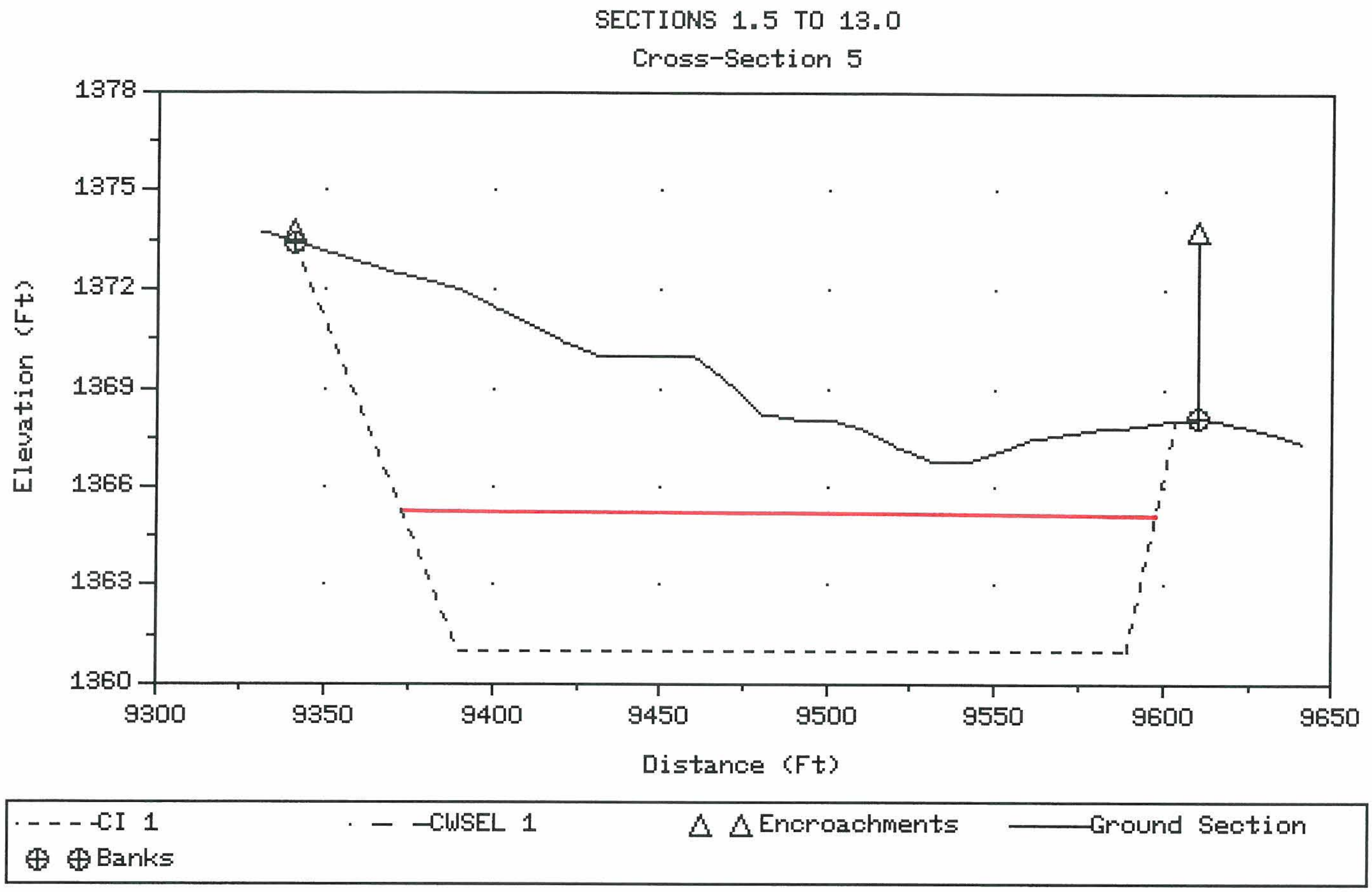
SECTIONS 1.5 TO 13.0
Cross-Section 3
Elevation (Ft)
1380
1376
1372
1368
1364
1360
1356
9100
9200
9300
9400
9500
9600
9700
9800
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

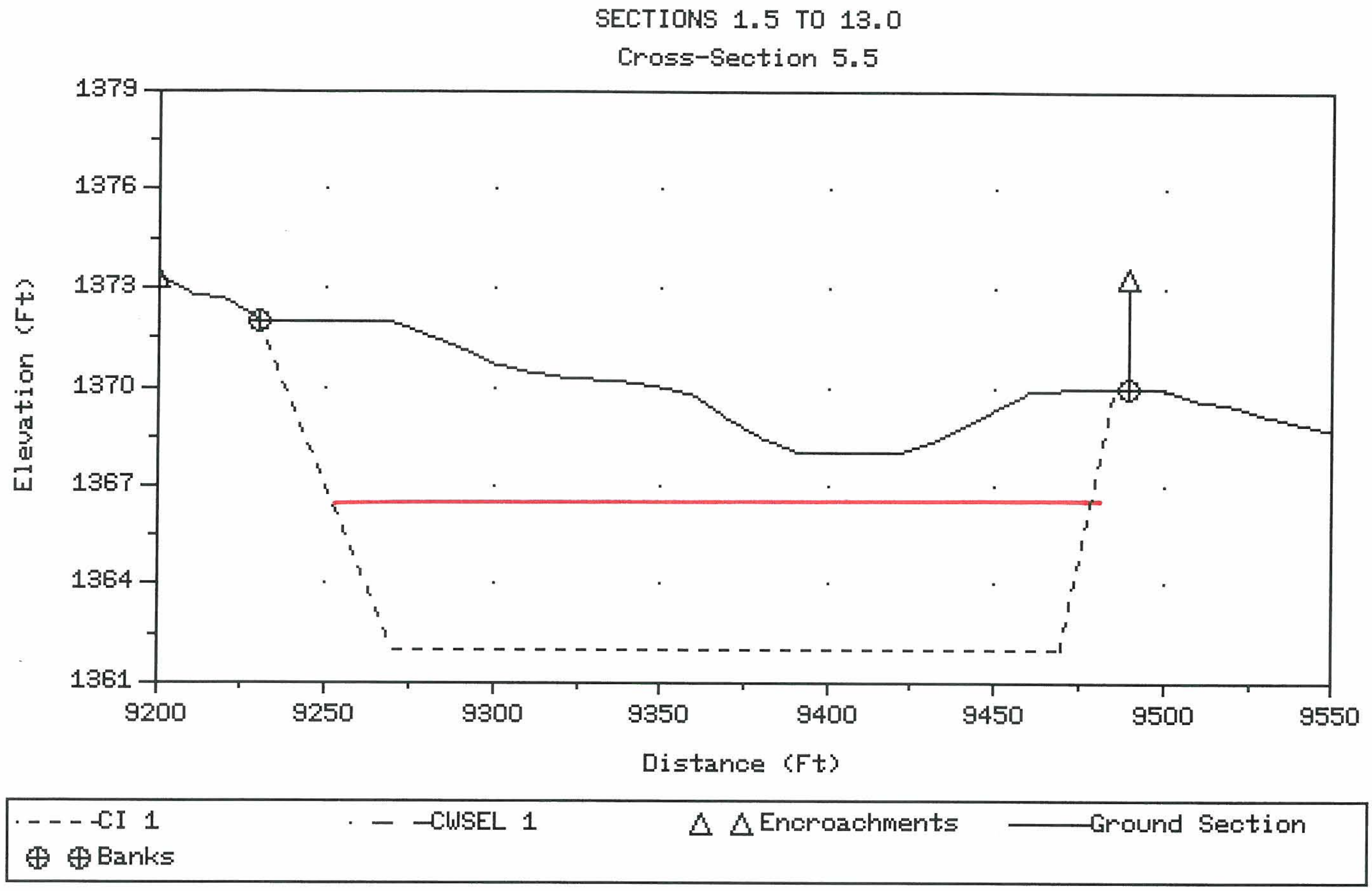
SECTIONS 1.5 TO 13.0
Cross-Section 3.5




SECTIONS 1.5 TO 13.0
Cross-Section 4
1428
1415
1402
1389
1376
1363
1350
Elevation (Ft)
9250
9350
9450
9550
9650
9750
9850
9950
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

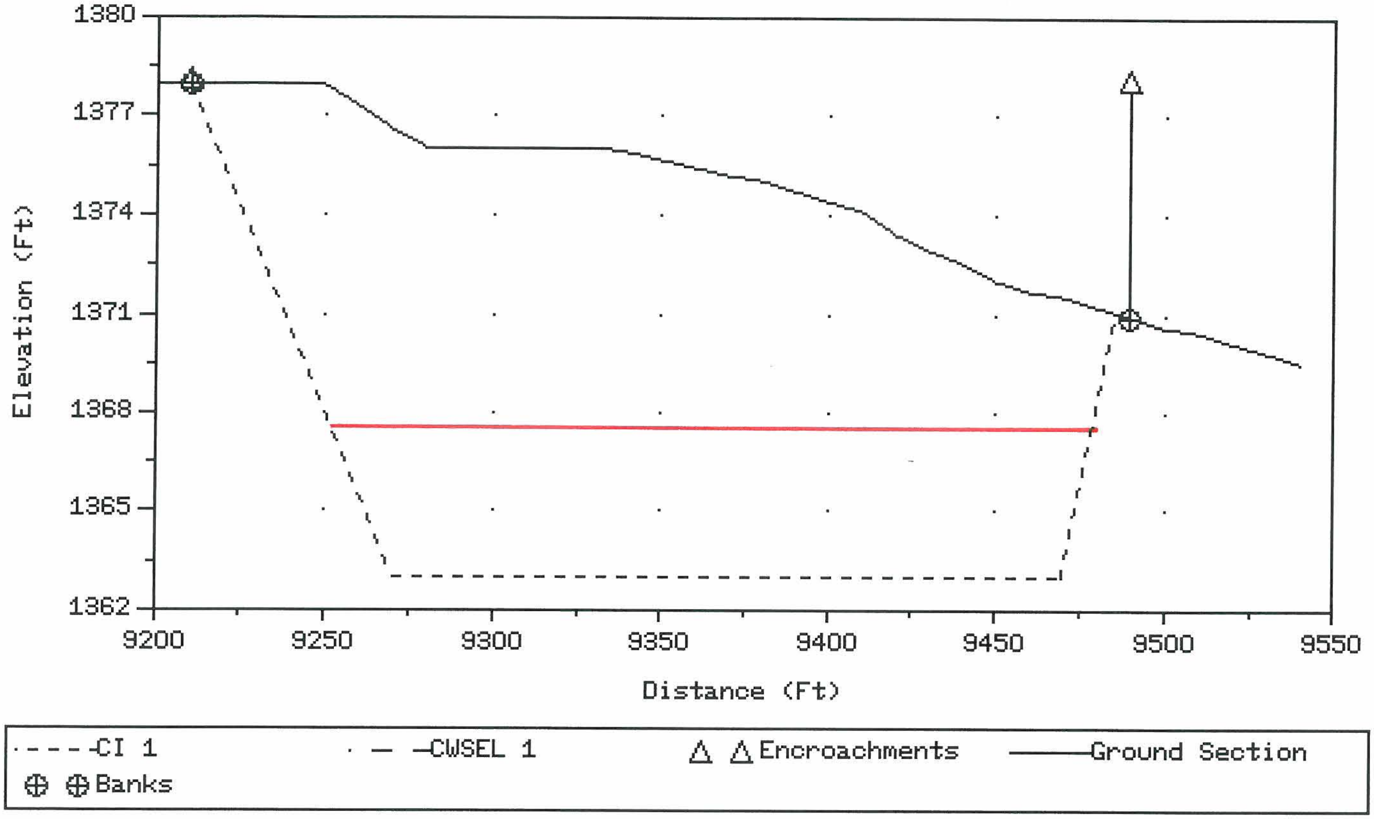

SECTIONS 1.5 TO 13.0
Cross-Section 4.5
Elevation (Ft)
1377
1374
1371
1368
1365
1362
1359
9400
9500
9600
9700
9800
9900
10000
10100
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

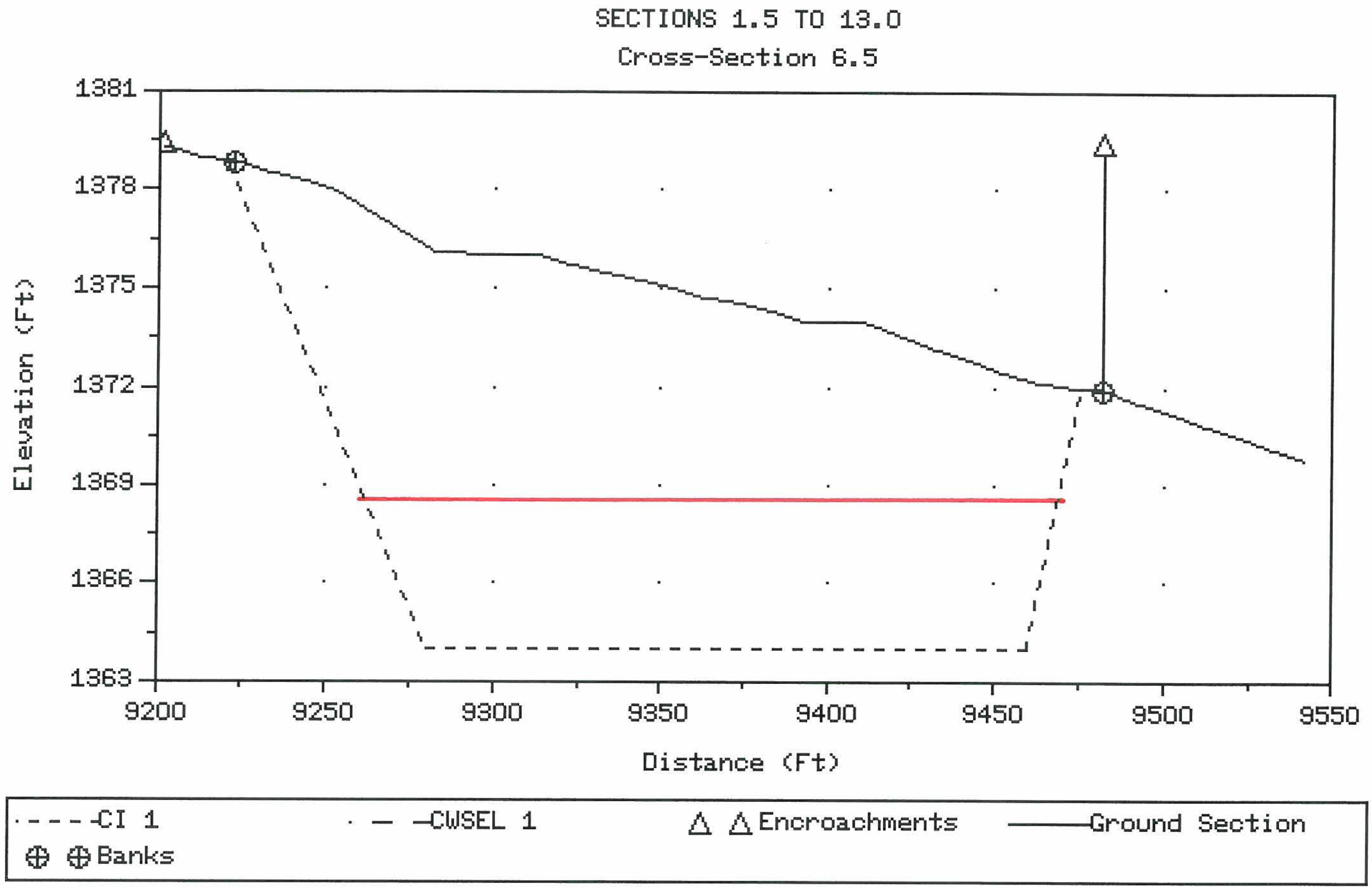

SECTIONS 1.5 TO 13.0
Cross-Section 5
1378
1375
1372
1369
1366
1363
1360
Elevation (Ft)
9300
9350
9400
9450
9500
9550
9600
9650
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks


SECTIONS 1.5 TO 13.0
Cross-Section 5.5
Elevation (Ft)
1379
1376
1373
1370
1367
1364
1361
9200
9250
9300
9350
9400
9450
9500
9550
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

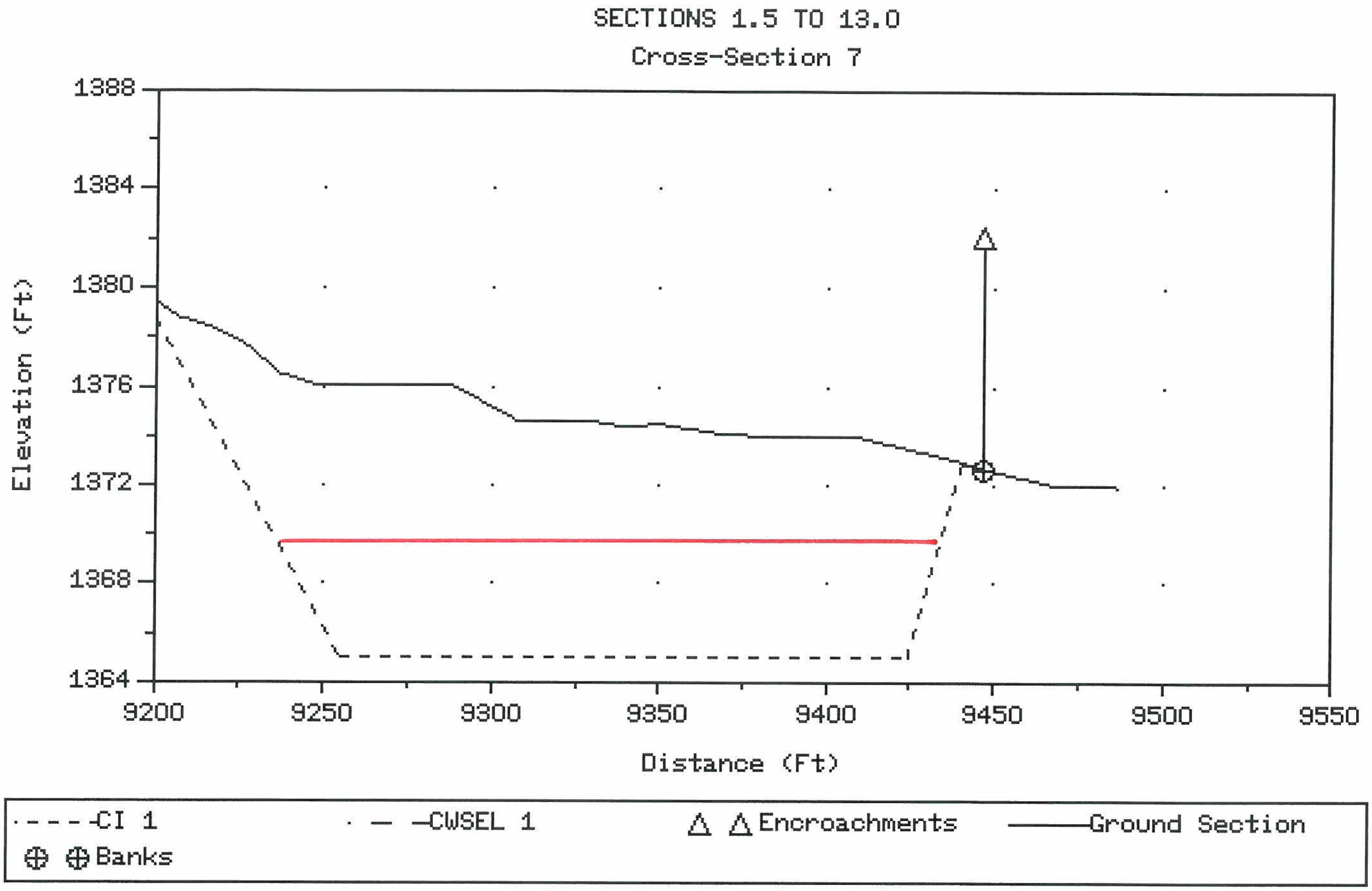
SECTIONS 1.5 TO 13.0

Cross-Section 6

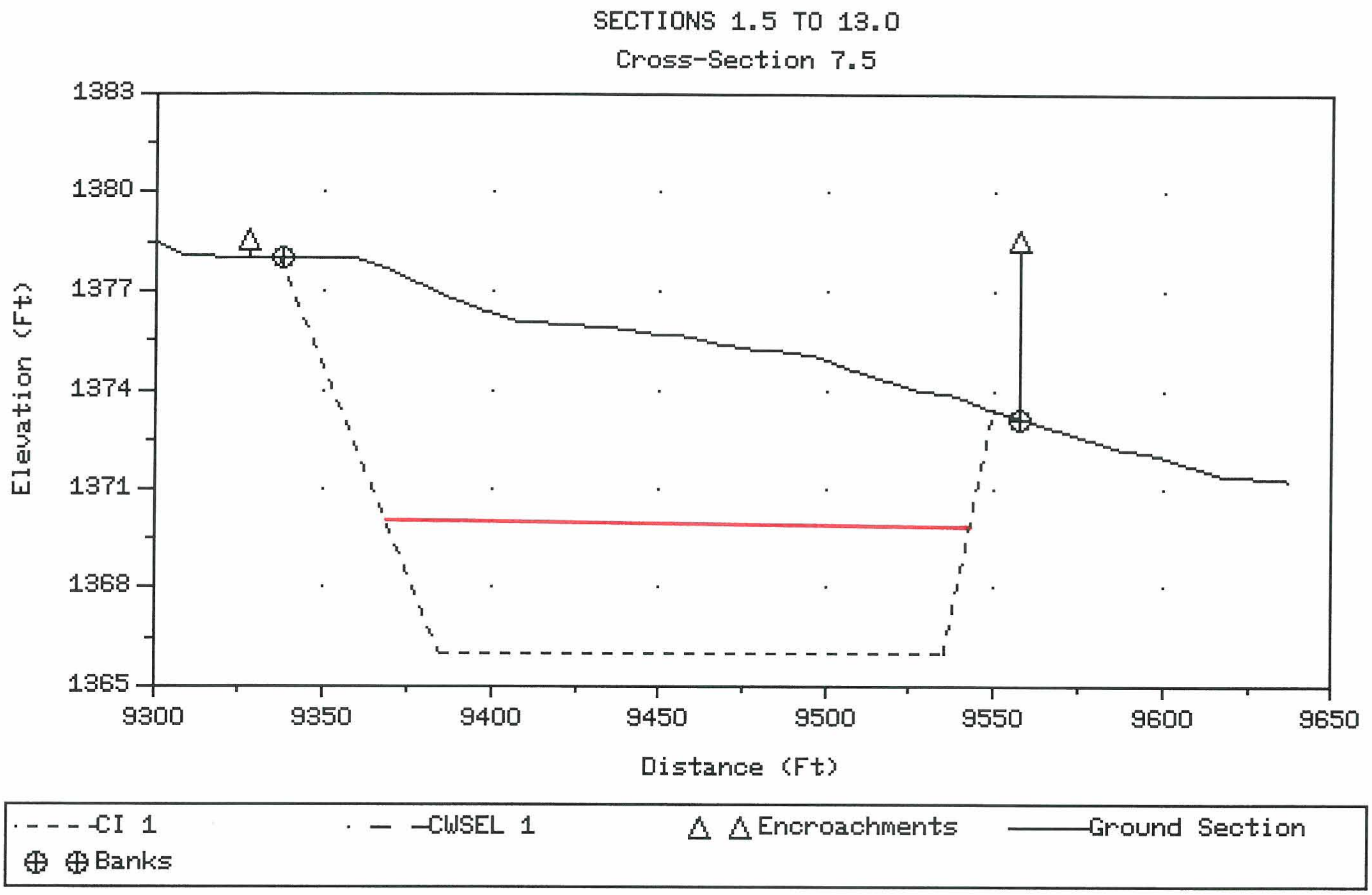




SECTIONS 1.5 TO 13.0
Cross-Section 6.5
1381
1378
1375
1372
1369
1366
1363
Elevation (Ft)
9200
9250
9300
9350
9400
9450
9500
9550
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks



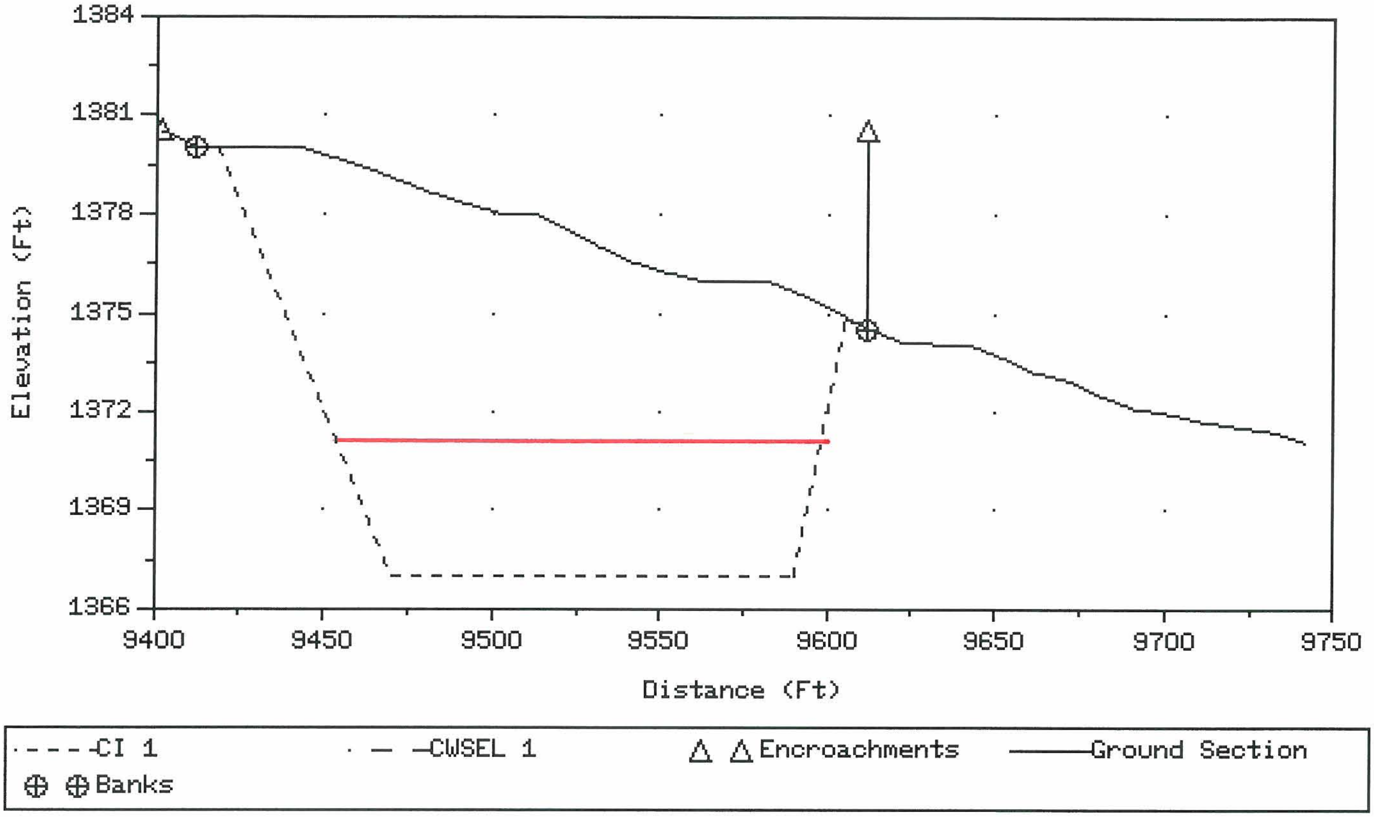
SECTIONS 1.5 TO 13.0
Cross-Section 7
Elevation (Ft)
1388
1384
1380
1376
1372
1368
1364
9200
9250
9300
9350
9400
9450
9500
9550
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks



SECTIONS 1.5 TO 13.0
Cross-Section 7.5
1383
1380
1377
1374
1371
1368
1365
Elevation (Ft)
9300
9350
9400
9450
9500
9550
9600
9650
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

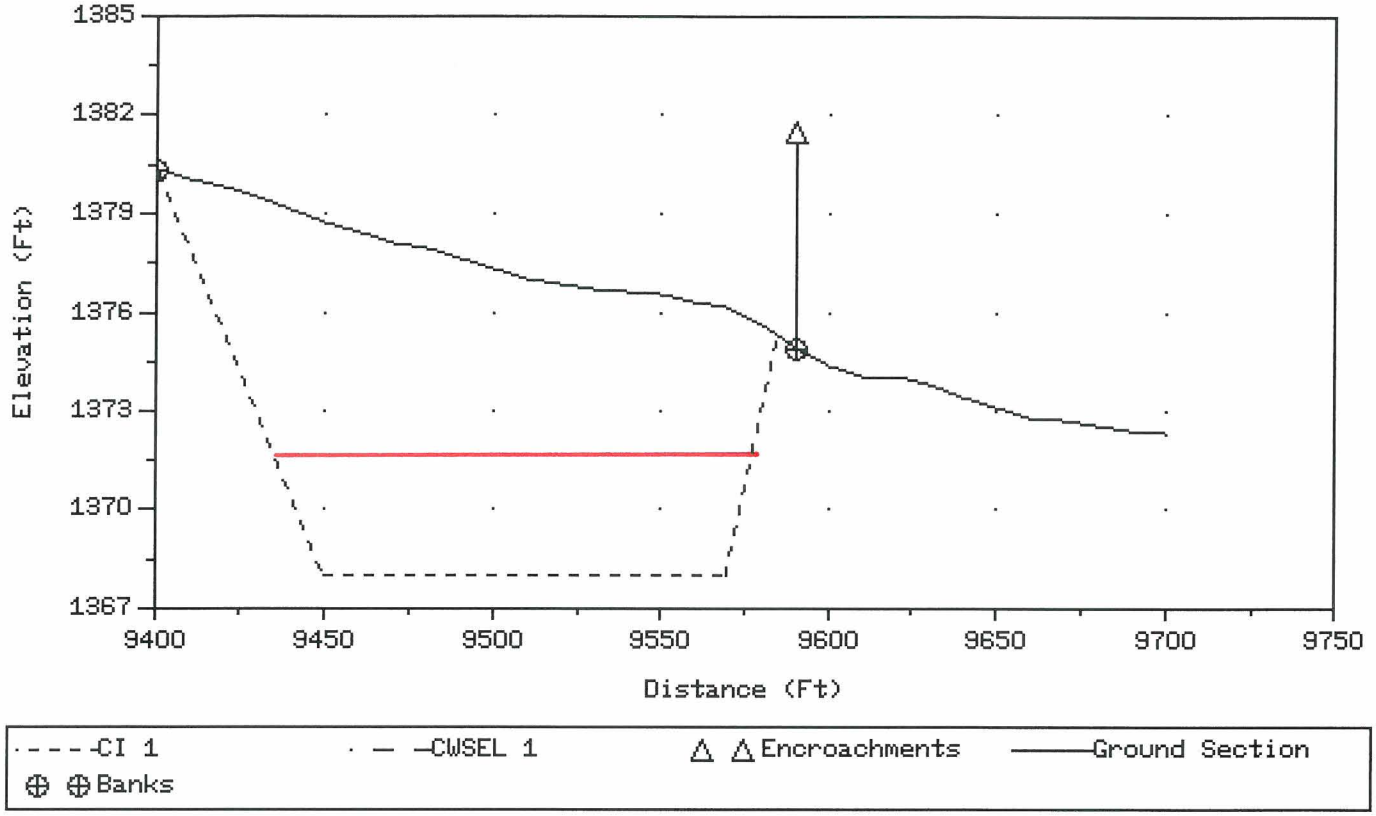
SECTIONS 1.5 TO 13.0

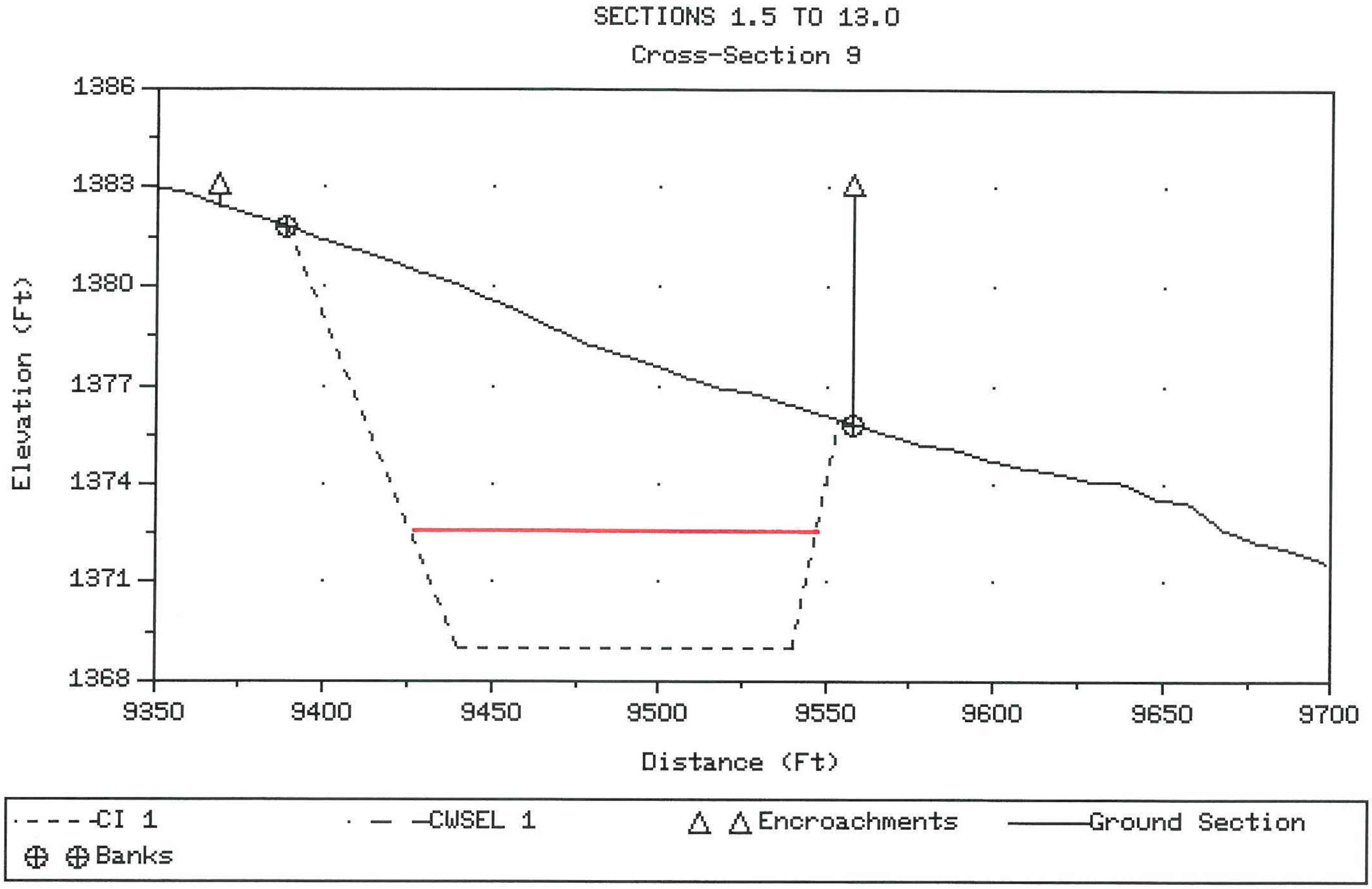
Cross-Section 8

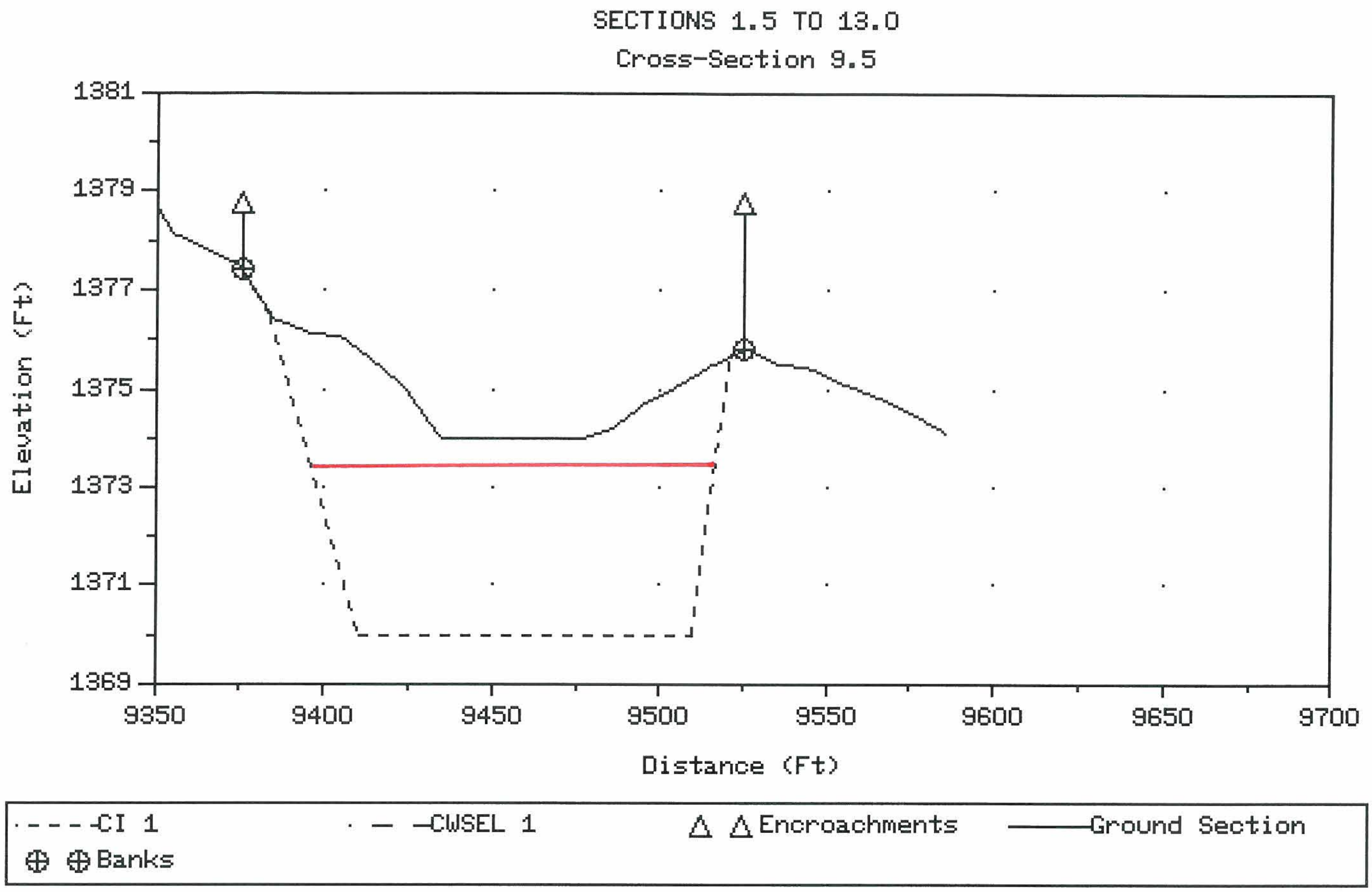


SECTIONS 1.5 TO 13.0

Cross-Section 8.5



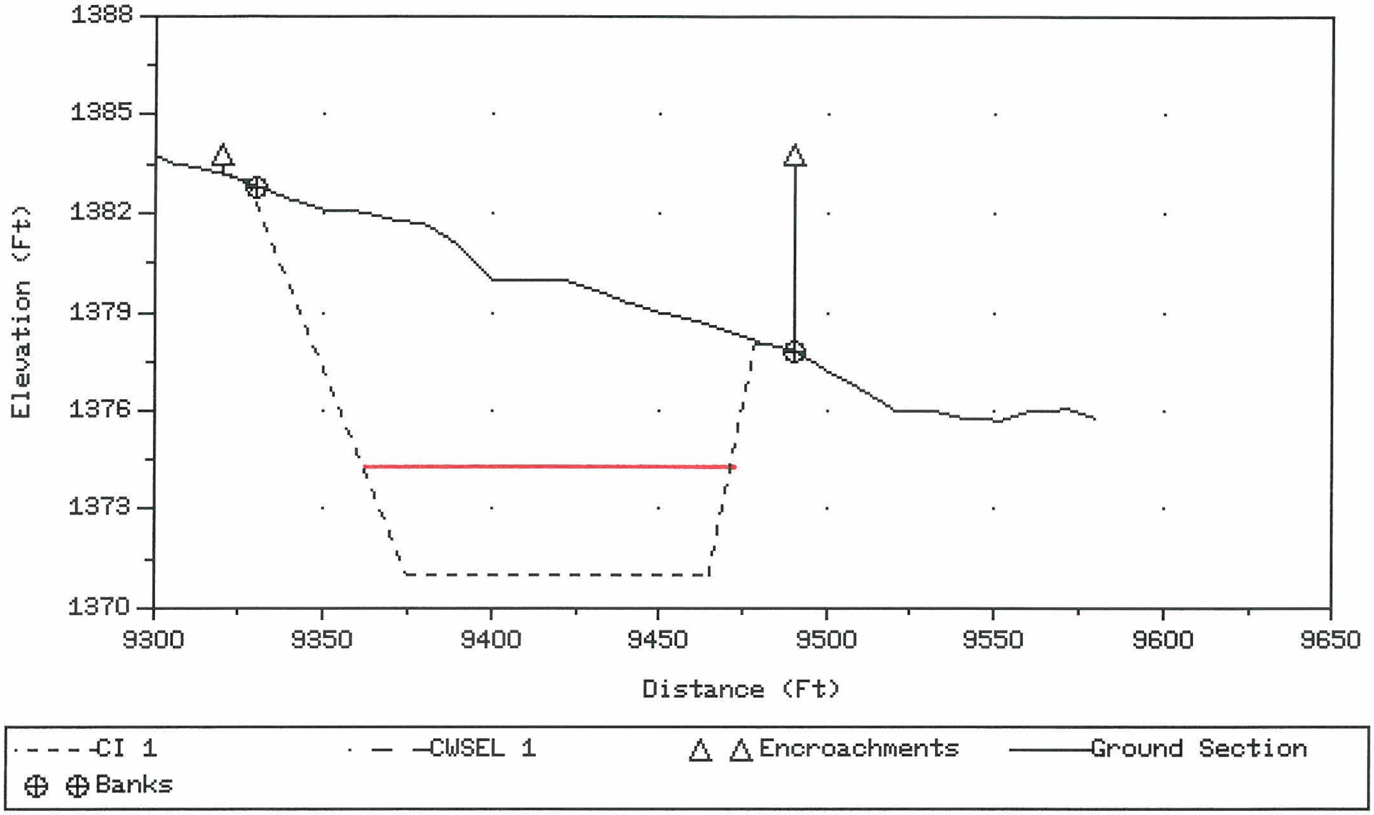

SECTIONS 1.5 TO 13.0
Cross-Section 9
Elevation (Ft)
1386
1383
1380
1377
1374
1371
1368
9350
9400
9450
9500
9550
9600
9650
9700
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

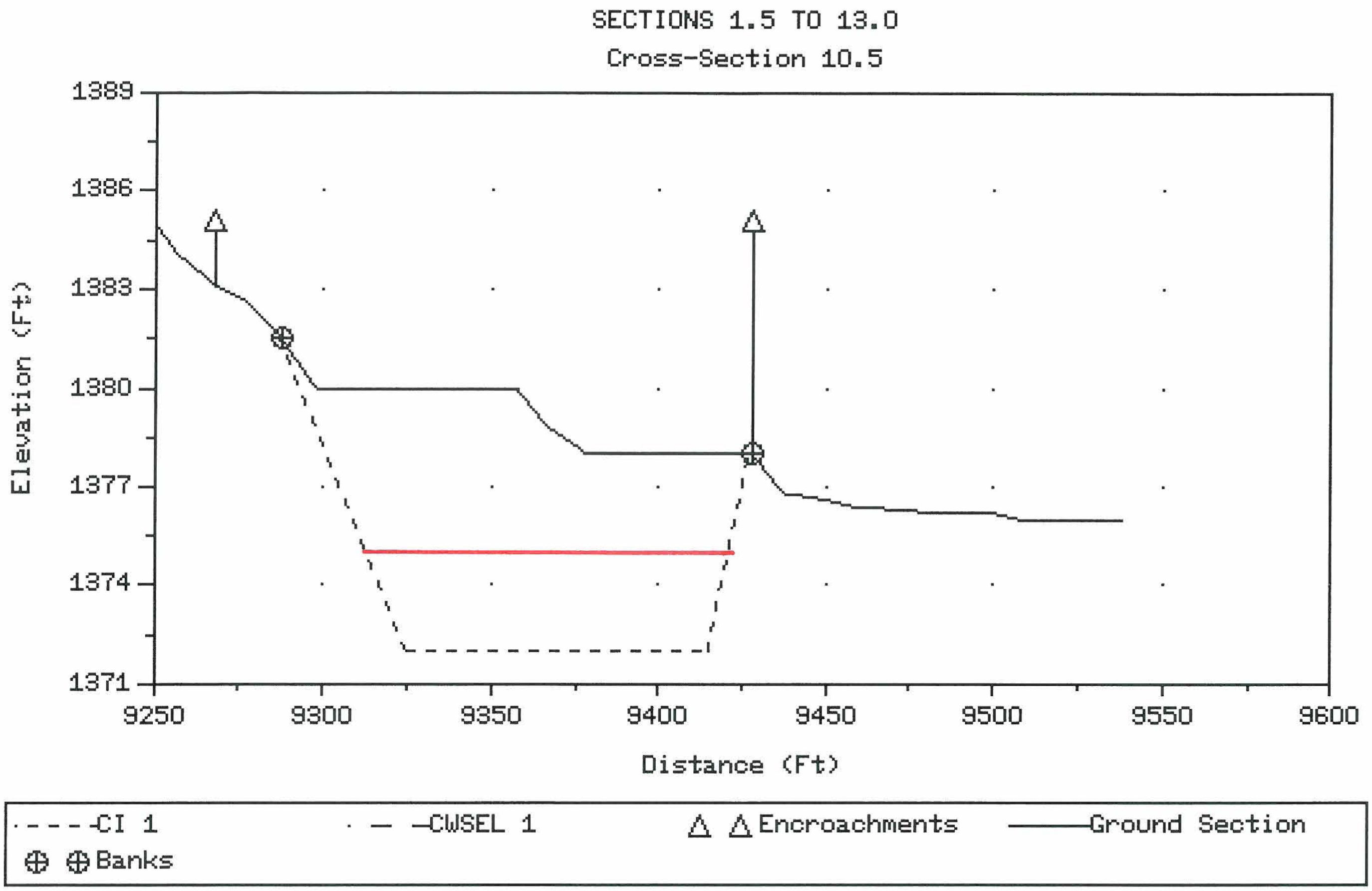


SECTIONS 1.5 TO 13.0
Cross-Section 9.5
1381
1379
1377
1375
1373
1371
1369
Elevation (Ft)
9350
9400
9450
9500
9550
9600
9650
9700
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

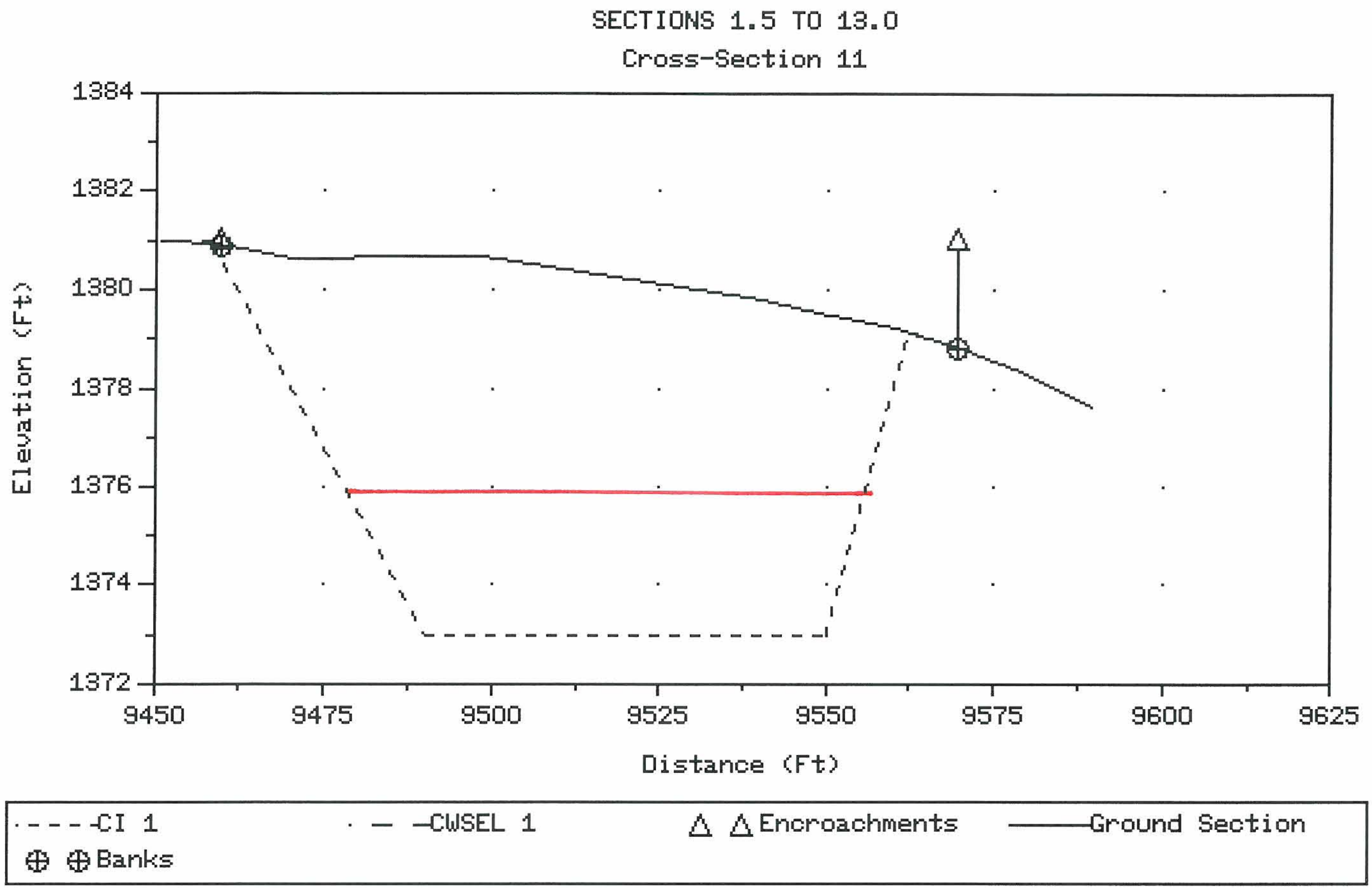
SECTIONS 1.5 TO 13.0

Cross-Section 10

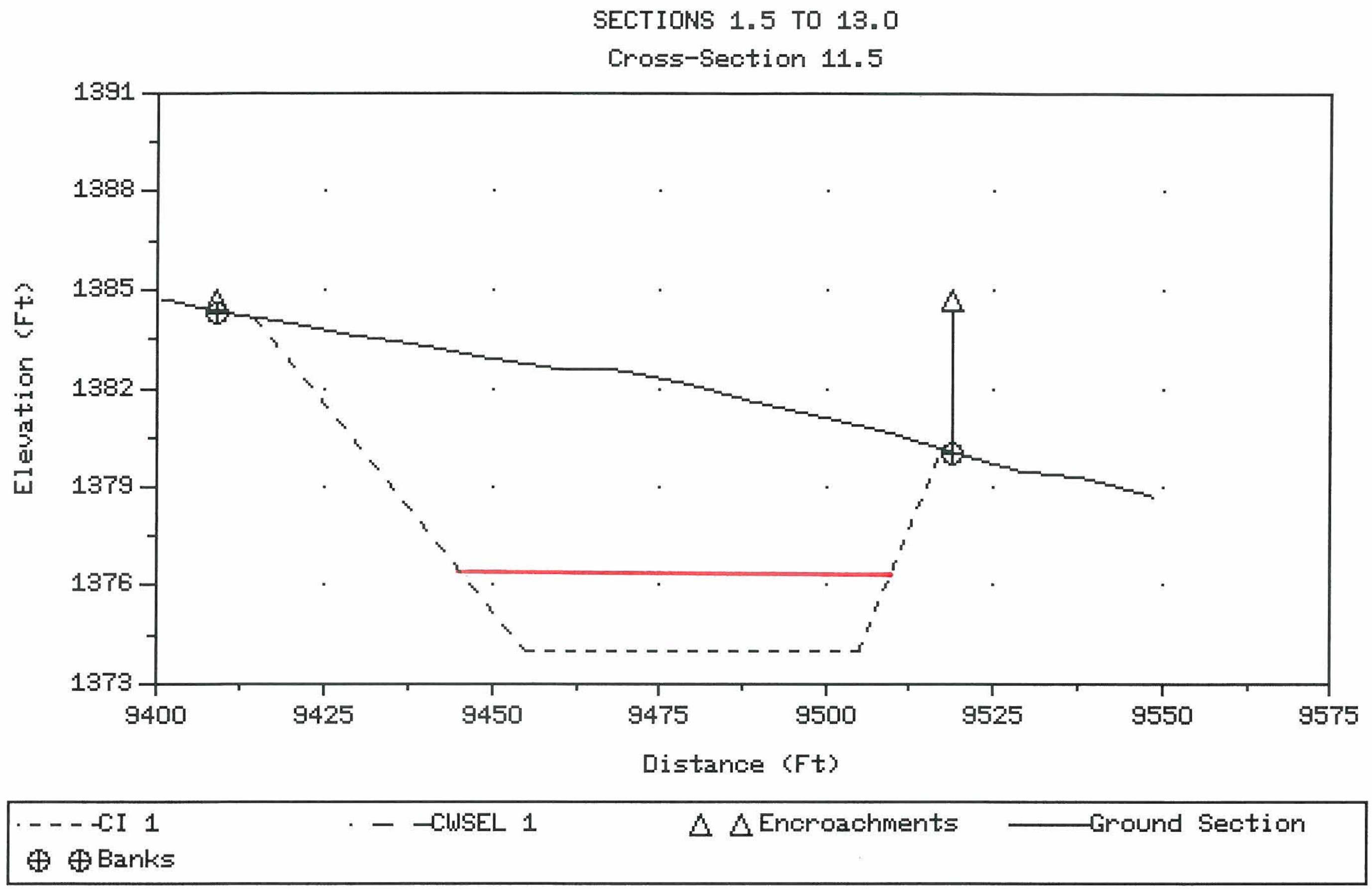




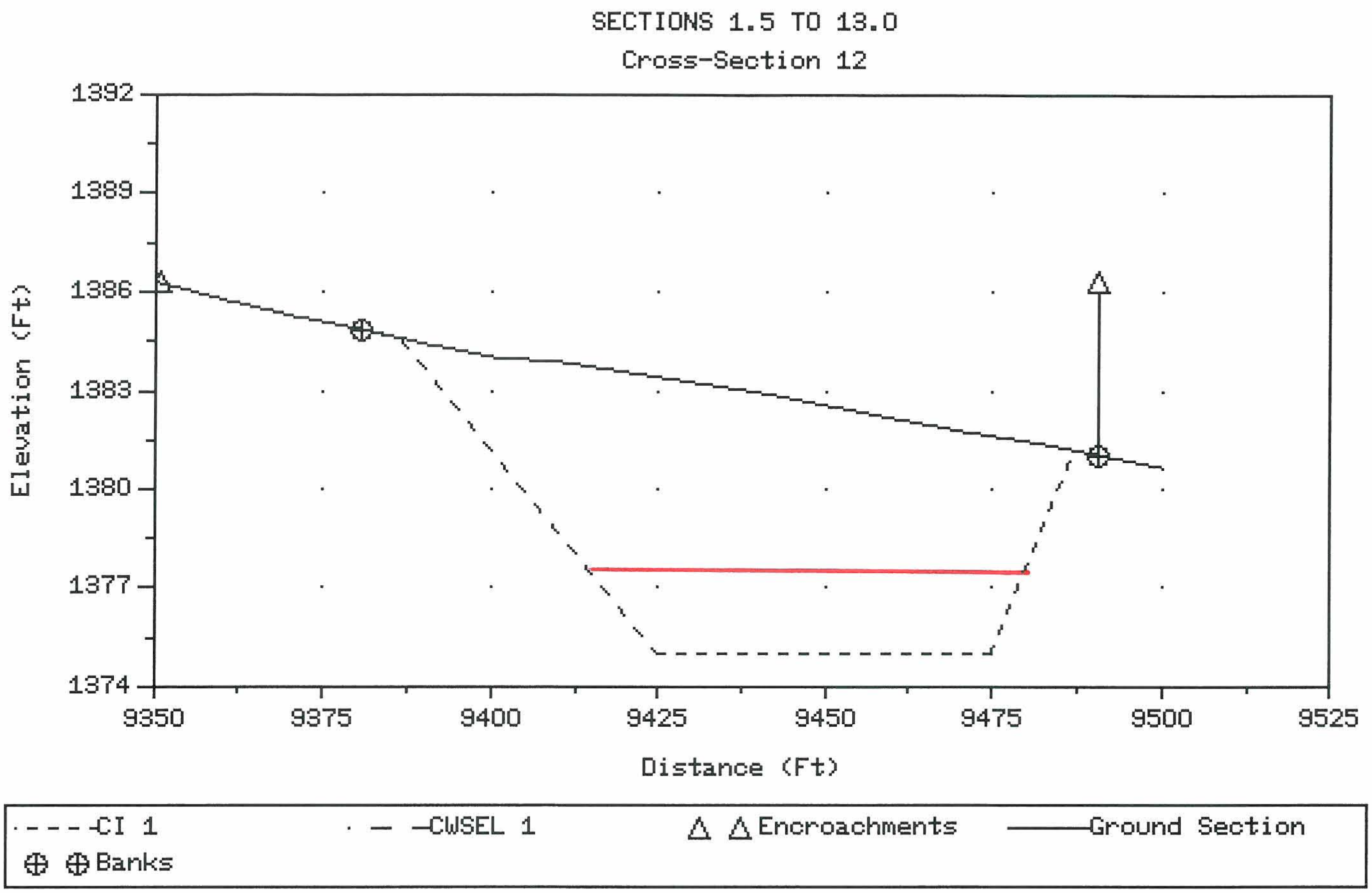
SECTIONS 1.5 TO 13.0
Cross-Section 10.5
Elevation (Ft)
1389
1386
1383
1380
1377
1374
1371
9250
9300
9350
9400
9450
9500
9550
9600
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

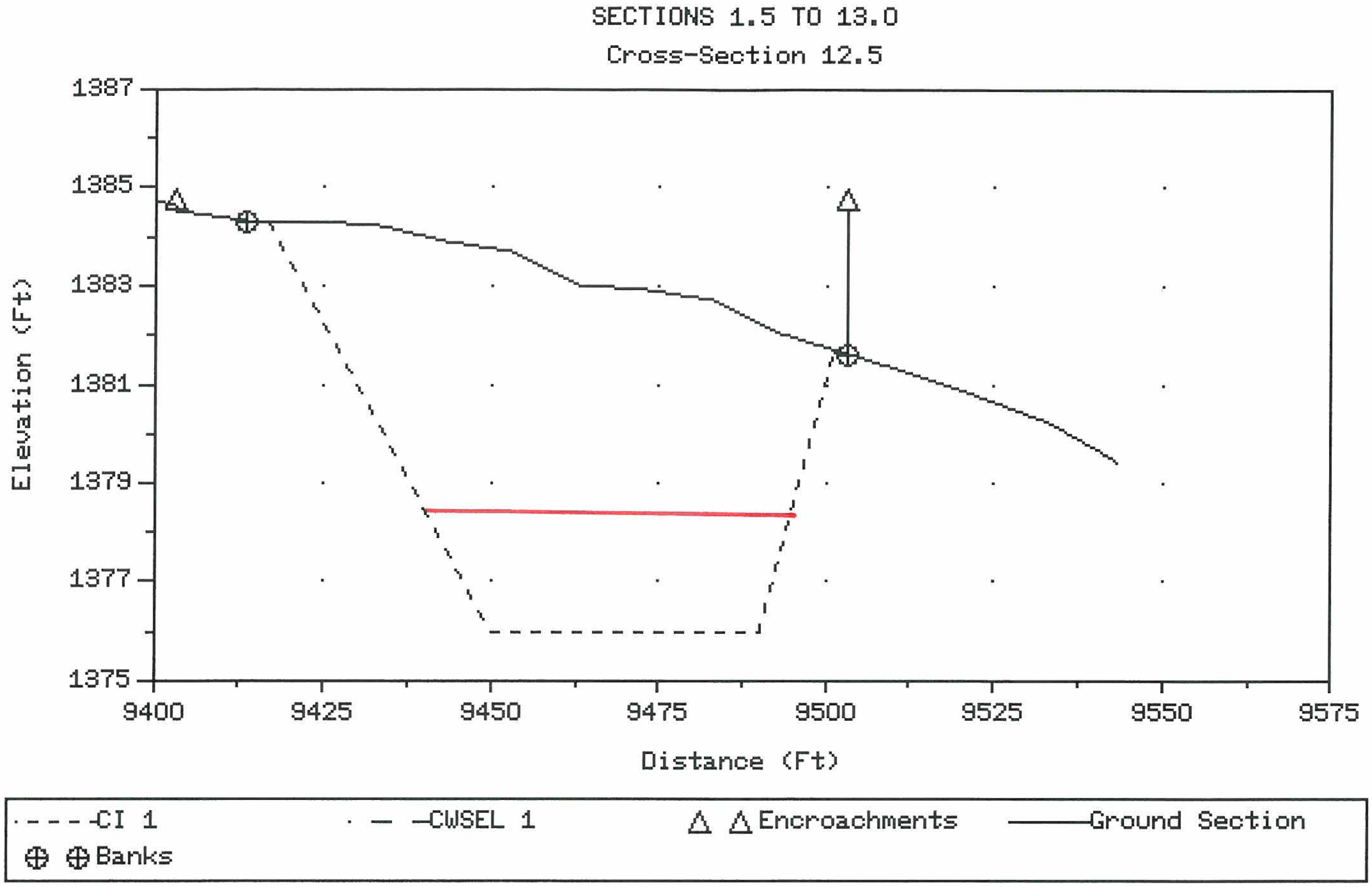


SECTIONS 1.5 TO 13.0
Cross-Section 11
1384
1382
1380
1378
1376
1374
1372
Elevation (Ft)
9450
9475
9500
9525
9550
9575
9600
9625
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

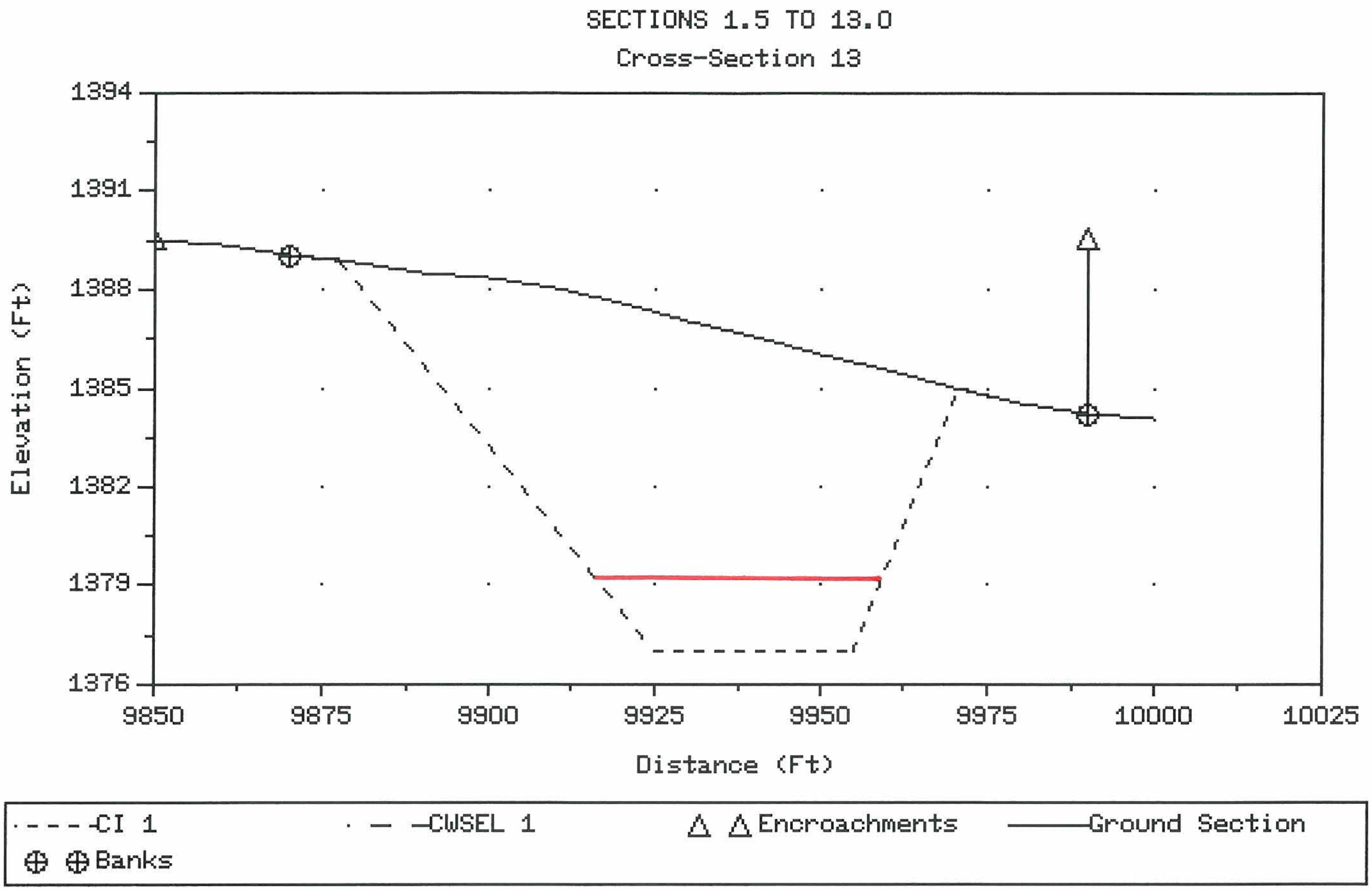


SECTIONS 1.5 TO 13.0
Cross-Section 11.5
Elevation (Ft)
1391
1388
1385
1382
1379
1376
1373
9400
9425
9450
9475
9500
9525
9550
9575
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks


SECTIONS 1.5 TO 13.0
Cross-Section 12
Elevation (Ft)
1392
1389
1386
1383
1380
1377
1374
9350
9375
9400
9425
9450
9475
9500
9525
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks



SECTIONS 1.5 TO 13.0
Cross-Section 12.5
1387
1385
1383
1381
1379
1377
1375
Elevation (Ft)
9400
9425
9450
9475
9500
9525
9550
9575
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks



SECTIONS 1.5 TO 13.0
Cross-Section 13
Elevation (Ft)
1394
1391
1388
1385
1382
1379
1376
9850
9875
9900
9925
9950
9975
10000
10025
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

FILE = MCMCHAPL.OUT

MARCH 18, 1997

R.W. CRUFF, P.E.

THIS IS A CUTTING OF GR DATA TO BE USED FOR PLOTS OF THE CHANNEL

RAISES THE BEGINNING ELEVATION BY 1.0 FEET FROM MCMCH-PL

T1 MCMICKEN CHANNEL DESIGN- PLOT
T2 100-YEAR FLOW - RUSS CRUFF 3-18-97
T3 SECTIONS 1.5 TO 13.0

SUMMARY PRINTOUT

SECNO	Q	CWSEL	VCH	DEPTH	BW	TOPWID
1.500	5600.00	1353.77	3.63	5.77	300.00	401.88
2.000	5600.00	1358.19	8.35	2.19	300.00	313.13
2.500	5600.00	1361.79	4.42	4.79	250.00	278.76
3.000	5000.00	1362.91	3.85	4.91	250.00	279.43
3.500	5000.00	1363.81	3.93	4.81	250.00	278.87
4.000	4500.00	1364.41	2.39	11.41	250.00	292.63
4.500	4500.00	1364.74	4.58	3.74	250.00	276.08
5.000	4000.00	1366.33	4.34	4.33	200.00	225.98
5.500	4000.00	1367.58	4.09	4.58	200.00	227.46
6.000	4000.00	1368.66	4.01	4.66	200.00	227.97
6.500	3000.00	1369.63	3.34	4.63	180.00	207.81
7.000	2500.00	1370.37	3.12	4.37	170.00	196.24
7.500	2000.00	1371.09	3.02	4.09	150.00	174.51
8.000	1500.00	1371.83	2.98	3.83	120.00	142.95
8.500	1500.00	1372.65	3.14	3.65	120.00	141.90
9.000	1200.00	1373.56	3.04	3.56	100.00	121.37
9.500	1000.00	1374.41	2.66	3.41	100.00	120.45
10.000	1000.00	1375.25	3.10	3.25	90.00	109.42
10.500	800.00	1376.18	2.53	3.18	90.00	109.09
11.000	400.00	1376.87	2.03	2.87	60.00	77.24
11.500	400.00	1377.60	2.67	2.60	50.00	65.58
12.000	400.00	1378.66	2.60	2.66	50.00	65.95
12.500	200.00	1379.49	1.69	2.49	40.00	54.95
13.000	200.00	1380.20	2.49	2.20	30.00	43.17

SUMMARY PRINTOUT

SECNO	Q	SSTA	ENDST	VEXR	VEXT
1.500	5600.00	9780.90	10182.78	.00	.00
2.000	5600.00	9171.25	9484.38	.00	.00
2.500	5600.00	9225.83	9504.58	42.33	42.33
3.000	5000.00	9205.38	9484.81	54.62	96.94
3.500	5000.00	9245.76	9524.62	51.45	148.40
4.000	4500.00	9657.37	9950.00	26.77	175.17
4.500	4500.00	9470.02	9746.10	15.42	190.58
5.000	4000.00	9372.68	9598.66	27.30	217.89
5.500	4000.00	9251.69	9479.15	28.90	246.79
6.000	4000.00	9251.35	9479.32	37.72	284.51
6.500	3000.00	9261.46	9469.27	42.98	327.49
7.000	2500.00	9237.51	9433.75	35.74	363.23
7.500	2000.00	9368.66	9543.17	30.63	393.86
8.000	1500.00	9454.70	9597.65	27.40	421.26
8.500	1500.00	9435.40	9577.30	24.80	446.06
9.000	1200.00	9425.76	9547.12	21.46	467.52
9.500	1000.00	9396.37	9516.82	13.72	481.24
10.000	1000.00	9362.05	9471.47	12.71	493.95
10.500	800.00	9312.28	9421.36	14.93	508.89
11.000	400.00	9478.51	9555.75	10.59	519.48
11.500	400.00	9444.61	9510.19	9.29	528.76
12.000	400.00	9414.37	9480.32	9.18	537.94
12.500	200.00	9440.03	9494.98	7.79	545.73
13.000	200.00	9916.22	9959.39	8.13	553.86

FILE = MCMCHBPL.OUT

MARCH 18, 1997

R.W. CRUFF, P.E.

RAISES THE BEGINNING ELEVATION BY 2.0 FEET FROM MCMCH-PL

THIS IS A CUTTING OF GR DATA TO BE USED FOR PLOTS OF THE CHANNEL

T1 MCMICKEN CHANNEL DESIGN- PLOT
T2 100-YEAR FLOW - RUSS CRUFF 3-18-97
T3 SECTIONS 1.5 TO 13.0

SUMMARY PRINTOUT

SECNO	Q	CWSEL	VCH	DEPTH	BW	TOPWID
1.500	5600.00	1353.77	3.63	5.77	300.00	401.88
2.000	5600.00	1359.19	8.35	2.19	300.00	313.13
2.500	5600.00	1362.79	4.42	4.79	250.00	278.76
3.000	5000.00	1363.91	3.85	4.91	250.00	279.43
3.500	5000.00	1364.81	3.93	4.81	250.00	278.86
4.000	4500.00	1365.34	2.17	12.34	250.00	292.37
4.500	4500.00	1365.55	4.80	3.55	250.00	275.32
5.000	4000.00	1367.31	4.36	4.31	200.00	225.85
5.500	4000.00	1368.57	4.10	4.57	200.00	227.41
6.000	4000.00	1369.66	4.01	4.66	200.00	227.96
6.500	3000.00	1370.63	3.34	4.63	180.00	207.81
7.000	2500.00	1371.37	3.12	4.37	170.00	196.24
7.500	2000.00	1372.08	3.02	4.08	150.00	174.51
8.000	1500.00	1372.83	2.98	3.83	120.00	142.95
8.500	1500.00	1373.65	3.14	3.65	120.00	141.90
9.000	1200.00	1374.56	3.04	3.56	100.00	121.37
9.500	1000.00	1375.41	2.66	3.41	100.00	120.45
10.000	1000.00	1376.25	3.10	3.25	90.00	109.42
10.500	800.00	1377.18	2.53	3.18	90.00	109.09
11.000	400.00	1377.87	2.03	2.87	60.00	77.24
11.500	400.00	1378.60	2.67	2.60	50.00	65.58
12.000	400.00	1379.66	2.60	2.66	50.00	65.95
12.500	200.00	1380.49	1.69	2.49	40.00	54.95
13.000	200.00	1381.20	2.49	2.20	30.00	43.17

SUMMARY PRINTOUT

SECNO	Q	SSTA	ENDST	VEXR	VEXT
1.500	5600.00	9780.90	10182.78	.00	.00
2.000	5600.00	9171.25	9484.38	.00	.00
2.500	5600.00	9225.83	9504.58	36.43	36.43
3.000	5000.00	9205.38	9484.81	48.82	85.24
3.500	5000.00	9245.76	9524.62	45.67	130.91
4.000	4500.00	9657.63	9950.00	22.61	153.52
4.500	4500.00	9470.78	9746.10	11.35	164.87
5.000	4000.00	9372.77	9598.62	22.21	187.08
5.500	4000.00	9251.72	9479.14	24.26	211.34
6.000	4000.00	9251.36	9479.32	32.96	244.31
6.500	3000.00	9261.46	9469.27	38.23	282.53
7.000	2500.00	9237.51	9433.75	31.31	313.85
7.500	2000.00	9368.66	9543.17	26.59	340.44
8.000	1500.00	9454.70	9597.65	23.86	364.30
8.500	1500.00	9435.40	9577.30	21.53	385.83
9.000	1200.00	9425.76	9547.12	18.41	404.23
9.500	1000.00	9396.37	9516.82	11.11	415.34
10.000	1000.00	9362.05	9471.47	10.23	425.57
10.500	800.00	9312.27	9421.36	12.46	438.03
11.000	400.00	9478.51	9555.75	8.56	446.59
11.500	400.00	9444.61	9510.19	7.55	454.14
12.000	400.00	9414.37	9480.32	7.48	461.62
12.500	200.00	9440.03	9494.98	6.25	467.87
13.000	200.00	9916.22	9959.39	6.65	474.52

CHANNEL STATISTICS

FILE = MCMCHDEM.WPD

MARCH 18, 1997

R.W. CRUFF, P.E.

THIS IS A MODIFICATION OF THE OUTPUT INFORMATION FROM MODEL "MCMCH-PL"

SUMMARY PRINTOUT

SECNO	Q	VEL	-----BOTTOM----- WIDTH	ELEV.	WATER SURFACE ELEV.	FLOW DEPTH	RIGHT BANK ELEV.	FREEBOARD
1.500	5600.00	3.63	300.00	1348.00	1353.77	5.77	1358.0	4.2
2.000	5600.00	8.35	300.00	1355.00	1357.19	2.19	1361.0	3.8
2.500	5600.00	4.42	250.00	1356.00	1360.79	4.79	1365.8	5.0
3.000	5000.00	3.85	250.00	1357.00	1361.91	4.91	1365.2	3.3
3.500	5000.00	3.93	250.00	1358.00	1362.81	4.81	1365.9	3.1
4.000	4500.00	2.63	250.00	1353.00	1363.48	10.48	1353.0	-10.5
4.500	4500.00	4.36	250.00	1360.00	1363.94	3.94	1363.7	-0.2
5.000	4000.00	4.31	200.00	1361.00	1365.36	4.36	1368.1	2.7
5.500	4000.00	4.08	200.00	1362.00	1366.59	4.59	1370.0	3.4
6.000	4000.00	4.01	200.00	1363.00	1367.67	4.67	1370.9	3.2
6.500	3000.00	3.34	180.00	1364.00	1368.64	4.64	1371.9	3.3
7.000	2500.00	3.12	170.00	1365.00	1369.37	4.37	1372.6	3.2
7.500	2000.00	3.02	150.00	1366.00	1370.09	4.09	1372.5	2.4
8.000	1500.00	2.98	120.00	1367.00	1370.83	3.83	1374.5	3.7
8.500	1500.00	3.14	120.00	1368.00	1371.65	3.65	1374.9	3.2
9.000	1200.00	3.04	100.00	1369.00	1372.56	3.56	1375.8	3.2
9.500	1000.00	2.66	100.00	1370.00	1373.41	3.41	1375.8	2.4
10.000	1000.00	3.10	90.00	1371.00	1374.25	3.25	1377.8	3.5
10.500	800.00	2.53	90.00	1372.00	1375.18	3.18	1378.0	2.8
11.000	400.00	2.03	60.00	1373.00	1375.87	2.87	1378.8	2.9
11.500	400.00	2.67	50.00	1374.00	1376.60	2.60	1380.0	3.4
12.000	400.00	2.60	50.00	1375.00	1377.66	2.66	1381.0	3.3
12.500	200.00	1.69	40.00	1376.00	1378.49	2.49	1381.6	3.1
13.000	200.00	2.49	30.00	1377.00	1379.20	2.20	1384.2	5.0

FILE = MCMCHSPF.DAT

```
C
C      2
C    1.5    WITHIN MCMICKEN RESERVOIR
C   13.0    UPPER END OF CHANNEL
*
*            MODEL = MCMCHSPF.DAT
*
*            THIS IS A MODIFICATION OF MCMCH.DAT FOR SPF FLOWS
*              FOR THE CHIMP ROUTINE, SLOPE = 0.002 &
*              BOTTOM ELEVATION = 1353 AT SECTION 2.0.
*
T1          MCMICKEN CHANNEL DESIGN
T2          SPF FLOW  - RUSS CRUFF 4-2-97
T3          SECTIONS 1.5 TO 13.0
J1             2                      .002
J2       1               -2
J3      38      43       1      26       8      30       4
J3      38      43      53      54      64      65
NC    .045    .045   0.045      .1      .3
QT       1   18100
X1    1.50      65    9600   10210       0       0       0
GR1357.7  9570.0  1357.8  9580.0  1357.9  9590.0  1358.0  9600.0  1357.9  9610.0
GR1357.9  9620.0  1357.9  9630.0  1357.8  9640.0  1357.6  9650.0  1357.5  9660.0
GR1357.3  9670.0  1357.2  9680.0  1357.0  9690.0  1356.8  9700.0  1356.6  9710.0
GR1356.4  9720.0  1356.2  9730.0  1356.0  9740.0  1355.4  9750.0  1354.8  9760.0
GR1354.4  9770.0  1354.0  9780.0  1351.4  9790.0  1349.9  9800.0  1349.7  9810.0
GR1349.6  9820.0  1349.7  9830.0  1349.8  9840.0  1350.0  9850.0  1350.1  9860.0
GR1350.2  9870.0  1350.4  9880.0  1350.5  9890.0  1350.7  9900.0  1350.6  9910.0
GR1350.5  9920.0  1350.3  9930.0  1350.2  9940.0  1350.0  9950.0  1349.5  9960.0
GR1349.0  9970.0  1348.5  9980.0  1348.1  9990.0  1348.0 10000.0  1348.0 10010.0
GR1348.0 10020.0  1348.0 10030.0  1348.0 10040.0  1348.0 10050.0  1348.0 10060.0
GR1348.0 10070.0  1348.5 10080.0  1349.0 10090.0  1349.3 10100.0  1349.7 10110.0
GR1350.4 10120.0  1351.7 10130.0  1352.3 10140.0  1352.6 10150.0  1353.0 10160.0
GR1353.3 10170.0  1353.6 10180.0  1354.2 10190.0  1356.2 10200.0  1358.2 10210.0
X1    2.00      90    9100    9500     460     530     500
CI    9330    1353               4       2     300
X3                            9100            9500
GR1360.0  9040.0  1360.1  9050.0  1360.5  9060.0  1360.8  9070.0  1361.2  9080.0
GR1361.4  9090.0  1361.5  9100.0  1360.9  9110.0  1360.3  9120.0  1360.0  9130.0
GR1360.0  9140.0  1360.0  9150.0  1360.6  9160.0  1361.5  9170.0  1362.0  9180.0
GR1362.0  9190.0  1362.0  9200.0  1362.0  9210.0  1362.0  9220.0  1362.0  9230.0
GR1362.0  9240.0  1361.8  9250.0  1361.4  9260.0  1361.8  9270.0  1362.0  9280.0
GR1362.0  9290.0  1362.0  9300.0  1362.0  9310.0  1362.0  9320.0  1361.5  9330.0
GR1361.0  9340.0  1360.5  9350.0  1360.0  9360.0  1360.0  9370.0  1360.0  9380.0
GR1360.0  9390.0  1360.0  9400.0  1360.0  9410.0  1360.0  9420.0  1360.3  9430.0
GR1360.6  9440.0  1360.9  9450.0  1361.2  9460.0  1361.6  9470.0  1361.9  9480.0
GR1362.0  9490.0  1362.0  9500.0  1362.0  9510.0  1361.6  9520.0  1361.0  9530.0
GR1360.6  9540.0  1360.4  9550.0  1360.2  9560.0  1359.9  9570.0  1359.8  9580.0
GR1359.6  9590.0  1359.5  9600.0  1359.3  9610.0  1359.2  9620.0  1359.1  9630.0
GR1359.1  9640.0  1359.1  9650.0  1359.1  9660.0  1359.2  9670.0  1359.2  9680.0
GR1359.2  9690.0  1359.1  9700.0  1359.1  9710.0  1359.0  9720.0  1359.0  9730.0
GR1358.9  9740.0  1358.9  9750.0  1358.9  9760.0  1358.9  9770.0  1358.7  9780.0
GR1358.5  9790.0  1358.2  9800.0  1357.9  9810.0  1357.8  9820.0  1357.6  9830.0
GR1357.4  9840.0  1357.3  9850.0  1357.2  9860.0  1357.2  9870.0  1357.1  9880.0
GR1357.1  9890.0  1357.1  9900.0  1357.1  9910.0  1357.2  9920.0  1357.3  9930.0
X1    2.50      90    9180    9520     650     200     500
CI    9370   0.002                                     250
X3                            9080            9520
GR1370.0  9040.0  1370.0  9050.0  1370.0  9060.0  1370.0  9070.0  1370.0  9080.0
GR1369.8  9090.0  1369.6  9100.0  1369.2  9110.0  1368.8  9120.0  1368.5  9130.0
GR1368.2  9140.0  1368.0  9150.0  1368.0  9160.0  1368.0  9170.0  1368.0  9180.0
GR1368.0  9190.0  1368.0  9200.0  1368.0  9210.0  1368.0  9220.0  1368.0  9230.0
GR1368.0  9240.0  1368.0  9250.0  1368.0  9260.0  1368.0  9270.0  1368.0  9280.0
GR1367.8  9290.0  1367.4  9300.0  1367.4  9310.0  1367.4  9320.0  1367.4  9330.0
GR1367.5  9340.0  1367.4  9350.0  1367.4  9360.0  1367.3  9370.0  1367.3  9380.0
GR1367.3  9390.0  1367.4  9400.0  1367.3  9410.0  1367.2  9420.0  1367.2  9430.0
GR1367.2  9440.0  1367.1  9450.0  1366.9  9460.0  1366.8  9470.0  1366.8  9480.0
GR1366.5  9490.0  1366.0  9500.0  1365.9  9510.0  1365.8  9520.0  1365.9  9530.0
GR1366.0  9540.0  1366.0  9550.0  1366.0  9560.0  1366.0  9570.0  1366.0  9580.0
GR1366.0  9590.0  1366.0  9600.0  1365.9  9610.0  1365.4  9620.0  1364.9  9630.0
GR1364.8  9640.0  1364.7  9650.0  1364.5  9660.0  1364.3  9670.0  1364.1  9680.0
GR1363.9  9690.0  1363.7  9700.0  1363.4  9710.0  1363.4  9720.0  1363.3  9730.0
GR1363.0  9740.0  1362.9  9750.0  1362.6  9760.0  1362.4  9770.0  1362.1  9780.0
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GR1361.7   9790.0   1361.3   9800.0   1361.1   9810.0   1361.0   9820.0   1361.0   9830.0
GR1360.9   9840.0   1360.7   9850.0   1360.5   9860.0   1360.2   9870.0   1360.0   9880.0
GR1360.0   9890.0   1360.0   9900.0   1360.0   9910.0   1360.0   9920.0   1360.0   9930.0
QT     1    16100
X1  3.00       90     9160     9490      540      460      500
CI  9350
X3                             9050              9490
GR1374.0   9050.0   1374.0   9060.0   1374.0   9070.0   1373.9   9080.0   1373.7   9090.0
GR1373.6   9100.0   1373.4   9110.0   1373.2   9120.0   1373.0   9130.0   1372.8   9140.0
GR1372.5   9150.0   1372.3   9160.0   1372.1   9170.0   1371.9   9180.0   1371.7   9190.0
GR1371.5   9200.0   1371.3   9210.0   1371.2   9220.0   1371.0   9230.0   1370.8   9240.0
GR1370.6   9250.0   1370.4   9260.0   1370.2   9270.0   1370.0   9280.0   1369.8   9290.0
GR1369.5   9300.0   1369.2   9310.0   1368.8   9320.0   1368.5   9330.0   1368.2   9340.0
GR1368.0   9350.0   1367.9   9360.0   1367.7   9370.0   1367.5   9380.0   1367.2   9390.0
GR1367.1   9400.0   1366.8   9410.0   1366.6   9420.0   1366.4   9430.0   1366.2   9440.0
GR1366.0   9450.0   1366.0   9460.0   1365.9   9470.0   1365.5   9480.0   1365.2   9490.0
GR1364.8   9500.0   1364.4   9510.0   1364.1   9520.0   1364.0   9530.0   1364.0   9540.0
GR1364.0   9550.0   1364.0   9560.0   1364.0   9570.0   1364.0   9580.0   1364.0   9590.0
GR1364.0   9600.0   1364.0   9610.0   1363.9   9620.0   1363.7   9630.0   1363.5   9640.0
GR1363.3   9650.0   1363.1   9660.0   1362.9   9670.0   1362.7   9680.0   1362.5   9690.0
GR1362.3   9700.0   1362.1   9710.0   1362.0   9720.0   1362.0   9730.0   1361.6   9740.0
GR1361.3   9750.0   1360.9   9760.0   1360.6   9770.0   1360.3   9780.0   1360.0   9790.0
GR1360.0   9800.0   1359.9   9810.0   1359.7   9820.0   1359.6   9830.0   1359.4   9840.0
GR1359.3   9850.0   1359.1   9860.0   1359.0   9870.0   1358.8   9880.0   1358.7   9890.0
GR1358.5   9900.0   1358.3   9910.0   1358.2   9920.0   1358.0   9930.0   1358.0   9940.0
X1  3.50       90     9220     9540      530      440      500
CI  9390
X3                             9190              9540
GR1370.2   9150.0   1370.6   9160.0   1371.1   9170.0   1371.2   9180.0   1371.1   9190.0
GR1371.0   9200.0   1370.7   9210.0   1370.4   9220.0   1370.0   9230.0   1369.8   9240.0
GR1369.5   9250.0   1369.2   9260.0   1369.2   9270.0   1369.1   9280.0   1369.0   9290.0
GR1369.0   9300.0   1368.9   9310.0   1368.8   9320.0   1368.8   9330.0   1368.7   9340.0
GR1368.7   9350.0   1368.6   9360.0   1368.4   9370.0   1368.2   9380.0   1368.1   9390.0
GR1368.0   9400.0   1368.0   9410.0   1368.0   9420.0   1368.0   9430.0   1367.9   9440.0
GR1367.8   9450.0   1367.6   9460.0   1367.4   9470.0   1367.2   9480.0   1367.0   9490.0
GR1366.8   9500.0   1366.6   9510.0   1366.4   9520.0   1366.1   9530.0   1365.9   9540.0
GR1365.7   9550.0   1365.6   9560.0   1365.4   9570.0   1365.2   9580.0   1365.0   9590.0
GR1364.8   9600.0   1364.6   9610.0   1364.4   9620.0   1364.3   9630.0   1364.1   9640.0
GR1363.9   9650.0   1363.6   9660.0   1363.4   9670.0   1363.2   9680.0   1362.9   9690.0
GR1362.7   9700.0   1362.4   9710.0   1362.1   9720.0   1361.9   9730.0   1361.6   9740.0
GR1361.2   9750.0   1360.9   9760.0   1360.5   9770.0   1360.2   9780.0   1360.0   9790.0
GR1359.8   9800.0   1359.1   9810.0   1358.4   9820.0   1358.0   9830.0   1358.0   9840.0
GR1358.0   9850.0   1358.0   9860.0   1358.0   9870.0   1358.0   9880.0   1358.2   9890.0
GR1359.1   9900.0   1359.9   9910.0   1360.0   9920.0   1359.8   9930.0   1359.3   9940.0
GR1358.7   9950.0   1358.0   9960.0   1357.5   9970.0   1357.2   9980.0   1357.0   9990.0
GR1356.7  10000.0   1357.0  10010.0   1357.7  10020.0   1358.0  10030.0   1358.0  10040.0
QT     1    14300
X1  4.00       90     9430     9950      600      280      500
CI  9800
X3                             9430              9950
GR1425.1   9090.0   1424.6   9100.0   1424.1   9110.0   1423.0   9120.0   1422.7   9130.0
GR1422.7   9140.0   1422.4   9150.0   1421.3   9160.0   1419.7   9170.0   1418.7   9180.0
GR1418.8   9190.0   1418.9   9200.0   1419.0   9210.0   1418.7   9220.0   1418.7   9230.0
GR1418.9   9240.0   1419.2   9250.0   1419.4   9260.0   1419.6   9270.0   1419.9   9280.0
GR1420.1   9290.0   1420.5   9300.0   1420.0   9310.0   1420.0   9320.0   1420.0   9330.0
GR1420.0   9340.0   1420.0   9350.0   1420.0   9360.0   1420.0   9370.0   1420.0   9380.0
GR1420.0   9390.0   1420.0   9400.0   1420.0   9410.0   1420.0   9420.0   1420.0   9430.0
GR1419.1   9440.0   1417.9   9450.0   1415.0   9460.0   1411.9   9470.0   1407.3   9480.0
GR1401.3   9490.0   1397.6   9500.0   1394.5   9510.0   1392.3   9520.0   1390.2   9530.0
GR1387.8   9540.0   1385.3   9550.0   1382.8   9560.0   1379.7   9570.0   1377.9   9580.0
GR1376.5   9590.0   1375.0   9600.0   1374.0   9610.0   1374.0   9620.0   1372.3   9630.0
GR1369.7   9640.0   1368.4   9650.0   1367.0   9660.0   1365.6   9670.0   1364.5   9680.0
GR1363.6   9690.0   1363.0   9700.0   1362.3   9710.0   1361.7   9720.0   1361.0   9730.0
GR1360.3   9740.0   1359.8   9750.0   1359.6   9760.0   1359.3   9770.0   1359.0   9780.0
GR1358.7   9790.0   1358.5   9800.0   1358.2   9810.0   1358.0   9820.0   1358.0   9830.0
GR1357.5   9840.0   1357.0   9850.0   1356.5   9860.0   1356.0   9870.0   1356.0   9880.0
GR1356.0   9890.0   1355.5   9900.0   1355.0   9910.0   1354.5   9920.0   1354.0   9930.0
GR1353.6   9940.0   1353.0   9950.0   1352.4   9960.0   1352.0   9970.0   1351.9   9980.0
X1  4.50       90   9426.1   9746.1      390      590      500
CI  9610
X3                           9426.1            9746.1
GR1425.1   9026.1   1424.9   9036.1   1424.4   9046.1   1424.0   9056.1   1423.3   9066.1
GR1422.5   9076.1   1421.8   9086.1   1421.0   9096.1   1420.3   9106.1   1419.4   9116.1
GR1418.1   9126.1   1416.4   9136.1   1414.7   9146.1   1413.0   9156.1   1411.3   9166.1
GR1409.7   9176.1   1408.0   9186.1   1405.8   9196.1   1403.6   9206.1   1401.3   9216.1
GR1399.5   9226.1   1398.3   9236.1   1397.1   9246.1   1395.8   9256.1   1394.3   9266.1
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GR1392.8	9276.1	1391.2	9286.1	1389.5	9296.1	1387.7	9306.1	1386.1	9316.1
GR1384.4	9326.1	1382.5	9336.1	1380.6	9346.1	1379.2	9356.1	1377.9	9366.1
GR1377.1	9376.1	1376.3	9386.1	1375.2	9396.1	1374.2	9406.1	1374.0	9416.1
GR1374.0	9426.1	1373.1	9436.1	1371.5	9446.1	1370.0	9456.1	1369.6	9466.1
GR1369.2	9476.1	1368.9	9486.1	1368.5	9496.1	1368.1	9506.1	1367.7	9516.1
GR1367.3	9526.1	1367.0	9536.1	1366.6	9546.1	1366.2	9556.1	1366.0	9566.1
GR1366.0	9576.1	1366.0	9586.1	1366.0	9596.1	1366.0	9606.1	1365.4	9616.1
GR1365.1	9626.1	1365.0	9636.1	1364.8	9646.1	1365.0	9656.1	1365.0	9666.1
GR1364.4	9676.1	1364.0	9686.1	1364.0	9696.1	1364.0	9706.1	1364.0	9716.1
GR1364.0	9726.1	1363.9	9736.1	1363.7	9746.1	1363.5	9756.1	1363.3	9766.1
GR1363.2	9776.1	1363.0	9786.1	1362.2	9796.1	1362.0	9806.1	1362.0	9816.1
GR1362.0	9826.1	1361.8	9836.1	1361.7	9846.1	1361.7	9856.1	1361.1	9866.1
GR1360.6	9876.1	1360.0	9886.1	1360.0	9896.1	1360.0	9906.1	1360.0	9916.1
QT 1	12000								
X1 5.0	90	9340.6	9610.6	570	320	500			
CI 9490					200				
X3			9320.6		9610.6				
GR1380.0	9030.6	1380.0	9040.6	1380.0	9050.6	1380.0	9060.6	1380.0	9070.6
GR1379.6	9080.6	1379.1	9090.6	1378.5	9100.6	1378.3	9110.6	1378.0	9120.6
GR1378.0	9130.6	1377.9	9140.6	1377.7	9150.6	1377.5	9160.6	1377.3	9170.6
GR1377.3	9180.6	1377.3	9190.6	1377.1	9200.6	1376.8	9210.6	1376.6	9220.6
GR1376.3	9230.6	1376.1	9240.6	1376.0	9250.6	1376.0	9260.6	1375.9	9270.6
GR1375.5	9280.6	1375.1	9290.6	1374.7	9300.6	1374.3	9310.6	1374.0	9320.6
GR1373.7	9330.6	1373.4	9340.6	1373.1	9350.6	1372.8	9360.6	1372.5	9370.6
GR1372.2	9380.6	1371.9	9390.6	1371.4	9400.6	1370.9	9410.6	1370.4	9420.6
GR1370.0	9430.6	1370.0	9440.6	1370.0	9450.6	1369.9	9460.6	1369.1	9470.6
GR1368.2	9480.6	1368.0	9490.6	1368.0	9500.6	1367.7	9510.6	1367.2	9520.6
GR1366.8	9530.6	1366.8	9540.6	1367.1	9550.6	1367.5	9560.6	1367.6	9570.6
GR1367.8	9580.6	1367.9	9590.6	1368.0	9600.6	1368.1	9610.6	1367.9	9620.6
GR1367.6	9630.6	1367.3	9640.6	1367.2	9650.6	1367.1	9660.6	1366.8	9670.6
GR1366.6	9680.6	1366.5	9690.6	1366.3	9700.6	1366.2	9710.6	1366.0	9720.6
GR1365.4	9730.6	1364.4	9740.6	1363.4	9750.6	1362.8	9760.6	1362.5	9770.6
GR1362.6	9780.6	1362.6	9790.6	1362.6	9800.6	1362.8	9810.6	1363.0	9820.6
GR1363.2	9830.6	1363.3	9840.6	1363.4	9850.6	1363.2	9860.6	1363.0	9870.6
GR1362.9	9880.6	1363.0	9890.6	1363.0	9900.6	1362.9	9910.6	1362.8	9920.6
X1 5.50	90	9230	9490	500	500	500			
CI 9370					200				
X3			9050		9490				
GR1378.0	9050.0	1377.5	9060.0	1377.0	9070.0	1376.5	9080.0	1376.2	9090.0
GR1376.0	9100.0	1376.0	9110.0	1376.0	9120.0	1376.0	9130.0	1375.4	9140.0
GR1374.8	9150.0	1374.3	9160.0	1374.0	9170.0	1374.0	9180.0	1373.7	9190.0
GR1373.3	9200.0	1372.8	9210.0	1372.6	9220.0	1372.0	9230.0	1372.0	9240.0
GR1372.0	9250.0	1372.0	9260.0	1371.9	9270.0	1371.5	9280.0	1371.1	9290.0
GR1370.7	9300.0	1370.4	9310.0	1370.3	9320.0	1370.2	9330.0	1370.1	9340.0
GR1370.0	9350.0	1369.7	9360.0	1369.0	9370.0	1368.4	9380.0	1368.0	9390.0
GR1368.0	9400.0	1368.0	9410.0	1368.0	9420.0	1368.3	9430.0	1368.8	9440.0
GR1369.3	9450.0	1369.9	9460.0	1370.0	9470.0	1370.0	9480.0	1370.0	9490.0
GR1369.9	9500.0	1369.6	9510.0	1369.4	9520.0	1369.1	9530.0	1368.9	9540.0
GR1368.6	9550.0	1368.4	9560.0	1368.1	9570.0	1367.9	9580.0	1367.6	9590.0
GR1367.3	9600.0	1367.1	9610.0	1366.8	9620.0	1366.5	9630.0	1366.2	9640.0
GR1366.0	9650.0	1365.9	9660.0	1365.7	9670.0	1365.4	9680.0	1365.2	9690.0
GR1365.0	9700.0	1364.8	9710.0	1364.6	9720.0	1364.4	9730.0	1364.2	9740.0
GR1364.0	9750.0	1364.0	9760.0	1364.0	9770.0	1363.8	9780.0	1363.4	9790.0
GR1362.9	9800.0	1362.5	9810.0	1362.1	9820.0	1362.0	9830.0	1362.0	9840.0
GR1362.0	9850.0	1361.8	9860.0	1361.6	9870.0	1361.4	9880.0	1361.2	9890.0
GR1361.1	9900.0	1360.9	9910.0	1360.8	9920.0	1360.6	9930.0	1360.4	9940.0
X1 6.00	90	9209.8	9489.8	500	500	500			
CI									
X3			9049.8		9489.8				
GR1381.1	9049.8	1380.9	9059.8	1380.7	9069.8	1380.5	9079.8	1380.1	9089.8
GR1380.0	9099.8	1380.0	9109.8	1380.0	9119.8	1380.0	9129.8	1379.6	9139.8
GR1379.2	9149.8	1378.8	9159.8	1378.4	9169.8	1378.0	9179.8	1378.0	9189.8
GR1378.0	9199.8	1378.0	9209.8	1378.0	9219.8	1378.0	9229.8	1378.0	9239.8
GR1377.9	9249.8	1377.3	9259.8	1376.6	9269.8	1376.0	9279.8	1376.0	9289.8
GR1376.0	9299.8	1376.0	9309.8	1376.0	9319.8	1376.0	9329.8	1375.9	9339.8
GR1375.6	9349.8	1375.4	9359.8	1375.2	9369.8	1375.0	9379.8	1374.7	9389.8
GR1374.4	9399.8	1374.1	9409.8	1373.4	9419.8	1372.9	9429.8	1372.5	9439.8
GR1372.0	9449.8	1371.7	9459.8	1371.5	9469.8	1371.2	9479.8	1370.9	9489.8
GR1370.6	9499.8	1370.4	9509.8	1370.1	9519.8	1369.8	9529.8	1369.5	9539.8
GR1369.4	9549.8	1369.2	9559.8	1369.1	9569.8	1369.0	9579.8	1368.8	9589.8
GR1368.6	9599.8	1368.4	9609.8	1368.2	9619.8	1368.0	9629.8	1368.0	9639.8
GR1368.0	9649.8	1367.6	9659.8	1367.2	9669.8	1366.8	9679.8	1366.3	9689.8
GR1365.8	9699.8	1365.3	9709.8	1364.8	9719.8	1364.3	9729.8	1363.6	9739.8
GR1362.9	9749.8	1362.0	9759.8	1360.6	9769.8	1360.0	9779.8	1360.0	9789.8
GR1359.3	9799.8	1358.5	9809.8	1358.0	9819.8	1358.1	9829.8	1358.3	9839.8
GR1358.6	9849.8	1358.8	9859.8	1359.1	9869.8	1359.3	9879.8	1359.5	9889.8

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GR1359.7    9899.8   1359.9   9909.8   1359.8   9919.8   1359.5   9929.8   1358.5   9939.8
QT     1     9000
X1   6.50      90   9221.8   9481.8      500      500      500
CI                                                180
X3                           9061.8            9481.8
GR1382.0    9051.8   1382.0   9061.8   1382.0   9071.8   1381.7   9081.8   1381.4   9091.8
GR1381.0    9101.8   1380.7   9111.8   1380.4   9121.8   1380.1   9131.8   1380.0   9141.8
GR1380.0    9151.8   1380.0   9161.8   1379.9   9171.8   1379.7   9181.8   1379.5   9191.8
GR1379.3    9201.8   1379.0   9211.8   1378.8   9221.8   1378.5   9231.8   1378.3   9241.8
GR1378.0    9251.8   1377.3   9261.8   1376.7   9271.8   1376.1   9281.8   1376.0   9291.8
GR1376.0    9301.8   1376.0   9311.8   1375.7   9321.8   1375.5   9331.8   1375.2   9341.8
GR1375.0    9351.8   1374.7   9361.8   1374.5   9371.8   1374.3   9381.8   1374.0   9391.8
GR1374.0    9401.8   1373.9   9411.8   1373.5   9421.8   1373.1   9431.8   1372.8   9441.8
GR1372.4    9451.8   1372.1   9461.8   1372.0   9471.8   1371.9   9481.8   1371.5   9491.8
GR1371.2    9501.8   1370.8   9511.8   1370.5   9521.8   1370.1   9531.8   1369.8   9541.8
GR1369.3    9551.8   1368.8   9561.8   1368.4   9571.8   1368.0   9581.8   1368.0   9591.8
GR1368.0    9601.8   1367.8   9611.8   1367.5   9621.8   1367.2   9631.8   1366.9   9641.8
GR1366.6    9651.8   1366.3   9661.8   1366.0   9671.8   1366.0   9681.8   1366.0   9691.8
GR1366.0    9701.8   1366.0   9711.8   1365.9   9721.8   1365.7   9731.8   1365.5   9741.8
GR1365.3    9751.8   1365.0   9761.8   1364.8   9771.8   1364.6   9781.8   1364.3   9791.8
GR1364.1    9801.8   1364.0   9811.8   1364.0   9821.8   1363.8   9831.8   1363.5   9841.8
GR1363.2    9851.8   1363.0   9861.8   1362.8   9871.8   1362.6   9881.8   1362.3   9891.8
GR1362.0    9901.8   1362.0   9911.8   1362.0   9921.8   1362.0   9931.8   1362.0   9941.8
QT     1     7500
X1   7.00      90   9196.8   9446.8      430      570      500
CI   9340                                         170
X3                           9046.8            9446.8
GR1383.9    9046.8   1383.7   9056.8   1383.5   9066.8   1383.0   9076.8   1382.2   9086.8
GR1382.0    9096.8   1382.0   9106.8   1382.0   9116.8   1382.0   9126.8   1382.0   9136.8
GR1382.0    9146.8   1381.7   9156.8   1381.2   9166.8   1380.8   9176.8   1380.3   9186.8
GR1379.6    9196.8   1378.8   9206.8   1378.3   9216.8   1377.6   9226.8   1376.5   9236.8
GR1376.0    9246.8   1376.0   9256.8   1376.0   9266.8   1376.0   9276.8   1376.0   9286.8
GR1375.3    9296.8   1374.6   9306.8   1374.6   9316.8   1374.6   9326.8   1374.4   9336.8
GR1374.5    9346.8   1374.3   9356.8   1374.1   9366.8   1374.0   9376.8   1374.0   9386.8
GR1374.0    9396.8   1374.0   9406.8   1373.7   9416.8   1373.4   9426.8   1373.0   9436.8
GR1372.6    9446.8   1372.3   9456.8   1372.0   9466.8   1372.0   9476.8   1371.9   9486.8
GR1371.5    9496.8   1371.1   9506.8   1370.6   9516.8   1370.2   9526.8   1369.8   9536.8
GR1369.3    9546.8   1369.0   9556.8   1368.7   9566.8   1368.4   9576.8   1368.1   9586.8
GR1367.2    9596.8   1366.1   9606.8   1366.0   9616.8   1366.0   9626.8   1366.0   9636.8
GR1366.0    9646.8   1366.1   9656.8   1366.5   9666.8   1367.0   9676.8   1367.0   9686.8
GR1367.1    9696.8   1367.3   9706.8   1367.1   9716.8   1366.9   9726.8   1366.6   9736.8
GR1366.4    9746.8   1366.2   9756.8   1366.0   9766.8   1365.8   9776.8   1365.7   9786.8
GR1365.6    9796.8   1365.5   9806.8   1365.4   9816.8   1365.2   9826.8   1365.1   9836.8
GR1364.8    9846.8   1364.4   9856.8   1364.0   9866.8   1363.7   9876.8   1363.3   9886.8
GR1363.2    9896.8   1363.0   9906.8   1362.8   9916.8   1362.6   9926.8   1362.4   9936.8
QT     1     5600
X1   7.50      90   9337.3   9557.8      480      520      500
CI   9460                                         150
X3                           9047.3            9557.8
GR1386.0    9047.3   1385.8   9057.3   1385.4   9067.3   1385.0   9077.3   1384.7   9087.3
GR1384.4    9097.3   1384.1   9107.3   1384.0   9117.3   1384.0   9127.3   1383.8   9137.3
GR1383.0    9147.3   1382.4   9157.3   1382.0   9167.3   1382.0   9177.3   1381.7   9187.3
GR1381.3    9197.3   1380.9   9207.3   1380.7   9217.3   1380.4   9227.3   1380.2   9237.3
GR1380.0    9247.3   1380.0   9257.3   1380.0   9267.3   1380.0   9277.3   1379.4   9287.3
GR1378.9    9297.3   1378.1   9307.3   1378.0   9317.3   1378.0   9327.3   1378.0   9337.3
GR1378.0    9347.3   1378.0   9357.3   1377.7   9367.3   1377.2   9377.3   1376.8   9387.3
GR1376.4    9397.3   1376.1   9407.3   1376.0   9417.3   1375.9   9427.3   1375.8   9437.3
GR1375.7    9447.3   1375.6   9457.3   1375.4   9467.3   1375.2   9477.3   1375.1   9487.3
GR1375.0    9497.3   1374.6   9507.3   1374.3   9517.3   1374.0   9527.3   1373.8   9537.3
GR1373.4    9547.3   1373.1   9557.3   1372.8   9567.3   1372.5   9577.3   1372.2   9587.3
GR1372.0    9597.3   1371.7   9607.3   1371.4   9617.3   1371.3   9627.3   1371.2   9637.3
GR1371.0    9647.3   1370.7   9657.3   1370.5   9667.3   1370.3   9677.3   1370.0   9687.3
GR1370.0    9697.3   1369.8   9707.3   1369.5   9717.3   1369.3   9727.3   1369.1   9737.3
GR1368.9    9747.3   1368.7   9757.3   1368.4   9767.3   1368.2   9777.3   1368.0   9787.3
GR1367.6    9797.3   1367.2   9807.3   1366.7   9817.3   1366.3   9827.3   1365.9   9837.3
GR1365.7    9847.3   1365.4   9857.3   1365.1   9867.3   1364.8   9877.3   1364.5   9887.3
GR1364.3    9897.3   1364.0   9907.3   1363.8   9917.3   1363.5   9927.3   1363.3   9937.3
QT     1     4000
X1   8.00      90   9411.3   9611.3      520      480      500
CI   9530                                         120
X3                           9051.3            9611.3
GR1390.4    9051.3   1390.2   9061.3   1390.0   9071.3   1389.6   9081.3   1389.1   9091.3
GR1388.6    9101.3   1388.2   9111.3   1388.0   9121.3   1387.6   9131.3   1387.3   9141.3
GR1386.9    9151.3   1386.5   9161.3   1386.1   9171.3   1385.7   9181.3   1385.3   9191.3
GR1384.9    9201.3   1384.6   9211.3   1384.4   9221.3   1384.1   9231.3   1384.0   9241.3
GR1384.0    9251.3   1383.9   9261.3   1383.8   9271.3   1383.7   9281.3   1383.6   9291.3
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GR1383.5	9301.3	1383.1	9311.3	1382.8	9321.3	1382.4	9331.3	1382.1	9341.3
GR1382.0	9351.3	1382.0	9361.3	1381.9	9371.3	1381.4	9381.3	1380.9	9391.3
GR1380.5	9401.3	1380.0	9411.3	1380.0	9421.3	1380.0	9431.3	1380.0	9441.3
GR1379.7	9451.3	1379.4	9461.3	1379.0	9471.3	1378.6	9481.3	1378.3	9491.3
GR1378.0	9501.3	1378.0	9511.3	1377.5	9521.3	1377.0	9531.3	1376.5	9541.3
GR1376.2	9551.3	1376.0	9561.3	1376.0	9571.3	1376.0	9581.3	1375.6	9591.3
GR1375.1	9601.3	1374.5	9611.3	1374.1	9621.3	1374.0	9631.3	1374.0	9641.3
GR1373.6	9651.3	1373.2	9661.3	1372.9	9671.3	1372.5	9681.3	1372.1	9691.3
GR1371.9	9701.3	1371.7	9711.3	1371.5	9721.3	1371.4	9731.3	1371.1	9741.3
GR1370.8	9751.3	1370.5	9761.3	1370.3	9771.3	1370.0	9781.3	1370.0	9791.3
GR1370.0	9801.3	1370.0	9811.3	1369.8	9821.3	1369.6	9831.3	1369.4	9841.3
GR1369.3	9851.3	1369.2	9861.3	1368.9	9871.3	1368.6	9881.3	1368.3	9891.3
GR1368.1	9901.3	1367.6	9911.3	1367.1	9921.3	1366.6	9931.3	1366.0	9941.3
X1 8.50	90	9400	9590	500	520	500			
CI 9510									
X3			9080		9590				
GR1386.0	9070.0	1386.0	9080.0	1384.9	9090.0	1383.8	9100.0	1383.5	9110.0
GR1383.3	9120.0	1383.1	9130.0	1383.2	9140.0	1383.2	9150.0	1383.3	9160.0
GR1383.4	9170.0	1383.5	9180.0	1383.6	9190.0	1383.6	9200.0	1383.6	9210.0
GR1383.7	9220.0	1383.6	9230.0	1383.6	9240.0	1383.5	9250.0	1383.4	9260.0
GR1383.4	9270.0	1383.4	9280.0	1383.4	9290.0	1383.4	9300.0	1383.3	9310.0
GR1383.2	9320.0	1383.0	9330.0	1382.5	9340.0	1382.1	9350.0	1381.8	9360.0
GR1381.4	9370.0	1381.1	9380.0	1380.8	9390.0	1380.3	9400.0	1380.0	9410.0
GR1379.8	9420.0	1379.5	9430.0	1379.1	9440.0	1378.7	9450.0	1378.4	9460.0
GR1378.1	9470.0	1377.9	9480.0	1377.6	9490.0	1377.3	9500.0	1377.0	9510.0
GR1376.8	9520.0	1376.7	9530.0	1376.6	9540.0	1376.5	9550.0	1376.3	9560.0
GR1376.1	9570.0	1375.6	9580.0	1374.9	9590.0	1374.3	9600.0	1374.0	9610.0
GR1374.0	9620.0	1373.8	9630.0	1373.4	9640.0	1373.1	9650.0	1372.8	9660.0
GR1372.7	9670.0	1372.5	9680.0	1372.4	9690.0	1372.3	9700.0	1372.4	9710.0
GR1372.3	9720.0	1372.0	9730.0	1372.0	9740.0	1372.0	9750.0	1372.0	9760.0
GR1372.0	9770.0	1372.0	9780.0	1372.0	9790.0	1372.0	9800.0	1371.4	9810.0
GR1371.1	9820.0	1370.7	9830.0	1370.3	9840.0	1370.0	9850.0	1369.2	9860.0
GR1368.9	9870.0	1368.6	9880.0	1368.2	9890.0	1367.9	9900.0	1367.3	9910.0
GR1366.6	9920.0	1365.9	9930.0	1365.4	9940.0	1364.8	9950.0	1364.3	9960.0
QT 1	2900								
X1 9.00	90	9388.1	9558.1	500	500	500			
CI 9490					100				
X3			9048.1		9558.1				
GR1391.0	9048.1	1390.7	9058.1	1390.5	9068.1	1390.2	9078.1	1390.0	9088.1
GR1389.8	9098.1	1389.3	9108.1	1388.9	9118.1	1388.4	9128.1	1388.0	9138.1
GR1388.0	9148.1	1388.0	9158.1	1387.9	9168.1	1387.7	9178.1	1387.4	9188.1
GR1387.2	9198.1	1386.9	9208.1	1386.7	9218.1	1386.5	9228.1	1386.2	9238.1
GR1386.0	9248.1	1385.7	9258.1	1385.4	9268.1	1385.1	9278.1	1384.8	9288.1
GR1384.5	9298.1	1384.2	9308.1	1384.0	9318.1	1383.7	9328.1	1383.4	9338.1
GR1383.1	9348.1	1382.8	9358.1	1382.4	9368.1	1382.1	9378.1	1381.8	9388.1
GR1381.4	9398.1	1381.1	9408.1	1380.8	9418.1	1380.4	9428.1	1380.1	9438.1
GR1379.6	9448.1	1379.2	9458.1	1378.7	9468.1	1378.2	9478.1	1377.9	9488.1
GR1377.6	9498.1	1377.2	9508.1	1376.9	9518.1	1376.7	9528.1	1376.4	9538.1
GR1376.1	9548.1	1375.8	9558.1	1375.5	9568.1	1375.2	9578.1	1375.0	9588.1
GR1374.7	9598.1	1374.5	9608.1	1374.3	9618.1	1374.1	9628.1	1374.0	9638.1
GR1373.5	9648.1	1373.4	9658.1	1372.6	9668.1	1372.2	9678.1	1372.0	9688.1
GR1371.6	9698.1	1371.3	9708.1	1370.8	9718.1	1370.4	9728.1	1370.0	9738.1
GR1370.0	9748.1	1370.0	9758.1	1370.0	9768.1	1370.0	9778.1	1370.0	9788.1
GR1370.0	9798.1	1369.9	9808.1	1369.8	9818.1	1369.4	9828.1	1369.2	9838.1
GR1369.0	9848.1	1368.6	9858.1	1368.2	9868.1	1368.0	9878.1	1367.8	9888.1
GR1367.0	9898.1	1366.3	9908.1	1365.9	9918.1	1365.6	9928.1	1365.3	9938.1
QT 1	2200								
X1 9.50	90	9375	9525	480	520	500			
CI 9460					100				
X3			9045		9525				
GR1390.0	9045.0	1389.7	9055.0	1389.3	9065.0	1388.9	9075.0	1388.5	9085.0
GR1388.1	9095.0	1388.0	9105.0	1387.5	9115.0	1386.6	9125.0	1386.0	9135.0
GR1385.7	9145.0	1385.1	9155.0	1384.6	9165.0	1384.1	9175.0	1384.0	9185.0
GR1384.0	9195.0	1384.0	9205.0	1383.4	9215.0	1383.2	9225.0	1383.1	9235.0
GR1382.9	9245.0	1382.3	9255.0	1381.8	9265.0	1381.3	9275.0	1381.2	9285.0
GR1380.9	9295.0	1380.5	9305.0	1380.1	9315.0	1379.6	9325.0	1379.3	9335.0
GR1378.7	9345.0	1378.1	9355.0	1377.8	9365.0	1377.4	9375.0	1376.4	9385.0
GR1376.1	9395.0	1376.0	9405.0	1375.5	9415.0	1374.9	9425.0	1374.0	9435.0
GR1374.0	9445.0	1374.0	9455.0	1374.0	9465.0	1374.0	9475.0	1374.2	9485.0
GR1374.7	9495.0	1375.1	9505.0	1375.5	9515.0	1375.8	9525.0	1375.5	9535.0
GR1375.4	9545.0	1375.1	9555.0	1374.8	9565.0	1374.5	9575.0	1374.1	9585.0
GR1374.0	9595.0	1373.7	9605.0	1373.3	9615.0	1372.9	9625.0	1372.5	9635.0
GR1372.1	9645.0	1372.0	9655.0	1372.0	9665.0	1372.0	9675.0	1371.6	9685.0
GR1370.7	9695.0	1370.0	9705.0	1370.0	9715.0	1370.0	9725.0	1370.0	9735.0
GR1370.0	9745.0	1370.0	9755.0	1370.0	9765.0	1370.0	9775.0	1370.0	9785.0
GR1369.7	9795.0	1369.3	9805.0	1369.0	9815.0	1368.8	9825.0	1368.5	9835.0

GR1368.2	9845.0	1368.0	9855.0	1367.8	9865.0	1367.5	9875.0	1367.2	9885.0
GR1367.0	9895.0	1366.6	9905.0	1366.3	9915.0	1366.0	9925.0	1365.5	9935.0
X1 10.00	90	9330	9490	430	580	500			
CI 9420					90				
X3			9050		9490				
GR1386.0	9040.0	1386.0	9050.0	1385.9	9060.0	1386.0	9070.0	1385.9	9080.0
GR1385.8	9090.0	1385.5	9100.0	1385.2	9110.0	1385.1	9120.0	1384.9	9130.0
GR1384.6	9140.0	1384.3	9150.0	1384.1	9160.0	1384.0	9170.0	1384.0	9180.0
GR1384.0	9190.0	1384.0	9200.0	1383.8	9210.0	1383.6	9220.0	1383.5	9230.0
GR1383.7	9240.0	1383.9	9250.0	1384.1	9260.0	1384.2	9270.0	1384.0	9280.0
GR1383.8	9290.0	1383.7	9300.0	1383.4	9310.0	1383.2	9320.0	1382.8	9330.0
GR1382.4	9340.0	1382.1	9350.0	1382.0	9360.0	1381.8	9370.0	1381.6	9380.0
GR1381.0	9390.0	1380.0	9400.0	1380.0	9410.0	1380.0	9420.0	1379.7	9430.0
GR1379.3	9440.0	1379.0	9450.0	1378.7	9460.0	1378.4	9470.0	1378.0	9480.0
GR1377.8	9490.0	1377.2	9500.0	1376.6	9510.0	1376.0	9520.0	1376.0	9530.0
GR1375.8	9540.0	1375.7	9550.0	1376.0	9560.0	1376.1	9570.0	1375.8	9580.0
GR1375.6	9590.0	1375.5	9600.0	1375.4	9610.0	1375.2	9620.0	1375.1	9630.0
GR1374.9	9640.0	1374.7	9650.0	1374.5	9660.0	1374.2	9670.0	1373.9	9680.0
GR1373.6	9690.0	1373.3	9700.0	1373.0	9710.0	1372.7	9720.0	1372.4	9730.0
GR1372.0	9740.0	1371.7	9750.0	1371.3	9760.0	1370.9	9770.0	1370.6	9780.0
GR1370.2	9790.0	1369.7	9800.0	1369.2	9810.0	1368.7	9820.0	1368.2	9830.0
GR1367.8	9840.0	1367.5	9850.0	1367.1	9860.0	1366.8	9870.0	1366.5	9880.0
GR1366.2	9890.0	1365.8	9900.0	1365.4	9910.0	1364.9	9920.0	1364.4	9930.0
QT 1	1500								
X1 10.50	90	9287.8	9427.8	490	530	500			
CI 9370									
X3			9047.8		9427.8				
GR1393.8	9047.8	1393.4	9057.8	1393.0	9067.8	1392.6	9077.8	1392.2	9087.8
GR1392.0	9097.8	1391.4	9107.8	1391.0	9117.8	1390.6	9127.8	1390.0	9137.8
GR1390.0	9147.8	1390.0	9157.8	1390.0	9167.8	1390.0	9177.8	1389.9	9187.8
GR1389.2	9197.8	1388.3	9207.8	1388.0	9217.8	1387.1	9227.8	1386.4	9237.8
GR1385.4	9247.8	1383.9	9257.8	1383.1	9267.8	1382.5	9277.8	1381.5	9287.8
GR1380.0	9297.8	1380.0	9307.8	1380.0	9317.8	1380.0	9327.8	1380.0	9337.8
GR1380.0	9347.8	1380.0	9357.8	1378.7	9367.8	1378.0	9377.8	1378.0	9387.8
GR1378.0	9397.8	1378.0	9407.8	1378.0	9417.8	1378.0	9427.8	1376.8	9437.8
GR1376.6	9447.8	1376.4	9457.8	1376.3	9467.8	1376.2	9477.8	1376.2	9487.8
GR1376.2	9497.8	1376.0	9507.8	1376.0	9517.8	1376.0	9527.8	1376.0	9537.8
GR1376.0	9547.8	1375.5	9557.8	1375.5	9567.8	1375.6	9577.8	1375.7	9587.8
GR1375.7	9597.8	1375.4	9607.8	1375.3	9617.8	1375.2	9627.8	1375.1	9637.8
GR1375.2	9647.8	1374.9	9657.8	1374.7	9667.8	1374.2	9677.8	1374.0	9687.8
GR1373.8	9697.8	1373.5	9707.8	1373.2	9717.8	1372.7	9727.8	1372.2	9737.8
GR1372.1	9747.8	1372.0	9757.8	1372.0	9767.8	1372.0	9777.8	1372.0	9787.8
GR1371.6	9797.8	1371.0	9807.8	1370.8	9817.8	1370.6	9827.8	1370.4	9837.8
GR1370.2	9847.8	1369.8	9857.8	1369.4	9867.8	1369.0	9877.8	1368.7	9887.8
GR1368.4	9897.8	1368.1	9907.8	1368.0	9917.8	1367.7	9927.8	1367.4	9937.8
QT 1	500								
X1 11.00	90	9459.6	9569.6	490	510	500			
CI 9520					60				
X3			9059.6		9569.6				
GR1394.0	9049.6	1394.0	9059.6	1394.0	9069.6	1394.0	9079.6	1393.5	9089.6
GR1393.1	9099.6	1392.0	9109.6	1392.0	9119.6	1391.8	9129.6	1390.4	9139.6
GR1390.0	9149.6	1389.8	9159.6	1388.2	9169.6	1388.0	9179.6	1388.0	9189.6
GR1388.7	9199.6	1389.0	9209.6	1389.2	9219.6	1388.6	9229.6	1388.0	9239.6
GR1388.0	9249.6	1388.0	9259.6	1388.0	9269.6	1388.0	9279.6	1388.0	9289.6
GR1387.9	9299.6	1387.6	9309.6	1387.0	9319.6	1386.4	9329.6	1386.0	9339.6
GR1385.8	9349.6	1385.3	9359.6	1384.7	9369.6	1384.0	9379.6	1384.0	9389.6
GR1383.6	9399.6	1383.0	9409.6	1382.5	9419.6	1382.0	9429.6	1382.0	9439.6
GR1381.5	9449.6	1380.9	9459.6	1380.6	9469.6	1380.7	9479.6	1380.7	9489.6
GR1380.6	9499.6	1380.4	9509.6	1380.2	9519.6	1380.0	9529.6	1379.8	9539.6
GR1379.5	9549.6	1379.2	9559.6	1378.8	9569.6	1378.3	9579.6	1377.6	9589.6
GR1377.1	9599.6	1376.7	9609.6	1376.6	9619.6	1376.4	9629.6	1376.3	9639.6
GR1376.0	9649.6	1376.0	9659.6	1376.0	9669.6	1376.0	9679.6	1376.0	9689.6
GR1375.6	9699.6	1375.2	9709.6	1374.8	9719.6	1374.4	9729.6	1374.0	9739.6
GR1374.0	9749.6	1374.0	9759.6	1374.0	9769.6	1373.8	9779.6	1373.4	9789.6
GR1373.0	9799.6	1372.5	9809.6	1372.1	9819.6	1371.6	9829.6	1371.2	9839.6
GR1370.6	9849.6	1370.1	9859.6	1369.5	9869.6	1368.9	9879.6	1368.2	9889.6
GR1368.0	9899.6	1368.0	9909.6	1367.8	9919.6	1367.2	9929.6	1366.6	9939.6
X1 11.50	90	9408.8	9518.8	430	570	500			
CI 9480					50				
X3			9058.8		9518.8				
GR1390.0	9048.8	1390.0	9058.8	1390.0	9068.8	1390.0	9078.8	1389.9	9088.8
GR1389.3	9098.8	1388.7	9108.8	1388.5	9118.8	1388.4	9128.8	1388.3	9138.8
GR1388.2	9148.8	1388.1	9158.8	1388.0	9168.8	1387.6	9178.8	1387.3	9188.8
GR1387.7	9198.8	1388.0	9208.8	1388.3	9218.8	1388.5	9228.8	1388.4	9238.8
GR1388.2	9248.8	1388.0	9258.8	1387.8	9268.8	1387.3	9278.8	1386.8	9288.8
GR1386.3	9298.8	1386.0	9308.8	1386.0	9318.8	1386.0	9328.8	1386.0	9338.8

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GR1386.0  9348.8  1386.0  9358.8  1385.7  9368.8  1385.5  9378.8  1385.0  9388.8
GR1384.7  9398.8  1384.3  9408.8  1384.0  9418.8  1383.6  9428.8  1383.3  9438.8
GR1382.9  9448.8  1382.6  9458.8  1382.5  9468.8  1382.1  9478.8  1381.6  9488.8
GR1381.1  9498.8  1380.6  9508.8  1380.0  9518.8  1379.5  9528.8  1379.2  9538.8
GR1378.7  9548.8  1378.2  9558.8  1377.7  9568.8  1377.2  9578.8  1376.5  9588.8
GR1376.0  9598.8  1376.0  9608.8  1375.1  9618.8  1374.0  9628.8  1373.5  9638.8
GR1373.4  9648.8  1373.4  9658.8  1372.8  9668.8  1372.4  9678.8  1372.0  9688.8
GR1372.0  9698.8  1371.9  9708.8  1370.7  9718.8  1370.0  9728.8  1370.0  9738.8
GR1370.0  9748.8  1370.0  9758.8  1370.0  9768.8  1370.0  9778.8  1369.3  9788.8
GR1369.1  9798.8  1369.2  9808.8  1369.1  9818.8  1369.0  9828.8  1369.3  9838.8
GR1369.8  9848.8  1370.1  9858.8  1370.2  9868.8  1370.0  9878.8  1370.0  9888.8
GR1370.0  9898.8  1369.9  9908.8  1369.4  9918.8  1368.9  9928.8  1368.4  9938.8
X1 12.00      90  9386.6  9490.6     480     560     500
CI  9450
X3                        9050.6          9490.6
GR1395.5  9040.6  1395.0  9050.6  1394.6  9060.6  1394.2  9070.6  1393.8  9080.6
GR1393.5  9090.6  1393.1  9100.6  1392.9  9110.6  1392.7  9120.6  1392.6  9130.6
GR1392.6  9140.6  1392.5  9150.6  1392.4  9160.6  1392.2  9170.6  1392.0  9180.6
GR1391.7  9190.6  1391.4  9200.6  1391.1  9210.6  1390.7  9220.6  1390.3  9230.6
GR1390.0  9240.6  1390.0  9250.6  1390.0  9260.6  1390.0  9270.6  1389.7  9280.6
GR1389.1  9290.6  1388.5  9300.6  1388.0  9310.6  1387.5  9320.6  1387.1  9330.6
GR1386.6  9340.6  1386.2  9350.6  1385.7  9360.6  1385.2  9370.6  1384.8  9380.6
GR1384.4  9390.6  1384.0  9400.6  1383.8  9410.6  1383.5  9420.6  1383.2  9430.6
GR1382.9  9440.6  1382.5  9450.6  1382.1  9460.6  1381.7  9470.6  1381.4  9480.6
GR1381.0  9490.6  1380.6  9500.6  1380.3  9510.6  1379.9  9520.6  1379.5  9530.6
GR1379.2  9540.6  1378.8  9550.6  1378.5  9560.6  1378.1  9570.6  1377.7  9580.6
GR1377.3  9590.6  1376.8  9600.6  1376.5  9610.6  1376.1  9620.6  1375.6  9630.6
GR1375.0  9640.6  1374.5  9650.6  1373.9  9660.6  1373.5  9670.6  1373.0  9680.6
GR1372.4  9690.6  1371.9  9700.6  1371.3  9710.6  1370.7  9720.6  1370.2  9730.6
GR1370.0  9740.6  1370.0  9750.6  1370.0  9760.6  1370.0  9770.6  1369.5  9780.6
GR1369.1  9790.6  1368.9  9800.6  1368.7  9810.6  1368.5  9820.6  1368.2  9830.6
GR1367.6  9840.6  1366.9  9850.6  1366.3  9860.6  1366.1  9870.6  1366.0  9880.6
GR1366.0  9890.6  1366.0  9900.6  1365.2  9910.6  1364.7  9920.6  1364.3  9930.6
QT     1     300
X1 12.50      90  9413.2  9503.2     380     600     500
CI  9470                                      40
X3                        9033.2          9503.2
GR1397.2  9033.2  1396.1  9043.2  1395.4  9053.2  1395.0  9063.2  1394.6  9073.2
GR1394.2  9083.2  1393.8  9093.2  1393.4  9103.2  1392.7  9113.2  1392.1  9123.2
GR1391.1  9133.2  1390.2  9143.2  1389.1  9153.2  1388.2  9163.2  1387.9  9173.2
GR1386.9  9183.2  1386.3  9193.2  1386.4  9203.2  1387.2  9213.2  1387.6  9223.2
GR1388.0  9233.2  1388.5  9243.2  1388.5  9253.2  1388.4  9263.2  1388.0  9273.2
GR1388.0  9283.2  1388.0  9293.2  1387.7  9303.2  1387.2  9313.2  1386.9  9323.2
GR1386.6  9333.2  1386.3  9343.2  1386.0  9353.2  1386.0  9363.2  1385.7  9373.2
GR1385.2  9383.2  1384.8  9393.2  1384.5  9403.2  1384.3  9413.2  1384.3  9423.2
GR1384.2  9433.2  1383.9  9443.2  1383.7  9453.2  1383.0  9463.2  1382.9  9473.2
GR1382.7  9483.2  1382.0  9493.2  1381.6  9503.2  1381.2  9513.2  1380.7  9523.2
GR1380.2  9533.2  1379.4  9543.2  1378.6  9553.2  1377.9  9563.2  1377.0  9573.2
GR1376.1  9583.2  1375.3  9593.2  1374.4  9603.2  1374.0  9613.2  1374.0  9623.2
GR1374.0  9633.2  1374.3  9643.2  1374.6  9653.2  1374.6  9663.2  1374.7  9673.2
GR1374.8  9683.2  1374.7  9693.2  1374.4  9703.2  1374.1  9713.2  1373.8  9723.2
GR1373.4  9733.2  1373.1  9743.2  1373.3  9753.2  1374.0  9763.2  1374.2  9773.2
GR1374.2  9783.2  1374.2  9793.2  1374.1  9803.2  1373.9  9813.2  1373.5  9823.2
GR1373.1  9833.2  1372.7  9843.2  1372.3  9853.2  1372.0  9863.2  1371.5  9873.2
GR1371.1  9883.2  1370.6  9893.2  1370.2  9903.2  1369.9  9913.2  1369.5  9923.2
X1 13.00      90    9870    9990     310     720     500
CI  9940                                      30
X3                          9050            9990
GR1402.4  9100.0  1401.9  9110.0  1401.2  9120.0  1400.5  9130.0  1399.9  9140.0
GR1399.3  9150.0  1398.6  9160.0  1398.0  9170.0  1398.0  9180.0  1398.0  9190.0
GR1398.0  9200.0  1399.2  9210.0  1400.5  9220.0  1401.9  9230.0  1402.0  9240.0
GR1402.0  9250.0  1402.2  9260.0  1401.9  9270.0  1401.7  9280.0  1401.8  9290.0
GR1402.0  9300.0  1402.2  9310.0  1402.5  9320.0  1402.7  9330.0  1402.7  9340.0
GR1402.4  9350.0  1402.1  9360.0  1401.5  9370.0  1400.9  9380.0  1400.2  9390.0
GR1399.8  9400.0  1399.5  9410.0  1398.9  9420.0  1398.2  9430.0  1397.4  9440.0
GR1397.3  9450.0  1397.4  9460.0  1398.0  9470.0  1398.0  9480.0  1398.0  9490.0
GR1398.0  9500.0  1397.9  9510.0  1397.6  9520.0  1397.3  9530.0  1397.0  9540.0
GR1396.6  9550.0  1396.2  9560.0  1395.8  9570.0  1395.3  9580.0  1394.9  9590.0
GR1394.5  9600.0  1394.1  9610.0  1393.9  9620.0  1393.9  9630.0  1394.0  9640.0
GR1394.0  9650.0  1394.0  9660.0  1393.9  9670.0  1393.6  9680.0  1393.4  9690.0
GR1393.1  9700.0  1392.8  9710.0  1392.5  9720.0  1392.1  9730.0  1391.6  9740.0
GR1391.0  9750.0  1390.9  9760.0  1390.7  9770.0  1390.5  9780.0  1390.4  9790.0
GR1390.4  9800.0  1390.3  9810.0  1390.2  9820.0  1390.0  9830.0  1389.8  9840.0
GR1389.5  9850.0  1389.3  9860.0  1389.0  9870.0  1388.8  9880.0  1388.5  9890.0
GR1388.3  9900.0  1388.0  9910.0  1387.5  9920.0  1387.0  9930.0  1386.5  9940.0
GR1386.0  9950.0  1385.5  9960.0  1385.0  9970.0  1384.5  9980.0  1384.2  9990.0
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EJ
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ER

FILE = MCMCHSPF.OUT

APRIL 2, 1997

R.W. CRUFF, P.E.

MODEL = MCMCHSPF.DAT

THIS IS A MODIFICATION OF MCMCH.DAT FOR SPF FLOWS
FOR THE CHIMP ROUTINE, SLOPE = 0.002 &
BOTTOM ELEVATION = 1353 AT SECTION 2.0.

T1 MCMICKEN CHANNEL DESIGN
T2 SPF FLOW - RUSS CRUFF 4-2-97
T3 SECTIONS 1.5 TO 13.0

SUMMARY PRINTOUT

SECNO	Q	CWSEL	VCH	DEPTH	BW	TOPWID
1.500	18100.00	1358.24	4.90	10.24	.01	640.00
2.000	18100.00	1359.31	8.99	6.31	300.00	337.87
2.500	18100.00	1362.08	7.09	8.08	300.00	332.30
3.000	16100.00	1363.61	6.09	8.61	300.00	324.44
3.500	16100.00	1364.69	5.84	8.69	300.00	334.75
4.000	14300.00	1365.65	4.89	13.75	300.00	334.62
4.500	14300.00	1366.35	5.66	8.35	300.00	319.48
5.000	12000.00	1367.35	6.39	8.35	200.00	250.10
5.500	12000.00	1368.62	6.16	8.62	200.00	251.71
6.000	12000.00	1369.77	6.05	11.77	200.00	252.60
6.500	9000.00	1370.88	4.90	8.88	180.00	233.35
7.000	7500.00	1371.62	4.44	9.22	170.00	221.73
7.500	5600.00	1372.26	3.88	8.96	150.00	199.59
8.000	4000.00	1372.79	3.58	7.79	120.00	166.76
8.500	4000.00	1373.30	3.86	9.00	120.00	163.77
9.000	2900.00	1373.92	3.47	8.62	100.00	141.51
9.500	2200.00	1374.45	2.86	8.95	100.00	138.68
10.000	2200.00	1374.90	3.46	10.50	90.00	125.43
10.500	1500.00	1375.50	2.56	8.10	90.00	123.03
11.000	500.00	1375.86	1.38	9.26	60.00	89.19
11.500	500.00	1376.05	1.98	7.65	50.00	74.32
12.000	500.00	1376.50	2.36	12.20	50.00	70.99
12.500	300.00	1377.10	1.97	7.60	40.00	58.58
13.000	300.00	1377.80	2.79	2.80	30.00	46.80

SUMMARY PRINTOUT

SECNO	Q	SSTA	ENDST	VEXR	VEXT
1.500	18100.00	9570.00	10210.00	.00	.00
2.000	18100.00	9154.75	9492.62	.00	.00
2.500	18100.00	9187.70	9520.00	66.64	66.64
3.000	16100.00	9165.56	9490.00	85.01	151.65
3.500	16100.00	9205.25	9540.00	81.57	233.22
4.000	14300.00	9615.38	9950.00	59.58	292.80
4.500	14300.00	9426.61	9746.10	47.45	340.24
5.000	12000.00	9356.60	9606.70	48.57	388.81
5.500	12000.00	9235.53	9487.24	43.54	432.35
6.000	12000.00	9234.93	9487.53	52.69	485.04
6.500	9000.00	9244.43	9477.78	57.90	542.94
7.000	7500.00	9220.51	9442.24	49.80	592.74
7.500	5600.00	9351.94	9551.53	43.50	636.24
8.000	4000.00	9438.83	9605.59	38.69	674.93
8.500	4000.00	9420.82	9584.59	35.29	710.22
9.000	2900.00	9412.32	9553.84	31.32	741.54
9.500	2200.00	9384.21	9522.89	22.33	763.87
10.000	2200.00	9351.38	9476.81	20.96	784.83
10.500	1500.00	9302.98	9426.01	23.25	808.08
11.000	500.00	9470.54	9559.73	17.59	825.67
11.500	500.00	9438.79	9513.11	15.22	840.90
12.000	500.00	9411.01	9482.00	15.00	855.90
12.500	300.00	9437.62	9496.19	13.10	869.00
13.000	300.00	9913.80	9960.60	13.24	882.24

FILE = MCMCHA.DAT

```
C
C       2
C     1.5    WITHIN MCMICKEN RESERVOIR
C     2.8    UPPER END OF CHANNEL
*
*             MODEL = MCMCHA.DAT
*
*             THIS MODEL IS A MODIFICATION OF MCMCH FOR THE DESGN
*             OF THE CHANNEL ONLY TO THE HILL ABOUT 2,000 FEET
*             SOUTHWEST OF THE DAM.
*
*                IN THIS MODEL A SLOPE = 0.004 WAS USED WITH A STARTING
*                BOTTOM ELEVATION = 1352.5 AT SECTION 1.8
*
*             THE GR DATA FOR THIS MODEL WAS PICKED FROM THE GIS GENERATED
*             TOPO MAP. THE APPROXIMATE CHANNEL ORIENTATION WAS LAYED OUT
*             ON THE MAP AND NEW CROSS SECTIONS DEFINED. A LINE FOR ORIENTATION
*             PURPOSES WAS DRAWN AND USED AS STATION 500. NEW GR DATA WAS
*             DETERMINED FROM THE TOPO MAP.
*
*                EXTRA CROSS SECTIONS WERE ADDED.
*
T1           MCMICKEN SHORT CHANNEL DESIGN
T2           100-YEAR FLOW  - RUSS CRUFF 4-1-97
T3           SECTIONS 1.5 TO 3.8
J1              2                        .002
J2      1                -2
J3     38      43         1      26       8      30       4
J3     38      43        53      54      64      65
NC   .045    .045     0.045      .1      .3
QT      1    2300
X1   1.50      65      9600   10210       0       0       0
GR1357.7  9570.0  1357.8  9580.0  1357.9  9590.0  1358.0  9600.0  1357.9  9610.0
GR1357.9  9620.0  1357.9  9630.0  1357.8  9640.0  1357.6  9650.0  1357.5  9660.0
GR1357.3  9670.0  1357.2  9680.0  1357.0  9690.0  1356.8  9700.0  1356.6  9710.0
GR1356.4  9720.0  1356.2  9730.0  1356.0  9740.0  1355.4  9750.0  1354.8  9760.0
GR1354.4  9770.0  1354.0  9780.0  1351.4  9790.0  1349.9  9800.0  1349.7  9810.0
GR1349.6  9820.0  1349.7  9830.0  1349.8  9840.0  1350.0  9850.0  1350.1  9860.0
GR1350.2  9870.0  1350.4  9880.0  1350.5  9890.0  1350.7  9900.0  1350.6  9910.0
GR1350.5  9920.0  1350.3  9930.0  1350.2  9940.0  1350.0  9950.0  1349.5  9960.0
GR1349.0  9970.0  1348.5  9980.0  1348.1  9990.0  1348.0 10000.0  1348.0 10010.0
GR1348.0 10020.0  1348.0 10030.0  1348.0 10040.0  1348.0 10050.0  1348.0 10060.0
GR1348.0 10070.0  1348.5 10080.0  1349.0 10090.0  1349.3 10100.0  1349.7 10110.0
GR1350.4 10120.0  1351.7 10130.0  1352.3 10140.0  1352.6 10150.0  1353.0 10160.0
GR1353.3 10170.0  1353.6 10180.0  1354.2 10190.0  1356.2 10200.0  1358.2 10210.0
X1   1.80      15       400     590     260     320     320
CI    515  1352.5                10       2     100
X3                              370             590
GR   1356     290      1356     291    1356     292    1356     293    1356     295
GR   1358     320      1359     370  1358.5     400    1358     430    1356     460
GR   1355     500      1356     550    1358     580    1360     590    1360     600
X1   2.00      15       260     470     350      20     250
CI    400   0.004
X3                              220             560
GR   1364     170      1364     175    1363     190    1364     220  1363.5     260
GR   1363     320      1362     340    1361     360  1360.5     400    1360     420
GR1359.5      450      1360     470  1360.3     530  1360.5     560    1360     600
X1   2.20       9       180     430     210     200     220
CI    360
X3                               10             430
GR   1370       0      1368      70    1367     130  1367.5     180    1368     210
GR   1366     320    1366.5     340    1364     430    1364     480    1364     500
X1   2.50      10       150     450     300     150     250
CI    370
X3                              100             450
GR   1372     100      1371     125  1370.0     150    1368     250    1368     270
GR   1368     330    1366.8     400  1366.9     450    1366     470  1365.5     510
X1   2.80      16       130     490     300     250     290
CI    400
X3                               80             490
GR1378.5        0      1378      30    1377      50    1376      70    1375      75
GR   1374      80      1372     100  1370.0     130    1368     160    1367     220
GR   1366     270      1368     300    1370     390    1368     450    1366     490
```

```
GR1365.8     500
X1  3.00      13     140     510     200     220     210
CI   420
X3                           140             510
GR  1376       0    1376      80    1374     110    1376     140    1374     200
GR1374.0     210    1373     270    1372     310  1371.5     430    1370     470
GR  1369     490  1368.8     510  1368.5     550
X1  3.30      14     150     500     300     300     310
CI   420
X3                           110             500
GR  1380     100    1380     110    1379     150    1378     190  1377.5     210
GR  1376     270    1374     340    1372     380    1372     420    1370     450
GR  1368     480    1367     500    1366     520    1366     580
X1  3.50      11     180     500     200     180     190
CI   420
X3                           180             500
GR  1377     150  1376.5     180  1376.2     210    1376     250  1375.7     270
GR  1374     400    1372     480  1371.5     500    1371     540  1370.5     580
GR  1370     600
X1  3.65      12     210     500     150     190     170
CI   420
X3                           100             500
GR  1376      20    1378     100    1376     180    1375     210  1374.5     250
GR  1374     270    1372     300    1370     400    1368     500    1366     520
GR  1366     540    1366     600
X1  3.75      12     260     540      90      70      80
CI   460
X3                           200             540
GR  1374     200    1372     250    1372     260    1372     300    1371     320
GR1370.5     400  1368.5     420    1368     490    1367     510    1368     540
GR  1368     570    1368     580
QT     1    0.01
X1  3.80       7     400     530      50      50      50
CI   460                                    0.01
X3                           400             530
GR  1372     360    1373     400    1372     420    1370     440    1368     460
GR  1370     480    1375     530
EJ
*
ER
```

FILE = MCMCHA.OUT

APRIL 15, 1997

R.W. CRUFF, P.E.

MODEL = MCMCHA.DAT

THIS MODEL IS A MODIFICATION OF MCMCH FOR THE DESGN OF THE CHANNEL ONLY TO THE HILL ABOUT 2,000 FEET SOUTHWEST OF THE DAM.

IN THIS MODEL A SLOPE = 0.004 WAS USED WITH A STARTING BOTTOM ELEVATION = 1352.5 AT SECTION 1.8

THE GR DATA FOR THIS MODEL WAS PICKED FROM THE GIS GENERATED TOPO MAP. THE APPROXIMATE CHANNEL ORIENTATION WAS LAYED OUT ON THE MAP AND NEW CROSS SECTIONS DEFINED. A LINE FOR ORIENTATION PURPOSES WAS DRAWN AND USED AS STATION 500. NEW GR DATA WAS DETERMINED FROM THE TOPO MAP.

EXTRA CROSS SECTIONS WERE ADDED.

SUMMARY PRINTOUT

SECNO	Q	CWSEL	VCH	DEPTH	BW	TOPWID
1.500	2300.00	1351.91	2.70	3.91	.01	345.47
1.800	2300.00	1354.91	8.35	2.41	100.00	128.89
2.000	2300.00	1357.61	4.49	4.11	100.00	149.34
2.200	2300.00	1358.42	4.58	4.04	100.00	148.50
2.500	2300.00	1359.39	4.63	4.01	100.00	148.08
2.800	2300.00	1360.54	4.64	4.00	100.00	147.95
3.000	2300.00	1361.37	4.65	3.99	100.00	147.87
3.300	2300.00	1362.62	4.64	4.00	100.00	147.94
3.500	2300.00	1363.37	4.64	3.99	100.00	147.95
3.650	2300.00	1364.05	4.65	3.99	100.00	147.90
3.750	2300.00	1364.37	4.65	3.99	100.00	147.90
3.800	.01	1368.00	.50	.00	.01	.08

FILE = MCMCHA.OUT

APRIL 15, 1997

R.W. CRUFF, P.E.

MODEL = MCMCHA.DAT

THIS MODEL IS A MODIFICATION OF MCMCH FOR THE DESGN OF THE CHANNEL ONLY TO THE HILL ABOUT 2,000 FEET SOUTHWEST OF THE DAM.

IN THIS MODEL A SLOPE = 0.004 WAS USED WITH A STARTING BOTTOM ELEVATION = 1352.5 AT SECTION 1.8

THE GR DATA FOR THIS MODEL WAS PICKED FROM THE GIS GENERATED TOPO MAP. THE APPROXIMATE CHANNEL ORIENTATION WAS LAYED OUT ON THE MAP AND NEW CROSS SECTIONS DEFINED. A LINE FOR ORIENTATION PURPOSES WAS DRAWN AND USED AS STATION 500. NEW GR DATA WAS DETERMINED FROM THE TOPO MAP.

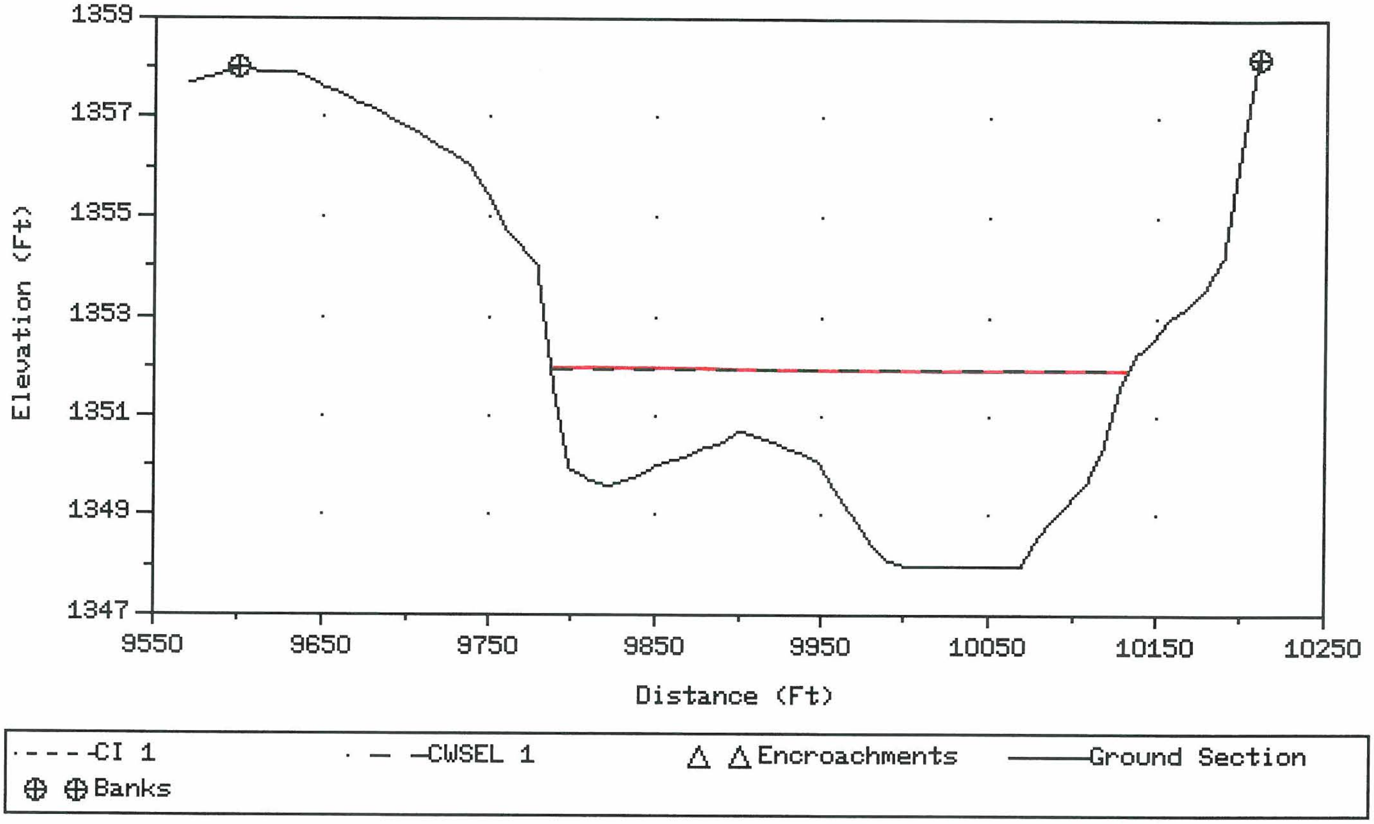
EXTRA CROSS SECTIONS WERE ADDED.

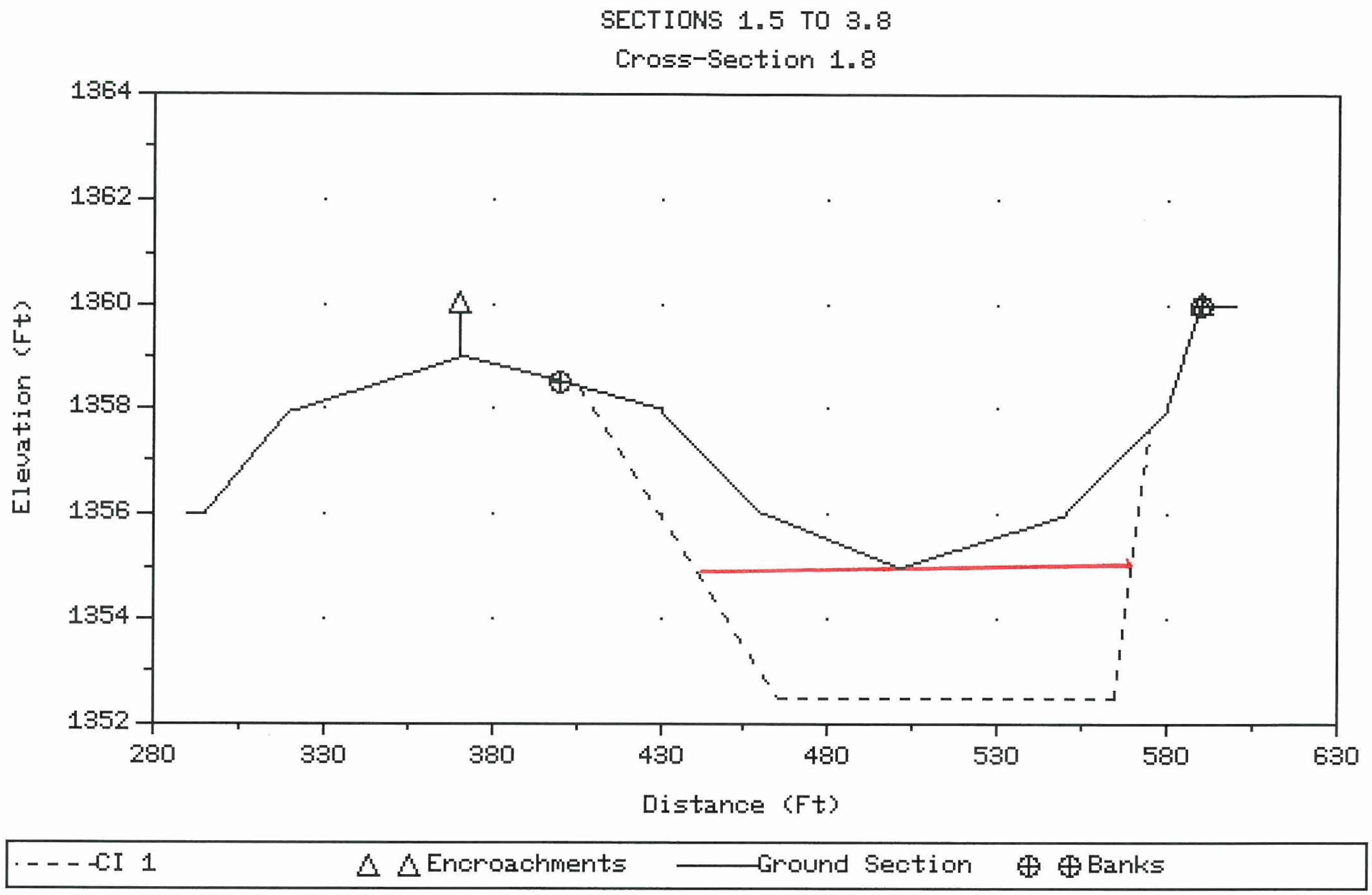
SUMMARY PRINTOUT

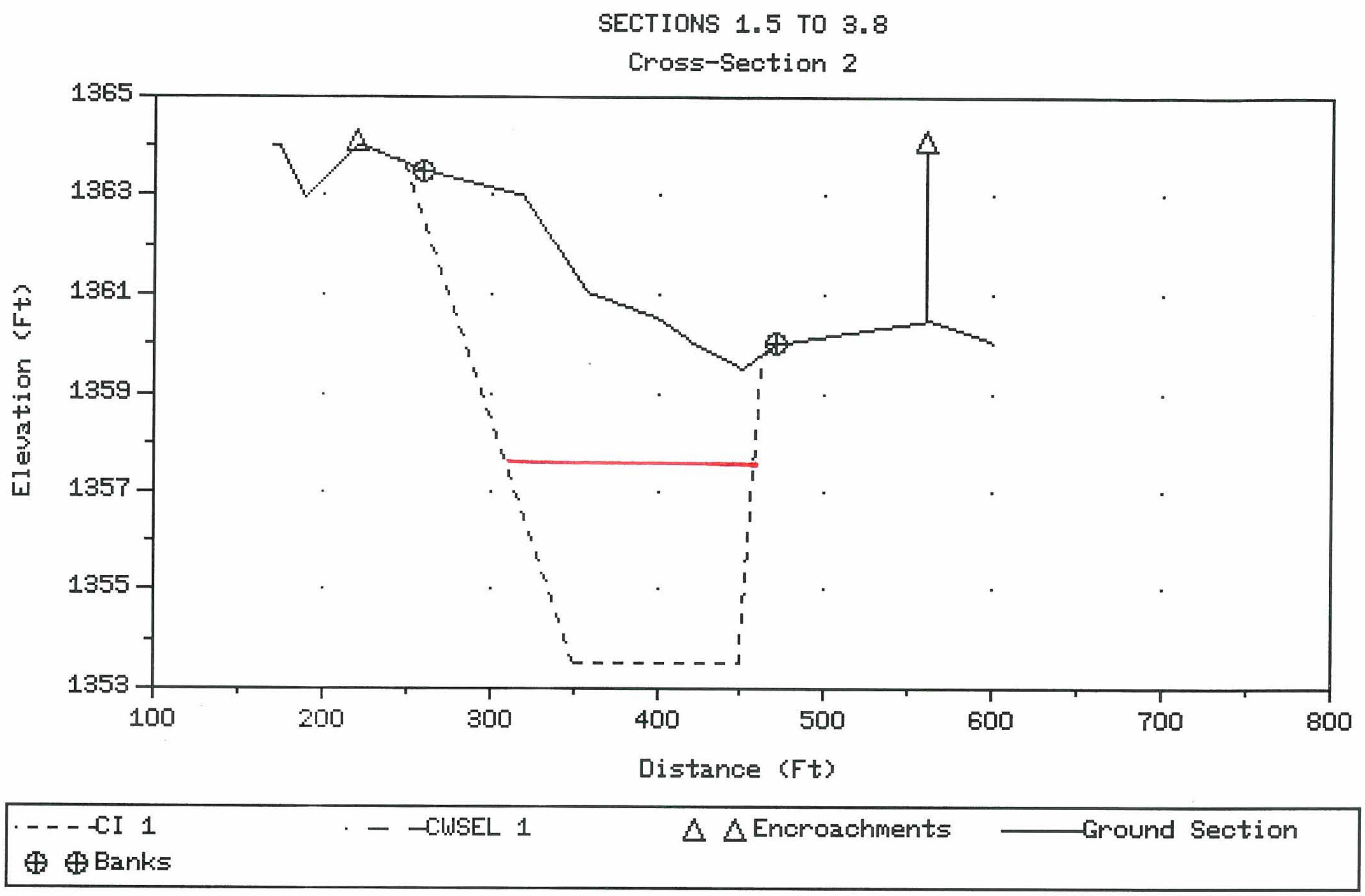
SECNO	Q	SSTA	ENDST	VEXR	VEXT
1.500	2300.00	9788.04	10133.51	.00	.00
1.800	2300.00	440.92	569.82	.00	.00
2.000	2300.00	308.88	458.22	7.53	7.53
2.200	2300.00	269.59	418.08	13.18	20.72
2.500	2300.00	279.94	428.01	19.56	40.28
2.800	2300.00	310.04	457.99	22.34	62.61
3.000	2300.00	330.11	477.98	18.25	80.87
3.300	2300.00	330.05	477.99	31.54	112.40
3.500	2300.00	330.04	477.99	19.87	132.28
3.650	2300.00	330.09	477.98	14.64	146.91
3.750	2300.00	370.08	517.98	4.69	151.61
3.800	.01	459.96	460.04	.00	151.61

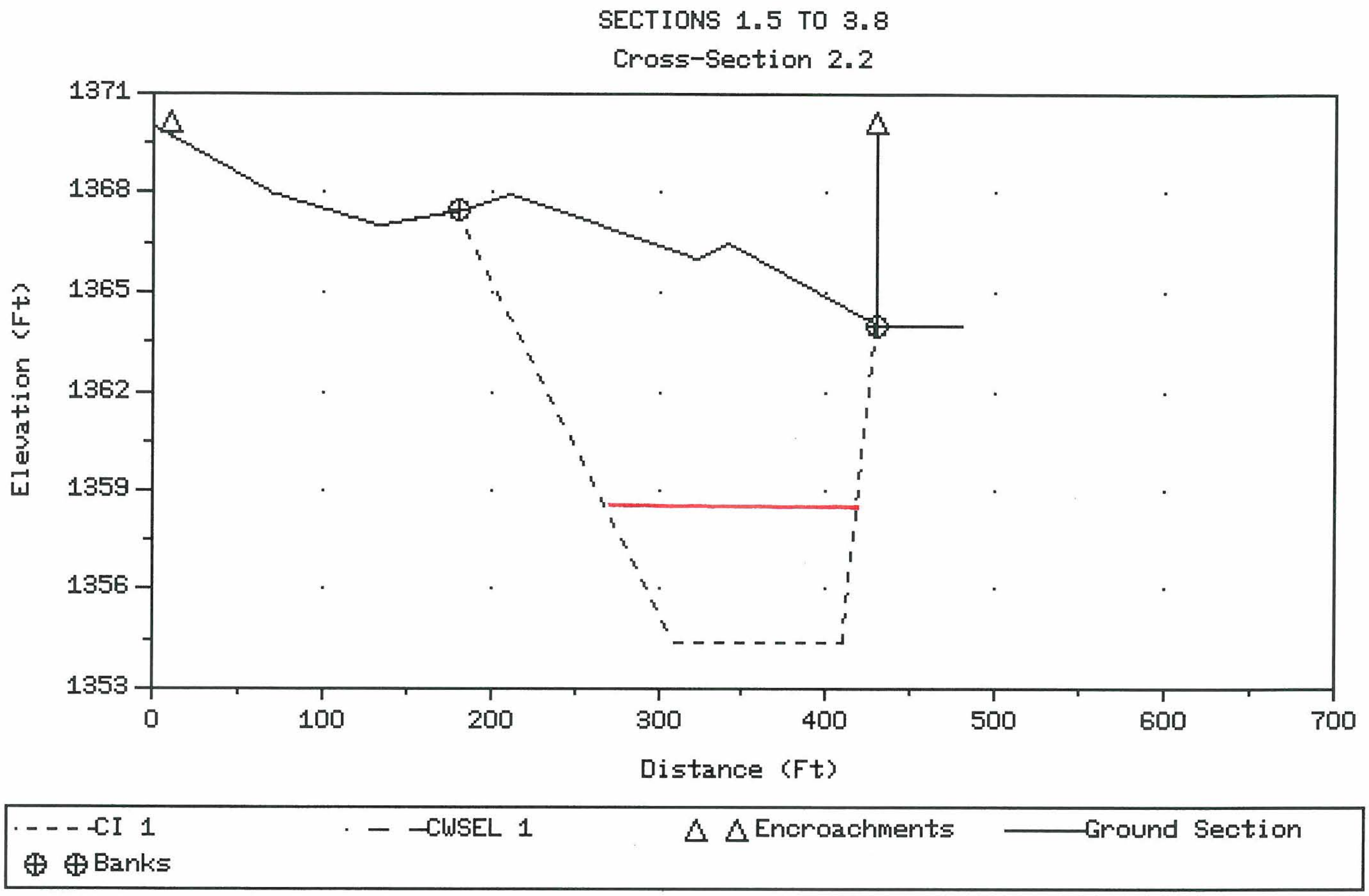
SECTIONS 1.5 TO 3.8

Cross-Section 1.5

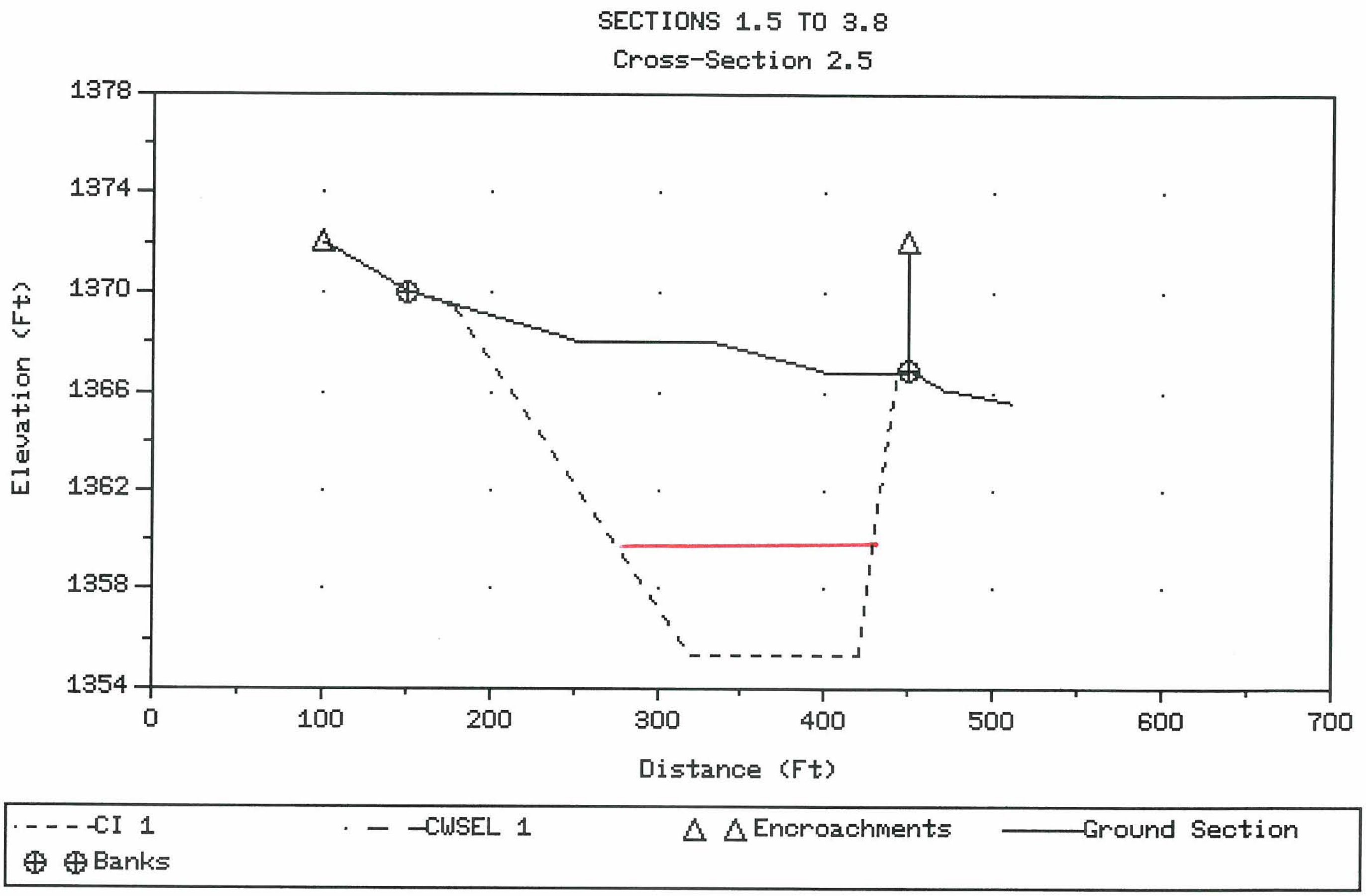


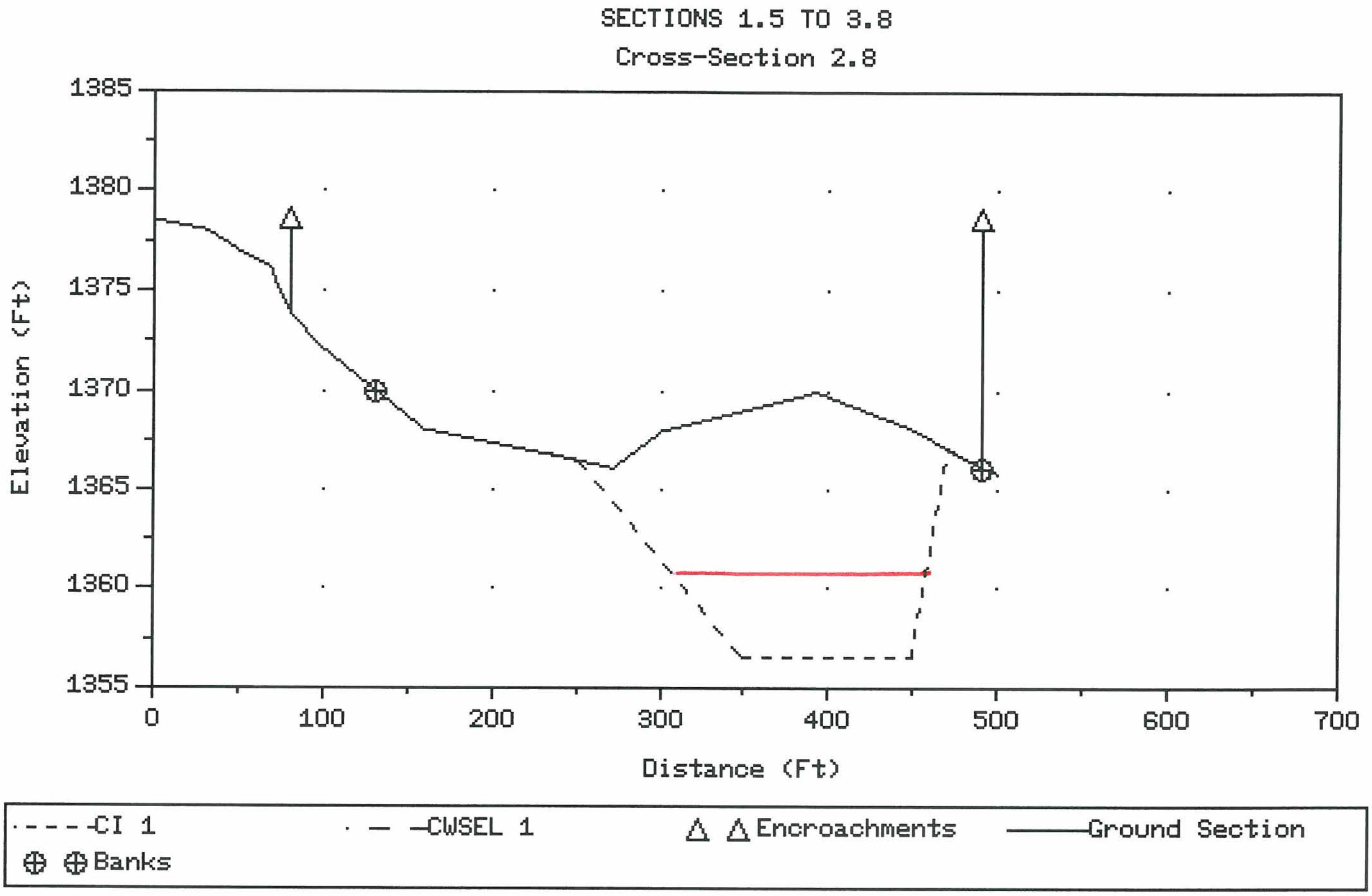

SECTIONS 1.5 TO 3.8
Cross-Section 1.8
Elevation (Ft)
1364
1362
1360
1358
1356
1354
1352
280
330
380
430
480
530
580
630
Distance (Ft)
CI 1
Encroachments
Ground Section
Banks


SECTIONS 1.5 TO 3.8
Cross-Section 2
Elevation (Ft)
1365
1363
1361
1359
1357
1355
1353
100
200
300
400
500
600
700
800
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

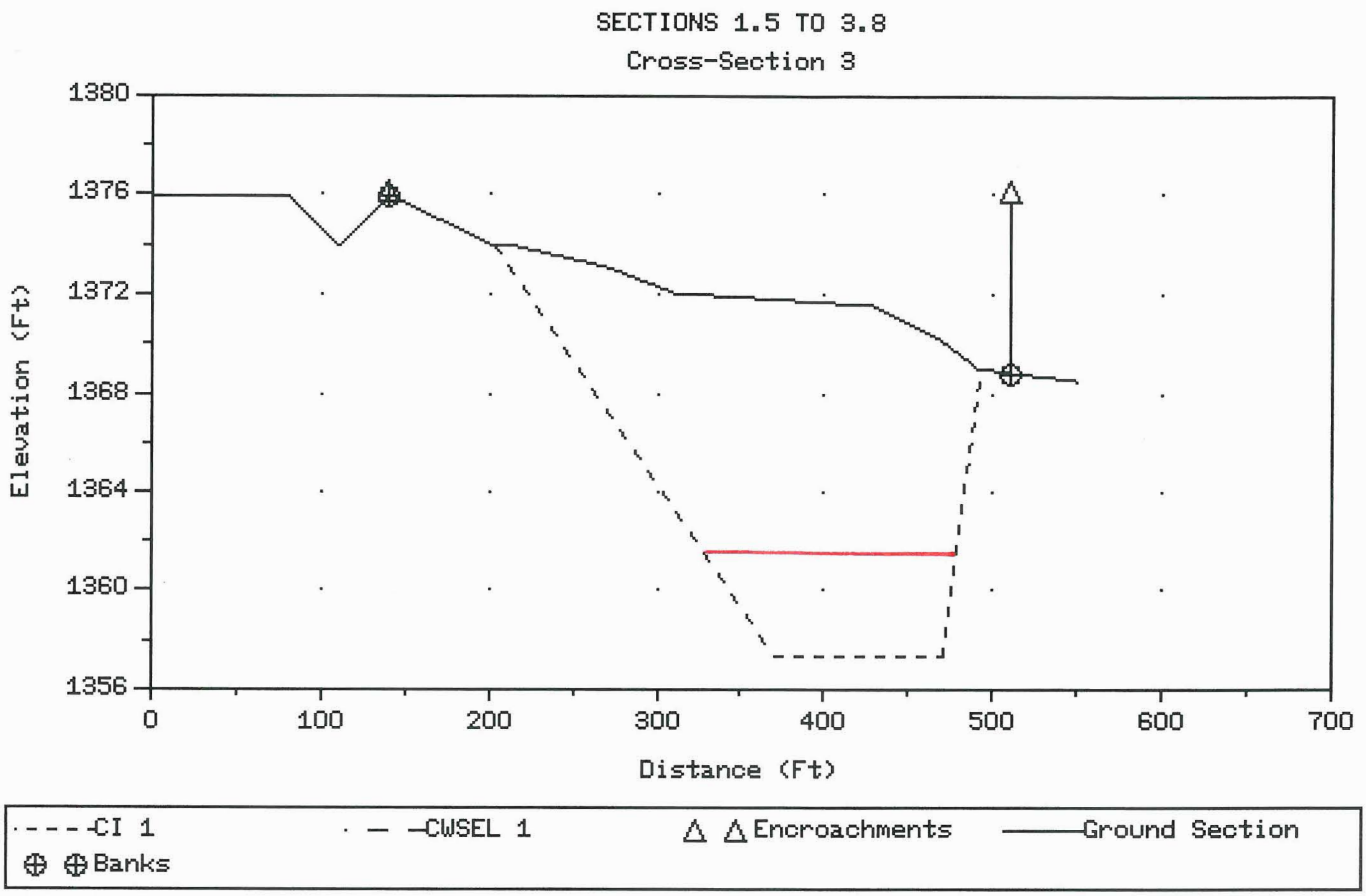


SECTIONS 1.5 TO 3.8
Cross-Section 2.2
Elevation (Ft)
1371
1368
1365
1362
1359
1356
1353
0
100
200
300
400
500
600
700
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

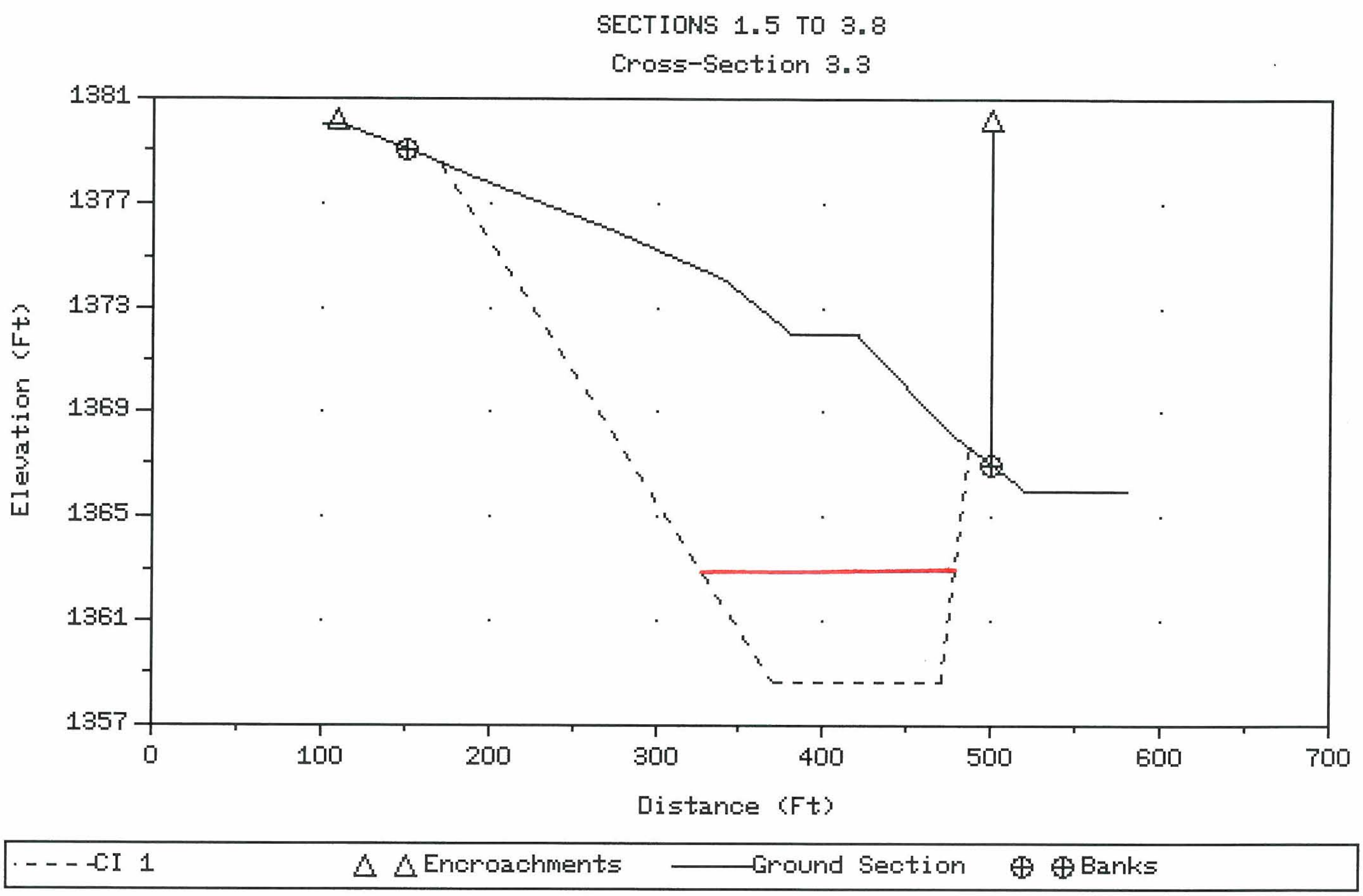

SECTIONS 1.5 TO 3.8
Cross-Section 2.5
Elevation (Ft)
1378
1374
1370
1366
1362
1358
1354
0
100
200
300
400
500
600
700
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks



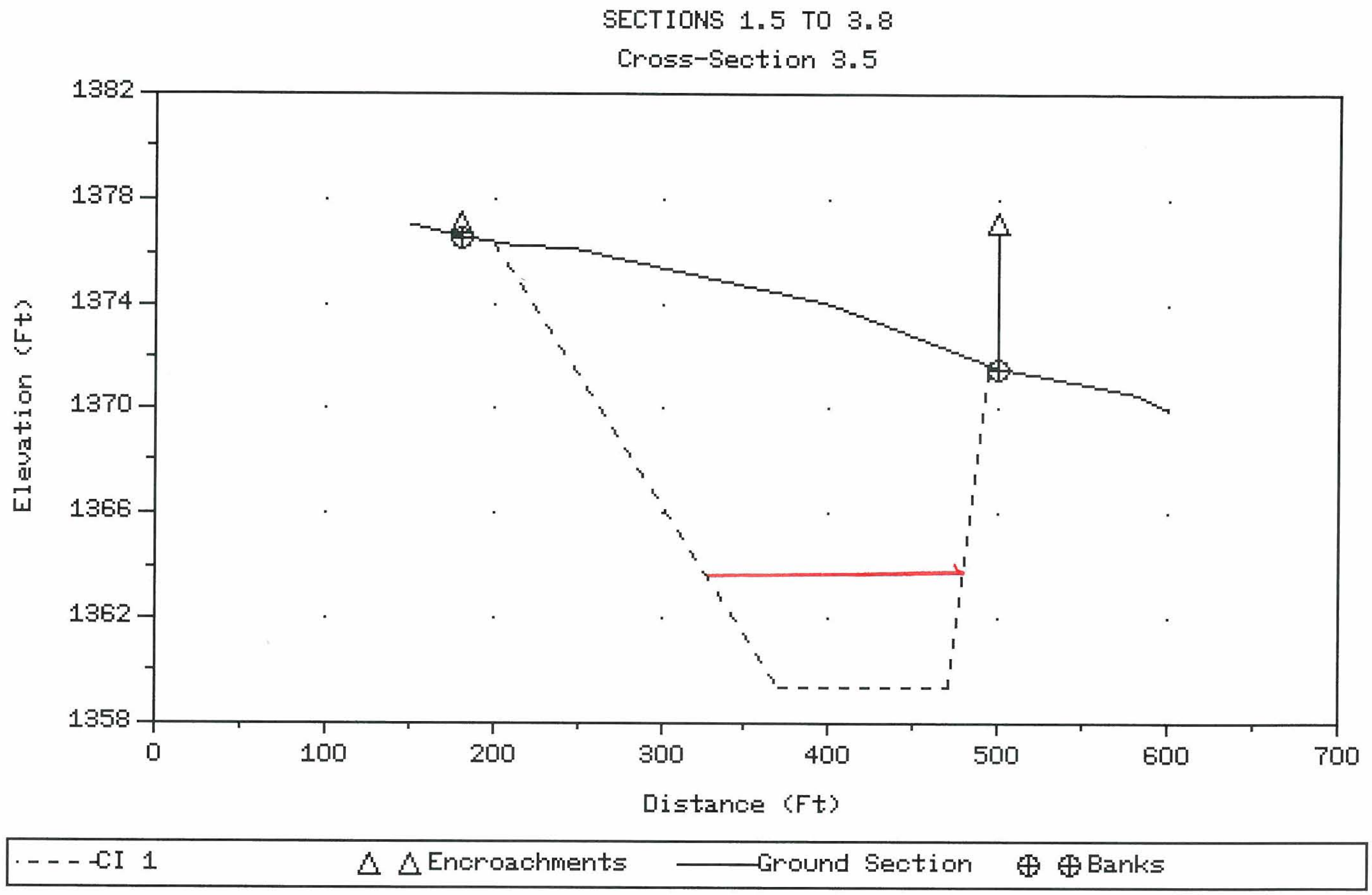
SECTIONS 1.5 TO 3.8
Cross-Section 2.8
Elevation (Ft)
1385
1380
1375
1370
1365
1360
1355
0
100
200
300
400
500
600
700
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks



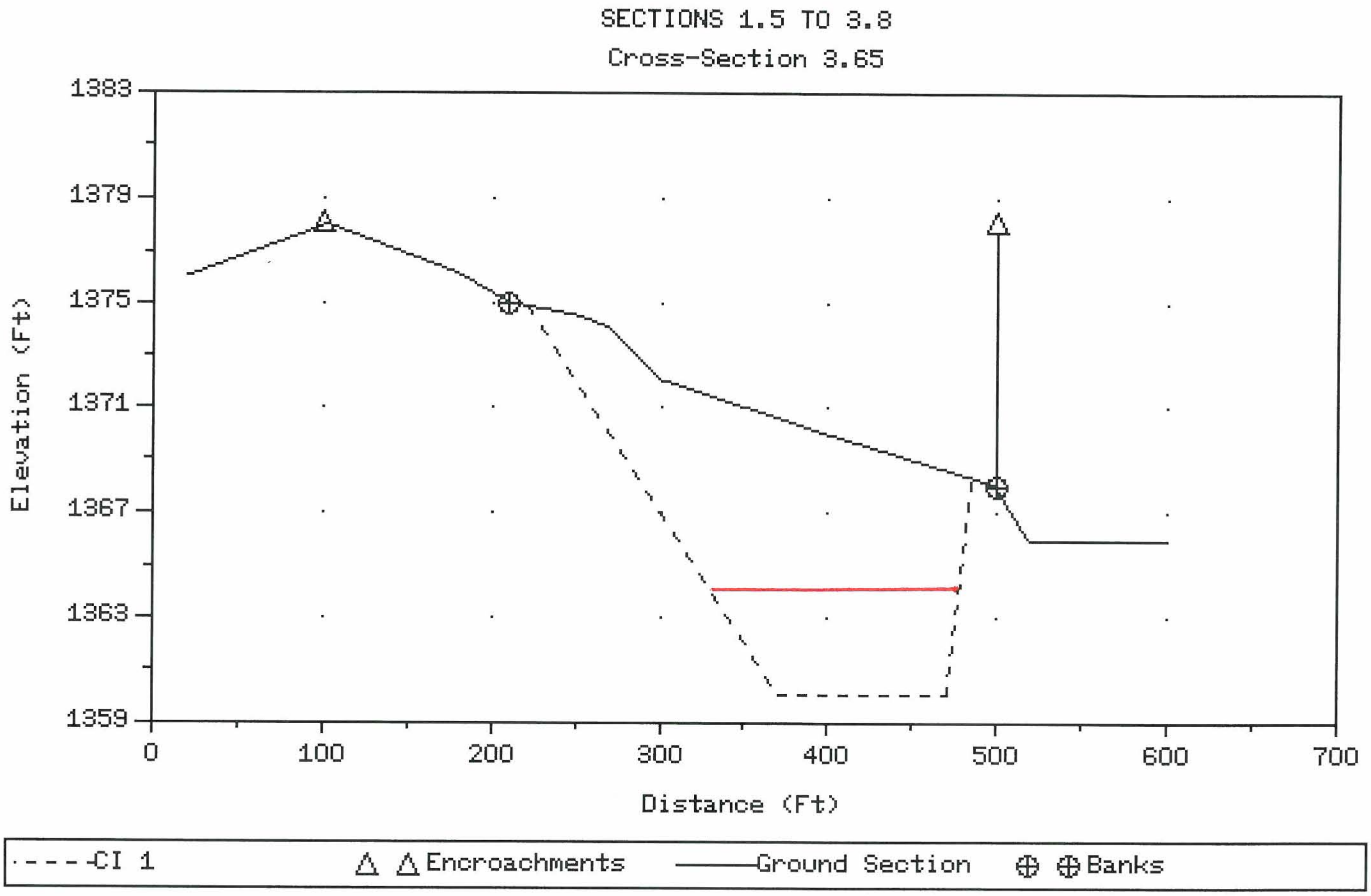
SECTIONS 1.5 TO 3.8
Cross-Section 3
1380
1376
1372
1368
1364
1360
1356
Elevation (Ft)
0
100
200
300
400
500
600
700
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks



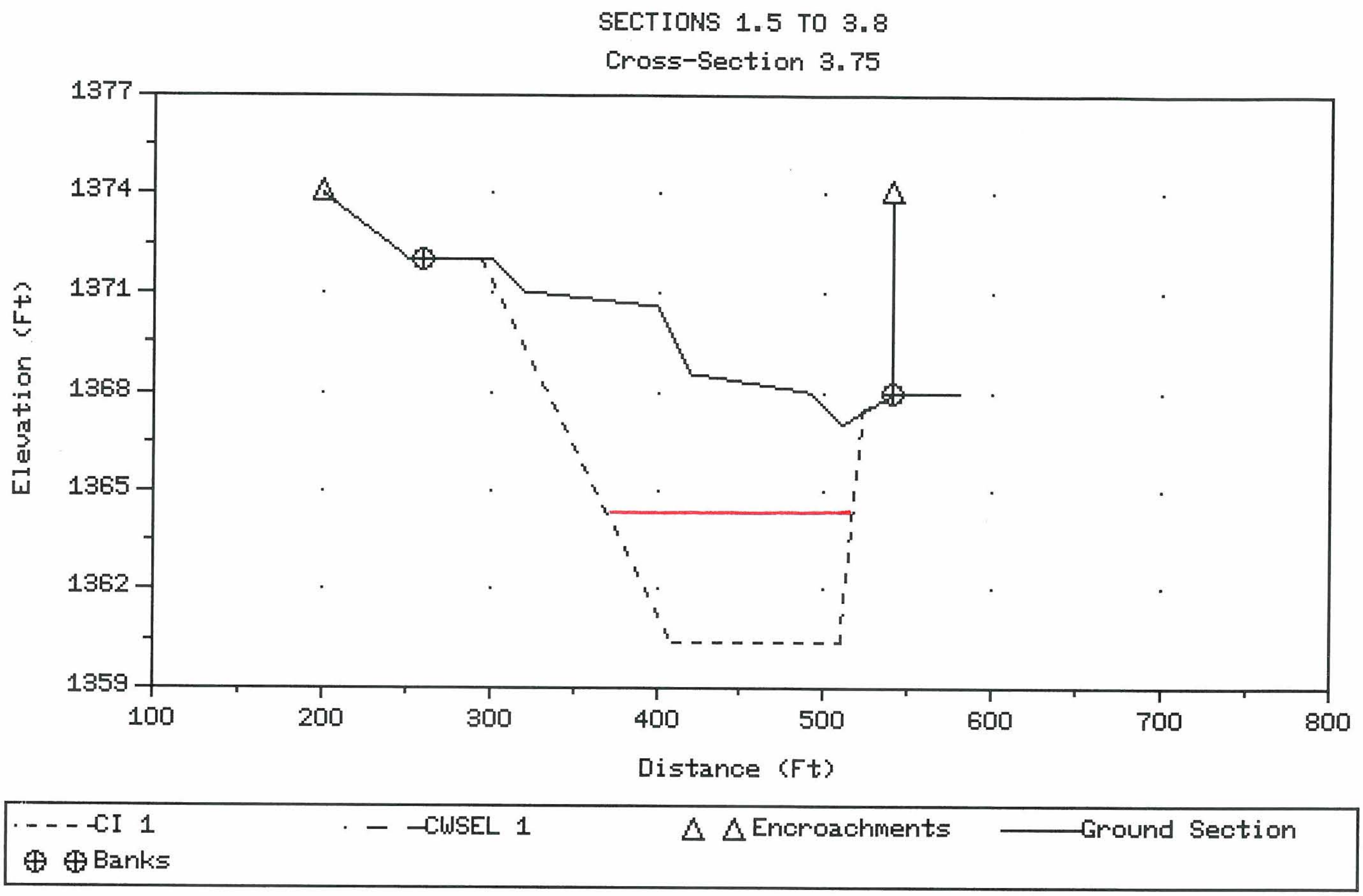
SECTIONS 1.5 TO 3.8
Cross-Section 3.3
1381
1377
1373
1369
1365
1361
1357
Elevation (Ft)
0
100
200
300
400
500
600
700
Distance (Ft)
CI 1
Encroachments
Ground Section
Banks



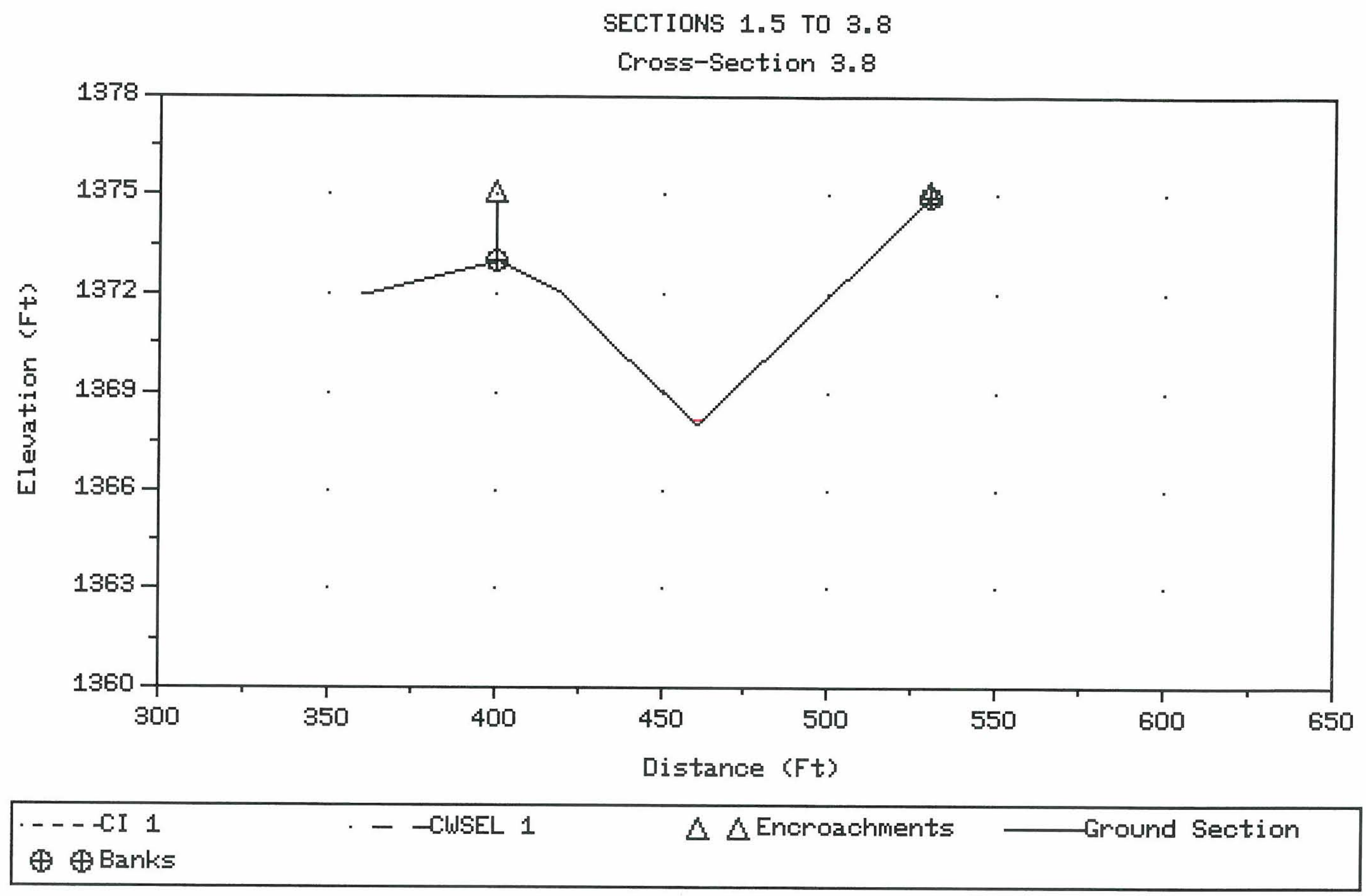
SECTIONS 1.5 TO 3.8
Cross-Section 3.5
1382
1378
1374
1370
1366
1362
1358
Elevation (Ft)
0
100
200
300
400
500
600
700
Distance (Ft)
CI 1
Encroachments
Ground Section
Banks



SECTIONS 1.5 TO 3.8
Cross-Section 3.65
Elevation (Ft)
1383
1379
1375
1371
1367
1363
1359
0
100
200
300
400
500
600
700
Distance (Ft)
CI 1
Encroachments
Ground Section
Banks



SECTIONS 1.5 TO 3.8
Cross-Section 3.75
Elevation (Ft)
1377
1374
1371
1368
1365
1362
1359
100
200
300
400
500
600
700
800
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks


SECTIONS 1.5 TO 3.8
Cross-Section 3.8
1378
1375
1372
1369
1366
1363
1360
Elevation (Ft)
300
350
400
450
500
550
600
650
Distance (Ft)
CI 1
CWSEL 1
Encroachments
Ground Section
Banks

FILE = MCMCHADM.OUT

APRIL 1, 1997

R.W. CRUFF, P.E.

THIS IS A SUMMARY OF THE RESULTS FROM MODEL "MCMCHA"

SUMMARY PRINTOUT

SECNO	Q	WATER SURFACE ELEV.	VEL.	DEPTH	-----BOTTOM----- WIDTH	ELEV.	RIGHT BANK ELEV.	FREEBOARD
1.500	2300.00	1351.91	2.70	3.91		1348.0	1358.2	6.3
1.800	2300.00	1354.91	8.35	2.41	100.00	1352.5	1360	2.4
2.000	2300.00	1357.61	4.49	4.11	100.00	1353.5	1360.5	2.9
2.200	2300.00	1358.42	4.58	4.04	100.00	1354.4	1364	5.6
2.500	2300.00	1359.39	4.63	4.01	100.00	1355.4	1366.9	7.5
2.800	2300.00	1360.54	4.64	4.00	100.00	1356.5	1366	5.5
3.000	2300.00	1361.37	4.65	3.99	100.00	1357.4	1368.8	7.4
3.300	2300.00	1362.62	4.64	4.00	100.00	1358.6	1367	4.4
3.500	2300.00	1363.37	4.64	3.99	100.00	1359.4	1371.5	8.1
3.650	2300.00	1364.05	4.65	3.99	100.00	1360.1	1368	4.0
3.750	2300.00	1364.37	4.65	3.99	100.00	1360.4	1368	3.6
3.800	.01	1368.00	.50	.00		1368	1375	7.0

FILE = MCMCHASP.DAT

```
C
C       2
C     1.5    WITHIN MCMICKEN RESERVOIR
C     2.8    UPPER END OF CHANNEL
*
*             MODEL = MCMCHASP.DAT
*
*             THIS MODEL IS A MODIFICATION OF MCMCHA FOR SPF FLOWS
*
*                IN MODEL MCMCHA A SLOPE = 0.004 WAS USED WITH A STARTING
*                BOTTOM ELEVATION = 1352.5 AT SECTION 1.8
*
*             THE GR DATA FOR MODEL MCMCHA WAS PICKED FROM THE GIS GENERATED
*             TOPO MAP. THE APPROXIMATE CHANNEL ORIENTATION WAS LAYED OUT
*             ON THE MAP AND NEW CROSS SECTIONS DEFINED. A LINE FOR ORIENTATION
*             PURPOSES WAS DRAWN AND USED AS STATION 500. NEW GR DATA WAS
*             DETERMINED FROM THE TOPO MAP.
*
*                EXTRA CROSS SECTIONS WERE ADDED.
*
T1           MCMICKEN SHORT CHANNEL DESIGN
T2           SPF FLOW  - RUSS CRUFF 4-2-97
T3           SECTIONS 1.5 TO 3.8
J1             2                        .002
J2      1              -2
J3     38      43       1      26       8      30       4
J3     38      43      53      54      64      65
NC   .045    .045   0.045      .1      .3
QT      1    6100
X1   1.50      65    9600   10210       0       0       0
GR1357.7  9570.0  1357.8  9580.0  1357.9  9590.0  1358.0  9600.0  1357.9  9610.0
GR1357.9  9620.0  1357.9  9630.0  1357.8  9640.0  1357.6  9650.0  1357.5  9660.0
GR1357.3  9670.0  1357.2  9680.0  1357.0  9690.0  1356.8  9700.0  1356.6  9710.0
GR1356.4  9720.0  1356.2  9730.0  1356.0  9740.0  1355.4  9750.0  1354.8  9760.0
GR1354.4  9770.0  1354.0  9780.0  1351.4  9790.0  1349.9  9800.0  1349.7  9810.0
GR1349.6  9820.0  1349.7  9830.0  1349.8  9840.0  1350.0  9850.0  1350.1  9860.0
GR1350.2  9870.0  1350.4  9880.0  1350.5  9890.0  1350.7  9900.0  1350.6  9910.0
GR1350.5  9920.0  1350.3  9930.0  1350.2  9940.0  1350.0  9950.0  1349.5  9960.0
GR1349.0  9970.0  1348.5  9980.0  1348.1  9990.0  1348.0 10000.0  1348.0 10010.0
GR1348.0 10020.0  1348.0 10030.0  1348.0 10040.0  1348.0 10050.0  1348.0 10060.0
GR1348.0 10070.0  1348.5 10080.0  1349.0 10090.0  1349.3 10100.0  1349.7 10110.0
GR1350.4 10120.0  1351.7 10130.0  1352.3 10140.0  1352.6 10150.0  1353.0 10160.0
GR1353.3 10170.0  1353.6 10180.0  1354.2 10190.0  1356.2 10200.0  1358.2 10210.0
X1   1.80      15     400     590     260     320     320
CI    515  1352.5              10       2     100
X3                            370             590
GR   1356     290    1356     291    1356     292    1356     293    1356     295
GR   1358     320    1359     370  1358.5     400    1358     430    1356     460
GR   1355     500    1356     550    1358     580    1360     590    1360     600
X1   2.00      15     260     470     350      20     250
CI    400   0.004
X3                            220             560
GR   1364     170    1364     175    1363     190    1364     220  1363.5     260
GR   1363     320    1362     340    1361     360  1360.5     400    1360     420
GR1359.5      450    1360     470  1360.3     530  1360.5     560    1360     600
X1   2.20       9     180     430     210     200     220
CI    360
X3                             10             430
GR   1370       0    1368      70    1367     130  1367.5     180    1368     210
GR   1366     320  1366.5     340    1364     430    1364     480    1364     500
X1   2.50      10     150     450     300     150     250
CI    370
X3                            100             450
GR   1372     100    1371     125  1370.0     150    1368     250    1368     270
GR   1368     330  1366.8     400  1366.9     450    1366     470  1365.5     510
X1   2.80      16     130     490     300     250     290
CI    400
X3                             80             490
GR1378.5        0    1378      30    1377      50    1376      70    1375      75
GR   1374      80    1372     100  1370.0     130    1368     160    1367     220
GR   1366     270    1368     300    1370     390    1368     450    1366     490
GR1365.8      500
X1   3.00      13     140     510     200     220     210
CI    420
```

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X3                                 140              510
GR  1376       0    1376            80     1374     110     1376     140     1374     200
GR1374.0     210    1373           270     1372     310   1371.5     430     1370     470
GR  1369     490  1368.8           510   1368.5     550
X1  3.30      14     150           500      300     300      310
CI   420
X3                                 110              500
GR  1380     100    1380           110     1379     150     1378     190   1377.5     210
GR  1376     270    1374           340     1372     380     1372     420     1370     450
GR  1368     480    1367           500     1366     520     1366     580
X1  3.50      11     180           500      200     180      190
CI   420
X3                                 180              500
GR  1377     150  1376.5           180   1376.2     210     1376     250   1375.7     270
GR  1374     400    1372           480   1371.5     500     1371     540   1370.5     580
GR  1370     600
X1  3.65      12     210           500      150     190      170
CI   420
X3                                 100              500
GR  1376      20    1378           100     1376     180     1375     210   1374.5     250
GR  1374     270    1372           300     1370     400     1368     500     1366     520
GR  1366     540    1366           600
X1  3.75      12     260           540       90      70       80
CI   460
X3                                 200              540
GR  1374     200    1372           250     1372     260     1372     300     1371     320
GR1370.5     400  1368.5           420     1368     490     1367     510     1368     540
GR  1368     570    1368           580
QT     1    0.01
X1  3.80       7     400           530       50      50       50
CI   460                                          0.01
X3                                 400              530
GR  1372     360    1373           400     1372     420     1370     440     1368     460
GR  1370     480    1375           530
EJ
*
ER
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FILE = MCMCHASP.OUT

APRIL 15, 1997

R.W. CRUFF, P.E.

MODEL = MCMCHASP.DAT.

THIS MODEL IS A MODIFICATION OF MCMCHA FOR SPF FLOWS

IN MODEL MCMCHA A SLOPE = 0.004 WAS USED WITH A STARTING BOTTOM ELEVATION = 1352.5 AT SECTION 1.8

THE GR DATA FOR MODEL MCMCHA WAS PICKED FROM THE GIS GENERATED TOPO MAP. THE APPROXIMATE CHANNEL ORIENTATION WAS LAYED OUT ON THE MAP AND NEW CROSS SECTIONS DEFINED. A LINE FOR ORIENTATION PURPOSES WAS DRAWN AND USED AS STATION 500. NEW GR DATA WAS DETERMINED FROM THE TOPO MAP.

EXTRA CROSS SECTIONS WERE ADDED.

SUMMARY PRINTOUT

SECNO	Q	CWSEL	VCH	DEPTH	BW	TOPWID
1.500	6100.00	1353.99	3.73	5.99	.01	406.45
1.800	6100.00	1356.92	10.91	4.42	100.00	153.03
2.000	6100.00	1360.26	6.39	6.76	100.00	240.41
2.200	6100.00	1361.20	6.35	6.82	100.00	181.83
2.500	6100.00	1362.22	6.33	6.84	100.00	182.02
2.800	6100.00	1363.39	6.32	6.85	100.00	182.15
3.000	6100.00	1364.23	6.31	6.85	100.00	182.22
3.300	6100.00	1365.47	6.31	6.85	100.00	182.20
3.500	6100.00	1366.23	6.31	6.85	100.00	182.21
3.650	6100.00	1366.91	6.31	6.85	100.00	182.22
3.750	6100.00	1367.23	6.31	6.85	100.00	182.22
3.800	.01	1368.11	.08	.11	.01	2.23

FILE = MCMCHASP.OUT

APRIL 15, 1997

R.W. CRUFF, P.E.

MODEL = MCMCHASP.DAT

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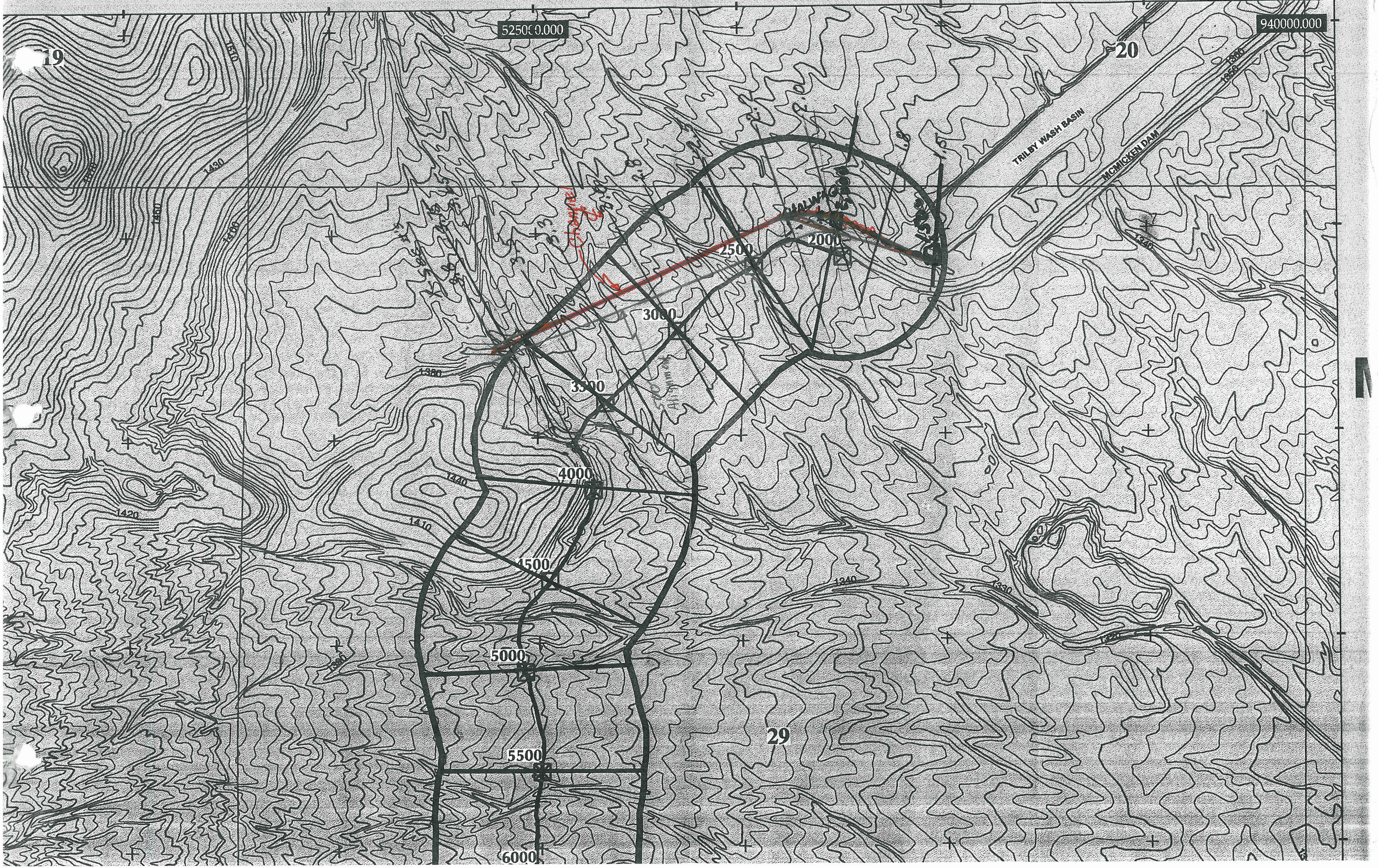
EXTRA CROSS SECTIONS WERE ADDED.

SUMMARY PRINTOUT

SECNO	Q	SSTA	ENDST	VEXR	VEXT
1.500	6100.00	9780.04	10186.49	.00	.00
1.800	6100.00	420.81	573.84	.00	.00
2.000	6100.00	282.36	522.77	7.53	7.53
2.200	6100.00	241.81	423.64	13.18	20.72
2.500	6100.00	251.65	433.67	19.56	40.28
2.800	6100.00	281.54	463.69	22.34	62.61
3.000	6100.00	301.48	483.70	18.25	80.87
3.300	6100.00	301.50	483.70	31.54	112.40
3.500	6100.00	301.50	483.70	19.87	132.28
3.650	6100.00	301.49	483.70	14.64	146.91
3.750	6100.00	341.48	523.70	4.69	151.61
3.800	.01	458.88	461.12	.00	151.61



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TRILBY WASH BASIN
MCMICKEN DAM
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6000