ADDENDUM TO THE CANDIDATE ASSESSMENT REPORT OF DURANGO REGIONAL CONVEYANCE CHANNEL

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
2801 WEST DURANGO STREET
PHOENIX, ARIZONA 85009
CONTRACT FCD 2007C026
ASSIGNMENT NO: 5

Prepared By

Prestige
Engineering Consultants

3404 West Cheryl Drive, Suite A-170, Phoenix, AZ 85051

JUNE 2009

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EXECUTIVE SUMMARY

This Addendum to the Candidate Assessment Report (A-CAR) modifies the recommended plan for the Durango Regional Conveyance Channel (DRCC) in Avondale and Phoenix, Arizona dated February 2006 (FCD Contract Number 2004C027) prepared by Aspen Consulting Engineers (Aspen). In this supplement, the section of the conveyance channel between 91st Avenue to 107th Avenue was revised.

The Recommended Plan for the DRCC in the Candidate Assessment Report (CAR), based on the evaluation of alternatives, with the identified opportunities and constraints, and with the concurrence between the Cities of Avondale and Phoenix, consisted of the following features:

- The channel extending from 107th Avenue to the Agua Fria River in Avondale. The channel alignment generally follows the course of the Buckeye Feeder Canal (BFC). And a channel following powerline corridor from 75th Avenue to 107th Avenue within City of Phoenix.
- A regional detention basin at approximately 95th Avenue alignment (Basin #2) and south of the DRCC alignment in Phoenix.
- 10-Year culverts along the DRCC alignment at major arterial streets (75th Avenue, 83rd Avenue, 91st Avenue and 99th Avenue) in Phoenix.

The hydrology conducted by Aspen included peak discharges at the major inflow locations and the frequency used is 100-yr, 6-hour storm.

The purpose of this study is described below:

- Evaluate the feasibility of removing the basin #2 located at 95th Avenue alignment and replace it at 107th Avenue alignment.
- Evaluate the hydrology between 95th Avenue and 107th Avenue and document changes due to basin relocation.
- Evaluate and recommend culvert crossings at 107th Avenue and 103rd Avenue.
- Provide amendment to the CAR Report documenting changes and listing all of the assumptions, criteria and methodology used during the design

The results indicated that the relocated basin at 107th Avenue will require 102 acre-feet of volume, with a base area of about 20 acres. The basin will be 5 feet deep with an outfall

structure of 3 barrels 10 feet by 5 feet box culvert. The outflow from this system is 810 cfs. The culvert at 107th Avenue will be 100-year culvert with no roadway overtopping during the 100-year storm.

The evaluation of the intermediate culverts between 91st Avenue to 107th Avenue indicated that although the 100-year peak discharges increased due to the removal of the proposed detention basin at 95th Avenue, the culverts are still adequate to meet the design criteria in the DRCC CAR. There is therefore no need to upsize these intermediate culverts.

A review of the DRCC CAR hydrologic models indicated that some of the channel routing reaches need adjustment when more topographic data becomes available.

1.0 INTRODUCTION

1.1 PURPOSE

This Addendum revises the recommended plan for the Durango Regional Conveyance Channel (DRCC) in Avondale and Phoenix, Arizona dated February 2006 (FCD Contract Number 2004C027) prepared by Aspen Consulting Engineers. In this amendment, the section of the conveyance channel between 9^{5th} Avenue to 107th Avenue was revised.

The tasks involved with this study are described below:

1. Relocate the 95th Avenue detention basin (Basin #2) proposed in the CAR recommended plan to 107th Avenue. The primary goal of this task is to reduce the peak flow leaving the proposed basin below historical peak discharge at 107th Avenue. The jurisdictional boundary between Avondale and Phoenix is 107th Avenue.
2. In the DRCC CAR Recommended Plan design, the culvert crossings were sized to convey approximately 10-year peak discharge while the 100-year was allowed to flow over the culvert to a maximum depth of 6-inches at major arterial crossings. The study will re-evaluate these culvert crossings (103rd Avenue and 107th Avenue) and make any necessary adjustments. This task is to revise any necessary peak discharges within affected reaches of the DRCC and resize these culverts using appropriate hydraulic modeling tool.
3. Existing Basin Capacity: Prestige Engineering staff shall conduct field visits and/or obtain as-built construction plans of the existing retention basins along DRCC alignment constructed between 99th Ave and 107th Ave and verify its capacities. The retention capacities will need to be included in the proposed HEC-1 model.
4. The proposed 107th Avenue basin footprint will be sized to reflect the multi-use component of the project in accordance the District's 'Policy for the Aesthetic Treatment and Landscaping of Flood Control Projects' (Policy).

1.2 LOCATION AND DESCRIPTION

The proposed DRCC project is located approximately along the alignment of the Buckeye Feeder Canal (BFC) in Avondale and Phoenix (Figures 1 and 2) The DRCC alignment is located between Lower Buckeye Road and Southern Avenue, and between 75th Avenue in Phoenix and the Agua Fria River in Avondale. 107th Avenue is the boundary between Phoenix and Avondale at the DRCC/BFC alignment.

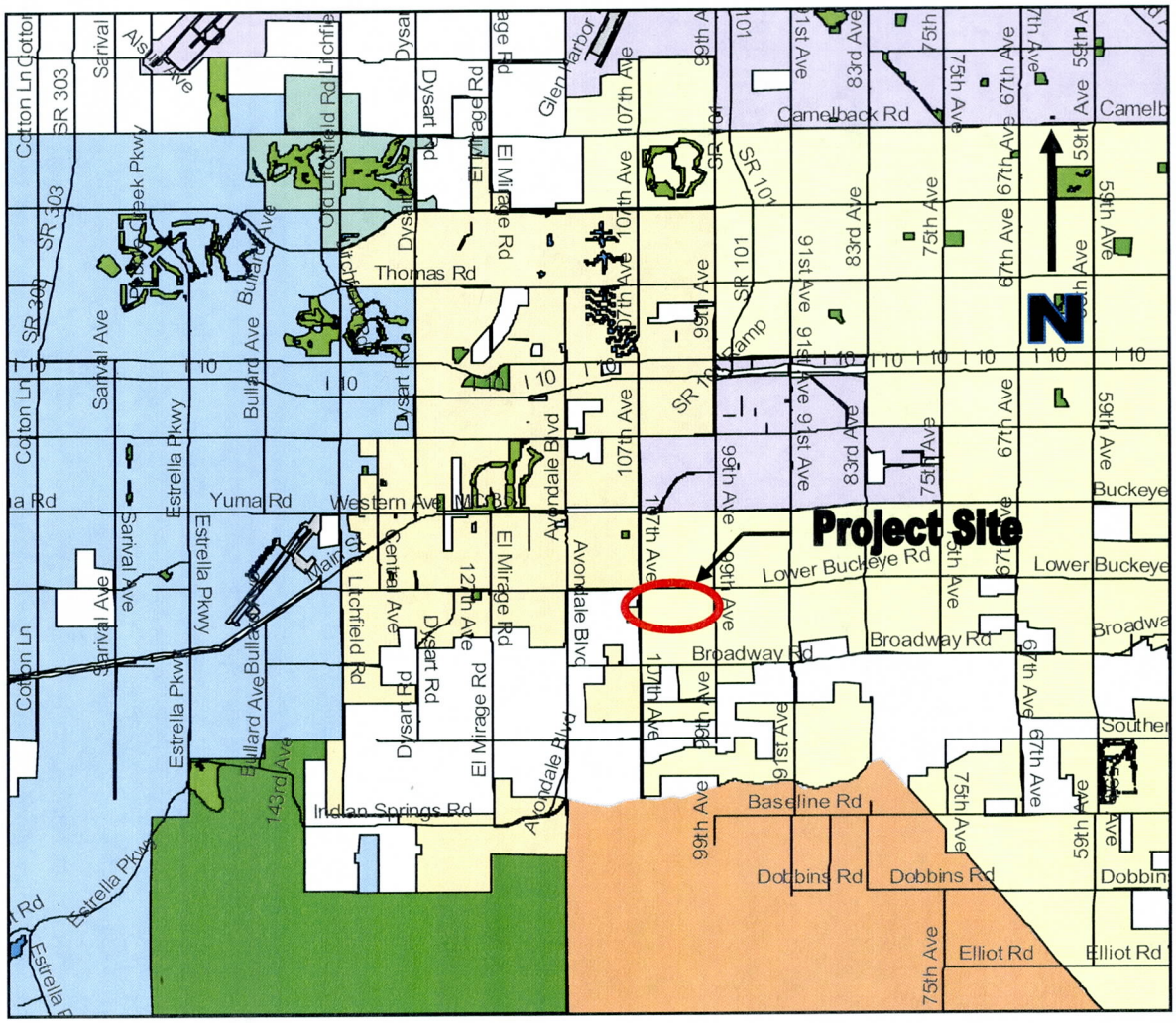

Figure 1 Location Map

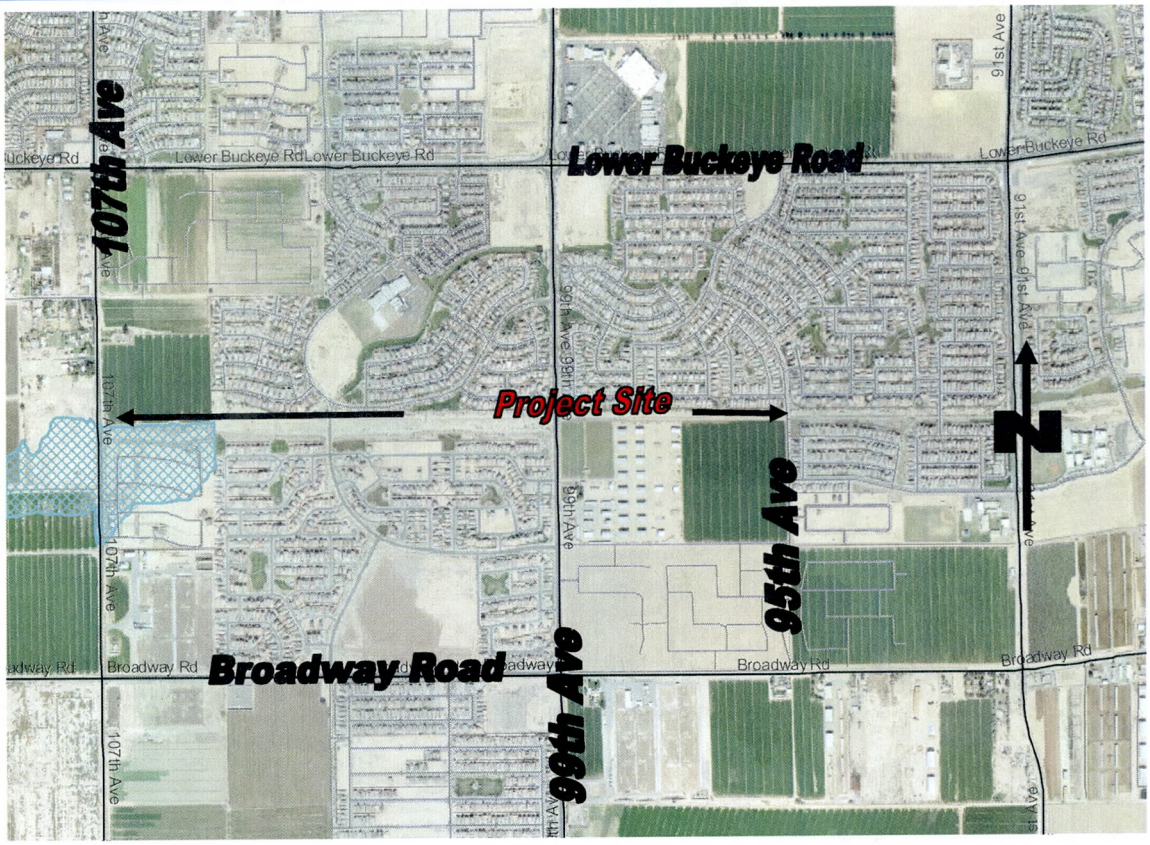

Figure 2 Vicinity Map

2.0 HYDROLOGIC ANALYSIS

2.1 RELOCATION OF 95TH AVENUE BASIN

Hydrologic analysis for the revision was performed by modifying the recommended future conditions HEC-1 model described in CAR Report to conform to the proposed condition specified in Section 1.1 above to each alternative. HEC-1 input and output are provided in the supplementary report.

The HEC-1 model prepared by Aspen for the recommended alternative was used as the basis for the revisions. The 100-year, 6-hour storm was determined in the CAR as the controlling storm type, therefore the HEC-1 model for this storm (REC6FINAL.DAT) was the starting model. The study focuses only on the reach between 91st Avenue to 107th Avenue.

The following were changes made to the original hydrology model.

1. Removed the detention basin at 95th Avenue from the HEC-1 model (HEC1 ID KK 95BASIN
2. Replaced the two routing reaches that were in series, RT95 and RT99 between 91st Avenue and 99th Avenue with a single routing reach. This was necessary after the removal of the 95th Avenue basin since the two reaches were initially required for a Reach-in and Reach-out of the basin system. The single reach is labeled RT99.
3. The reach distance between 91st Avenue and 99th Avenue was originally about 7522 ft combine for the two reaches. This was adjusted to the one-mile distance between 91st Avenue and 99th Avenue. A distance of 5216 ft was used.
4. The routing reach distance between 99th Avenue to 107th Avenue (RT107) modified to account for a portion that will become part of the detention basin.
5. A detention basin was added at the northeast corner of 107th Avenue and the channel after combining SUB 1B and SUB 1C and the routed flows from the north (RTMBIB) at concentration point CPIB2. The basin sizes varied according to the options evaluated and discussed in other sections below.

6. Route the flows through the proposed detention basin at 107th Avenue and the proposed 107th Avenue culvert (RRIB) renamed DET107. Culvert sizes also varied according to the Options discussed in subsequent sections.

2.2 Detention Basin Configuration

The site is rectangular in shape, 1300 feet by 1300 feet including easements. The site allocated for use as a basin is approximately 36 acres. Out of this, allocation from 107th Avenue ultimate section of 75 feet from center needed to be dedicated. An additional width of about 300 feet needs to be reserved for commercial development along 107th Avenue. Also, about 50 feet buffer would be required along the north and east property line. It is also anticipated that the basin would have a multi-use component, most likely soccer fields. A rectangular shape with variable side slopes therefore appears to be the appropriate shape at this time, for the purpose of HEC-1 modeling.

2.3 In-Line Basin vs. Off-line Basin

Another consideration for the basin modeling was whether to adopt off-line basin or in-line basin. Off-line basin typically requires smaller basin area but requires higher cost for a weir inlet structure. The weir operation is also complicated as flows in excess of a pre-determined value need to be siphoned into the basin. Also, it requires outlet structures to hold the storm water and release it after the peak is passed. A preliminary analysis indicated that the basin area required for the off-line system is virtually the same as that for the in-line system therefore only the in-line basin system is evaluated. A modified in-line system was adopted where a low flow channel allows minor flows to by-pass the basin so that only higher flows would flow into the basin. This is to reduce maintenance of the basin and also allow for the multi-use opportunities to be maximized.

2.4 Target Outflow at 107th Avenue

107th Avenue is the jurisdictional boundary between City of Phoenix and City of Avondale. The DRCC drains from east to west, thus storm water from the City of Phoenix drains into City of Avondale. According to previous agreements this flow has to be kept to historical levels or lower. The existing condition 100-year flow is about 1193 cfs at 107th Avenue. However, the recommended plan in the CAR would release 1318 cfs. Furthermore, major drainage structures are planned downstream of 107th Avenue which would benefit from

reduced peak discharges. The goal will be to keep the outflow from the proposed basin to less than 1200 cfs.

2.5 The Options Considered

The options considered are based on the basin size, together with the culvert size, that would make maximum use of the acquired parcel while producing the lowest outflow entering into the City of Avondale reach of DRCC (downstream of 107th Avenue). Four (4) various options were analyzed as listed in Table 2.1.

2.6 Methodology

Stage-Storage relationships were developed for basins of various bottom areas or given outlet culverts. The side slopes for the basin were assumed to be 6:1. The maximum water depth allowed in the basin was 5 feet. The crossing at 107th Avenue would not be overtopped during the 100-year storm.

2.7 Results

The Table 2.1 below shows the results of the hydrologic analyses. The detention basin at 95th Avenue was removed from the HEC-1 model and a new one located at 107th Avenue. The tables summarize the peak discharges at key concentration points within the watershed, along the DRCC corridor. The HEC-1 model output for the options are given in Appendix A, B, C and D. The following HEC-1 ID points are the concentration points of interest and are described below:

RRED is the detention routing between 91st Avenue to 95th Avenue. This detention routing is not affected by the removal of the 95th Avenue basin because it is upstream of this location.

RT95 is the channel routing between 91st Avenue and 95th Avenue in the ASPEN model. This reach routing is removed and replaced by reach routing from 91st Avenue to 99th Avenue due to the removal of the 95th Avenue Basin.

RT99 is the reach routing from 95th Avenue to 99th Avenue in the ASPEN model. This combines the RT95 with RT99 to one long channel routing. The channel sections are the

same for both RT95 and RT99. The reach length was modified to the one mile length between 91st Avenue and 99th Avenue. The results indicated that RT99 increased from 297 cfs to 736 cfs reflecting the removal of 95th Avenue basin.

Table 2.1 HEC-1 Model Results Comparison of Aspen Model and Various Options

HEC-1 ID	Description of Flow Location	ASPEN Recommended Plan	OPTION 1 53 Ac-ft Basin	OPTION 2 75-Ac-ft Basin	OPTION 3 95-Ac-ft Basin	OPTION 4 102-Ac-ft Basin
RRED	Det Routing at 91st Ave	876 cfs	876 cfs	876 cfs	876 cfs	876 cfs
RT95	Chan Routing from 91st to 95th Ave	767 cfs	N/A (Basin Removed)	N/A (Basin Removed)	N/A (Basin Removed)	N/A (Basin Removed)
RT99	Route Flows from 95h to 99th Ave	297 cfs	736 cfs	736 cfs	736 cfs	736 cfs
CPID3	Comb. All Flows at 99th	1038 cfs	1167 cfs	1167 cfs	1167 cfs	1167 cfs
RT107	Route Flows from 99th to 107th Ave	870 cfs	1120 cfs	1120 cfs	1120 cfs	1120 cfs
CPIB2	Comb All flows at 107th	1345 cfs	1434 cfs	1434 cfs	1434 cfs	1434 cfs
RRIB (DET107 in Revised)	Route Flows through 107th Ave Basin & Culvert	1318 cfs	1220 cfs	1009 cfs	855 cfs	810 cfs

CPID3 is the combination of all flows at 99th Avenue. Due to increase in flows of RT99 due to the removal of the 95th Avenue Detention Basin, CPID3 also increased from the 1038 cfs in the CAR recommended plan to 1167 cfs.

RT107 is channel routing of the CPID3 flows at 99th Avenue to 107th Avenue. This also increased from 870 cfs to 1120 cfs in the revised model.

CPIB2 is the sum of all flows at 107th Avenue, on the City of Phoenix side of the road. This flow also increases as expected from 1345 cfs to 1434 cfs.

RRIB is the detention routing from 107th Avenue to City of Avondale side of DRCC. The recommended plan performed the detention routing using two-celled 9feet by 4feet culvert that allowed roadway overtopping. RRIB is renamed DET107 in the revised model. The outflow from this routing depended on the option modeled. The combination of basin size and culvert size gave different results, but in all cases the outflows are much lower than the 1318 cfs given in the recommended plan.

The HEC-1 model outputs for the various Options are given in Appendices 'A' through 'D'. The configuration for the detentions basins of the various Options are given in Exhibits 1 through 4. These basin plans are preliminary only and incorporates soccer fields for recreational purposes.

Table 2.2 below gives the physical data for the basin and culvert for the various options modeled.

Table 2.2 Physical Data for Basin and Culvert for the Various Options

Physical Property	PRESTIGE OPTION 1	PRESTIGE OPTION 2	PRESTIGE OPTION 3	PRESTIGE OPTION 4
Basin Area (Acres)	10	15	20	20
Peak Storage (Ac-Ft)	53	75	102	102
Peak Outflow Depth (ft)	4.8	5.1	5.3	5.2
Culvert Size at 107th Avenue (RCBC)	1220	1008	855	810
Culvert Size at 107th Avenue (RCBC)	5-10ftX5ft	4-10ftX5ft	4-10ftX5ft	3-10ftX5ft

The basin storage volume and peak discharges were obtained by generating detailed output for the basin routing HEC-1 ID KK location. This generates various results for several "Transposition Areas" which are then interpolated for the corresponding peak flows. The results indicate that Option 4 provides the lowest outflow of 810 cfs using 3- 10 feet by 5

feet box culverts. This option also provided the maximum storage volume. The maximum stage in the basin is about 5 feet 3 inches which is slightly higher than the 5 feet desired, but the basin will be fine-tuned during design to bring the peak stage to 5 feet or under.

3.0 HYDRAULIC ANALYSIS

The scope of work also required that the culvert crossings at the major street locations be evaluated for capacity due to increased flows between 91st Avenue and 107th Avenue. The culverts were initially sized to pass flows that are approximately 10-year flows, while allowing the 100-year flows to overtop the roadways to a maximum of 6-inches. The following table gives information on the existing culverts within the DRCC study reach. The culverts locations evaluated were the 95th Avenue, 99th Avenue and 103rd Avenue locations in addition to the 107th Avenue culvert that is associated with the basin design. The location of 91st Avenue was not evaluated

Table 3.1 – Physical and Hydraulic Data for Existing Culverts

HEC-1 ID	Description of Location	Culvert Location	Existing Culvert Size	Existing Culvert Capacity (without overtopping road)	CAR Recommended Design Flows
RT99	Route flows from 95th to 99th	95th Avenue	2-10X4 RCBC	538 cfs	388 cfs
RRID1	Route Flows at 99th Det. Basin	99th Avenue	2-10X4 RCBC	586 cfs	Not Evaluated
RT107	Route flows from 99th to 107th	103rd Avenue	2-6X4 RCBC	385 cfs	Not Evaluated

It should be noted that there are small culverts at both 99th Avenue and 103rd Avenue. These small culverts are located within linear retention basins that are parallel to the DRCC channel within the power line corridor. The small pipe culverts are located in the southern linear basins while the major box culverts are located within the northern main channel. The minor pipe culverts were ignored in the evaluation because they are small, 3-24 inch pipes at 99th Avenue and 3-36 inch pipes at 95th Avenue and they would pass insignificant amount of flows. The existing culvert capacities were determined as flows through the culvert without overtopping the roadway.

Table 3.2 below shows the existing culverts and the proposed condition capacities required at each crossing.

Table 3.2 –Hydraulic Data for Existing Culverts Maximum Flow Capacity

HEC-1 ID	Culvert Location	Existing Culvert Size	Existing Culvert Capacity with flow Just below Road	Existing Culvert Capacity with Road Weir Flow*	Revised 100-Year Peak Discharge
RT99	95th Avenue	2-10X4 RCBC	806 cfs	1431 cfs	736 cfs
RRID1	99th Avenue	2-10X4 RCBC	717 cfs	1342 cfs	1167 cfs
RT107	103rd Avenue	2-6X4 RCBC	430 cfs	1055 cfs	1120 cfs

* Road weir flow assumes 250 ft Road Length with 1-foot Overtopping. Top of Road is about 2 feet above Culvert Soffit. A variation in roadway profile is not accounted for due to lack of survey data.

The above results indicate that all of the culverts appear to be adequate to pass the 100-year peak discharges, including the increase due to the removal of the proposed 95th Avenue detention basin. The culvert at 103rd Avenue appears to be slightly under capacity, but the difference is only about 5% and this will have to be analyzed in detail during pre-design. Since the 10-year HEC-1 model was not within our scope of work, approximate value for 10-yr flow was assumed. All of the culverts between 95th Avenue and 107th Avenue as listed in Table 3.2 convey 10-yr flow and 100-yr flow with less than 6" of overtopping. No improvements to the culvert will be necessary. However, the roadway profile and adjacent grades will have to be verified and this analysis repeated after conducting a detail topographic survey of the area. This task is not in our scope of work and anticipated to be completed during pre-design.

4.0 REVIEW OF THE CAR HEC-1 MODEL

The objective of the review is to determine if the HEC-1 model reflects prepared in the Candidate Assessment Report (CAR) the existing development along the DRCC Corridor. Most of the development was constructed during the development of the CAR or even after the model was finalized. It is therefore possible that the HEC-1 model does not reflect what was ultimately constructed.

4.1 Data Collection

Data collection was based on field measurements of structures as well as reports and construction plans. Field measurement of channels was only at locations near the culverts and the data may not be representative of the entire channel.

4.2 HEC-1 Channel and Basin Routing

The following are field and plans derived cross sections for routing reaches and the actual routing sections in the CAR HEC1 models.

There are conflicting values between routing parameter used in the HEC-1 model and what was actually observed in the field. For the downstream segment between 91st Avenue and 107th Avenue, the data appears to reflect what exists in the field currently. The reach between 83rd Avenue to 91st Avenue however appears to have too wide of channel width within certain segments. The developments along the DRCC corridor on the north side have retention basins in place. These appear to be the future DRCC channel system, and the average bottom width of the basins are about 80 feet. However, in the CAR HEC-1 models, the routing channel bottom widths ranged from 250 feet to 450 feet.

Table 4.1 – HEC-1 Routing Reach Comparison with Actual Measured

HEC-1 ID	Description of Flow Location	Bottom width of Channel in ASPEN Model	Reach Length in HEC-1 ASPEN Model	Bottom width of Channel Measured or from plans	Reach Length of Channel Measured or from plans
MCJCJB	Channel Routing from to 75th Ave to 83rd Ave Along DRCC	250 ft (Triangular Shaped Section)	5964 ft	No Channel – Open Field	5900 ft
RRJBED1	Channel Routing from 83rd Ave to Irrigation. Canal Along DRCC	250 ft	2563 ft	80 ft for HOA Retention Basins	2563 ft
RRJBED2	Channel Routing from to Irrigation. Canal to 91st Ave Along DRCC	420 ft	2563 ft	80 ft for HOA Retention Basins	2563 ft
RT95	Channel Routing from to 91st Ave to 95th Along DRCC	22 ft	2439 ft	25 ft	2600 ft
RT99	Channel Routing from to 95th Ave to 99th Along DRCC	22 ft	5127 ft	18 ft	2600 ft
RT107	Channel Routing from to 99th Ave to 107th Along DRCC	22 ft	5265 ft	15 ft	5280 ft

5.0 Cost Analysis

Based on preliminary hydrology and hydraulic analysis, the basin excavation volumes, size of the box culvert and other necessary costs were derived. Table 5.1 lists each options, description and its cost. The most feasible option per our analysis is Option #4.

Option Number	Option Description	Cost
Option #1	53 ac-ft Basin w/ Outflow = 1,220 cfs	$1.641 million
Option #2	75 ac-ft Basin w/ Outflow = 1,009 cfs	$1.838 million
Option #3	92 ac-ft Basin w/ Outflow = 855 cfs	$2.035 million
Option #4	102 ac-ft Basin w/ Outflow = 810 cfs	$1.954 million

There are several advantages of selecting option #4 and some of these are listed below:

- Provides more storage volumes thus reducing discharge downstream
- Provides smaller size box culvert downstream at 107th Avenue crossing
- Reduces cost for downstream infrastructure, which has significant cost benefits
- Provides more opportunities for active and passive recreational activities

6.0 SUMMARY AND CONCLUSION

Based on the hydrology and hydraulic analysis we recommend:

- Option #4, which includes 102 ac-ft of storage within the basin with the outflow of 810 cfs, 3 barrels of 10'X5' reinforced concrete box culvert at 107th Avenue crossing.
- No improvements are necessary to the crossings at 95th Avenue, 99th Avenue and 103rd Avenue, as our analysis show 10-yr flow can be conveyed under the culvert and remaining flow during 100-yr storm flows over the culvert with less than 6" of overtopping.
- The detail analysis with more accurate topographic survey will be required along the DRCC alignment and more specifically at the major arterial crossings.

7.0 REFERENCES

1. DRCC CAR, Prepared by Aspen Consulting Engineers, February 2006.
2. Durango Area Drainage Master Plan (ADMP), Prepared by Dibble and Associates, October 2002
3. HEC-1 Hydrology Modeling Software, Version 4.1, U.S. Army Corps of Engineers, 2004
4. Haestad Methods, "Culvert Master v3.1", 2005

APPENDIX A

HEC-1 Model Output for Option 1 (107BSNZ.DAT)

```
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   26MAY09  TIME  15:24:45  *
*                                      *
****************************************
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****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
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```
X     X  XXXXXXX   XXXXX          X
X     X  X        X     X       XX
X     X  X        X               X
XXXXXXX  XXXX     X        XXXXX  X
X     X  X        X               X
X     X  X        X     X         X
X     X  XXXXXXX   XXXXX         XXX
```

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   107BSNZ.DAT
  2           ID   PRESTIGE ENGINEERING CONSULTANTS - MARCH 23, 2009
  3           ID   REMOVAL OF 95TH AVENUE BASIN & REPLACE WITH 10TH AVENUE BASIN
  4           ID   6-HOUR RAINFALL
  5           ID   DURANGO REGIONAL CONVEYANCE CHANNEL AND SUNLAND CHANNEL
  6           ID   AVONDALE AND PHOENIX ARIZONA
  7           ID   THIS HEC-1 MODEL IS THE SAME AS THE REC6FINAL.DAT MODEL FOR THE SAME AREA,
  8           ID   DATED JANUARY 25, 2006 AND DELIVERED TO THE FCDMC ON FEBRUARY 15, 2006,
  9           ID   WITH THE FOLLOWING CHANGES ADDED BY PRESTIGE ENGINEERING
 10           ID   1.  REMOVE DETENTION BASIN AT 95TH AVENUE (KK 95BASIN) FROM THE MODEL
 11           ID   2.  REPLACE THE TWO ROUTING REACHES RT95 AND RT99 BETWEEN 91ST AVE & 99 AVE
 12           ID       WITH A SINGLE ROUTING REACH, AFTER THE REMOVAL OF THR 95TH AVE BASIN
 13           ID       RENAME BOTH ROUTINGS WITH A SINGLE LABEL RT99
 14           ID   3.  REVISE THE REACH DISTANCE TO THE ONE MILE DISTANCE BETWEEN 91ST & 99TH
 15           ID   4.  FROM THE 7566 FT (2439 FT FOR RT95 PLUS 5127 FT FOR RT99) TO 5216 FT
 16           ID   5.  ADD BASIN AT 107TH AVENUE AFTER COMBINING SUB IB AND IC AND ROUTED FLOWS
 17           ID       FROM THE NORTH AT CPIB2 WHICH WAS FORMERLLY RRIB
 18           ID   6.  THE 107TH AVE BASIN IS 10 AC BOTTOM AT 6:1 SIDES BOT FLUSHED WITH CHANNE
 19           ID   7.  THE CULVERT USED IS 10FT WIDE BY 5FT HIGH FIVE CELL BOX CULVERT
 20           ID   8.  TOP OF ROAD IS 6 INCHES ABOVE CULVERT TOP
 21           ID   9.  SLOPE OF CULVERT BARREL IS 0.005 FT/FT
 22           ID   10. 100-YR DISCHARGE WAS TAKEN FROM ASPEN REPORT AS 1193 CFS
 23           ID   11. CULVERT SET TO DISCHARGE ABOUT THE EXISTING CONDITION 100-YR WITH NO ROAD
 24           ID       OVERTOPPING AT 107TH AVENUE
 25           ID   12. THE CHAN ROUTING RT107 LENGTH SHORTENED BY 500 FT TO ALLOW FOR THE 107TH
 26           ID       BASIN DETENTION
              *DIAGRAM
              * MODIFIED IT CARD FOR DSS RUN  SLT
              * IT     5            1200    2000
 27           IT       5 09MAR95    1200    2000
 28           IO       5
 29           IN      15
              *
 30           JD    3.23    0.01
 31           PC   0.000   0.008   0.016   0.025   0.033   0.041   0.050   0.058   0.066   0.074
 32           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931   0.950
 33           PC   0.962   0.972   0.983   0.991   1.000
 34           JD   3.209    0.50
 35           JD   3.149    2.80
 36           PC   0.000   0.009   0.016   0.025   0.034   0.042   0.051   0.059   0.067   0.076
 37           PC   0.087   0.100   0.120   0.163   0.252   0.451   0.694   0.837   0.900   0.938
 38           PC   0.950   0.963   0.975   0.988   1.000
 39           JD   2.978    16.0
 40           PC   0.000   0.009   0.020   0.030   0.048   0.063   0.076   0.090   0.105   0.119
 41           PC   0.135   0.152   0.175   0.222   0.304   0.472   0.670   0.796   0.868   0.912
 42           PC   0.946   0.960   0.973   0.987   1.000
 43           JD   2.623    90.0
 44           PC   0.000   0.021   0.035   0.051   0.071   0.087   0.105   0.125   0.143   0.160
 45           PC   0.179   0.201   0.232   0.281   0.364   0.500   0.658   0.773   0.841   0.888
 46           PC   0.927   0.945   0.964   0.982   1.000
 47           JD   1.841   500.0
 48           PC   0.000   0.024   0.043   0.059   0.078   0.098   0.119   0.141   0.162   0.186
 49           PC   0.212   0.239   0.271   0.321   0.408   0.515   0.627   0.735   0.814   0.864
 50           PC   0.907   0.930   0.954   0.977   1.000
              *
```

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

  51          KK   SUBWD   BASIN
  52          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
  53          BA   0.393
  54          LG    0.20    0.19    7.00    0.17      12
  55          UI      32      42     116     157     189     226     281     403     348     281
  56          UI     240     193     156     115      65      54      42      32      17      10
  57          UI      10      10      10       9       0       0       0       0       0       0
  58          UI       0       0       0       0       0       0       0       0       0       0
              *

  59          KK  RTWDXA   ROUTE   REACH
  60          KM        ROUTE FLOW FROM WD TO XA (ALONG 27TH AVENUE).
  61          KM        TYPE C CHANNEL
  62          RS       4              -1       0
  63          RC   0.025   0.025   0.025    2500  0.0016    0.00
  64          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
  65          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

  66          KK   SUBXA   BASIN
  67          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
  68          BA   0.247
  69          LG    0.13    0.15    9.70    0.06      44
  70          UI      34     125     193     268     417     308     225     157      74      48
  71          UI      29      10      11      11       0       0       0       0       0       0
  72          UI       0       0       0       0       0       0       0       0       0       0
              *

  73          KK   CPXA1
  74          KM   ADD HYDROGRAPHS AT XA
  75          HC       2
              *
              * KK  RSXA
              * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
              * RS     1    STOR       0       0
              * SV   .01     .07     1.0     5.1    14.0    28.5    50.0    79.1   117.4   165
              * SE1063.3  1063.5  1063.6  1064.1  1064.6  1065.1  1065.6  1066.1  1066.6  1067
              * SQ     0      15      43     455    1751    3879    6999   11192   17236   253
              *

  76          KK   DIXAO
  77          KM   DIVERT FLOW FROM XA SOUTHWARD OVER SPRR AND OUT OF MODEL
  78          DT   DIZZ1
  79          DI       0       0      43     455    1751    3879    6999   11192   17236   25382
  80          DQ       0       0       0       0       0       0       0      44     960    3141
              *

  81          KK  RTXAWC   ROUTE   REACH
  82          KM        ROUTE FLOW FROM XA TO WC (ALONG SPRR).
  83          KM        TYPE C CHANNEL
  84          RS      12              -1       0
  85          RC   0.035   0.035   0.035    5100  0.0016    0.00
  86          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
  87          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

  88          KK   SUBWB   BASIN
  89          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
  90          BA   0.667
  91          LG    0.16    0.15    9.70    0.06      36
  92          UI      60     103     240     316     391     474     689     701     538     442
  93          UI     358     278     177     107      94      61      41      19      18      19
  94          UI      19      18       0       0       0       0       0       0       0       0
  95          UI       0       0       0       0       0       0       0       0       0       0
              *

  96          KK  RTWBWC   ROUTE   REACH
  97          KM        ROUTE FLOW FROM WB TO WC (ALONG 35TH AVENUE).
  98          KM        TYPE C CHANNEL
  99          RS       3              -1       0
 100          RC   0.025   0.025   0.025    2500  0.0020    0.00
 101          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 102          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 103          KK   SUBWC   BASIN
 104          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 105          BA   0.487
 106          LG    0.16    0.16    9.70    0.06      43
 107          UI      46      90     195     255     315     404     581     477     377     302
 108          UI     240     167      90      78      48      36      14      15      14      14
 109          UI       0       0       0       0       0       0       0       0       0       0
              *

 110          KK    CPWC
 111          KM    ADD HYDROGRAPHS AT WC.
 112          HC       3
              *
```

```
                 * KK  RSWC
                 * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
                 * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
                 * KO     1
                 * RS     1    STOR       0       0
                 * SV  16.1    27.6    44.0    65.2    90.7   121.5   159.6   206.8   263.7   329
                 * SE1057.1  1057.6  1058.1  1058.6  1059.1  1059.6  1060.1  1060.6  1061.1  1061
                 * SQ     0      34     456    1381    2859    4933    7982   12958   19919   288
                 *

113              KK  DIWCWA
114              KM   DIVERT FLOW FROM WC TO QE
115              KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
116              DT    DIQE
117              DI       0      34     456    1381    2859    4933    7982   12958   19919   28835
118              DQ       0       0       0       0       0       0     141    1221    3463    6954
                 *
                 * KKDIWCQE
                 * KM DIVERT FLOW FROM WC TO QE
                 * DT  DIQE
                 * DI     0     115     608    1579    3086    5253    8972   15024   23745   350
                 * DQ     0       0       0       0       0      40     951    3350    7104   121
                 *
1                                                HEC-1 INPUT                                                PAGE  4

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

119              KK  RTWCWA
120              KM   HEC-RAS REACH
121              KM        ROUTE FLOW FROM WC TO WA (ALONG SPRR).
122              KM        Channel geometry changed to match natural conditions 04.11.00  JEP
123              KM        Manning's N values changed to match approved values 04.11.00  JEP
124              KM        Method changed from Normal Depth Storage to Modified Puls 05.25.00 JEP
125              KM        Stage-storage values are based on HEC-2 analysis results 06.19.00 JEP
126              KM        Values transferred directly from HEC-2 file: Tape7_1 09.29.00 JEP
127              RS      15    STOR       0       0
128              SV       0     103     168     242     267     296     317     332     338     354
129              SV     375
130              SQ       0     200     400     800    1000    1200    1400    1600    1700    1900
131              SQ    2200
                 * RC  .129    .129    .129    4850   .0010
                 * RX     0      40     200     410     870    1240    1700    2160
                 * RY   4.4     3.8       0     1.6       0     1.8     2.8     4.4
                 *
                 *

132              KK   SUBWA   BASIN
133              KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
134              BA   0.492
135              LG    0.15    0.15   10.10    0.05      43
136              UI      75     302     455     683     855     573     402     209     117      67
137              UI      23      23      23       0       0       0       0       0       0       0
138              UI       0       0       0       0       0       0       0       0       0       0
                 *

139              KK   CPWA1
140              KM    ADD HYDROGRAPH SUBWA TO RTWCWA
141              HC       2
                 *

142              KK   SUBVD   BASIN
143              KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
144              BA   0.697
145              LG    0.16    0.16    9.70    0.06      36
146              UI      63     108     251     330     408     495     720     733     562     461
147              UI     375     291     185     112      98      63      44      19      20      19
148              UI      20      19       0       0       0       0       0       0       0       0
149              UI       0       0       0       0       0       0       0       0       0       0
                 *

150              KK  RTVDWA   ROUTE   REACH
151              KM        ROUTE FLOW FROM VD TO WA (ALONG 43RD AVENUE).
152              KM        FUTURE ARTERIAL SECTION
153              RS       1              -1       0
154              RC   0.100   0.023   0.100    2500  0.0030    0.00
155              RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
156              RY     105     105     105   99.75   99.75     105     105     105
                 *
1                                                HEC-1 INPUT                                                PAGE  5

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

157              KK   CPWA2
158              KM    ADD HYDROGRAPHS FROM SUBWA AND RTWCWA TO RTVDWA.
159              HC       2
                 *
                 * KK  RSWA
                 * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
                 * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
                 * KO     1
                 * RS     1    STOR       0       0
                 * SV   1.3     1.9     2.4     3.1     4.0     8.5    16.7    29.9    48.5    74
                 * SE1050.7  1050.9  1051.1  1051.3  1051.4  1051.9  1052.4  1052.9  1053.4  1053
```

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            * SQ      0       0       0       0       0      77     562    1532    3131     53
            *

 160        KK  DIWAVC
 161        KM        DIVERT FLOW FROM WA TO QD OVER SPRR
 162        KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
 163        KM   Revised DQ records based on HEC-2 analysis results.  06.28.00 JEP
 164        DT    DIQD
 165        DI       0     200     400     800    1000    1200    1400    1600    1700    1900
 166        DQ       0       0      42     369     555     746     942    1140    1174    1370
            *
            * KKDIVCQD
            * KM DIVERT FLOW FROM VC TO QD OVER SPRR
            * DT  DIQD
            * DI     0     810    9237   10710
            * DQ     0       0       0      63
            *

 167        KK  RTWAVC
 168        KM   HEC-RAS REACH
 169        KM        MODIFIED PULS ROUTE FLOW FROM WA TO VC (ALONG SPRR).
            * KM      Channel geometry changed to match natural conditions 04.11.00  JEP
 170        KM        Manning's N values changed to match approved values 04.11.00  JEP
 171        KM        Method changed from Normal Depth Storage to Modified Puls 05.22.00 JEP
 172        KM        Stage-Storage values based on HEC-2 analysis results.  06.19.00 JEP
 173        KM        Values transferred directly from HEC-2 file:  Tape7_2  9.29.00 JEP
 174        RS      15    STOR       0       0
 175        SV       0     146     178     193     201     208     212
 176        SQ       0     400     600     800     989    1247    1487
            * RC  .317    .317    .317    5270   .0005
            * RX     0      50     120     390     810     950    1400    1700
            * RY   6.8       0       0     1.8     2.8     3.8     5.1     6.8
            *

 177        KK   SUBVC   BASIN
 178        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 179        BA   0.490
 180        LG    0.12    0.16    8.40    0.10      50
 181        UI      75     300     454     680     852     570     400     209     116      67
 182        UI      23      23      23       0       0       0       0       0       0       0
 183        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

 184        KK   CPVC1
 185        KM    ADD HYDROGRAPH SUBVC TO RTWAVC.
 186        HC       2
            *

 187        KK   SUBVB   BASIN
 188        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 189        BA   0.720
 190        LG    0.15    0.17    9.70    0.06      45
 191        UI     121     489     718    1162    1201     810     529     243     146      66
 192        UI      36      36       0       0       0       0       0       0       0       0
 193        UI       0       0       0       0       0       0       0       0       0       0
            *

 194        KK  RTVBVC   ROUTE   REACH
 195        KM        ROUTE FLOW FROM VB TO VC (ALONG 51ST AVENUE).
 196        KM        FUTURE ARTERIAL SECTION
 197        RS       1              -1       0
 198        RC   0.100   0.023   0.100    2500  0.0017    0.00
 199        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 200        RY     105     105     105   99.75   99.75     105     105     105
            *

 201        KK   CPVC2
 202        KM    ADD HYDROGRAPHS FROM SUBVC AND RTWAVC TO RTVBVC.
 203        HC       2
            *
            * KK  RSVC
            * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
            * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
            * KO     1
            * RS     1    STOR       0       0
            * SV    70      83      97     113     121     170     192     216     284       3
            * SE1051.4  1051.6  1051.8  1052.0  1052.1  1052.6  1052.8  1053.0  1053.3  1053
            * SQ    16     246     746    1537    2048    5354    7033    8943   12315     147
            *

 204        KK  DIVCQA
 205        KM   DIVERT FLOW FROM VC TO VA OVER 51st AVE.
 206        KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
 207        KM   Revised DQ records based on HEC-2 analysis results.  06.19.00 JEP
 208        DT    DIVA
 209        DI       0     100     400     600     800     989    1247    1487
 210        DQ       0       1      27      32      30      32      32      32
            *
            * KKDIVCVA
            * KM DIVERT FLOW FROM VC TO VA OVER 51st AVE.
            * DT  DIVA
```

```
                 * DI     0       9     654    2822    7159
                 * DQ     0       4     214     753    1814
                 *
1                                          HEC-1 INPUT                                                    PAGE  7

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

 211             KK  RTVCQA   ROUTE   REACH
 212             KM   ROUTE FLOW FROM VC TO QA (ALONG 51ST AVENUE).
 213             KM   FUTURE ARTERIAL SECTION
 214             RS       2              -1       0
 215             RC   0.100   0.023   0.100    5000  0.0030    0.00
 216             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 217             RY     105     105     105   99.75   99.75     105     105     105
                 *

 218             KK   SUBQA   BASIN
 219             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 220             BA   0.485
 221             LG    0.34    0.14   10.10    0.05      20
 222             UI      38      40     133     178     215     253     303     423     464     361
 223             UI     306     252     209     170     115      67      63      44      38      18
 224             UI      12      11      12      11      12       0       0       0       0       0
 225             UI       0       0       0       0       0       0       0       0       0       0
                 *

 226             KK   CPQA2
 227             KM   ADD HYDROGRAPHS AT QA
 228             HC       2
                 *

 229             KK    RSQA
 230             KM        MODIFIED PLUS ROUTING THROUGH PONDING BEHIND RID
 231             RS       1    STOR      -1       0
 232             SV     6.6     9.4    13.0    17.4    22.4    28.1    34.6    42.1    50.4
 233             SE  1032.2  1032.4  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.8
 234             SQ       0      69    1129    6033   11213
 235             SE  1031.9  1032.4  1032.9  1033.4  1033.9
                 *

 236             KK  DIQAPF
 237             KM   DIVERT FLOW FROM QA TO PF
 238             DT    DIPF
 239             DI       0      69    1129    6033   11213
 240             DQ       0      39     462    1272    2210
                 *

 241             KK  RTQAJH   ROUTE   REACH
 242             KM        ROUTE FLOW FROM QA TO JH (SHEET FLOW).
 243             KM        TYPE A CHANNEL
 244             RS      11              -1       0
 245             RC   0.100   0.100   0.100    2800  0.0031    0.00
 246             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 247             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *
1                                          HEC-1 INPUT                                                    PAGE  8

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

 248             KK   SUBQE   BASIN
 249             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 250             BA   0.913
 251             LG    0.15    0.13   10.10    0.04      56
 252             UI      92     200     409     529     670     915    1121     854     673     525
 253             UI     394     212     156     109      77      28      29      28      29       0
 254             UI       0       0       0       0       0       0       0       0       0       0
                 *

 255             KK    DRQE
 256             KM    RETURN DIVERT FROM WC
 257             DR    DIQE
                 *

 258             KK  RTDIQE   ROUTE   REACH
 259             KM        ROUTE DIVERT FROM WC TO QE
 260             KM        TYPE A CHANNEL
 261             RS       8              -1       0
 262             RC   0.025   0.025   0.025    6600  0.0030    0.00
 263             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 264             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *

 265             KK    CPQE
 266             KM        ADD HYDROGRAPHS AT QE
 267             HC       2
                 *

 268             KK    RSQE
 269             KM        MODIFIED PULS ROUTING BEHIND RID CANAL
 270             RS       1    STOR       0       0
 271             SV     9.5    11.0    14.9    20.2    26.5    33.8   55.23    82.5    95.6   159.9
 272             SE  1040.1  1040.2  1040.4  1040.6  1040.8  1041.0  1041.5  1042.0  1042.2  1043.0
 273             SQ       0     1.8    62.8   242.3   581.9    1158    4169    9977   13108   31180
```

```
                 *

 274             KK  RTQEQC   ROUTE   REACH
 275             KM        ROUTE FLOW FROM QE TO QC (SHEET FLOW).
 276             KM        TYPE A CHANNEL
 277             RS       3              -1       0
 278             RC   0.025   0.025   0.025    3000  0.0027    0.00
 279             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 280             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *

 281             KK   SUBQD   BASIN
 282             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 283             BA   0.249
 284             LG    0.17    0.06   12.40    0.02      51
 285             UI      35     125     195     271     419     311     227     158      75      48
 286             UI      29      10      11      11       0       0       0       0       0       0
 287             UI       0       0       0       0       0       0       0       0       0       0
                 *
1                                                HEC-1 INPUT                                          PAGE  9

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

 288             KK    DRQD
 289             KM   RETURN DIVERT FROM WA
 290             DR    DIQD
                 *

 291             KK  RTDIQD   ROUTE   REACH
 292             KM        ROUTE DIVERT FROM WA TO QD
 293             KM        TYPE C CHANNEL
 294             RS       5              -1       0
 295             RC   0.100   0.023   0.100    5000  0.0030    0.00
 296             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 297             RY     105     105     105   99.75   99.75     105     105     105
                 *

 298             KK    CPQD
 299             KM    ADD HYDROGRAPHS AT QD
 300             HC       2
                 *

 301             KK    RSQD
 302             KM        MODIFIED PULS ROUTING BEHIND RID CANAL.
 303             RS       1    STOR       0       0
 304             SV     2.8     4.8     8.6    14.6    22.5    31.9    42.6    54.8    65.5
 305             SE  1038.1  1038.5  1039.0  1039.5  1040.0  1040.5  1041.0  1041.5  1042.0
 306             SQ       0    30.5   388.4  1580.9  4070.0  7936.6 13214.2 19810.4 26117.2
                 *

 307             KK  DIQDQB
 308             KM        DIVERT FLOW FROM QD TO QB
 309             DT    DIQB
 310             DI       0      31     388    1580    4070    7937   13214   19810   26117
 311             DQ       0       0      71     591    1899    3883    6624   10067   13292
                 *

 312             KK  RTQDQC   ROUTE REACH
 313             KM        ROUTE FLOW FROM QD TO QC.
 314             KM        FUTURE ARTERIAL SECTION
 315             RS       1              -1       0
 316             RC   0.100   0.023   0.100    2600  0.0040    0.00
 317             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 318             RY     105     105     105   99.75   99.75     105     105     105
                 *

 319             KK   SUBQC   BASIN
 320             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 321             BA   0.606
 322             LG    0.23    0.16   10.10    0.04      32
 323             UI      63     146     285     371     474     679     733     552     429     333
 324             UI     233     119      98      64      33      20      20      19      20       0
 325             UI       0       0       0       0       0       0       0       0       0       0
                 *
1                                                HEC-1 INPUT                                          PAGE 10

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

 326             KK    CPQC
 327             KM        ADD HYDROGRAPHS AT QC
 328             HC       3
                 *

 329             KK   DIQCR
 330             KM   DIVERT 80% OF FLOW FROM QC TO RIVER
 331             DT    DISR
 332             DI       0      25      50      75     100     150     200
 333             DQ       0      20      40      60      80     120     160
                 *

 334             KK  RTQCJI   ROUTE   REACH
 335             KM        ROUTE FLOW FROM QC TO JF
 336             KM        TYPE A CHANNEL
```

```
 337          RS      15              -1       0
 338          RC   0.100   0.100   0.100    6500  0.0028    0.00
 339          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 340          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 341          KK   SUBQB   BASIN
 342          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 343          BA   0.505
 344          LG    0.30    0.11   11.20    0.03      27
 345          UI      40      48     143     194     234     276     336     483     465     366
 346          UI     316     253     211     166      97      69      63      41      34      12
 347          UI      13      12      13      12      13       0       0       0       0       0
 348          UI       0       0       0       0       0       0       0       0       0       0
              *

 349          KK    DRQB
 350          KM        RETURN DIVERT FROM QD
 351          DR    DIQB
              *

 352          KK  RTDIQB   ROUTE   REACH
 353          KM        TYPE C CHANNEL
 354          RS      12              -1       0
 355          RC   0.100   0.100   0.100    2500  0.0028    0.00
 356          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
 357          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

 358          KK    CPQB
 359          KM   ADD HYDROGRAPHS AT QB
 360          HC       2
              *
```



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

 361          KK    RSQB
 362          KM        MODIFIED PULS ROUTING THROUGH PONDING BEHIND RID.
 363          KM   THROUGH THE 43RD AVENUE.
 364          RS       1    STOR       0       0
 365          SV     9.4    13.9    19.2    25.5    33.1    41.8    51.7    62.9    75.3    89.1
 366          SE  1033.3  1033.6  1033.9  1034.2  1034.5  1034.8  1035.1  1035.4  1035.7  1036.0
 367          SQ       0    19.3   123.0   423.5   958.2  1718.8  2775.9  4426.7  6845.4  9954.3
              *

 368          KK  RTQBJH   ROUTE REACH
 369          KM   ROUTE FLOW FROM QB TO JH (SHEET FLOW).
 370          KM        TYPE A CHANNEL
 371          RS      15              -1       0
 372          RC   0.100   0.100   0.100    3500  0.0028    0.00
 373          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 374          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 375          KK   SUBJH   BASIN
 376          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 377          BA   0.516
 378          LG    0.37    0.11   11.20    0.03      17
 379          UI      62     175     314     402     581     733     541     418     304     176
 380          UI     107      71      41      19      19      19       0       0       0       0
 381          UI       0       0       0       0       0       0       0       0       0       0
              *

 382          KK    CPJH
 383          HC       4
              *

 384          KK  RTJHJI   ROUTE REACH
 385          KM   ROUTE FLOW FROM JH TO JI (SHEET FLOW).
 386          KM        TYPE A CHANNEL
 387          RS      14              -1       0
 388          RC   0.100   0.100   0.100    4000  0.0031    0.00
 389          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 390          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 391          KK   SUBJI   BASIN
 392          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 393          BA   0.308
 394          LG    0.39    0.11   11.20    0.03      21
 395          UI      52     209     307     497     514     346     227     104      62      28
 396          UI      16      15       0       0       0       0       0       0       0       0
 397          UI       0       0       0       0       0       0       0       0       0       0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 398          KK    CPJI
 399          KM   COMBINE FLOWS AT JI
 400          HC       2
              *
```

```
401          KK   DISRX
402          KM    DUMMY DIVERT TO SALT RIVER (NOT RETURNED)
403          DT   DISR1
404          DI       0   10000
405          DQ       0   10000
             *

406          KK   SUBPF   BASIN
407          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
408          BA   0.502
409          LG    0.17    0.20    7.30    0.12      52
410          UI     113     407     611    1001     766     497     244     127      58      26
411          UI      28       0       0       0       0       0       0       0       0       0
412          UI       0       0       0       0       0       0       0       0       0       0
             *

413          KK   RETPF
414          KM   DIVERT RETENTION OUT OF MODEL DUE TO KNIGHT TRANSPORTATION
415          KM   PARKING LOT EXPANSION. -DCF
416          KM   TOTAL RETENTION IS 3.9 AF. 80% OF THAT IS USED HERE. -DCF
417          DT   RETPF     3.1
418          DI       0   10000
419          DQ       0   10000
             *

420          KK    DRPF
421          KM        RETURN DIVERT FROM QA.
422          DR    DIPF
             *

423          KK  RTDIPF   ROUTE   REACH
424          KM         ROUTE DIVERT FROM QA TO PF.
425          KM         TYPE C CHANNEL
426          RS      11              -1       0
427          RC   0.035   0.035   0.035    2600  0.0005    0.00
428          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
429          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
             *

430          KK   @CPPF
431          KM        ADD HYDROGRAPHS AT PF
432          HC       2    5.19
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

433          KK    RSPF
434          KM        MODIFIED PULS ROUTING BEHIND RID
             * KO     1
435          RS       1    STOR       0       0
436          SV    28.2    33.4    39.2    48.8    55.7    67.3    76.0    85.3   100.7   111.8
437          SE  1032.2  1032.4  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.8  1034.0
438          SQ       0    19.4   124.9   457.5  1050.9  1875.2  2964.8  4437.1  6362.7  8725.9
             *

439          KK  DIPFPE
440          KM        DIVERT FLOW FROM PF TO PE
441          DT    DIPE
442          DI       0     255    1875    5340   11513
443          DQ       0       0       0     160    1143
             *

444          KK  RTPFJF   ROUTE   REACH
445          KM        ROUTE FLOW FROM PF TO JF.
446          KM        TYPE A CHANNEL
447          RS       6              -1       0
448          RC   0.035   0.035   0.035    4000  0.0040    0.00
449          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
450          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
             *

451          KK   SUBUD   BASIN
452          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
453          KM    L=      1.3  Lca=       .6   S=   20.0  Kn= .020  LAG=  14.9
454          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
455          BA     .759
456          LG     .15     .15    9.70     .05   55.00
457          UI    306.    941.   1739.   1494.    851.    324.    131.     53.      0.      0.
458          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

459          KK    RETUD
460          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
461          KM   80% OF REQUIRED MODELED
462          DT   RETB1    38.7
463          DI       0   10000
464          DQ       0   10000
             *

465          KK  SDDRUD
466          KM   DIVERT STORM DRAIN FLOW
467          DT  59SD1D
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 468          DI       0     102   10000
 469          DQ       0     102     102
              *
1                                        HEC-1 INPUT                                                PAGE 14

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


 470          KK  DIUDUA
 471          KM   DIVERT 25% OF FLOW FROM UD TO UA.
 472          DT    DIUA
 473          DI       0      25      50      75     100     150     200
 474          DQ       0       6      13      19      25      38      50
              *

 475          KK  RTUDVA   ROUTE   REACH
 476          KM        ROUTE FLOW FROM UD TO VA (ALONG 59TH AVENUE).
 477          KM        FUTURE ARTERIAL SECTION
 478          RS       1              -1       0
 479          RC   0.100   0.023   0.100    2600  0.0019    0.00
 480          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 481          RY     105     105     105   99.75   99.75     105     105     105
              *

 482          KK   SUBVA   BASIN
 483          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 484          BA   0.493
 485          LG    0.10    0.15    8.40    0.10      58
 486          UI      75     303     456     684     857     574     402     210     117      67
 487          UI      23      23      24       0       0       0       0       0       0       0
 488          UI       0       0       0       0       0       0       0       0       0       0
              *
              * THE FOLLOWING DIVERT RETURN IS REMOVED TO MODEL THE ADMP CONDITION

 489          KK    DRVA
 490          KM        RETURN DIVERT FROM VC
 491          DR    DIVA
              *
              * KKRTDIVA
              * KM HEC-RAS REACH
              * KO     1
              * KM      ROUTE FLOW FROM VC TO VA (ALONG SPRR).
              * KM      Method changed from Normal Depth Storage to Modified Puls 06.19.00 JEP
              * KM      Stage-Storage values are based on HEC-2 analysis results. 06.19.00 JEP
              * KM      Values transferred directly from HEC-2 file:  Tape7_3  09.29.00  JEP
              * RS    15    STOR       0       0
              * SV     0      56      87     130     163     191     205     218     227
              * SQ     0     100     200     400     600     800    1000    1200    1500
              *

 492          KK   CPVA1
 493          KM        ADD HYDROGRAPH SUBVA TO RTDIVA
 494          HC       3
              *
              *

 495          KK  SDDRVA
 496          KM   DIVERT STORM DRAIN FLOW
 497          DT  59SD2D
 498          DI       0      59   10000
 499          DQ       0      59      59
              *
              * KK CPVA2
              * KM      ADD HYDROGRAPHS SUBVA AND RTDIVA TO RTUDVA
              * HC     2
              *
              * KK  RSVA
              * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
              * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
              * KO     1
              * RS     1    STOR       0       0
              * SV  10.3    13.3    15.6    23.9    34.6    48.9    67.7    90.8   118.6
              * SE1044.2  1044.3  1044.5  1045.0  1045.5  1046.0  1046.5  1047.0  1047.5
              * SQ     0       2      39     397    1279    2904    5363    8613   13175
              *
1                                        HEC-1 INPUT                                                PAGE 15

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


 500          KK  DIVAPE
 501          KM   DIVERT FLOW FROM VA TO UC OVER 59TH AVE.
 502          KM   Revised DQ records to reflect new weir analysis based on survey. 05.04.00 JEP
 503          KM   REVISED DIVERSION RECORDS TO REROUTE DIVERSION AROUND CODE SEQUENCE.
 504          KM   INSTEAD OF DIVERTING FLOW OVER THE WEIR TO THE SOUTH, FLOW IS BEING
 505          KM   DIVERTED TO THE WEST. 06.02.00 -DCF
 506          KM   Revised DQ records based on HEC-2 analysis results.  06.19.00 JEP
 507          DT    DIUC
 508          DI       0     200     400     600     800    1000    1200    1500
 509          DQ       0     200     398     548     656     715     738     756
              * DI     0       2      39     397    1279
              * DQ     0       0       0       0       0
              *

 510          KK  RTVAPE   ROUTE   REACH
```

```
 511          KM   ROUTE FLOW FROM VA TO PE (ALONG 59TH AVENUE).
 512          KM   FUTURE ARTERIAL SECTION
 513          RS       2              -1       0
 514          RC   0.100   0.023   0.100    3000  0.0038    0.00
 515          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 516          RY     105     105     105   99.75   99.75     105     105     105
              *

 517          KK   SUBPE   BASIN
 518          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 519          BA   0.504
 520          LG    0.13    0.26    6.20    0.22      56
 521          UI     130     449     692    1071     728     453     189     108      32      29
 522          UI       0       0       0       0       0       0       0       0       0       0
              *

 523          KK    DRPE
 524          KM    RETURN DIVERT FROM PF
 525          DR    DIPE
              *

 526          KK  RTDIPE
 527          KM         ROUTE DIVERT FROM PF TO PE.
 528          KM         TYPE C CHANNEL
 529          RS       3              -1       0
 530          RC    .035    .035    .035    2000   .0005
 531          RX       0      20      35      50    50.1     250     450     550
 532          RY       5       5     2.5       0       0       2       4       5
              *

 533          KK    CPPE
 534          KM        ADD HYDROGRAPHS AT PE
 535          HC       3
              *
```



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

 536          KK    RSPE
 537          KM         RESERVOIR ROUTING BEHIND 59TH AVE AND RID CANAL
 538          RS       1    STOR       0       0
 539          SV    15.6    16.9    21.0    24.0    29.5    33.7    38.3    43.2
 540          SE  1032.5  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.7
 541          SQ       0    1.44      23     194     637    1420    2516    3177
              *

 542          KK  DIPEPD
 543          KM         DIVERT FLOW FROM PE TO PD
 544          DT    DIPD
 545          DI       0     8.2     636    3177
 546          DQ       0       0       0     8.1
              *

 547          KK  RTPEJF   ROUTE   REACH
 548          KM        ROUTE FLOW FROM PE TO JF (ALONG 59TH AVE).
 549          KM        FUTURE ARTERIAL SECTION
 550          RS       1              -1       0
 551          RC   0.100   0.023   0.100    2600  0.0036    0.00
 552          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 553          RY     105     105     105   99.75   99.75     105     105     105
              *

 554          KK   SUBJF   BASIN
 555          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 556          KM    L=       .7  Lca=       .4   S=   11.1  Kn= .027  LAG=  22.9
 557          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 558          BA   0.501
 559          LG    0.10    0.15    7.60    0.14      55
 560          UI     320    1108    1172     675     319     146      67      20      19      19
 561          UI       0       0       0       0       0       0       0       0       0       0
              *

 562          KK    CPJF
 563          KM   COMBINE FLOWS AT JF.
 564          HC       3
              *

 565          KK  RTJFJG   ROUTE   REACH
 566          KM        ROUTE FLOW FROM JF TO JE (ALONG 59TH AVE).
 567          KM        FUTURE ARTERIAL SECTION
 568          RS       3              -1       0
 569          RC   0.100   0.023   0.100    6000  0.0036    0.00
 570          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 571          RY     105     105     105   99.75   99.75     105     105     105
              *

 572          KK   SUBJG   BASIN
 573          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 574          KM    L=       .7  Lca=       .4   S=   11.1  Kn= .027  LAG=  22.9
 575          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 576          BA   0.901
 577          LG    0.12    0.16    8.40    0.10      51
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 578          UI     195     717    1181    1396    1191     840     531     336     203     134
 579          UI      96      35      20      21      21      20      21       0       0       0
 580          UI       0       0       0       0       0       0       0       0       0       0
              *

 581          KK    CPJG
 582          KM   COMBINE FLOWS AT SALT RIVER.
 583          HC       2
              *

 584          KK  CPJGSR
 585          KM   COMBINE FLOWS AT SALT RIVER
 586          HC       2
              *
              * ******************************************************************************
              *

 587          KK    DRUC
 588          KM    RETURN DIVERT FROM VA
 589          DR    DIUC
              *
              *
              * KKRTVAUC   ROUTE   REACH
              * KM      ROUTE FLOW FROM VA TO UC
              * KM      Channel geometry changed to match natural conditions 04.11.00  JEP
              * KM      Manning's N values changed to match approved values 04.11.00  JEP
              * RS     9        -1       0
              * RC 0.035   0.035   0.035    5200  0.0012    0.00
              * RX   0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
              * RY   5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

 590          KK  RTVAUC
 591          KM   HEC-RAS REACH
 592          KM        ROUTE FLOW FROM VA TO A POINT IN UC (ALONG SPRR).
 593          KM        Channel geometry changed to match natural conditions 04.11.00  JEP
 594          KM        Manning's N values changed to match approved values 04.11.00  JEP
 595          KM        Method changed from Normal Depth Storage to Modified Puls 05.25.00 JEP
 596          KM        Stage-storage values are from HEC-2 results 06.19.00 JEP
 597          KM        Values transferred directly from HEC-2 file: Tape7_4  09.29.00 JEP
 598          KM        Values modified to reflect channelization downstream  06.11.01 JEP
 599          RS       9    STOR       0       0
 600          SV       0      46      62      76      90     102     114     125     137
 601          SQ       0     200     400     600     800    1000    1200    1400    1600
              *
              * KKSUBUC    BASIN
              * KM  VALLEY S-GRAPH WAS USED FOR THIS BASIN
              * BA 0.483
              * LG  0.23    0.15    9.70    0.06      28
              * UI    49     105     217     280     354     484     594     451     356       2
              * UI   208     113      83      57      41      15      15      14      15
              * UI     0       0       0       0       0       0       0       0       0
              *
              * KK@CPUC1
              * KM      ADD HYDROGRAPHS SUBUC1 TO RTVAUC
              * HC     2    1.73
              *
1                                          HEC-1 INPUT                                          PAGE 18

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

 602          KK  MCUCUC   ROUTE   REACH
 603          KM   ADMP CHANNEL
 604          KM   MASTER CHANNEL ROUTE FROM UC1 TO UC2
 605          KM   ROUTING RECORD ADDED, JEP 6/11/01
 606          RS       1    FLOW      -1
 607          RC   0.014   0.014   0.014    2493  0.0014    0.00
 608          RX     0.0    16.0    16.0    16.0    46.0    46.0    46.0    62.0
 609          RY     4.8     5.1     2.6     0.0     0.0     2.6     5.1     4.8
              *

 610          KK  SUBUC    BASIN
 611          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 612          BA   0.483
 613          LG    0.23    0.15    9.70    0.06      28
 614          UI      49     105     217     280     354     484     594     451     356     278
 615          UI     208     113      83      57      41      15      15      14      15       0
 616          UI       0       0       0       0       0       0       0       0       0       0
              *

 617          KK   @CPUC
 618          KM        ADD HYDROGRAPHS SUBUC TO MCUCUC
 619          HC       2    1.73

 620          KK  SUBTB1
 621          KM   BASIN TB1
 622          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 623          KM    L=        .9  Lca=        .3   S=     9.4  Kn= .020  LAG=  10.4
 624          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
 625          BA     .14
 626          LG     .25     .15    9.70     .05   30.00
 627          UI    118.    367.    381.    146.     40.     14.      0.      0.      0.      0.
```

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 628          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

 629          KK   RETB1
 630          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
 631          KM   80% OF REQUIRED MODELED
 632          DT   RETB1    11.2
 633          DI       0   10000
 634          DQ       0   10000
              *

 635          KK  SDDTB1
 636          KM   DIVERT STORM DRAIN FLOW
 637          DT  67SD1D
 638          DI       0      17   10000
 639          DQ       0      17      17
              *
1                                          HEC-1 INPUT                                                PAGE 19

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

 640          KK  RTUAUC   ROUTE   REACH
 641          KM        ROUTE FLOW FROM TB1 TO UA (ALONG 67TH AVENUE).
 642          KM        FUTURE ARTERIAL SECTION
 643          RS       2              -1       0
 644          RC   0.100   0.023   0.100    2450  0.0015    0.00
 645          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 646          RY     105     105     105   99.75   99.75     105     105     105
              *

 647          KK   SUBUA   BASIN
 648          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 649          BA   0.561
 650          LG    0.23    0.16    9.70    0.06      22
 651          UI      44      46     155     204     249     294     350     490     536     417
 652          UI     354     291     242     198     133      77      73      51      43      21
 653          UI      13      13      14      13      14       0       0       0       0       0
 654          UI       0       0       0       0       0       0       0       0       0       0
              *

 655          KK    DRUA
 656          KM    RETURN DIVERT FROM UD
 657          DR    DIUA
              *

 658          KK  RTDIUA   ROUTE   REACH
 659          KM        ROUTE DIVERT TO UA
 660          KM        FUTURE ARTERIAL SECTION
 661          RS       4              -1       0
 662          RC   0.100   0.023   0.100    5000  0.0014    0.00
 663          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 664          RY     105     105     105   99.75   99.75     105     105     105
              *

 665          KK   @CPUA
 666          KM        ADD HYDROGRAPHS AT UA
 667          HC       3    1.46
              *

 668          KK  SDDRUA
 669          KM   DIVERT STORM DRAIN FLOW
 670          DT  67SD1D
 671          DI       0      96   10000
 672          DQ       0      96      96
              *

 673          KK  DIUAUC
 674          KM        DIVERT 20% OF FLOW FROM UA TO TB
 675          DT    DITB
 676          DI       0      25      50      75     100     150     200
 677          DQ       0       5      10      15      20      30      40
              *
1                                          HEC-1 INPUT                                                PAGE 20

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

 678          KK  RTUAUC   ROUTE   REACH
 679          KM        ROUTE FLOW FROM UA TO UC (ALONG 67TH AVENUE).
 680          KM        FUTURE ARTERIAL SECTION
 681          RS       2              -1       0
 682          RC   0.100   0.023   0.100    2400  0.0017    0.00
 683          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 684          RY     105     105     105   99.75   99.75     105     105     105
              *

 685          KK  ~CPUC2
 686          KM        ADD HYDROGRAPHS SUBUC AND MCUCUC TO RTUAUC
 687          HC       2
              *
              * KK  RSUC
              * KM       ROUTE FLOW FROM UC TO UB OVER 67th AVE.
              * KM Revised SV-SQ records to reflect new weir analysis based on survey.. 03.15.0
              * KO     1
```

```
          * RS      1    STOR       0       0
          * SV    4.8     6.9     9.9    19.0    33.0    52.6    77.4   108.7   148.6
          * SE1036.2  1036.3  1036.5  1037.0  1037.5  1038.0  1038.5  1039.0  1039.5
          * SQ      0       0      76     811    2294    4562    7715   11722   16588
          *

688       KK  DIUCPC
689       KM   DIVERT FLOW FROM UC TO PC OVER SPRR
690       KM   Revised DQ records to reflect new weir analysis based on survey. 05.04.00 JEP
691       KM   Revised DQ records based on HEC-2 results.  06.19.00 JEP
692       KM   REVERSE DIVERT TO ROUTE AROUND CODE SEQUENCE. 06.21.00 -DCF
693       KM   DIVERT EFFECTIVELY REMOVED DUE TO ADMP CHANNELIZATION.  06.11.01 -JEP
694       DT    DIUB
695       DI       0     100     400     800    1000    1200    1400    1600
696       DQ       0     100     400     800    1000    1200    1400    1600
          * DI     0     100     400     800    1000    1200    1400    1600
          * DQ     0     100     400     674     825     854     914     945
          * DI     0     100     400     800    1000    1200    1400    1600
          * DQ     0       0       0     126     175     346     486     655
          *

697       KK  RTUCPC   ROUTE   REACH
698       KM   ROUTE FLOW FROM UC TO PC (ALONG 67TH AVE).
699       KM   FUTURE ARTERIAL SECTION
700       RS       3              -1       0
701       RC   0.100   0.023   0.100    3000  0.0038    0.00
702       RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
703       RY     105     105     105   99.75   99.75     105     105     105
          *

704       KK   SUBPC   BASIN
705       KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
706       BA   0.300
707       LG    0.18    0.19    8.80    0.06      42
708       UI     160     482     829     518     214      79      23       0       0       0
709       UI       0       0       0       0       0       0       0       0       0       0
          *
```



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

710       KK    CPPC
711       KM   COMBINE POSSIBLE FLOWS FROM UC WITH FLOWS FROM PC
712       HC       2
          *

713       KK    RSPC
714       KM   MODIFIED PULS ROUTING FROM PC TO NB.
715       RS       1    STOR       0       0
716       SV    29.1    31.8    34.8    38.2      42      46    50.2    78.8   107.9   135.6
717       SE  1029.8  1029.9  1030.0  1030.1  1030.2  1030.3  1030.4  1031.0  1031.5  1032.0
718       SQ       5      27      70     134     225     357     545    3654    9263   17876
          *

719       KK  RTPCNB   ROUTE   REACH
720       KM        ROUTE FLOW FROM PC TO NB (ALONG 67TH AVE).
721       KM        FUTURE ARTERIAL SECTION
722       RS       7              -1       0
723       RC   0.100   0.023   0.100    4800  0.0038    0.00
724       RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
725       RY     105     105     105   99.75   99.75     105     105     105
          *

726       KK   SUBNB   BASIN
727       KM   BASIN NB
728       KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
729       KM    L=      1.4  Lca=       .7   S=   16.8  Kn= .020  LAG=  16.4
730       KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
731       BA     .44
732       LG     .25     .15    6.80     .16   12.00
733       UI    144.    464.    790.    956.    577.    284.    126.     48.     28.      0.
734       UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
          *

735       KK   RETNB
736       KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
737       KM   80% OF REQUIRED MODELED
738       DT   RETNB    33.5
739       DI       0   10000
740       DQ       0   10000
          *

741       KK   CPNB1
742       KM        ADD HYDROGRAPHS AT NB
743       HC       2
          *
          * KKDINBNA
          * KM      DIVERT 65% OF FLOW FROM NB TO NA
          * DT  DINA
          * DI      0      25      50      75     100     150     200
          * DQ      0      16      33      49      65      98     130
          *
```

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

 744          KK  RTNBJD   ROUTE   REACH
 745          KM        ROUTE FLOW FROM NB TO JD (ALONG 67TH AVENUE).
 746          KM        FUTURE ARTERIAL SECTION
 747          RS       3              -1       0
 748          RC   0.100    0.023   0.100    5200  0.0054    0.00
 749          RX     0.0      440     445   445.1   575.1   575.2     900  1000.0
 750          RY     105      105     105   99.75   99.75     105     105     105
              *

 751          KK   SUBPD   BASIN
 752          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 753          BA   0.443
 754          LG    0.14     0.17    8.00    0.11      24
 755          UI     130      438     708     954     610     331     138      64      27      27
 756          UI       0        0       0       0       0       0       0       0       0       0
              *

 757          KK    DRPD
 758          KM    RETURN DIVERT FROM PE
 759          DR    DIPD
              *

 760          KK   CPPD2
 761          KM        ADD HYDROGRAPH AT PD
 762          HC       2
              *

 763          KK    RSPD
 764          KM        MODIFIED PULS ROUTING FROM PD TO NC.
              * KO     1
 765          RS       1    STOR       0       0
 766          SV    25.6    37.6    42.4    51.8    53.9    56.1    58.2
 767          SE  1030.6  1030.7  1030.8  1030.9  1031.0  1031.1  1031.2
 768          SQ       0       4      28     101     246     487     820
              *

 769          KK  RTPDNC   ROUTE   REACH
 770          KM        ROUTE FLOW FROM PD TO NC (SHEET FLOW).
 771          KM        TYPE A CHANNEL
 772          RS       5              -1       0
 773          RC   0.035   0.035   0.035    3000  0.0027    0.00
 774          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 775          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 776          KK   SUBNC   BASIN
 777          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 778          KM    L=       .7  Lca=       .3   S=   14.7  Kn= .092  LAG=  43.5
 779          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 780          BA   0.306
 781          LG    0.47    0.25    5.30    0.35      51
 782          UI      86     341     534     508     379     219     121      71      44      23
 783          UI       9       8       8       9       8       0       0       0       0       0
 784          UI       0       0       0       0       0       0       0       0       0       0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 785          KK    CPNC
 786          KM        ADD HYDROGRAPHS AT NC.
 787          HC       2
              *

 788          KK  RTNCJE   ROUTE   REACH
 789          KM        ROUTE FLOW FROM NC TO JE (SHEET FLOW).
 790          KM        TYPE A CHANNEL
 791          RS      12              -1       0
 792          RC   0.035   0.035   0.035    5000  0.0014    0.00
 793          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 794          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 795          KK  SUBJE1   BASIN
 796          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 797          KM    L=      1.1  Lca=       .6   S=   12.7  Kn= .090  LAG=  66.1
 798          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 799          BA   0.248
 800          LG    0.10    0.25    5.40    0.32      55
 801          UI     192     630     574     304     118      57      16      11      10       0
 802          UI       0       0       0       0       0       0       0       0       0       0
              *

 803          KK   CPJE1
 804          KM   COMBINE FLOWS FROM NC AND JE1
 805          HC       2
              *

 806          KK  RTJEJD   ROUTE   REACH
 807          KM        ROUTE FLOW FROM JE TO JD.
 808          KM        FUTURE ARTERIAL SECTION
```

```
 809          RS       3              -1       0
 810          RC   0.100   0.023   0.100    2500  0.0080    0.00
 811          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 812          RY     105     105     105   99.75   99.75     105     105     105
              *

 813          KK   SUBJD   BASIN
 814          KM   BASIN JD
 815          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 816          KM    L=      1.1  Lca=       .6   S=   12.7  Kn= .020  LAG=  14.7
 817          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
 818          BA     .51
 819          LG     .25     .17    8.00     .10   22.50
 820          UI    211.    648.   1201.    988.    552.    203.     82.     36.      0.      0.
 821          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *
1                                          HEC-1 INPUT                                          PAGE 24

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

 822          KK   RETJD
 823          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
 824          KM   80% OF REQUIRED MODELED
              * KO     3                                  21
 825          DT   RETJD    35.0
 826          DI       0   10000
 827          DQ       0   10000
              *

 828          KK    CPJD
 829          KM        ADD HYDROGRAPHS AT JD
 830          HC       3
              *
              * KKSDDRJD
              * KM DIVERT STORM DRAIN FLOW
              * DT59SDJD
              * DI     0     207   10000
              * DQ     0     207     207
              *

 831          KK  DIJDJC
 832          KM        DIVERT 37% OF FLOW AT JD TO JC2.
 833          DT   DIJC2
 834          DI       0      25      50     100     150     200
 835          DQ       0       9      19      37      56      74
              *

 836          KK  RTJDFC   ROUTE   REACH
 837          KM        ROUTE FLOW FROM JD TO FC.
 838          KM        FUTURE ARTERIAL SECTION
 839          RS       1              -1       0
 840          RC   0.100   0.023   0.100    3000  0.0053    0.00
 841          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 842          RY     105     105     105   99.75   99.75     105     105     105
              *

 843          KK  SUBJE2   BASIN
 844          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 845          KM    L=      1.1  Lca=       .5   S=   19.8  Kn= .097  LAG=  63.6
 846          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 847          BA   0.253
 848          LG    0.12    0.13   10.10    0.05      44
 849          UI     109     427     539     421     225     108      59      33       9       8
 850          UI       8       9       0       0       0       0       0       0       0       0
 851          UI       0       0       0       0       0       0       0       0       0       0
              *

 852          KK  RETJE2
 853          KM   DIVERT RETENTION OUT OF MODEL DUE TO RIO DEL REY DEVELOPMENT. -DCF
 854          KM   TOTAL RETENTION IS 5.9 AF. 80% OF THAT IS USED HERE. -DCF
 855          DT   RETJE     4.7
 856          DI       0   10000
 857          DQ       0   10000
              *
1                                          HEC-1 INPUT                                          PAGE 25

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

 858          KK  RTJEFC   ROUTE   REACH
 859          KM        ROUTE FLOW FROM JE TO FC (SHEET FLOW).
 860          KM        TYPE A CHANNEL
 861          RS       4              -1       0
 862          RC   0.035   0.035   0.035    4000  0.0080    0.00
 863          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 864          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 865          KK   SUBFC   BASIN
 866          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 867          KM    L=      1.0  Lca=       .4   S=   18.6  Kn= .097  LAG=  55.3
 868          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 869          BA   0.357
 870          LG    0.12    0.16    7.60    0.13      51
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871          UI     101     397     624     592     442     256     140      84      50      28
872          UI      10       9      10      10      10       0       0       0       0       0
873          UI       0       0       0       0       0       0       0       0       0       0
             *

874          KK    CPFC
875          KM          ADD HYDROGRAPHS AT FC
876          HC       3
             *

877          KK  CPFCSR
878          KM   COMBINE HYDROGRAPHS INTO SALT RIVER AT FC
879          HC       2
             *
             * ******************************************************************************
             *
             *
             * ******************************************************************************
             *
             *

880          KK  DRUCUB
881          KM   RETURN DIVERT FROM UC
882          DR    DIUB
             *

883          KK  MCUCUB   ROUTE   REACH
884          KM   ADMP CHANNEL
885          KM   MASTER CHANNEL ROUTE FROM UC2 TO UB
886          KM   ROUTING RECORD ADDED, JEP 6/11/01
887          RS       1    FLOW      -1
888          RC   0.014   0.014   0.014    1287  0.0010    0.00
889          RX     0.0    16.0    16.0    16.0    51.0    51.0    51.0    67.0
890          RY     4.8     5.1     2.5     0.0     0.0     2.5     5.1     4.8
             *
             * KKRTUCUB
             * KM HEC-RAS REACH
             * KM      ROUTE FLOW FROM UC TO UB
             * KM      Channel geometry changed to match natural conditions 04.11.00  JEP
             * KM      Manning's N values changed to match approved values 04.11.00  JEP
             * RS     4          -1       0
             * RC 0.035   0.035   0.035    1400  0.0043    0.00
             * RX   0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
             * RY   5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
             *
             *
```



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

891          KK   SUBUB
892          KM   BASIN UB
893          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
894          KM    L=       .8  Lca=       .4   S=   16.2  Kn= .048  LAG=  26.9
895          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
896          BA     .14
897          LG     .25     .14    8.80     .08   30.00
898          UI     18.     53.     91.    119.    176.    199.    143.    106.     76.     38.
899          UI     27.     18.      6.      5.      5.      5.      0.      0.      0.      0.
900          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

901          KK  ~@CPUB
902          KM        ADD HYDROGRAPHS AT UB
903          HC       2    2.42
             *
             * KK71PASS
             * KM DIVERT LOW FLOW AROUND BASIN
             * DT71PASS
             * DI     0       0   10000
             * DQ     0       0       0
             *

904          KK  SUBSF1
905          KM   BASIN SF1
906          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
907          KM    L=       .5  Lca=       .3   S=    9.2  Kn= .100  LAG=  45.9
908          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
909          BA     .13
910          LG     .50     .15    9.70     .07     .00
911          UI     10.     11.     24.     46.     58.     74.     81.     86.     86.     74.
912          UI     75.     62.     58.     42.     35.     30.     25.     18.     15.     13.
913          UI     10.      9.      7.      6.      6.      5.      1.      1.      1.      1.
914          UI      1.      1.      1.      1.      1.      1.      1.      1.      1.      1.
915          UI      1.      0.      0.      0.      0.      0.      0.      0.      0.      0.
916          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

917          KK    DRTB
918          KM        RETURN DIVERT FROM UA
919          DR    DITB
             *

920          KK  RTDITB   ROUTE   REACH
```

```
921          KM        ROUTE DIVERT TO SF1 (REACH LENGTH SUBJECT TO CHANGED
922          KM        BASED ON BASIN 3 LOCATION)
923          KM        TYPE A CHANNEL
924          RS       8          -1        0
925          RC   0.025   0.025   0.025    1400  0.0019    0.00
926          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
927          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *
1                                        HEC-1 INPUT                                                    PAGE 27

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


928          KK   CPBA3
929          KM   COMBINE CPUB, SF1, DITB
930          HC       3
             *

931          KK  SUBTB2
932          KM   BASIN TB2
933          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
934          KM    L=       1.8  Lca=       .9   S=   10.3  Kn= .046  LAG=  50.5
935          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
936          BA     .75
937          LG     .15     .15    8.80     .06   55.00
938          UI     50.     50.    127.    204.    251.    289.    334.    391.    512.    630.
939          UI    541.    450.    392.    333.    284.    242.    184.    119.     88.     82.
940          UI     59.     50.     36.     15.     15.     15.     15.     15.     15.     15.
941          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

942          KK  RETTB
943          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
944          KM   80% OF REQUIRED MODELED
945          DT   RETTB    19.6
946          DI       0   10000
947          DQ       0   10000
             *

948          KK  DITBTA
949          KM        DIVERT 25% OF FLOW TO TA
950          DT    DITA
951          DI       0      25      50      75     100     150     200
952          DQ       0       6      13      19      25      38      50
             *

953          KK  RTTBSF   ROUTE   REACH
954          KM   ROUTE FLOW FROM TB TO SF (ALONG 75TH AVENUE).
955          KM   TARGET CHANNEL
956          RS       4    ELEV   27.35       0
957          RC   0.030   0.030   0.030    2160  0.0010    0.00
958          RX     100   107.0   127.0   133.0   151.0   157.0   179.0   193.0
959          RY    32.5    32.0   27.35   27.35   27.35   27.35    32.0    32.5
             *

960          KK  SUSFB2
961          KM   BASIN SFB2
962          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
963          KM    L=        .5  Lca=       .3   S=    2.9  Kn= .020  LAG=  11.4
964          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
965          BA     .11
966          LG     .15     .15    9.70     .07   50.00
967          UI     78.    231.    324.    153.     46.     13.      0.      0.      0.      0.
968          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *
1                                        HEC-1 INPUT                                                    PAGE 28

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


969          KK  SUSF2A
970          KM   BASIN SF2A
971          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
972          KM    L=        .6  Lca=       .2   S=    5.9  Kn= .020  LAG=   9.2
973          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
974          BA     .14
975          LG     .15     .15    9.70     .07   80.00
976          UI    154.    478.    336.     89.     19.      0.      0.      0.      0.      0.
977          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

978          KK  RSSF2A
979          KM   TARGET NORTH BASIN
980          KM   28.51 Acre Feet of Sorage Provided per Target Drainage Report
981          DT  RETSF2   28.51
982          DI       0   10000
983          DQ       0   10000
             *
             * KKRSSF2A
             * KM  TARGET NORTH RETENTION BASIN
             * RS     1    STOR       0       0
             * SA  5.57    6.03    6.50    6.98    6.56    8.03   12.56   20.42   28.51   37.
             * SE     0       1       2       3       4       5       6       7       8
             * SQ     0       0       0       0       0       0       0       0       0    3
             *
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 984          KK  CPSF2B
 985          KM    COMBINE FLOW FROM TB1, SF2A AMD SF2B
 986          HC       3
              *

 987          KK   CPBA3
 988          KM   Combine Target with regional basin
 989          HC       2
              *

 990          KK  BSN71
 991          KM   PROPOSED DETENTION BASIN DRC #4
 992          KM   INCLUDES TARGET SOUTH RETETNION BASIN AREA
 993          RS       1    ELEV    1010
 994          SV       0   0.001   0.001   10.40   15.34   53.24   74.82  118.92  163.57  349.40
 995          SQ       0   18.38   45.77   52.41   55.24   73.97   78.64   86.98   90.38   96.00
 996          SE    1010 1012.12    1015    1016 1016.47 1020.00    1021 1023.00    1024    1028
              *

 997          KK  DBSN71
 998          KM   DIVERT FLOWS FROM DETENTION BASIN DCR4 TO STORM DRAIN
 999          DT   BSN71
1000          DI       0   10000
1001          DQ       0   10000
              *
1                                        HEC-1 INPUT                                          PAGE 29

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


1002          KK  SUBPB
              * KO     3                                21
1003          KM   BASIN PB
1004          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1005          KM    L=      1.1  Lca=       .5   S=    5.3  Kn= .020  LAG=  16.9
1006          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1007          BA     .41
1008          LG     .25     .15    8.80     .06   55.00
1009          UI    123.    405.    671.    887.    553.    301.    126.     56.     25.     25.
1010          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1011          KK   RETPB
1012          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1013          KM   80% OF REQUIRED MODELED
              * KO     3                                21
1014          DT   RETPB    42.9
1015          DI       0   10000
1016          DQ       0   10000
              *

1017          KK   PB75
1018          KM   BASIN PB75 (ROADWAY DRAINAGE)
1019          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1020          KM    L=       .5  Lca=       .3   S=   12.0  Kn= .020  LAG=   8.1
1021          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1022          BA     .01
1023          LG     .15     .15    9.70     .04   80.00
1024          UI     14.     39.     19.      4.      0.      0.      0.      0.      0.      0.
1025          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1026          KK    PBBU
1027          KM   BASIN PBBU   (ROADWAY DRAINAGE)
1028          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1029          KM    L=      1.0  Lca=       .5   S=    6.0  Kn= .020  LAG=  15.8
1030          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1031          BA     .02
1032          LG     .15     .15    8.00     .07   80.00
1033          UI      7.     23.     42.     44.     26.     11.      5.      2.      1.      0.
1034          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1035          KK  CPBSD
              * KO     3                                21
1036          KM           COMBINE STREET DRAINAGE
1037          HC       2
              *
1                                        HEC-1 INPUT                                          PAGE 30

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


1038          KK  DPBSD1
1039          KM   DIVERT STORM DRAIN FLOW (75TH AVENUE)
1040          DT  SD75PB
1041          DI       0      23   10000
1042          DQ       0      23      23
              *
              *

1043          KK  DPBSD2
1044          KM   DIVERT STORM DRAIN FLOW (BUCKEYE ROAD DRAINAGE)
1045          DT  SDBRPB
```

```
1046          DI        0       39   10000
1047          DQ        0       39      39
              *

1048          KK    CPPB
              * KO      3                                21
1049          KM         ADD HYDROGRAPHS AT PB
1050          HC        2
              *

1051          KK  DIPBPA
1052          KM         DIVERT 19% OF FLOW FROM PB TO PA(ADMP DIVERSION)
1053          DT   DIPA1
1054          DI        0       25       50       75      100      150      200      400      800    10000
1055          DQ        0        5       10       14       19       29       38       76      152     1900
              *

1056          KK   CPPB1
              * KO      3                                21
1057          KM         ADD HYDROGRAPHS AT PB
1058          HC        2
              *

1059          KK  RTPBNA   ROUTE   REACH
1060          KM         ROUTE FLOW FROM PB TO NA ALONG 75th AVE.
1061          KM         FUTURE ARTERIAL SECTION
              * KO      3                                21
1062          RS        4    ELEV      -1        0
1063          RC    0.100   0.023   0.100     5280  0.0032     0.00
1064          RX      0.0     440     445    445.1   575.1    575.2      900  1000.0
1065          RY      105     105     105    99.75   99.75      105      105     105
              *

1066          KK  SUBNA
1067          KM   BASIN NA
1068          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1069          KM    L=      2.0  Lca=      1.0   S=   10.5  Kn= .020  LAG=  24.0
1070          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1071          BA     .94
1072          LG     .25     .15    8.00     .08   51.00
1073          UI    132.    473.    742.   1029.   1568.   1184.    859.    588.    280.    184.
1074          UI    106.     40.     40.     40.      0.      0.      0.      0.      0.      0.
1075          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *
```



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

1076          KK   RETNA
1077          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1078          KM   80% OF REQUIRED MODELED
1079          DT   RETNA    89.6
1080          DI        0   10000
1081          DQ        0   10000
              *

1082          KK    NA75
1083          KM   BASIN NA75  (75 AVENUE ROADWAY DRAINAGE)
1084          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1085          KM    L=      1.0  Lca=       .5   S=   15.2  Kn= .020  LAG=  13.1
1086          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1087          BA     .02
1088          LG     .15     .15    7.60     .08   80.00
1089          UI     11.     32.     55.     35.     14.      5.      2.      0.      0.      0.
1090          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1091          KK    NALB
1092          KM   BASIN NALB  (LOWER BUCKEYE ROADWAY DRAINAGE)
1093          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1094          KM    L=      1.0  Lca=       .5   S=    6.0  Kn= .020  LAG=  15.8
1095          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1096          BA     .02
1097          LG     .15     .19    6.60     .12   80.00
1098          UI      7.     23.     42.     44.     26.     11.      5.      2.      1.      0.
1099          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1100          KK   CNASD
              * KO      3                                21
1101          KM    COMBINE STREET DRAINAGE
1102          HC        2
              *

1103          KK  CPNA1
1104          KM    COMBINE ROUTED FLOW FROM PB
1105          HC        3
              *
              *

1106          KK  DNASD1
1107          KM   DIVERT STORM DRAIN FLOW (75TH AVENUE)
1108          DT  SD75NA
1109          DI        0       40   10000
```

```
1110          DQ       0      40      40
              *
1                                   HEC-1 INPUT                                                    PAGE 32

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


1111          KK  DNASD2
1112          KM   DIVERT STORM DRAIN FLOW (LOWER BUCKEYE)
1113          DT  SDLBNA
1114          DI       0      38   10000
1115          DQ       0      38      38
              *

1116          KK  DADMP1
1117          KM   DIVERT STREET FLOW TO ADMP CHANNEL
1118          DT   ADMP1
1119          DI       0     220   10000
1120          DQ       0     220   10000
              *

1121          KK  SUBJC1
1122          KM   BASIN JC1
1123          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1124          KM    L=      1.5  Lca=      1.0   S=   10.7  Kn= .020  LAG=  21.4
1125          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1126          BA     .47
1127          LG     .25     .15    7.00     .13   30.00
1128          UI     76.    304.    456.    712.    797.    538.    365.    173.    102.     52.
1129          UI     23.     23.      0.      0.      0.      0.      0.      0.      0.      0.
1130          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1131          KK  RETJC1
              * KO     3                                  21
1132          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1133          KM   80% OF REQUIRED MODELED
1134          DT  RETJC1    35.5
1135          DI       0   10000
1136          DQ       0   10000
              *

1137          KK    JC75
1138          KM   BASIN JC75  (ROADWAY DRAINAGE)
1139          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1140          KM    L=      1.0  Lca=       .5   S=   13.0  Kn= .020  LAG=  13.6
1141          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1142          BA     .02
1143          LG     .15     .15    7.00     .10   80.00
1144          UI     10.     31.     56.     38.     18.      7.      2.      2.      0.      0.
1145          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1146          KK  CJCSD1
              * KO     3                                  21
1147          KM        COMBINE STREET DRAINAGE AND RETETION OVERFLOW
1148          HC       2     .49
              *
1                                   HEC-1 INPUT                                                    PAGE 33

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


1149          KK  SUBJC2
1150          KM   BASIN JC2
1151          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1152          KM    L=      1.5  Lca=      1.0   S=   11.3  Kn= .020  LAG=  21.2
1153          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1154          BA     .48
1155          LG     .25     .15    7.00     .13     .24
1156          UI     81.    317.    475.    753.    805.    544.    365.    165.    101.     49.
1157          UI     23.     23.      0.      0.      0.      0.      0.      0.      0.      0.
1158          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1159          KK  RETJC2
              * KO     3                                  21
1160          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1161          KM    140 ACRES OF EXISITING DEVELOPMENT NOT INCLUDED IN CALCULATIONS
1162          KM   80% OF REQUIRED MODELED
1163          DT  RETJC2    19.6
1164          DI       0   10000
1165          DQ       0   10000
              *

1166          KK  DETJC2
1167          KM   DIVERT PROPOSED RETENTION OUT OF MODEL FOR APPROXIMATELY 140 ACRES
1168          KM   OF EXISITING DEVELOPMENT THAT DOES NOT HAVE RETENTION
1169          KM   80% OF REQUIRED MODELED
1170          DT  DETJC2    16.6
1171          DI       0   10000
1172          DQ       0   10000
              *

1173          KK  RTJCJC   ROUTE   REACH
```

```
1174        KM        ROUTE FLOW FROM JC2 TO JC1 ALONG 75th AVE.
1175        KM        FUTURE ARTERIAL SECTION
            * KO     3                                  21
1176        RS       2    ELEV       -1        0
1177        RC   0.100   0.023   0.100    2640  0.0021    0.00
1178        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1179        RY     105     105     105   99.75   99.75     105     105     105
            *

1180        KK  CPJC1A
1181        KM            COMBINE FLOW FROM JC2 WITH FLOW FROM JC3
1182        HC       2     .97
            *

1183        KK    JCBR
1184        KM   BASIN JCBR  (ROADWAY DRAINAGE)
1185        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1186        KM    L=       1.0  Lca=        .5   S=   11.0  Kn= .020  LAG=  14.0
1187        KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1188        BA     .02
1189        LG     .15     .17    6.90     .11   80.00
1190        UI     10.     29.     53.     39.     20.      7.      3.      2.      0.      0.
```



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

1191        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
            *

1192        KK  CJCSD2
            * KO     3                                  21
1193        KM        COMBINE STREET DRAINAGE AND RETETION OVERFLOW
1194        HC       2
            *

1195        KK  CPJC1B
            * KO     3                                  21
1196        KM        COMBINE JC1, JC2 AND STREET DRAINAGE
1197        HC       2   5.96
            *

1198        KK  DJC2SD
1199        KM   DIVERT OFFSITE TO STORM DRAIN FLOW (BROADWAY STORM DRAIN FLOW)
1200        DT  SDOSBR
1201        DI       0      41   10000
1202        DQ       0      41      41
            *

1203        KK  DJCSD1
1204        KM   DIVERT STORM DRAIN FLOW (75TH AVE. STORM DRAIN FLOW)
1205        DT  SD75JC
1206        DI       0      42   10000
1207        DQ       0      42      42
            *

1208        KK   DIJD
1209        KM   RETURN DIVERTED FLOW FROM BASIN SUBJD
1210        DR   DIJC2
            *

1211        KK  RTJCJC   ROUTE   REACH
1212        KM        ROUTE FLOW FROM JD TO JC1 ALONG 75th AVE.
1213        KM        FUTURE ARTERIAL SECTION
            * KO     3                                  21
1214        RS       5    ELEV       -1        0
1215        RC   0.100   0.023   0.100    5280  0.0021    0.00
1216        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1217        RY     105     105     105   99.75   99.75     105     105     105
            *

1218        KK   CPJC2
            * KO     3                                  21
1219        KM         COMBINE SPLIT FLOW FROM SUBJD WITH FLOW AT CPCJ1
1220        HC       2    8.11
            *
```



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

1221        KK  DIJCJB
1222        KM        DIVERT 46% OF FLOW AT JC TO JB.  (ADMP DIVERSION)
            * KO     3                                  21
1223        DT   DIJB2
1224        DI       0      25      50      75     100     150     200    1346    2000
1225        DQ       0      12      23      35      46      69      92   605.7     920
            *

1226        KK  RTJCFB   ROUTE   REACH
1227        KM        ROUTE FLOW FROM JC1 TO FB ALONG 75th AVE.
1228        KM        FUTURE ARTERIAL SECTION
            * KO     3                                  21
1229        RS       3    ELEV       -1        0
1230        RC   0.100   0.023   0.100    4200  0.0032    0.00
1231        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
```

```
1232          RY     105     105     105   99.75   99.75     105     105     105
              *

1233          KK   DRB71
1234          KM   RETURN DIVERTED FLOW FROM BASIN DRC #4
1235          DR   BSN71
              *

1236          KK  RT71PB   ROUTE   REACH
1237          KM        ROUTE FLOW FROM BASIN TO PB ALONG 71th AVE AND
1238          KM        BUCKEYE RD.
1239          KM
1240          RT                      2
              *

1241          KK  RSDPB1
1242          KM   RETURN STORM DRAIN FLOW FROM PB
1243          DR  SD75PB
              *

1244          KK  CPPBS1
              * KO     3                              21
1245          KM    COMBINE STORM DRAIN FLOWS
1246          HC       2    3.99
              *

1247          KK  RSDPB2
1248          KM   RETURN STORM DRAIN FLOW FROM PB
1249          DR  SDBRPB
              *

1250          KK  CPPBS2
              * KO     3                              21
1251          KM    COMBINE STORM DRAIN FLOWS
1252          HC       2
              *
```



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

1253          KK  RTPBNA   ROUTE   REACH
1254          KM        ROUTE FLOW FROM PB TO NA IN STORM DRAIN
1255          KM
1256          RT                      2
              *

1257          KK  RSDNA1
1258          KM   RETURN DIVERTED STORM DRAIN FLOW FROM NA
1259          DR  SD75NA
              *

1260          KK  CPNAS1
              * KO     3                              21
1261          KM    COMBINE STORM DRAIN FLOWS
1262          HC       2    4.97
              *

1263          KK  RSDNA2
1264          KM   RETURN DIVERTED STORM DRAIN FLOW FROM NA
1265          DR  SDLBNA
              *

1266          KK  CPNAS2
              * KO     3                              21
1267          KM    COMBINE STORM DRAIN FLOWS
1268          HC       2
              *

1269          KK  RTNAJC   ROUTE   REACH
1270          KM        ROUTE FLOW FROM NA TO JC IN STORM DRAIN
1271          KM
1272          RT                      2
              *

1273          KK  RSDJC1
1274          KM   RETURN DIVERTED STORM DRAIN FLOW FROM JC (75TH AVENUE)
1275          DR  SD75JC
              *

1276          KK  CPJCS1
              * KO     3                              21
1277          KM    COMBINE STORM DRAIN FLOWS
1278          HC       2    5.96
              *
              * KKRSDJC2
              * KM RETURN DIVERTED STORM DRAIN FLOW FROM JC (BROADWAY ROAD)
              * DRSDBRJC
              *
```



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

1279          KK  RSDJC3
```

```
1280        KM   RETURN DIVERTED STORM DRAIN FLOW FROM JC1 and JC2
1281        DR  SDOSBR
            *
            * KKCPJCS2
            * KO     3                                  21
            * KM  COMBINE STORM DRAIN FLOWS
            * HC     2    0.50
            *

1282        KK  CPJCS3
            * KO     3                                  21
1283        KM    COMBINE STORM DRAIN FLOWS
1284        HC       2    5.96
            *

1285        KK  RTJCFB   ROUTE   REACH
1286        KM        ROUTE FLOW FROM JC TO FB ALONG 75th AVE.
1287        KM
1288        RT                      2
            *

1289        KK    FB75
1290        KM   BASIN FB75(ROADWAY DRAINAGE)
1291        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1292        KM    L=        .8  Lca=        .4   S=   10.7  Kn= .020  LAG=  12.4
1293        KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1294        BA     .02
1295        LG     .15      .25    4.70      .25   80.00
1296        UI     11.      32.     52.      29.     10.      3.      2.      0.      0.      0.
1297        UI      0.       0.      0.       0.      0.      0.      0.      0.      0.      0.
            *

1298        KK    CPFB
            * KO     3                                  21
1299        KM        ADD HYDROGRAPHS AT FB
1300        HC       2    5.98
            *
            * ADDED BY SLT MAR16,2005 TO ELIMINATE ERROR

1301        KK    DUMM
1302        KM        ELIMINATE UNNECESSARY HYDROGRAPHS
1303        HC       3
            *
            *
            * ADDED RETURNS TO ADD TO DDS FOR NEW STUDY  -  SLT  3/03/05
            *
            * KK  SLT1
            * KM      RETURN DIVERT FROM TB
            * DR  DITA
            * ZW A=DURANGO B=SLT1  C=FLOW  E=5MIN F=6-HR
            *
            * KK  SLT2
            * KM      RETURN DIVERT FROM ADMP1
            * DR ADMP1
            * ZW A=DURANGO B=SLT2  C=FLOW  E=5MIN  F=6-HR
            *
```



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

1304        KK   SUBSH   BASIN
1305        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1306        KM    L=        .4  Lca=        .2   S=   11.1  Kn= .030  LAG=  11.5
1307        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1308        BA   0.103
1309        LG    0.15     0.16    9.70     0.07      55
1310        UI      72      211     303      147      44      13       8       0       0       0
1311        UI       0        0       0        0       0       0       0       0       0       0
            *

1312        KK   RETSH
1313        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1314        DT   RETSH    10.3
1315        DI       0   10000
1316        DQ       0   10000
            *

1317        KK    RSSH
1318        KM        MODIFIED PULS ROUTING BEHIND RID.
            * KO     1
1319        RS       1    STOR       0       0
1320        SV      19      21      24      30      37      44    46.4
1321        SE  1027.0  1027.1  1027.2  1027.5  1027.7  1028.0  1028.2
1322        SQ       0   138.6   475.2  1277.3
1323        SE  1027.0  1027.6  1027.8  1028.1
            *
            *

1324        KK  DISHRJ
1325        KM   DIVERT FLOW FROM SH TO RJ2
1326        DT   DIRJ2
1327        DI       0   138.6   475.2  1277.3
1328        DQ       0    88.6   375.2  1077.3
            *
```

```
                *

1329            KK  RTSHSG   ROUTE   REACH
1330            KM        ROUTE FLOW FROM SH TO SG
1331            KM        TYPE C CHANNEL
1332            RS       8              -1        0
1333            RC   0.035   0.035   0.035    2600  0.0008    0.00
1334            RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1335            RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                *

1336            KK   SUBTA   BASIN
1337            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1338            KM    L=        .8  Lca=        .4   S=   10.5  Kn= .03  LAG=  17.1
1339            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1340            BA   0.241
1341            LG    0.15    0.15    7.00    0.18      55
1342            UI      71     234     382     523     328     186      76      35      15      14
1343            UI       3       0       0       0       0       0       0       0       0       0
1344            UI       0       0       0       0       0       0       0       0       0       0
                *
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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1345            KK   RETTA
1346            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1347            DT   RETTA    24.1
1348            DI       0   10000
1349            DQ       0   10000
                *

1350            KK    DRTA
1351            KM        RETURN DIVERT FROM TB
1352            KM        RETURN DIVERT FROM TB
1353            DR    DITA
                * BA     0
                * ZR  =QI A=DURANGO B=SLT1  C=FLOW  E=5MIN  F=6-HR
                *

1354            KK  RTDITA   ROUTE   REACH
1355            KM        ROUTE DIVERT TO TA
1356            KM        TYPE A CHANNEL
1357            RS       8              -1        0
1358            RC   0.025   0.025   0.024    2600  0.0004    0.00
1359            RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1360            RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                *

1361            KK   @CPTA
1362            KM        ADD HYDROGRAPHS AT TA
1363            HC       2    1.13
                *

1364            KK  RTTASG   ROUTE   REACH
1365            KM        ROUTE FLOW FROM TA TO SG (SHEET FLOW)
1366            KM        TYPE A CHANNEL
1367            RS       2              -1        0
1368            RC   0.025   0.025   0.025    2200  0.0050    0.00
1369            RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1370            RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                *

1371            KK   SUBSG   BASIN
1372            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1373            KM    L=        .6  Lca=        .3   S=    5.0  Kn= .03  LAG=  16.6
1374            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1375            BA   0.136
1376            LG    0.15    0.15    8.80    0.09      55
1377            UI      43     139     233     294     180      92      40      16       8       8
1378            UI       0       0       0       0       0       0       0       0       0       0
                *

1379            KK   RETSG
1380            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1381            DT   RETSG    13.6
1382            DI       0   10000
1383            DQ       0   10000
                *
1                                          HEC-1 INPUT                                                PAGE 40

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


1384            KK    CPSG
1385            KM        ADD HYDROGRAPHS AT SG
1386            HC       3
                *

1387            KK    RSSG
1388            KM        MODIFIED PULS ROUTING BEHIND RID AND 81ST AVENUE
                * KO     1
1389            RS       1    STOR       0       0
1390            SV    12.3    13.3    14.9    16.5    18.4    22.4    25.9    35.2
```

```
1391          SE  1026.4  1026.6  1026.8  1027.0  1027.2  1027.4  1027.6  1027.9
1392          SQ       0       9     114     525    1221    2143    3276    5343
              *

1393          KK  DISGRJ
1394          KM        DIVERT FLOW FROM SG TO RJ
1395          DT   DIRJ4
1396          DI       0       9     114     525    1221
1397          DQ       0       1      70     400     964
              *

1398          KK  RTSGSE   ROUTE   REACH
1399          KM        ROUTE FLOW FROM SG TO SE
1400          KM        TYPE C CHANNEL
1401          RS       2              -1       0
1402          RC   0.035   0.035   0.035    1200  0.0030    0.00
1403          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1404          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1405          KK   SUBSC   BASIN
1406          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1407          KM    L=      1.3  Lca=       .7   S=   15.2  Kn= .029  LAG=  23.9
1408          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1409          BA   0.453
1410          LG    0.14    0.26    5.00    0.39      58
1411          UI      64     229     360     500     758     569     409     284     133      88
1412          UI      50      19      20      20       6       0       0       0       0       0
1413          UI       0       0       0       0       0       0       0       0       0       0
              *

1414          KK   RETSC
1415          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1416          DT   RETSC    45.4
1417          DI       0   10000
1418          DQ       0   10000
              *

1419          KK  DISCSD
1420          KM        DIVERT 54% OF FLOW AT SC TO SD.
1421          DT    DISD
1422          DI       0      25      50     100     150     200
1423          DQ       0      14      27      54      81     108
              *
```



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

1424          KK  RTSCSE   ROUTE   REACH
1425          KM        ROUTE FLOW FROM SC TO SE (ALONG 83RD AVENUE).
1426          KM        FUTURE ARTERIAL SECTION
1427          RS       1              -1       0
1428          RC   0.100   0.023   0.100    1000  0.0022    0.00
1429          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1430          RY     105     105     105   99.75   99.75     105     105     105
              *

1431          KK   SUBSE   BASIN
1432          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1433          KM    L=       .3  Lca=       .2   S=   26.5  Kn= .03  LAG=  7.8
1434          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1435          BA   0.125
1436          LG    0.15    0.25    4.80    0.39      55
1437          UI     185     511     220      40      11       0       0       0       0       0
1438          UI       0       0       0       0       0       0       0       0       0       0
              *

1439          KK   RETSE
1440          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1441          DT   RETSE    12.5
1442          DI       0   10000
1443          DQ       0   10000
              *

1444          KK    CPSE
1445          KM        ADD HYDROGRAPHS AT SE
1446          HC       3
              *

1447          KK    RSSE
1448          KM        MODIFIED PULS ROUTING AT SE BEHIND THE RID CANAL
              * KO     1
1449          RS       1    STOR       0       0
1450          SV    13.5    14.8    17.6    20.5
1451          SE  1025.9  1026.0  1026.5  1026.9
1452          SQ    3.14    14.3  479.44 2013.01
              *

1453          KK  DISERJ
1454          KM   DIVERT FLOW FROM SE TO RJ
1455          DT   DIRJ5
1456          DI       0       3     142    1100
1457          DQ       0       3     142    1100
              *
```

```
1458          KK  RTSERI   ROUTE   REACH
1459          KM        ROUTE FLOW FROM SE TO RI
1460          KM        TYPE A CHANNEL
1461          RS       4              -1        0
1462          RC   0.035   0.035   0.035    2000  0.0019    0.00
1463          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1464          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
1                                          HEC-1 INPUT                                                          PAGE 42

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


1465          KK   SUBRJ   BASIN
1466          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1467          KM    L=        .7  Lca=        .4   S=     5.6  Kn= .03  LAG=  19.8
1468          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1469          BA   0.163
1470          LG    0.15    0.15    7.00    0.18      55
1471          UI      33     122     184     307     254     170      98      46      25       8
1472          UI       9       7       0       0       0       0       0       0       0       0
1473          UI       0       0       0       0       0       0       0       0       0       0
              *

1474          KK   RETRJ
1475          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1476          DT   RETRJ    16.3
1477          DI       0   10000
1478          DQ       0   10000
              *

1479          KK   CPRJ2
1480          KM        RETURN DIVERSION FROM SH
1481          DR   DIRJ2
              *

1482          KK  RTSHRJ   ROUTE   REACH
1483          KM        ROUTE HYDROGRAPH FROM SH TO RJ2
1484          KM        TYPE C CHANNEL
1485          RS       7              -1        0
1486          RC   0.050   0.050   0.050    2000  0.0015    0.00
1487          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1488          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1489          KK  RTRJ3    ROUTE   REACH
1490          KM        ROUTE HYDROGRAPH FROM RJ3 TO RJ
1491          KM        TYPE C CHANNEL
1492          RS       8              -1        0
1493          RC   0.035   0.035   0.035    3900  0.0015    0.00
1494          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1495          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1496          KK  CPRJ4A
1497          KM        RETURN DIVERT FROM SG
1498          DR   DIRJ4
              *

1499          KK  CPRJ4B
1500          KM        COMBINE HYDROGRAPHS AT RJ4
1501          HC       2     .39
              *
              *
1                                          HEC-1 INPUT                                                          PAGE 43

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


1502          KK  RTSGRJ   ROUTE   REACH
1503          KM        ROUTE DIVERT FROM SG TO RJ
1504          KM        TYPE C CHANNEL
1505          RS       3              -1        0
1506          RC   0.035   0.035   0.035    1400  0.0019    0.00
1507          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1508          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1509          KK   CPRJ5
1510          KM        RETURN DIVERT FROM SE
1511          DR   DIRJ5
              *

1512          KK  RTSERJ   ROUTE   REACH
1513          KM        ROUTE DIVERT FROM SE TO RJ
1514          KM        TYPE C CHANNEL
1515          RS       9              -1        0
1516          RC   0.035   0.035   0.035    1000  0.0001    0.00
1517          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1518          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1519          KK  @CPRJ6
1520          KM        ADD HYDROGRAPHS AT RJ
```

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1521        HC        3    3.81
            *

1522        KK    RSRJ
1523        KM        RESERVOIR ROUTING AT RJ BEHIND 83RD AVE AND THE SPRR
            * KO      1
1524        RS        1    STOR        0        0
1525        SV      3.5     6.2     11.0     18.4     30.9     52.2     76.3
1526        SE   1022.1  1022.5   1023.0   1023.5   1024.0   1024.5   1024.9
1527        SQ        0      50      100      506      899     1369
1528        SE   1022.1  1022.7   1022.9   1023.7   1024.0   1024.2
            *

1529        KK  DIRJPA
1530        KM   DIVERT FLOW OVER SPRR FROM RJ TO PA
1531        DT   DIPA2
1532        DI        0      50      100      506      899     1369
1533        DQ        0       0        0        6      149      369
            *

1534        KK  RTRJRI   ROUTE   REACH
1535        KM        ROUTE FLOW FROM RJ TO RI1
1536        KM        TYPE C CHANNEL
1537        RS        5              -1        0
1538        RC    0.035   0.035    0.035     2600   0.0019     0.00
1539        RX      0.0    20.0     35.0     50.0     50.1    250.0    450.0    550.0
1540        RY      5.0     5.0      2.5      0.0      0.0      2.0      4.0      5.0
            *
            * THE FOLLOWING DIVERT REMOVED TO MODEL THE ADMP CONDITION
            * KKDIRIOE
            * KM DIVERT FLOW FROM RI TO OE OVER SPRR.
            * KM 1/4 MILE WEST OF 83RD AVE.
            * DT DIOE3
            * DI   100      400     1392     1300     1400
            * DQ     0       55      370      680      730
            *
```



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

1541        KK  RTRIRI
1542        KM   TYPE C CHANNEL
1543        RS        4              -1        0
1544        RC     .035    .035     .035     1550    .0019
1545        RX        0      20       35       50     50.1      250      450      550
1546        RY        5       5      2.5        0        0        2        4        5
            *

1547        KK   SUBRI   BASIN
1548        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1549        KM    L=        .6  Lca=        .2   S=   19.3  Kn= .03  LAG=  10.6
1550        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1551        BA   0.232
1552        LG    0.15    0.15     7.60     0.14       55
1553        UI     193     596      651      255       72       23        7        0        0        0
1554        UI       0       0        0        0        0        0        0        0        0        0
            *

1555        KK   RETRI
1556        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1557        DT   RETRI    23.2
1558        DI       0   10000
1559        DQ       0   10000
            *

1560        KK   SUBSB   BASIN
1561        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1562        KM    L=        .5  Lca=        .3   S=   15.1  Kn= .03   LAG=  12.3
1563        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1564        BA   0.168
1565        LG    0.15    0.15     9.70     0.07       55
1566        UI     102     299      486      271       95       30       14        5        0        0
1567        UI       0       0        0        0        0        0        0        0        0        0
            *

1568        KK   RETSB
1569        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1570        DT   RETSB    16.8
1571        DI       0   10000
1572        DQ       0   10000
            *

1573        KK    RSSB
1574        KM        MODIFIED PULS ROUTING THROUGH PONDING  BEHIND RID CANAL.
            * KO      1
1575        RS        1    STOR        0        0
1576        SV      2.2     5.6     11.9     21.4     33.8
1577        SE   1024.0  1024.5   1025.0   1025.5   1025.9
1578        SQ        0      94      581     2114     4864
            *
```



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

```
1579          KK   SUBSD   BASIN
1580          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1581          KM    L=        .6  Lca=        .3   S=   12.3  Kn= .03  LAG=  14.4
1582          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1583          BA   0.168
1584          LG    0.15    0.28    6.60    0.18      55
1585          UI      73     222     410     319     173      61      24      12       7       0
1586          UI       0       0       0       0       0       0       0       0       0       0
              *

1587          KK   RETSD
1588          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1589          DT   RETSD    16.8
1590          DI       0   10000
1591          DQ       0   10000
              *

1592          KK    DRSD
1593          KM    RETURN DIVERT FROM SC.
1594          DR    DISD
              *

1595          KK   @CPSD
1596          KM        ADD HYDROGRAPHS AT SD.
1597          KM        ROUTING STEP NOT INCLUDED DUE TO SHORT ROUTING LENGTH
1598          HC       3      .79
              *

1599          KK    RSSD
1600          KM        MODIFIED PULS ROUTING BEHIND CANAL, NORTH OF VAN BUREN.
              * KO      1
1601          RS       1    STOR       0       0
1602          SV       0     .01      .1      .6     1.8       5       9      14      23
1603          SE  1021.4  1022.8    1023  1023.3  1023.6    1024  1024.3  1024.6    1025
1604          SQ       0     .16      46     534     939    1427    1993    2767
1605          SE  1021.4  1021.5    1022    1023  1023.5    1024  1024.5    1025
              *

1606          KK  RTSDRI   ROUTE   REACH
1607          KM        ROUTE FLOW FROM SD TO RI
1608          KM        TYPE A CHANNEL
1609          RS       3              -1       0
1610          RC   0.035   0.035   0.035    2400  0.0046    0.00
1611          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1612          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

1613          KK  ~@CPRI
1614          KM   ADD HYDROGRAPHS AT RI (1/2 MILE WEST OF 83RD AVE)
1615          HC       4    4.38
              *
              * THE FOLLWOING PONDING REMOVED TO MODEL THE ADMP CONDITION
              * KK  RSRI
              * KM      MODIFIED PULS ROUTING BEHIND SPRR.
              * KO      1
              * RS      1    STOR      -1       0
              * SV      0       0      .1      .3     1.2     3.0     6.5   13.76    21.8    35
              * SE1014.0  1014.1  1014.5  1015.0  1015.5  1016.0  1016.5  1017.0  1017.5  1018
              * SQ      0       4     142     573    1333    3217    5957    9319   13343   182
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1616          KK  MCRIRH   ROUTE   REACH
1617          KM   ADMP CHANNEL
1618          KM   ROUTE FLOW FROM RI TO RH
1619          RS       3    FLOW      -1
1620          RC   0.040   0.040   0.040    2482  0.0015    0.00
1621          RX     0.0    16.0    33.7    51.3    71.3    89.0   106.7   122.7
1622          RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
              *
              * ***********************************************************************
              *

1623          KK   SUBPA   BASIN
1624          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1625          KM    L=      1.1  Lca=        .6   S=   16.7  Kn= .03   LAG=  21.5
1626          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1627          BA   0.477
1628          LG    0.15    0.17    7.30    0.14      55
1629          UI      76     307     461     716     812     547     372     178     105      54
1630          UI      23      23      19       0       0       0       0       0       0       0
1631          UI       0       0       0       0       0       0       0       0       0       0
              *

1632          KK   RETPA
1633          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1634          DT   RETPA    47.8
1635          DI       0   10000
1636          DQ       0   10000
              *
```

```
1637          KK   DRPA2
1638          KM   RETURN DIVERT FROM RJ.
1639          DR   DIPA2
              *

1640          KK  RTRJPA   ROUTE   REACH
1641          KM        ROUTE DIVERT FROM RJ TO PA
1642          KM        FUTURE ARTERIAL SECTION
1643          RS       2              -1        0
1644          RC   0.100   0.023   0.100    2400  0.0054    0.00
1645          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1646          RY     105     105     105   99.75   99.75     105     105     105
              *

1647          KK    CPPA
1648          KM   ADD HYDROGRAPHS AT PA
1649          HC       2
              *

1650          KK  DIPAOE
1651          KM        DIVERT 18% OF FLOW AT PA TO OE.
1652          DT    DIOE
1653          DI       0      25      50      75     100     150     200
1654          DQ       0       5       9      14      18      27      36
              *
```



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

1655          KK  RTPAMH   ROUTE   REACH
1656          KM        ROUTE FLOW FROM PA TO MH (ALONG 83RD AVENUE).
1657          KM        FUTURE ARTERIAL SECTION
1658          RS       2              -1        0
1659          RC   0.100   0.023   0.100    2640  0.0012    0.00
1660          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1661          RY     105     105     105   99.75   99.75     105     105     105
              *

1662          KK   SUBMH   BASIN
1663          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1664          KM    L=        .7  Lca=        .3   S=     8.8  Kn= .05  LAG=  19.7
1665          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1666          BA   0.239
1667          LG    0.25    0.15    8.80    0.09      30
1668          UI      49     179     272     452     372     249     141      66      36      13
1669          UI      12      10       0       0       0       0       0       0       0       0
              *

1670          KK   RETMH
1671          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1672          DT   RETMH    19.8
1673          DI       0   10000
1674          DQ       0   10000
              *

1675          KK    CPMH
1676          KM    ADD HYDROGRAPHS AT MH
1677          HC       2
              *

1678          KK  RTMHMD   ROUTE   REACH
1679          KM        ROUTE FLOW FROM PA TO MD (ALONG 83RD AVENUE).
1680          KM        FUTURE ARTERIAL SECTION
1681          RS       2              -1        0
1682          RC   0.100   0.023   0.100    2640  0.0012    0.00
1683          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1684          RY     105     105     105   99.75   99.75     105     105     105
              *

1685          KK   SUBMD   BASIN
1686          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1687          KM    L=       1.4  Lca=        .6   S=    14.3  Kn= .05  LAG=  41.7
1688          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1689          BA   0.255
1690          LG    0.25    0.08    7.60    0.11      30
1691          UI      21      24      73     100     119     142     175     247     234     185
1692          UI     156     127     106      80      47      35      30      21      15       6
1693          UI       6       6       6       6       6       0       0       0       0       0
              *
```



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

1694          KK   RETMD
1695          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1696          DT   RETMD    21.1
1697          DI       0   10000
1698          DQ       0   10000
              *

1699          KK    CPMD
1700          KM        ADD HYDROGRAPHS AT MD
1701          HC       2
```

```
                *

1702            KK  DIMDJB
1703            KM        DIVERT 21% OF FLOW FROM MD TO JB.
1704            DT   DIJB1
1705            DI       0      25      50      75     100     150     200
1706            DQ       0       5      10      16      21      32      42
                *

1707            KK  DIMDMF
1708            KM   DIVERT FLOW FROM MD TO MF
1709            KM   DUMMY DIVERT TO ROUTE FLOW AROUND CODE SEQUENCE.
1710            DT   DIMFX
1711            DI       0   10000
1712            DQ       0   10000
                *

1713            KK   SUBMI   BASIN
1714            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1715            KM    L=        .7  Lca=        .3   S=    8.8  Kn= .043  LAG=  16.9
1716            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1717            BA   0.409
1718            LG    0.21    0.15    8.40    0.11      38
1719            UI     122     402     662     886     553     306     126      57      25      25
1720            UI       3       0       0       0       0       0       0       0       0       0
                *

1721            KK   RETMI
1722            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1723            DT   RETMI    35.3
1724            DI       0   10000
1725            DQ       0   10000
                *

1726            KK   SUBMG   BASIN
1727            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1728            KM    L=        .7  Lca=        .3   S=    8.8  Kn= .04   LAG=  11.7
1729            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1730            BA   0.082
1731            LG    0.20    0.15    7.00    0.17      43
1732            UI      55     162     241     120      37      11       7       0       0       0
                *
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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1733            KK   RETMG
1734            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1735            DT   RETMG     7.3
1736            DI       0   10000
1737            DQ       0   10000
                *

1738            KK    CPMG
1739            KM   COMBINE FLOWS FROM MI AND MG.
1740            HC       2
                *

1741            KK  RTMGJB   ROUTE   REACH
1742            KM        ROUTE FLOW FROM MG TO JB1 (ACROSS SUB JB1).
1743            KM        TYPE B    CHANNEL
1744            KM        ROUTE ADDED, JEP 5/10/01
1745            RS       9              -1       0
1746            RC   0.035   0.035   0.035    5050  0.0024    0.00
1747            RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1748            RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                *
                * KK~CNAMG
                * KM COMBINE FLOWS FROM NA AND MG INTO ADMP CHANNEL
                * HC     3
                *
                * KKMCMGJB   ROUTE   REACH
                * KM ADMP CHANNEL
                * RS     3    FLOW      -1
                * RC 0.040   0.040   0.040    4374  0.0029    0.00
                * RX   0.0    16.0    33.9    51.9    86.9   104.8   122.8   138.8
                * RY   5.7     6.0     3.0     0.0     0.0     3.0     6.0     5.7
                *

1749            KK  SUBJB1   BASIN
1750            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1751            KM    L=      1.3  Lca=        .7   S=   17.4  Kn= .050  LAG=  39.7
1752            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1753            BA   0.494
1754            LG    0.25    0.25    5.00    0.41      30
1755            UI      42      58     157     209     250     303     397     524     425     348
1756            UI     286     233     186     117      73      67      42      35      13      13
1757            UI      13      13      13       9       0       0       0       0       0       0
                *

1758            KK  RETJB1
1759            KM   RETENTION MODIFIED FROM 80% REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTI
1760            KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
1761            DT  RETJB1    10.5
```

```
1762          DI       0   10000
1763          DQ       0   10000
              *
1                                        HEC-1 INPUT                                                    PAGE 50

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


1764          KK    DRJB
1765          KM   RETURN DIVERT FROM MD
1766          DR   DIJB1
              *

1767          KK  RDIJB1
1768          KM   ROUTE DIVERT FROM MD TO JB
1769          KM   FUTURE ARTERIAL SECTION
1770          RS       4              -1       0
1771          RC      .1   0.023      .1    2640   .0030
1772          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1773          RY     105     105     105   99.75   99.75     105     105     105
              *

1774          KK   ADMP1
1775          KM   RETURN DIVERT FROM 75TH SD MODEL  - SLT 3/9/2005
1776          KM        RETURN DIVERT FROM ADMP1
1777          DR   ADMP1
              * BA     0
              * ZR  =QI A=DURANGO B=SLT2  C=FLOW  E=5MIN
              *

1778          KK  MCJCJB
1779          KM   ROUTE      REACH
1780          KM   MASTER CHANNEL ROUTE FROM JC1 TO JB1
1781          KM   ASSUME FLOW OVER RETENTION BASINS AS IS CURRENT DEVELOPED CONDITION
1782          RS       6    FLOW      -1
1783          RC   0.040   0.040   0.040    5964  0.0015    0.00
1784          RX     0.0       0       0       0     250     250     250     250
1785          RY      10       0       0       0     0.0       0       0      10
              *

1786          KK  ~CPJB1
1787          KM   COMBINE FLOWS FROM MD, JC1, MG AND JB1 INTO ADMP CHANNEL
1788          KM   COMBINE ADDED, JEP 5/10/01
1789          HC       5    9.37
              *

1790          KK   RRJB1
1791          KM   MODIFIED PULS ROUTING
1792          KM   DETENTION IN DRCC RIGHT OF WAY AT JB1 (83RD AVENUE) POL
1793          KM   BASIN 6 FEET DEEP, 850 FEET LONG 165 FOOT BOTTOM 250 FOOT TOP
1794          KM   ASSUME 1 FOOT WEIR OVER THE ROAD
1795          KM   CULVERT IS 1 CELL 4 BY 8
1796          RS       1    STOR       0       0
1797          SV       0     3.4    24.2    29.1
1798          SQ       0      18     308    1094
              *
1                                        HEC-1 INPUT                                                    PAGE 51

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


1799          KK    DIED
1800          KM   DIVERT FLOWS AT JB TO ED.  THIS IS DONE TO ROUTE FLOW AS NEEDED
1801          KM   FOR THE ADMP
1802          DT    DIED
1803          DI       0   10000
1804          DQ       0   10000
              *
              *
              *

1805          KK   SUBOE   BASIN
1806          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1807          KM    L=      1.1  Lca=       .6   S=   17.3  Kn= .03  LAG=  20.8
1808          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1809          BA   0.469
1810          LG    0.15    0.23    6.20    0.24      55
1811          UI      84     321     482     784     767     519     338     150      92      38
1812          UI      23      23      10       0       0       0       0       0       0       0
1813          UI       0       0       0       0       0       0       0       0       0       0
              *

1814          KK   RETOE
1815          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1816          DT   RETOE    47.0
1817          DI       0   10000
1818          DQ       0   10000
              *
              * REMOVED BY JCS
              * KK RETOE
              * KM DIVERT RETENTION OUT OF MODEL DUE TO WILLAMETTE IND. DEVELOPMENT. -DCF
              * KM TOTAL RETENTION IS 5.3 AF. 80% OF THAT IS USED HERE. -DCF
              * DT RETOE     4.2
              * DI     0   10000
              * DQ     0   10000
```

```
                 *
1819             KK   CPOE1
1820             KM   RETURN DIVERT FROM PA.
1821             DR    DIOE
                 *

1822             KK  RTDIOE   ROUTE   REACH
1823             KM   ROUTE DIVERT FROM PA TO OE
1824             KM   FUTURE ARTERIAL SECTION
1825             RS       7              -1       0
1826             RC   0.100   0.023   0.100    5000  0.0013    0.00
1827             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1828             RY     105     105     105   99.75   99.75     105     105     105
                 *
                 * THE FOLLOWING RETURNS REMOVED TO MODEL THE ADMP CONDITION.
                 * KK CPOE2
                 * KM RETURN DIVERT FROM RH
                 * DR DIOE2
                 *
                 * KK CPOE3
                 * KM RETURN DIVERT FROM RI
                 * DR DIOE3
                 *
1                                          HEC-1 INPUT                                                    PAGE 52

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


1829             KK   @CPOE
1830             KM        ADD HYDROGRAPHS AT OE
1831             HC       2     .47
                 *

1832             KK  DIOEOD
1833             KM   DIVERT 17% OF FLOW FROM OE2 TO OD
1834             DT    DIOD
1835             DI       0      25      50      75     100     150     200
1836             DQ       0       4       9      12      17      26      34
                 *

1837             KK  RTOEMF   ROUTE   REACH
1838             KM   ROUTE FLOW FROM OE TO MF.
1839             KM   FUTURE ARTERIAL SECTION
1840             RS       4              -1       0
1841             RC   0.100   0.023   0.100    5200  0.0021    0.00
1842             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1843             RY     105     105     105   99.75   99.75     105     105     105
                 *

1844             KK   SUBMF   BASIN
1845             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1846             KM    L=      1.4  Lca=       .7   S=   12.9  Kn= .050  LAG=  44.0
1847             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1848             BA   0.971
1849             LG    0.25    0.15    8.40    0.10      30
1850             UI      74      74     256     341     414     483     581     777     936     739
1851             UI     619     520     429     362     256     153     125     105      74      56
1852             UI      23      23      23      22      22      22       6       0       0       0
                 *

1853             KK   RETMF
1854             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1855             DT   RETMF    80.3
1856             DI       0   10000
1857             DQ       0   10000
                 *

1858             KK    CPMF
1859             KM        RETURN ROUTING DIVERT FROM MD (DIMFX).
1860             DR   DIMFX
                 *
                 *

1861             KK  RTMDMF   ROUTE   REACH
1862             KM        ROUTE FLOW FROM MD TO MF (ALONG LOWER BUCKEYE ROAD).
1863             KM        FUTURE ARTERIAL SECTION
1864             RS       6              -1       0
1865             RC   0.100   0.023   0.100    5200  0.0015    0.00
1866             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1867             RY     105     105     105   99.75   99.75     105     105     105
                 *
                 *
1                                          HEC-1 INPUT                                                    PAGE 53

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


1868             KK   CPMF1
1869             KM        ADD HYDROGRAPHS AT MF
1870             HC       3
                 *

1871             KK  DIMFEB
1872             KM        DIVERT 47% OF FLOW AT MF TO EB.
```

```
1873          DT    DIEB
1874          DI       0       25       50       75      100      150      200
1875          DQ       0       12       23       35       47       71       94
              *

1876          KK  RTMFMC   ROUTE   REACH
1877          KM        ROUTE FLOW FROM MF TO MC (ALONG LOWER BUCKEYE ROAD).
1878          KM        FUTURE ARTERIAL SECTION
1879          RS       5                -1        0
1880          RC   0.100   0.023   0.100    5200  0.0015     0.00
1881          RX     0.0     440     445   445.1   575.1    575.2      900  1000.0
1882          RY     105     105     105   99.75   99.75      105      105     105
              *

1883          KK   SUBOD   BASIN
1884          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1885          KM    L=      1.1  Lca=       .6   S=   18.2  Kn= .030  LAG=  20.6
1886          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1887          BA   0.509
1888          LG    0.15    0.15    9.70    0.07      55
1889          UI      94     354     533     874     825     556     357     157      97      37
1890          UI      25      26       7       0       0       0       0       0       0       0
1891          UI       0       0       0       0       0       0       0       0       0       0
              *

1892          KK   RETOD
1893          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1894          DT   RETOD    63.7
1895          DI       0   10000
1896          DQ       0   10000
              *

1897          KK    DROD
1898          KM    RETURN DIVERT FROM OE.
1899          DR    DIOD
              *

1900          KK  RTDIOD  ROUTE   REACH
1901          KM   FUTURE ARTERIAL SECTION
1902          RS       4                -1        0
1903          RC   0.100   0.023   0.100    2700  0.0013     0.00
1904          RX     0.0     440     445   445.1   575.1    575.2      900  1000.0
1905          RY     105     105     105   99.75   99.75      105      105     105
              *
              * THE FOLLOWING RETURNS REMOVED TO MODEL THE ADMP CONDITION
              * KK DROD2
              * KM  RETURN DIVERT FROM OG1
              * DR DIOD1
              *
              * KK DROD3
              * KM      RETURN DIVERT FROM OG2.
              * DR DIOD2
              *
```



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

1906          KK    CPOD
1907          KM   ADD HYDROGRAPHS AT OD.
1908          HC       2
              *

1909          KK  DIODOC
1910          KM        DIVERT 18% OF FLOW FROM OD TO OC.
1911          DT    DIOC
1912          DI       0       25       50       75      100      150      200
1913          DQ       0        5        9       14       18       27       36
              *

1914          KK  RTODMC   ROUTE   REACH
1915          KM   ROUTE FLOW FROM OD TO MC.
1916          KM   FUTURE ARTERIAL SECTION
1917          RS       5                -1        0
1918          RC   0.100   0.023   0.100    5200  0.0023     0.00
1919          RX     0.0     440     445   445.1   575.1    575.2      900  1000.0
1920          RY     105     105     105   99.75   99.75      105      105     105
              *

1921          KK   SUBMC   BASIN
1922          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1923          KM    L=      1.4  Lca=       .7   S=   13.6  Kn= .035  LAG=  30.5
1924          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1925          BA   0.999
1926          LG    0.18    0.15    8.80    0.09      59
1927          UI     110     271     519     667     869    1308    1136     873     663     506
1928          UI     275     187     126      81      34      34      34      34       7       0
              *

1929          KK   RETMC
1930          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1931          DT   RETMC    95.4
1932          DI       0   10000
1933          DQ       0   10000
              *
```

```
1934          KK   CPMC1
1935          KM        ADD HYDROGRAPHS AT MC
1936          HC       3
              *

1937          KK  DIMCMB
1938          KM        DIVERT 39% OF FLOW AT MC TO MB.
1939          DT    DIMB
1940          DI       0       25       50       75      100      150      200
1941          DQ       0        8       20       29       39       59       78
              *
```



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1                                   HEC-1 INPUT

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


1942          KK  RTMCIE   ROUTE   REACH
1943          KM        ROUTE FLOW FROM MC TO IE (ALONG 99TH AVENUE).
1944          KM        FUTURE ARTERIAL SECTION
1945          RS       1              -1        0
1946          RC   0.100   0.023   0.100    2000  0.0030    0.00
1947          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1948          RY     105     105     105   99.75   99.75     105     105     105
              *

1949          KK  DIMCIE
1950          KM        DIVERT FLOW FOR LATER RECOMBINING
1951          DT    MCIE
1952          DI       0   10000
1953          DQ       0   10000
              *

1954          KK    DREB
1955          KM   RETURN DIVERT FROM MF TO EB
1956          DR    DIEB
              *

1957          KK   SUBEB   BASIN
1958          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1959          KM    L=        .5  Lca=        .3   S=    11.3  Kn= .050  LAG=  22.1
1960          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1961          BA   0.139
1962          LG    0.25    0.21    6.40    0.23      30
1963          UI      21      85     127     192     240     164     114      60      34      19
1964          UI       6       6       6       1       0       0       0       0       0       0
              *

1965          KK   RETEB
1966          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1967          DT   RETEB    11.5
1968          DI       0   10000.
1969          DQ       0   10000
              *

1970          KK    CPEB
1971          HC       2
              *

1972          KK   RDIED
1973          KM   RETURN DIVERT FROM JB1 TO ED1
1974          DR    DIED
              *

1975          KK  RJBED1   ROUTE   REACH
1976          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 83RD TO IRRIGATION CANAL
1977          KM   ROUTING IS OVER EXISTING RETENTION BASINS 250 FOOT WIDTH
1978          RS       7              -1        0
1979          RC   0.040   0.040   0.040    2563  0.0007    0.00
1980          RX     0.0       0       0       0     250     250     250     250
1981          RY      10       1       1     1.0     1.0       1       1      10
              *
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1                                   HEC-1 INPUT

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


1982          KK  RJBED2   ROUTE   REACH
1983          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM IRRIGATION CANAL TO 91ST
1984          KM    ROUTING IS OVER EXISTING RETENTION BASINS MEASURED AT 420 FOOT WIDTH
1985          KM    NEW DEVELOPMENT STILL BEING GRADED AT TIME OF THIS RUN 1-22-2006
1986          RS       7              -1        0
1987          RC   0.040   0.040   0.040    2563  0.0007    0.00
1988          RX     0.0       0       0       0     420     420     420     420
1989          RY      10       1       1     1.0     1.0       1       1      10
              *

1990          KK  SUBED1   BASIN
1991          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1992          KM    L=       1.2  Lca=        .6   S=     9.4  Kn= .050  LAG=  42.1
1993          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1994          BA   0.382
1995          LG    0.25    0.25    5.70    0.31      30
1996          UI      30      35     108     147     174     208     254     357     356     280
1997          UI     237     193     161     127      75      53      49      30      27       9
```

```
1998        UI       9       9       9       9       9       2       0       0       0       0
            *

1999        KK  RETED1
2000        KM   RETENTION
2001        KM   DIVERT FIRST FLUSH AND A PORTION OF 100-YEAR 2-HOUR RETENTION
2002        KM   PORTION OF ED1 UPSTREAM OF IRRIGATION CANAL ASSUMED 100-YEAR-2HOUR RETENTION
2003        KM   PORTION OF ED1 DOWNSTREAM OF IRRIGATION CANAL ASSUMED FIRST FLUSH ONLY
2004        KM   DOWNSTREAM 100-YEAR 2-HOUR RETENTION WOULD BE REMOVED BY INSTALLING 10-YEAR
2005        KM   CULVERT AT 91ST AVENUE
2006        DT  RETED1    19.9
2007        DI       0   10000
2008        DQ       0   10000
            *

2009        KK  SUBED2   BASIN
2010        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2011        KM    L= 0.6    Lca=  .3     S=    9.4      Kn= .050     LAG=  24.5
2012        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2013        BA   0.114
2014        LG    0.30    0.25    5.70    0.31      15
2015        UI      16      54      87     118     184     146     107      76      38      24
2016        UI      15       5       5       5       3       0       0       0       0       0
            *

2017        KK  RETED2
2018        KM   RETENTION
2019        KM   DIVERT 80% OF 100-YEAR 2-HOUR  RETENTION OUT OF MODEL - JCS
2020        DT  RETED2     7.5
2021        DI       0   10000
2022        DQ       0   10000
            *
```



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1                                   HEC-1 INPUT

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

2023        KK  CPED1
2024        KM   ADD HYDROGRAPHS AT ED1
2025        HC       2
            *

2026        KK  ~CPED1
2027        KM   ADD HYDROGRAPHS AT ED1
2028        HC       2
            *

2029        KK  ~CPED2
2030        KM   COMBINE FLOW FROM EB & ED WITH FLOW FROM MF DIVERSION
2031        HC       2
            *

2032        KK  RRED
2033        KM   MODIFIED PULS ROUTING
2034        KM   DETENTION IN DRCC RIGHT OF WAY AT ED1 (91ST AVENUE)  POL
2035        RS       1    STOR       0       0
2036        SV       0    11.7    16.4
2037        SQ       0     333    1180
            *

2038        KK  RT99  ROUTE   REACH
2039        KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 91ST TO 99TH BASIN
2040        RS       1              -1       0
2041        RC   0.032   0.032   0.032    5217  0.0015    0.00
2042        RX     0.0       0       0      23      45      66      66      66
2043        RY       7       7       7     0.0     0.0       7       7       7
            *
            * KT95 BASIN REMOVED BY KA - PRESTIGE ENG
            * KK95BASIN
            * KM DETENTION IN 95BSN
            *
            * SECOND LEG OF ROUTING REMOVED (FROM 95TH TO 99TH) BY KA -PRESTIGE ENG

2044        KK  SUBID1   BASIN
2045        KM   THE FOLLOWING PARMETERS WERE PROVIDED FOR THIS BASIN
2046        KM   L= 1.0 Lca= .4  S= 7.1  Kn= .05  LAG= 35.0
2047        BA   0.204
2048        LG    0.25    0.15    8.00    0.11      30
2049        UI      20      37      82     107     131     170     242     199     159     126
2050        UI     101      71      38      32      20      15       6       6       6       6
2051        UI       6       0       0       0       0       0       0       0       0       0
2052        UI       0       0       0       0       0       0       0       0       0       0
            *

2053        KK  RETID1
2054        KM   RETENTION
2055        KM   DIVERT 80% OF 100-YEAR 2 HOUR RETENTION
2056        KM   NO EXPECTED PROJECT-RELATED CHANGE IN RETENTION AS A RESULT OF THIS PROJECT
2057        DT  RETID1    16.9
2058        DI       0   10000
2059        DQ       0   10000
            *
```



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1                                   HEC-1 INPUT

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

```
2060        KK  SUBID2   BASIN
2061        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2062        KM    L=   1.0     Lca=  .4       S=  7.1      Kn= .05     LAG=  35.0
2063        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2064        BA   0.359
2065        LG    0.25    0.25    4.90    0.40      30
2066        UI      34      65     145     188     231     298     426     351     280     222
2067        UI     177     124      67      57      36      26      11      10      11      10
2068        UI      10       0       0       0       0       0       0       0       0       0
2069        UI       0       0       0       0       0       0       0       0       0       0
            *

2070        KK  RETID2
2071        KM   RETENTION
2072        KM   DIVERT 80% OF 100-YEAR 2 HOUR RETENTION
2073        KM   NO EXPECTED PROJECT-RELATED CHANGE IN RETENTION AS A RESULT OF THIS PROJECT
2074        DT  RETID2    29.7
2075        DI       0   10000
2076        DQ       0   10000
            *

2077        KK   SUBIE   BASIN
2078        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2079        KM    L=       .8  Lca=       .4   S=    6.0  Kn= .05   LAG=  34.3
2080        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2081        BA   0.302
2082        LG    0.25    0.15    8.80    0.09      30
2083        UI      30      58     126     164     203     267     368     289     232     181
2084        UI     137     135     135     132     113     115     126      84      88      87
2085        UI     146      93      51      44      30      16       9       9       9       9
2086        UI       5       0       0       0       0       0       0       0       0       0
            *

2087        KK   RETIE
2088        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2089        DT   RETIE    25.0
2090        DI       0   10000
2091        DQ       0   10000
            *

2092        KK  DRMCIE
2093        KM   RETURN DIVERT MCIE
2094        DR    MCIE
            *

2095        KK  ~CPID2
2096        HC       4
            *
```



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

2097        KK   RRID1
2098        KM   MODIFIED PULS ROUTING
2099        KM   DETENTION IN DRCC RIGHT OF WAY AT ID1 (99TH AVENUE)  POL
2100        KM   OUTFLOW BASED ON AN EXISTING 2 CELL 4 BY 10 CULVERT AT 99TH AVENUE
2101        KM   MAXIMUM HEADWATER IS 6 FEET WITHOUT OVERFLOW
2102        KM   ASSUME 1 FOOT OVERFLOW
2103        KM   STORAGE BASED ON EXISTING CHANNEL 20 FOOT BOTTOM WIDTH 65 FOOT TOP
2104        KM   CHANNEL 6 FEET DEEP ASSUME 1 FOOT OVERTOPPING
2105        KM   OVERTOPPING WIDTH 250 FEET
2106        KM   CHANNEL SLOPE 0.0032
2107        RS       1    STOR       0       0
2108        SV       0    0.10       6    12.9
2109        SQ       0      50     770    1611
            *

2110        KK   CPID3
2111        HC       2
            *

2112        KK  RT107  ROUTE   REACH
2113        KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 99TH TO 107TH
2114        KM   APPROXIMATELY THREE FOURTHS OF THIS CHANNEL IS EXISTING
2115        KM   CHANNEL ASSUMED TO BE EXTENDED TO 500 FT UPSTREAM OF 107TH AVE
2116        KM   THIS AND PROPOSED CULVERT AT 107TH ASSUMED TO ELIMINATE
2117        KM   ALL BUT FIRST FLUSH RETENTION BETWEEN 99TH AND 107TH
2118        RS       2                -1       0
2119        RC   0.032   0.032   0.032    4765  0.0032    0.00
2120        RX     0.0       0       0      23      45      66      66      66
2121        RY       7       7       7     0.0     0.0       7       7       7
            *

2122        KK   SUBIB   BASIN
2123        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2124        KM    L=   1.1    Lca=  .6       S=   14.2      Kn= .050     LAG=  36.8
2125        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2126        BA   0.479
2127        LG    0.25    0.15    8.00    0.13      30
2128        UI      44      75     175     231     279     349     502     500     386     316
2129        UI     252     199     123      76      66      44      27      13      14      13
2130        UI      13      13       0       0       0       0       0       0       0       0
```

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2131        UI      0       0       0       0       0       0       0       0       0       0
            *

2132        KK   RETIB
2133        KM   RETENTION MODIFIED FROM REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTING -
2134        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2135        DT   RETIB    10.2
2136        DI       0   10000
2137        DQ       0   10000
            *
```



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

2138        KK   SUBIC   BASIN
2139        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2140        KM    L=  1.1     Lca= .5      S=  4.7     Kn= .050     LAG=  43.1
2141        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2142        BA   0.461
2143        LG    0.25    0.25    5.20    0.36      30
2144        UI      36      38     127     169     203     239     289     396     442     344
2145        UI     291     240     200     162     111      64      59      43      36      18
2146        UI      11      11      11      11      11       9       0       0       0       0
2147        UI       0       0       0       0       0       0       0       0       0       0
            *

2148        KK   RETIC
2149        KM   RETENTION MODIFIED FROM 80% REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTI
2150        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2151        DT   RETIC     9.8
2152        DI       0   10000
2153        DQ       0   10000
            *

2154        KK    CPIC
2155        KM   COMBINE IB AND IC FLOWS
2156        HC       2
            *
            *

2157        KK   SUBOC   BASIN
2158        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2159        KM    L=        .8  Lca=        .4   S=   13.2    Kn= .03   LAG=  17.6
2160        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2161        BA   0.310
2162        LG    0.15    0.15    9.70    0.07      59
2163        UI      85     285     452     670     436     263     109      56      18      18
2164        UI      10       0       0       0       0       0       0       0       0       0
2165        UI       0       0       0       0       0       0       0       0       0       0
            *

2166        KK   RETOC
2167        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2168        DT   RETOC    31.1
2169        DI       0   10000
2170        DQ       0   10000
            *

2171        KK    DROC
2172        KM    RETURN DIVERT FROM OD.
2173        DR    DIOC
            *
```



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

2174        KK  RTDIOC   ROUTE   REACH
2175        KM        ROUTE DIVERT FROM OD TO OC
2176        KM        FUTURE ARTERIAL SECTION
2177        RS       7              -1       0
2178        RC   0.100   0.023   0.100    4000  0.0010    0.00
2179        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2180        RY     105     105     105   99.75   99.75     105     105     105
            *

2181        KK    CPOC
2182        KM   ADD HYDROGRAPHS AT OC
2183        HC       2
            *

2184        KK  RTOCMB   ROUTE   REACH
2185        KM        ROUTE FLOW FROM OC TO MB.
2186        KM        FUTURE ARTERIAL SECTION
2187        RS       3              -1       0
2188        RC   0.100   0.023   0.100    5200  0.0038    0.00
2189        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2190        RY     105     105     105   99.75   99.75     105     105     105
            *

2191        KK   SUBMB   BASIN
2192        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2193        KM    L=  1.4     Lca= .7     S= 17.6     Kn= .0425     LAG=  34.5
2194        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
```

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2195        BA   0.995
2196        LG    0.21    0.15    8.40    0.10      46
2197        UI      97     190     413     535     664     866    1210     956     766     598
2198        UI     486     313     171     148      98      58      30      30      30      30
2199        UI      17       0       0       0       0       0       0       0       0       0
2200        UI       0       0       0       0       0       0       0       0       0       0
            *

2201        KK   RETMB
2202        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2203        DT   RETMB    88.4
2204        DI       0   10000
2205        DQ       0   10000
            *

2206        KK    DRMB
2207        KM    RETURN DIVERT FROM MC.
2208        DR    DIMB
            *

2209        KK  RTDIMB   ROUTE   REACH
2210        KM        ROUTE DIVERT FROM MC TO MB
2211        KM        FUTURE ARTERIAL SECTION
2212        RS       4              -1       0
2213        RC   0.100   0.023   0.100    5200  0.0023    0.00
2214        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2215        RY     105     105     105   99.75   99.75     105     105     105
            *
```



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

2216        KK   @CPMB
2217        KM   ADD HYDROGRAPHS AT MB.
2218        HC       3    5.24
            *

2219        KK  RTMBIB   ROUTE   REACH
2220        KM        ROUTE FLOW FROM MB TO IB (ALONG 107TH AVENUE).
2221        KM        FUTURE ARTERIAL SECTION
2222        RS       1              -1       0
2223        RC   0.100   0.030   0.100    2600  0.0015    0.00
2224        RX     0.0     440     445   445.1   745.1   745.2     900  1000.0
2225        RY     105     105     105   100.0   100.0     105     105     105
            *

2226        KK   CPIB0
2227        KM   ADD HYDROGRAPHS AT IB.
2228        HC       2
            *
            * KK CPIB1
            * KM ADD HYDROGRAPHS AT IB.
            * HC     2
            *

2229        KK  @CPIB2
2230        KM   COMBINE TRIBUTARY FLOW WITH MAIN CHANNEL FLOW
2231        HC       3
            *
            * ADD DETENTION BASIN AT 107TH AVE - BY KA (PRESTIGE ENGR)
            *

2232        KK  DET107
2233        KO       2
2234        KM   MODIFIED PULS ROUTING
2235        KM   BASIN AT 107TH AVENUE REPLACES THE 95TH AVE BASIN BY ASPEN
2236        KM   BASIN HAS 10-AC BOTTOM AREA WITH 6:1 SIDE SLOPES
2237        KM   BASIN BOTTOMFLUSH WITH ADJACENT CHANNEL BOTTOM (IN-LINE TYPE)
2238        KM   A CULVERT  5-CELLED 10x5 RBC
2239        KM   MAX CULVERT HEADWATER AND PONDING IN BASIN IS 5.0 FT  OVERTOPPING ON ROAD
2240        KM   NOT ALLOWED
2241        RS       1    STOR       0       0
2242        SV       0    10.2    20.7    31.7    43.0    48.8    54.7
2243        SQ       0    35.0     232     520     880    1080    1295
2244        SE     960     961     962     963     964   964.5     965
            *
            *

2245        KK  MCIBIA   ROUTE   REACH
2246        KM   ADMP CHANNEL
2247        KM   ROUTE FLOW FROM IB TO IA
2248        RS       4    FLOW      -1
2249        RC   0.040   0.040   0.040    2493  0.0005    0.00
2250        RX     1.0    17.0    35.2    53.3   263.3   281.5   299.7   315.7
2251        RY     5.7     6.1     3.0     0.0     0.0     3.0     6.1     5.7
            *
            * KM HEC-RAS REACH
            * KM BFC
            * KM ROUTE FLOW FROM IB TO IA (ALONG 107TH AVENUE).
            * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
            * KM HEC-RAS MODEL. 06.07.00 -DCF
            * RS     3    STOR       0
            * SV     0      17    45.4      77     106   135.9   167.9   199.8   228.7       2
            * SQ     0     400     800    1200    1600    2000    2400    2800    3200      34
```

```
                *
                * KM FUTURE ARTERIAL SECTION
                * RS     1              -1        0
                * RC 0.100   0.023   0.100     500  0.0120    0.00
                * RX   0.0     440     445   445.1   575.1   575.2     900  1000.0
                * RY   105     105     105   99.75   99.75     105     105     105
                *
```



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

2252            KK   SUBME   BASIN
2253            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2254            KM    L=   1.0     Lca= .4     S=  20.6     Kn= .050     LAG=  30.1
2255            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2256            BA   0.326
2257            LG    0.29    0.26    4.70    0.44      18
2258            UI      36      91     172     222     290     437     366     282     215     161
2259            UI      83      61      39      23      11      11      11      11       0       0
2260            UI       0       0       0       0       0       0       0       0       0       0
                *

2261            KK   RETME
2262            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2263            DT   RETME    22.8
2264            DI       0   10000
2265            DQ       0   10000
                *

2266            KK  RTMEIA   ROUTE   REACH
2267            KM        ROUTE FLOW FROM ME TO IA (ALONG 107TH AVENUE).
2268            KM        FUTURE ARTERIAL SECTION
2269            RS       3              -1        0
2270            RC   0.100   0.023   0.100    3400  0.0034    0.00
2271            RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2272            RY     105     105     105   99.75   99.75     105     105     105
                *

2273            KK   SUBIA   BASIN
2274            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2275            KM    L=  .8      Lca=  .4     S= 17.1      Kn= .05     LAG=  26.2
2276            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2277            KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2278            KM   WITHOUT RETENTION. - JCS
2279            BA   0.309
2280            LG    0.27    0.25    6.00    0.25    23.1
2281            UI      40     125     210     277     426     426     309     227     152      73
2282            UI      53      32      12      12      12       8       0       0       0       0
2283            UI       0       0       0       0       0       0       0       0       0       0
                *

2284            KK   RETIA
2285            KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2286            KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2287            KM   WITHOUT RETENTION. - JCS
2288            DT   RETIA     3.6
2289            DI       0   10000
2290            DQ       0   10000
                *
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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2291            KK   ~CPIA
2292            KM        ADD HYDROGRAPHS AT IA.
2293            HC       3
                *

2294            KK  MCIAHB   ROUTE   REACH
2295            KM   ADMP CHANNEL
2296            KM   ROUTE FLOW FROM BASIN IA TO HB
2297            RS       4    FLOW      -1
2298            RC   0.040   0.040   0.040    2646  0.0005    0.00
2299            RX     0.0    16.0    34.1    52.2   262.2   280.3   298.4   314.4
2300            RY     5.7     6.0     3.0     0.0     0.0     3.0     6.0     5.7
                * KM HEC-RAS REACH
                * KM BFC
                * KM ROUTE FLOW FROM IA TO HB.
                * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
                * KM HEC-RAS MODEL. 06.07.00 -DCF
                * RS     2    STOR       0
                * SV     0    23.3    45.2      73   102.7   132.9   160.6   189.4   212.1   222
                * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
                *

2301            KK   SUBHB   BASIN
2302            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2303            KM    L=  .8     Lca=   .4     S=  25.0     Kn= .050     LAG=  25.1
2304            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2305            KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2306            KM   WITHOUT RETENTION. - JCS
2307            BA   0.343
2308            LG    0.27    0.25    4.80    0.41    24.3
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2309          UI      46     154     250     336     531     450     329     239     132      78
2310          UI      48      21      14      14      14       0       0       0       0       0
2311          UI       0       0       0       0       0       0       0       0       0       0
              *

2312          KK   RETHB
2313          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2314          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2315          KM   WITHOUT RETENTION. - JCS
2316          DT   RETHB     4.5
2317          DI       0   10000
2318          DQ       0   10000
              *

2319          KK   CPHB1
2320          KM   ADD HYDROGRAPHS AT HB.
2321          HC       2
              *
```



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

2322          KK   SUBDA   BASIN
2323          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2324          KM    L=  1.0    Lca= .6      S= 17.6     Kn= .05     LAG=  34.0
2325          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2326          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2327          KM   WITHOUT RETENTION. - JCS
2328          BA   0.328
2329          LG    0.30    0.17    6.80    0.18      15
2330          UI      32      65     140     181     225     302     400     311     249     195
2331          UI     154      94      56      46      33      14      10      10      10      10
2332          UI       3       0       0       0       0       0       0       0       0       0
2333          UI       0       0       0       0       0       0       0       0       0       0
              *

2334          KK   RETDA
2335          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2336          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2337          KM   WITHOUT RETENTION. - JCS
2338          DT   RETDA     4.6
2339          DI       0   10000
2340          DQ       0   10000
              *

2341          KK   ~CPDA
2342          KM   ADD HYDROGRAPHS AT DA.
2343          HC       2
              *

2344          KK   SUBLD   BASIN
2345          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2346          KM    L=       .8  Lca=       .4   S=   13.3    Kn= .05    LAG=  30
2347          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2348          BA   0.278
2349          LG    0.28    0.26    4.80    0.37      29
2350          UI      32      82     153     197     263     386     305     236     179     126
2351          UI      65      49      32      14      10      10       9       6       0       0
2352          UI       0       0       0       0       0       0       0       0       0       0
              *

2353          KK   RETLD
2354          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2355          DT   RETLD    20.7
2356          DI       0   10000
2357          DQ       0   10000
              *
              * THE FOLLOWING RETURN AND ROUTE REMOVED TO MODEL THE ADMP CONDITION
              * KK  DRLD
              * KM RETURN DIVERT FROM LE TO LD
              * DR  DILD
              *
              * KKRTDILD   ROUTE   REACH
              * KM ROUTE DIVERT FROM LE TO LD
              * KM TYPE A CHANNEL
              * RS     4              -1       0
              * RC 0.025   0.025   0.025    2500  0.0016    0.00
              * RX   0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
              * RY   5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2358          KK  RTLDMA   ROUTE   REACH
2359          KM        ROUTE FLOW FROM LD TO MA
2360          KM        TYPE A CHANNEL
2361          RS       3              -1       0
2362          RC   0.025   0.025   0.025    2600  0.0035    0.00
2363          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2364          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
```

```
2365          KK   SUBMA   BASIN
2366          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2367          KM    L=  .7      Lca= .3       S=  14.7      Kn= .050     LAG=  24.8
2368          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2369          BA   0.247
2370          LG    0.30    0.25    4.55    0.52      15
2371          UI      33     115     184     250     392     320     234     167      88      55
2372          UI      34      12      10      10       8       0       0       0       0       0
2373          UI       0       0       0       0       0       0       0       0       0       0
              *

2374          KK   RETMA
2375          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2376          DT   RETMA    16.3
2377          DI       0   10000
2378          DQ       0   10000
              *

2379          KK    CPMA
2380          KM        ADD HYDROGRAPHS AT MA
2381          HC       2
              *

2382          KK  RTMAHB   ROUTE   REACH
2383          KM        ROUTE FLOW FROM MA TO HB (ALONG 115TH AVENUE).
2384          KM        FUTURE ARTERIAL SECTION
2385          RS       3              -1       0
2386          RC   0.100   0.023   0.100    4000  0.0071    0.00
2387          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2388          RY     105     105     105   99.75   99.75     105     105     105
              *

2389          KK   CPHB2
2390          KM        ADD HYDROGRAPHS AT HB.
2391          HC       2
              *
              * THE FOLLOWING ROUTES REMOVED TO MODEL THE ADMP CONDITION
              * ROUTING TO DA NO LONGER OCCURS BUT IS COMBINED INTO CHANNEL AT HB
              * KKRTHBDA
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM HB TO DA (ALONG 115TH AVENUE).
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS     2    STOR       0
              * SV     0    11.3    18.3    26.4    34.3    40.3    46.2    51.7    56.5    59
              * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
              *
              * KKRTDACC
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM DA TO CC.
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS     6    STOR       0
              * SV     0    49.6    80.6   107.1   129.8   149.2     167   184.1   200.2   207
              * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2392          KK   SUBLB   BASIN
2393          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2394          KM    L=       ..7  Lca=       .3   S=    8.8  Kn= .050  LAG=  27
2395          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2396          BA   0.249
2397          LG    0.30    0.25    4.60    0.49      15
2398          UI      31      90     158     206     297     358     258     192     142      72
2399          UI      50      31      14      10      10       9       3       0       0       0
2400          UI       0       0       0       0       0       0       0       0       0       0
              *

2401          KK   RETLB
2402          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2403          DT   RETLB    16.4
2404          DI       0   10000
2405          DQ       0   10000
              *

2406          KK  RTLBHA   ROUTE   REACH
2407          KM        ROUTE FLOW FROM LB TO HA (SHEET FLOW).
2408          KM        TYPE A CHANNEL
2409          RS      13              -1       0
2410          RC   0.100   0.100   0.100    4000  0.0065    0.00
2411          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2412          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

2413          KK   SUBHA   BASIN
2414          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2415          KM    L=  .8      Lca=  .4      S= 33.8      Kn= .05      LAG=  23.5
2416          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2417          BA   0.150
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2418          LG    0.25    0.25    4.70    0.44      30
2419          UI      21      79     122     172     255     186     133     089      42      27
2420          UI      14       7       7       7       0       0       0       0       0       0
2421          UI       0       0       0       0       0       0       0       0       0       0
              *

2422          KK   RETHA
2423          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2424          DT   RETHA     3.2
2425          DI       0   10000
2426          DQ       0   10000
              *

2427          KK    CPHA
2428          KM         ADD HYDROGRAPHS AT HA
2429          HC        3
              * ***********************************************************************
              * INSERTED SOUTH ALIGNMENT FROM 1084F6-IMP-R.DAT - JCS
              * ADDED/CHANGED SUBJB2 TO CPEE IN ORDER TO REINSERT SUBJB2 - JCS
              *
1                                          HEC-1 INPUT                                          PAGE 68

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

2430          KK  MCHACB    ROUTE       REACH
2431          KM   ADMP CHANNEL
2432          KM   ROUTE FLOW FROM HA TO CB.
2433          RS       8     FLOW      -1
2434          RC   0.040   0.040   0.040    9163  0.0017    0.00
2435          RX     0.0    16.0    33.7    51.4   201.4   219.4   228.1   244.1
2436          RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
              *

2437          KK   SUBJB2
2438          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2439          KM    L=       1.3  Lca=       .7   S=   17.4  Kn= .050  LAG=  40
2440          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2441          BA   0.493
2442          LG    0.30    0.21    6.40    0.18      15
2443          UI      41      54     151     203     242     293     372     515     433     350
2444          UI     292     237     194     133      73      68      46      41      14      13
2445          UI      12      13      13      13       2       0       0       0       0       0
              *

2446          KK  RETJB2
2447          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2448          DT  RETJB2    32.4
2449          DI       0   10000
2450          DQ       0   10000
              *

2451          KK   DRJB2
2452          KM    RETURN DIVERT FROM JC2
2453          DR   DIJB2
              *

2454          KK   RTJCJB   ROUTE       REACH
2455          KM   ROUTE DIVERT FROM JC2 TO JB2
2456          KM   FUTURE ARTERIAL SECTION
2457          RS       4              -1       0
2458          RC   0.100   0.023   0.100    5000  0.0015    0.00
2459          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2460          RY     105     105     105   99.75   99.75     105     105     105
              *

2461          KK  @CPJB2
2462          KM   ADD HYDROGRAPHS AT JB2
2463          HC       2    3.81
              *

2464          KK  DIJBEE
2465          KM   DIVERT 64% OF FLOW AT JB2 TO FA AND THE SALT RIVER. - JCS
2466          DT    DIFA
2467          DI       0      25      50      75     100     150    2000
2468          DQ       0      16      32      48      64      96    1280
              *
1                                          HEC-1 INPUT                                          PAGE 69

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

2469          KK  RTJBEE  ROUTE       REACH
2470          KM         ROUTE DIVERT FROM JB TO EE
2471          KM         TYPE A CHANNEL
2472          RS      10              -1       0
2473          RC   0.100   0.023   0.100    7500  0.0015    0.00
2474          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2475          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

2476          KK   SUBEE
2477          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2478          KM    L=       1.6  Lca=       1.0   S=   16.0  Kn= .05  LAG=  50.8
2479          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
```

```
2480          BA   0.958
2481          LG    0.20    0.25    4.90    0.34      15
2482          UI      63      63     159     258     318     366     421     494     637     802
2483          UI     695     577     504     428     362     314     244     157     113     104
2484          UI      79      64      51      19      20      20      19      20      20      20
2485          UI       7       0       0       0       0       0       0       0       0       0
2486          UI       0       0       0       0       0       0       0       0       0       0
              *

2487          KK  RETEE
2488          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2489          DT  RETEE     63.0
2490          DI       0   10000
2491          DQ       0   10000
              *

2492          KK   CPEE
2493          KM        ADD HYDROGRAPHS AT EE
2494          HC       2
              *

2495          KK  RTEEEA
2496          KM   HEC-RAS REACH
2497          KM   ROUTE FLOW FROM EE TO EA.
2498          KM   ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES OBTAINED FROM THE
2499          KM   DIBBLE MODEL DUR-6im.DAT.   POL 9-6-2005
2500          RS       9    STOR       0
2501          SV       0    63.2    84.9     119   148.6   174.2   197.9   220.2   241.2   263.1
2502          SQ       0     100     200     400     600     800    1000    1200    1400    1600
              *
              * KKRTEEEA   ROUTE   REACH
              * KM      ROUTE FLOW FROM EE TO EA
              * KM      TYPE A CHANNEL
              * RS      9              -1       0
              * RC 0.035   0.035   0.035    5300  0.0030    0.00
              * RX   0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
              * RY   5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
```



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

2503          KK   SUBEA   BASIN
2504          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2505          KM    L=      1.5  Lca=     .8     S=   21.3    Kn= .05    LAG=  44.3
2506          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2507          BA   1.321
2508          LG    0.29    0.25    5.30    0.34      16
2509          UI     100     101     340     457     556     647     776    1034    1263    1015
2510          UI     846     715     587     501     364     221     170     151     100      89
2511          UI      31      31      31      30      30      30      15       0       0       0
2512          UI       0       0       0       0       0       0       0       0       0       0
              *

2513          KK   RETEA
2514          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2515          DT   RETEA    89.2
2516          DI       0   10000
2517          DQ       0   10000
              *

2518          KK    CPEA
2519          KM        ADD HYDROGRAPHS AT EA
2520          HC       2
              *
              * KKP-99SO
              * KO     1       2
              * KM DIVERT OVERFLOW INTO BASIN - JLM 6/17/02
              * DTB-99SO
              * DI     0     260     260    2000    5000
              * DQ     0       0       1    1740    4740
              *

2521          KK  RTEADC   ROUTE   REACH
2522          KM    ROUTE FLOW FROM EA TO DC
2523          KM   SUNLAND CHANNEL
2524          RS       7              -1       0
2525          RC   0.040   0.040   0.040    4951  0.0018    0.00
2526          RX     0.0   100.0   101.0   137.0   157.0   193.0   194.0   294.0
2527          RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
              *

2528          KK   SUBDC   BASIN
2529          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2530          KM    L=      1.4  Lca=       .4   S=   22.1    Kn= .05    LAG=  33.5
2531          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2532          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2533          KM   WITHOUT RETENTION. - JCS
2534          BA   0.830
2535          LG    0.29    0.25    6.00    0.27      16
2536          UI      83     170     363     469     584     800    1016     778     624     486
2537          UI     377     216     142     108      83      26      26      26      26      25
2538          UI       2       0       0       0       0       0       0       0       0       0
2539          UI       0       0       0       0       0       0       0       0       0       0
```

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

2540            KK   RETDC
2541            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL (43%) - JCS
2542            KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL (12%) - JCS
2543            KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2544            KM   WITHOUT RETENTION. (45%) - JCS
2545            DT   RETDC     25.9
2546            DI       0    10000
2547            DQ       0    10000
                *

2548            KK   ~CPDC
2549            KM        ADD HYDROGRAPHS AT DC
2550            HC       2
                *

2551            KK  RTDCCC   ROUTE   REACH
2552            KM        ROUTE FLOW FROM DC TO CC.
2553            KM   SUNLAND CHANNEL
2554            RS       5              -1       0
2555            RC   0.040   0.040   0.040    5103  0.0022    0.00
2556            RX     0.0   100.0   101.0   137.0   167.0   203.0   204.0   304.0
2557            RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
                *

2558            KK   SUBDD   BASIN
2559            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2560            KM    L=        .5  Lca=        .3   S=   28.3  Kn= .050  LAG=  18.2
2561            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2562            BA   0.133
2563            LG    0.25    0.25    4.65    0.43      30
2564            UI      34     115     178     281     193     123      53      30      10       8
2565            UI       7       0       0       0       0       0       0       0       0       0
2566            UI       0       0       0       0       0       0       0       0       0       0
                *

2567            KK   RETDD
2568            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2569            DT   RETDD     11.0
2570            DI       0    10000
2571            DQ       0    10000
                *

2572            KK  RTDDCCROUTE      REACH
2573            KM        ROUTE FLOW FROM DD TO CC.
2574            KM        TYPE A CHANNEL
2575            RS       7              -1       0
2576            RC   0.035   0.035   0.035    5000  0.0040    0.00
2577            RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2578            RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                *
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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2579            KK   SUBCC   BASIN
2580            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2581            KM    L=  1.4     Lca= .7      S=   22.8       Kn= .05       LAG=  38.6
2582            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2583            KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2584            KM   WITHOUT RETENTION. - JCS
2585            BA   0.981
2586            LG    0.30    0.24    6.20    0.21      15
2587            UI      85     130     328     437     522     639     869    1062     820     677
2588            UI     546     446     331     189     145     111      86      42      26      26
2589            UI      26      25      26       2       0       0       0       0       0       0
2590            UI       0       0       0       0       0       0       0       0       0       0
                *

2591            KK   RETCC
2592            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL (54%) - JCS
2593            KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL (24%) - JCS
2594            KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2595            KM   WITHOUT RETENTION. (40%) - JCS
2596            DT   RETCC     34.2
2597            DI       0    10000
2598            DQ       0    10000
                *

2599            KK   ~CPCC
2600            HC       3
                *

2601            KK  RTCCSC
2602            KM   ROUTE FLOW FROM CC TO DRCC
2603            KM   SUNLAND CHANNEL
2604            RS       4              -1       0
2605            RC   0.040   0.040   0.040    3027  0.0008    0.00
2606            RX     0.0   100.0   101.0   137.0   167.0   203.0   204.0   304.0
```

```
2607          RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
              *

2608          KK  RTCCSC
2609          KM   HEC-RAS REACH
2610          KM   BFC
2611          KM   ROUTE SUNLAND IN DRCC
2612          KM   DRCC CHANNEL
2613          RS       2              -1       0
2614          RC   0.040   0.040   0.040    2256  0.0017    0.00
2615          RX     0.0   100.0   101.0   137.0   287.0   353.0   354.0   454.0
2616          RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
              *

2617          KK   SUBCB   BASIN
2618          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2619          KM    L=  1.2    Lca=  .5     S= 11.1     Kn= .05     LAG=  36.9
2620          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2621          BA   0.739
2622          LG    0.30    0.15    9.70    0.07      15
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1                                         HEC-1 INPUT

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

2623          UI      67     114     268     355     429     535     768     774     596     488
2624          UI     390     310     194     117     102      68      43      21      21      21
2625          UI      21      21       1       0       0       0       0       0       0       0
2626          UI       0       0       0       0       0       0       0       0       0       0
              *

2627          KK   RETCB
2628          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2629          DT   RETCB    15.8
2630          DI       0   10000
2631          DQ       0   10000
              *

2632          KK  ~CPCB1
2633          HC       3
              *

2634          KK  SUBGD1   BASIN
2635          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2636          KM    L=  1.1     Lca= .6     S= 33.3     Kn= .05     LAG=  31.6
2637          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2638          BA   0.629
2639          LG    0.25    0.25    5.30    0.33      30
2640          UI      67     155     306     394     501     742     750     564     440     342
2641          UI     225     116      96      68      26      21      21      20      18       0
2642          UI       0       0       0       0       0       0       0       0       0       0
              *

2643          KK  RETGD1
2644          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2645          DT  RETGD1    13.4
2646          DI       0   10000
2647          DQ       0   10000
              *

2648          KK  SUBGD2
2649          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2650          KM    L=  1.2     Lca=  .5     S= 11.1     Kn= .05     LAG=  37.5
2651          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2652          BA   0.211
2653          LG    0.25    0.15    9.70    0.07      30
2654          UI      66     108     259     345     414     512     722     791     604     498
2655          UI     395     327     218     119     109      69      56      21      21      20
2656          UI      21      20       9       0       0       0       0       0       0       0
2657          UI       0       0       0       0       0       0       0       0       0       0
              *

2658          KK  RETGD2
2659          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2660          DT  RETGD2    15.8
2661          DI       0   10000
2662          DQ       0   10000
              *
```



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1                                         HEC-1 INPUT

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

2663          KK   CPGD
2664          KM   RECOMBINE SUBBASIN GD - JCS
2665          HC       2
              *

2666          KK   SUBKC   BASIN
2667          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2668          KM    L=        .8  Lca=        .4   S=    26.3  Kn= .050  LAG=  25
2669          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2670          BA   0.264
2671          LG    0.25    0.25    4.60    0.50      30
2672          UI      35     119     193     260     409     346     253     183     101      60
2673          UI      37      16      11      11      11       0       0       0       0       0
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2674          UI       0       0       0       0       0       0       0       0       0       0
              *

2675          KK   RETKC
2676          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2677          DT   RETKC     21.8
2678          DI       0   10000
2679          DQ       0   10000
              *

2680          KK  RTKCGDROUTE       REACH
2681          KM        ROUTE FLOW FROM KC TO GD1 (ALONG EL MIRAGE RD).
2682          KM        ASSUME NEGLIGIBLE CHANNEL TRANSMISSION LOSS.
2683          KM        FUTURE ARTERIAL SECTION
2684          RS       3               -1       0
2685          RC   0.100   0.023   0.100    4090  0.0049    0.00
2686          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2687          RY     105     105     105   99.75   99.75     105     105     105
              *

2688          KK   SUBGC   BASIN
2689          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2690          KM    L= .8     Lca=  .4      S=   26.5     Kn= .045     LAG=  23.3
2691          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2692          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2693          KM   WITHOUT RETENTION. - JCS
2694          BA   0.215
2695          LG    0.28    0.26    4.70    0.34    19.7
2696          UI      31     116     178     254     368     265     189     123      57      38
2697          UI      19      10       9       9       0       0       0       0       0       0
2698          UI       0       0       0       0       0       0       0       0       0       0
              *

2699          KK   RETGC
2700          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2701          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2702          KM   WITHOUT RETENTION. - JCS
2703          DT   RETGC      5.0
2704          DI       0   10000
2705          DQ       0   10000
              *
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1                                   HEC-1 INPUT

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

2706          KK  RTGCGD      ROUTE       REACH
2707          KM        ROUTE FLOW FROM GC TO GD1 (ALONG EL MIRAGE ROAD).
2708          KM        FUTURE ARTERIAL SECTION
2709          RS       1               -1       0
2710          RC   0.100   0.023   0.100     820  0.0049    0.00
2711          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2712          RY     105     105     105   99.75   99.75     105     105     105
              *

2713          KK   CPGD1
2714          KM        ADD ALL HYDROGRAPHS AT GD1.
2715          HC       3
              *

2716          KK  RTGDCB   ROUTE       REACH
2717          KM   ROUTE FLOW FROM GD1 TO CB
2718          RS       6    FLOW       -1
2719          RC   0.100   0.023   0.100    3880  0.0010    0.00
2720          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2721          RY     105     105     105   99.75   99.75     105     105     105
              *

2722          KK  ~CPCB2
2723          KM   COMBINE FLOWS FROM CB TO CHANNEL
2724          HC       2
              *

2725          KK  MCCBCA
2726          KM   ADMP CHANNEL
2727          KM   ROUTE FLOW FROM CB TO CA.
2728          RS       8    FLOW       -1
2729          RC   0.040   0.040   0.040    5026  0.0014    0.00
2730          RX     0.0    16.0    33.7    51.4   201.4   219.4   228.1   244.1
2731          RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
              *

2732          KK  SUBCA1   BASIN
2733          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2734          KM    L=      1.0  Lca=       .5   S=     6.4  Kn= .05  LAG=  38.9
2735          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2736          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2737          KM   WITHOUT RETENTION. - JCS
2738          BA   0.143
2739          LG    0.26    0.15    7.60    0.14    26.9
2740          UI      12      18      47      63      75      92     124     154     120      99
2741          UI      81      65      50      29      21      17      12       7       4       4
2742          UI       4       4       4       1       0       0       0       0       0       0
2743          UI       0       0       0       0       0       0       0       0       0       0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2744          KK  RETCA1
2745          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2746          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2747          KM   WITHOUT RETENTION. - JCS
2748          DT  RETCA1      2.4
2749          DI        0   10000
2750          DQ        0   10000
              *

2751          KK  SUBCA2   BASIN
2752          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2753          KM    L=       1.0  Lca=        .5   S=     7.8     Kn= .05     LAG=  37.4
2754          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2755          BA   0.841
2756          LG    0.30     0.15     8.80     0.09       15
2757          UI      76      123      297      297      393      474      585      829      898      566
2758          UI     448      369      247      134      124       76       63       23       23       23
2759          UI      23       23        9        0        0        0        0        0        0        0
2760          UI       0        0        0        0        0        0        0        0        0        0
              *

2761          KK  RETCA2
2762          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2763          DT  RETCA2     17.9
2764          DI        0   10000
2765          DQ        0   10000
              *

2766          KK  ~CPCA1
2767          KM   COMBINE FLOWS AT CA
2768          KM   RECOMBINE SUBBASIN CA - JCS
2769          HC        3
              *

2770          KK   SUBGB   BASIN
2771          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2772          KM    L= .8      Lca= .6    S=    36.1     Kn= .05      LAG=  27.4
2773          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2774          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2775          KM   WITHOUT RETENTION. - JCS
2776          BA   0.221
2777          LG    0.30     0.25     4.55     0.42       15
2778          UI      27       79      139      181      260      318      230      171      127       65
2779          UI      45       27       13        8        8        8        3        0        0        0
2780          UI       0        0        0        0        0        0        0        0        0        0
              *

2781          KK   RETGB
2782          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2783          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2784          KM   WITHOUT RETENTION. - JCS
2785          DT   RETGB      8.3
2786          DI        0   10000
2787          DQ        0   10000
              *
```



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

2788          KK  RTGBCA   ROUTE      REACH
2789          KM        ROUTE FLOW FROM GB TO CA1.
2790          KM        FUTURE ARTERIAL SECTION
2791          RS        5              -1        0
2792          RC    0.040    0.040    0.040     5136   0.0014     0.00
2793          RX      0.0     16.0     33.8     51.6    166.6    184.4    202.3    218.3
2794          RY      5.6      5.9      3.0      0.0      0.0      3.0      5.9      5.6
              *

2795          KK  ~CPCA2
2796          KM        ADD HYDROGRAPHS AT CA
2797          HC        2
              *

2798          KK  P-DRCCDIVERT
2799          KM   DIVERT OVERFLOW INTO BASIN - JLM 6/18/02
2800          DT  B-DRCC
2801          DI        0       34       34     5000     9000
2802          DQ        0        0        1     4966     8966
              *

2803          KK  MCCABC   ROUTE      REACH
2804          KM   ROUTE ADMP CHANNEL FROM CA1 TO BC1
2805          RS        5     FLOW       -1
2806          RC    0.014    0.014    0.014     3914   0.0005     0.00
2807          RX      0.0     16.0     16.0     16.0     20.0     20.0     20.0     36.0
2808          RY      3.8      4.1      2.1      0.0      0.0      2.1      4.1      3.8
              *
              * KM HEC-RAS REACH
              * KM BFC
```

```
                    * KM ROUTE FLOW FROM CA TO BC.
                    * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
                    * KM HEC-RAS MODEL. 06.07.00 -DCF
                    * RS     11     STOR        0
                    * SV      0     52.4    113.5    174.4    227.6    278.6    321.5      363    401.7      4
                    * SQ      0      400      800     1200     1600     2000     2400     2800     3200     34
                    *

          2809      KK  SUBBC1   BASIN
          2810      KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
          2811      KM    L=  0.22x1.7   Lca=  0.22x0.8    S=  11.5    Kn= .02    LAG=  6.3
          2812      KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
          2813      BA   0.137
          2814      LG    0.15    0.28    4.80    0.38      55
          2815      UI     309     618     117     117      18       0       0       0       0       0
          2816      UI       0       0       0       0       0       0       0       0       0       0
                    *

          2817      KK  RETBC1
          2818      KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
          2819      DT  RETBC1     2.9
          2820      DI       0   10000
          2821      DQ       0   10000
                    *
1                                                HEC-1 INPUT                                                    PAGE 78

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


          2822      KK  SUBBC2   BASIN
          2823      KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
          2824      KM    L=      1.7  Lca=       .8   S=   11.5  Kn= .038  LAG=  38.3
          2825      KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
          2826      BA   0.493
          2827      LG    0.24    0.25    5.10    0.39      31
          2828      UI      55      86     214     284     340     419     573     682     523     433
          2829      UI     345     284     204     116      93      68      55      21      17      17
          2830      UI      17      17      15       0       0       0       0       0       0       0
          2831      UI       0       0       0       0       0       0       0       0       0       0
                    *

          2832      KK  RETBC2
          2833      KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
          2834      DT  RETBC2    10.5
          2835      DI       0   10000
          2836      DQ       0   10000
                    *

          2837      KK   ~CPBC
          2838      KM   ADD HYDROGRAPHS AT BC1
          2839      KM   RECOMBINE SUBBASIN BC - JCS
          2840      HC       3
                    *

          2841      KK  CPAFBC
          2842      KM   COMBINE FLOWS INTO AGUA FRIA RIVER AT BC
          2843      HC       2
                    *
                    * KM      FUTURE ARTERIAL SECTION
                    * RS    10              -1       0
                    * RC 0.100   0.023   0.100    5700  0.0018    0.00
                    * RX   0.0     440     445   445.1   575.1   575.2     900  1000.0
                    * RY   105     105     105   99.75   99.75     105     105     105
                    *
                    *
                    *
                    * ***********************************************************************
                    * NOTES REFERING TO CHANGES MADE TO DIBBLE MODEL HAVE BEEN OMITTED.
                    * SEE 1084F6-IMP-R.DAT FOR NOTES. - JCS
          2844      ZZ
1
1*****************************************                                    ****************************************
 *                                         *                                   *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)     *                                   *    U.S. ARMY CORPS OF ENGINEERS      *
 *              JUN   1998                 *                                   *    HYDROLOGIC ENGINEERING CENTER     *
 *            VERSION 4.1                  *                                   *          609 SECOND STREET           *
 *                                         *                                   *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   26MAY09  TIME  15:24:45     *                                   *           (916) 756-1104             *
 *                                         *                                   *                                      *
 *****************************************                                    ****************************************


                    107BSNZ.DAT
                    PRESTIGE ENGINEERING CONSULTANTS - MARCH 23, 2009
                    REMOVAL OF 95TH AVENUE BASIN & REPLACE WITH 10TH AVENUE BASIN
                    6-HOUR RAINFALL
                    DURANGO REGIONAL CONVEYANCE CHANNEL AND SUNLAND CHANNEL
                    AVONDALE AND PHOENIX ARIZONA
                    THIS HEC-1 MODEL IS THE SAME AS THE REC6FINAL.DAT MODEL FOR THE SAME AREA,
                    DATED JANUARY 25, 2006 AND DELIVERED TO THE FCDMC ON FEBRUARY 15, 2006,
                    WITH THE FOLLOWING CHANGES ADDED BY PRESTIGE ENGINEERING
                    1.  REMOVE DETENTION BASIN AT 95TH AVENUE (KK 95BASIN) FROM THE MODEL
```

2. REPLACE THE TWO ROUTING REACHES RT95 AND RT99 BETWEEN 91ST AVE & 99 AVE WITH A SINGLE ROUTING REACH, AFTER THE REMOVAL OF THR 95TH AVE BASIN RENAME BOTH ROUTINGS WITH A SINGLE LABEL RT99
3. REVISE THE REACH DISTANCE TO THE ONE MILE DISTANCE BETWEEN 91ST & 99TH
4. FROM THE 7566 FT (2439 FT FOR RT95 PLUS 5127 FT FOR RT99) TO 5216 FT
5. ADD BASIN AT 107TH AVENUE AFTER COMBINING SUB IB AND IC AND ROUTED FLOWS FROM THE NORTH AT CPIB2 WHICH WAS FORMERLLY RRIB
6. THE 107TH AVE BASIN IS 10 AC BOTTOM AT 6:1 SIDES BOT FLUSHED WITH CHANNE
7. THE CULVERT USED IS 10FT WIDE BY 5FT HIGH FIVE CELL BOX CULVERT
8. TOP OF ROAD IS 6 INCHES ABOVE CULVERT TOP
9. SLOPE OF CULVERT BARREL IS 0.005 FT/FT
10. 100-YR DISCHARGE WAS TAKEN FROM ASPEN REPORT AS 1193 CFS
11. CULVERT SET TO DISCHARGE ABOUT THE EXISTING CONDITION 100-YR WITH NO ROAD OVERTOPPING AT 107TH AVENUE
12. THE CHAN ROUTING RT107 LENGTH SHORTENED BY 500 FT TO ALLOW FOR THE 107TH BASIN DETENTION

```
28 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     9MAR95  STARTING DATE
                  ITIME       1200  STARTING TIME
                     NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                 NDDATE    16MAR95  ENDING DATE
                 NDTIME       1035  ENDING TIME
                  ICENT         19  CENTURY MARK

            COMPUTATION INTERVAL      .08 HOURS
                 TOTAL TIME BASE  166.58 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

30 JD        INDEX STORM NO. 1
                  STRM        3.23  PRECIPITATION DEPTH
                  TRDA         .01  TRANSPOSITION DRAINAGE AREA

31 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       .01       .01       .01       .01       .01       .01       .03
                 .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                 .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00

34 JD        INDEX STORM NO. 2
                  STRM        3.21  PRECIPITATION DEPTH
                  TRDA         .50  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       .01       .01       .01       .01       .01       .01       .03
                 .03       .03       .05       .05       .05       .15       .15       .15       .03       .03
                 .03       .01       .01       .01       .01       .01       .01       .00       .00       .00
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00

35 JD        INDEX STORM NO. 3
                  STRM        3.15  PRECIPITATION DEPTH
                  TRDA        2.80  TRANSPOSITION DRAINAGE AREA

36 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       .01       .01       .01       .01       .01       .01       .03
                 .03       .03       .07       .07       .07       .08       .08       .08       .05       .05
                 .05       .02       .02       .02       .01       .01       .01       .00       .00       .00
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                 .00       .00

39 JD        INDEX STORM NO. 4
                  STRM        2.98  PRECIPITATION DEPTH
                  TRDA       16.00  TRANSPOSITION DRAINAGE AREA

40 PI          PRECIPITATION PATTERN
                 .00       .00       .00       .00       .00       .00       .00       .00       .00       .01
                 .01       .01       .00       .01       .00       .00       .00       .00       .00       .00
                 .00       .00       .01       .00       .00       .00       .00       .01       .01       .01
                 .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                 .03       .03       .06       .06       .06       .07       .07       .07       .04       .04
```

```
                .04       .02       .02       .02       .01       .01       .01       .01       .01       .01
                .00       .00       .00       .00       .00       .00       .00       .00       .00       .00
                .00       .00

43 JD        INDEX STORM NO. 5
                STRM        2.62  PRECIPITATION DEPTH
                TRDA       90.00  TRANSPOSITION DRAINAGE AREA

44 PI          PRECIPITATION PATTERN
                .01       .01       .01       .00       .00       .00       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .05       .05       .05       .05       .05       .05       .04       .04
                .04       .02       .02       .02       .02       .02       .02       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01

47 JD        INDEX STORM NO. 6
                STRM        1.84  PRECIPITATION DEPTH
                TRDA      500.00  TRANSPOSITION DRAINAGE AREA

48 PI          PRECIPITATION PATTERN
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .02       .02       .02       .03
                .03       .03       .04       .04       .04       .04       .04       .04       .04       .04
                .04       .03       .03       .03       .02       .02       .02       .01       .01       .01
                .01       .01       .01       .01       .01       .01       .01       .01       .01       .01
                .01       .01

WARNING --- ROUTED OUTFLOW (   2259.) IS GREATER THAN MAXIMUM OUTFLOW (   2200.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (   2264.) IS GREATER THAN MAXIMUM OUTFLOW (   2200.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (   2249.) IS GREATER THAN MAXIMUM OUTFLOW (   2200.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (   2209.) IS GREATER THAN MAXIMUM OUTFLOW (   2200.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (   2221.) IS GREATER THAN MAXIMUM OUTFLOW (   2200.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (   2238.) IS GREATER THAN MAXIMUM OUTFLOW (   2200.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (   2244.) IS GREATER THAN MAXIMUM OUTFLOW (   2200.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (   2229.) IS GREATER THAN MAXIMUM OUTFLOW (   2200.) IN STORAGE-OUTFLOW TABLE

WARNING --- ROUTED OUTFLOW (   2201.) IS GREATER THAN MAXIMUM OUTFLOW (   2200.) IN STORAGE-OUTFLOW TABLE
        WARNING EXCESS AT PONDING LESS THAN ZERO FOR PERIOD. EXCESS SET TO ZERO

WARNING --- ROUTED OUTFLOW (   1568.) IS GREATER THAN MAXIMUM OUTFLOW (   1566.) IN STORAGE-OUTFLOW TABLE


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


           **************
           *            *
2232 KK    *    DET107  *
           *            *
           **************

2233 KO        OUTPUT CONTROL VARIABLES
                IPRNT           2  PRINT CONTROL
                IPLOT           0  PLOT CONTROL
                QSCAL          0.  HYDROGRAPH PLOT SCALE
                    MODIFIED PULS ROUTING
                    BASIN AT 107TH AVENUE REPLACES THE 95TH AVE BASIN BY ASPEN
                    BASIN HAS 10-AC BOTTOM AREA WITH 6:1 SIDE SLOPES
                    BASIN BOTTOMFLUSH WITH ADJACENT CHANNEL BOTTOM (IN-LINE TYPE)
                    A CULVERT  5-CELLED 10x5 RBC
                    MAX CULVERT HEADWATER AND PONDING IN BASIN IS 5.0 FT  OVERTOPPING ON ROAD
                    NOT ALLOWED

            HYDROGRAPH ROUTING DATA

2241 RS        STORAGE ROUTING
                NSTPS           1  NUMBER OF SUBREACHES
                 ITYP        STOR  TYPE OF INITIAL CONDITION
                RSVRIC        .00  INITIAL CONDITION
                    X         .00 WORKING R AND D COEFFICIENT

2242 SV          STORAGE        .0      10.2      20.7      31.7      43.0      48.8      54.7

2243 SQ        DISCHARGE        0.       35.      232.      520.      880.     1080.     1295.

2244 SE        ELEVATION    960.00    961.00    962.00    963.00    964.00    964.50    965.00

                                                                   ***


    ***          ***          ***          ***          ***
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HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA .0 SQ MI

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2305.	5.25		960.	264.	88.	38.
		(INCHES)	.840	.923	.924	.924
		(AC-FT)	476.	523.	524.	524.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
82.	5.25	44.	15.	5.	2.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
967.35	5.25	964.04	961.44	960.48	960.21

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA .5 SQ MI

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 2245.	5.25		940.	259.	86.	37.
		(INCHES)	.822	.905	.906	.906
		(AC-FT)	466.	513.	513.	513.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
81.	5.25	43.	15.	5.	2.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
967.21	5.25	963.99	961.42	960.48	960.21

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 2.8 SQ MI

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1700.	5.42		786.	222.	74.	32.
		(INCHES)	.688	.776	.777	.777
		(AC-FT)	390.	440.	440.	440.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
66.	5.42	39.	14.	5.	2.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
965.94	5.42	963.63	961.35	960.45	960.20

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 16.0 SQ MI

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 1085.	5.67		539.	160.	53.	23.
		(INCHES)	.472	.559	.560	.560
		(AC-FT)	268.	317.	318.	318.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR

+ (AC-FT)	(HR)				
49.	5.67	32.	12.	4.	2.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
964.51	5.67	962.98	961.19	960.40	960.17

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 90.0 SQ MI

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 357.	6.08		207.	66.	22.	10.
		(INCHES)	.181	.231	.232	.232
		(AC-FT)	103.	131.	132.	132.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
25.	6.08	19.	8.	3.	1.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
962.43	6.08	961.83	960.80	960.27	960.12

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 500.0 SQ MI

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 37.	6.08		24.	10.	3.	1.
		(INCHES)	.021	.034	.034	.034
		(AC-FT)	12.	19.	19.	19.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
10.	6.08	7.	3.	1.	0.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
961.01	6.08	960.70	960.28	960.09	960.04

CUMULATIVE AREA = 10.63 SQ MI

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	SUBWD	595.	4.50	86.	22.	7.	.39		
+	ROUTED TO	RTWDXA	551.	4.75	86.	22.	7.	.39		
+	HYDROGRAPH AT	SUBXA	580.	4.25	71.	18.	6.	.25		
+	2 COMBINED AT	CPXA1	740.	4.33	154.	39.	13.	.64		
+	DIVERSION TO	DIZZ1	0.	.00	0.	0.	0.	.64		
+	HYDROGRAPH AT	DIXAO	740.	4.33	154.	39.	13.	.64		
+	ROUTED TO	RTXAWC	705.	4.92	154.	39.	13.	.64		
+	HYDROGRAPH AT	SUBWB	1154.	4.42	184.	46.	15.	.67		

+	ROUTED TO	RTWBWC	1092.	4.58	183.	46.	15.	.67
+	HYDROGRAPH AT	SUBWC	922.	4.42	138.	35.	12.	.49
+	3 COMBINED AT	CPWC	1938.	4.67	456.	116.	39.	1.79
+	DIVERSION TO	DIQE	0.	.00	0.	0.	0.	1.79
+	HYDROGRAPH AT	DIWCWA	1938.	4.67	456.	116.	39.	1.79
+	ROUTED TO	RTWCWA	948.	6.83	412.	116.	39.	1.79
+	HYDROGRAPH AT	SUBWA	1196.	4.25	141.	35.	12.	.49
+	2 COMBINED AT	CPWA1	941.	6.83	437.	150.	50.	2.29
+	HYDROGRAPH AT	SUBVD	1195.	4.42	191.	48.	16.	.70
+	ROUTED TO	RTVDWA	1156.	4.50	190.	48.	16.	.70
+	2 COMBINED AT	CPWA2	1537.	4.33	607.	195.	65.	2.98
+	DIVERSION TO	DIQD	1078.	4.33	255.	64.	21.	2.98
+	HYDROGRAPH AT	DIWAVC	459.	4.33	352.	130.	43.	2.98
+	ROUTED TO	RTWAVC	360.	12.08	321.	130.	43.	2.98
+	HYDROGRAPH AT	SUBVC	1177.	4.25	140.	35.	12.	.49
+	2 COMBINED AT	CPVC1	778.	4.17	321.	164.	55.	3.47
+	HYDROGRAPH AT	SUBVB	1651.	4.17	203.	51.	17.	.72
+	ROUTED TO	RTVBVC	1545.	4.25	202.	51.	17.	.72
+	2 COMBINED AT	CPVC2	1800.	4.25	421.	212.	71.	4.19
+	DIVERSION TO	DIVA	32.	4.00	20.	9.	3.	4.19
+	HYDROGRAPH AT	DIVCQA	1768.	4.25	406.	202.	67.	4.19
+	ROUTED TO	RTVCQA	1685.	4.42	402.	202.	67.	4.19
+	HYDROGRAPH AT	SUBQA	779.	4.58	124.	31.	10.	.49
+	2 COMBINED AT	CPQA2	2197.	4.42	508.	231.	77.	4.68
+	ROUTED TO	RSQA	2174.	4.42	507.	231.	77.	4.68
+	DIVERSION TO	DIPF	635.	4.42	192.	96.	32.	4.68
+	HYDROGRAPH AT	DIQAPF	1539.	4.42	315.	135.	45.	4.68
+	ROUTED TO	RTQAJH	1413.	5.00	310.	135.	45.	4.68
+	HYDROGRAPH AT	SUBQE	1654.	4.42	274.	69.	23.	.91
+	HYDROGRAPH AT	DRQE	0.	.00	0.	0.	0.	1.79
+	ROUTED TO	RTDIQE	0.	.00	0.	0.	0.	1.79
+	2 COMBINED AT	CPQE	1654.	4.42	274.	69.	23.	.91

+	ROUTED TO	RSQE	1575.	4.50	254.	64.	21.	.91
+	ROUTED TO	RTQEQC	1479.	4.67	253.	64.	21.	.91
+	HYDROGRAPH AT	SUBQD	600.	4.25	78.	20.	7.	.25
+	HYDROGRAPH AT	DRQD	1078.	4.33	255.	64.	21.	2.98
+	ROUTED TO	RTDIQD	1044.	4.50	251.	64.	21.	2.98
+	2 COMBINED AT	CPQD	1887.	4.42	361.	94.	31.	.25
+	ROUTED TO	RSQD	1831.	4.50	359.	93.	31.	.25
+	DIVERSION TO	DIQB	723.	4.50	100.	25.	8.	.25
+	HYDROGRAPH AT	DIQDQB	1108.	4.50	259.	68.	23.	.25
+	ROUTED TO	RTQDQC	1049.	4.58	257.	68.	23.	.25
+	HYDROGRAPH AT	SUBQC	1160.	4.33	167.	42.	14.	.61
+	3 COMBINED AT	CPQC	2913.	4.58	643.	168.	56.	1.77
+	DIVERSION TO	DISR	2330.	4.58	515.	135.	45.	1.77
+	HYDROGRAPH AT	DIQCR	583.	4.58	129.	34.	11.	1.77
+	ROUTED TO	RTQCJI	385.	6.25	121.	34.	11.	1.77
+	HYDROGRAPH AT	SUBQB	852.	4.50	141.	35.	12.	.50
+	HYDROGRAPH AT	DRQB	723.	4.50	100.	25.	8.	.25
+	ROUTED TO	RTDIQB	619.	5.00	99.	25.	8.	.25
+	2 COMBINED AT	CPQB	1061.	4.92	232.	60.	20.	.50
+	ROUTED TO	RSQB	942.	5.00	210.	55.	18.	.50
+	ROUTED TO	RTQBJH	851.	5.67	203.	55.	18.	.50
+	HYDROGRAPH AT	SUBJH	1096.	4.33	137.	34.	11.	.52
+	4 COMBINED AT	CPJH	1548.	4.92	653.	239.	80.	7.47
+	ROUTED TO	RTJHJI	1391.	5.67	647.	239.	80.	7.47
+	HYDROGRAPH AT	SUBJI	760.	4.17	82.	21.	7.	.31
+	2 COMBINED AT	CPJI	1399.	5.67	683.	257.	86.	7.78
+	DIVERSION TO	DISR1	1399.	5.67	683.	257.	86.	7.78
+	HYDROGRAPH AT	DISRX	0.	.00	0.	0.	0.	7.78
+	HYDROGRAPH AT	SUBPF	1297.	4.17	141.	35.	12.	.50
+	DIVERSION TO	RETPF	19.	.92	6.	2.	1.	.50
+	HYDROGRAPH AT	RETPF	1297.	4.17	136.	34.	11.	.50
	HYDROGRAPH AT							

+		DRPF	635.	4.42	192.	96.	32.	4.68
+	ROUTED TO	RTDIPF	622.	4.83	189.	96.	32.	4.68
+	2 COMBINED AT	@CPPF	1569.	4.17	378.	150.	50.	5.19
+	ROUTED TO	RSPF	769.	4.92	241.	112.	38.	5.19
+	DIVERSION TO	DIPE	0.	.00	0.	0.	0.	5.19
+	HYDROGRAPH AT	DIPFPE	769.	4.92	241.	112.	38.	5.19
+	ROUTED TO	RTPFJF	749.	5.17	238.	112.	38.	5.19
+	HYDROGRAPH AT	SUBUD	2034.	4.08	225.	56.	19.	.75
+	DIVERSION TO	RETB1	1140.	3.92	78.	20.	7.	.75
+	HYDROGRAPH AT	RETU	2034.	4.08	147.	37.	12.	.75
+	DIVERSION TO	59SD1D	102.	4.00	25.	6.	2.	.75
+	HYDROGRAPH AT	SDDRUD	1932.	4.08	122.	30.	10.	.75
+	DIVERSION TO	DIUA	466.	4.08	29.	7.	2.	.75
+	HYDROGRAPH AT	DIUDUA	1466.	4.08	92.	23.	8.	.75
+	ROUTED TO	RTUDVA	1145.	4.25	92.	23.	8.	.75
+	HYDROGRAPH AT	SUBVA	1195.	4.25	146.	37.	12.	.49
+	HYDROGRAPH AT	DRVA	32.	4.00	20.	9.	3.	4.19
+	3 COMBINED AT	CPVA1	2010.	4.25	241.	67.	22.	1.24
+	DIVERSION TO	59SD2D	59.	3.42	38.	17.	6.	1.24
+	HYDROGRAPH AT	SDDRVA	1951.	4.25	202.	51.	17.	1.24
+	DIVERSION TO	DIUC	783.	4.25	129.	32.	11.	1.24
+	HYDROGRAPH AT	DIVAPE	1168.	4.25	73.	18.	6.	1.24
+	ROUTED TO	RTVAPE	1043.	4.33	73.	18.	6.	1.24
+	HYDROGRAPH AT	SUBPE	1303.	4.17	138.	35.	12.	.50
+	HYDROGRAPH AT	DRPE	0.	.00	0.	0.	0.	5.19
+	ROUTED TO	RTDIPE	0.	.00	0.	0.	0.	5.19
+	3 COMBINED AT	CPPE	1559.	4.33	198.	50.	17.	1.75
+	ROUTED TO	RSPE	1478.	4.33	163.	42.	14.	1.75
+	DIVERSION TO	DIPD	3.	4.33	0.	0.	0.	1.75
+	HYDROGRAPH AT	DIPEPD	1476.	4.33	162.	41.	14.	1.75
+	ROUTED TO	RTPEJF	1345.	4.42	162.	41.	14.	1.75
+	HYDROGRAPH AT	SUBJF	1509.	4.08	144.	36.	12.	.50

+	3 COMBINED AT	CPJF	1306.	4.42	473.	178.	61.	7.44
+	ROUTED TO	RTJFJG	1130.	4.67	455.	174.	59.	7.44
+	HYDROGRAPH AT	SUBJG	1897.	4.17	254.	64.	21.	.90
+	2 COMBINED AT	CPJG	1904.	4.25	662.	231.	79.	8.34
+	2 COMBINED AT	CPJGSR	1706.	4.25	625.	223.	76.	16.11
+	HYDROGRAPH AT	DRUC	783.	4.25	129.	32.	11.	1.24
+	ROUTED TO	RTVAUC	500.	5.33	129.	32.	11.	1.24
+	ROUTED TO	MCUCUC	485.	5.50	129.	32.	11.	1.24
+	HYDROGRAPH AT	SUBUC	927.	4.42	128.	32.	11.	.48
+	2 COMBINED AT	@CPUC	744.	4.42	250.	64.	21.	1.73
+	HYDROGRAPH AT	SUBTB1	443.	4.00	37.	9.	3.	.14
+	DIVERSION TO	RETB1	443.	4.00	23.	6.	2.	.14
+	HYDROGRAPH AT	RETB1	347.	4.08	15.	4.	1.	.14
+	DIVERSION TO	67SD1D	17.	4.08	3.	1.	0.	.14
+	HYDROGRAPH AT	SDDTB1	330.	4.08	12.	3.	1.	.14
+	ROUTED TO	RTUAUC	122.	4.33	12.	3.	1.	.14
+	HYDROGRAPH AT	SUBUA	886.	4.58	144.	36.	12.	.56
+	HYDROGRAPH AT	DRUA	466.	4.08	29.	7.	2.	.75
+	ROUTED TO	RTDIUA	224.	4.58	29.	7.	2.	.75
+	3 COMBINED AT	@CPUA	1036.	4.58	179.	45.	15.	1.46
+	DIVERSION TO	67SD1D	96.	3.83	46.	12.	4.	1.46
+	HYDROGRAPH AT	SDDRUA	940.	4.58	133.	33.	11.	1.46
+	DIVERSION TO	DITB	188.	4.58	27.	7.	2.	1.46
+	HYDROGRAPH AT	DIUAUC	752.	4.58	106.	27.	9.	1.46
+	ROUTED TO	RTUAUC	719.	4.67	106.	27.	9.	1.46
+	2 COMBINED AT	~CPUC2	1125.	4.58	354.	91.	30.	3.19
+	DIVERSION TO	DIUB	1125.	4.58	354.	91.	30.	3.19
+	HYDROGRAPH AT	DIUCPC	0.	.00	0.	0.	0.	3.19
+	ROUTED TO	RTUCPC	0.	.00	0.	0.	0.	3.19
+	HYDROGRAPH AT	SUBPC	932.	4.08	84.	21.	7.	.30
+	2 COMBINED AT	CPPC	512.	4.08	80.	20.	7.	3.49
+	ROUTED TO	RSPC	59.	4.92	19.	9.	6.	3.49

+	ROUTED TO	RTPCNB	50.	5.75	19.	9.	6.	3.49
+	HYDROGRAPH AT	SUBNB	1154.	4.17	100.	25.	8.	.44
+	DIVERSION TO	RETNB	1150.	4.08	68.	17.	6.	.44
+	HYDROGRAPH AT	RETNB	930.	4.25	32.	8.	3.	.44
+	2 COMBINED AT	CPNB1	338.	4.42	41.	14.	8.	3.93
+	ROUTED TO	RTNBJD	164.	4.83	41.	14.	8.	3.93
+	HYDROGRAPH AT	SUBPD	1174.	4.17	111.	28.	9.	.44
+	HYDROGRAPH AT	DRPD	3.	4.33	0.	0.	0.	1.75
+	2 COMBINED AT	CPPD2	1175.	4.17	112.	28.	9.	.44
+	ROUTED TO	RSPD	95.	4.67	35.	11.	5.	.44
+	ROUTED TO	RTPDNC	82.	5.33	34.	11.	5.	.44
+	HYDROGRAPH AT	SUBNC	714.	4.08	76.	19.	6.	.31
+	2 COMBINED AT	CPNC	647.	4.08	99.	29.	11.	.75
+	ROUTED TO	RTNCJE	470.	4.75	98.	29.	11.	.75
+	HYDROGRAPH AT	SUBJE1	732.	4.08	66.	17.	6.	.25
+	2 COMBINED AT	CPJE1	612.	4.08	154.	44.	16.	1.00
+	ROUTED TO	RTJEJD	584.	4.17	153.	44.	16.	1.00
+	HYDROGRAPH AT	SUBJD	1447.	4.08	125.	31.	10.	.51
+	DIVERSION TO	RETJD	1215.	4.08	71.	18.	6.	.51
+	HYDROGRAPH AT	RETJD	1362.	4.17	55.	14.	5.	.51
+	3 COMBINED AT	CPJD	845.	4.33	213.	63.	25.	5.44
+	DIVERSION TO	DIJC2	306.	4.33	78.	23.	9.	5.44
+	HYDROGRAPH AT	DIJDJC	539.	4.33	135.	40.	16.	5.44
+	ROUTED TO	RTJDFC	457.	4.42	135.	40.	16.	5.44
+	HYDROGRAPH AT	SUBJE2	742.	4.08	74.	18.	6.	.25
+	DIVERSION TO	RETJE	123.	3.58	9.	2.	1.	.25
+	HYDROGRAPH AT	RETJE2	742.	4.08	64.	16.	5.	.25
+	ROUTED TO	RTJEFC	595.	4.33	64.	16.	5.	.25
+	HYDROGRAPH AT	SUBFC	910.	4.08	101.	25.	8.	.36
+	3 COMBINED AT	CPFC	1176.	4.33	277.	77.	29.	6.05
+	2 COMBINED AT	CPFCSR	2448.	4.33	833.	282.	98.	22.16
	HYDROGRAPH AT							

+		DRUCUB	1125.	4.58	354.	91.	30.	3.19
+	ROUTED TO	MCUCUB	1123.	4.67	354.	91.	30.	3.19
+	HYDROGRAPH AT	SUBUB	299.	4.33	37.	9.	3.	.14
+	2 COMBINED AT	~@CPUB	1324.	4.58	390.	100.	33.	2.42
+	HYDROGRAPH AT	SUBSF1	155.	4.50	27.	7.	2.	.13
+	HYDROGRAPH AT	DRTB	188.	4.58	27.	7.	2.	1.46
+	ROUTED TO	RTDITB	182.	4.75	27.	7.	2.	1.46
+	3 COMBINED AT	CPBA3	1574.	4.58	441.	113.	38.	2.55
+	HYDROGRAPH AT	SUBTB2	1085.	4.67	221.	56.	19.	.75
+	DIVERSION TO	RETTB	464.	4.08	40.	10.	3.	.75
+	HYDROGRAPH AT	RETTB	1085.	4.67	183.	46.	15.	.75
+	DIVERSION TO	DITA	262.	4.67	45.	11.	4.	.75
+	HYDROGRAPH AT	DITBTA	822.	4.67	138.	35.	12.	.75
+	ROUTED TO	RTTBSF	803.	4.75	138.	35.	12.	.75
+	HYDROGRAPH AT	SUSFB2	354.	4.08	32.	8.	3.	.11
+	HYDROGRAPH AT	SUSF2A	488.	4.00	45.	11.	4.	.14
+	DIVERSION TO	RETSF2	488.	4.00	45.	11.	4.	.14
+	HYDROGRAPH AT	RSSF2A	0.	.00	0.	0.	0.	.14
+	3 COMBINED AT	CPSF2B	803.	4.75	168.	42.	14.	1.00
+	2 COMBINED AT	CPBA3	2168.	4.67	595.	152.	51.	3.55
+	ROUTED TO	BSN71	93.	8.25	93.	91.	51.	3.55
+	DIVERSION TO	BSN71	93.	8.25	93.	91.	51.	3.55
+	HYDROGRAPH AT	DBSN71	0.	.00	0.	0.	0.	3.55
+	HYDROGRAPH AT	SUBPB	1132.	4.17	121.	30.	10.	.41
+	DIVERSION TO	RETPB	1132.	4.17	87.	22.	7.	.41
+	HYDROGRAPH AT	RETPB	633.	4.33	35.	9.	3.	.41
+	HYDROGRAPH AT	PB75	36.	4.00	3.	1.	0.	.01
+	HYDROGRAPH AT	PBBU	61.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CPBSD	92.	4.08	10.	2.	1.	.03
+	DIVERSION TO	SD75PB	23.	3.67	6.	1.	0.	.03
+	HYDROGRAPH AT	DPBSD1	69.	4.08	4.	1.	0.	.03
+	DIVERSION TO	SDBRPB	39.	3.92	3.	1.	0.	.03

+	HYDROGRAPH AT	DPBSD2	30.	4.08	1.	0.	0.	.03
+	2 COMBINED AT	CPPB	633.	4.33	36.	9.	3.	.44
+	DIVERSION TO	DIPA1	120.	4.33	7.	2.	1.	.44
+	HYDROGRAPH AT	DIPBPA	513.	4.33	29.	7.	2.	.44
+	2 COMBINED AT	CPPB1	296.	4.42	24.	6.	2.	3.99
+	ROUTED TO	RTPBNA	129.	5.00	24.	6.	2.	3.99
+	HYDROGRAPH AT	SUBNA	1930.	4.25	267.	67.	22.	.94
+	DIVERSION TO	RETNA	1930.	4.25	181.	45.	15.	.94
+	HYDROGRAPH AT	RETNA	1140.	4.50	87.	22.	7.	.94
+	HYDROGRAPH AT	NA75	64.	4.08	6.	2.	1.	.02
+	HYDROGRAPH AT	NALB	61.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CNASD	124.	4.08	13.	3.	1.	.04
+	3 COMBINED AT	CPNA1	1154.	4.50	119.	30.	10.	4.97
+	DIVERSION TO	SD75NA	40.	3.83	24.	6.	2.	4.97
+	HYDROGRAPH AT	DNASD1	731.	4.50	85.	21.	7.	4.97
+	DIVERSION TO	SDLBNA	38.	4.58	14.	4.	1.	4.97
+	HYDROGRAPH AT	DNASD2	705.	4.50	70.	18.	6.	4.97
+	DIVERSION TO	ADMP1	705.	4.50	70.	18.	6.	4.97
+	HYDROGRAPH AT	DADMP1	0.	.00	0.	0.	0.	4.97
+	HYDROGRAPH AT	SUBJC1	1104.	4.17	119.	30.	10.	.47
+	DIVERSION TO	RETJC1	1104.	4.17	72.	18.	6.	.47
+	HYDROGRAPH AT	RETJC1	933.	4.33	48.	12.	4.	.47
+	HYDROGRAPH AT	JC75	66.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CJCSD1	957.	4.33	55.	14.	5.	.49
+	HYDROGRAPH AT	SUBJC2	1098.	4.17	104.	26.	9.	.48
+	DIVERSION TO	RETJC2	949.	4.08	40.	10.	3.	.48
+	HYDROGRAPH AT	RETJC2	1093.	4.25	64.	16.	5.	.48
+	DIVERSION TO	DETJC2	1093.	4.25	33.	8.	3.	.48
+	HYDROGRAPH AT	DETJC2	666.	4.33	31.	8.	3.	.48
+	ROUTED TO	RTJCJC	408.	4.58	31.	8.	3.	.48
+	2 COMBINED AT	CPJC1A	949.	4.33	85.	21.	7.	.97
+	HYDROGRAPH AT	JCBR	65.	4.08	7.	2.	1.	.02

+	2 COMBINED AT	CJCSD2	924.	4.33	90.	23.	8.	.99
+	2 COMBINED AT	CPJC1B	457.	4.50	65.	16.	5.	5.96
+	DIVERSION TO	SDOSBR	41.	3.83	21.	5.	2.	5.96
+	HYDROGRAPH AT	DJC2SD	416.	4.50	45.	11.	4.	5.96
+	DIVERSION TO	SD75JC	42.	4.50	10.	3.	1.	5.96
+	HYDROGRAPH AT	DJCSD1	374.	4.50	35.	9.	3.	5.96
+	HYDROGRAPH AT	DIJD	306.	4.33	78.	23.	9.	5.44
+	ROUTED TO	RTJCJC	235.	4.75	78.	23.	9.	5.44
+	2 COMBINED AT	CPJC2	469.	4.58	103.	29.	11.	8.11
+	DIVERSION TO	DIJB2	213.	4.58	47.	13.	5.	8.11
+	HYDROGRAPH AT	DIJCJB	257.	4.58	56.	16.	6.	8.11
+	ROUTED TO	RTJCFB	209.	5.00	55.	16.	6.	8.11
+	HYDROGRAPH AT	DRB71	93.	8.25	93.	91.	51.	3.55
+	ROUTED TO	RT71PB	93.	8.42	93.	91.	51.	3.55
+	HYDROGRAPH AT	RSDPB1	23.	3.67	6.	1.	0.	.03
+	2 COMBINED AT	CPPBS1	95.	6.00	93.	91.	51.	3.99
+	HYDROGRAPH AT	RSDPB2	39.	3.92	3.	1.	0.	.03
+	2 COMBINED AT	CPPBS2	105.	4.08	94.	91.	51.	3.99
+	ROUTED TO	RTPBNA	105.	4.25	94.	91.	51.	3.99
+	HYDROGRAPH AT	RSDNA1	40.	3.83	24.	6.	2.	4.97
+	2 COMBINED AT	CPNAS1	143.	4.25	114.	96.	53.	4.97
+	HYDROGRAPH AT	RSDNA2	38.	4.58	14.	4.	1.	4.97
+	2 COMBINED AT	CPNAS2	173.	6.17	129.	100.	54.	4.97
+	ROUTED TO	RTNAJC	173.	6.33	129.	100.	54.	4.97
+	HYDROGRAPH AT	RSDJC1	42.	4.50	10.	3.	1.	5.96
+	2 COMBINED AT	CPJCS1	213.	5.33	138.	102.	54.	5.96
+	HYDROGRAPH AT	RSDJC3	41.	3.83	21.	5.	2.	5.96
+	2 COMBINED AT	CPJCS3	254.	5.33	156.	107.	56.	5.96
+	ROUTED TO	RTJCFB	254.	5.50	156.	107.	56.	5.96
+	HYDROGRAPH AT	FB75	58.	4.08	6.	1.	0.	.02
+	2 COMBINED AT	CPFB	257.	4.92	160.	108.	56.	5.98
	3 COMBINED AT							

+		DUMM	2444.	4.33	956.	375.	146.	36.25
+	HYDROGRAPH AT	SUBSH	333.	4.08	30.	8.	3.	.10
+	DIVERSION TO	RETSH	315.	4.08	21.	5.	2.	.10
+	HYDROGRAPH AT	RETSH	261.	4.17	10.	2.	1.	.10
+	ROUTED TO	RSSH	0.	.00	0.	0.	0.	.10
+	DIVERSION TO	DIRJ2	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	DISHRJ	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTSHSG	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	SUBTA	649.	4.17	68.	17.	6.	.24
+	DIVERSION TO	RETTA	649.	4.17	49.	12.	4.	.24
+	HYDROGRAPH AT	RETTA	365.	4.33	20.	5.	2.	.24
+	HYDROGRAPH AT	DRTA	262.	4.67	45.	11.	4.	.75
+	ROUTED TO	RTDITA	234.	5.17	45.	11.	4.	.75
+	2 COMBINED AT	@CPTA	366.	4.33	65.	16.	5.	1.13
+	ROUTED TO	RTTASG	230.	5.33	63.	16.	5.	1.13
+	HYDROGRAPH AT	SUBSG	376.	4.17	40.	10.	3.	.14
+	DIVERSION TO	RETSG	376.	4.17	27.	7.	2.	.14
+	HYDROGRAPH AT	RETSG	268.	4.25	13.	3.	1.	.14
+	3 COMBINED AT	CPSG	235.	5.33	74.	18.	6.	1.37
+	ROUTED TO	RSSG	229.	5.42	48.	12.	4.	1.37
+	DIVERSION TO	DIRJ4	163.	5.42	29.	7.	2.	1.37
+	HYDROGRAPH AT	DISGRJ	67.	5.42	19.	5.	2.	1.37
+	ROUTED TO	RTSGSE	61.	5.75	19.	5.	2.	1.37
+	HYDROGRAPH AT	SUBSC	988.	4.25	121.	30.	10.	.45
+	DIVERSION TO	RETSC	988.	4.25	92.	23.	8.	.45
+	HYDROGRAPH AT	RETSC	507.	4.50	30.	8.	3.	.45
+	DIVERSION TO	DISD	274.	4.50	16.	4.	1.	.45
+	HYDROGRAPH AT	DISCSD	233.	4.50	14.	3.	1.	.45
+	ROUTED TO	RTSCSE	155.	4.58	14.	3.	1.	.45
+	HYDROGRAPH AT	SUBSE	425.	4.00	33.	8.	3.	.13
+	DIVERSION TO	RETSE	425.	4.00	25.	6.	2.	.13
+	HYDROGRAPH AT	RETSE	160.	4.17	8.	2.	1.	.13

+	3 COMBINED AT	CPSE	144.	4.58	39.	10.	3.	1.95
+	ROUTED TO	RSSE	12.	6.58	7.	4.	3.	1.95
+	DIVERSION TO	DIRJ5	12.	6.58	7.	4.	3.	1.95
+	HYDROGRAPH AT	DISERJ	0.	.00	0.	0.	0.	1.95
+	ROUTED TO	RTSERI	0.	.00	0.	0.	0.	1.95
+	HYDROGRAPH AT	SUBRJ	413.	4.17	46.	12.	4.	.16
+	DIVERSION TO	RETRJ	413.	4.17	33.	8.	3.	.16
+	HYDROGRAPH AT	RETRJ	282.	4.33	14.	3.	1.	.16
+	HYDROGRAPH AT	CPRJ2	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTSHRJ	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTRJ3	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	CPRJ4A	163.	5.42	29.	7.	2.	1.37
+	2 COMBINED AT	CPRJ4B	177.	5.42	32.	8.	3.	.39
+	ROUTED TO	RTSGRJ	165.	5.67	32.	8.	3.	.39
+	HYDROGRAPH AT	CPRJ5	12.	6.58	7.	4.	3.	1.95
+	ROUTED TO	RTSERJ	10.	7.33	7.	4.	3.	1.95
+	3 COMBINED AT	@CPRJ6	444.	4.50	68.	20.	9.	3.81
+	ROUTED TO	RSRJ	80.	6.42	34.	11.	6.	3.81
+	DIVERSION TO	DIPA2	0.	.00	0.	0.	0.	3.81
+	HYDROGRAPH AT	DIRJPA	80.	6.42	34.	11.	6.	3.81
+	ROUTED TO	RTRJRI	76.	6.92	34.	11.	6.	3.81
+	ROUTED TO	RTRIRI	73.	7.17	33.	11.	6.	3.81
+	HYDROGRAPH AT	SUBRI	742.	4.08	67.	17.	6.	.23
+	DIVERSION TO	RETRI	738.	4.00	47.	12.	4.	.23
+	HYDROGRAPH AT	RETRI	523.	4.17	20.	5.	2.	.23
+	HYDROGRAPH AT	SUBSB	536.	4.08	50.	12.	4.	.17
+	DIVERSION TO	RETSB	536.	4.08	34.	8.	3.	.17
+	HYDROGRAPH AT	RETSB	393.	4.17	16.	4.	1.	.17
+	ROUTED TO	RSSB	74.	4.42	12.	3.	1.	.17
+	HYDROGRAPH AT	SUBSD	487.	4.08	46.	12.	4.	.17
+	DIVERSION TO	RETSD	487.	4.08	34.	8.	3.	.17
+	HYDROGRAPH AT	RETSD	309.	4.25	13.	3.	1.	.17

+	HYDROGRAPH AT	DRSD	274.	4.50	16.	4.	1.	.45
+	3 COMBINED AT	@CPSD	340.	4.50	38.	9.	3.	.79
+	ROUTED TO	RSSD	342.	4.50	38.	9.	3.	.79
+	ROUTED TO	RTSDRI	239.	4.75	38.	9.	3.	.79
+	4 COMBINED AT	~@CPRI	837.	4.33	163.	46.	17.	4.38
+	ROUTED TO	MCRIRH	164.	5.17	71.	22.	9.	4.38
+	HYDROGRAPH AT	SUBPA	1148.	4.17	136.	34.	11.	.48
+	DIVERSION TO	RETPA	1148.	4.17	96.	24.	8.	.48
+	HYDROGRAPH AT	RETPA	690.	4.42	40.	10.	3.	.48
+	HYDROGRAPH AT	DRPA2	0.	.00	0.	0.	0.	3.81
+	ROUTED TO	RTRJPA	0.	.00	0.	0.	0.	3.81
+	2 COMBINED AT	CPPA	690.	4.42	40.	10.	3.	.48
+	DIVERSION TO	DIOE	124.	4.42	7.	2.	1.	.48
+	HYDROGRAPH AT	DIPAOE	566.	4.42	33.	8.	3.	.48
+	ROUTED TO	RTPAMH	290.	4.67	33.	8.	3.	.48
+	HYDROGRAPH AT	SUBMH	601.	4.17	62.	16.	5.	.24
+	DIVERSION TO	RETMH	601.	4.17	40.	10.	3.	.24
+	HYDROGRAPH AT	RETMH	435.	4.33	22.	6.	2.	.24
+	2 COMBINED AT	CPMH	370.	4.33	54.	13.	4.	.72
+	ROUTED TO	RTMHMD	300.	4.75	54.	13.	4.	.72
+	HYDROGRAPH AT	SUBMD	423.	4.50	68.	17.	6.	.25
+	DIVERSION TO	RETMD	423.	4.50	43.	11.	4.	.25
+	HYDROGRAPH AT	RETMD	329.	4.67	26.	6.	2.	.25
+	2 COMBINED AT	CPMD	534.	4.83	77.	19.	6.	.97
+	DIVERSION TO	DIJB1	109.	4.83	16.	4.	1.	.97
+	HYDROGRAPH AT	DIMDJB	425.	4.83	61.	15.	5.	.97
+	DIVERSION TO	DIMFX	425.	4.83	61.	15.	5.	.97
+	HYDROGRAPH AT	DIMDMF	0.	.00	0.	0.	0.	.97
+	HYDROGRAPH AT	SUBMI	1098.	4.17	109.	27.	9.	.41
+	DIVERSION TO	RETMI	1078.	4.08	71.	18.	6.	.41
+	HYDROGRAPH AT	RETMI	930.	4.25	38.	10.	3.	.41
	HYDROGRAPH AT							

+		SUBMG	257.	4.08	22.	5.	2.	.08
+	DIVERSION TO	RETMG	240.	4.00	15.	4.	1.	.08
+	HYDROGRAPH AT	RETMG	203.	4.17	7.	2.	1.	.08
+	2 COMBINED AT	CPMG	1038.	4.25	46.	11.	4.	.49
+	ROUTED TO	RTMGJB	374.	4.92	46.	11.	4.	.49
+	HYDROGRAPH AT	SUBJB1	703.	4.50	105.	26.	9.	.49
+	DIVERSION TO	RETJB1	315.	4.08	21.	5.	2.	.49
+	HYDROGRAPH AT	RETJB1	703.	4.50	84.	21.	7.	.49
+	HYDROGRAPH AT	DRJB	109.	4.83	16.	4.	1.	.97
+	ROUTED TO	RDIJB1	84.	5.17	16.	4.	1.	.97
+	HYDROGRAPH AT	ADMP1	705.	4.50	70.	18.	6.	4.97
+	ROUTED TO	MCJCJB	290.	5.67	70.	18.	6.	4.97
+	5 COMBINED AT	~CPJB1	707.	5.33	205.	51.	17.	9.37
+	ROUTED TO	RRJB1	345.	5.50	156.	41.	14.	9.37
+	DIVERSION TO	DIED	345.	5.50	156.	41.	14.	9.37
+	HYDROGRAPH AT	DIED	0.	.00	0.	0.	0.	9.37
+	HYDROGRAPH AT	SUBOE	1120.	4.17	128.	32.	11.	.47
+	DIVERSION TO	RETOE	1120.	4.17	95.	24.	8.	.47
+	HYDROGRAPH AT	RETOE	618.	4.42	33.	8.	3.	.47
+	HYDROGRAPH AT	CPOE1	124.	4.42	7.	2.	1.	.48
+	ROUTED TO	RTDIOE	29.	5.67	7.	2.	1.	.48
+	2 COMBINED AT	@CPOE	618.	4.42	41.	10.	3.	.47
+	DIVERSION TO	DIOD	101.	4.42	7.	2.	1.	.47
+	HYDROGRAPH AT	DIOEOD	517.	4.42	34.	8.	3.	.47
+	ROUTED TO	RTOEMF	175.	4.92	34.	8.	3.	.47
+	HYDROGRAPH AT	SUBMF	1379.	4.58	245.	62.	21.	.97
+	DIVERSION TO	RETMF	1379.	4.58	162.	40.	13.	.97
+	HYDROGRAPH AT	RETMF	869.	4.83	84.	21.	7.	.97
+	HYDROGRAPH AT	CPMF	425.	4.83	61.	15.	5.	.97
+	ROUTED TO	RTMDMF	308.	5.33	61.	15.	5.	.97
+	3 COMBINED AT	CPMF1	955.	4.92	170.	43.	14.	1.44
+	DIVERSION TO	DIEB	441.	4.92	79.	20.	7.	1.44

+	HYDROGRAPH AT	DIMFEB	514.	4.92	91.	23.	8.	1.44
+	ROUTED TO	RTMFMC	393.	5.50	90.	23.	8.	1.44
+	HYDROGRAPH AT	SUBOD	1279.	4.17	150.	38.	13.	.51
+	DIVERSION TO	RETOD	1279.	4.17	128.	32.	11.	.51
+	HYDROGRAPH AT	RETOD	353.	4.50	22.	6.	2.	.51
+	HYDROGRAPH AT	DROD	101.	4.42	7.	2.	1.	.47
+	ROUTED TO	RTDIOD	29.	5.08	7.	2.	1.	.47
+	2 COMBINED AT	CPOD	355.	4.50	29.	7.	2.	.51
+	DIVERSION TO	DIOC	64.	4.50	5.	1.	0.	.51
+	HYDROGRAPH AT	DIODOC	291.	4.50	24.	6.	2.	.51
+	ROUTED TO	RTODMC	104.	5.17	24.	6.	2.	.51
+	HYDROGRAPH AT	SUBMC	1825.	4.33	291.	73.	24.	1.00
+	DIVERSION TO	RETMC	1825.	4.33	192.	48.	16.	1.00
+	HYDROGRAPH AT	RETMC	1234.	4.58	100.	25.	8.	1.00
+	3 COMBINED AT	CPMC1	1043.	4.58	196.	49.	16.	2.95
+	DIVERSION TO	DIMB	398.	4.58	75.	19.	6.	2.95
+	HYDROGRAPH AT	DIMCMB	645.	4.58	121.	30.	10.	2.95
+	ROUTED TO	RTMCIE	478.	4.83	120.	30.	10.	2.95
+	DIVERSION TO	MCIE	478.	4.83	120.	30.	10.	2.95
+	HYDROGRAPH AT	DIMCIE	0.	.00	0.	0.	0.	2.95
+	HYDROGRAPH AT	DREB	441.	4.92	79.	20.	7.	1.44
+	HYDROGRAPH AT	SUBEB	308.	4.25	32.	8.	3.	.14
+	DIVERSION TO	RETEB	308.	4.25	23.	6.	2.	.14
+	HYDROGRAPH AT	RETEB	188.	4.42	9.	2.	1.	.14
+	2 COMBINED AT	CPEB	646.	4.75	97.	24.	8.	.14
+	HYDROGRAPH AT	RDIED	345.	5.50	156.	41.	14.	9.37
+	ROUTED TO	RJBED1	323.	5.83	155.	41.	14.	9.37
+	ROUTED TO	RJBED2	291.	6.92	152.	41.	14.	9.37
+	HYDROGRAPH AT	SUBED1	536.	4.58	84.	21.	7.	.38
+	DIVERSION TO	RETED1	487.	4.42	40.	10.	3.	.38
+	HYDROGRAPH AT	RETED1	536.	4.58	44.	11.	4.	.38
+	HYDROGRAPH AT	SUBED2	218.	4.25	22.	6.	2.	.11

+	DIVERSION TO	RETED2	218.	4.25	15.	4.	1.	.11
+	HYDROGRAPH AT	RETED2	159.	4.42	7.	2.	1.	.11
+	2 COMBINED AT	CPED1	611.	4.58	51.	13.	4.	.50
+	2 COMBINED AT	~CPED1	894.	5.83	270.	73.	24.	.50
+	2 COMBINED AT	~CPED2	981.	4.75	357.	95.	32.	.63
+	ROUTED TO	RRED	876.	5.92	352.	95.	32.	.63
+	ROUTED TO	RT99	736.	6.25	344.	95.	32.	.63
+	HYDROGRAPH AT	SUBID1	370.	4.42	52.	13.	4.	.20
+	DIVERSION TO	RETID1	370.	4.42	34.	9.	3.	.20
+	HYDROGRAPH AT	RETID1	297.	4.58	19.	5.	2.	.20
+	HYDROGRAPH AT	SUBID2	560.	4.42	77.	19.	6.	.36
+	DIVERSION TO	RETID2	560.	4.42	60.	15.	5.	.36
+	HYDROGRAPH AT	RETID2	286.	4.75	17.	4.	1.	.36
+	HYDROGRAPH AT	SUBIE	574.	4.42	117.	29.	10.	.30
+	DIVERSION TO	RETIE	574.	4.42	50.	13.	4.	.30
+	HYDROGRAPH AT	RETIE	470.	4.58	67.	17.	6.	.30
+	HYDROGRAPH AT	DRMCIE	478.	4.83	120.	30.	10.	2.95
+	4 COMBINED AT	~CPID2	1308.	4.75	230.	58.	19.	.87
+	ROUTED TO	RRID1	1163.	4.83	230.	58.	19.	.87
+	2 COMBINED AT	CPID3	1167.	4.92	525.	142.	47.	1.50
+	ROUTED TO	RT107	1120.	5.25	519.	142.	47.	1.50
+	HYDROGRAPH AT	SUBIB	826.	4.42	121.	30.	10.	.48
+	DIVERSION TO	RETIB	327.	4.00	21.	5.	2.	.48
+	HYDROGRAPH AT	RETIB	826.	4.42	101.	25.	8.	.48
+	HYDROGRAPH AT	SUBIC	630.	4.58	100.	25.	8.	.46
+	DIVERSION TO	RETIC	291.	4.17	20.	5.	2.	.46
+	HYDROGRAPH AT	RETIC	630.	4.58	80.	20.	7.	.46
+	2 COMBINED AT	CPIC	1296.	4.50	174.	44.	15.	.94
+	HYDROGRAPH AT	SUBOC	847.	4.17	93.	23.	8.	.31
+	DIVERSION TO	RETOC	847.	4.17	63.	16.	5.	.31
+	HYDROGRAPH AT	RETOC	546.	4.25	30.	8.	3.	.31
	HYDROGRAPH AT							

+		DROC	64.	4.50	5.	1.	0.	.51
+	ROUTED TO	RTDIOC	18.	5.92	5.	1.	0.	.51
+	2 COMBINED AT	CPOC	546.	4.25	36.	9.	3.	.31
+	ROUTED TO	RTOCMB	231.	4.67	36.	9.	3.	.31
+	HYDROGRAPH AT	SUBMB	1673.	4.42	273.	68.	23.	1.00
+	DIVERSION TO	RETMB	1673.	4.42	178.	45.	15.	1.00
+	HYDROGRAPH AT	RETMB	1163.	4.67	96.	24.	8.	1.00
+	HYDROGRAPH AT	DRMB	398.	4.58	75.	19.	6.	2.95
+	ROUTED TO	RTDIMB	217.	5.17	74.	19.	6.	2.95
+	3 COMBINED AT	@CPMB	1155.	4.67	195.	49.	16.	5.24
+	ROUTED TO	RTMBIB	612.	5.17	172.	44.	15.	5.24
+	2 COMBINED AT	CPIB0	1316.	4.92	365.	93.	31.	6.18
+	3 COMBINED AT	@CPIB2	1434.	5.25	627.	175.	58.	10.63
+	ROUTED TO	DET107	1220.	5.58	597.	174.	58.	10.63
+	ROUTED TO	MCIBIA	1189.	5.92	589.	174.	58.	10.63
+	HYDROGRAPH AT	SUBME	521.	4.33	60.	15.	5.	.33
+	DIVERSION TO	RETME	521.	4.33	46.	11.	4.	.33
+	HYDROGRAPH AT	RETME	257.	4.58	14.	4.	1.	.33
+	ROUTED TO	RTMEIA	118.	5.00	14.	4.	1.	.33
+	HYDROGRAPH AT	SUBIA	594.	4.25	67.	17.	6.	.31
+	DIVERSION TO	RETIA	110.	3.83	7.	2.	1.	.31
+	HYDROGRAPH AT	RETIA	594.	4.25	59.	15.	5.	.31
+	3 COMBINED AT	~CPIA	1186.	5.92	587.	184.	61.	11.26
+	ROUTED TO	MCIAHB	1151.	6.25	583.	183.	61.	11.26
+	HYDROGRAPH AT	SUBHB	644.	4.25	69.	17.	6.	.34
+	DIVERSION TO	RETHB	119.	3.92	9.	2.	1.	.34
+	HYDROGRAPH AT	RETHB	644.	4.25	60.	15.	5.	.34
+	2 COMBINED AT	CPHB1	1149.	6.25	586.	192.	64.	11.61
+	HYDROGRAPH AT	SUBDA	565.	4.42	72.	18.	6.	.33
+	DIVERSION TO	RETDA	216.	4.00	9.	2.	1.	.33
+	HYDROGRAPH AT	RETDA	565.	4.42	63.	16.	5.	.33
+	2 COMBINED AT	~CPDA	1146.	6.25	628.	203.	68.	11.94

+	HYDROGRAPH AT	SUBLD	489.	4.33	60.	15.	5.	.28
+	DIVERSION TO	RETLD	489.	4.33	42.	10.	3.	.28
+	HYDROGRAPH AT	RETLD	287.	4.58	18.	4.	1.	.28
+	ROUTED TO	RTLDMA	163.	4.83	18.	4.	1.	.28
+	HYDROGRAPH AT	SUBMA	430.	4.25	42.	11.	4.	.25
+	DIVERSION TO	RETMA	430.	4.25	33.	8.	3.	.25
+	HYDROGRAPH AT	RETMA	220.	4.50	10.	2.	1.	.25
+	2 COMBINED AT	CPMA	215.	4.50	27.	7.	2.	.52
+	ROUTED TO	RTMAHB	165.	5.08	27.	7.	2.	.52
+	2 COMBINED AT	CPHB2	1148.	6.25	628.	203.	68.	12.46
+	HYDROGRAPH AT	SUBLB	412.	4.33	43.	11.	4.	.25
+	DIVERSION TO	RETLB	412.	4.33	33.	8.	3.	.25
+	HYDROGRAPH AT	RETLB	189.	4.58	10.	3.	1.	.25
+	ROUTED TO	RTLBHA	51.	5.83	10.	3.	1.	.25
+	HYDROGRAPH AT	SUBHA	298.	4.25	32.	8.	3.	.15
+	DIVERSION TO	RETHA	106.	3.92	6.	2.	1.	.15
+	HYDROGRAPH AT	RETHA	298.	4.25	25.	6.	2.	.15
+	3 COMBINED AT	CPHA	1136.	6.25	636.	206.	69.	12.86
+	ROUTED TO	MCHACB	1071.	6.92	611.	205.	69.	12.86
+	HYDROGRAPH AT	SUBJB	744.	4.50	106.	27.	9.	.49
+	DIVERSION TO	RETJB2	744.	4.50	65.	16.	5.	.49
+	HYDROGRAPH AT	RETJB2	613.	4.67	41.	10.	3.	.49
+	HYDROGRAPH AT	DRJB2	213.	4.58	47.	13.	5.	8.11
+	ROUTED TO	RTJCJ	147.	5.25	46.	13.	5.	8.11
+	2 COMBINED AT	@CPJB2	739.	4.83	108.	29.	11.	3.81
+	DIVERSION TO	DIFA	276.	5.00	54.	15.	5.	3.81
+	HYDROGRAPH AT	DIJBEE	155.	5.00	30.	8.	3.	3.81
+	ROUTED TO	RTJBEE	86.	6.25	29.	8.	3.	3.81
+	HYDROGRAPH AT	SUBEE	1002.	4.67	177.	44.	15.	.96
+	DIVERSION TO	RETEE	1002.	4.67	127.	32.	11.	.96
+	HYDROGRAPH AT	RETEE	468.	4.92	50.	13.	4.	.96
+	2 COMBINED AT	CPEE	273.	5.17	50.	14.	5.	4.77

+	ROUTED TO	RTEEEA	43.	13.25	36.	14.	5.	4.77
+	HYDROGRAPH AT	SUBEA	1391.	4.58	231.	58.	19.	1.32
+	DIVERSION TO	RETEA	1391.	4.58	180.	45.	15.	1.32
+	HYDROGRAPH AT	RETEA	478.	4.83	52.	13.	4.	1.32
+	2 COMBINED AT	CPEA	303.	5.17	35.	19.	7.	6.09
+	ROUTED TO	RTEADC	141.	5.67	31.	17.	6.	6.09
+	HYDROGRAPH AT	SUBDC	1202.	4.42	158.	40.	13.	.83
+	DIVERSION TO	RETDC	846.	4.17	52.	13.	4.	.83
+	HYDROGRAPH AT	RETDC	1202.	4.42	107.	27.	9.	.83
+	2 COMBINED AT	~CPDC	776.	4.42	94.	34.	12.	6.92
+	ROUTED TO	RTDCCC	565.	4.92	93.	34.	12.	6.92
+	HYDROGRAPH AT	SUBDD	308.	4.17	28.	7.	2.	.13
+	DIVERSION TO	RETDD	308.	4.17	22.	6.	2.	.13
+	HYDROGRAPH AT	RETDD	119.	4.33	6.	2.	1.	.13
+	ROUTED TO	RTDDCC	28.	5.42	6.	2.	1.	.13
+	HYDROGRAPH AT	SUBCC	1311.	4.50	194.	49.	16.	.98
+	DIVERSION TO	RETCC	984.	4.25	69.	17.	6.	.98
+	HYDROGRAPH AT	RETCC	1311.	4.50	125.	31.	10.	.98
+	3 COMBINED AT	~CPCC	1122.	4.83	181.	55.	19.	8.03
+	ROUTED TO	RTCCSC	1032.	5.08	180.	55.	19.	8.03
+	ROUTED TO	RTCCSC	932.	5.25	179.	55.	19.	8.03
+	HYDROGRAPH AT	SUBCB	1204.	4.42	178.	45.	15.	.74
+	DIVERSION TO	RETCB	582.	4.08	32.	8.	3.	.74
+	HYDROGRAPH AT	RETCB	1204.	4.42	146.	37.	12.	.74
+	3 COMBINED AT	~CPCB1	1320.	5.33	712.	243.	82.	21.63
+	HYDROGRAPH AT	SUBGD1	1022.	4.42	136.	34.	11.	.63
+	DIVERSION TO	RETGD1	451.	4.00	27.	7.	2.	.63
+	HYDROGRAPH AT	RETGD1	1022.	4.42	110.	27.	9.	.63
+	HYDROGRAPH AT	SUBGD2	1299.	4.50	195.	49.	16.	.21
+	DIVERSION TO	RETGD2	527.	4.00	32.	8.	3.	.21
+	HYDROGRAPH AT	RETGD2	1299.	4.50	164.	41.	14.	.21
	2 COMBINED AT							

+		CPGD	2156.	4.42	268.	67.	22.	.84
+	HYDROGRAPH AT	SUBKC	492.	4.25	54.	14.	5.	.26
+	DIVERSION TO	RETKC	492.	4.25	44.	11.	4.	.26
+	HYDROGRAPH AT	RETKC	183.	4.58	10.	3.	1.	.26
+	ROUTED TO	RTKCGD	60.	5.08	10.	3.	1.	.26
+	HYDROGRAPH AT	SUBGC	432.	4.25	43.	11.	4.	.22
+	DIVERSION TO	RETGC	234.	4.00	10.	3.	1.	.22
+	HYDROGRAPH AT	RETGC	432.	4.25	33.	8.	3.	.22
+	ROUTED TO	RTGCGD	423.	4.25	33.	8.	3.	.22
+	3 COMBINED AT	CPGD1	2260.	4.42	297.	74.	25.	1.32
+	ROUTED TO	RTGDCB	2252.	4.50	297.	74.	25.	1.32
+	2 COMBINED AT	~CPCB2	2043.	4.50	919.	293.	99.	22.95
+	ROUTED TO	MCCBCA	1894.	4.92	900.	292.	99.	22.95
+	HYDROGRAPH AT	SUBCA1	238.	4.50	35.	9.	3.	.14
+	DIVERSION TO	RETCA1	86.	4.00	5.	1.	0.	.14
+	HYDROGRAPH AT	RETCA1	238.	4.50	31.	8.	3.	.14
+	HYDROGRAPH AT	SUBCA2	1249.	4.50	186.	47.	16.	.84
+	DIVERSION TO	RETCA2	621.	4.08	36.	9.	3.	.84
+	HYDROGRAPH AT	RETCA2	1249.	4.50	150.	37.	12.	.84
+	3 COMBINED AT	~CPCA1	2431.	4.92	994.	322.	109.	23.93
+	HYDROGRAPH AT	SUBGB	379.	4.33	41.	10.	3.	.22
+	DIVERSION TO	RETGB	308.	4.17	17.	4.	1.	.22
+	HYDROGRAPH AT	RETGB	379.	4.33	24.	6.	2.	.22
+	ROUTED TO	RTGBCA	111.	5.25	24.	6.	2.	.22
+	2 COMBINED AT	~CPCA2	2426.	4.92	999.	323.	109.	24.16
+	DIVERSION TO	B-DRCC	2393.	4.92	966.	291.	97.	24.16
+	HYDROGRAPH AT	P-DRCC	33.	4.92	33.	32.	12.	24.16
+	ROUTED TO	MCCABC	33.	5.17	33.	32.	12.	24.16
+	HYDROGRAPH AT	SUBBC1	494.	4.00	40.	10.	3.	.14
+	DIVERSION TO	RETBC1	50.	3.50	6.	1.	0.	.14
+	HYDROGRAPH AT	RETBC1	494.	4.00	34.	9.	3.	.14
+	HYDROGRAPH AT	SUBBC2	931.	4.50	136.	34.	11.	.49

+	DIVERSION TO	RETBC2	316.	4.00	21.	5.	2.	.49
+	HYDROGRAPH AT	RETBC2	931.	4.50	115.	29.	10.	.49
+	3 COMBINED AT	~CPBC	522.	4.50	126.	56.	21.	24.78
+	2 COMBINED AT	CPAFBC	485.	4.50	120.	54.	20.	34.15

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

APPENDIX B

HEC-1 Model Output for Option 2 (107BSNE.DAT)

```
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              JUN   1998              *
*            VERSION 4.1               *
*                                      *
*  RUN DATE   27APR09  TIME  14:49:47  *
*                                      *
****************************************
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```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

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

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

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

1 HEC-1 INPUT PAGE 1

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

  1           ID   107BSNE.DAT
  2           ID   PRESTIGE ENGINEERING CONSULTANTS - MARCH 23, 2009
  3           ID   REMOVAL OF 95TH AVENUE BASIN & REPLACE WITH 10TH AVENUE BASIN
  4           ID   6-HOUR RAINFALL
  5           ID   DURANGO REGIONAL CONVEYANCE CHANNEL AND SUNLAND CHANNEL
  6           ID   AVONDALE AND PHOENIX ARIZONA
  7           ID   THIS HEC-1 MODEL IS THE SAME AS THE REC6FINAL.DAT MODEL FOR THE SAME AREA,
  8           ID   DATED JANUARY 25, 2006 AND DELIVERED TO THE FCDMC ON FEBRUARY 15, 2006,
  9           ID   WITH THE FOLLOWING CHANGES ADDED BY PRESTIGE ENGINEERING
 10           ID   1.  REMOVE DETENTION BASIN AT 95TH AVENUE (KK 95BASIN) FROM THE MODEL
 11           ID   2.  REPLACE THE TWO ROUTING REACHES RT95 AND RT99 BETWEEN 91ST AVE & 99 AVE
 12           ID       WITH A SINGLE ROUTING REACH, AFTER THE REMOVAL OF THR 95TH AVE BASIN
 13           ID       RENAME BOTH ROUTINGS WITH A SINGLE LABEL RT99
 14           ID   3.  REVISE THE REACH DISTANCE TO THE ONE MILE DISTANCE BETWEEN 91ST & 99TH
 15           ID   4.  FROM THE 7566 FT (2439 FT FOR RT95 PLUS 5127 FT FOR RT99) TO 5216 FT
 16           ID   5.  ADD BASIN AT 107TH AVENUE AFTER COMBINING SUB IB AND IC AND ROUTED FLOWS
 17           ID       FROM THE NORTH AT CPIB2 WHICH WAS FORMERLLY RRIB
 18           ID   6.  THE 107TH AVE BASIN IS 15 AC BOTTOM AT 6:1 SIDES BOT FLUSHED WITH CHANNE
 19           ID   7.  THE CULVERT USED IS 10FT WIDE BY 5FT HIGH QUADRU CONCRETE BOX CULVERT
 20           ID   8.  TOP OF ROAD IS 0.5 FT ABOVE TOP OF CULVERT
 21           ID   9.  SLOPE OF CULVERT BARREL IS 0.005 FT/FT
 22           ID   10. 100-YR DISCHARGE WAS TAKEN FROM ASPEN REPORT AS 1193 CFS
 23           ID   11. CULVERT SET TO DISCHARGE ABOUT THE EXISTING CONDITION 100-YR WITH NO ROAD
 24           ID       OVERTOPPING AT 107TH AVENUE
 25           ID   12. THE CHAN ROUTING RT107 LENGTH SHORTENED BY 500 FT TO ALLOW FOR THE 107TH
 26           ID       BASIN DETENTION
              *DIAGRAM
              * MODIFIED IT CARD FOR DSS RUN  SLT
              * IT     5          1200    2000
 27           IT       5 09MAR95  1200    2000
 28           IO       5
 29           IN      15
              *
 30           JD    3.23    0.01
 31           PC   0.000   0.008   0.016   0.025   0.033   0.041   0.050   0.058   0.066   0.074
 32           PC   0.087   0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931   0.950
 33           PC   0.962   0.972   0.983   0.991   1.000
 34           JD   3.209    0.50
 35           JD   3.149    2.80
 36           PC   0.000   0.009   0.016   0.025   0.034   0.042   0.051   0.059   0.067   0.076
 37           PC   0.087   0.100   0.120   0.163   0.252   0.451   0.694   0.837   0.900   0.938
 38           PC   0.950   0.963   0.975   0.988   1.000
 39           JD   2.978    16.0
 40           PC   0.000   0.009   0.020   0.030   0.048   0.063   0.076   0.090   0.105   0.119
 41           PC   0.135   0.152   0.175   0.222   0.304   0.472   0.670   0.796   0.868   0.912
 42           PC   0.946   0.960   0.973   0.987   1.000
 43           JD   2.623    90.0
 44           PC   0.000   0.021   0.035   0.051   0.071   0.087   0.105   0.125   0.143   0.160
 45           PC   0.179   0.201   0.232   0.281   0.364   0.500   0.658   0.773   0.841   0.888
 46           PC   0.927   0.945   0.964   0.982   1.000
 47           JD   1.841   500.0
 48           PC   0.000   0.024   0.043   0.059   0.078   0.098   0.119   0.141   0.162   0.186
 49           PC   0.212   0.239   0.271   0.321   0.408   0.515   0.627   0.735   0.814   0.864
 50           PC   0.907   0.930   0.954   0.977   1.000
              *
```

1 HEC-1 INPUT PAGE 2

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

 51           KK   SUBWD   BASIN
 52           KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 53           BA   0.393
 54           LG    0.20    0.19    7.00    0.17      12
 55           UI      32      42     116     157     189     226     281     403     348     281
 56           UI     240     193     156     115      65      54      42      32      17      10
 57           UI      10      10      10       9       0       0       0       0       0       0
 58           UI       0       0       0       0       0       0       0       0       0       0
```

```
                *
 59             KK  RTWDXA   ROUTE   REACH
 60             KM        ROUTE FLOW FROM WD TO XA (ALONG 27TH AVENUE).
 61             KM        TYPE C CHANNEL
 62             RS       4              -1        0
 63             RC   0.025   0.025   0.025    2500  0.0016    0.00
 64             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 65             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                *

 66             KK   SUBXA   BASIN
 67             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 68             BA   0.247
 69             LG    0.13    0.15    9.70    0.06      44
 70             UI      34     125     193     268     417     308     225     157      74      48
 71             UI      29      10      11      11       0       0       0       0       0       0
 72             UI       0       0       0       0       0       0       0       0       0       0
                *

 73             KK   CPXA1
 74             KM   ADD HYDROGRAPHS AT XA
 75             HC       2
                *
                * KK  RSXA
                * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
                * RS      1    STOR       0       0
                * SV    .01     .07     1.0     5.1    14.0    28.5    50.0    79.1   117.4     165
                * SE1063.3  1063.5  1063.6  1064.1  1064.6  1065.1  1065.6  1066.1  1066.6    1067
                * SQ      0      15      43     455    1751    3879    6999   11192   17236     253
                *

 76             KK   DIXAO
 77             KM   DIVERT FLOW FROM XA SOUTHWARD OVER SPRR AND OUT OF MODEL
 78             DT   DIZZ1
 79             DI       0       0      43     455    1751    3879    6999   11192   17236   25382
 80             DQ       0       0       0       0       0       0       0      44     960    3141
                *

 81             KK  RTXAWC   ROUTE   REACH
 82             KM        ROUTE FLOW FROM XA TO WC (ALONG SPRR).
 83             KM        TYPE C CHANNEL
 84             RS      12              -1        0
 85             RC   0.035   0.035   0.035    5100  0.0016    0.00
 86             RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
 87             RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                *
1                                          HEC-1 INPUT                                          PAGE  3

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

 88             KK   SUBWB   BASIN
 89             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 90             BA   0.667
 91             LG    0.16    0.15    9.70    0.06      36
 92             UI      60     103     240     316     391     474     689     701     538     442
 93             UI     358     278     177     107      94      61      41      19      18      19
 94             UI      19      18       0       0       0       0       0       0       0       0
 95             UI       0       0       0       0       0       0       0       0       0       0
                *

 96             KK  RTWBWC   ROUTE   REACH
 97             KM        ROUTE FLOW FROM WB TO WC (ALONG 35TH AVENUE).
 98             KM        TYPE C CHANNEL
 99             RS       3              -1        0
100             RC   0.025   0.025   0.025    2500  0.0020    0.00
101             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
102             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                *

103             KK   SUBWC   BASIN
104             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
105             BA   0.487
106             LG    0.16    0.16    9.70    0.06      43
107             UI      46      90     195     255     315     404     581     477     377     302
108             UI     240     167      90      78      48      36      14      15      14      14
109             UI       0       0       0       0       0       0       0       0       0       0
                *

110             KK    CPWC
111             KM    ADD HYDROGRAPHS AT WC.
112             HC       3
                *
                * KK  RSWC
                * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
                * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
                * KO      1
                * RS      1    STOR       0       0
                * SV   16.1    27.6    44.0    65.2    90.7   121.5   159.6   206.8   263.7     329
                * SE1057.1  1057.6  1058.1  1058.6  1059.1  1059.6  1060.1  1060.6  1061.1    1061
                * SQ      0      34     456    1381    2859    4933    7982   12958   19919     288
                *

113             KK  DIWCWA
114             KM   DIVERT FLOW FROM WC TO QE
115             KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
116             DT    DIQE
117             DI       0      34     456    1381    2859    4933    7982   12958   19919   28835
118             DQ       0       0       0       0       0       0     141    1221    3463    6954
                *
                * KKDIWCQE
                * KM DIVERT FLOW FROM WC TO QE
                * DT  DIQE
                * DI      0     115     608    1579    3086    5253    8972   15024   23745     350
                * DQ      0       0       0       0       0      40     951    3350    7104     121
                *
1                                          HEC-1 INPUT                                          PAGE  4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 119          KK  RTWCWA
 120          KM   HEC-RAS REACH
 121          KM        ROUTE FLOW FROM WC TO WA (ALONG SPRR).
 122          KM        Channel geometry changed to match natural conditions 04.11.00  JEP
 123          KM        Manning's N values changed to match approved values 04.11.00  JEP
 124          KM        Method changed from Normal Depth Storage to Modified Puls 05.25.00 JEP
 125          KM        Stage-storage values are based on HEC-2 analysis results 06.19.00 JEP
 126          KM        Values transferred directly from HEC-2 file: Tape7_1 09.29.00 JEP
 127          RS      15    STOR        0        0
 128          SV       0     103      168      242      267      296      317      332      338      354
 129          SV     375
 130          SQ       0     200      400      800     1000     1200     1400     1600     1700     1900
 131          SQ    2200
              * RC  .129    .129     .129     4850    .0010
              * RX     0      40      200      410      870     1240     1700     2160
              * RY   4.4     3.8        0      1.6        0      1.8      2.8      4.4
              *
              *

 132          KK   SUBWA   BASIN
 133          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 134          BA   0.492
 135          LG    0.15    0.15    10.10     0.05       43
 136          UI      75     302      455      683      855      573      402      209      117       67
 137          UI      23      23       23        0        0        0        0        0        0        0
 138          UI       0       0        0        0        0        0        0        0        0        0
              *

 139          KK   CPWA1
 140          KM    ADD HYDROGRAPH SUBWA TO RTWCWA
 141          HC       2
              *

 142          KK   SUBVD   BASIN
 143          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 144          BA   0.697
 145          LG    0.16    0.16     9.70     0.06       36
 146          UI      63     108      251      330      408      495      720      733      562      461
 147          UI     375     291      185      112       98       63       44       19       20       19
 148          UI      20      19        0        0        0        0        0        0        0        0
 149          UI       0       0        0        0        0        0        0        0        0        0
              *

 150          KK  RTVDWA   ROUTE   REACH
 151          KM        ROUTE FLOW FROM VD TO WA (ALONG 43RD AVENUE).
 152          KM        FUTURE ARTERIAL SECTION
 153          RS       1               -1        0
 154          RC   0.100   0.023    0.100     2500   0.0030     0.00
 155          RX     0.0     440      445    445.1    575.1    575.2      900   1000.0
 156          RY     105     105      105    99.75    99.75      105      105      105
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 157          KK   CPWA2
 158          KM    ADD HYDROGRAPHS FROM SUBWA AND RTWCWA TO RTVDWA.
 159          HC       2
              *
              * KK  RSWA
              * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
              * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
              * KO      1
              * RS      1    STOR        0        0
              * SV    1.3     1.9      2.4      3.1      4.0      8.5     16.7     29.9     48.5       74
              * SE1050.7  1050.9   1051.1   1051.3   1051.4   1051.9   1052.4   1052.9   1053.4     1053
              * SQ      0       0        0        0        0       77      562     1532     3131       53
              *

 160          KK  DIWAVC
 161          KM        DIVERT FLOW FROM WA TO QD OVER SPRR
 162          KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
 163          KM   Revised DQ records based on HEC-2 analysis results.  06.28.00 JEP
 164          DT    DIQD
 165          DI       0     200      400      800     1000     1200     1400     1600     1700     1900
 166          DQ       0       0       42      369      555      746      942     1140     1174     1370
              *
              * KKDIVCQD
              * KM DIVERT FLOW FROM VC TO QD OVER SPRR
              * DT  DIQD
              * DI      0     810     9237    10710
              * DQ      0       0        0       63
              *

 167          KK  RTWAVC
 168          KM   HEC-RAS REACH
 169          KM        MODIFIED PULS ROUTE FLOW FROM WA TO VC (ALONG SPRR).
              * KM       Channel geometry changed to match natural conditions 04.11.00  JEP
 170          KM        Manning's N values changed to match approved values 04.11.00  JEP
 171          KM        Method changed from Normal Depth Storage to Modified Puls 05.22.00 JEP
 172          KM        Stage-Storage values based on HEC-2 analysis results.  06.19.00 JEP
 173          KM        Values transferred directly from HEC-2 file:  Tape7_2  9.29.00 JEP
 174          RS      15    STOR        0        0
 175          SV       0     146      178      193      201      208      212
 176          SQ       0     400      600      800      989     1247     1487
              * RC  .317    .317     .317     5270    .0005
              * RX     0      50      120      390      810      950     1400     1700
              * RY   6.8       0        0      1.8      2.8      3.8      5.1      6.8
              *

 177          KK   SUBVC   BASIN
 178          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 179          BA   0.490
```

```
 180          LG    0.12    0.16    8.40    0.10      50
 181          UI      75     300     454     680     852     570     400     209     116      67
 182          UI      23      23      23       0       0       0       0       0       0       0
 183          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

 184          KK   CPVC1
 185          KM    ADD HYDROGRAPH SUBVC TO RTWAVC.
 186          HC       2
              *

 187          KK   SUBVB   BASIN
 188          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 189          BA   0.720
 190          LG    0.15    0.17    9.70    0.06      45
 191          UI     121     489     718    1162    1201     810     529     243     146      66
 192          UI      36      36       0       0       0       0       0       0       0       0
 193          UI       0       0       0       0       0       0       0       0       0       0
              *

 194          KK  RTVBVC   ROUTE   REACH
 195          KM        ROUTE FLOW FROM VB TO VC (ALONG 51ST AVENUE).
 196          KM        FUTURE ARTERIAL SECTION
 197          RS       1              -1       0
 198          RC   0.100   0.023   0.100    2500  0.0017    0.00
 199          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 200          RY     105     105     105   99.75   99.75     105     105     105
              *

 201          KK   CPVC2
 202          KM    ADD HYDROGRAPHS FROM SUBVC AND RTWAVC TO RTVBVC.
 203          HC       2
              *
              * KK  RSVC
              * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
              * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
              * KO     1
              * RS     1    STOR       0       0
              * SV    70      83      97     113     121     170     192     216     284       3
              * SE1051.4  1051.6  1051.8  1052.0  1052.1  1052.6  1052.8  1053.0  1053.3    1053
              * SQ    16     246     746    1537    2048    5354    7033    8943   12315     147
              *

 204          KK  DIVCQA
 205          KM   DIVERT FLOW FROM VC TO VA OVER 51st AVE.
 206          KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
 207          KM   Revised DQ records based on HEC-2 analysis results.  06.19.00 JEP
 208          DT    DIVA
 209          DI       0     100     400     600     800     989    1247    1487
 210          DQ       0       1      27      32      30      32      32      32
              *
              * KKDIVCVA
              * KM DIVERT FLOW FROM VC TO VA OVER 51st AVE.
              * DT  DIVA
              * DI     0       9     654    2822    7159
              * DQ     0       4     214     753    1814
              *
1                                          HEC-1 INPUT                                                    PAGE  7

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

 211          KK  RTVCQA   ROUTE   REACH
 212          KM   ROUTE FLOW FROM VC TO QA (ALONG 51ST AVENUE).
 213          KM   FUTURE ARTERIAL SECTION
 214          RS       2              -1       0
 215          RC   0.100   0.023   0.100    5000  0.0030    0.00
 216          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 217          RY     105     105     105   99.75   99.75     105     105     105
              *

 218          KK   SUBQA   BASIN
 219          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 220          BA   0.485
 221          LG    0.34    0.14   10.10    0.05      20
 222          UI      38      40     133     178     215     253     303     423     464     361
 223          UI     306     252     209     170     115      67      63      44      38      18
 224          UI      12      11      12      11      12       0       0       0       0       0
 225          UI       0       0       0       0       0       0       0       0       0       0
              *

 226          KK   CPQA2
 227          KM   ADD HYDROGRAPHS AT QA
 228          HC       2
              *

 229          KK    RSQA
 230          KM        MODIFIED PLUS ROUTING THROUGH PONDING BEHIND RID
 231          RS       1    STOR      -1       0
 232          SV     6.6     9.4    13.0    17.4    22.4    28.1    34.6    42.1    50.4
 233          SE  1032.2  1032.4  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.8
 234          SQ       0      69    1129    6033   11213
 235          SE  1031.9  1032.4  1032.9  1033.4  1033.9
              *

 236          KK  DIQAPF
 237          KM   DIVERT FLOW FROM QA TO PF
 238          DT    DIPF
 239          DI       0      69    1129    6033   11213
 240          DQ       0      39     462    1272    2210
              *

 241          KK  RTQAJH   ROUTE   REACH
 242          KM        ROUTE FLOW FROM QA TO JH (SHEET FLOW).
```

```
243          KM        TYPE A CHANNEL
244          RS      11          -1        0
245          RC   0.100    0.100    0.100    2800  0.0031    0.00
246          RX     0.0    100.0    400.0   500.0   500.1   600.0   900.0  1000.0
247          RY     5.0      4.0      1.0     0.0     0.0     1.0     4.0     5.0
             *
1                                          HEC-1 INPUT                                                          PAGE  8

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

248          KK   SUBQE   BASIN
249          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
250          BA   0.913
251          LG    0.15     0.13    10.10     0.04      56
252          UI      92      200      409      529     670     915    1121     854     673     525
253          UI     394      212      156      109      77      28      29      28      29       0
254          UI       0        0        0        0       0       0       0       0       0       0
             *

255          KK    DRQE
256          KM    RETURN DIVERT FROM WC
257          DR    DIQE
             *

258          KK  RTDIQE   ROUTE   REACH
259          KM        ROUTE DIVERT FROM WC TO QE
260          KM        TYPE A CHANNEL
261          RS       8             -1        0
262          RC   0.025    0.025    0.025    6600  0.0030    0.00
263          RX     0.0    100.0    400.0   500.0   500.1   600.0   900.0  1000.0
264          RY     5.0      4.0      1.0     0.0     0.0     1.0     4.0     5.0
             *

265          KK    CPQE
266          KM        ADD HYDROGRAPHS AT QE
267          HC       2
             *

268          KK    RSQE
269          KM        MODIFIED PULS ROUTING BEHIND RID CANAL
270          RS       1    STOR        0        0
271          SV     9.5    11.0     14.9     20.2    26.5    33.8   55.23    82.5    95.6   159.9
272          SE  1040.1  1040.2   1040.4   1040.6  1040.8  1041.0  1041.5  1042.0  1042.2  1043.0
273          SQ       0     1.8     62.8    242.3   581.9    1158    4169    9977   13108   31180
             *

274          KK  RTQEQC   ROUTE   REACH
275          KM        ROUTE FLOW FROM QE TO QC (SHEET FLOW).
276          KM        TYPE A CHANNEL
277          RS       3             -1        0
278          RC   0.025    0.025    0.025    3000  0.0027    0.00
279          RX     0.0    100.0    400.0   500.0   500.1   600.0   900.0  1000.0
280          RY     5.0      4.0      1.0     0.0     0.0     1.0     4.0     5.0
             *

281          KK   SUBQD   BASIN
282          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
283          BA   0.249
284          LG    0.17     0.06    12.40     0.02      51
285          UI      35      125      195      271     419     311     227     158      75      48
286          UI      29       10       11       11       0       0       0       0       0       0
287          UI       0        0        0        0       0       0       0       0       0       0
             *
1                                          HEC-1 INPUT                                                          PAGE  9

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

288          KK    DRQD
289          KM   RETURN DIVERT FROM WA
290          DR    DIQD
             *

291          KK  RTDIQD   ROUTE   REACH
292          KM        ROUTE DIVERT FROM WA TO QD
293          KM        TYPE C CHANNEL
294          RS       5             -1        0
295          RC   0.100    0.023    0.100    5000  0.0030    0.00
296          RX     0.0      440      445   445.1   575.1   575.2     900  1000.0
297          RY     105      105      105   99.75   99.75     105     105     105
             *

298          KK    CPQD
299          KM    ADD HYDROGRAPHS AT QD
300          HC       2
             *

301          KK    RSQD
302          KM        MODIFIED PULS ROUTING BEHIND RID CANAL.
303          RS       1    STOR        0        0
304          SV     2.8     4.8      8.6     14.6    22.5    31.9    42.6    54.8    65.5
305          SE  1038.1  1038.5   1039.0   1039.5  1040.0  1040.5  1041.0  1041.5  1042.0
306          SQ       0    30.5    388.4   1580.9  4070.0  7936.6 13214.2 19810.4 26117.2
             *

307          KK  DIQDQB
308          KM        DIVERT FLOW FROM QD TO QB
309          DT    DIQB
310          DI       0      31      388     1580    4070    7937   13214   19810   26117
311          DQ       0       0       71      591    1899    3883    6624   10067   13292
             *

312          KK  RTQDQC   ROUTE REACH
313          KM        ROUTE FLOW FROM QD TO QC.
314          KM        FUTURE ARTERIAL SECTION
315          RS       1             -1        0
316          RC   0.100    0.023    0.100    2600  0.0040    0.00
```

```
 317          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 318          RY     105     105     105   99.75   99.75     105     105     105
              *

 319          KK   SUBQC   BASIN
 320          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 321          BA   0.606
 322          LG    0.23    0.16   10.10    0.04      32
 323          UI      63     146     285     371     474     679     733     552     429     333
 324          UI     233     119      98      64      33      20      20      19      20       0
 325          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                          HEC-1 INPUT                                          PAGE 10

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

 326          KK    CPQC
 327          KM        ADD HYDROGRAPHS AT QC
 328          HC       3
              *

 329          KK   DIQCR
 330          KM   DIVERT 80% OF FLOW FROM QC TO RIVER
 331          DT    DISR
 332          DI       0      25      50      75     100     150     200
 333          DQ       0      20      40      60      80     120     160
              *

 334          KK  RTQCJI   ROUTE   REACH
 335          KM        ROUTE FLOW FROM QC TO JF
 336          KM        TYPE A CHANNEL
 337          RS      15              -1       0
 338          RC   0.100   0.100   0.100    6500  0.0028    0.00
 339          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 340          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 341          KK   SUBQB   BASIN
 342          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 343          BA   0.505
 344          LG    0.30    0.11   11.20    0.03      27
 345          UI      40      48     143     194     234     276     336     483     465     366
 346          UI     316     253     211     166      97      69      63      41      34      12
 347          UI      13      12      13      12      13       0       0       0       0       0
 348          UI       0       0       0       0       0       0       0       0       0       0
              *

 349          KK    DRQB
 350          KM        RETURN DIVERT FROM QD
 351          DR    DIQB
              *

 352          KK  RTDIQB   ROUTE   REACH
 353          KM        TYPE C CHANNEL
 354          RS      12              -1       0
 355          RC   0.100   0.100   0.100    2500  0.0028    0.00
 356          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
 357          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

 358          KK    CPQB
 359          KM   ADD HYDROGRAPHS AT QB
 360          HC       2
              *
1                                          HEC-1 INPUT                                          PAGE 11

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

 361          KK    RSQB
 362          KM        MODIFIED PULS ROUTING THROUGH PONDING BEHIND RID.
 363          KM   THROUGH THE 43RD AVENUE.
 364          RS       1    STOR       0       0
 365          SV     9.4    13.9    19.2    25.5    33.1    41.8    51.7    62.9    75.3    89.1
 366          SE  1033.3  1033.6  1033.9  1034.2  1034.5  1034.8  1035.1  1035.4  1035.7  1036.0
 367          SQ       0    19.3   123.0   423.5   958.2  1718.8  2775.9  4426.7  6845.4  9954.3
              *

 368          KK  RTQBJH   ROUTE REACH
 369          KM   ROUTE FLOW FROM QB TO JH (SHEET FLOW).
 370          KM        TYPE A CHANNEL
 371          RS      15              -1       0
 372          RC   0.100   0.100   0.100    3500  0.0028    0.00
 373          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 374          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 375          KK   SUBJH   BASIN
 376          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 377          BA   0.516
 378          LG    0.37    0.11   11.20    0.03      17
 379          UI      62     175     314     402     581     733     541     418     304     176
 380          UI     107      71      41      19      19      19       0       0       0       0
 381          UI       0       0       0       0       0       0       0       0       0       0
              *

 382          KK    CPJH
 383          HC       4
              *

 384          KK  RTJHJI   ROUTE REACH
 385          KM   ROUTE FLOW FROM JH TO JI (SHEET FLOW).
 386          KM        TYPE A CHANNEL
 387          RS      14              -1       0
 388          RC   0.100   0.100   0.100    4000  0.0031    0.00
 389          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 390          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
```

```
                 *
391              KK   SUBJI   BASIN
392              KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
393              BA   0.308
394              LG    0.39    0.11   11.20    0.03      21
395              UI      52     209     307     497     514     346     227     104      62      28
396              UI      16      15       0       0       0       0       0       0       0       0
397              UI       0       0       0       0       0       0       0       0       0       0
                 *
1                                                HEC-1 INPUT                                                    PAGE 12

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

398              KK    CPJI
399              KM   COMBINE FLOWS AT JI
400              HC       2
                 *

401              KK   DISRX
402              KM    DUMMY DIVERT TO SALT RIVER (NOT RETURNED)
403              DT   DISR1
404              DI       0   10000
405              DQ       0   10000
                 *

406              KK   SUBPF   BASIN
407              KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
408              BA   0.502
409              LG    0.17    0.20    7.30    0.12      52
410              UI     113     407     611    1001     766     497     244     127      58      26
411              UI      28       0       0       0       0       0       0       0       0       0
412              UI       0       0       0       0       0       0       0       0       0       0
                 *

413              KK   RETPF
414              KM   DIVERT RETENTION OUT OF MODEL DUE TO KNIGHT TRANSPORTATION
415              KM   PARKING LOT EXPANSION. -DCF
416              KM   TOTAL RETENTION IS 3.9 AF. 80% OF THAT IS USED HERE. -DCF
417              DT   RETPF     3.1
418              DI       0   10000
419              DQ       0   10000
                 *

420              KK    DRPF
421              KM        RETURN DIVERT FROM QA.
422              DR    DIPF
                 *

423              KK  RTDIPF   ROUTE   REACH
424              KM         ROUTE DIVERT FROM QA TO PF.
425              KM         TYPE C CHANNEL
426              RS      11              -1       0
427              RC   0.035   0.035   0.035    2600  0.0005    0.00
428              RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
429              RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                 *

430              KK   @CPPF
431              KM        ADD HYDROGRAPHS AT PF
432              HC       2    5.19
                 *
1                                                HEC-1 INPUT                                                    PAGE 13

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

433              KK    RSPF
434              KM        MODIFIED PULS ROUTING BEHIND RID
                 * KO     1
435              RS       1    STOR       0       0
436              SV    28.2    33.4    39.2    48.8    55.7    67.3    76.0    85.3   100.7   111.8
437              SE  1032.2  1032.4  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.8  1034.0
438              SQ       0    19.4   124.9   457.5  1050.9  1875.2  2964.8  4437.1  6362.7  8725.9
                 *

439              KK  DIPFPE
440              KM        DIVERT FLOW FROM PF TO PE
441              DT    DIPE
442              DI       0     255    1875    5340   11513
443              DQ       0       0       0     160    1143
                 *

444              KK  RTPFJF   ROUTE   REACH
445              KM        ROUTE FLOW FROM PF TO JF.
446              KM        TYPE A CHANNEL
447              RS       6              -1       0
448              RC   0.035   0.035   0.035    4000  0.0040    0.00
449              RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
450              RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                 *

451              KK   SUBUD   BASIN
452              KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
453              KM    L=      1.3  Lca=        .6   S=   20.0  Kn= .020  LAG=  14.9
454              KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
455              BA     .759
456              LG     .15     .15    9.70     .05   55.00
457              UI    306.    941.   1739.   1494.    851.    324.    131.     53.      0.      0.
458              UI      0.      0.      0.      0.      0.      0.      0.      0.      0.
                 *

459              KK    RETUD
460              KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
461              KM   80% OF REQUIRED MODELED
462              DT   RETB1    38.7
463              DI       0   10000
```

```
464          DQ       0   10000
             *

465          KK  SDDRUD
466          KM   DIVERT STORM DRAIN FLOW
467          DT  59SD1D
468          DI       0     102   10000
469          DQ       0     102     102
             *
```



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

470          KK  DIUDUA
471          KM   DIVERT 25% OF FLOW FROM UD TO UA.
472          DT    DIUA
473          DI       0      25      50      75     100     150     200
474          DQ       0       6      13      19      25      38      50
             *

475          KK  RTUDVA   ROUTE   REACH
476          KM        ROUTE FLOW FROM UD TO VA (ALONG 59TH AVENUE).
477          KM        FUTURE ARTERIAL SECTION
478          RS       1              -1       0
479          RC   0.100   0.023   0.100    2600  0.0019    0.00
480          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
481          RY     105     105     105   99.75   99.75     105     105     105
             *

482          KK   SUBVA   BASIN
483          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
484          BA   0.493
485          LG    0.10    0.15    8.40    0.10      58
486          UI      75     303     456     684     857     574     402     210     117      67
487          UI      23      23      24       0       0       0       0       0       0       0
488          UI       0       0       0       0       0       0       0       0       0       0
             *
             * THE FOLLOWING DIVERT RETURN IS REMOVED TO MODEL THE ADMP CONDITION

489          KK    DRVA
490          KM        RETURN DIVERT FROM VC
491          DR    DIVA
             *
             * KKRTDIVA
             * KM HEC-RAS REACH
             * KO      1
             * KM      ROUTE FLOW FROM VC TO VA (ALONG SPRR).
             * KM      Method changed from Normal Depth Storage to Modified Puls 06.19.00 JEP
             * KM      Stage-Storage values are based on HEC-2 analysis results. 06.19.00 JEP
             * KM      Values transferred directly from HEC-2 file:  Tape7_3  09.29.00  JEP
             * RS     15    STOR       0       0
             * SV      0      56      87     130     163     191     205     218     227
             * SQ      0     100     200     400     600     800    1000    1200    1500
             *

492          KK   CPVA1
493          KM        ADD HYDROGRAPH SUBVA TO RTDIVA
494          HC       3
             *
             *

495          KK  SDDRVA
496          KM   DIVERT STORM DRAIN FLOW
497          DT  59SD2D
498          DI       0      59   10000
499          DQ       0      59      59
             *
             * KK CPVA2
             * KM      ADD HYDROGRAPHS SUBVA AND RTDIVA TO RTUDVA
             * HC      2
             *
             * KK  RSVA
             * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
             * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
             * KO      1
             * RS      1    STOR       0       0
             * SV   10.3    13.3    15.6    23.9    34.6    48.9    67.7    90.8   118.6
             * SE1044.2  1044.3  1044.5  1045.0  1045.5  1046.0  1046.5  1047.0  1047.5
             * SQ      0       2      39     397    1279    2904    5363    8613   13175
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

500          KK  DIVAPE
501          KM   DIVERT FLOW FROM VA TO UC OVER 59TH AVE.
502          KM   Revised DQ records to reflect new weir analysis based on survey. 05.04.00 JEP
503          KM   REVISED DIVERSION RECORDS TO REROUTE DIVERSION AROUND CODE SEQUENCE.
504          KM   INSTEAD OF DIVERTING FLOW OVER THE WEIR TO THE SOUTH, FLOW IS BEING
505          KM   DIVERTED TO THE WEST. 06.02.00 -DCF
506          KM   Revised DQ records based on HEC-2 analysis results.  06.19.00 JEP
507          DT    DIUC
508          DI       0     200     400     600     800    1000    1200    1500
509          DQ       0     200     398     548     656     715     738     756
             * DI     0       2      39     397    1279
             * DQ     0       0       0       0       0
             *

510          KK  RTVAPE   ROUTE   REACH
511          KM   ROUTE FLOW FROM VA TO PE (ALONG 59TH AVENUE).
512          KM   FUTURE ARTERIAL SECTION
513          RS       2              -1       0
514          RC   0.100   0.023   0.100    3000  0.0038    0.00
515          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
516          RY     105     105     105   99.75   99.75     105     105     105
             *
```

```
517          KK   SUBPE   BASIN
518          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
519          BA   0.504
520          LG    0.13    0.26    6.20    0.22      56
521          UI     130     449     692    1071     728     453     189     108      32      29
522          UI       0       0       0       0       0       0       0       0       0       0
             *

523          KK    DRPE
524          KM    RETURN DIVERT FROM PF
525          DR    DIPE
             *

526          KK  RTDIPE
527          KM         ROUTE DIVERT FROM PF TO PE.
528          KM         TYPE C CHANNEL
529          RS       3              -1       0
530          RC    .035    .035    .035    2000   .0005
531          RX       0      20      35      50    50.1     250     450     550
532          RY       5       5     2.5       0       0       2       4       5
             *

533          KK    CPPE
534          KM        ADD HYDROGRAPHS AT PE
535          HC       3
             *
1                                          HEC-1 INPUT                                                    PAGE 16

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

536          KK    RSPE
537          KM         RESERVOIR ROUTING BEHIND 59TH AVE AND RID CANAL
538          RS       1    STOR       0       0
539          SV    15.6    16.9    21.0    24.0    29.5    33.7    38.3    43.2
540          SE  1032.5  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.7
541          SQ       0    1.44      23     194     637    1420    2516    3177
             *

542          KK  DIPEPD
543          KM         DIVERT FLOW FROM PE TO PD
544          DT    DIPD
545          DI       0     8.2     636    3177
546          DQ       0       0       0     8.1
             *

547          KK  RTPEJF   ROUTE   REACH
548          KM        ROUTE FLOW FROM PE TO JF (ALONG 59TH AVE).
549          KM        FUTURE ARTERIAL SECTION
550          RS       1              -1       0
551          RC   0.100   0.023   0.100    2600  0.0036    0.00
552          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
553          RY     105     105     105   99.75   99.75     105     105     105
             *

554          KK   SUBJF   BASIN
555          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
556          KM    L=        .7  Lca=        .4   S=   11.1  Kn= .027  LAG=  22.9
557          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
558          BA   0.501
559          LG    0.10    0.15    7.60    0.14      55
560          UI     320    1108    1172     675     319     146      67      20      19      19
561          UI       0       0       0       0       0       0       0       0       0       0
             *

562          KK    CPJF
563          KM   COMBINE FLOWS AT JF.
564          HC       3
             *

565          KK  RTJFJG   ROUTE   REACH
566          KM        ROUTE FLOW FROM JF TO JE (ALONG 59TH AVE).
567          KM        FUTURE ARTERIAL SECTION
568          RS       3              -1       0
569          RC   0.100   0.023   0.100    6000  0.0036    0.00
570          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
571          RY     105     105     105   99.75   99.75     105     105     105
             *

572          KK   SUBJG   BASIN
573          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
574          KM    L=        .7  Lca=        .4   S=   11.1  Kn= .027  LAG=  22.9
575          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
576          BA   0.901
577          LG    0.12    0.16    8.40    0.10      51
                                           HEC-1 INPUT                                                    PAGE 17
1
LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

578          UI     195     717    1181    1396    1191     840     531     336     203     134
579          UI      96      35      20      21      21      20      21       0       0       0
580          UI       0       0       0       0       0       0       0       0       0       0
             *

581          KK    CPJG
582          KM   COMBINE FLOWS AT SALT RIVER.
583          HC       2
             *

584          KK  CPJGSR
585          KM   COMBINE FLOWS AT SALT RIVER
586          HC       2
             *
             * ******************************************************************************
             *

587          KK    DRUC
```

```
588          KM    RETURN DIVERT FROM VA
589          DR    DIUC
             *
             *
             * KKRTVAUC   ROUTE   REACH
             * KM       ROUTE FLOW FROM VA TO UC
             * KM       Channel geometry changed to match natural conditions 04.11.00  JEP
             * KM       Manning's N values changed to match approved values 04.11.00  JEP
             * RS     9        -1        0
             * RC 0.035   0.035   0.035    5200  0.0012    0.00
             * RX   0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
             * RY   5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
             *

590          KK  RTVAUC
591          KM   HEC-RAS REACH
592          KM        ROUTE FLOW FROM VA TO A POINT IN UC (ALONG SPRR).
593          KM        Channel geometry changed to match natural conditions 04.11.00  JEP
594          KM        Manning's N values changed to match approved values 04.11.00  JEP
595          KM        Method changed from Normal Depth Storage to Modified Puls 05.25.00 JEP
596          KM        Stage-storage values are from HEC-2 results 06.19.00 JEP
597          KM        Values transferred directly from HEC-2 file: Tape7_4  09.29.00 JEP
598          KM        Values modified to reflect channelization downstream  06.11.01 JEP
599          RS       9    STOR       0        0
600          SV       0      46      62       76      90     102     114     125     137
601          SQ       0     200     400      600     800    1000    1200    1400    1600
             *
             * KKSUBUC    BASIN
             * KM  VALLEY S-GRAPH WAS USED FOR THIS BASIN
             * BA 0.483
             * LG  0.23    0.15    9.70    0.06      28
             * UI    49     105     217     280     354     484     594     451     356      2
             * UI   208     113      83      57      41      15      15      14      15
             * UI     0       0       0       0       0       0       0       0       0
             *
             * KK@CPUC1
             * KM      ADD HYDROGRAPHS SUBUC1 TO RTVAUC
             * HC     2    1.73
             *
1                                          HEC-1 INPUT                                                    PAGE 18

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

602          KK  MCUCUC   ROUTE   REACH
603          KM   ADMP CHANNEL
604          KM   MASTER CHANNEL ROUTE FROM UC1 TO UC2
605          KM   ROUTING RECORD ADDED, JEP 6/11/01
606          RS       1    FLOW      -1
607          RC   0.014   0.014   0.014    2493  0.0014    0.00
608          RX     0.0    16.0    16.0    16.0    46.0    46.0    46.0    62.0
609          RY     4.8     5.1     2.6     0.0     0.0     2.6     5.1     4.8
             *

610          KK  SUBUC    BASIN
611          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
612          BA   0.483
613          LG    0.23    0.15    9.70    0.06      28
614          UI      49     105     217     280     354     484     594     451     356     278
615          UI     208     113      83      57      41      15      15      14      15       0
616          UI       0       0       0       0       0       0       0       0       0       0
             *

617          KK   @CPUC
618          KM        ADD HYDROGRAPHS SUBUC TO MCUCUC
619          HC       2    1.73

620          KK  SUBTB1
621          KM   BASIN TB1
622          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
623          KM    L=        .9  Lca=        .3   S=     9.4  Kn= .020  LAG=  10.4
624          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
625          BA     .14
626          LG     .25      .15    9.70     .05   30.00
627          UI    118.     367.    381.    146.     40.     14.      0.      0.      0.      0.
628          UI      0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

629          KK   RETB1
630          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
631          KM   80% OF REQUIRED MODELED
632          DT   RETB1    11.2
633          DI       0   10000
634          DQ       0   10000
             *

635          KK  SDDTB1
636          KM   DIVERT STORM DRAIN FLOW
637          DT  67SD1D
638          DI       0      17   10000
639          DQ       0      17      17
             *
1                                          HEC-1 INPUT                                                    PAGE 19

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

640          KK  RTUAUC   ROUTE   REACH
641          KM        ROUTE FLOW FROM TB1 TO UA (ALONG 67TH AVENUE).
642          KM        FUTURE ARTERIAL SECTION
643          RS       2        -1        0
644          RC   0.100   0.023   0.100    2450  0.0015    0.00
645          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
646          RY     105     105     105   99.75   99.75     105     105     105
             *

647          KK   SUBUA   BASIN
648          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
```

```
649          BA   0.561
650          LG    0.23     0.16     9.70     0.06       22
651          UI      44       46      155      204      249      294      350      490      536      417
652          UI     354      291      242      198      133       77       73       51       43       21
653          UI      13       13       14       13       14        0        0        0        0        0
654          UI       0        0        0        0        0        0        0        0        0        0
             *

655          KK    DRUA
656          KM    RETURN DIVERT FROM UD
657          DR    DIUA
             *

658          KK  RTDIUA   ROUTE   REACH
659          KM        ROUTE DIVERT TO UA
660          KM        FUTURE ARTERIAL SECTION
661          RS       4              -1        0
662          RC   0.100    0.023    0.100     5000   0.0014     0.00
663          RX     0.0      440      445    445.1    575.1    575.2      900   1000.0
664          RY     105      105      105    99.75    99.75      105      105      105
             *

665          KK   @CPUA
666          KM        ADD HYDROGRAPHS AT UA
667          HC       3     1.46
             *

668          KK  SDDRUA
669          KM   DIVERT STORM DRAIN FLOW
670          DT  67SD1D
671          DI       0       96    10000
672          DQ       0       96       96
             *

673          KK  DIUAUC
674          KM        DIVERT 20% OF FLOW FROM UA TO TB
675          DT    DITB
676          DI       0       25       50       75      100      150      200
677          DQ       0        5       10       15       20       30       40
             *
1                                          HEC-1 INPUT                                                    PAGE 20

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

678          KK  RTUAUC   ROUTE   REACH
679          KM        ROUTE FLOW FROM UA TO UC (ALONG 67TH AVENUE).
680          KM        FUTURE ARTERIAL SECTION
681          RS       2              -1        0
682          RC   0.100    0.023    0.100     2400   0.0017     0.00
683          RX     0.0      440      445    445.1    575.1    575.2      900   1000.0
684          RY     105      105      105    99.75    99.75      105      105      105
             *

685          KK  ~CPUC2
686          KM        ADD HYDROGRAPHS SUBUC AND MCUCUC TO RTUAUC
687          HC       2
             *
             * KK  RSUC
             * KM      ROUTE FLOW FROM UC TO UB OVER 67th AVE.
             * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
             * KO     1
             * RS     1    STOR        0        0
             * SV   4.8     6.9      9.9     19.0     33.0     52.6     77.4    108.7    148.6
             * SE1036.2  1036.3   1036.5   1037.0   1037.5   1038.0   1038.5   1039.0   1039.5
             * SQ     0        0       76      811     2294     4562     7715    11722    16588
             *

688          KK  DIUCPC
689          KM   DIVERT FLOW FROM UC TO PC OVER SPRR
690          KM   Revised DQ records to reflect new weir analysis based on survey. 05.04.00 JEP
691          KM   Revised DQ records based on HEC-2 results.  06.19.00 JEP
692          KM   REVERSE DIVERT TO ROUTE AROUND CODE SEQUENCE. 06.21.00 -DCF
693          KM   DIVERT EFFECTIVELY REMOVED DUE TO ADMP CHANNELIZATION.  06.11.01 -JEP
694          DT    DIUB
695          DI       0      100      400      800     1000     1200     1400     1600
696          DQ       0      100      400      800     1000     1200     1400     1600
             * DI     0      100      400      800     1000     1200     1400     1600
             * DQ     0      100      400      674      825      854      914      945
             * DI     0      100      400      800     1000     1200     1400     1600
             * DQ     0        0        0      126      175      346      486      655
             *

697          KK  RTUCPC   ROUTE   REACH
698          KM   ROUTE FLOW FROM UC TO PC (ALONG 67TH AVE).
699          KM   FUTURE ARTERIAL SECTION
700          RS       3              -1        0
701          RC   0.100    0.023    0.100     3000   0.0038     0.00
702          RX     0.0      440      445    445.1    575.1    575.2      900   1000.0
703          RY     105      105      105    99.75    99.75      105      105      105
             *

704          KK   SUBPC   BASIN
705          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
706          BA   0.300
707          LG    0.18     0.19     8.80     0.06       42
708          UI     160      482      829      518      214       79       23        0        0        0
709          UI       0        0        0        0        0        0        0        0        0        0
             *
1                                          HEC-1 INPUT                                                    PAGE 21

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

710          KK    CPPC
711          KM   COMBINE POSSIBLE FLOWS FROM UC WITH FLOWS FROM PC
712          HC       2
             *
```

```
713          KK    RSPC
714          KM   MODIFIED PULS ROUTING FROM PC TO NB.
715          RS       1    STOR        0        0
716          SV    29.1    31.8     34.8     38.2       42       46     50.2     78.8    107.9    135.6
717          SE  1029.8  1029.9   1030.0   1030.1   1030.2   1030.3   1030.4   1031.0   1031.5   1032.0
718          SQ       5      27       70      134      225      357      545     3654     9263    17876
             *

719          KK  RTPCNB   ROUTE   REACH
720          KM        ROUTE FLOW FROM PC TO NB (ALONG 67TH AVE).
721          KM        FUTURE ARTERIAL SECTION
722          RS       7               -1        0
723          RC   0.100   0.023    0.100     4800   0.0038     0.00
724          RX     0.0     440      445    445.1    575.1    575.2      900   1000.0
725          RY     105     105      105    99.75    99.75      105      105      105
             *

726          KK   SUBNB   BASIN
727          KM   BASIN NB
728          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
729          KM    L=       1.4  Lca=        .7   S=   16.8  Kn= .020  LAG=  16.4
730          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
731          BA     .44
732          LG     .25      .15     6.80      .16    12.00
733          UI    144.     464.     790.     956.     577.     284.     126.      48.      28.       0.
734          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
             *

735          KK   RETNB
736          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
737          KM   80% OF REQUIRED MODELED
738          DT   RETNB    33.5
739          DI       0   10000
740          DQ       0   10000
             *

741          KK   CPNB1
742          KM        ADD HYDROGRAPHS AT NB
743          HC       2
             *
             * KKDINBNA
             * KM       DIVERT 65% OF FLOW FROM NB TO NA
             * DT  DINA
             * DI     0       25       50       75      100      150      200
             * DQ     0       16       33       49       65       98      130
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

744          KK  RTNBJD   ROUTE   REACH
745          KM        ROUTE FLOW FROM NB TO JD (ALONG 67TH AVENUE).
746          KM        FUTURE ARTERIAL SECTION
747          RS       3               -1        0
748          RC   0.100   0.023    0.100     5200   0.0054     0.00
749          RX     0.0     440      445    445.1    575.1    575.2      900   1000.0
750          RY     105     105      105    99.75    99.75      105      105      105
             *

751          KK   SUBPD   BASIN
752          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
753          BA   0.443
754          LG    0.14     0.17     8.00     0.11       24
755          UI     130      438      708      954      610      331      138       64       27       27
756          UI       0        0        0        0        0        0        0        0        0        0
             *

757          KK    DRPD
758          KM    RETURN DIVERT FROM PE
759          DR    DIPD
             *

760          KK   CPPD2
761          KM        ADD HYDROGRAPH AT PD
762          HC       2
             *

763          KK    RSPD
764          KM        MODIFIED PULS ROUTING FROM PD TO NC.
             * KO     1
765          RS       1    STOR        0        0
766          SV    25.6    37.6     42.4     51.8     53.9     56.1     58.2
767          SE  1030.6  1030.7   1030.8   1030.9   1031.0   1031.1   1031.2
768          SQ       0        4       28      101      246      487      820
             *

769          KK  RTPDNC   ROUTE   REACH
770          KM        ROUTE FLOW FROM PD TO NC (SHEET FLOW).
771          KM        TYPE A CHANNEL
772          RS       5               -1        0
773          RC   0.035   0.035    0.035     3000   0.0027     0.00
774          RX     0.0   100.0    400.0    500.0    500.1    600.0    900.0   1000.0
775          RY     5.0     4.0      1.0      0.0      0.0      1.0      4.0      5.0
             *

776          KK   SUBNC   BASIN
777          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
778          KM    L=        .7  Lca=        .3   S=   14.7  Kn= .092  LAG=  43.5
779          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
780          BA   0.306
781          LG    0.47     0.25     5.30     0.35       51
782          UI      86      341      534      508      379      219      121       71       44       23
783          UI       9        8        8        9        8        0        0        0        0        0
784          UI       0        0        0        0        0        0        0        0        0        0
             *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 785          KK    CPNC
 786          KM        ADD HYDROGRAPHS AT NC.
 787          HC       2
              *

 788          KK  RTNCJE   ROUTE   REACH
 789          KM        ROUTE FLOW FROM NC TO JE (SHEET FLOW).
 790          KM        TYPE A CHANNEL
 791          RS      12              -1        0
 792          RC   0.035   0.035   0.035    5000  0.0014    0.00
 793          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 794          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 795          KK  SUBJE1   BASIN
 796          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 797          KM    L=      1.1  Lca=       .6   S=   12.7  Kn= .090  LAG=  66.1
 798          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 799          BA   0.248
 800          LG    0.10    0.25    5.40    0.32      55
 801          UI     192     630     574     304     118      57      16      11      10       0
 802          UI       0       0       0       0       0       0       0       0       0       0
              *

 803          KK   CPJE1
 804          KM   COMBINE FLOWS FROM NC AND JE1
 805          HC       2
              *

 806          KK  RTJEJD   ROUTE   REACH
 807          KM        ROUTE FLOW FROM JE TO JD.
 808          KM        FUTURE ARTERIAL SECTION
 809          RS       3              -1        0
 810          RC   0.100   0.023   0.100    2500  0.0080    0.00
 811          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 812          RY     105     105     105   99.75   99.75     105     105     105
              *

 813          KK   SUBJD   BASIN
 814          KM   BASIN JD
 815          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 816          KM    L=      1.1  Lca=       .6   S=   12.7  Kn= .020  LAG=  14.7
 817          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
 818          BA     .51
 819          LG     .25     .17    8.00     .10   22.50
 820          UI    211.    648.   1201.    988.    552.    203.     82.     36.      0.      0.
 821          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *
1                                          HEC-1 INPUT                                          PAGE 24

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

 822          KK   RETJD
 823          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
 824          KM   80% OF REQUIRED MODELED
              * KO     3                                   21
 825          DT   RETJD    35.0
 826          DI       0   10000
 827          DQ       0   10000
              *

 828          KK    CPJD
 829          KM        ADD HYDROGRAPHS AT JD
 830          HC       3
              *
              * KKSDDRJD
              * KM DIVERT STORM DRAIN FLOW
              * DT59SDJD
              * DI     0     207   10000
              * DQ     0     207     207
              *

 831          KK  DIJDJC
 832          KM        DIVERT 37% OF FLOW AT JD TO JC2.
 833          DT   DIJC2
 834          DI       0      25      50     100     150     200
 835          DQ       0       9      19      37      56      74
              *

 836          KK  RTJDFC   ROUTE   REACH
 837          KM        ROUTE FLOW FROM JD TO FC.
 838          KM        FUTURE ARTERIAL SECTION
 839          RS       1              -1        0
 840          RC   0.100   0.023   0.100    3000  0.0053    0.00
 841          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 842          RY     105     105     105   99.75   99.75     105     105     105
              *

 843          KK  SUBJE2   BASIN
 844          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 845          KM    L=      1.1  Lca=       .5   S=   19.8  Kn= .097  LAG=  63.6
 846          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 847          BA   0.253
 848          LG    0.12    0.13   10.10    0.05      44
 849          UI     109     427     539     421     225     108      59      33       9       8
 850          UI       8       9       0       0       0       0       0       0       0       0
 851          UI       0       0       0       0       0       0       0       0       0       0
              *

 852          KK  RETJE2
 853          KM   DIVERT RETENTION OUT OF MODEL DUE TO RIO DEL REY DEVELOPMENT. -DCF
 854          KM   TOTAL RETENTION IS 5.9 AF. 80% OF THAT IS USED HERE. -DCF
 855          DT   RETJE     4.7
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856          DI       0   10000
857          DQ       0   10000
             *
1                                        HEC-1 INPUT                                                    PAGE 25

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

858          KK  RTJEFC   ROUTE   REACH
859          KM        ROUTE FLOW FROM JE TO FC (SHEET FLOW).
860          KM        TYPE A CHANNEL
861          RS       4              -1       0
862          RC   0.035   0.035   0.035    4000  0.0080    0.00
863          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
864          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *

865          KK   SUBFC   BASIN
866          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
867          KM    L=      1.0  Lca=        .4   S=   18.6  Kn= .097  LAG=  55.3
868          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
869          BA   0.357
870          LG    0.12    0.16    7.60    0.13      51
871          UI     101     397     624     592     442     256     140      84      50      28
872          UI      10       9      10      10      10       0       0       0       0       0
873          UI       0       0       0       0       0       0       0       0       0       0
             *

874          KK    CPFC
875          KM         ADD HYDROGRAPHS AT FC
876          HC       3
             *

877          KK  CPFCSR
878          KM   COMBINE HYDROGRAPHS INTO SALT RIVER AT FC
879          HC       2
             *
             * ***********************************************************************
             *
             *
             * ***********************************************************************
             *
             *

880          KK  DRUCUB
881          KM   RETURN DIVERT FROM UC
882          DR    DIUB
             *

883          KK  MCUCUB   ROUTE   REACH
884          KM   ADMP CHANNEL
885          KM   MASTER CHANNEL ROUTE FROM UC2 TO UB
886          KM   ROUTING RECORD ADDED, JEP 6/11/01
887          RS       1    FLOW      -1
888          RC   0.014   0.014   0.014    1287  0.0010    0.00
889          RX     0.0    16.0    16.0    16.0    51.0    51.0    51.0    67.0
890          RY     4.8     5.1     2.5     0.0     0.0     2.5     5.1     4.8
             *
             * KKRTUCUB
             * KM HEC-RAS REACH
             * KM      ROUTE FLOW FROM UC TO UB
             * KM      Channel geometry changed to match natural conditions 04.11.00  JEP
             * KM      Manning's N values changed to match approved values 04.11.00  JEP
             * RS     4              -1       0
             * RC 0.035   0.035   0.035    1400  0.0043    0.00
             * RX   0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
             * RY   5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
             *
             *
1                                        HEC-1 INPUT                                                    PAGE 26

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

891          KK   SUBUB
892          KM   BASIN UB
893          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
894          KM    L=        .8  Lca=        .4   S=   16.2  Kn= .048  LAG=  26.9
895          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
896          BA     .14
897          LG     .25     .14    8.80     .08   30.00
898          UI     18.     53.     91.    119.    176.    199.    143.    106.     76.     38.
899          UI     27.     18.      6.      5.      5.      5.      0.      0.      0.      0.
900          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

901          KK  ~@CPUB
902          KM        ADD HYDROGRAPHS AT UB
903          HC       2    2.42
             *
             * KK71PASS
             * KM DIVERT LOW FLOW AROUND BASIN
             * DT71PASS
             * DI     0       0   10000
             * DQ     0       0       0
             *

904          KK  SUBSF1
905          KM   BASIN SF1
906          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
907          KM    L=        .5  Lca=        .3   S=    9.2  Kn= .100  LAG=  45.9
908          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
909          BA     .13
910          LG     .50     .15    9.70     .07     .00
911          UI     10.     11.     24.     46.     58.     74.     81.     86.     86.     74.
912          UI     75.     62.     58.     42.     35.     30.     25.     18.     15.     13.
913          UI     10.      9.      7.      6.      6.      5.      1.      1.      1.      1.
914          UI      1.      1.      1.      1.      1.      1.      1.      1.      1.      1.
```

```
915          UI      1.      0.      0.      0.      0.      0.      0.      0.      0.      0.
916          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

917          KK    DRTB
918          KM        RETURN DIVERT FROM UA
919          DR    DITB
             *

920          KK  RTDITB   ROUTE   REACH
921          KM        ROUTE DIVERT TO SF1 (REACH LENGTH SUBJECT TO CHANGED
922          KM        BASED ON BASIN 3 LOCATION)
923          KM        TYPE A CHANNEL
924          RS       8              -1       0
925          RC   0.025   0.025   0.025    1400  0.0019    0.00
926          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
927          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *
1                                          HEC-1 INPUT                                                    PAGE 27

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

928          KK   CPBA3
929          KM   COMBINE CPUB, SF1, DITB
930          HC       3
             *

931          KK  SUBTB2
932          KM   BASIN TB2
933          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
934          KM    L=      1.8  Lca=       .9   S=   10.3  Kn= .046  LAG=  50.5
935          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
936          BA     .75
937          LG     .15     .15    8.80     .06   55.00
938          UI     50.     50.    127.    204.    251.    289.    334.    391.    512.    630.
939          UI    541.    450.    392.    333.    284.    242.    184.    119.     88.     82.
940          UI     59.     50.     36.     15.     15.     15.     15.     15.     15.     15.
941          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

942          KK  RETTB
943          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
944          KM   80% OF REQUIRED MODELED
945          DT   RETTB    19.6
946          DI       0   10000
947          DQ       0   10000
             *

948          KK  DITBTA
949          KM        DIVERT 25% OF FLOW TO TA
950          DT    DITA
951          DI       0      25      50      75     100     150     200
952          DQ       0       6      13      19      25      38      50
             *

953          KK  RTTBSF   ROUTE   REACH
954          KM   ROUTE FLOW FROM TB TO SF (ALONG 75TH AVENUE).
955          KM   TARGET CHANNEL
956          RS       4    ELEV   27.35       0
957          RC   0.030   0.030   0.030    2160  0.0010    0.00
958          RX     100   107.0   127.0   133.0   151.0   157.0   179.0   193.0
959          RY    32.5    32.0   27.35   27.35   27.35   27.35    32.0    32.5
             *

960          KK  SUSFB2
961          KM   BASIN SFB2
962          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
963          KM    L=       .5  Lca=       .3   S=    2.9  Kn= .020  LAG=  11.4
964          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
965          BA     .11
966          LG     .15     .15    9.70     .07   50.00
967          UI     78.    231.    324.    153.     46.     13.      0.      0.      0.      0.
968          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *
1                                          HEC-1 INPUT                                                    PAGE 28

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

969          KK  SUSF2A
970          KM   BASIN SF2A
971          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
972          KM    L=       .6  Lca=       .2   S=    5.9  Kn= .020  LAG=   9.2
973          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
974          BA     .14
975          LG     .15     .15    9.70     .07   80.00
976          UI    154.    478.    336.     89.     19.      0.      0.      0.      0.      0.
977          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

978          KK  RSSF2A
979          KM   TARGET NORTH BASIN
980          KM   28.51 Acre Feet of Sorage Provided per Target Drainage Report
981          DT  RETSF2   28.51
982          DI       0   10000
983          DQ       0   10000
             *
             * KKRSSF2A
             * KM  TARGET NORTH RETENTION BASIN
             * RS    1    STOR      0       0
             * SA  5.57    6.03    6.50    6.98    6.56    8.03   12.56   20.42   28.51   37.
             * SE     0       1       2       3       4       5       6       7       8
             * SQ     0       0       0       0       0       0       0       0       0       3
             *

984          KK  CPSF2B
985          KM    COMBINE FLOW FROM TB1, SF2A AMD SF2B
```

```
 986          HC       3
              *

 987          KK   CPBA3
 988          KM   Combine Target with regional basin
 989          HC       2
              *

 990          KK  BSN71
 991          KM   PROPOSED DETENTION BASIN DRC #4
 992          KM   INCLUDES TARGET SOUTH RETETNION BASIN AREA
 993          RS       1    ELEV    1010
 994          SV       0   0.001   0.001   10.40   15.34   53.24   74.82  118.92  163.57  349.40
 995          SQ       0   18.38   45.77   52.41   55.24   73.97   78.64   86.98   90.38   96.00
 996          SE    1010 1012.12    1015    1016 1016.47 1020.00    1021 1023.00    1024    1028
              *

 997          KK  DBSN71
 998          KM   DIVERT FLOWS FROM DETENTION BASIN DCR4 TO STORM DRAIN
 999          DT   BSN71
1000          DI       0   10000
1001          DQ       0   10000
              *
1                                        HEC-1 INPUT                                          PAGE 29

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

1002          KK  SUBPB
              * KO     3                                  21
1003          KM   BASIN PB
1004          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1005          KM    L=      1.1  Lca=       .5   S=     5.3  Kn= .020  LAG=  16.9
1006          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1007          BA     .41
1008          LG     .25     .15    8.80     .06   55.00
1009          UI    123.    405.    671.    887.    553.    301.    126.     56.     25.     25.
1010          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1011          KK   RETPB
1012          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1013          KM   80% OF REQUIRED MODELED
              * KO     3                                  21
1014          DT   RETPB    42.9
1015          DI       0   10000
1016          DQ       0   10000
              *

1017          KK   PB75
1018          KM   BASIN PB75 (ROADWAY DRAINAGE)
1019          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1020          KM    L=       .5  Lca=       .3   S=    12.0  Kn= .020  LAG=   8.1
1021          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1022          BA     .01
1023          LG     .15     .15    9.70     .04   80.00
1024          UI     14.     39.     19.      4.      0.      0.      0.      0.      0.      0.
1025          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1026          KK    PBBU
1027          KM   BASIN PBBU   (ROADWAY DRAINAGE)
1028          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1029          KM    L=      1.0  Lca=       .5   S=     6.0  Kn= .020  LAG=  15.8
1030          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1031          BA     .02
1032          LG     .15     .15    8.00     .07   80.00
1033          UI      7.     23.     42.     44.     26.     11.      5.      2.      1.      0.
1034          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1035          KK  CPBSD
              * KO     3                                  21
1036          KM           COMBINE STREET DRAINAGE
1037          HC       2
              *
1                                        HEC-1 INPUT                                          PAGE 30

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

1038          KK  DPBSD1
1039          KM   DIVERT STORM DRAIN FLOW (75TH AVENUE)
1040          DT  SD75PB
1041          DI       0      23   10000
1042          DQ       0      23      23
              *
              *

1043          KK  DPBSD2
1044          KM   DIVERT STORM DRAIN FLOW (BUCKEYE ROAD DRAINAGE)
1045          DT  SDBRPB
1046          DI       0      39   10000
1047          DQ       0      39      39
              *

1048          KK    CPPB
              * KO     3                                  21
1049          KM        ADD HYDROGRAPHS AT PB
1050          HC       2
              *

1051          KK  DIPBPA
1052          KM        DIVERT 19% OF FLOW FROM PB TO PA(ADMP DIVERSION)
1053          DT   DIPA1
1054          DI       0      25      50      75     100     150     200     400     800   10000
1055          DQ       0       5      10      14      19      29      38      76     152    1900
              *
```

```
1056          KK   CPPB1
              * KO     3                                  21
1057          KM        ADD HYDROGRAPHS AT PB
1058          HC       2
              *

1059          KK  RTPBNA   ROUTE   REACH
1060          KM        ROUTE FLOW FROM PB TO NA ALONG 75th AVE.
1061          KM        FUTURE ARTERIAL SECTION
              * KO     3                                  21
1062          RS       4    ELEV      -1       0
1063          RC   0.100   0.023   0.100    5280  0.0032    0.00
1064          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1065          RY     105     105     105   99.75   99.75     105     105     105
              *

1066          KK  SUBNA
1067          KM   BASIN NA
1068          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1069          KM    L=      2.0  Lca=      1.0   S=   10.5  Kn= .020  LAG=  24.0
1070          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1071          BA     .94
1072          LG     .25     .15    8.00     .08   51.00
1073          UI    132.    473.    742.   1029.   1568.   1184.    859.    588.    280.    184.
1074          UI    106.     40.     40.     40.      0.      0.      0.      0.      0.      0.
1075          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *
1                                          HEC-1 INPUT                                                    PAGE 31

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

1076          KK   RETNA
1077          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1078          KM   80% OF REQUIRED MODELED
1079          DT   RETNA    89.6
1080          DI       0   10000
1081          DQ       0   10000
              *

1082          KK    NA75
1083          KM   BASIN NA75  (75 AVENUE ROADWAY DRAINAGE)
1084          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1085          KM    L=      1.0  Lca=       .5   S=   15.2  Kn= .020  LAG=  13.1
1086          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1087          BA     .02
1088          LG     .15     .15    7.60     .08   80.00
1089          UI     11.     32.     55.     35.     14.      5.      2.      0.      0.      0.
1090          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1091          KK    NALB
1092          KM   BASIN NALB  (LOWER BUCKEYE ROADWAY DRAINAGE)
1093          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1094          KM    L=      1.0  Lca=       .5   S=    6.0  Kn= .020  LAG=  15.8
1095          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1096          BA     .02
1097          LG     .15     .19    6.60     .12   80.00
1098          UI      7.     23.     42.     44.     26.     11.      5.      2.      1.      0.
1099          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1100          KK   CNASD
              * KO     3                                  21
1101          KM    COMBINE STREET DRAINAGE
1102          HC       2
              *

1103          KK  CPNA1
1104          KM    COMBINE ROUTED FLOW FROM PB
1105          HC       3
              *
              *

1106          KK  DNASD1
1107          KM   DIVERT STORM DRAIN FLOW (75TH AVENUE)
1108          DT  SD75NA
1109          DI       0      40   10000
1110          DQ       0      40      40
              *
1                                          HEC-1 INPUT                                                    PAGE 32

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

1111          KK  DNASD2
1112          KM   DIVERT STORM DRAIN FLOW (LOWER BUCKEYE)
1113          DT  SDLBNA
1114          DI       0      38   10000
1115          DQ       0      38      38
              *

1116          KK  DADMP1
1117          KM   DIVERT STREET FLOW TO ADMP CHANNEL
1118          DT   ADMP1
1119          DI       0     220   10000
1120          DQ       0     220   10000
              *

1121          KK  SUBJC1
1122          KM   BASIN JC1
1123          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1124          KM    L=      1.5  Lca=      1.0   S=   10.7  Kn= .020  LAG=  21.4
1125          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1126          BA     .47
1127          LG     .25     .15    7.00     .13   30.00
1128          UI     76.    304.    456.    712.    797.    538.    365.    173.    102.     52.
```

```
1129          UI     23.     23.      0.      0.      0.      0.      0.      0.      0.      0.
1130          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1131          KK  RETJC1
              * KO     3                                   21
1132          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1133          KM   80% OF REQUIRED MODELED
1134          DT  RETJC1    35.5
1135          DI       0   10000
1136          DQ       0   10000
              *

1137          KK    JC75
1138          KM   BASIN JC75  (ROADWAY DRAINAGE)
1139          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1140          KM    L=       1.0  Lca=        .5   S=   13.0  Kn= .020  LAG=  13.6
1141          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1142          BA     .02
1143          LG     .15     .15    7.00     .10   80.00
1144          UI     10.     31.     56.     38.     18.      7.      2.      2.      0.      0.
1145          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1146          KK  CJCSD1
              * KO     3                                   21
1147          KM        COMBINE STREET DRAINAGE AND RETETION OVERFLOW
1148          HC       2     .49
              *
1                                          HEC-1 INPUT                                          PAGE 33

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

1149          KK  SUBJC2
1150          KM   BASIN JC2
1151          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1152          KM    L=       1.5  Lca=       1.0   S=   11.3  Kn= .020  LAG=  21.2
1153          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1154          BA     .48
1155          LG     .25     .15    7.00     .13     .24
1156          UI     81.    317.    475.    753.    805.    544.    365.    165.    101.     49.
1157          UI     23.     23.      0.      0.      0.      0.      0.      0.      0.      0.
1158          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1159          KK  RETJC2
              * KO     3                                   21
1160          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1161          KM    140 ACRES OF EXISITING DEVELOPMENT NOT INCLUDED IN CALCULATIONS
1162          KM   80% OF REQUIRED MODELED
1163          DT  RETJC2    19.6
1164          DI       0   10000
1165          DQ       0   10000
              *

1166          KK  DETJC2
1167          KM   DIVERT PROPOSED RETENTION OUT OF MODEL FOR APPROXIMATELY 140 ACRES
1168          KM   OF EXISITING DEVELOPMENT THAT DOES NOT HAVE RETENTION
1169          KM   80% OF REQUIRED MODELED
1170          DT  DETJC2    16.6
1171          DI       0   10000
1172          DQ       0   10000
              *

1173          KK  RTJCJC   ROUTE   REACH
1174          KM        ROUTE FLOW FROM JC2 TO JC1 ALONG 75th AVE.
1175          KM        FUTURE ARTERIAL SECTION
              * KO     3                                   21
1176          RS       2    ELEV      -1       0
1177          RC   0.100   0.023   0.100    2640  0.0021    0.00
1178          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1179          RY     105     105     105   99.75   99.75     105     105     105
              *

1180          KK  CPJC1A
1181          KM             COMBINE FLOW FROM JC2 WITH FLOW FROM JC3
1182          HC       2     .97
              *

1183          KK    JCBR
1184          KM   BASIN JCBR  (ROADWAY DRAINAGE)
1185          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1186          KM    L=       1.0  Lca=        .5   S=   11.0  Kn= .020  LAG=  14.0
1187          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1188          BA     .02
1189          LG     .15     .17    6.90     .11   80.00
1190          UI     10.     29.     53.     39.     20.      7.      3.      2.      0.      0.
                                           HEC-1 INPUT                                          PAGE 34
1

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

1191          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1192          KK  CJCSD2
              * KO     3                                   21
1193          KM        COMBINE STREET DRAINAGE AND RETETION OVERFLOW
1194          HC       2
              *

1195          KK  CPJC1B
              * KO     3                                   21
1196          KM        COMBINE JC1, JC2 AND STREET DRAINAGE
1197          HC       2   5.96
              *

1198          KK  DJC2SD
```

```
1199        KM   DIVERT OFFSITE TO STORM DRAIN FLOW (BROADWAY STORM DRAIN FLOW)
1200        DT  SDOSBR
1201        DI       0      41   10000
1202        DQ       0      41      41
            *

1203        KK  DJCSD1
1204        KM   DIVERT STORM DRAIN FLOW (75TH AVE. STORM DRAIN FLOW)
1205        DT  SD75JC
1206        DI       0      42   10000
1207        DQ       0      42      42
            *

1208        KK   DIJD
1209        KM   RETURN DIVERTED FLOW FROM BASIN SUBJD
1210        DR   DIJC2
            *

1211        KK  RTJCJC   ROUTE   REACH
1212        KM        ROUTE FLOW FROM JD TO JC1 ALONG 75th AVE.
1213        KM        FUTURE ARTERIAL SECTION
            * KO     3                                  21
1214        RS       5    ELEV      -1       0
1215        RC   0.100   0.023   0.100    5280  0.0021    0.00
1216        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1217        RY     105     105     105   99.75   99.75     105     105     105
            *

1218        KK   CPJC2
            * KO     3                                  21
1219        KM         COMBINE SPLIT FLOW FROM SUBJD WITH FLOW AT CPCJ1
1220        HC       2    8.11
            *
```



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

1221        KK  DIJCJB
1222        KM        DIVERT 46% OF FLOW AT JC TO JB.  (ADMP DIVERSION)
            * KO     3                                  21
1223        DT   DIJB2
1224        DI       0      25      50      75     100     150     200    1346    2000
1225        DQ       0      12      23      35      46      69      92   605.7     920
            *

1226        KK  RTJCFB   ROUTE   REACH
1227        KM        ROUTE FLOW FROM JC1 TO FB ALONG 75th AVE.
1228        KM        FUTURE ARTERIAL SECTION
            * KO     3                                  21
1229        RS       3    ELEV      -1       0
1230        RC   0.100   0.023   0.100    4200  0.0032    0.00
1231        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1232        RY     105     105     105   99.75   99.75     105     105     105
            *

1233        KK   DRB71
1234        KM   RETURN DIVERTED FLOW FROM BASIN DRC #4
1235        DR   BSN71
            *

1236        KK  RT71PB   ROUTE   REACH
1237        KM        ROUTE FLOW FROM BASIN TO PB ALONG 71th AVE AND
1238        KM        BUCKEYE RD.
1239        KM
1240        RT                      2
            *

1241        KK  RSDPB1
1242        KM   RETURN STORM DRAIN FLOW FROM PB
1243        DR  SD75PB
            *

1244        KK  CPPBS1
            * KO     3                                  21
1245        KM    COMBINE STORM DRAIN FLOWS
1246        HC       2    3.99
            *

1247        KK  RSDPB2
1248        KM   RETURN STORM DRAIN FLOW FROM PB
1249        DR  SDBRPB
            *

1250        KK  CPPBS2
            * KO     3                                  21
1251        KM    COMBINE STORM DRAIN FLOWS
1252        HC       2
            *
```



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

1253        KK  RTPBNA   ROUTE   REACH
1254        KM        ROUTE FLOW FROM PB TO NA IN STORM DRAIN
1255        KM
1256        RT                      2
            *

1257        KK  RSDNA1
1258        KM   RETURN DIVERTED STORM DRAIN FLOW FROM NA
1259        DR  SD75NA
            *

1260        KK  CPNAS1
            * KO     3                                  21
1261        KM    COMBINE STORM DRAIN FLOWS
```

```
1262        HC       2    4.97
            *

1263        KK  RSDNA2
1264        KM   RETURN DIVERTED STORM DRAIN FLOW FROM NA
1265        DR  SDLBNA
            *

1266        KK  CPNAS2
            * KO     3                                  21
1267        KM    COMBINE STORM DRAIN FLOWS
1268        HC       2
            *

1269        KK  RTNAJC   ROUTE   REACH
1270        KM        ROUTE FLOW FROM NA TO JC IN STORM DRAIN
1271        KM
1272        RT                      2
            *

1273        KK  RSDJC1
1274        KM   RETURN DIVERTED STORM DRAIN FLOW FROM JC (75TH AVENUE)
1275        DR  SD75JC
            *

1276        KK  CPJCS1
            * KO     3                                  21
1277        KM    COMBINE STORM DRAIN FLOWS
1278        HC       2    5.96
            *
            * KKRSDJC2
            * KM RETURN DIVERTED STORM DRAIN FLOW FROM JC (BROADWAY ROAD)
            * DRSDBRJC
            *
```



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1                                   HEC-1 INPUT

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

1279        KK  RSDJC3
1280        KM   RETURN DIVERTED STORM DRAIN FLOW FROM JC1 and JC2
1281        DR  SDOSBR
            *
            * KKCPJCS2
            * KO     3                                  21
            * KM  COMBINE STORM DRAIN FLOWS
            * HC     2    0.50
            *

1282        KK  CPJCS3
            * KO     3                                  21
1283        KM    COMBINE STORM DRAIN FLOWS
1284        HC       2    5.96
            *

1285        KK  RTJCFB   ROUTE   REACH
1286        KM        ROUTE FLOW FROM JC TO FB ALONG 75th AVE.
1287        KM
1288        RT                      2
            *

1289        KK    FB75
1290        KM   BASIN FB75(ROADWAY DRAINAGE)
1291        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1292        KM    L=        .8  Lca=        .4   S=   10.7  Kn= .020  LAG=  12.4
1293        KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1294        BA     .02
1295        LG     .15      .25    4.70     .25   80.00
1296        UI     11.      32.     52.     29.     10.      3.      2.      0.      0.      0.
1297        UI      0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
            *

1298        KK    CPFB
            * KO     3                                  21
1299        KM        ADD HYDROGRAPHS AT FB
1300        HC       2    5.98
            *
            * ADDED BY SLT MAR16,2005 TO ELIMINATE ERROR

1301        KK    DUMM
1302        KM        ELIMINATE UNNECESSARY HYDROGRAPHS
1303        HC       3
            *
            *
            * ADDED RETURNS TO ADD TO DDS FOR NEW STUDY  -  SLT  3/03/05
            *
            * KK  SLT1
            * KM      RETURN DIVERT FROM TB
            * DR  DITA
            * ZW A=DURANGO B=SLT1  C=FLOW  E=5MIN F=6-HR
            *
            * KK  SLT2
            * KM      RETURN DIVERT FROM ADMP1
            * DR ADMP1
            * ZW A=DURANGO B=SLT2  C=FLOW  E=5MIN  F=6-HR
            *
```



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1                                   HEC-1 INPUT

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

1304        KK   SUBSH   BASIN
1305        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1306        KM    L=        .4  Lca=        .2   S=   11.1  Kn= .030  LAG=  11.5
1307        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1308        BA   0.103
1309        LG    0.15     0.16    9.70    0.07      55
1310        UI      72      211     303     147      44      13       8       0       0       0
```

```
1311        UI       0       0       0       0       0       0       0       0       0       0
            *

1312        KK   RETSH
1313        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1314        DT   RETSH    10.3
1315        DI       0   10000
1316        DQ       0   10000
            *

1317        KK    RSSH
1318        KM        MODIFIED PULS ROUTING BEHIND RID.
            * KO     1
1319        RS       1    STOR       0       0
1320        SV      19      21      24      30      37      44    46.4
1321        SE  1027.0  1027.1  1027.2  1027.5  1027.7  1028.0  1028.2
1322        SQ       0   138.6   475.2  1277.3
1323        SE  1027.0  1027.6  1027.8  1028.1
            *
            *

1324        KK  DISHRJ
1325        KM   DIVERT FLOW FROM SH TO RJ2
1326        DT   DIRJ2
1327        DI       0   138.6   475.2  1277.3
1328        DQ       0    88.6   375.2  1077.3
            *
            *

1329        KK  RTSHSG   ROUTE   REACH
1330        KM        ROUTE FLOW FROM SH TO SG
1331        KM        TYPE C CHANNEL
1332        RS       8              -1       0
1333        RC   0.035   0.035   0.035    2600  0.0008    0.00
1334        RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1335        RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
            *

1336        KK   SUBTA   BASIN
1337        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1338        KM    L=        .8  Lca=       .4   S=   10.5  Kn= .03  LAG=  17.1
1339        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1340        BA   0.241
1341        LG    0.15    0.15    7.00    0.18      55
1342        UI      71     234     382     523     328     186      76      35      15      14
1343        UI       3       0       0       0       0       0       0       0       0       0
1344        UI       0       0       0       0       0       0       0       0       0       0
            *
```



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

1345        KK   RETTA
1346        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1347        DT   RETTA    24.1
1348        DI       0   10000
1349        DQ       0   10000
            *

1350        KK    DRTA
1351        KM        RETURN DIVERT FROM TB
1352        KM        RETURN DIVERT FROM TB
1353        DR    DITA
            * BA     0
            * ZR  =QI A=DURANGO B=SLT1  C=FLOW  E=5MIN  F=6-HR
            *

1354        KK  RTDITA   ROUTE   REACH
1355        KM        ROUTE DIVERT TO TA
1356        KM        TYPE A CHANNEL
1357        RS       8              -1       0
1358        RC   0.025   0.025   0.024    2600  0.0004    0.00
1359        RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1360        RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
            *

1361        KK   @CPTA
1362        KM        ADD HYDROGRAPHS AT TA
1363        HC       2    1.13
            *

1364        KK  RTTASG   ROUTE   REACH
1365        KM        ROUTE FLOW FROM TA TO SG (SHEET FLOW).
1366        KM        TYPE A CHANNEL
1367        RS       2              -1       0
1368        RC   0.025   0.025   0.025    2200  0.0050    0.00
1369        RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1370        RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
            *

1371        KK   SUBSG   BASIN
1372        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1373        KM    L=        .6  Lca=       .3   S=    5.0  Kn= .03  LAG=  16.6
1374        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1375        BA   0.136
1376        LG    0.15    0.15    8.80    0.09      55
1377        UI      43     139     233     294     180      92      40      16       8       8
1378        UI       0       0       0       0       0       0       0       0       0       0
            *

1379        KK   RETSG
1380        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1381        DT   RETSG    13.6
1382        DI       0   10000
1383        DQ       0   10000
            *
```

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

1384          KK    CPSG
1385          KM        ADD HYDROGRAPHS AT SG
1386          HC       3
              *

1387          KK    RSSG
1388          KM        MODIFIED PULS ROUTING BEHIND RID AND 81ST AVENUE
              * KO     1
1389          RS       1    STOR        0        0
1390          SV    12.3    13.3     14.9     16.5     18.4     22.4     25.9     35.2
1391          SE  1026.4  1026.6   1026.8   1027.0   1027.2   1027.4   1027.6   1027.9
1392          SQ       0       9      114      525     1221     2143     3276     5343
              *

1393          KK  DISGRJ
1394          KM        DIVERT FLOW FROM SG TO RJ
1395          DT   DIRJ4
1396          DI       0       9      114      525     1221
1397          DQ       0       1       70      400      964
              *

1398          KK  RTSGSE   ROUTE   REACH
1399          KM        ROUTE FLOW FROM SG TO SE
1400          KM        TYPE C CHANNEL
1401          RS       2              -1        0
1402          RC   0.035   0.035   0.035     1200  0.0030     0.00
1403          RX     0.0    20.0    35.0     50.0     50.1    250.0    450.0    550.0
1404          RY     5.0     5.0     2.5      0.0      0.0      2.0      4.0      5.0
              *

1405          KK   SUBSC   BASIN
1406          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1407          KM    L=      1.3  Lca=       .7   S=   15.2  Kn= .029  LAG=  23.9
1408          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1409          BA   0.453
1410          LG    0.14    0.26    5.00    0.39       58
1411          UI      64     229     360     500      758      569      409      284      133       88
1412          UI      50      19      20      20        6        0        0        0        0        0
1413          UI       0       0       0       0        0        0        0        0        0        0
              *

1414          KK   RETSC
1415          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1416          DT   RETSC    45.4
1417          DI       0   10000
1418          DQ       0   10000
              *

1419          KK  DISCSD
1420          KM        DIVERT 54% OF FLOW AT SC TO SD.
1421          DT    DISD
1422          DI       0      25      50     100      150      200
1423          DQ       0      14      27      54       81      108
              *
```



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

1424          KK  RTSCSE   ROUTE   REACH
1425          KM        ROUTE FLOW FROM SC TO SE (ALONG 83RD AVENUE).
1426          KM        FUTURE ARTERIAL SECTION
1427          RS       1              -1        0
1428          RC   0.100   0.023   0.100     1000  0.0022     0.00
1429          RX     0.0     440     445    445.1    575.1    575.2      900   1000.0
1430          RY     105     105     105    99.75    99.75      105      105      105
              *

1431          KK   SUBSE   BASIN
1432          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1433          KM    L=       .3  Lca=       .2   S=   26.5  Kn= .03  LAG=   7.8
1434          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1435          BA   0.125
1436          LG    0.15    0.25    4.80    0.39       55
1437          UI     185     511     220      40       11        0        0        0        0        0
1438          UI       0       0       0       0        0        0        0        0        0        0
              *

1439          KK   RETSE
1440          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1441          DT   RETSE    12.5
1442          DI       0   10000
1443          DQ       0   10000
              *

1444          KK    CPSE
1445          KM        ADD HYDROGRAPHS AT SE
1446          HC       3
              *

1447          KK    RSSE
1448          KM        MODIFIED PULS ROUTING AT SE BEHIND THE RID CANAL
              * KO     1
1449          RS       1    STOR        0        0
1450          SV    13.5    14.8     17.6     20.5
1451          SE  1025.9  1026.0   1026.5   1026.9
1452          SQ    3.14    14.3   479.44  2013.01
              *

1453          KK  DISERJ
1454          KM   DIVERT FLOW FROM SE TO RJ
1455          DT   DIRJ5
1456          DI       0       3      142     1100
1457          DQ       0       3      142     1100
```

```
                 *
1458             KK  RTSERI   ROUTE   REACH
1459             KM        ROUTE FLOW FROM SE TO RI
1460             KM        TYPE A CHANNEL
1461             RS       4              -1        0
1462             RC   0.035   0.035   0.035    2000  0.0019    0.00
1463             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1464             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *
```



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1                                   HEC-1 INPUT

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

1465             KK   SUBRJ   BASIN
1466             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1467             KM    L=        .7  Lca=        .4   S=     5.6  Kn= .03  LAG=  19.8
1468             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1469             BA   0.163
1470             LG    0.15    0.15    7.00    0.18      55
1471             UI      33     122     184     307     254     170      98      46      25       8
1472             UI       9       7       0       0       0       0       0       0       0       0
1473             UI       0       0       0       0       0       0       0       0       0       0
                 *

1474             KK   RETRJ
1475             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1476             DT   RETRJ    16.3
1477             DI       0   10000
1478             DQ       0   10000
                 *

1479             KK   CPRJ2
1480             KM        RETURN DIVERSION FROM SH
1481             DR   DIRJ2
                 *

1482             KK  RTSHRJ   ROUTE   REACH
1483             KM        ROUTE HYDROGRAPH FROM SH TO RJ2
1484             KM        TYPE C CHANNEL
1485             RS       7              -1        0
1486             RC   0.050   0.050   0.050    2000  0.0015    0.00
1487             RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1488             RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                 *

1489             KK  RTRJ3    ROUTE   REACH
1490             KM        ROUTE HYDROGRAPH FROM RJ3 TO RJ
1491             KM        TYPE C CHANNEL
1492             RS       8              -1        0
1493             RC   0.035   0.035   0.035    3900  0.0015    0.00
1494             RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1495             RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                 *

1496             KK  CPRJ4A
1497             KM        RETURN DIVERT FROM SG
1498             DR   DIRJ4
                 *

1499             KK  CPRJ4B
1500             KM        COMBINE HYDROGRAPHS AT RJ4
1501             HC       2     .39
                 *
                 *
```



```
1                                   HEC-1 INPUT

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

1502             KK  RTSGRJ   ROUTE   REACH
1503             KM        ROUTE DIVERT FROM SG TO RJ
1504             KM        TYPE C CHANNEL
1505             RS       3              -1        0
1506             RC   0.035   0.035   0.035    1400  0.0019    0.00
1507             RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1508             RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                 *

1509             KK   CPRJ5
1510             KM        RETURN DIVERT FROM SE
1511             DR   DIRJ5
                 *

1512             KK  RTSERJ   ROUTE   REACH
1513             KM        ROUTE DIVERT FROM SE TO RJ
1514             KM        TYPE C CHANNEL
1515             RS       9              -1        0
1516             RC   0.035   0.035   0.035    1000  0.0001    0.00
1517             RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1518             RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                 *

1519             KK  @CPRJ6
1520             KM        ADD HYDROGRAPHS AT RJ
1521             HC       3    3.81
                 *

1522             KK    RSRJ
1523             KM        RESERVOIR ROUTING AT RJ BEHIND 83RD AVE AND THE SPRR
                 * KO     1
1524             RS       1    STOR       0       0
1525             SV     3.5     6.2    11.0    18.4    30.9    52.2    76.3
1526             SE  1022.1  1022.5  1023.0  1023.5  1024.0  1024.5  1024.9
1527             SQ       0      50     100     506     899    1369
1528             SE  1022.1  1022.7  1022.9  1023.7  1024.0  1024.2
                 *
```

```
1529        KK  DIRJPA
1530        KM   DIVERT FLOW OVER SPRR FROM RJ TO PA
1531        DT   DIPA2
1532        DI       0       50      100      506      899     1369
1533        DQ       0        0        0        6      149      369
            *

1534        KK  RTRJRI   ROUTE   REACH
1535        KM        ROUTE FLOW FROM RJ TO RI1
1536        KM        TYPE C CHANNEL
1537        RS       5                -1        0
1538        RC   0.035   0.035   0.035     2600  0.0019     0.00
1539        RX     0.0    20.0    35.0     50.0    50.1    250.0   450.0   550.0
1540        RY     5.0     5.0     2.5      0.0     0.0      2.0     4.0     5.0
            *
            * THE FOLLOWING DIVERT REMOVED TO MODEL THE ADMP CONDITION
            * KKDIRIOE
            * KM DIVERT FLOW FROM RI TO OE OVER SPRR.
            * KM 1/4 MILE WEST OF 83RD AVE.
            * DT DIOE3
            * DI   100     400    1392    1300    1400
            * DQ     0      55     370     680     730
            *
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1                                   HEC-1 INPUT

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

1541        KK  RTRIRI
1542        KM   TYPE C CHANNEL
1543        RS       4                -1        0
1544        RC    .035    .035    .035     1550   .0019
1545        RX       0      20      35       50    50.1     250     450     550
1546        RY       5       5     2.5        0       0       2       4       5
            *

1547        KK   SUBRI   BASIN
1548        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1549        KM    L=        .6  Lca=        .2   S=   19.3  Kn= .03  LAG=  10.6
1550        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1551        BA   0.232
1552        LG    0.15    0.15    7.60    0.14      55
1553        UI     193     596     651     255      72      23       7       0       0       0
1554        UI       0       0       0       0       0       0       0       0       0       0
            *

1555        KK   RETRI
1556        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1557        DT   RETRI    23.2
1558        DI       0   10000
1559        DQ       0   10000
            *

1560        KK   SUBSB   BASIN
1561        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1562        KM    L=        .5  Lca=        .3   S=   15.1  Kn= .03   LAG=  12.3
1563        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1564        BA   0.168
1565        LG    0.15    0.15    9.70    0.07      55
1566        UI     102     299     486     271      95      30      14       5       0       0
1567        UI       0       0       0       0       0       0       0       0       0       0
            *

1568        KK   RETSB
1569        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1570        DT   RETSB    16.8
1571        DI       0   10000
1572        DQ       0   10000
            *

1573        KK    RSSB
1574        KM         MODIFIED PULS ROUTING THROUGH PONDING  BEHIND RID CANAL.
            * KO     1
1575        RS       1     STOR       0       0
1576        SV     2.2      5.6    11.9    21.4    33.8
1577        SE  1024.0   1024.5  1025.0  1025.5  1025.9
1578        SQ       0       94     581    2114    4864
            *
```



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1                                   HEC-1 INPUT

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

1579        KK   SUBSD   BASIN
1580        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1581        KM    L=        .6  Lca=        .3   S=   12.3  Kn= .03  LAG=  14.4
1582        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1583        BA   0.168
1584        LG    0.15    0.28    6.60    0.18      55
1585        UI      73     222     410     319     173      61      24      12       7       0
1586        UI       0       0       0       0       0       0       0       0       0       0
            *

1587        KK   RETSD
1588        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1589        DT   RETSD    16.8
1590        DI       0   10000
1591        DQ       0   10000
            *

1592        KK    DRSD
1593        KM    RETURN DIVERT FROM SC.
1594        DR    DISD
            *

1595        KK   @CPSD
1596        KM         ADD HYDROGRAPHS AT SD.
```

```
1597        KM        ROUTING STEP NOT INCLUDED DUE TO SHORT ROUTING LENGTH
1598        HC       3      .79
            *

1599        KK    RSSD
1600        KM        MODIFIED PULS ROUTING BEHIND CANAL, NORTH OF VAN BUREN.
            * KO      1
1601        RS        1     STOR        0        0
1602        SV        0      .01       .1       .6      1.8        5        9       14       23
1603        SE   1021.4   1022.8     1023   1023.3   1023.6     1024   1024.3   1024.6     1025
1604        SQ        0      .16       46      534      939     1427     1993     2767
1605        SE   1021.4   1021.5     1022     1023   1023.5     1024   1024.5     1025
            *

1606        KK  RTSDRI   ROUTE   REACH
1607        KM        ROUTE FLOW FROM SD TO RI
1608        KM        TYPE A CHANNEL
1609        RS        3                -1        0
1610        RC    0.035    0.035    0.035     2400   0.0046     0.00
1611        RX      0.0    100.0    400.0    500.0    500.1    600.0    900.0   1000.0
1612        RY      5.0      4.0      1.0      0.0      0.0      1.0      4.0      5.0
            *

1613        KK  ~@CPRI
1614        KM   ADD HYDROGRAPHS AT RI (1/2 MILE WEST OF 83RD AVE)
1615        HC        4    4.38
            *
            * THE FOLLWOING PONDING REMOVED TO MODEL THE ADMP CONDITION
            * KK  RSRI
            * KM       MODIFIED PULS ROUTING BEHIND SPRR.
            * KO      1
            * RS      1     STOR       -1        0
            * SV      0        0       .1       .3      1.2      3.0      6.5    13.76    21.8     35
            * SE1014.0   1014.1   1014.5   1015.0   1015.5   1016.0   1016.5   1017.0   1017.5   1018
            * SQ      0        4      142      573     1333     3217     5957     9319    13343    182
            *
```



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

1616        KK  MCRIRH   ROUTE   REACH
1617        KM   ADMP CHANNEL
1618        KM   ROUTE FLOW FROM RI TO RH
1619        RS        3    FLOW       -1
1620        RC    0.040    0.040    0.040     2482   0.0015     0.00
1621        RX      0.0     16.0     33.7     51.3     71.3     89.0    106.7    122.7
1622        RY      5.6      5.9      3.0      0.0      0.0      3.0      5.9      5.6
            *
            * ******************************************************************************
            *

1623        KK   SUBPA   BASIN
1624        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1625        KM    L=       1.1  Lca=        .6   S=    16.7  Kn= .03   LAG=  21.5
1626        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1627        BA   0.477
1628        LG    0.15     0.17     7.30     0.14       55
1629        UI      76      307      461      716      812      547      372      178      105       54
1630        UI      23       23       19        0        0        0        0        0        0        0
1631        UI       0        0        0        0        0        0        0        0        0        0
            *

1632        KK   RETPA
1633        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1634        DT   RETPA    47.8
1635        DI       0   10000
1636        DQ       0   10000
            *

1637        KK   DRPA2
1638        KM   RETURN DIVERT FROM RJ.
1639        DR   DIPA2
            *

1640        KK  RTRJPA   ROUTE   REACH
1641        KM        ROUTE DIVERT FROM RJ TO PA
1642        KM        FUTURE ARTERIAL SECTION
1643        RS        2                -1        0
1644        RC    0.100    0.023    0.100     2400   0.0054     0.00
1645        RX      0.0      440      445    445.1    575.1    575.2      900   1000.0
1646        RY      105      105      105    99.75    99.75      105      105      105
            *

1647        KK    CPPA
1648        KM   ADD HYDROGRAPHS AT PA
1649        HC        2
            *

1650        KK  DIPAOE
1651        KM        DIVERT 18% OF FLOW AT PA TO OE.
1652        DT    DIOE
1653        DI       0       25       50       75      100      150      200
1654        DQ       0        5        9       14       18       27       36
            *
```



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

1655        KK  RTPAMH   ROUTE   REACH
1656        KM        ROUTE FLOW FROM PA TO MH (ALONG 83RD AVENUE).
1657        KM        FUTURE ARTERIAL SECTION
1658        RS        2                -1        0
1659        RC    0.100    0.023    0.100     2640   0.0012     0.00
1660        RX      0.0      440      445    445.1    575.1    575.2      900   1000.0
1661        RY      105      105      105    99.75    99.75      105      105      105
            *
```

```
1662          KK   SUBMH   BASIN
1663          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1664          KM    L=        .7  Lca=        .3   S=    8.8  Kn= .05  LAG=  19.7
1665          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1666          BA   0.239
1667          LG    0.25    0.15    8.80    0.09      30
1668          UI      49     179     272     452     372     249     141      66      36      13
1669          UI      12      10       0       0       0       0       0       0       0       0
              *

1670          KK   RETMH
1671          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1672          DT   RETMH    19.8
1673          DI       0   10000
1674          DQ       0   10000
              *

1675          KK    CPMH
1676          KM    ADD HYDROGRAPHS AT MH
1677          HC       2
              *

1678          KK  RTMHMD   ROUTE   REACH
1679          KM        ROUTE FLOW FROM PA TO MD (ALONG 83RD AVENUE).
1680          KM        FUTURE ARTERIAL SECTION
1681          RS       2      -1       0
1682          RC   0.100   0.023   0.100    2640  0.0012    0.00
1683          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1684          RY     105     105     105   99.75   99.75     105     105     105
              *

1685          KK   SUBMD   BASIN
1686          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1687          KM    L=      1.4  Lca=        .6   S=   14.3  Kn= .05  LAG=  41.7
1688          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1689          BA   0.255
1690          LG    0.25    0.08    7.60    0.11      30
1691          UI      21      24      73     100     119     142     175     247     234     185
1692          UI     156     127     106      80      47      35      30      21      15       6
1693          UI       6       6       6       6       6       0       0       0       0       0
              *
```



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

1694          KK   RETMD
1695          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1696          DT   RETMD    21.1
1697          DI       0   10000
1698          DQ       0   10000
              *

1699          KK    CPMD
1700          KM        ADD HYDROGRAPHS AT MD
1701          HC       2
              *

1702          KK  DIMDJB
1703          KM        DIVERT 21% OF FLOW FROM MD TO JB.
1704          DT   DIJB1
1705          DI       0      25      50      75     100     150     200
1706          DQ       0       5      10      16      21      32      42
              *

1707          KK  DIMDMF
1708          KM   DIVERT FLOW FROM MD TO MF
1709          KM   DUMMY DIVERT TO ROUTE FLOW AROUND CODE SEQUENCE.
1710          DT   DIMFX
1711          DI       0   10000
1712          DQ       0   10000
              *

1713          KK   SUBMI   BASIN
1714          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1715          KM    L=        .7  Lca=        .3   S=    8.8  Kn= .043  LAG=  16.9
1716          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1717          BA   0.409
1718          LG    0.21    0.15    8.40    0.11      38
1719          UI     122     402     662     886     553     306     126      57      25      25
1720          UI       3       0       0       0       0       0       0       0       0       0
              *

1721          KK   RETMI
1722          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1723          DT   RETMI    35.3
1724          DI       0   10000
1725          DQ       0   10000
              *

1726          KK   SUBMG   BASIN
1727          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1728          KM    L=        .7  Lca=        .3   S=    8.8  Kn= .04   LAG=  11.7
1729          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1730          BA   0.082
1731          LG    0.20    0.15    7.00    0.17      43
1732          UI      55     162     241     120      37      11       7       0       0       0
              *
```



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

1733          KK   RETMG
1734          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1735          DT   RETMG     7.3
1736          DI       0   10000
```

```
1737          DQ       0   10000
              *

1738          KK    CPMG
1739          KM   COMBINE FLOWS FROM MI AND MG.
1740          HC       2
              *

1741          KK  RTMGJB   ROUTE   REACH
1742          KM        ROUTE FLOW FROM MG TO JB1 (ACROSS SUB JB1).
1743          KM        TYPE B    CHANNEL
1744          KM        ROUTE ADDED, JEP 5/10/01
1745          RS       9              -1        0
1746          RC   0.035   0.035   0.035    5050  0.0024    0.00
1747          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1748          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
              * KK-CNAMG
              * KM COMBINE FLOWS FROM NA AND MG INTO ADMP CHANNEL
              * HC     3
              *
              * KKMCMGJB   ROUTE   REACH
              * KM ADMP CHANNEL
              * RS     3    FLOW      -1
              * RC 0.040   0.040   0.040    4374  0.0029    0.00
              * RX   0.0    16.0    33.9    51.9    86.9   104.8   122.8   138.8
              * RY   5.7     6.0     3.0     0.0     0.0     3.0     6.0     5.7
              *

1749          KK  SUBJB1   BASIN
1750          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1751          KM    L=      1.3  Lca=       .7   S=   17.4  Kn= .050  LAG=  39.7
1752          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1753          BA   0.494
1754          LG    0.25    0.25    5.00    0.41      30
1755          UI      42      58     157     209     250     303     397     524     425     348
1756          UI     286     233     186     117      73      67      42      35      13      13
1757          UI      13      13      13       9       0       0       0       0       0       0
              *

1758          KK  RETJB1
1759          KM   RETENTION MODIFIED FROM 80% REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTI
1760          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
1761          DT  RETJB1    10.5
1762          DI       0   10000
1763          DQ       0   10000
              *
```



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

1764          KK    DRJB
1765          KM   RETURN DIVERT FROM MD
1766          DR   DIJB1
              *

1767          KK  RDIJB1
1768          KM   ROUTE DIVERT FROM MD TO JB
1769          KM   FUTURE ARTERIAL SECTION
1770          RS       4              -1        0
1771          RC      .1   0.023      .1     2640   .0030
1772          RX     0.0     440     445    445.1   575.1   575.2     900  1000.0
1773          RY     105     105     105    99.75   99.75     105     105     105
              *

1774          KK   ADMP1
1775          KM   RETURN DIVERT FROM 75TH SD MODEL  - SLT 3/9/2005
1776          KM        RETURN DIVERT FROM ADMP1
1777          DR   ADMP1
              * BA     0
              * ZR  =QI A=DURANGO B=SLT2  C=FLOW  E=5MIN
              *

1778          KK  MCJCJB
1779          KM   ROUTE      REACH
1780          KM   MASTER CHANNEL ROUTE FROM JC1 TO JB1
1781          KM   ASSUME FLOW OVER RETENTION BASINS AS IS CURRENT DEVELOPED CONDITION
1782          RS       6    FLOW      -1
1783          RC   0.040   0.040   0.040    5964  0.0015    0.00
1784          RX     0.0       0       0       0     250     250     250     250
1785          RY      10       0       0       0     0.0       0       0      10
              *

1786          KK  ~CPJB1
1787          KM   COMBINE FLOWS FROM MD, JC1, MG AND JB1 INTO ADMP CHANNEL
1788          KM   COMBINE ADDED, JEP 5/10/01
1789          HC       5    9.37
              *

1790          KK   RRJB1
1791          KM   MODIFIED PULS ROUTING
1792          KM   DETENTION IN DRCC RIGHT OF WAY AT JB1 (83RD AVENUE) POL
1793          KM   BASIN 6 FEET DEEP, 850 FEET LONG 165 FOOT BOTTOM 250 FOOT TOP
1794          KM   ASSUME 1 FOOT WEIR OVER THE ROAD
1795          KM   CULVERT IS 1 CELL 4 BY 8
1796          RS       1    STOR       0        0
1797          SV       0     3.4    24.2     29.1
1798          SQ       0      18     308     1094
              *
```



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

1799          KK    DIED
1800          KM   DIVERT FLOWS AT JB TO ED.  THIS IS DONE TO ROUTE FLOW AS NEEDED
1801          KM   FOR THE ADMP
```

```
1802          DT    DIED
1803          DI       0   10000
1804          DQ       0   10000
              *
              *
              *

1805          KK   SUBOE   BASIN
1806          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1807          KM    L=      1.1  Lca=       .6   S=   17.3  Kn= .03  LAG=  20.8
1808          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1809          BA   0.469
1810          LG    0.15    0.23    6.20    0.24      55
1811          UI      84     321     482     784     767     519     338     150      92      38
1812          UI      23      23      10       0       0       0       0       0       0       0
1813          UI       0       0       0       0       0       0       0       0       0       0
              *

1814          KK   RETOE
1815          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1816          DT   RETOE    47.0
1817          DI       0   10000
1818          DQ       0   10000
              *
              * REMOVED BY JCS
              * KK RETOE
              * KM DIVERT RETENTION OUT OF MODEL DUE TO WILLAMETTE IND. DEVELOPMENT. -DCF
              * KM TOTAL RETENTION IS 5.3 AF. 80% OF THAT IS USED HERE. -DCF
              * DT RETOE     4.2
              * DI      0   10000
              * DQ      0   10000
              *

1819          KK   CPOE1
1820          KM   RETURN DIVERT FROM PA.
1821          DR    DIOE
              *

1822          KK  RTDIOE   ROUTE   REACH
1823          KM   ROUTE DIVERT FROM PA T0 OE
1824          KM   FUTURE ARTERIAL SECTION
1825          RS       7              -1       0
1826          RC   0.100   0.023   0.100    5000  0.0013    0.00
1827          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1828          RY     105     105     105   99.75   99.75     105     105     105
              *
              * THE FOLLOWING RETURNS REMOVED TO MODEL THE ADMP CONDITION.
              * KK CPOE2
              * KM RETURN DIVERT FROM RH
              * DR DIOE2
              *
              * KK CPOE3
              * KM RETURN DIVERT FROM RI
              * DR DIOE3
              *
```



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

1829          KK   @CPOE
1830          KM        ADD HYDROGRAPHS AT OE
1831          HC       2     .47
              *

1832          KK  DIOEOD
1833          KM   DIVERT 17% OF FLOW FROM OE2 TO OD
1834          DT    DIOD
1835          DI       0      25      50      75     100     150     200
1836          DQ       0       4       9      12      17      26      34
              *

1837          KK  RTOEMF   ROUTE   REACH
1838          KM   ROUTE FLOW FROM OE TO MF.
1839          KM   FUTURE ARTERIAL SECTION
1840          RS       4              -1       0
1841          RC   0.100   0.023   0.100    5200  0.0021    0.00
1842          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1843          RY     105     105     105   99.75   99.75     105     105     105
              *

1844          KK   SUBMF   BASIN
1845          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1846          KM    L=      1.4  Lca=       .7   S=   12.9  Kn= .050  LAG=  44.0
1847          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1848          BA   0.971
1849          LG    0.25    0.15    8.40    0.10      30
1850          UI      74      74     256     341     414     483     581     777     936     739
1851          UI     619     520     429     362     256     153     125     105      74      56
1852          UI      23      23      23      22      22      22       6       0       0       0
              *

1853          KK   RETMF
1854          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1855          DT   RETMF    80.3
1856          DI       0   10000
1857          DQ       0   10000
              *

1858          KK    CPMF
1859          KM        RETURN ROUTING DIVERT FROM MD (DIMFX).
1860          DR   DIMFX
              *
              *

1861          KK  RTMDMF   ROUTE   REACH
1862          KM        ROUTE FLOW FROM MD TO MF (ALONG LOWER BUCKEYE ROAD).
1863          KM        FUTURE ARTERIAL SECTION
```

```
1864          RS        6                -1        0
1865          RC    0.100    0.023    0.100     5200  0.0015     0.00
1866          RX      0.0      440      445    445.1   575.1    575.2      900  1000.0
1867          RY      105      105      105    99.75   99.75      105      105     105
              *
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1868          KK   CPMF1
1869          KM        ADD HYDROGRAPHS AT MF
1870          HC       3
              *

1871          KK  DIMFEB
1872          KM        DIVERT 47% OF FLOW AT MF TO EB.
1873          DT    DIEB
1874          DI       0       25       50       75      100      150      200
1875          DQ       0       12       23       35       47       71       94
              *

1876          KK  RTMFMC   ROUTE   REACH
1877          KM        ROUTE FLOW FROM MF TO MC (ALONG LOWER BUCKEYE ROAD).
1878          KM        FUTURE ARTERIAL SECTION
1879          RS       5                -1        0
1880          RC    0.100    0.023    0.100     5200  0.0015     0.00
1881          RX      0.0      440      445    445.1   575.1    575.2      900  1000.0
1882          RY      105      105      105    99.75   99.75      105      105     105
              *

1883          KK   SUBOD   BASIN
1884          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1885          KM    L=        1.1  Lca=        .6   S=   18.2  Kn= .030  LAG=  20.6
1886          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1887          BA   0.509
1888          LG    0.15     0.15     9.70     0.07       55
1889          UI      94      354      533      874      825      556      357      157       97       37
1890          UI      25       26        7        0        0        0        0        0        0        0
1891          UI       0        0        0        0        0        0        0        0        0        0
              *

1892          KK   RETOD
1893          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1894          DT   RETOD    63.7
1895          DI       0    10000
1896          DQ       0    10000
              *

1897          KK    DROD
1898          KM    RETURN DIVERT FROM OE.
1899          DR    DIOD
              *

1900          KK  RTDIOD  ROUTE   REACH
1901          KM   FUTURE ARTERIAL SECTION
1902          RS       4                -1        0
1903          RC    0.100    0.023    0.100     2700  0.0013     0.00
1904          RX      0.0      440      445    445.1   575.1    575.2      900  1000.0
1905          RY      105      105      105    99.75   99.75      105      105     105
              *
              * THE FOLLOWING RETURNS REMOVED TO MODEL THE ADMP CONDITION
              * KK DROD2
              * KM  RETURN DIVERT FROM OG1
              * DR DIOD1
              *
              * KK DROD3
              * KM       RETURN DIVERT FROM OG2.
              * DR DIOD2
              *
1                                          HEC-1 INPUT                                                    PAGE 54

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

1906          KK    CPOD
1907          KM   ADD HYDROGRAPHS AT OD.
1908          HC       2
              *

1909          KK  DIODOC
1910          KM        DIVERT 18% OF FLOW FROM OD TO OC.
1911          DT    DIOC
1912          DI       0       25       50       75      100      150      200
1913          DQ       0        5        9       14       18       27       36
              *

1914          KK  RTODMC   ROUTE   REACH
1915          KM   ROUTE FLOW FROM OD TO MC.
1916          KM   FUTURE ARTERIAL SECTION
1917          RS       5                -1        0
1918          RC    0.100    0.023    0.100     5200  0.0023     0.00
1919          RX      0.0      440      445    445.1   575.1    575.2      900  1000.0
1920          RY      105      105      105    99.75   99.75      105      105     105
              *

1921          KK   SUBMC   BASIN
1922          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1923          KM    L=        1.4  Lca=        .7   S=   13.6  Kn= .035  LAG=  30.5
1924          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1925          BA   0.999
1926          LG    0.18     0.15     8.80     0.09       59
1927          UI     110      271      519      667      869     1308     1136      873      663      506
1928          UI     275      187      126       81       34       34       34       34        7        0
              *

1929          KK   RETMC
```

```
1930          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1931          DT   RETMC     95.4
1932          DI       0    10000
1933          DQ       0    10000
              *

1934          KK   CPMC1
1935          KM        ADD HYDROGRAPHS AT MC
1936          HC       3
              *

1937          KK  DIMCMB
1938          KM        DIVERT 39% OF FLOW AT MC TO MB.
1939          DT    DIMB
1940          DI       0       25       50       75      100      150      200
1941          DQ       0        8       20       29       39       59       78
              *
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1                                   HEC-1 INPUT

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

1942          KK  RTMCIE   ROUTE   REACH
1943          KM        ROUTE FLOW FROM MC TO IE (ALONG 99TH AVENUE).
1944          KM        FUTURE ARTERIAL SECTION
1945          RS       1              -1        0
1946          RC   0.100   0.023   0.100     2000  0.0030     0.00
1947          RX     0.0     440     445    445.1   575.1    575.2      900  1000.0
1948          RY     105     105     105    99.75   99.75      105      105     105
              *

1949          KK  DIMCIE
1950          KM        DIVERT FLOW FOR LATER RECOMBINING
1951          DT    MCIE
1952          DI       0    10000
1953          DQ       0    10000
              *

1954          KK    DREB
1955          KM   RETURN DIVERT FROM MF TO EB
1956          DR    DIEB
              *

1957          KK   SUBEB   BASIN
1958          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1959          KM    L=        .5  Lca=        .3   S=    11.3  Kn= .050  LAG=  22.1
1960          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1961          BA   0.139
1962          LG    0.25    0.21    6.40    0.23      30
1963          UI      21      85     127     192     240     164     114      60      34      19
1964          UI       6       6       6       1       0       0       0       0       0       0
              *

1965          KK   RETEB
1966          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1967          DT   RETEB     11.5
1968          DI       0    10000
1969          DQ       0    10000
              *

1970          KK    CPEB
1971          HC       2
              *

1972          KK   RDIED
1973          KM   RETURN DIVERT FROM JB1 TO ED1
1974          DR    DIED
              *

1975          KK  RJBED1   ROUTE   REACH
1976          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 83RD TO IRRIGATION CANAL
1977          KM   ROUTING IS OVER EXISTING RETENTION BASINS 250 FOOT WIDTH
1978          RS       7              -1        0
1979          RC   0.040   0.040   0.040    2563  0.0007     0.00
1980          RX     0.0       0       0       0     250      250     250     250
1981          RY      10       1       1     1.0     1.0        1       1      10
              *
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1                                   HEC-1 INPUT

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

1982          KK  RJBED2   ROUTE   REACH
1983          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM IRRIGATION CANAL TO 91ST
1984          KM    ROUTING IS OVER EXISTING RETENTION BASINS MEASURED AT 420 FOOT WIDTH
1985          KM    NEW DEVELOPMENT STILL BEING GRADED AT TIME OF THIS RUN 1-22-2006
1986          RS       7              -1        0
1987          RC   0.040   0.040   0.040    2563  0.0007     0.00
1988          RX     0.0       0       0       0     420      420     420     420
1989          RY      10       1       1     1.0     1.0        1       1      10
              *

1990          KK  SUBED1   BASIN
1991          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1992          KM    L=       1.2  Lca=        .6   S=     9.4  Kn= .050  LAG=  42.1
1993          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1994          BA   0.382
1995          LG    0.25    0.25    5.70    0.31      30
1996          UI      30      35     108     147     174     208     254     357     356     280
1997          UI     237     193     161     127      75      53      49      30      27       9
1998          UI       9       9       9       9       9       2       0       0       0       0
              *

1999          KK  RETED1
2000          KM   RETENTION
2001          KM   DIVERT FIRST FLUSH AND A PORTION OF 100-YEAR 2-HOUR RETENTION
2002          KM   PORTION OF ED1 UPSTREAM OF IRRIGATION CANAL ASSUMED 100-YEAR-2HOUR RETENTION
2003          KM   PORTION OF ED1 DOWNSTREAM OF IRRIGATION CANAL ASSUMED FIRST FLUSH ONLY
```

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2004        KM   DOWNSTREAM 100-YEAR 2-HOUR RETENTION WOULD BE REMOVED BY INSTALLING 10-YEAR
2005        KM   CULVERT AT 91ST AVENUE
2006        DT  RETED1     19.9
2007        DI       0   10000
2008        DQ       0   10000
            *

2009        KK  SUBED2   BASIN
2010        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2011        KM    L= 0.6     Lca=  .3      S=     9.4       Kn= .050      LAG=  24.5
2012        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2013        BA   0.114
2014        LG    0.30     0.25     5.70     0.31      15
2015        UI      16       54       87      118     184      146      107       76       38       24
2016        UI      15        5        5        5       3        0        0        0        0        0
            *

2017        KK  RETED2
2018        KM   RETENTION
2019        KM   DIVERT 80% OF 100-YEAR 2-HOUR  RETENTION OUT OF MODEL - JCS
2020        DT  RETED2      7.5
2021        DI       0   10000
2022        DQ       0   10000
            *
```



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1                                   HEC-1 INPUT

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

2023        KK  CPED1
2024        KM   ADD HYDROGRAPHS AT ED1
2025        HC       2
            *

2026        KK  ~CPED1
2027        KM   ADD HYDROGRAPHS AT ED1
2028        HC       2
            *

2029        KK  ~CPED2
2030        KM   COMBINE FLOW FROM EB & ED WITH FLOW FROM MF DIVERSION
2031        HC       2
            *

2032        KK  RRED
2033        KM   MODIFIED PULS ROUTING
2034        KM   DETENTION IN DRCC RIGHT OF WAY AT ED1 (91ST AVENUE)  POL
2035        RS       1     STOR       0       0
2036        SV       0     11.7    16.4
2037        SQ       0      333    1180
            *

2038        KK  RT99  ROUTE   REACH
2039        KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 91ST TO 99TH BASIN
2040        RS       1              -1       0
2041        RC   0.032    0.032    0.032    5217  0.0015     0.00
2042        RX     0.0        0        0      23      45       66       66       66
2043        RY       7        7        7     0.0     0.0        7        7        7
            *
            * KT95 BASIN REMOVED BY KA - PRESTIGE ENG
            * KK95BASIN
            * KM DETENTION IN 95BSN
            *
            * SECOND LEG OF ROUTING REMOVED (FROM 95TH TO 99TH) BY KA -PRESTIGE ENG

2044        KK  SUBID1   BASIN
2045        KM   THE FOLLOWING PARMETERS WERE PROVIDED FOR THIS BASIN
2046        KM   L= 1.0 Lca= .4  S= 7.1  Kn= .05  LAG= 35.0
2047        BA   0.204
2048        LG    0.25     0.15     8.00     0.11      30
2049        UI      20       37       82      107     131      170      242      199      159      126
2050        UI     101       71       38       32      20       15        6        6        6        6
2051        UI       6        0        0        0       0        0        0        0        0        0
2052        UI       0        0        0        0       0        0        0        0        0        0
            *

2053        KK  RETID1
2054        KM   RETENTION
2055        KM   DIVERT 80% OF 100-YEAR 2 HOUR RETENTION
2056        KM   NO EXPECTED PROJECT-RELATED CHANGE IN RETENTION AS A RESULT OF THIS PROJECT
2057        DT  RETID1     16.9
2058        DI       0   10000
2059        DQ       0   10000
            *
```



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1                                   HEC-1 INPUT

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

2060        KK  SUBID2   BASIN
2061        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2062        KM    L=   1.0      Lca=  .4        S=  7.1       Kn= .05      LAG=  35.0
2063        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2064        BA   0.359
2065        LG    0.25     0.25     4.90     0.40      30
2066        UI      34       65      145      188     231      298      426      351      280      222
2067        UI     177      124       67       57      36       26       11       10       11       10
2068        UI      10        0        0        0       0        0        0        0        0        0
2069        UI       0        0        0        0       0        0        0        0        0        0
            *

2070        KK  RETID2
2071        KM   RETENTION
2072        KM   DIVERT 80% OF 100-YEAR 2 HOUR RETENTION
2073        KM   NO EXPECTED PROJECT-RELATED CHANGE IN RETENTION AS A RESULT OF THIS PROJECT
2074        DT  RETID2     29.7
2075        DI       0   10000
2076        DQ       0   10000
```

```
                *
2077            KK   SUBIE   BASIN
2078            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2079            KM    L=        .8  Lca=        .4   S=     6.0  Kn= .05   LAG=  34.3
2080            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2081            BA   0.302
2082            LG    0.25    0.15    8.80    0.09      30
2083            UI      30      58     126     164     203     267     368     289     232     181
2084            UI     137     135     135     132     113     115     126      84      88      87
2085            UI     146      93      51      44      30      16       9       9       9       9
2086            UI       5       0       0       0       0       0       0       0       0       0
                *

2087            KK   RETIE
2088            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2089            DT   RETIE    25.0
2090            DI       0   10000
2091            DQ       0   10000
                *

2092            KK  DRMCIE
2093            KM   RETURN DIVERT MCIE
2094            DR    MCIE
                *

2095            KK  ~CPID2
2096            HC       4
                *
1                                          HEC-1 INPUT                                                          PAGE 59

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

2097            KK   RRID1
2098            KM   MODIFIED PULS ROUTING
2099            KM   DETENTION IN DRCC RIGHT OF WAY AT ID1 (99TH AVENUE)  POL
2100            KM   OUTFLOW BASED ON AN EXISTING 2 CELL 4 BY 10 CULVERT AT 99TH AVENUE
2101            KM   MAXIMUM HEADWATER IS 6 FEET WITHOUT OVERFLOW
2102            KM   ASSUME 1 FOOT OVERFLOW
2103            KM   STORAGE BASED ON EXISTING CHANNEL 20 FOOT BOTTOM WIDTH 65 FOOT TOP
2104            KM   CHANNEL 6 FEET DEEP ASSUME 1 FOOT OVERTOPPING
2105            KM   OVERTOPPING WIDTH 250 FEET
2106            KM   CHANNEL SLOPE 0.0032
2107            RS       1    STOR       0       0
2108            SV       0    0.10       6    12.9
2109            SQ       0      50     770    1611
                *

2110            KK   CPID3
2111            HC       2
                *

2112            KK  RT107  ROUTE   REACH
2113            KM         ROUTE FLOW ALONG DRCC ALIGNMENT FROM 99TH TO 107TH
2114            KM   APPROXIMATELY THREE FOURTHS OF THIS CHANNEL IS EXISTING
2115            KM   CHANNEL ASSUMED TO BE EXTENDED TO 500 FT UPSTREAM OF 107TH AVE
2116            KM   THIS AND PROPOSED CULVERT AT 107TH ASSUMED TO ELIMINATE
2117            KM   ALL BUT FIRST FLUSH RETENTION BETWEEN 99TH AND 107TH
2118            RS       2              -1       0
2119            RC   0.032   0.032   0.032    4765  0.0032    0.00
2120            RX     0.0       0       0      23      45      66      66      66
2121            RY       7       7       7     0.0     0.0       7       7       7
                *

2122            KK   SUBIB   BASIN
2123            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2124            KM    L=   1.1    Lca=  .6        S=   14.2      Kn= .050     LAG=  36.8
2125            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2126            BA   0.479
2127            LG    0.25    0.15    8.00    0.13      30
2128            UI      44      75     175     231     279     349     502     500     386     316
2129            UI     252     199     123      76      66      44      27      13      14      13
2130            UI      13      13       0       0       0       0       0       0       0       0
2131            UI       0       0       0       0       0       0       0       0       0       0
                *

2132            KK   RETIB
2133            KM   RETENTION MODIFIED FROM REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTING -
2134            KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2135            DT   RETIB    10.2
2136            DI       0   10000
2137            DQ       0   10000
                *
1                                          HEC-1 INPUT                                                          PAGE 60

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

2138            KK   SUBIC   BASIN
2139            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2140            KM    L=  1.1     Lca= .5       S=  4.7     Kn= .050     LAG=  43.1
2141            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2142            BA   0.461
2143            LG    0.25    0.25    5.20    0.36      30
2144            UI      36      38     127     169     203     239     289     396     442     344
2145            UI     291     240     200     162     111      64      59      43      36      18
2146            UI      11      11      11      11      11       9       0       0       0       0
2147            UI       0       0       0       0       0       0       0       0       0       0
                *

2148            KK   RETIC
2149            KM   RETENTION MODIFIED FROM 80% REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTI
2150            KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2151            DT   RETIC     9.8
2152            DI       0   10000
2153            DQ       0   10000
                *
```

```
2154          KK    CPIC
2155          KM   COMBINE IB AND IC FLOWS
2156          HC       2
              *
              *

2157          KK   SUBOC   BASIN
2158          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2159          KM    L=        .8  Lca=       .4   S=   13.2    Kn= .03   LAG=  17.6
2160          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2161          BA   0.310
2162          LG    0.15    0.15    9.70    0.07      59
2163          UI      85     285     452     670     436     263     109      56      18      18
2164          UI      10       0       0       0       0       0       0       0       0       0
2165          UI       0       0       0       0       0       0       0       0       0       0
              *

2166          KK   RETOC
2167          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2168          DT   RETOC    31.1
2169          DI       0   10000
2170          DQ       0   10000
              *

2171          KK    DROC
2172          KM    RETURN DIVERT FROM OD.
2173          DR    DIOC
              *
```



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

2174          KK  RTDIOC   ROUTE   REACH
2175          KM        ROUTE DIVERT FROM OD TO OC
2176          KM        FUTURE ARTERIAL SECTION
2177          RS       7              -1       0
2178          RC   0.100   0.023   0.100    4000  0.0010    0.00
2179          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2180          RY     105     105     105   99.75   99.75     105     105     105
              *

2181          KK    CPOC
2182          KM   ADD HYDROGRAPHS AT OC
2183          HC       2
              *

2184          KK  RTOCMB   ROUTE   REACH
2185          KM        ROUTE FLOW FROM OC TO MB.
2186          KM        FUTURE ARTERIAL SECTION
2187          RS       3              -1       0
2188          RC   0.100   0.023   0.100    5200  0.0038    0.00
2189          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2190          RY     105     105     105   99.75   99.75     105     105     105
              *

2191          KK   SUBMB   BASIN
2192          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2193          KM    L=  1.4     Lca= .7     S= 17.6     Kn= .0425     LAG=  34.5
2194          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2195          BA   0.995
2196          LG    0.21    0.15    8.40    0.10      46
2197          UI      97     190     413     535     664     866    1210     956     766     598
2198          UI     486     313     171     148      98      58      30      30      30      30
2199          UI      17       0       0       0       0       0       0       0       0       0
2200          UI       0       0       0       0       0       0       0       0       0       0
              *

2201          KK   RETMB
2202          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2203          DT   RETMB    88.4
2204          DI       0   10000
2205          DQ       0   10000
              *

2206          KK    DRMB
2207          KM    RETURN DIVERT FROM MC.
2208          DR    DIMB
              *

2209          KK  RTDIMB   ROUTE   REACH
2210          KM        ROUTE DIVERT FROM MC TO MB
2211          KM        FUTURE ARTERIAL SECTION
2212          RS       4              -1       0
2213          RC   0.100   0.023   0.100    5200  0.0023    0.00
2214          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2215          RY     105     105     105   99.75   99.75     105     105     105
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2216          KK   @CPMB
2217          KM   ADD HYDROGRAPHS AT MB.
2218          HC       3    5.24
              *

2219          KK  RTMBIB   ROUTE   REACH
2220          KM        ROUTE FLOW FROM MB TO IB (ALONG 107TH AVENUE).
2221          KM        FUTURE ARTERIAL SECTION
2222          RS       1              -1       0
2223          RC   0.100   0.030   0.100    2600  0.0015    0.00
2224          RX     0.0     440     445   445.1   745.1   745.2     900  1000.0
2225          RY     105     105     105   100.0   100.0     105     105     105
              *
```

```
2226          KK   CPIB0
2227          KM   ADD HYDROGRAPHS AT IB.
2228          HC       2
              *
              * KK CPIB1
              * KM ADD HYDROGRAPHS AT IB.
              * HC      2
              *

2229          KK  @CPIB2
2230          KM   COMBINE TRIBUTARY FLOW WITH MAIN CHANNEL FLOW
2231          HC       3
              *
              * ADD DETENTION BASIN AT 107TH AVE - BY KA (PRESTIGE ENGR)
              *

2232          KK  DET107
2233          KO       2
2234          KM   MODIFIED PULS ROUTING
2235          KM   BASIN AT 107TH AVENUE REPLACES THE 95TH AVE BASIN BY ASPEN
2236          KM   BASIN HAS 15-AC BOTTOM AREA WITH 6:1 SIDE SLOPES
2237          KM   BASIN BOTTOMFLUSH WITH ADJACENT CHANNEL BOTTOM (IN-LINE TYPE)
2238          KM   A CULVERT QUADRUPLE 10x5 RBC
2239          KM   MAX CULVERT HEADWATER AND PONDING IN BASIN IS 5 FEET. OVERTOPPING ON ROAD
2240          KM   NOT ALLOWED
2241          RS       1    STOR       0       0
2242          SV       0    15.2    30.9    47.0    63.6    72.1    80.7    80.7
2243          SQ       0    28.0     186     416   703.0   864.0  1036.0  1200.0
2244          SE     960     961     962     963     964   964.5     965   965.5
              *
              *

2245          KK  MCIBIA   ROUTE   REACH
2246          KM   ADMP CHANNEL
2247          KM   ROUTE FLOW FROM IB TO IA
2248          RS       4    FLOW      -1
2249          RC   0.040   0.040   0.040    2493  0.0005    0.00
2250          RX     1.0    17.0    35.2    53.3   263.3   281.5   299.7   315.7
2251          RY     5.7     6.1     3.0     0.0     0.0     3.0     6.1     5.7
              *
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM IB TO IA (ALONG 107TH AVENUE).
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS     3    STOR       0
              * SV     0      17    45.4      77     106   135.9   167.9   199.8   228.7     2
              * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
              *
              * KM FUTURE ARTERIAL SECTION
              * RS     1              -1       0
              * RC 0.100   0.023   0.100     500  0.0120    0.00
              * RX   0.0     440     445   445.1   575.1   575.2     900  1000.0
              * RY   105     105     105   99.75   99.75     105     105     105
              *
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1                                   HEC-1 INPUT

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

2252          KK   SUBME   BASIN
2253          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2254          KM    L=   1.0     Lca= .4     S=  20.6     Kn= .050     LAG=  30.1
2255          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2256          BA   0.326
2257          LG    0.29    0.26    4.70    0.44      18
2258          UI      36      91     172     222     290     437     366     282     215     161
2259          UI      83      61      39      23      11      11      11      11       0       0
2260          UI       0       0       0       0       0       0       0       0       0       0
              *

2261          KK   RETME
2262          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2263          DT   RETME    22.8
2264          DI       0   10000
2265          DQ       0   10000
              *

2266          KK  RTMEIA   ROUTE   REACH
2267          KM        ROUTE FLOW FROM ME TO IA (ALONG 107TH AVENUE).
2268          KM        FUTURE ARTERIAL SECTION
2269          RS       3              -1       0
2270          RC   0.100   0.023   0.100    3400  0.0034    0.00
2271          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2272          RY     105     105     105   99.75   99.75     105     105     105
              *

2273          KK   SUBIA   BASIN
2274          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2275          KM    L=  .8      Lca=  .4     S= 17.1      Kn= .05     LAG=  26.2
2276          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2277          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2278          KM   WITHOUT RETENTION. - JCS
2279          BA   0.309
2280          LG    0.27    0.25    6.00    0.25    23.1
2281          UI      40     125     210     277     426     426     309     227     152      73
2282          UI      53      32      12      12      12       8       0       0       0       0
2283          UI       0       0       0       0       0       0       0       0       0       0
              *

2284          KK   RETIA
2285          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2286          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2287          KM   WITHOUT RETENTION. - JCS
2288          DT   RETIA     3.6
2289          DI       0   10000
2290          DQ       0   10000
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2291          KK   ~CPIA
2292          KM        ADD HYDROGRAPHS AT IA.
2293          HC       3
              *

2294          KK  MCIAHB   ROUTE   REACH
2295          KM   ADMP CHANNEL
2296          KM   ROUTE FLOW FROM BASIN IA TO HB
2297          RS       4    FLOW      -1
2298          RC   0.040   0.040   0.040    2646  0.0005    0.00
2299          RX     0.0    16.0    34.1    52.2   262.2   280.3   298.4   314.4
2300          RY     5.7     6.0     3.0     0.0     0.0     3.0     6.0     5.7
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM IA TO HB.
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS      2    STOR       0
              * SV      0    23.3    45.2      73   102.7   132.9   160.6   189.4   212.1   222
              * SQ      0     400     800    1200    1600    2000    2400    2800    3200    34
              *

2301          KK   SUBHB   BASIN
2302          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2303          KM    L=  .8    Lca=    .4     S=  25.0     Kn= .050     LAG=  25.1
2304          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2305          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2306          KM   WITHOUT RETENTION. - JCS
2307          BA   0.343
2308          LG    0.27    0.25    4.80    0.41    24.3
2309          UI      46     154     250     336     531     450     329     239     132      78
2310          UI      48      21      14      14       0       0       0       0       0       0
2311          UI       0       0       0       0       0       0       0       0       0       0
              *

2312          KK   RETHB
2313          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2314          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2315          KM   WITHOUT RETENTION. - JCS
2316          DT   RETHB     4.5
2317          DI       0   10000
2318          DQ       0   10000
              *

2319          KK   CPHB1
2320          KM   ADD HYDROGRAPHS AT HB.
2321          HC       2
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2322          KK   SUBDA   BASIN
2323          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2324          KM    L=  1.0    Lca= .6      S= 17.6     Kn= .05     LAG=  34.0
2325          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2326          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2327          KM   WITHOUT RETENTION. - JCS
2328          BA   0.328
2329          LG    0.30    0.17    6.80    0.18      15
2330          UI      32      65     140     181     225     302     400     311     249     195
2331          UI     154      94      56      46      33      14      10      10      10      10
2332          UI       3       0       0       0       0       0       0       0       0       0
2333          UI       0       0       0       0       0       0       0       0       0       0
              *

2334          KK   RETDA
2335          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2336          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2337          KM   WITHOUT RETENTION. - JCS
2338          DT   RETDA     4.6
2339          DI       0   10000
2340          DQ       0   10000
              *

2341          KK   ~CPDA
2342          KM   ADD HYDROGRAPHS AT DA.
2343          HC       2
              *

2344          KK   SUBLD   BASIN
2345          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2346          KM    L=       .8  Lca=       .4   S=    13.3    Kn= .05    LAG=  30
2347          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2348          BA   0.278
2349          LG    0.28    0.26    4.80    0.37      29
2350          UI      32      82     153     197     263     386     305     236     179     126
2351          UI      65      49      32      14      10      10       9       6       0       0
2352          UI       0       0       0       0       0       0       0       0       0       0
              *

2353          KK   RETLD
2354          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2355          DT   RETLD    20.7
2356          DI       0   10000
2357          DQ       0   10000
              *
              * THE FOLLOWING RETURN AND ROUTE REMOVED TO MODEL THE ADMP CONDITION
              * KK  DRLD
              * KM RETURN DIVERT FROM LE TO LD
              * DR  DILD
              *
```

```
                 * KKRTDILD   ROUTE   REACH
                 * KM ROUTE DIVERT FROM LE TO LD
                 * KM TYPE A CHANNEL
                 * RS     4                -1        0
                 * RC 0.025   0.025   0.025    2500  0.0016    0.00
                 * RX   0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
                 * RY   5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *
1                                          HEC-1 INPUT                                                    PAGE 66

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

2358             KK  RTLDMA   ROUTE   REACH
2359             KM        ROUTE FLOW FROM LD TO MA
2360             KM        TYPE A CHANNEL
2361             RS       3              -1        0
2362             RC   0.025   0.025   0.025    2600  0.0035    0.00
2363             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2364             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *

2365             KK   SUBMA   BASIN
2366             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2367             KM    L=  .7       Lca= .3       S=  14.7       Kn= .050      LAG=  24.8
2368             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2369             BA   0.247
2370             LG    0.30    0.25    4.55    0.52      15
2371             UI      33     115     184     250     392     320     234     167      88      55
2372             UI      34      12      10      10       8       0       0       0       0       0
2373             UI       0       0       0       0       0       0       0       0       0       0
                 *

2374             KK   RETMA
2375             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2376             DT   RETMA    16.3
2377             DI       0   10000
2378             DQ       0   10000
                 *

2379             KK    CPMA
2380             KM        ADD HYDROGRAPHS AT MA
2381             HC       2
                 *

2382             KK  RTMAHB   ROUTE   REACH
2383             KM        ROUTE FLOW FROM MA TO HB (ALONG 115TH AVENUE).
2384             KM        FUTURE ARTERIAL SECTION
2385             RS       3              -1        0
2386             RC   0.100   0.023   0.100    4000  0.0071    0.00
2387             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2388             RY     105     105     105   99.75   99.75     105     105     105
                 *

2389             KK   CPHB2
2390             KM        ADD HYDROGRAPHS AT HB.
2391             HC       2
                 *
                 * THE FOLLOWING ROUTES REMOVED TO MODEL THE ADMP CONDITION
                 * ROUTING TO DA NO LONGER OCCURS BUT IS COMBINED INTO CHANNEL AT HB
                 * KKRTHBDA
                 * KM HEC-RAS REACH
                 * KM BFC
                 * KM ROUTE FLOW FROM HB TO DA (ALONG 115TH AVENUE).
                 * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
                 * KM HEC-RAS MODEL. 06.07.00 -DCF
                 * RS     2    STOR       0
                 * SV     0    11.3    18.3    26.4    34.3    40.3    46.2    51.7    56.5     59
                 * SQ     0     400     800    1200    1600    2000    2400    2800    3200     34
                 *
                 * KKRTDACC
                 * KM HEC-RAS REACH
                 * KM BFC
                 * KM ROUTE FLOW FROM DA TO CC.
                 * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
                 * KM HEC-RAS MODEL. 06.07.00 -DCF
                 * RS     6    STOR       0
                 * SV     0    49.6    80.6   107.1   129.8   149.2     167   184.1   200.2    207
                 * SQ     0     400     800    1200    1600    2000    2400    2800    3200     34
                 *
1                                          HEC-1 INPUT                                                    PAGE 67

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

2392             KK   SUBLB   BASIN
2393             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2394             KM    L=      .7  Lca=      .3   S=     8.8  Kn= .050  LAG=  27
2395             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2396             BA   0.249
2397             LG    0.30    0.25    4.60    0.49      15
2398             UI      31      90     158     206     297     358     258     192     142      72
2399             UI      50      31      14      10      10       9       3       0       0       0
2400             UI       0       0       0       0       0       0       0       0       0       0
                 *

2401             KK   RETLB
2402             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2403             DT   RETLB    16.4
2404             DI       0   10000
2405             DQ       0   10000
                 *

2406             KK  RTLBHA   ROUTE   REACH
2407             KM        ROUTE FLOW FROM LB TO HA (SHEET FLOW).
2408             KM        TYPE A CHANNEL
2409             RS      13              -1        0
2410             RC   0.100   0.100   0.100    4000  0.0065    0.00
```

```
2411          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2412          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

2413          KK   SUBHA   BASIN
2414          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2415          KM    L=  .8     Lca=  .4      S= 33.8      Kn= .05     LAG=  23.5
2416          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2417          BA   0.150
2418          LG    0.25    0.25    4.70    0.44      30
2419          UI      21      79     122     172     255     186     133     089      42      27
2420          UI      14       7       7       7       0       0       0       0       0       0
2421          UI       0       0       0       0       0       0       0       0       0       0
              *

2422          KK   RETHA
2423          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2424          DT   RETHA     3.2
2425          DI       0   10000
2426          DQ       0   10000
              *

2427          KK    CPHA
2428          KM        ADD HYDROGRAPHS AT HA
2429          HC       3
              * ***********************************************************************
              * INSERTED SOUTH ALIGNMENT FROM 1084F6-IMP-R.DAT - JCS
              * ADDED/CHANGED SUBJB2 TO CPEE IN ORDER TO REINSERT SUBJB2 - JCS
              *
1                                          HEC-1 INPUT                                          PAGE 68

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

2430          KK  MCHACB    ROUTE      REACH
2431          KM   ADMP CHANNEL
2432          KM   ROUTE FLOW FROM HA TO CB.
2433          RS       8     FLOW      -1
2434          RC   0.040   0.040   0.040    9163  0.0017    0.00
2435          RX     0.0    16.0    33.7    51.4   201.4   219.4   228.1   244.1
2436          RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
              *

2437          KK   SUBJB2
2438          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2439          KM    L=      1.3  Lca=       .7   S=   17.4  Kn= .050  LAG=  40
2440          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2441          BA   0.493
2442          LG    0.30    0.21    6.40    0.18      15
2443          UI      41      54     151     203     242     293     372     515     433     350
2444          UI     292     237     194     133      73      68      46      41      14      13
2445          UI      12      13      13      13       2       0       0       0       0       0
              *

2446          KK  RETJB2
2447          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2448          DT  RETJB2    32.4
2449          DI       0   10000
2450          DQ       0   10000
              *

2451          KK   DRJB2
2452          KM    RETURN DIVERT FROM JC2
2453          DR   DIJB2
              *

2454          KK   RTJCJB   ROUTE      REACH
2455          KM   ROUTE DIVERT FROM JC2 TO JB2
2456          KM   FUTURE ARTERIAL SECTION
2457          RS       4              -1       0
2458          RC   0.100   0.023   0.100    5000  0.0015    0.00
2459          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2460          RY     105     105     105   99.75   99.75     105     105     105
              *

2461          KK  @CPJB2
2462          KM   ADD HYDROGRAPHS AT JB2
2463          HC       2    3.81
              *

2464          KK  DIJBEE
2465          KM   DIVERT 64% OF FLOW AT JB2 TO FA AND THE SALT RIVER. - JCS
2466          DT    DIFA
2467          DI       0      25      50      75     100     150    2000
2468          DQ       0      16      32      48      64      96    1280
              *
1                                          HEC-1 INPUT                                          PAGE 69

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

2469          KK  RTJBEE  ROUTE      REACH
2470          KM        ROUTE DIVERT FROM JB TO EE
2471          KM        TYPE A CHANNEL
2472          RS      10              -1       0
2473          RC   0.100   0.023   0.100    7500  0.0015    0.00
2474          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2475          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

2476          KK   SUBEE
2477          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2478          KM    L=      1.6  Lca=      1.0   S=   16.0  Kn= .05  LAG=  50.8
2479          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2480          BA   0.958
2481          LG    0.20    0.25    4.90    0.34      15
2482          UI      63      63     159     258     318     366     421     494     637     802
2483          UI     695     577     504     428     362     314     244     157     113     104
```

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2484          UI      79      64      51      19      20      20      19      20      20      20
2485          UI       7       0       0       0       0       0       0       0       0       0
2486          UI       0       0       0       0       0       0       0       0       0       0
              *

2487          KK  RETEE
2488          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2489          DT  RETEE     63.0
2490          DI       0   10000
2491          DQ       0   10000
              *

2492          KK   CPEE
2493          KM        ADD HYDROGRAPHS AT EE
2494          HC       2
              *

2495          KK  RTEEEA
2496          KM   HEC-RAS REACH
2497          KM   ROUTE FLOW FROM EE TO EA.
2498          KM   ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES OBTAINED FROM THE
2499          KM   DIBBLE MODEL DUR-6im.DAT.   POL 9-6-2005
2500          RS       9    STOR       0
2501          SV       0    63.2    84.9     119   148.6   174.2   197.9   220.2   241.2   263.1
2502          SQ       0     100     200     400     600     800    1000    1200    1400    1600
              *
              * KKRTEEEA   ROUTE   REACH
              * KM      ROUTE FLOW FROM EE TO EA
              * KM      TYPE A CHANNEL
              * RS      9          -1       0
              * RC 0.035   0.035   0.035    5300  0.0030    0.00
              * RX   0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
              * RY   5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2503          KK   SUBEA   BASIN
2504          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2505          KM    L=      1.5  Lca=     .8     S=   21.3    Kn= .05    LAG=  44.3
2506          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2507          BA   1.321
2508          LG    0.29    0.25    5.30    0.34      16
2509          UI     100     101     340     457     556     647     776    1034    1263    1015
2510          UI     846     715     587     501     364     221     170     151     100      89
2511          UI      31      31      31      30      30      30      15       0       0       0
2512          UI       0       0       0       0       0       0       0       0       0       0
              *

2513          KK   RETEA
2514          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2515          DT   RETEA    89.2
2516          DI       0   10000
2517          DQ       0   10000
              *

2518          KK    CPEA
2519          KM        ADD HYDROGRAPHS AT EA
2520          HC       2
              *
              * KKP-99SO
              * KO      1       2
              * KM DIVERT OVERFLOW INTO BASIN - JLM 6/17/02
              * DTB-99SO
              * DI      0     260     260    2000    5000
              * DQ      0       0       1    1740    4740
              *

2521          KK  RTEADC   ROUTE   REACH
2522          KM    ROUTE FLOW FROM EA TO DC
2523          KM   SUNLAND CHANNEL
2524          RS       7          -1       0
2525          RC   0.040   0.040   0.040    4951  0.0018    0.00
2526          RX     0.0   100.0   101.0   137.0   157.0   193.0   194.0   294.0
2527          RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
              *

2528          KK   SUBDC   BASIN
2529          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2530          KM    L=      1.4  Lca=      .4   S=   22.1    Kn= .05    LAG=  33.5
2531          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2532          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2533          KM   WITHOUT RETENTION. - JCS
2534          BA   0.830
2535          LG    0.29    0.25    6.00    0.27      16
2536          UI      83     170     363     469     584     800    1016     778     624     486
2537          UI     377     216     142     108      83      26      26      26      26      25
2538          UI       2       0       0       0       0       0       0       0       0       0
2539          UI       0       0       0       0       0       0       0       0       0       0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2540          KK   RETDC
2541          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL (43%) - JCS
2542          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL (12%) - JCS
2543          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2544          KM   WITHOUT RETENTION. (45%) - JCS
2545          DT   RETDC    25.9
2546          DI       0   10000
2547          DQ       0   10000
              *

2548          KK   ~CPDC
```

```
2549          KM        ADD HYDROGRAPHS AT DC
2550          HC       2
              *

2551          KK  RTDCCC   ROUTE   REACH
2552          KM        ROUTE FLOW FROM DC TO CC.
2553          KM   SUNLAND CHANNEL
2554          RS       5                -1        0
2555          RC   0.040    0.040    0.040     5103  0.0022     0.00
2556          RX     0.0    100.0    101.0    137.0   167.0    203.0    204.0    304.0
2557          RY     6.0      6.0      6.0      0.0     0.0      6.0      6.0      6.0
              *

2558          KK   SUBDD   BASIN
2559          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2560          KM    L=        .5  Lca=        .3    S=   28.3  Kn= .050  LAG=  18.2
2561          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2562          BA   0.133
2563          LG    0.25     0.25     4.65     0.43      30
2564          UI      34      115      178      281     193      123       53       30       10        8
2565          UI       7        0        0        0       0        0        0        0        0        0
2566          UI       0        0        0        0       0        0        0        0        0        0
              *

2567          KK   RETDD
2568          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2569          DT   RETDD    11.0
2570          DI       0    10000
2571          DQ       0    10000
              *

2572          KK  RTDDCCROUTE       REACH
2573          KM        ROUTE FLOW FROM DD TO CC.
2574          KM        TYPE A CHANNEL
2575          RS       7                -1        0
2576          RC   0.035    0.035    0.035     5000  0.0040     0.00
2577          RX     0.0    100.0    400.0    500.0   500.1    600.0    900.0   1000.0
2578          RY     5.0      4.0      1.0      0.0     0.0      1.0      4.0      5.0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2579          KK   SUBCC   BASIN
2580          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2581          KM    L=  1.4    Lca= .7     S=   22.8      Kn= .05      LAG=  38.6
2582          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2583          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2584          KM   WITHOUT RETENTION. - JCS
2585          BA   0.981
2586          LG    0.30     0.24     6.20     0.21      15
2587          UI      85      130      328      437     522      639      869     1062      820      677
2588          UI     546      446      331      189     145      111       86       42       26       26
2589          UI      26       25       26        2       0        0        0        0        0        0
2590          UI       0        0        0        0       0        0        0        0        0        0
              *

2591          KK   RETCC
2592          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL (54%) - JCS
2593          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL (24%) - JCS
2594          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2595          KM   WITHOUT RETENTION. (40%) - JCS
2596          DT   RETCC    34.2
2597          DI       0    10000
2598          DQ       0    10000
              *

2599          KK   ~CPCC
2600          HC       3
              *

2601          KK  RTCCSC
2602          KM   ROUTE FLOW FROM CC TO DRCC
2603          KM   SUNLAND CHANNEL
2604          RS       4                -1        0
2605          RC   0.040    0.040    0.040     3027  0.0008     0.00
2606          RX     0.0    100.0    101.0    137.0   167.0    203.0    204.0    304.0
2607          RY     6.0      6.0      6.0      0.0     0.0      6.0      6.0      6.0
              *

2608          KK  RTCCSC
2609          KM   HEC-RAS REACH
2610          KM   BFC
2611          KM   ROUTE SUNLAND IN DRCC
2612          KM   DRCC CHANNEL
2613          RS       2                -1        0
2614          RC   0.040    0.040    0.040     2256  0.0017     0.00
2615          RX     0.0    100.0    101.0    137.0   287.0    353.0    354.0    454.0
2616          RY     6.0      6.0      6.0      0.0     0.0      6.0      6.0      6.0
              *

2617          KK   SUBCB   BASIN
2618          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2619          KM    L=  1.2    Lca=  .5     S= 11.1     Kn= .05     LAG=  36.9
2620          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2621          BA   0.739
2622          LG    0.30     0.15     9.70     0.07      15
```



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

2623          UI      67      114      268      355     429      535      768      774      596      488
2624          UI     390      310      194      117     102       68       43       21       21       21
2625          UI      21       21        1        0       0        0        0        0        0        0
2626          UI       0        0        0        0       0        0        0        0        0        0
              *
```

```
2627          KK   RETCB
2628          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2629          DT   RETCB     15.8
2630          DI        0   10000
2631          DQ        0   10000
              *

2632          KK  ~CPCB1
2633          HC        3
              *

2634          KK  SUBGD1   BASIN
2635          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2636          KM    L=  1.1     Lca= .6     S= 33.3     Kn= .05      LAG=  31.6
2637          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2638          BA   0.629
2639          LG    0.25    0.25    5.30    0.33      30
2640          UI      67     155     306     394     501     742     750     564     440     342
2641          UI     225     116      96      68      26      21      21      20      18       0
2642          UI       0       0       0       0       0       0       0       0       0       0
              *

2643          KK  RETGD1
2644          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2645          DT  RETGD1     13.4
2646          DI        0   10000
2647          DQ        0   10000
              *

2648          KK  SUBGD2
2649          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2650          KM    L=  1.2     Lca=  .5     S= 11.1     Kn= .05      LAG=  37.5
2651          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2652          BA   0.211
2653          LG    0.25    0.15    9.70    0.07      30
2654          UI      66     108     259     345     414     512     722     791     604     498
2655          UI     395     327     218     119     109      69      56      21      21      20
2656          UI      21      20       9       0       0       0       0       0       0       0
2657          UI       0       0       0       0       0       0       0       0       0       0
              *

2658          KK  RETGD2
2659          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2660          DT  RETGD2     15.8
2661          DI        0   10000
2662          DQ        0   10000
              *
```



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

2663          KK   CPGD
2664          KM   RECOMBINE SUBBASIN GD - JCS
2665          HC        2
              *

2666          KK   SUBKC   BASIN
2667          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2668          KM    L=        .8  Lca=        .4   S=   26.3  Kn= .050  LAG=  25
2669          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2670          BA   0.264
2671          LG    0.25    0.25    4.60    0.50      30
2672          UI      35     119     193     260     409     346     253     183     101      60
2673          UI      37      16      11      11      11       0       0       0       0       0
2674          UI       0       0       0       0       0       0       0       0       0       0
              *

2675          KK   RETKC
2676          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2677          DT   RETKC     21.8
2678          DI        0   10000
2679          DQ        0   10000
              *

2680          KK  RTKCGDROUTE       REACH
2681          KM        ROUTE FLOW FROM KC TO GD1 (ALONG EL MIRAGE RD).
2682          KM        ASSUME NEGLIGIBLE CHANNEL TRANSMISSION LOSS.
2683          KM        FUTURE ARTERIAL SECTION
2684          RS        3      -1       0
2685          RC    0.100   0.023   0.100    4090  0.0049    0.00
2686          RX      0.0     440     445   445.1   575.1   575.2     900  1000.0
2687          RY      105     105     105   99.75   99.75     105     105     105
              *

2688          KK   SUBGC   BASIN
2689          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2690          KM    L= .8      Lca=  .4      S=   26.5     Kn= .045      LAG=  23.3
2691          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2692          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2693          KM   WITHOUT RETENTION. - JCS
2694          BA   0.215
2695          LG    0.28    0.26    4.70    0.34    19.7
2696          UI      31     116     178     254     368     265     189     123      57      38
2697          UI      19      10       9       9       0       0       0       0       0       0
2698          UI       0       0       0       0       0       0       0       0       0       0
              *

2699          KK   RETGC
2700          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2701          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2702          KM   WITHOUT RETENTION. - JCS
2703          DT   RETGC      5.0
2704          DI        0   10000
2705          DQ        0   10000
              *
```

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

2706          KK  RTGCGD      ROUTE       REACH
2707          KM        ROUTE FLOW FROM GC TO GD1 (ALONG EL MIRAGE ROAD).
2708          KM        FUTURE ARTERIAL SECTION
2709          RS       1        -1        0
2710          RC   0.100   0.023   0.100     820  0.0049    0.00
2711          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2712          RY     105     105     105   99.75   99.75     105     105     105
              *

2713          KK   CPGD1
2714          KM        ADD ALL HYDROGRAPHS AT GD1.
2715          HC       3
              *

2716          KK  RTGDCB   ROUTE       REACH
2717          KM   ROUTE FLOW FROM GD1 TO CB
2718          RS       6     FLOW      -1
2719          RC   0.100   0.023   0.100    3880  0.0010    0.00
2720          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2721          RY     105     105     105   99.75   99.75     105     105     105
              *

2722          KK  ~CPCB2
2723          KM   COMBINE FLOWS FROM CB TO CHANNEL
2724          HC       2
              *

2725          KK  MCCBCA
2726          KM   ADMP CHANNEL
2727          KM   ROUTE FLOW FROM CB TO CA.
2728          RS       8     FLOW      -1
2729          RC   0.040   0.040   0.040    5026  0.0014    0.00
2730          RX     0.0    16.0    33.7    51.4   201.4   219.4   228.1   244.1
2731          RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
              *

2732          KK  SUBCA1   BASIN
2733          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2734          KM    L=      1.0  Lca=       .5   S=    6.4  Kn= .05  LAG=  38.9
2735          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2736          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2737          KM   WITHOUT RETENTION. - JCS
2738          BA   0.143
2739          LG    0.26    0.15    7.60    0.14    26.9
2740          UI      12      18      47      63      75      92     124     154     120      99
2741          UI      81      65      50      29      21      17      12       7       4       4
2742          UI       4       4       4       1       0       0       0       0       0       0
2743          UI       0       0       0       0       0       0       0       0       0       0
              *
```



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1                                        HEC-1 INPUT

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

2744          KK  RETCA1
2745          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2746          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2747          KM   WITHOUT RETENTION. - JCS
2748          DT  RETCA1     2.4
2749          DI       0   10000
2750          DQ       0   10000
              *

2751          KK  SUBCA2   BASIN
2752          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2753          KM    L=      1.0  Lca=       .5   S=    7.8    Kn= .05    LAG=  37.4
2754          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2755          BA   0.841
2756          LG    0.30    0.15    8.80    0.09      15
2757          UI      76     123     297     297     393     474     585     829     898     566
2758          UI     448     369     247     134     124      76      63      23      23      23
2759          UI      23      23       9       0       0       0       0       0       0       0
2760          UI       0       0       0       0       0       0       0       0       0       0
              *

2761          KK  RETCA2
2762          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2763          DT  RETCA2    17.9
2764          DI       0   10000
2765          DQ       0   10000
              *

2766          KK  ~CPCA1
2767          KM   COMBINE FLOWS AT CA
2768          KM   RECOMBINE SUBBASIN CA - JCS
2769          HC       3
              *

2770          KK   SUBGB   BASIN
2771          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2772          KM    L= .8     Lca= .6   S=   36.1    Kn= .05     LAG=  27.4
2773          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2774          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2775          KM   WITHOUT RETENTION. - JCS
2776          BA   0.221
2777          LG    0.30    0.25    4.55    0.42      15
2778          UI      27      79     139     181     260     318     230     171     127      65
2779          UI      45      27      13       8       8       8       3       0       0       0
2780          UI       0       0       0       0       0       0       0       0       0       0
              *

2781          KK   RETGB
2782          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2783          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2784          KM   WITHOUT RETENTION. - JCS
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2785          DT   RETGB      8.3
2786          DI       0    10000
2787          DQ       0    10000
              *
1                                        HEC-1 INPUT                                                          PAGE 77

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

2788          KK  RTGBCA   ROUTE       REACH
2789          KM        ROUTE FLOW FROM GB TO CA1.
2790          KM        FUTURE ARTERIAL SECTION
2791          RS       5              -1        0
2792          RC   0.040   0.040   0.040    5136  0.0014    0.00
2793          RX     0.0    16.0    33.8    51.6   166.6   184.4   202.3   218.3
2794          RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
              *

2795          KK  ~CPCA2
2796          KM        ADD HYDROGRAPHS AT CA
2797          HC       2
              *

2798          KK  P-DRCCDIVERT
2799          KM   DIVERT OVERFLOW INTO BASIN - JLM 6/18/02
2800          DT  B-DRCC
2801          DI       0      34      34    5000    9000
2802          DQ       0       0       1    4966    8966
              *

2803          KK  MCCABC   ROUTE       REACH
2804          KM   ROUTE ADMP CHANNEL FROM CA1 TO BC1
2805          RS       5    FLOW       -1
2806          RC   0.014   0.014   0.014    3914  0.0005    0.00
2807          RX     0.0    16.0    16.0    16.0    20.0    20.0    20.0    36.0
2808          RY     3.8     4.1     2.1     0.0     0.0     2.1     4.1     3.8
              *
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM CA TO BC.
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS    11    STOR       0
              * SV     0    52.4   113.5   174.4   227.6   278.6   321.5     363   401.7     4
              * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
              *

2809          KK  SUBBC1   BASIN
2810          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2811          KM    L=  0.22x1.7   Lca=  0.22x0.8    S=  11.5    Kn= .02    LAG=  6.3
2812          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2813          BA   0.137
2814          LG    0.15    0.28    4.80    0.38      55
2815          UI     309     618     117     117      18       0       0       0       0       0
2816          UI       0       0       0       0       0       0       0       0       0       0
              *

2817          KK  RETBC1
2818          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2819          DT  RETBC1     2.9
2820          DI       0    10000
2821          DQ       0    10000
              *
1                                        HEC-1 INPUT                                                          PAGE 78

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

2822          KK  SUBBC2   BASIN
2823          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2824          KM    L=      1.7  Lca=       .8   S=   11.5  Kn= .038  LAG=  38.3
2825          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2826          BA   0.493
2827          LG    0.24    0.25    5.10    0.39      31
2828          UI      55      86     214     284     340     419     573     682     523     433
2829          UI     345     284     204     116      93      68      55      21      17      17
2830          UI      17      17      15       0       0       0       0       0       0       0
2831          UI       0       0       0       0       0       0       0       0       0       0
              *

2832          KK  RETBC2
2833          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2834          DT  RETBC2    10.5
2835          DI       0    10000
2836          DQ       0    10000
              *

2837          KK   ~CPBC
2838          KM   ADD HYDROGRAPHS AT BC1
2839          KM   RECOMBINE SUBBASIN BC - JCS
2840          HC       3
              *

2841          KK  CPAFBC
2842          KM   COMBINE FLOWS INTO AGUA FRIA RIVER AT BC
2843          HC       2
              *
              * KM      FUTURE ARTERIAL SECTION
              * RS    10              -1        0
              * RC 0.100   0.023   0.100    5700  0.0018    0.00
              * RX   0.0     440     445   445.1   575.1   575.2     900  1000.0
              * RY   105     105     105   99.75   99.75     105     105     105
              *
              *
              *
              * ***********************************************************************
              * NOTES REFERING TO CHANGES MADE TO DIBBLE MODEL HAVE BEEN OMITTED.
              * SEE 1084F6-IMP-R.DAT FOR NOTES. - JCS
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2844 ZZ

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

              **************
              *            *
2232 KK       *    DET107  *
              *            *
              **************

2233 KO          OUTPUT CONTROL VARIABLES
                       IPRNT          2  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL         0.  HYDROGRAPH PLOT SCALE
                           MODIFIED PULS ROUTING
                           BASIN AT 107TH AVENUE REPLACES THE 95TH AVE BASIN BY ASPEN
                           BASIN HAS 15-AC BOTTOM AREA WITH 6:1 SIDE SLOPES
                           BASIN BOTTOMFLUSH WITH ADJACENT CHANNEL BOTTOM (IN-LINE TYPE)
                           A CULVERT QUADRUPLE 10x5 RBC
                           MAX CULVERT HEADWATER AND PONDING IN BASIN IS 5 FEET. OVERTOPPING ON ROAD
                           NOT ALLOWED

                 HYDROGRAPH ROUTING DATA

2241 RS          STORAGE ROUTING
                       NSTPS          1  NUMBER OF SUBREACHES
                        ITYP       STOR  TYPE OF INITIAL CONDITION
                      RSVRIC        .00  INITIAL CONDITION
                           X        .00 WORKING R AND D COEFFICIENT

2242 SV            STORAGE          .0      15.2      30.9      47.0      63.6      72.1      80.7      80.7

2243 SQ          DISCHARGE          0.       28.      186.      416.      703.      864.     1036.     1200.

2244 SE          ELEVATION      960.00    961.00    962.00    963.00    964.00    964.50    965.00    965.50
                                                                   ***

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

                        HYDROGRAPH AT STATION   DET107
                      TRANSPOSITION AREA       .0 SQ MI

  PEAK FLOW      TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR    166.58-HR
+   (CFS)        (HR)
                                    (CFS)
+    2898.       4.92                932.        263.         88.          38.
                                 (INCHES)       .816        .919        .924         .924
                                  (AC-FT)       462.        521.        524.         524.

 PEAK STORAGE    TIME                         MAXIMUM AVERAGE STORAGE
                                      6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)       (HR)
      82.       4.92                 63.         25.          9.           4.

  PEAK STAGE     TIME                          MAXIMUM AVERAGE STAGE
                                      6-HR       24-HR       72-HR    166.58-HR
+   (FEET)       (HR)
   971.57       4.92               964.95      961.83      960.63       960.27

                       CUMULATIVE AREA =   10.63 SQ MI

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

                        HYDROGRAPH AT STATION   DET107
                      TRANSPOSITION AREA       .5 SQ MI

  PEAK FLOW      TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR    166.58-HR
+   (CFS)        (HR)
                                    (CFS)
+    2814.       4.92                912.        257.         86.          37.
                                 (INCHES)       .798        .901        .906         .906
                                  (AC-FT)       452.        511.        513.         513.

 PEAK STORAGE    TIME                         MAXIMUM AVERAGE STORAGE
                                      6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)       (HR)
      82.       6.50                 63.         25.          8.           4.

  PEAK STAGE     TIME                          MAXIMUM AVERAGE STAGE
                                      6-HR       24-HR       72-HR    166.58-HR
+   (FEET)       (HR)
   969.64       4.92               964.42      961.70      960.58       960.25

                       CUMULATIVE AREA =   10.63 SQ MI

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

                        HYDROGRAPH AT STATION   DET107
                      TRANSPOSITION AREA      2.8 SQ MI

  PEAK FLOW      TIME                          MAXIMUM AVERAGE FLOW
                                      6-HR       24-HR       72-HR    166.58-HR
+   (CFS)        (HR)
                                    (CFS)
+    2020.       5.17                735.        220.         74.          32.
                                 (INCHES)       .643        .771        .777         .777
                                  (AC-FT)       365.        437.        440.         440.

 PEAK STORAGE    TIME                         MAXIMUM AVERAGE STORAGE
                                      6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)       (HR)
      83.       5.42                 78.         29.         10.           4.
```

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
969.60	5.42	965.78	962.08	960.71	960.31

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 16.0 SQ MI

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 904.	5.92		515.	159.	53.	23.
		(INCHES)	.450	.555	.560	.560
		(AC-FT)	255.	315.	318.	318.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
74.	5.92	52.	22.	8.	3.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
964.62	5.92	963.30	961.42	960.49	960.21

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 90.0 SQ MI

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 308.	6.42		191.	65.	22.	10.
		(INCHES)	.167	.228	.232	.232
		(AC-FT)	94.	129.	132.	132.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
39.	6.42	30.	15.	5.	2.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
962.53	6.42	961.97	960.98	960.34	960.15

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 500.0 SQ MI

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 22.	6.50		18.	9.	3.	1.
		(INCHES)	.016	.033	.034	.034
		(AC-FT)	9.	19.	19.	19.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
12.	6.50	10.	5.	2.	1.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
960.79	6.50	960.63	960.33	960.12	960.05

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	SUBWD	595.	4.50	86.	22.	7.	.39		
+	ROUTED TO	RTWDXA	551.	4.75	86.	22.	7.	.39		
+	HYDROGRAPH AT	SUBXA	580.	4.25	71.	18.	6.	.25		
+	2 COMBINED AT	CPXA1	740.	4.33	154.	39.	13.	.64		
+	DIVERSION TO	DIZZ1	0.	.00	0.	0.	0.	.64		
	HYDROGRAPH AT									

+		DIXAO	740.	4.33	154.	39.	13.	.64
+	ROUTED TO	RTXAWC	705.	4.92	154.	39.	13.	.64
+	HYDROGRAPH AT	SUBWB	1154.	4.42	184.	46.	15.	.67
+	ROUTED TO	RTWBWC	1092.	4.58	183.	46.	15.	.67
+	HYDROGRAPH AT	SUBWC	922.	4.42	138.	35.	12.	.49
+	3 COMBINED AT	CPWC	1938.	4.67	456.	116.	39.	1.79
+	DIVERSION TO	DIQE	0.	.00	0.	0.	0.	1.79
+	HYDROGRAPH AT	DIWCWA	1938.	4.67	456.	116.	39.	1.79
+	ROUTED TO	RTWCWA	948.	6.83	412.	116.	39.	1.79
+	HYDROGRAPH AT	SUBWA	1196.	4.25	141.	35.	12.	.49
+	2 COMBINED AT	CPWA1	941.	6.83	437.	150.	50.	2.29
+	HYDROGRAPH AT	SUBVD	1195.	4.42	191.	48.	16.	.70
+	ROUTED TO	RTVDWA	1156.	4.50	190.	48.	16.	.70
+	2 COMBINED AT	CPWA2	1537.	4.33	607.	195.	65.	2.98
+	DIVERSION TO	DIQD	1078.	4.33	255.	64.	21.	2.98
+	HYDROGRAPH AT	DIWAVC	459.	4.33	352.	130.	43.	2.98
+	ROUTED TO	RTWAVC	360.	12.08	321.	130.	43.	2.98
+	HYDROGRAPH AT	SUBVC	1177.	4.25	140.	35.	12.	.49
+	2 COMBINED AT	CPVC1	778.	4.17	321.	164.	55.	3.47
+	HYDROGRAPH AT	SUBVB	1651.	4.17	203.	51.	17.	.72
+	ROUTED TO	RTVBVC	1545.	4.25	202.	51.	17.	.72
+	2 COMBINED AT	CPVC2	1800.	4.25	421.	212.	71.	4.19
+	DIVERSION TO	DIVA	32.	4.00	20.	9.	3.	4.19
+	HYDROGRAPH AT	DIVCQA	1768.	4.25	406.	202.	67.	4.19
+	ROUTED TO	RTVCQA	1685.	4.42	402.	202.	67.	4.19
+	HYDROGRAPH AT	SUBQA	779.	4.58	124.	31.	10.	.49
+	2 COMBINED AT	CPQA2	2197.	4.42	508.	231.	77.	4.68
+	ROUTED TO	RSQA	2174.	4.42	507.	231.	77.	4.68
+	DIVERSION TO	DIPF	635.	4.42	192.	96.	32.	4.68
+	HYDROGRAPH AT	DIQAPF	1539.	4.42	315.	135.	45.	4.68
+	ROUTED TO	RTQAJH	1413.	5.00	310.	135.	45.	4.68
+	HYDROGRAPH AT	SUBQE	1654.	4.42	274.	69.	23.	.91
+	HYDROGRAPH AT	DRQE	0.	.00	0.	0.	0.	1.79
+	ROUTED TO	RTDIQE	0.	.00	0.	0.	0.	1.79
+	2 COMBINED AT	CPQE	1654.	4.42	274.	69.	23.	.91
+	ROUTED TO	RSQE	1575.	4.50	254.	64.	21.	.91
	ROUTED TO							

+	RTQEQC	1479.	4.67	253.	64.	21.	.91
+ HYDROGRAPH AT	SUBQD	600.	4.25	78.	20.	7.	.25
+ HYDROGRAPH AT	DRQD	1078.	4.33	255.	64.	21.	2.98
+ ROUTED TO	RTDIQD	1044.	4.50	251.	64.	21.	2.98
+ 2 COMBINED AT	CPQD	1887.	4.42	361.	94.	31.	.25
+ ROUTED TO	RSQD	1831.	4.50	359.	93.	31.	.25
+ DIVERSION TO	DIQB	723.	4.50	100.	25.	8.	.25
+ HYDROGRAPH AT	DIQDQB	1108.	4.50	259.	68.	23.	.25
+ ROUTED TO	RTQDQC	1049.	4.58	257.	68.	23.	.25
+ HYDROGRAPH AT	SUBQC	1160.	4.33	167.	42.	14.	.61
+ 3 COMBINED AT	CPQC	2913.	4.58	643.	168.	56.	1.77
+ DIVERSION TO	DISR	2330.	4.58	515.	135.	45.	1.77
+ HYDROGRAPH AT	DIQCR	583.	4.58	129.	34.	11.	1.77
+ ROUTED TO	RTQCJI	385.	6.25	121.	34.	11.	1.77
+ HYDROGRAPH AT	SUBQB	852.	4.50	141.	35.	12.	.50
+ HYDROGRAPH AT	DRQB	723.	4.50	100.	25.	8.	.25
+ ROUTED TO	RTDIQB	619.	5.00	99.	25.	8.	.25
+ 2 COMBINED AT	CPQB	1061.	4.92	232.	60.	20.	.50
+ ROUTED TO	RSQB	942.	5.00	210.	55.	18.	.50
+ ROUTED TO	RTQBJH	851.	5.67	203.	55.	18.	.50
+ HYDROGRAPH AT	SUBJH	1096.	4.33	137.	34.	11.	.52
+ 4 COMBINED AT	CPJH	1548.	4.92	653.	239.	80.	7.47
+ ROUTED TO	RTJHJI	1391.	5.67	647.	239.	80.	7.47
+ HYDROGRAPH AT	SUBJI	760.	4.17	82.	21.	7.	.31
+ 2 COMBINED AT	CPJI	1399.	5.67	683.	257.	86.	7.78
+ DIVERSION TO	DISR1	1399.	5.67	683.	257.	86.	7.78
+ HYDROGRAPH AT	DISRX	0.	.00	0.	0.	0.	7.78
+ HYDROGRAPH AT	SUBPF	1297.	4.17	141.	35.	12.	.50
+ DIVERSION TO	RETPF	19.	.92	6.	2.	1.	.50
+ HYDROGRAPH AT	RETPF	1297.	4.17	136.	34.	11.	.50
+ HYDROGRAPH AT	DRPF	635.	4.42	192.	96.	32.	4.68
+ ROUTED TO	RTDIPF	622.	4.83	189.	96.	32.	4.68
+ 2 COMBINED AT	@CPPF	1569.	4.17	378.	150.	50.	5.19
+ ROUTED TO	RSPF	769.	4.92	241.	112.	38.	5.19
+ DIVERSION TO	DIPE	0.	.00	0.	0.	0.	5.19
+ HYDROGRAPH AT	DIPFPE	769.	4.92	241.	112.	38.	5.19
ROUTED TO							

+		RTPFJF	749.	5.17	238.	112.	38.	5.19
+	HYDROGRAPH AT	SUBUD	2034.	4.08	225.	56.	19.	.75
+	DIVERSION TO	RETB1	1140.	3.92	78.	20.	7.	.75
+	HYDROGRAPH AT	RETU	2034.	4.08	147.	37.	12.	.75
+	DIVERSION TO	59SD1D	102.	4.00	25.	6.	2.	.75
+	HYDROGRAPH AT	SDDRUD	1932.	4.08	122.	30.	10.	.75
+	DIVERSION TO	DIUA	466.	4.08	29.	7.	2.	.75
+	HYDROGRAPH AT	DIUDUA	1466.	4.08	92.	23.	8.	.75
+	ROUTED TO	RTUDVA	1145.	4.25	92.	23.	8.	.75
+	HYDROGRAPH AT	SUBVA	1195.	4.25	146.	37.	12.	.49
+	HYDROGRAPH AT	DRVA	32.	4.00	20.	9.	3.	4.19
+	3 COMBINED AT	CPVA1	2010.	4.25	241.	67.	22.	1.24
+	DIVERSION TO	59SD2D	59.	3.42	38.	17.	6.	1.24
+	HYDROGRAPH AT	SDDRVA	1951.	4.25	202.	51.	17.	1.24
+	DIVERSION TO	DIUC	783.	4.25	129.	32.	11.	1.24
+	HYDROGRAPH AT	DIVAPE	1168.	4.25	73.	18.	6.	1.24
+	ROUTED TO	RTVAPE	1043.	4.33	73.	18.	6.	1.24
+	HYDROGRAPH AT	SUBPE	1303.	4.17	138.	35.	12.	.50
+	HYDROGRAPH AT	DRPE	0.	.00	0.	0.	0.	5.19
+	ROUTED TO	RTDIPE	0.	.00	0.	0.	0.	5.19
+	3 COMBINED AT	CPPE	1559.	4.33	198.	50.	17.	1.75
+	ROUTED TO	RSPE	1478.	4.33	163.	42.	14.	1.75
+	DIVERSION TO	DIPD	3.	4.33	0.	0.	0.	1.75
+	HYDROGRAPH AT	DIPEPD	1476.	4.33	162.	41.	14.	1.75
+	ROUTED TO	RTPEJF	1345.	4.42	162.	41.	14.	1.75
+	HYDROGRAPH AT	SUBJF	1509.	4.08	144.	36.	12.	.50
+	3 COMBINED AT	CPJF	1306.	4.42	473.	178.	61.	7.44
+	ROUTED TO	RTJFJG	1130.	4.67	455.	174.	59.	7.44
+	HYDROGRAPH AT	SUBJG	1897.	4.17	254.	64.	21.	.90
+	2 COMBINED AT	CPJG	1904.	4.25	662.	231.	79.	8.34
+	2 COMBINED AT	CPJGSR	1706.	4.25	625.	223.	76.	16.11
+	HYDROGRAPH AT	DRUC	783.	4.25	129.	32.	11.	1.24
+	ROUTED TO	RTVAUC	500.	5.33	129.	32.	11.	1.24
+	ROUTED TO	MCUCUC	485.	5.50	129.	32.	11.	1.24
+	HYDROGRAPH AT	SUBUC	927.	4.42	128.	32.	11.	.48
+	2 COMBINED AT	@CPUC	744.	4.42	250.	64.	21.	1.73
	HYDROGRAPH AT							

+	SUBTB1	443.	4.00	37.	9.	3.	.14
+ DIVERSION TO	RETB1	443.	4.00	23.	6.	2.	.14
+ HYDROGRAPH AT	RETB1	347.	4.08	15.	4.	1.	.14
+ DIVERSION TO	67SD1D	17.	4.08	3.	1.	0.	.14
+ HYDROGRAPH AT	SDDTB1	330.	4.08	12.	3.	1.	.14
+ ROUTED TO	RTUAUC	122.	4.33	12.	3.	1.	.14
+ HYDROGRAPH AT	SUBUA	886.	4.58	144.	36.	12.	.56
+ HYDROGRAPH AT	DRUA	466.	4.08	29.	7.	2.	.75
+ ROUTED TO	RTDIUA	224.	4.58	29.	7.	2.	.75
+ 3 COMBINED AT	@CPUA	1036.	4.58	179.	45.	15.	1.46
+ DIVERSION TO	67SD1D	96.	3.83	46.	12.	4.	1.46
+ HYDROGRAPH AT	SDDRUA	940.	4.58	133.	33.	11.	1.46
+ DIVERSION TO	DITB	188.	4.58	27.	7.	2.	1.46
+ HYDROGRAPH AT	DIUAUC	752.	4.58	106.	27.	9.	1.46
+ ROUTED TO	RTUAUC	719.	4.67	106.	27.	9.	1.46
+ 2 COMBINED AT	~CPUC2	1125.	4.58	354.	91.	30.	3.19
+ DIVERSION TO	DIUB	1125.	4.58	354.	91.	30.	3.19
+ HYDROGRAPH AT	DIUCPC	0.	.00	0.	0.	0.	3.19
+ ROUTED TO	RTUCPC	0.	.00	0.	0.	0.	3.19
+ HYDROGRAPH AT	SUBPC	932.	4.08	84.	21.	7.	.30
+ 2 COMBINED AT	CPPC	512.	4.08	80.	20.	7.	3.49
+ ROUTED TO	RSPC	59.	4.92	19.	9.	6.	3.49
+ ROUTED TO	RTPCNB	50.	5.75	19.	9.	6.	3.49
+ HYDROGRAPH AT	SUBNB	1154.	4.17	100.	25.	8.	.44
+ DIVERSION TO	RETNB	1150.	4.08	68.	17.	6.	.44
+ HYDROGRAPH AT	RETNB	930.	4.25	32.	8.	3.	.44
+ 2 COMBINED AT	CPNB1	338.	4.42	41.	14.	8.	3.93
+ ROUTED TO	RTNBJD	164.	4.83	41.	14.	8.	3.93
+ HYDROGRAPH AT	SUBPD	1174.	4.17	111.	28.	9.	.44
+ HYDROGRAPH AT	DRPD	3.	4.33	0.	0.	0.	1.75
+ 2 COMBINED AT	CPPD2	1175.	4.17	112.	28.	9.	.44
+ ROUTED TO	RSPD	95.	4.67	35.	11.	5.	.44
+ ROUTED TO	RTPDNC	82.	5.33	34.	11.	5.	.44
+ HYDROGRAPH AT	SUBNC	714.	4.08	76.	19.	6.	.31
+ 2 COMBINED AT	CPNC	647.	4.08	99.	29.	11.	.75
+ ROUTED TO	RTNCJE	470.	4.75	98.	29.	11.	.75
HYDROGRAPH AT							

+		SUBJE1	732.	4.08	66.	17.	6.	.25
+	2 COMBINED AT	CPJE1	612.	4.08	154.	44.	16.	1.00
+	ROUTED TO	RTJEJD	584.	4.17	153.	44.	16.	1.00
+	HYDROGRAPH AT	SUBJD	1447.	4.08	125.	31.	10.	.51
+	DIVERSION TO	RETJD	1215.	4.08	71.	18.	6.	.51
+	HYDROGRAPH AT	RETJD	1362.	4.17	55.	14.	5.	.51
+	3 COMBINED AT	CPJD	845.	4.33	213.	63.	25.	5.44
+	DIVERSION TO	DIJC2	306.	4.33	78.	23.	9.	5.44
+	HYDROGRAPH AT	DIJDJC	539.	4.33	135.	40.	16.	5.44
+	ROUTED TO	RTJDFC	457.	4.42	135.	40.	16.	5.44
+	HYDROGRAPH AT	SUBJE2	742.	4.08	74.	18.	6.	.25
+	DIVERSION TO	RETJE	123.	3.58	9.	2.	1.	.25
+	HYDROGRAPH AT	RETJE2	742.	4.08	64.	16.	5.	.25
+	ROUTED TO	RTJEFC	595.	4.33	64.	16.	5.	.25
+	HYDROGRAPH AT	SUBFC	910.	4.08	101.	25.	8.	.36
+	3 COMBINED AT	CPFC	1176.	4.33	277.	77.	29.	6.05
+	2 COMBINED AT	CPFCSR	2448.	4.33	833.	282.	98.	22.16
+	HYDROGRAPH AT	DRUCUB	1125.	4.58	354.	91.	30.	3.19
+	ROUTED TO	MCUCUB	1123.	4.67	354.	91.	30.	3.19
+	HYDROGRAPH AT	SUBUB	299.	4.33	37.	9.	3.	.14
+	2 COMBINED AT	~@CPUB	1324.	4.58	390.	100.	33.	2.42
+	HYDROGRAPH AT	SUBSF1	155.	4.50	27.	7.	2.	.13
+	HYDROGRAPH AT	DRTB	188.	4.58	27.	7.	2.	1.46
+	ROUTED TO	RTDITB	182.	4.75	27.	7.	2.	1.46
+	3 COMBINED AT	CPBA3	1574.	4.58	441.	113.	38.	2.55
+	HYDROGRAPH AT	SUBTB2	1085.	4.67	221.	56.	19.	.75
+	DIVERSION TO	RETTB	464.	4.08	40.	10.	3.	.75
+	HYDROGRAPH AT	RETTB	1085.	4.67	183.	46.	15.	.75
+	DIVERSION TO	DITA	262.	4.67	45.	11.	4.	.75
+	HYDROGRAPH AT	DITBTA	822.	4.67	138.	35.	12.	.75
+	ROUTED TO	RTTBSF	803.	4.75	138.	35.	12.	.75
+	HYDROGRAPH AT	SUSFB2	354.	4.08	32.	8.	3.	.11
+	HYDROGRAPH AT	SUSF2A	488.	4.00	45.	11.	4.	.14
+	DIVERSION TO	RETSF2	488.	4.00	45.	11.	4.	.14
+	HYDROGRAPH AT	RSSF2A	0.	.00	0.	0.	0.	.14
+	3 COMBINED AT	CPSF2B	803.	4.75	168.	42.	14.	1.00
	2 COMBINED AT							

+		CPBA3	2168.	4.67	595.	152.	51.	3.55
+	ROUTED TO	BSN71	93.	8.25	93.	91.	51.	3.55
+	DIVERSION TO	BSN71	93.	8.25	93.	91.	51.	3.55
+	HYDROGRAPH AT	DBSN71	0.	.00	0.	0.	0.	3.55
+	HYDROGRAPH AT	SUBPB	1132.	4.17	121.	30.	10.	.41
+	DIVERSION TO	RETPB	1132.	4.17	87.	22.	7.	.41
+	HYDROGRAPH AT	RETPB	633.	4.33	35.	9.	3.	.41
+	HYDROGRAPH AT	PB75	36.	4.00	3.	1.	0.	.01
+	HYDROGRAPH AT	PBBU	61.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CPBSD	92.	4.08	10.	2.	1.	.03
+	DIVERSION TO	SD75PB	23.	3.67	6.	1.	0.	.03
+	HYDROGRAPH AT	DPBSD1	69.	4.08	4.	1.	0.	.03
+	DIVERSION TO	SDBRPB	39.	3.92	3.	1.	0.	.03
+	HYDROGRAPH AT	DPBSD2	30.	4.08	1.	0.	0.	.03
+	2 COMBINED AT	CPPB	633.	4.33	36.	9.	3.	.44
+	DIVERSION TO	DIPA1	120.	4.33	7.	2.	1.	.44
+	HYDROGRAPH AT	DIPBPA	513.	4.33	29.	7.	2.	.44
+	2 COMBINED AT	CPPB1	296.	4.42	24.	6.	2.	3.99
+	ROUTED TO	RTPBNA	129.	5.00	24.	6.	2.	3.99
+	HYDROGRAPH AT	SUBNA	1930.	4.25	267.	67.	22.	.94
+	DIVERSION TO	RETNA	1930.	4.25	181.	45.	15.	.94
+	HYDROGRAPH AT	RETNA	1140.	4.50	87.	22.	7.	.94
+	HYDROGRAPH AT	NA75	64.	4.08	6.	2.	1.	.02
+	HYDROGRAPH AT	NALB	61.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CNASD	124.	4.08	13.	3.	1.	.04
+	3 COMBINED AT	CPNA1	1154.	4.50	119.	30.	10.	4.97
+	DIVERSION TO	SD75NA	40.	3.83	24.	6.	2.	4.97
+	HYDROGRAPH AT	DNASD1	731.	4.50	85.	21.	7.	4.97
+	DIVERSION TO	SDLBNA	38.	4.58	14.	4.	1.	4.97
+	HYDROGRAPH AT	DNASD2	705.	4.50	70.	18.	6.	4.97
+	DIVERSION TO	ADMP1	705.	4.50	70.	18.	6.	4.97
+	HYDROGRAPH AT	DADMP1	0.	.00	0.	0.	0.	4.97
+	HYDROGRAPH AT	SUBJC1	1104.	4.17	119.	30.	10.	.47
+	DIVERSION TO	RETJC1	1104.	4.17	72.	18.	6.	.47
+	HYDROGRAPH AT	RETJC1	933.	4.33	48.	12.	4.	.47
+	HYDROGRAPH AT	JC75	66.	4.08	7.	2.	1.	.02
	2 COMBINED AT							

+		CJCSD1	957.	4.33	55.	14.	5.	.49
+	HYDROGRAPH AT	SUBJC2	1098.	4.17	104.	26.	9.	.48
+	DIVERSION TO	RETJC2	949.	4.08	40.	10.	3.	.48
+	HYDROGRAPH AT	RETJC2	1093.	4.25	64.	16.	5.	.48
+	DIVERSION TO	DETJC2	1093.	4.25	33.	8.	3.	.48
+	HYDROGRAPH AT	DETJC2	666.	4.33	31.	8.	3.	.48
+	ROUTED TO	RTJCJC	408.	4.58	31.	8.	3.	.48
+	2 COMBINED AT	CPJC1A	949.	4.33	85.	21.	7.	.97
+	HYDROGRAPH AT	JCBR	65.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CJCSD2	924.	4.33	90.	23.	8.	.99
+	2 COMBINED AT	CPJC1B	457.	4.50	65.	16.	5.	5.96
+	DIVERSION TO	SDOSBR	41.	3.83	21.	5.	2.	5.96
+	HYDROGRAPH AT	DJC2SD	416.	4.50	45.	11.	4.	5.96
+	DIVERSION TO	SD75JC	42.	4.50	10.	3.	1.	5.96
+	HYDROGRAPH AT	DJCSD1	374.	4.50	35.	9.	3.	5.96
+	HYDROGRAPH AT	DIJD	306.	4.33	78.	23.	9.	5.44
+	ROUTED TO	RTJCJC	235.	4.75	78.	23.	9.	5.44
+	2 COMBINED AT	CPJC2	469.	4.58	103.	29.	11.	8.11
+	DIVERSION TO	DIJB2	213.	4.58	47.	13.	5.	8.11
+	HYDROGRAPH AT	DIJCJB	257.	4.58	56.	16.	6.	8.11
+	ROUTED TO	RTJCFB	209.	5.00	55.	16.	6.	8.11
+	HYDROGRAPH AT	DRB71	93.	8.25	93.	91.	51.	3.55
+	ROUTED TO	RT71PB	93.	8.42	93.	91.	51.	3.55
+	HYDROGRAPH AT	RSDPB1	23.	3.67	6.	1.	0.	.03
+	2 COMBINED AT	CPPBS1	95.	6.00	93.	91.	51.	3.99
+	HYDROGRAPH AT	RSDPB2	39.	3.92	3.	1.	0.	.03
+	2 COMBINED AT	CPPBS2	105.	4.08	94.	91.	51.	3.99
+	ROUTED TO	RTPBNA	105.	4.25	94.	91.	51.	3.99
+	HYDROGRAPH AT	RSDNA1	40.	3.83	24.	6.	2.	4.97
+	2 COMBINED AT	CPNAS1	143.	4.25	114.	96.	53.	4.97
+	HYDROGRAPH AT	RSDNA2	38.	4.58	14.	4.	1.	4.97
+	2 COMBINED AT	CPNAS2	173.	6.17	129.	100.	54.	4.97
+	ROUTED TO	RTNAJC	173.	6.33	129.	100.	54.	4.97
+	HYDROGRAPH AT	RSDJC1	42.	4.50	10.	3.	1.	5.96
+	2 COMBINED AT	CPJCS1	213.	5.33	138.	102.	54.	5.96
+	HYDROGRAPH AT	RSDJC3	41.	3.83	21.	5.	2.	5.96
	2 COMBINED AT							

+		CPJCS3	254.	5.33	156.	107.	56.	5.96
+	ROUTED TO	RTJCFB	254.	5.50	156.	107.	56.	5.96
+	HYDROGRAPH AT	FB75	58.	4.08	6.	1.	0.	.02
+	2 COMBINED AT	CPFB	257.	4.92	160.	108.	56.	5.98
+	3 COMBINED AT	DUMM	2444.	4.33	956.	375.	146.	36.25
+	HYDROGRAPH AT	SUBSH	333.	4.08	30.	8.	3.	.10
+	DIVERSION TO	RETSH	315.	4.08	21.	5.	2.	.10
+	HYDROGRAPH AT	RETSH	261.	4.17	10.	2.	1.	.10
+	ROUTED TO	RSSH	0.	.00	0.	0.	0.	.10
+	DIVERSION TO	DIRJ2	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	DISHRJ	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTSHSG	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	SUBTA	649.	4.17	68.	17.	6.	.24
+	DIVERSION TO	RETTA	649.	4.17	49.	12.	4.	.24
+	HYDROGRAPH AT	RETTA	365.	4.33	20.	5.	2.	.24
+	HYDROGRAPH AT	DRTA	262.	4.67	45.	11.	4.	.75
+	ROUTED TO	RTDITA	234.	5.17	45.	11.	4.	.75
+	2 COMBINED AT	@CPTA	366.	4.33	65.	16.	5.	1.13
+	ROUTED TO	RTTASG	230.	5.33	63.	16.	5.	1.13
+	HYDROGRAPH AT	SUBSG	376.	4.17	40.	10.	3.	.14
+	DIVERSION TO	RETSG	376.	4.17	27.	7.	2.	.14
+	HYDROGRAPH AT	RETSG	268.	4.25	13.	3.	1.	.14
+	3 COMBINED AT	CPSG	235.	5.33	74.	18.	6.	1.37
+	ROUTED TO	RSSG	229.	5.42	48.	12.	4.	1.37
+	DIVERSION TO	DIRJ4	163.	5.42	29.	7.	2.	1.37
+	HYDROGRAPH AT	DISGRJ	67.	5.42	19.	5.	2.	1.37
+	ROUTED TO	RTSGSE	61.	5.75	19.	5.	2.	1.37
+	HYDROGRAPH AT	SUBSC	988.	4.25	121.	30.	10.	.45
+	DIVERSION TO	RETSC	988.	4.25	92.	23.	8.	.45
+	HYDROGRAPH AT	RETSC	507.	4.50	30.	8.	3.	.45
+	DIVERSION TO	DISD	274.	4.50	16.	4.	1.	.45
+	HYDROGRAPH AT	DISCSD	233.	4.50	14.	3.	1.	.45
+	ROUTED TO	RTSCSE	155.	4.58	14.	3.	1.	.45
+	HYDROGRAPH AT	SUBSE	425.	4.00	33.	8.	3.	.13
+	DIVERSION TO	RETSE	425.	4.00	25.	6.	2.	.13
+	HYDROGRAPH AT	RETSE	160.	4.17	8.	2.	1.	.13
	3 COMBINED AT							

+		CPSE	144.	4.58	39.	10.	3.	1.95
+	ROUTED TO	RSSE	12.	6.58	7.	4.	3.	1.95
+	DIVERSION TO	DIRJ5	12.	6.58	7.	4.	3.	1.95
+	HYDROGRAPH AT	DISERJ	0.	.00	0.	0.	0.	1.95
+	ROUTED TO	RTSERI	0.	.00	0.	0.	0.	1.95
+	HYDROGRAPH AT	SUBRJ	413.	4.17	46.	12.	4.	.16
+	DIVERSION TO	RETRJ	413.	4.17	33.	8.	3.	.16
+	HYDROGRAPH AT	RETRJ	282.	4.33	14.	3.	1.	.16
+	HYDROGRAPH AT	CPRJ2	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTSHRJ	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTRJ3	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	CPRJ4A	163.	5.42	29.	7.	2.	1.37
+	2 COMBINED AT	CPRJ4B	177.	5.42	32.	8.	3.	.39
+	ROUTED TO	RTSGRJ	165.	5.67	32.	8.	3.	.39
+	HYDROGRAPH AT	CPRJ5	12.	6.58	7.	4.	3.	1.95
+	ROUTED TO	RTSERJ	10.	7.33	7.	4.	3.	1.95
+	3 COMBINED AT	@CPRJ6	444.	4.50	68.	20.	9.	3.81
+	ROUTED TO	RSRJ	80.	6.42	34.	11.	6.	3.81
+	DIVERSION TO	DIPA2	0.	.00	0.	0.	0.	3.81
+	HYDROGRAPH AT	DIRJPA	80.	6.42	34.	11.	6.	3.81
+	ROUTED TO	RTRJRI	76.	6.92	34.	11.	6.	3.81
+	ROUTED TO	RTRIRI	73.	7.17	33.	11.	6.	3.81
+	HYDROGRAPH AT	SUBRI	742.	4.08	67.	17.	6.	.23
+	DIVERSION TO	RETRI	738.	4.00	47.	12.	4.	.23
+	HYDROGRAPH AT	RETRI	523.	4.17	20.	5.	2.	.23
+	HYDROGRAPH AT	SUBSB	536.	4.08	50.	12.	4.	.17
+	DIVERSION TO	RETSB	536.	4.08	34.	8.	3.	.17
+	HYDROGRAPH AT	RETSB	393.	4.17	16.	4.	1.	.17
+	ROUTED TO	RSSB	74.	4.42	12.	3.	1.	.17
+	HYDROGRAPH AT	SUBSD	487.	4.08	46.	12.	4.	.17
+	DIVERSION TO	RETSD	487.	4.08	34.	8.	3.	.17
+	HYDROGRAPH AT	RETSD	309.	4.25	13.	3.	1.	.17
+	HYDROGRAPH AT	DRSD	274.	4.50	16.	4.	1.	.45
+	3 COMBINED AT	@CPSD	340.	4.50	38.	9.	3.	.79
+	ROUTED TO	RSSD	342.	4.50	38.	9.	3.	.79
+	ROUTED TO	RTSDRI	239.	4.75	38.	9.	3.	.79
	4 COMBINED AT							

+		~@CPRI	837.	4.33	163.	46.	17.	4.38
+	ROUTED TO	MCRIRH	164.	5.17	71.	22.	9.	4.38
+	HYDROGRAPH AT	SUBPA	1148.	4.17	136.	34.	11.	.48
+	DIVERSION TO	RETPA	1148.	4.17	96.	24.	8.	.48
+	HYDROGRAPH AT	RETPA	690.	4.42	40.	10.	3.	.48
+	HYDROGRAPH AT	DRPA2	0.	.00	0.	0.	0.	3.81
+	ROUTED TO	RTRJPA	0.	.00	0.	0.	0.	3.81
+	2 COMBINED AT	CPPA	690.	4.42	40.	10.	3.	.48
+	DIVERSION TO	DIOE	124.	4.42	7.	2.	1.	.48
+	HYDROGRAPH AT	DIPAOE	566.	4.42	33.	8.	3.	.48
+	ROUTED TO	RTPAMH	290.	4.67	33.	8.	3.	.48
+	HYDROGRAPH AT	SUBMH	601.	4.17	62.	16.	5.	.24
+	DIVERSION TO	RETMH	601.	4.17	40.	10.	3.	.24
+	HYDROGRAPH AT	RETMH	435.	4.33	22.	6.	2.	.24
+	2 COMBINED AT	CPMH	370.	4.33	54.	13.	4.	.72
+	ROUTED TO	RTMHMD	300.	4.75	54.	13.	4.	.72
+	HYDROGRAPH AT	SUBMD	423.	4.50	68.	17.	6.	.25
+	DIVERSION TO	RETMD	423.	4.50	43.	11.	4.	.25
+	HYDROGRAPH AT	RETMD	329.	4.67	26.	6.	2.	.25
+	2 COMBINED AT	CPMD	534.	4.83	77.	19.	6.	.97
+	DIVERSION TO	DIJB1	109.	4.83	16.	4.	1.	.97
+	HYDROGRAPH AT	DIMDJB	425.	4.83	61.	15.	5.	.97
+	DIVERSION TO	DIMFX	425.	4.83	61.	15.	5.	.97
+	HYDROGRAPH AT	DIMDMF	0.	.00	0.	0.	0.	.97
+	HYDROGRAPH AT	SUBMI	1098.	4.17	109.	27.	9.	.41
+	DIVERSION TO	RETMI	1078.	4.08	71.	18.	6.	.41
+	HYDROGRAPH AT	RETMI	930.	4.25	38.	10.	3.	.41
+	HYDROGRAPH AT	SUBMG	257.	4.08	22.	5.	2.	.08
+	DIVERSION TO	RETMG	240.	4.00	15.	4.	1.	.08
+	HYDROGRAPH AT	RETMG	203.	4.17	7.	2.	1.	.08
+	2 COMBINED AT	CPMG	1038.	4.25	46.	11.	4.	.49
+	ROUTED TO	RTMGJB	374.	4.92	46.	11.	4.	.49
+	HYDROGRAPH AT	SUBJB1	703.	4.50	105.	26.	9.	.49
+	DIVERSION TO	RETJB1	315.	4.08	21.	5.	2.	.49
+	HYDROGRAPH AT	RETJB1	703.	4.50	84.	21.	7.	.49
+	HYDROGRAPH AT	DRJB	109.	4.83	16.	4.	1.	.97
	ROUTED TO							

+		RDIJB1	84.	5.17	16.	4.	1.	.97
+	HYDROGRAPH AT	ADMP1	705.	4.50	70.	18.	6.	4.97
+	ROUTED TO	MCJCJB	290.	5.67	70.	18.	6.	4.97
+	5 COMBINED AT	~CPJB1	707.	5.33	205.	51.	17.	9.37
+	ROUTED TO	RRJB1	345.	5.50	156.	41.	14.	9.37
+	DIVERSION TO	DIED	345.	5.50	156.	41.	14.	9.37
+	HYDROGRAPH AT	DIED	0.	.00	0.	0.	0.	9.37
+	HYDROGRAPH AT	SUBOE	1120.	4.17	128.	32.	11.	.47
+	DIVERSION TO	RETOE	1120.	4.17	95.	24.	8.	.47
+	HYDROGRAPH AT	RETOE	618.	4.42	33.	8.	3.	.47
+	HYDROGRAPH AT	CPOE1	124.	4.42	7.	2.	1.	.48
+	ROUTED TO	RTDIOE	29.	5.67	7.	2.	1.	.48
+	2 COMBINED AT	@CPOE	618.	4.42	41.	10.	3.	.47
+	DIVERSION TO	DIOD	101.	4.42	7.	2.	1.	.47
+	HYDROGRAPH AT	DIOEOD	517.	4.42	34.	8.	3.	.47
+	ROUTED TO	RTOEMF	175.	4.92	34.	8.	3.	.47
+	HYDROGRAPH AT	SUBMF	1379.	4.58	245.	62.	21.	.97
+	DIVERSION TO	RETMF	1379.	4.58	162.	40.	13.	.97
+	HYDROGRAPH AT	RETMF	869.	4.83	84.	21.	7.	.97
+	HYDROGRAPH AT	CPMF	425.	4.83	61.	15.	5.	.97
+	ROUTED TO	RTMDMF	308.	5.33	61.	15.	5.	.97
+	3 COMBINED AT	CPMF1	955.	4.92	170.	43.	14.	1.44
+	DIVERSION TO	DIEB	441.	4.92	79.	20.	7.	1.44
+	HYDROGRAPH AT	DIMFEB	514.	4.92	91.	23.	8.	1.44
+	ROUTED TO	RTMFMC	393.	5.50	90.	23.	8.	1.44
+	HYDROGRAPH AT	SUBOD	1279.	4.17	150.	38.	13.	.51
+	DIVERSION TO	RETOD	1279.	4.17	128.	32.	11.	.51
+	HYDROGRAPH AT	RETOD	353.	4.50	22.	6.	2.	.51
+	HYDROGRAPH AT	DROD	101.	4.42	7.	2.	1.	.47
+	ROUTED TO	RTDIOD	29.	5.08	7.	2.	1.	.47
+	2 COMBINED AT	CPOD	355.	4.50	29.	7.	2.	.51
+	DIVERSION TO	DIOC	64.	4.50	5.	1.	0.	.51
+	HYDROGRAPH AT	DIODOC	291.	4.50	24.	6.	2.	.51
+	ROUTED TO	RTODMC	104.	5.17	24.	6.	2.	.51
+	HYDROGRAPH AT	SUBMC	1825.	4.33	291.	73.	24.	1.00
+	DIVERSION TO	RETMC	1825.	4.33	192.	48.	16.	1.00
	HYDROGRAPH AT							

+	RETMC	1234.	4.58	100.	25.	8.	1.00
+ 3 COMBINED AT	CPMC1	1043.	4.58	196.	49.	16.	2.95
+ DIVERSION TO	DIMB	398.	4.58	75.	19.	6.	2.95
+ HYDROGRAPH AT	DIMCMB	645.	4.58	121.	30.	10.	2.95
+ ROUTED TO	RTMCIE	478.	4.83	120.	30.	10.	2.95
+ DIVERSION TO	MCIE	478.	4.83	120.	30.	10.	2.95
+ HYDROGRAPH AT	DIMCIE	0.	.00	0.	0.	0.	2.95
+ HYDROGRAPH AT	DREB	441.	4.92	79.	20.	7.	1.44
+ HYDROGRAPH AT	SUBEB	308.	4.25	32.	8.	3.	.14
+ DIVERSION TO	RETEB	308.	4.25	23.	6.	2.	.14
+ HYDROGRAPH AT	RETEB	188.	4.42	9.	2.	1.	.14
+ 2 COMBINED AT	CPEB	646.	4.75	97.	24.	8.	.14
+ HYDROGRAPH AT	RDIED	345.	5.50	156.	41.	14.	9.37
+ ROUTED TO	RJBED1	323.	5.83	155.	41.	14.	9.37
+ ROUTED TO	RJBED2	291.	6.92	152.	41.	14.	9.37
+ HYDROGRAPH AT	SUBED1	536.	4.58	84.	21.	7.	.38
+ DIVERSION TO	RETED1	487.	4.42	40.	10.	3.	.38
+ HYDROGRAPH AT	RETED1	536.	4.58	44.	11.	4.	.38
+ HYDROGRAPH AT	SUBED2	218.	4.25	22.	6.	2.	.11
+ DIVERSION TO	RETED2	218.	4.25	15.	4.	1.	.11
+ HYDROGRAPH AT	RETED2	159.	4.42	7.	2.	1.	.11
+ 2 COMBINED AT	CPED1	611.	4.58	51.	13.	4.	.50
+ 2 COMBINED AT	~CPED1	894.	5.83	270.	73.	24.	.50
+ 2 COMBINED AT	~CPED2	981.	4.75	357.	95.	32.	.63
+ ROUTED TO	RRED	876.	5.92	352.	95.	32.	.63
+ ROUTED TO	RT99	736.	6.25	344.	95.	32.	.63
+ HYDROGRAPH AT	SUBID1	370.	4.42	52.	13.	4.	.20
+ DIVERSION TO	RETID1	370.	4.42	34.	9.	3.	.20
+ HYDROGRAPH AT	RETID1	297.	4.58	19.	5.	2.	.20
+ HYDROGRAPH AT	SUBID2	560.	4.42	77.	19.	6.	.36
+ DIVERSION TO	RETID2	560.	4.42	60.	15.	5.	.36
+ HYDROGRAPH AT	RETID2	286.	4.75	17.	4.	1.	.36
+ HYDROGRAPH AT	SUBIE	574.	4.42	117.	29.	10.	.30
+ DIVERSION TO	RETIE	574.	4.42	50.	13.	4.	.30
+ HYDROGRAPH AT	RETIE	470.	4.58	67.	17.	6.	.30
+ HYDROGRAPH AT	DRMCIE	478.	4.83	120.	30.	10.	2.95
4 COMBINED AT							

+		-CPID2	1308.	4.75	230.	58.	19.	.87
+	ROUTED TO	RRID1	1163.	4.83	230.	58.	19.	.87
+	2 COMBINED AT	CPID3	1167.	4.92	525.	142.	47.	1.50
+	ROUTED TO	RT107	1120.	5.25	519.	142.	47.	1.50
+	HYDROGRAPH AT	SUBIB	826.	4.42	121.	30.	10.	.48
+	DIVERSION TO	RETIB	327.	4.00	21.	5.	2.	.48
+	HYDROGRAPH AT	RETIB	826.	4.42	101.	25.	8.	.48
+	HYDROGRAPH AT	SUBIC	630.	4.58	100.	25.	8.	.46
+	DIVERSION TO	RETIC	291.	4.17	20.	5.	2.	.46
+	HYDROGRAPH AT	RETIC	630.	4.58	80.	20.	7.	.46
+	2 COMBINED AT	CPIC	1296.	4.50	174.	44.	15.	.94
+	HYDROGRAPH AT	SUBOC	847.	4.17	93.	23.	8.	.31
+	DIVERSION TO	RETOC	847.	4.17	63.	16.	5.	.31
+	HYDROGRAPH AT	RETOC	546.	4.25	30.	8.	3.	.31
+	HYDROGRAPH AT	DROC	64.	4.50	5.	1.	0.	.51
+	ROUTED TO	RTDIOC	18.	5.92	5.	1.	0.	.51
+	2 COMBINED AT	CPOC	546.	4.25	36.	9.	3.	.31
+	ROUTED TO	RTOCMB	231.	4.67	36.	9.	3.	.31
+	HYDROGRAPH AT	SUBMB	1673.	4.42	273.	68.	23.	1.00
+	DIVERSION TO	RETMB	1673.	4.42	178.	45.	15.	1.00
+	HYDROGRAPH AT	RETMB	1163.	4.67	96.	24.	8.	1.00
+	HYDROGRAPH AT	DRMB	398.	4.58	75.	19.	6.	2.95
+	ROUTED TO	RTDIMB	217.	5.17	74.	19.	6.	2.95
+	3 COMBINED AT	@CPMB	1155.	4.67	195.	49.	16.	5.24
+	ROUTED TO	RTMBIB	612.	5.17	172.	44.	15.	5.24
+	2 COMBINED AT	CPIB0	1316.	4.92	365.	93.	31.	6.18
+	3 COMBINED AT	@CPIB2	1434.	5.25	627.	175.	58.	10.63
+	ROUTED TO	DET107	1008.	5.67	567.	173.	58.	10.63
+	ROUTED TO	MCIBIA	982.	6.08	560.	173.	58.	10.63
+	HYDROGRAPH AT	SUBME	521.	4.33	60.	15.	5.	.33
+	DIVERSION TO	RETME	521.	4.33	46.	11.	4.	.33
+	HYDROGRAPH AT	RETME	257.	4.58	14.	4.	1.	.33
+	ROUTED TO	RTMEIA	118.	5.00	14.	4.	1.	.33
+	HYDROGRAPH AT	SUBIA	594.	4.25	67.	17.	6.	.31
+	DIVERSION TO	RETIA	110.	3.83	7.	2.	1.	.31
+	HYDROGRAPH AT	RETIA	594.	4.25	59.	15.	5.	.31
	3 COMBINED AT							

+		~CPIA	985.	6.08	560.	183.	62.	11.26
+	ROUTED TO	MCIAHB	953.	6.42	551.	181.	61.	11.26
+	HYDROGRAPH AT	SUBHB	644.	4.25	69.	17.	6.	.34
+	DIVERSION TO	RETHB	119.	3.92	9.	2.	1.	.34
+	HYDROGRAPH AT	RETHB	644.	4.25	60.	15.	5.	.34
+	2 COMBINED AT	CPHB1	953.	6.42	550.	191.	65.	11.61
+	HYDROGRAPH AT	SUBDA	565.	4.42	72.	18.	6.	.33
+	DIVERSION TO	RETDA	216.	4.00	9.	2.	1.	.33
+	HYDROGRAPH AT	RETDA	565.	4.42	63.	16.	5.	.33
+	2 COMBINED AT	~CPDA	948.	6.42	576.	201.	68.	11.94
+	HYDROGRAPH AT	SUBLD	489.	4.33	60.	15.	5.	.28
+	DIVERSION TO	RETLD	489.	4.33	42.	10.	3.	.28
+	HYDROGRAPH AT	RETLD	287.	4.58	18.	4.	1.	.28
+	ROUTED TO	RTLDMA	163.	4.83	18.	4.	1.	.28
+	HYDROGRAPH AT	SUBMA	430.	4.25	42.	11.	4.	.25
+	DIVERSION TO	RETMA	430.	4.25	33.	8.	3.	.25
+	HYDROGRAPH AT	RETMA	220.	4.50	10.	2.	1.	.25
+	2 COMBINED AT	CPMA	215.	4.50	27.	7.	2.	.52
+	ROUTED TO	RTMAHB	165.	5.08	27.	7.	2.	.52
+	2 COMBINED AT	CPHB2	952.	6.42	577.	201.	68.	12.46
+	HYDROGRAPH AT	SUBLB	412.	4.33	43.	11.	4.	.25
+	DIVERSION TO	RETLB	412.	4.33	33.	8.	3.	.25
+	HYDROGRAPH AT	RETLB	189.	4.58	10.	3.	1.	.25
+	ROUTED TO	RTLBHA	51.	5.83	10.	3.	1.	.25
+	HYDROGRAPH AT	SUBHA	298.	4.25	32.	8.	3.	.15
+	DIVERSION TO	RETHA	106.	3.92	6.	2.	1.	.15
+	HYDROGRAPH AT	RETHA	298.	4.25	25.	6.	2.	.15
+	3 COMBINED AT	CPHA	942.	6.42	588.	204.	69.	12.86
+	ROUTED TO	MCHACB	896.	7.25	564.	202.	69.	12.86
+	HYDROGRAPH AT	SUBJB	744.	4.50	106.	27.	9.	.49
+	DIVERSION TO	RETJB2	744.	4.50	65.	16.	5.	.49
+	HYDROGRAPH AT	RETJB2	613.	4.67	41.	10.	3.	.49
+	HYDROGRAPH AT	DRJB2	213.	4.58	47.	13.	5.	8.11
+	ROUTED TO	RTJCJ	147.	5.25	46.	13.	5.	8.11
+	2 COMBINED AT	@CPJB2	739.	4.83	108.	29.	11.	3.81
+	DIVERSION TO	DIFA	276.	5.00	54.	15.	5.	3.81
+	HYDROGRAPH AT							

+		DIJBEE	155.	5.00	30.	8.	3.	3.81
+	ROUTED TO	RTJBEE	86.	6.25	29.	8.	3.	3.81
+	HYDROGRAPH AT	SUBEE	1002.	4.67	177.	44.	15.	.96
+	DIVERSION TO	RETEE	1002.	4.67	127.	32.	11.	.96
+	HYDROGRAPH AT	RETEE	468.	4.92	50.	13.	4.	.96
+	2 COMBINED AT	CPEE	273.	5.17	50.	14.	5.	4.77
+	ROUTED TO	RTEEEA	43.	13.25	36.	14.	5.	4.77
+	HYDROGRAPH AT	SUBEA	1391.	4.58	231.	58.	19.	1.32
+	DIVERSION TO	RETEA	1391.	4.58	180.	45.	15.	1.32
+	HYDROGRAPH AT	RETEA	478.	4.83	52.	13.	4.	1.32
+	2 COMBINED AT	CPEA	303.	5.17	35.	19.	7.	6.09
+	ROUTED TO	RTEADC	141.	5.67	31.	17.	6.	6.09
+	HYDROGRAPH AT	SUBDC	1202.	4.42	158.	40.	13.	.83
+	DIVERSION TO	RETDC	846.	4.17	52.	13.	4.	.83
+	HYDROGRAPH AT	RETDC	1202.	4.42	107.	27.	9.	.83
+	2 COMBINED AT	~CPDC	776.	4.42	94.	34.	12.	6.92
+	ROUTED TO	RTDCCC	565.	4.92	93.	34.	12.	6.92
+	HYDROGRAPH AT	SUBDD	308.	4.17	28.	7.	2.	.13
+	DIVERSION TO	RETDD	308.	4.17	22.	6.	2.	.13
+	HYDROGRAPH AT	RETDD	119.	4.33	6.	2.	1.	.13
+	ROUTED TO	RTDDCC	28.	5.42	6.	2.	1.	.13
+	HYDROGRAPH AT	SUBCC	1311.	4.50	194.	49.	16.	.98
+	DIVERSION TO	RETCC	984.	4.25	69.	17.	6.	.98
+	HYDROGRAPH AT	RETCC	1311.	4.50	125.	31.	10.	.98
+	3 COMBINED AT	~CPCC	1122.	4.83	181.	55.	19.	8.03
+	ROUTED TO	RTCCSC	1032.	5.08	180.	55.	19.	8.03
+	ROUTED TO	RTCCSC	932.	5.25	179.	55.	19.	8.03
+	HYDROGRAPH AT	SUBCB	1204.	4.42	178.	45.	15.	.74
+	DIVERSION TO	RETCB	582.	4.08	32.	8.	3.	.74
+	HYDROGRAPH AT	RETCB	1204.	4.42	146.	37.	12.	.74
+	3 COMBINED AT	~CPCB1	1319.	5.33	673.	240.	82.	21.63
+	HYDROGRAPH AT	SUBGD1	1022.	4.42	136.	34.	11.	.63
+	DIVERSION TO	RETGD1	451.	4.00	27.	7.	2.	.63
+	HYDROGRAPH AT	RETGD1	1022.	4.42	110.	27.	9.	.63
+	HYDROGRAPH AT	SUBGD2	1299.	4.50	195.	49.	16.	.21
+	DIVERSION TO	RETGD2	527.	4.00	32.	8.	3.	.21
	HYDROGRAPH AT							

+		RETGD2	1299.	4.50	164.	41.	14.	.21
+	2 COMBINED AT	CPGD	2156.	4.42	268.	67.	22.	.84
+	HYDROGRAPH AT	SUBKC	492.	4.25	54.	14.	5.	.26
+	DIVERSION TO	RETKC	492.	4.25	44.	11.	4.	.26
+	HYDROGRAPH AT	RETKC	183.	4.58	10.	3.	1.	.26
+	ROUTED TO	RTKCGD	60.	5.08	10.	3.	1.	.26
+	HYDROGRAPH AT	SUBGC	432.	4.25	43.	11.	4.	.22
+	DIVERSION TO	RETGC	234.	4.00	10.	3.	1.	.22
+	HYDROGRAPH AT	RETGC	432.	4.25	33.	8.	3.	.22
+	ROUTED TO	RTGCGD	423.	4.25	33.	8.	3.	.22
+	3 COMBINED AT	CPGD1	2260.	4.42	297.	74.	25.	1.32
+	ROUTED TO	RTGDCB	2252.	4.50	297.	74.	25.	1.32
+	2 COMBINED AT	~CPCB2	2043.	4.50	880.	291.	99.	22.95
+	ROUTED TO	MCCBCA	1894.	4.92	861.	289.	99.	22.95
+	HYDROGRAPH AT	SUBCA1	238.	4.50	35.	9.	3.	.14
+	DIVERSION TO	RETCA1	86.	4.00	5.	1.	0.	.14
+	HYDROGRAPH AT	RETCA1	238.	4.50	31.	8.	3.	.14
+	HYDROGRAPH AT	SUBCA2	1249.	4.50	186.	47.	16.	.84
+	DIVERSION TO	RETCA2	621.	4.08	36.	9.	3.	.84
+	HYDROGRAPH AT	RETCA2	1249.	4.50	150.	37.	12.	.84
+	3 COMBINED AT	~CPCA1	2431.	4.92	953.	319.	109.	23.93
+	HYDROGRAPH AT	SUBGB	379.	4.33	41.	10.	3.	.22
+	DIVERSION TO	RETGB	308.	4.17	17.	4.	1.	.22
+	HYDROGRAPH AT	RETGB	379.	4.33	24.	6.	2.	.22
+	ROUTED TO	RTGBCA	111.	5.25	24.	6.	2.	.22
+	2 COMBINED AT	~CPCA2	2426.	4.92	958.	320.	109.	24.16
+	DIVERSION TO	B-DRCC	2393.	4.92	925.	288.	96.	24.16
+	HYDROGRAPH AT	P-DRCC	33.	4.92	33.	32.	13.	24.16
+	ROUTED TO	MCCABC	33.	5.17	33.	32.	13.	24.16
+	HYDROGRAPH AT	SUBBC1	494.	4.00	40.	10.	3.	.14
+	DIVERSION TO	RETBC1	50.	3.50	6.	1.	0.	.14
+	HYDROGRAPH AT	RETBC1	494.	4.00	34.	9.	3.	.14
+	HYDROGRAPH AT	SUBBC2	931.	4.50	136.	34.	11.	.49
+	DIVERSION TO	RETBC2	316.	4.00	21.	5.	2.	.49
+	HYDROGRAPH AT	RETBC2	931.	4.50	115.	29.	10.	.49
+	3 COMBINED AT	~CPBC	522.	4.50	126.	56.	22.	24.78
	2 COMBINED AT							

```
+                    CPAFBC      485.    4.50        120.        54.        21.      34.15

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

APPENDIX C

HEC-1 Model Output for Option 3 (107BSNF.DAT)

```
1****************************************
 *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
 *              JUN  1998               *
 *            VERSION 4.1               *
 *                                      *
 *  RUN DATE   27APR09  TIME  10:36:12  *
 *                                      *
 ****************************************
```

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

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

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

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

```
1                                    HEC-1 INPUT                                    PAGE  1

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

    1           ID   107BSNF.DAT
    2           ID   PRESTIGE ENGINEERING CONSULTANTS - MARCH 23, 2009
    3           ID   REMOVAL OF 95TH AVENUE BASIN & REPLACE WITH 10TH AVENUE BASIN
    4           ID   6-HOUR RAINFALL
    5           ID   DURANGO REGIONAL CONVEYANCE CHANNEL AND SUNLAND CHANNEL
    6           ID   AVONDALE AND PHOENIX ARIZONA
    7           ID   THIS HEC-1 MODEL IS THE SAME AS THE REC6FINAL.DAT MODEL FOR THE SAME AREA,
    8           ID   DATED JANUARY 25, 2006 AND DELIVERED TO THE FCDMC ON FEBRUARY 15, 2006,
    9           ID   WITH THE FOLLOWING CHANGES ADDED BY PRESTIGE ENGINEERING
   10           ID   1.  REMOVE DETENTION BASIN AT 95TH AVENUE (KK 95BASIN) FROM THE MODEL
   11           ID   2.  REPLACE THE TWO ROUTING REACHES RT95 AND RT99 BETWEEN 91ST AVE & 99 AVE
   12           ID       WITH A SINGLE ROUTING REACH, AFTER THE REMOVAL OF THR 95TH AVE BASIN
   13           ID       RENAME BOTH ROUTINGS WITH A SINGLE LABEL RT99
   14           ID   3.  REVISE THE REACH DISTANCE TO THE ONE MILE DISTANCE BETWEEN 91ST & 99TH
   15           ID   4.  FROM THE 7566 FT (2439 FT FOR RT95 PLUS 5127 FT FOR RT99) TO 5216 FT
   16           ID   5.  ADD BASIN AT 107TH AVENUE AFTER COMBINING SUB IB AND IC AND ROUTED FLOWS
   17           ID       FROM THE NORTH AT CPIB2 WHICH WAS FORMERLLY RRIB
   18           ID   6.  THE 107TH AVE BASIN IS 18 AC BOTTOM AT 6:1 SIDES BOT FLUSHED WITH CHANNE
   19           ID   7.  THE CULVERT USED IS 10FT WIDE BY 5FT HIGH TRIPLE CONCRETE BOX CULVERT
   20           ID   8.  TOP OF ROAD IS 0.5 FT ABOVE TOP OF CULVERT
   21           ID   9.  SLOPE OF CULVERT BARREL IS 0.005 FT/FT
   22           ID   10. 100-YR DISCHARGE WAS TAKEN FROM ASPEN REPORT AS 1193 CFS
   23           ID   11. CULVERT SET TO DISCHARGE ABOUT THE EXISTING CONDITION 100-YR WITH NO ROAD
   24           ID       OVERTOPPING AT 107TH AVENUE
   25           ID   12. THE CHAN ROUTING RT107 LENGTH SHORTENED BY 500 FT TO ALLOW FOR THE 107TH
   26           ID       BASIN DETENTION
                *DIAGRAM
                * MODIFIED IT CARD FOR DSS RUN  SLT
                * IT      5            1200    2000
   27           IT        5 09MAR95    1200    2000
   28           IO        5
   29           IN       15
                *
   30           JD    3.23     0.01
   31           PC   0.000    0.008   0.016   0.025   0.033   0.041   0.050   0.058   0.066   0.074
   32           PC   0.087    0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931   0.950
   33           PC   0.962    0.972   0.983   0.991   1.000
   34           JD   3.209     0.50
   35           JD   3.149     2.80
   36           PC   0.000    0.009   0.016   0.025   0.034   0.042   0.051   0.059   0.067   0.076
   37           PC   0.087    0.100   0.120   0.163   0.252   0.451   0.694   0.837   0.900   0.938
   38           PC   0.950    0.963   0.975   0.988   1.000
   39           JD   2.978     16.0
   40           PC   0.000    0.009   0.020   0.030   0.048   0.063   0.076   0.090   0.105   0.119
   41           PC   0.135    0.152   0.175   0.222   0.304   0.472   0.670   0.796   0.868   0.912
   42           PC   0.946    0.960   0.973   0.987   1.000
   43           JD   2.623     90.0
   44           PC   0.000    0.021   0.035   0.051   0.071   0.087   0.105   0.125   0.143   0.160
   45           PC   0.179    0.201   0.232   0.281   0.364   0.500   0.658   0.773   0.841   0.888
   46           PC   0.927    0.945   0.964   0.982   1.000
   47           JD   1.841    500.0
   48           PC   0.000    0.024   0.043   0.059   0.078   0.098   0.119   0.141   0.162   0.186
   49           PC   0.212    0.239   0.271   0.321   0.408   0.515   0.627   0.735   0.814   0.864
   50           PC   0.907    0.930   0.954   0.977   1.000
                *
1                                    HEC-1 INPUT                                    PAGE  2

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

   51           KK   SUBWD   BASIN
   52           KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
   53           BA   0.393
   54           LG    0.20     0.19    7.00    0.17      12
   55           UI      32       42     116     157     189     226     281     403     348     281
   56           UI     240      193     156     115      65      54      42      32      17      10
   57           UI      10       10      10       9       0       0       0       0       0       0
   58           UI       0        0       0       0       0       0       0       0       0       0
                *
```

```
 59          KK  RTWDXA   ROUTE   REACH
 60          KM        ROUTE FLOW FROM WD TO XA (ALONG 27TH AVENUE).
 61          KM        TYPE C CHANNEL
 62          RS       4              -1        0
 63          RC   0.025    0.025    0.025    2500  0.0016    0.00
 64          RX     0.0    100.0    400.0    500.0   500.1   600.0   900.0  1000.0
 65          RY     5.0      4.0      1.0      0.0     0.0     1.0     4.0     5.0
             *

 66          KK   SUBXA   BASIN
 67          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 68          BA   0.247
 69          LG    0.13     0.15     9.70     0.06      44
 70          UI      34      125      193      268     417     308     225     157      74      48
 71          UI      29       10       11       11       0       0       0       0       0       0
 72          UI       0        0        0        0       0       0       0       0       0       0
             *

 73          KK   CPXA1
 74          KM   ADD HYDROGRAPHS AT XA
 75          HC       2
             *
             * KK  RSXA
             * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
             * RS     1    STOR        0        0
             * SV   .01     .07      1.0      5.1     14.0    28.5    50.0    79.1   117.4   165
             * SE1063.3  1063.5  1063.6  1064.1  1064.6  1065.1  1065.6  1066.1  1066.6  1067
             * SQ     0      15       43      455    1751    3879    6999   11192   17236   253
             *

 76          KK   DIXAO
 77          KM   DIVERT FLOW FROM XA SOUTHWARD OVER SPRR AND OUT OF MODEL
 78          DT   DIZZ1
 79          DI       0        0       43      455    1751    3879    6999   11192   17236   25382
 80          DQ       0        0        0        0       0       0       0      44     960    3141
             *

 81          KK  RTXAWC   ROUTE   REACH
 82          KM        ROUTE FLOW FROM XA TO WC (ALONG SPRR).
 83          KM        TYPE C CHANNEL
 84          RS      12              -1        0
 85          RC   0.035    0.035    0.035    5100  0.0016    0.00
 86          RX     0.0     20.0     35.0     50.0    50.1   250.0   450.0   550.0
 87          RY     5.0      5.0      2.5      0.0     0.0     2.0     4.0     5.0
             *
```



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

 88          KK   SUBWB   BASIN
 89          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 90          BA   0.667
 91          LG    0.16     0.15     9.70     0.06      36
 92          UI      60      103      240      316     391     474     689     701     538     442
 93          UI     358      278      177      107      94      61      41      19      18      19
 94          UI      19       18        0        0       0       0       0       0       0       0
 95          UI       0        0        0        0       0       0       0       0       0       0
             *

 96          KK  RTWBWC   ROUTE   REACH
 97          KM        ROUTE FLOW FROM WB TO WC (ALONG 35TH AVENUE).
 98          KM        TYPE C CHANNEL
 99          RS       3              -1        0
100          RC   0.025    0.025    0.025    2500  0.0020    0.00
101          RX     0.0    100.0    400.0    500.0   500.1   600.0   900.0  1000.0
102          RY     5.0      4.0      1.0      0.0     0.0     1.0     4.0     5.0
             *

103          KK   SUBWC   BASIN
104          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
105          BA   0.487
106          LG    0.16     0.16     9.70     0.06      43
107          UI      46       90      195      255     315     404     581     477     377     302
108          UI     240      167       90       78      48      36      14      15      14      14
109          UI       0        0        0        0       0       0       0       0       0       0
             *

110          KK    CPWC
111          KM    ADD HYDROGRAPHS AT WC.
112          HC       3
             *
             * KK  RSWC
             * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
             * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
             * KO     1
             * RS     1    STOR        0        0
             * SV  16.1     27.6     44.0     65.2     90.7   121.5   159.6   206.8   263.7   329
             * SE1057.1  1057.6  1058.1  1058.6  1059.1  1059.6  1060.1  1060.6  1061.1  1061
             * SQ     0      34      456     1381    2859    4933    7982   12958   19919   288
             *

113          KK  DIWCWA
114          KM   DIVERT FLOW FROM WC TO QE
115          KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
116          DT    DIQE
117          DI       0       34      456     1381    2859    4933    7982   12958   19919   28835
118          DQ       0        0        0        0       0       0     141    1221    3463    6954
             *
             * KKDIWCQE
             * KM DIVERT FLOW FROM WC TO QE
             * DT  DIQE
             * DI     0      115      608     1579    3086    5253    8972   15024   23745   350
             * DQ     0        0        0        0       0      40     951    3350    7104   121
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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119          KK  RTWCWA
120          KM   HEC-RAS REACH
121          KM        ROUTE FLOW FROM WC TO WA (ALONG SPRR).
122          KM        Channel geometry changed to match natural conditions 04.11.00  JEP
123          KM        Manning's N values changed to match approved values 04.11.00  JEP
124          KM        Method changed from Normal Depth Storage to Modified Puls 05.25.00 JEP
125          KM        Stage-storage values are based on HEC-2 analysis results 06.19.00 JEP
126          KM        Values transferred directly from HEC-2 file: Tape7_1 09.29.00 JEP
127          RS      15    STOR       0       0
128          SV       0     103     168     242     267     296     317     332     338     354
129          SV     375
130          SQ       0     200     400     800    1000    1200    1400    1600    1700    1900
131          SQ    2200
             * RC  .129    .129    .129    4850   .0010
             * RX     0      40     200     410     870    1240    1700    2160
             * RY   4.4     3.8       0     1.6       0     1.8     2.8     4.4
             *
             *

132          KK   SUBWA   BASIN
133          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
134          BA   0.492
135          LG    0.15    0.15   10.10    0.05      43
136          UI      75     302     455     683     855     573     402     209     117      67
137          UI      23      23      23       0       0       0       0       0       0       0
138          UI       0       0       0       0       0       0       0       0       0       0
             *

139          KK   CPWA1
140          KM    ADD HYDROGRAPH SUBWA TO RTWCWA
141          HC       2
             *

142          KK   SUBVD   BASIN
143          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
144          BA   0.697
145          LG    0.16    0.16    9.70    0.06      36
146          UI      63     108     251     330     408     495     720     733     562     461
147          UI     375     291     185     112      98      63      44      19      20      19
148          UI      20      19       0       0       0       0       0       0       0       0
149          UI       0       0       0       0       0       0       0       0       0       0
             *

150          KK  RTVDWA   ROUTE   REACH
151          KM        ROUTE FLOW FROM VD TO WA (ALONG 43RD AVENUE).
152          KM        FUTURE ARTERIAL SECTION
153          RS       1              -1       0
154          RC   0.100   0.023   0.100    2500  0.0030    0.00
155          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
156          RY     105     105     105   99.75   99.75     105     105     105
             *
```



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

157          KK   CPWA2
158          KM    ADD HYDROGRAPHS FROM SUBWA AND RTWCWA TO RTVDWA.
159          HC       2
             *
             * KK  RSWA
             * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
             * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
             * KO     1
             * RS     1    STOR       0       0
             * SV   1.3     1.9     2.4     3.1     4.0     8.5    16.7    29.9    48.5    74
             * SE1050.7  1050.9  1051.1  1051.3  1051.4  1051.9  1052.4  1052.9  1053.4  1053
             * SQ     0       0       0       0       0      77     562    1532    3131    53
             *

160          KK  DIWAVC
161          KM        DIVERT FLOW FROM WA TO QD OVER SPRR
162          KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
163          KM   Revised DQ records based on HEC-2 analysis results.  06.28.00 JEP
164          DT    DIQD
165          DI       0     200     400     800    1000    1200    1400    1600    1700    1900
166          DQ       0       0      42     369     555     746     942    1140    1174    1370
             *
             * KKDIVCQD
             * KM DIVERT FLOW FROM VC TO QD OVER SPRR
             * DT  DIQD
             * DI     0     810    9237   10710
             * DQ     0       0       0      63
             *

167          KK  RTWAVC
168          KM   HEC-RAS REACH
169          KM        MODIFIED PULS ROUTE FLOW FROM WA TO VC (ALONG SPRR).
             * KM       Channel geometry changed to match natural conditions 04.11.00  JEP
170          KM        Manning's N values changed to match approved values 04.11.00  JEP
171          KM        Method changed from Normal Depth Storage to Modified Puls 05.22.00 JEP
172          KM        Stage-Storage values based on HEC-2 analysis results.  06.19.00 JEP
173          KM        Values transferred directly from HEC-2 file:  Tape7_2  9.29.00 JEP
174          RS      15    STOR       0       0
175          SV       0     146     178     193     201     208     212
176          SQ       0     400     600     800     989    1247    1487
             * RC  .317    .317    .317    5270   .0005
             * RX     0      50     120     390     810     950    1400    1700
             * RY   6.8       0       0     1.8     2.8     3.8     5.1     6.8
             *

177          KK   SUBVC   BASIN
178          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
179          BA   0.490
180          LG    0.12    0.16    8.40    0.10      50
181          UI      75     300     454     680     852     570     400     209     116      67
```

```
 182          UI      23      23      23       0       0       0       0       0       0       0
 183          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

 184          KK   CPVC1
 185          KM    ADD HYDROGRAPH SUBVC TO RTWAVC.
 186          HC       2
              *

 187          KK   SUBVB   BASIN
 188          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 189          BA   0.720
 190          LG    0.15    0.17    9.70    0.06      45
 191          UI     121     489     718    1162    1201     810     529     243     146      66
 192          UI      36      36       0       0       0       0       0       0       0       0
 193          UI       0       0       0       0       0       0       0       0       0       0
              *

 194          KK  RTVBVC   ROUTE   REACH
 195          KM        ROUTE FLOW FROM VB TO VC (ALONG 51ST AVENUE).
 196          KM        FUTURE ARTERIAL SECTION
 197          RS       1              -1       0
 198          RC   0.100   0.023   0.100    2500  0.0017    0.00
 199          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 200          RY     105     105     105   99.75   99.75     105     105     105
              *

 201          KK   CPVC2
 202          KM    ADD HYDROGRAPHS FROM SUBVC AND RTWAVC TO RTVBVC.
 203          HC       2
              *
              * KK  RSVC
              * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
              * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
              * KO     1
              * RS     1    STOR       0       0
              * SV    70      83      97     113     121     170     192     216     284       3
              * SE1051.4  1051.6  1051.8  1052.0  1052.1  1052.6  1052.8  1053.0  1053.3    1053
              * SQ    16     246     746    1537    2048    5354    7033    8943   12315     147
              *

 204          KK  DIVCQA
 205          KM   DIVERT FLOW FROM VC TO VA OVER 51st AVE.
 206          KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
 207          KM   Revised DQ records based on HEC-2 analysis results.  06.19.00 JEP
 208          DT    DIVA
 209          DI       0     100     400     600     800     989    1247    1487
 210          DQ       0       1      27      32      30      32      32      32
              *
              * KKDIVCVA
              * KM DIVERT FLOW FROM VC TO VA OVER 51st AVE.
              * DT  DIVA
              * DI     0       9     654    2822    7159
              * DQ     0       4     214     753    1814
              *
1                                          HEC-1 INPUT                                                PAGE  7

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

 211          KK  RTVCQA   ROUTE   REACH
 212          KM   ROUTE FLOW FROM VC TO QA (ALONG 51ST AVENUE).
 213          KM   FUTURE ARTERIAL SECTION
 214          RS       2              -1       0
 215          RC   0.100   0.023   0.100    5000  0.0030    0.00
 216          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 217          RY     105     105     105   99.75   99.75     105     105     105
              *

 218          KK   SUBQA   BASIN
 219          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 220          BA   0.485
 221          LG    0.34    0.14   10.10    0.05      20
 222          UI      38      40     133     178     215     253     303     423     464     361
 223          UI     306     252     209     170     115      67      63      44      38      18
 224          UI      12      11      12      11      12       0       0       0       0       0
 225          UI       0       0       0       0       0       0       0       0       0       0
              *

 226          KK   CPQA2
 227          KM   ADD HYDROGRAPHS AT QA
 228          HC       2
              *

 229          KK    RSQA
 230          KM        MODIFIED PLUS ROUTING THROUGH PONDING BEHIND RID
 231          RS       1    STOR      -1       0
 232          SV     6.6     9.4    13.0    17.4    22.4    28.1    34.6    42.1    50.4
 233          SE  1032.2  1032.4  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.8
 234          SQ       0      69    1129    6033   11213
 235          SE  1031.9  1032.4  1032.9  1033.4  1033.9
              *

 236          KK  DIQAPF
 237          KM   DIVERT FLOW FROM QA TO PF
 238          DT    DIPF
 239          DI       0      69    1129    6033   11213
 240          DQ       0      39     462    1272    2210
              *

 241          KK  RTQAJH   ROUTE   REACH
 242          KM        ROUTE FLOW FROM QA TO JH (SHEET FLOW).
 243          KM        TYPE A CHANNEL
 244          RS      11              -1       0
```

```
 245          RC   0.100   0.100   0.100    2800  0.0031    0.00
 246          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 247          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
```



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

 248          KK   SUBQE   BASIN
 249          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 250          BA   0.913
 251          LG    0.15    0.13   10.10    0.04      56
 252          UI      92     200     409     529     670     915    1121     854     673     525
 253          UI     394     212     156     109      77      28      29      28      29       0
 254          UI       0       0       0       0       0       0       0       0       0       0
              *

 255          KK    DRQE
 256          KM    RETURN DIVERT FROM WC
 257          DR    DIQE
              *

 258          KK  RTDIQE   ROUTE   REACH
 259          KM        ROUTE DIVERT FROM WC TO QE
 260          KM        TYPE A CHANNEL
 261          RS       8              -1       0
 262          RC   0.025   0.025   0.025    6600  0.0030    0.00
 263          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 264          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 265          KK    CPQE
 266          KM        ADD HYDROGRAPHS AT QE
 267          HC       2
              *

 268          KK    RSQE
 269          KM        MODIFIED PULS ROUTING BEHIND RID CANAL
 270          RS       1    STOR       0       0
 271          SV     9.5    11.0    14.9    20.2    26.5    33.8   55.23    82.5    95.6   159.9
 272          SE  1040.1  1040.2  1040.4  1040.6  1040.8  1041.0  1041.5  1042.0  1042.2  1043.0
 273          SQ       0     1.8    62.8   242.3   581.9    1158    4169    9977   13108   31180
              *

 274          KK  RTQEQC   ROUTE   REACH
 275          KM        ROUTE FLOW FROM QE TO QC (SHEET FLOW).
 276          KM        TYPE A CHANNEL
 277          RS       3              -1       0
 278          RC   0.025   0.025   0.025    3000  0.0027    0.00
 279          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 280          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 281          KK   SUBQD   BASIN
 282          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 283          BA   0.249
 284          LG    0.17    0.06   12.40    0.02      51
 285          UI      35     125     195     271     419     311     227     158      75      48
 286          UI      29      10      11      11       0       0       0       0       0       0
 287          UI       0       0       0       0       0       0       0       0       0       0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 288          KK    DRQD
 289          KM   RETURN DIVERT FROM WA
 290          DR    DIQD
              *

 291          KK  RTDIQD   ROUTE   REACH
 292          KM        ROUTE DIVERT FROM WA TO QD
 293          KM        TYPE C CHANNEL
 294          RS       5              -1       0
 295          RC   0.100   0.023   0.100    5000  0.0030    0.00
 296          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 297          RY     105     105     105   99.75   99.75     105     105     105
              *

 298          KK    CPQD
 299          KM    ADD HYDROGRAPHS AT QD
 300          HC       2
              *

 301          KK    RSQD
 302          KM        MODIFIED PULS ROUTING BEHIND RID CANAL.
 303          RS       1    STOR       0       0
 304          SV     2.8     4.8     8.6    14.6    22.5    31.9    42.6    54.8    65.5
 305          SE  1038.1  1038.5  1039.0  1039.5  1040.0  1040.5  1041.0  1041.5  1042.0
 306          SQ       0    30.5   388.4  1580.9  4070.0  7936.6 13214.2 19810.4 26117.2
              *

 307          KK  DIQDQB
 308          KM        DIVERT FLOW FROM QD TO QB
 309          DT    DIQB
 310          DI       0      31     388    1580 .  4070    7937   13214   19810   26117
 311          DQ       0       0      71     591    1899    3883    6624   10067   13292
              *

 312          KK  RTQDQC   ROUTE REACH
 313          KM        ROUTE FLOW FROM QD TO QC.
 314          KM        FUTURE ARTERIAL SECTION
 315          RS       1              -1       0
 316          RC   0.100   0.023   0.100    2600  0.0040    0.00
 317          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 318          RY     105     105     105   99.75   99.75     105     105     105
```

```
                *
 319            KK   SUBQC   BASIN
 320            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 321            BA   0.606
 322            LG    0.23     0.16    10.10     0.04      32
 323            UI      63      146      285      371     474      679      733      552      429      333
 324            UI     233      119       98       64      33       20       20       19       20        0
 325            UI       0        0        0        0       0        0        0        0        0        0
                *
1                                                HEC-1 INPUT                                                    PAGE 10

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

 326            KK    CPQC
 327            KM        ADD HYDROGRAPHS AT QC
 328            HC       3
                *

 329            KK   DIQCR
 330            KM   DIVERT 80% OF FLOW FROM QC TO RIVER
 331            DT    DISR
 332            DI       0       25       50       75      100      150      200
 333            DQ       0       20       40       60       80      120      160
                *

 334            KK  RTQCJI   ROUTE   REACH
 335            KM        ROUTE FLOW FROM QC TO JF
 336            KM        TYPE A CHANNEL
 337            RS      15              -1        0
 338            RC   0.100    0.100    0.100     6500  0.0028     0.00
 339            RX     0.0    100.0    400.0    500.0   500.1    600.0    900.0   1000.0
 340            RY     5.0      4.0      1.0      0.0     0.0      1.0      4.0      5.0
                *

 341            KK   SUBQB   BASIN
 342            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 343            BA   0.505
 344            LG    0.30     0.11    11.20     0.03      27
 345            UI      40       48      143      194     234      276      336      483      465      366
 346            UI     316      253      211      166      97       69       63       41       34       12
 347            UI      13       12       13       12      13        0        0        0        0        0
 348            UI       0        0        0        0       0        0        0        0        0        0
                *

 349            KK    DRQB
 350            KM        RETURN DIVERT FROM QD
 351            DR    DIQB
                *

 352            KK  RTDIQB   ROUTE   REACH
 353            KM        TYPE C CHANNEL
 354            RS      12              -1        0
 355            RC   0.100    0.100    0.100     2500  0.0028     0.00
 356            RX     0.0     20.0     35.0     50.0    50.1    250.0    450.0    550.0
 357            RY     5.0      5.0      2.5      0.0     0.0      2.0      4.0      5.0
                *

 358            KK    CPQB
 359            KM   ADD HYDROGRAPHS AT QB
 360            HC       2
                *
1                                                HEC-1 INPUT                                                    PAGE 11

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

 361            KK    RSQB
 362            KM        MODIFIED PULS ROUTING THROUGH PONDING BEHIND RID.
 363            KM   THROUGH THE 43RD AVENUE.
 364            RS       1     STOR       0        0
 365            SV     9.4     13.9     19.2     25.5    33.1     41.8     51.7     62.9     75.3     89.1
 366            SE  1033.3   1033.6   1033.9   1034.2  1034.5   1034.8   1035.1   1035.4   1035.7   1036.0
 367            SQ       0     19.3    123.0    423.5   958.2   1718.8   2775.9   4426.7   6845.4   9954.3
                *

 368            KK  RTQBJH   ROUTE REACH
 369            KM   ROUTE FLOW FROM QB TO JH (SHEET FLOW).
 370            KM        TYPE A CHANNEL
 371            RS      15              -1        0
 372            RC   0.100    0.100    0.100     3500  0.0028     0.00
 373            RX     0.0    100.0    400.0    500.0   500.1    600.0    900.0   1000.0
 374            RY     5.0      4.0      1.0      0.0     0.0      1.0      4.0      5.0
                *

 375            KK   SUBJH   BASIN
 376            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 377            BA   0.516
 378            LG    0.37     0.11    11.20     0.03      17
 379            UI      62      175      314      402     581      733      541      418      304      176
 380            UI     107       71       41       19      19       19        0        0        0        0
 381            UI       0        0        0        0       0        0        0        0        0        0
                *

 382            KK    CPJH
 383            HC       4
                *

 384            KK  RTJHJI   ROUTE REACH
 385            KM   ROUTE FLOW FROM JH TO JI (SHEET FLOW).
 386            KM        TYPE A CHANNEL
 387            RS      14              -1        0
 388            RC   0.100    0.100    0.100     4000  0.0031     0.00
 389            RX     0.0    100.0    400.0    500.0   500.1    600.0    900.0   1000.0
 390            RY     5.0      4.0      1.0      0.0     0.0      1.0      4.0      5.0
                *
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```
 391          KK   SUBJI   BASIN
 392          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 393          BA   0.308
 394          LG    0.39    0.11   11.20    0.03      21
 395          UI      52     209     307     497     514     346     227     104      62      28
 396          UI      16      15       0       0       0       0       0       0       0       0
 397          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                          HEC-1 INPUT                                          PAGE 12

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

 398          KK    CPJI
 399          KM   COMBINE FLOWS AT JI
 400          HC       2
              *

 401          KK   DISRX
 402          KM    DUMMY DIVERT TO SALT RIVER (NOT RETURNED)
 403          DT   DISR1
 404          DI       0   10000
 405          DQ       0   10000
              *

 406          KK   SUBPF   BASIN
 407          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 408          BA   0.502
 409          LG    0.17    0.20    7.30    0.12      52
 410          UI     113     407     611    1001     766     497     244     127      58      26
 411          UI      28       0       0       0       0       0       0       0       0       0
 412          UI       0       0       0       0       0       0       0       0       0       0
              *

 413          KK   RETPF
 414          KM   DIVERT RETENTION OUT OF MODEL DUE TO KNIGHT TRANSPORTATION
 415          KM   PARKING LOT EXPANSION. -DCF
 416          KM   TOTAL RETENTION IS 3.9 AF. 80% OF THAT IS USED HERE. -DCF
 417          DT   RETPF     3.1
 418          DI       0   10000
 419          DQ       0   10000
              *

 420          KK    DRPF
 421          KM        RETURN DIVERT FROM QA.
 422          DR    DIPF
              *

 423          KK  RTDIPF   ROUTE   REACH
 424          KM         ROUTE DIVERT FROM QA TO PF.
 425          KM         TYPE C CHANNEL
 426          RS      11              -1       0
 427          RC   0.035   0.035   0.035    2600  0.0005    0.00
 428          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
 429          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

 430          KK   @CPPF
 431          KM        ADD HYDROGRAPHS AT PF
 432          HC       2    5.19
              *
1                                          HEC-1 INPUT                                          PAGE 13

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

 433          KK    RSPF
 434          KM        MODIFIED PULS ROUTING BEHIND RID
              * KO     1
 435          RS       1    STOR       0       0
 436          SV    28.2    33.4    39.2    48.8    55.7    67.3    76.0    85.3   100.7   111.8
 437          SE  1032.2  1032.4  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.8  1034.0
 438          SQ       0    19.4   124.9   457.5  1050.9  1875.2  2964.8  4437.1  6362.7  8725.9
              *

 439          KK  DIPFPE
 440          KM        DIVERT FLOW FROM PF TO PE
 441          DT    DIPE
 442          DI       0     255    1875    5340   11513
 443          DQ       0       0       0     160    1143
              *

 444          KK  RTPFJF   ROUTE   REACH
 445          KM        ROUTE FLOW FROM PF TO JF.
 446          KM        TYPE A CHANNEL
 447          RS       6              -1       0
 448          RC   0.035   0.035   0.035    4000  0.0040    0.00
 449          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
 450          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

 451          KK   SUBUD   BASIN
 452          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 453          KM    L=       1.3  Lca=        .6   S=    20.0  Kn= .020  LAG=  14.9
 454          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
 455          BA     .759
 456          LG     .15     .15    9.70     .05   55.00
 457          UI    306.    941.   1739.   1494.    851.    324.    131.     53.      0.      0.
 458          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

 459          KK    RETUD
 460          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
 461          KM   80% OF REQUIRED MODELED
 462          DT   RETB1    38.7
 463          DI       0   10000
 464          DQ       0   10000
              *
```

```
 465          KK  SDDRUD
 466          KM   DIVERT STORM DRAIN FLOW
 467          DT  59SD1D
 468          DI       0      102   10000
 469          DQ       0      102     102
              *
1                                        HEC-1 INPUT                                                    PAGE 14

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


 470          KK  DIUDUA
 471          KM   DIVERT 25% OF FLOW FROM UD TO UA.
 472          DT    DIUA
 473          DI       0       25       50       75      100      150      200
 474          DQ       0        6       13       19       25       38       50
              *

 475          KK  RTUDVA   ROUTE   REACH
 476          KM        ROUTE FLOW FROM UD TO VA (ALONG 59TH AVENUE).
 477          KM        FUTURE ARTERIAL SECTION
 478          RS       1               -1        0
 479          RC   0.100   0.023   0.100     2600  0.0019     0.00
 480          RX     0.0     440     445    445.1   575.1    575.2      900  1000.0
 481          RY     105     105     105    99.75   99.75      105      105     105
              *

 482          KK   SUBVA   BASIN
 483          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 484          BA   0.493
 485          LG    0.10    0.15    8.40    0.10      58
 486          UI      75     303     456     684     857      574      402      210      117       67
 487          UI      23      23      24       0       0        0        0        0        0        0
 488          UI       0       0       0       0       0        0        0        0        0        0
              *
              * THE FOLLOWING DIVERT RETURN IS REMOVED TO MODEL THE ADMP CONDITION

 489          KK    DRVA
 490          KM        RETURN DIVERT FROM VC
 491          DR    DIVA
              *
              * KKRTDIVA
              * KM HEC-RAS REACH
              * KO     1
              * KM      ROUTE FLOW FROM VC TO VA (ALONG SPRR).
              * KM      Method changed from Normal Depth Storage to Modified Puls 06.19.00 JEP
              * KM      Stage-Storage values are based on HEC-2 analysis results. 06.19.00 JEP
              * KM      Values transferred directly from HEC-2 file:  Tape7_3  09.29.00  JEP
              * RS    15    STOR       0       0
              * SV     0      56      87     130     163      191      205      218      227
              * SQ     0     100     200     400     600      800     1000     1200     1500
              *

 492          KK   CPVA1
 493          KM        ADD HYDROGRAPH SUBVA TO RTDIVA
 494          HC       3
              *
              *

 495          KK  SDDRVA
 496          KM   DIVERT STORM DRAIN FLOW
 497          DT  59SD2D
 498          DI       0       59   10000
 499          DQ       0       59      59
              *
              * KK CPVA2
              * KM       ADD HYDROGRAPHS SUBVA AND RTDIVA TO RTUDVA
              * HC     2
              *
              * KK  RSVA
              * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
              * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
              * KO     1
              * RS     1    STOR       0       0
              * SV  10.3    13.3    15.6    23.9    34.6    48.9    67.7    90.8   118.6
              * SE1044.2  1044.3  1044.5  1045.0  1045.5  1046.0  1046.5  1047.0  1047.5
              * SQ     0       2      39     397    1279    2904    5363    8613   13175
              *
1                                        HEC-1 INPUT                                                    PAGE 15

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


 500          KK  DIVAPE
 501          KM   DIVERT FLOW FROM VA TO UC OVER 59TH AVE.
 502          KM   Revised DQ records to reflect new weir analysis based on survey. 05.04.00 JEP
 503          KM   REVISED DIVERSION RECORDS TO REROUTE DIVERSION AROUND CODE SEQUENCE.
 504          KM   INSTEAD OF DIVERTING FLOW OVER THE WEIR TO THE SOUTH, FLOW IS BEING
 505          KM   DIVERTED TO THE WEST. 06.02.00 -DCF
 506          KM   Revised DQ records based on HEC-2 analysis results.  06.19.00 JEP
 507          DT    DIUC
 508          DI       0     200     400     600     800    1000    1200    1500
 509          DQ       0     200     398     548     656     715     738     756
              * DI     0       2      39     397    1279
              * DQ     0       0       0       0       0
              *

 510          KK  RTVAPE   ROUTE   REACH
 511          KM   ROUTE FLOW FROM VA TO PE (ALONG 59TH AVENUE).
 512          KM   FUTURE ARTERIAL SECTION
 513          RS       2               -1        0
 514          RC   0.100   0.023   0.100     3000  0.0038     0.00
 515          RX     0.0     440     445    445.1   575.1    575.2      900  1000.0
 516          RY     105     105     105    99.75   99.75      105      105     105
              *

 517          KK   SUBPE   BASIN
```

```
 518          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 519          BA   0.504
 520          LG    0.13     0.26     6.20     0.22       56
 521          UI     130      449      692     1071      728      453      189      108       32       29
 522          UI       0        0        0        0        0        0        0        0        0        0
              *

 523          KK    DRPE
 524          KM    RETURN DIVERT FROM PF
 525          DR    DIPE
              *

 526          KK  RTDIPE
 527          KM         ROUTE DIVERT FROM PF TO PE.
 528          KM         TYPE C CHANNEL
 529          RS       3                -1        0
 530          RC    .035     .035     .035     2000    .0005
 531          RX       0       20       35       50     50.1      250      450      550
 532          RY       5        5      2.5        0        0        2        4        5
              *

 533          KK    CPPE
 534          KM        ADD HYDROGRAPHS AT PE
 535          HC       3
              *
1                                          HEC-1 INPUT                                                    PAGE 16

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

 536          KK    RSPE
 537          KM         RESERVOIR ROUTING BEHIND 59TH AVE AND RID CANAL
 538          RS       1      STOR        0        0
 539          SV    15.6     16.9     21.0     24.0     29.5     33.7     38.3     43.2
 540          SE  1032.5   1032.6   1032.8   1033.0   1033.2   1033.4   1033.6   1033.7
 541          SQ       0     1.44       23      194      637     1420     2516     3177
              *

 542          KK  DIPEPD
 543          KM         DIVERT FLOW FROM PE TO PD
 544          DT    DIPD
 545          DI       0      8.2      636     3177
 546          DQ       0        0        0      8.1
              *

 547          KK  RTPEJF   ROUTE   REACH
 548          KM        ROUTE FLOW FROM PE TO JF (ALONG 59TH AVE).
 549          KM        FUTURE ARTERIAL SECTION
 550          RS       1                -1        0
 551          RC   0.100    0.023    0.100     2600   0.0036     0.00
 552          RX     0.0      440      445    445.1    575.1    575.2      900   1000.0
 553          RY     105      105      105    99.75    99.75      105      105      105
              *

 554          KK   SUBJF   BASIN
 555          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 556          KM    L=        .7  Lca=        .4   S=    11.1  Kn= .027  LAG=  22.9
 557          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 558          BA   0.501
 559          LG    0.10     0.15     7.60     0.14       55
 560          UI     320     1108     1172      675      319      146       67       20       19       19
 561          UI       0        0        0        0        0        0        0        0        0        0
              *

 562          KK    CPJF
 563          KM   COMBINE FLOWS AT JF.
 564          HC       3
              *

 565          KK  RTJFJG   ROUTE   REACH
 566          KM        ROUTE FLOW FROM JF TO JE (ALONG 59TH AVE).
 567          KM        FUTURE ARTERIAL SECTION
 568          RS       3                -1        0
 569          RC   0.100    0.023    0.100     6000   0.0036     0.00
 570          RX     0.0      440      445    445.1    575.1    575.2      900   1000.0
 571          RY     105      105      105    99.75    99.75      105      105      105
              *

 572          KK   SUBJG   BASIN
 573          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 574          KM    L=        .7  Lca=        .4   S=    11.1  Kn= .027  LAG=  22.9
 575          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 576          BA   0.901
 577          LG    0.12     0.16     8.40     0.10       51
1                                          HEC-1 INPUT                                                    PAGE 17

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

 578          UI     195      717     1181     1396     1191      840      531      336      203      134
 579          UI      96       35       20       21       21       20       21        0        0        0
 580          UI       0        0        0        0        0        0        0        0        0        0
              *

 581          KK    CPJG
 582          KM   COMBINE FLOWS AT SALT RIVER.
 583          HC       2
              *

 584          KK  CPJGSR
 585          KM   COMBINE FLOWS AT SALT RIVER
 586          HC       2
              *
              * ******************************************************************************
              *

 587          KK    DRUC
 588          KM    RETURN DIVERT FROM VA
 589          DR    DIUC
```

```
                 *
                 *
                 * KKRTVAUC   ROUTE   REACH
                 * KM      ROUTE FLOW FROM VA TO UC
                 * KM      Channel geometry changed to match natural conditions 04.11.00  JEP
                 * KM      Manning's N values changed to match approved values 04.11.00  JEP
                 * RS     9              -1       0
                 * RC 0.035   0.035   0.035    5200  0.0012    0.00
                 * RX   0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
                 * RY   5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                 *

 590             KK  RTVAUC
 591             KM   HEC-RAS REACH
 592             KM        ROUTE FLOW FROM VA TO A POINT IN UC (ALONG SPRR).
 593             KM        Channel geometry changed to match natural conditions 04.11.00  JEP
 594             KM        Manning's N values changed to match approved values 04.11.00  JEP
 595             KM        Method changed from Normal Depth Storage to Modified Puls 05.25.00 JEP
 596             KM        Stage-storage values are from HEC-2 results 06.19.00 JEP
 597             KM        Values transferred directly from HEC-2 file: Tape7_4  09.29.00 JEP
 598             KM        Values modified to reflect channelization downstream  06.11.01 JEP
 599             RS       9    STOR       0       0
 600             SV       0      46      62      76      90     102     114     125     137
 601             SQ       0     200     400     600     800    1000    1200    1400    1600
                 *
                 * KKSUBUC    BASIN
                 * KM  VALLEY S-GRAPH WAS USED FOR THIS BASIN
                 * BA 0.483
                 * LG  0.23    0.15    9.70    0.06      28
                 * UI    49     105     217     280     354     484     594     451     356     2
                 * UI   208     113      83      57      41      15      15      14      15
                 * UI     0       0       0       0       0       0       0       0       0
                 *
                 * KK@CPUC1
                 * KM      ADD HYDROGRAPHS SUBUC1 TO RTVAUC
                 * HC     2    1.73
                 *
1                                          HEC-1 INPUT                                          PAGE 18

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

 602             KK  MCUCUC   ROUTE   REACH
 603             KM   ADMP CHANNEL
 604             KM   MASTER CHANNEL ROUTE FROM UC1 TO UC2
 605             KM   ROUTING RECORD ADDED, JEP 6/11/01
 606             RS       1    FLOW      -1
 607             RC   0.014   0.014   0.014    2493  0.0014    0.00
 608             RX     0.0    16.0    16.0    16.0    46.0    46.0    46.0    62.0
 609             RY     4.8     5.1     2.6     0.0     0.0     2.6     5.1     4.8
                 *

 610             KK  SUBUC    BASIN
 611             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 612             BA   0.483
 613             LG    0.23    0.15    9.70    0.06      28
 614             UI      49     105     217     280     354     484     594     451     356     278
 615             UI     208     113      83      57      41      15      15      14      15       0
 616             UI       0       0       0       0       0       0       0       0       0       0
                 *

 617             KK   @CPUC
 618             KM        ADD HYDROGRAPHS SUBUC TO MCUCUC
 619             HC       2    1.73

 620             KK  SUBTB1
 621             KM   BASIN TB1
 622             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 623             KM    L=       .9  Lca=       .3   S=    9.4  Kn= .020  LAG=  10.4
 624             KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
 625             BA     .14
 626             LG     .25     .15    9.70     .05   30.00
 627             UI    118.    367.    381.    146.     40.     14.      0.      0.      0.      0.
 628             UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                 *

 629             KK   RETB1
 630             KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
 631             KM   80% OF REQUIRED MODELED
 632             DT   RETB1    11.2
 633             DI       0   10000
 634             DQ       0   10000
                 *

 635             KK  SDDTB1
 636             KM   DIVERT STORM DRAIN FLOW
 637             DT  67SD1D
 638             DI       0      17   10000
 639             DQ       0      17      17
                 *
1                                          HEC-1 INPUT                                          PAGE 19

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

 640             KK  RTUAUC   ROUTE   REACH
 641             KM        ROUTE FLOW FROM TB1 TO UA (ALONG 67TH AVENUE).
 642             KM        FUTURE ARTERIAL SECTION
 643             RS       2              -1       0
 644             RC   0.100   0.023   0.100    2450  0.0015    0.00
 645             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 646             RY     105     105     105   99.75   99.75     105     105     105
                 *

 647             KK   SUBUA   BASIN
 648             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 649             BA   0.561
 650             LG    0.23    0.16    9.70    0.06      22
```

```
 651          UI      44      46     155     204     249     294     350     490     536     417
 652          UI     354     291     242     198     133      77      73      51      43      21
 653          UI      13      13      14      13      14       0       0       0       0       0
 654          UI       0       0       0       0       0       0       0       0       0       0
              *

 655          KK    DRUA
 656          KM    RETURN DIVERT FROM UD
 657          DR    DIUA
              *

 658          KK  RTDIUA   ROUTE   REACH
 659          KM        ROUTE DIVERT TO UA
 660          KM        FUTURE ARTERIAL SECTION
 661          RS       4              -1       0
 662          RC   0.100   0.023   0.100    5000  0.0014    0.00
 663          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 664          RY     105     105     105   99.75   99.75     105     105     105
              *

 665          KK   @CPUA
 666          KM        ADD HYDROGRAPHS AT UA
 667          HC       3    1.46
              *

 668          KK  SDDRUA
 669          KM   DIVERT STORM DRAIN FLOW
 670          DT  67SD1D
 671          DI       0      96   10000
 672          DQ       0      96      96
              *

 673          KK  DIUAUC
 674          KM        DIVERT 20% OF FLOW FROM UA TO TB
 675          DT    DITB
 676          DI       0      25      50      75     100     150     200
 677          DQ       0       5      10      15      20      30      40
              *
1                                          HEC-1 INPUT                                          PAGE 20

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

 678          KK  RTUAUC   ROUTE   REACH
 679          KM        ROUTE FLOW FROM UA TO UC (ALONG 67TH AVENUE).
 680          KM        FUTURE ARTERIAL SECTION
 681          RS       2              -1       0
 682          RC   0.100   0.023   0.100    2400  0.0017    0.00
 683          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 684          RY     105     105     105   99.75   99.75     105     105     105
              *

 685          KK  ~CPUC2
 686          KM        ADD HYDROGRAPHS SUBUC AND MCUCUC TO RTUAUC
 687          HC       2
              *
              * KK  RSUC
              * KM      ROUTE FLOW FROM UC TO UB OVER 67th AVE.
              * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
              * KO     1
              * RS     1    STOR       0       0
              * SV   4.8     6.9     9.9    19.0    33.0    52.6    77.4   108.7   148.6
              * SE1036.2  1036.3  1036.5  1037.0  1037.5  1038.0  1038.5  1039.0  1039.5
              * SQ     0       0      76     811    2294    4562    7715   11722   16588
              *

 688          KK  DIUCPC
 689          KM   DIVERT FLOW FROM UC TO PC OVER SPRR
 690          KM   Revised DQ records to reflect new weir analysis based on survey. 05.04.00 JEP
 691          KM   Revised DQ records based on HEC-2 results.  06.19.00 JEP
 692          KM   REVERSE DIVERT TO ROUTE AROUND CODE SEQUENCE. 06.21.00 -DCF
 693          KM   DIVERT EFFECTIVELY REMOVED DUE TO ADMP CHANNELIZATION.  06.11.01 -JEP
 694          DT    DIUB
 695          DI       0     100     400     800    1000    1200    1400    1600
 696          DQ       0     100     400     800    1000    1200    1400    1600
              * DI     0     100     400     800    1000    1200    1400    1600
              * DQ     0     100     400     674     825     854     914     945
              * DI     0     100     400     800    1000    1200    1400    1600
              * DQ     0       0       0     126     175     346     486     655
              *

 697          KK  RTUCPC   ROUTE   REACH
 698          KM   ROUTE FLOW FROM UC TO PC (ALONG 67TH AVE).
 699          KM   FUTURE ARTERIAL SECTION
 700          RS       3              -1       0
 701          RC   0.100   0.023   0.100    3000  0.0038    0.00
 702          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 703          RY     105     105     105   99.75   99.75     105     105     105
              *

 704          KK   SUBPC   BASIN
 705          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 706          BA   0.300
 707          LG    0.18    0.19    8.80    0.06      42
 708          UI     160     482     829     518     214      79      23       0       0       0
 709          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                          HEC-1 INPUT                                          PAGE 21

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

 710          KK    CPPC
 711          KM   COMBINE POSSIBLE FLOWS FROM UC WITH FLOWS FROM PC
 712          HC       2
              *

 713          KK    RSPC
```

```
 714          KM   MODIFIED PULS ROUTING FROM PC TO NB.
 715          RS       1    STOR       0       0
 716          SV    29.1    31.8    34.8    38.2      42      46    50.2    78.8   107.9   135.6
 717          SE  1029.8  1029.9  1030.0  1030.1  1030.2  1030.3  1030.4  1031.0  1031.5  1032.0
 718          SQ       5      27      70     134     225     357     545    3654    9263   17876
              *

 719          KK  RTPCNB   ROUTE   REACH
 720          KM        ROUTE FLOW FROM PC TO NB (ALONG 67TH AVE).
 721          KM        FUTURE ARTERIAL SECTION
 722          RS       7              -1       0
 723          RC   0.100   0.023   0.100    4800  0.0038    0.00
 724          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 725          RY     105     105     105   99.75   99.75     105     105     105
              *

 726          KK   SUBNB   BASIN
 727          KM   BASIN NB
 728          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 729          KM    L=      1.4  Lca=       .7   S=   16.8  Kn= .020  LAG=  16.4
 730          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
 731          BA     .44
 732          LG     .25     .15    6.80     .16   12.00
 733          UI    144.    464.    790.    956.    577.    284.    126.     48.     28.      0.
 734          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

 735          KK   RETNB
 736          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
 737          KM   80% OF REQUIRED MODELED
 738          DT   RETNB    33.5
 739          DI       0   10000
 740          DQ       0   10000
              *

 741          KK   CPNB1
 742          KM        ADD HYDROGRAPHS AT NB
 743          HC       2
              *
              * KKDINBNA
              * KM      DIVERT 65% OF FLOW FROM NB TO NA
              * DT  DINA
              * DI     0      25      50      75     100     150     200
              * DQ     0      16      33      49      65      98     130
              *
1                                          HEC-1 INPUT                                          PAGE 22

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

 744          KK  RTNBJD   ROUTE   REACH
 745          KM        ROUTE FLOW FROM NB TO JD (ALONG 67TH AVENUE).
 746          KM        FUTURE ARTERIAL SECTION
 747          RS       3              -1       0
 748          RC   0.100   0.023   0.100    5200  0.0054    0.00
 749          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 750          RY     105     105     105   99.75   99.75     105     105     105
              *

 751          KK   SUBPD   BASIN
 752          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 753          BA   0.443
 754          LG    0.14    0.17    8.00    0.11      24
 755          UI     130     438     708     954     610     331     138      64      27      27
 756          UI       0       0       0       0       0       0       0       0       0       0
              *

 757          KK    DRPD
 758          KM    RETURN DIVERT FROM PE
 759          DR    DIPD
              *

 760          KK   CPPD2
 761          KM        ADD HYDROGRAPH AT PD
 762          HC       2
              *

 763          KK    RSPD
 764          KM        MODIFIED PULS ROUTING FROM PD TO NC.
              * KO     1
 765          RS       1    STOR       0       0
 766          SV    25.6    37.6    42.4    51.8    53.9    56.1    58.2
 767          SE  1030.6  1030.7  1030.8  1030.9  1031.0  1031.1  1031.2
 768          SQ       0       4      28     101     246     487     820
              *

 769          KK  RTPDNC   ROUTE   REACH
 770          KM        ROUTE FLOW FROM PD TO NC (SHEET FLOW).
 771          KM        TYPE A CHANNEL
 772          RS       5              -1       0
 773          RC   0.035   0.035   0.035    3000  0.0027    0.00
 774          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 775          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 776          KK   SUBNC   BASIN
 777          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 778          KM    L=       .7  Lca=       .3   S=   14.7  Kn= .092  LAG=  43.5
 779          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 780          BA   0.306
 781          LG    0.47    0.25    5.30    0.35      51
 782          UI      86     341     534     508     379     219     121      71      44      23
 783          UI       9       8       8       9       8       0       0       0       0       0
 784          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                          HEC-1 INPUT                                          PAGE 23

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
785          KK    CPNC
786          KM        ADD HYDROGRAPHS AT NC.
787          HC       2
             *

788          KK  RTNCJE   ROUTE   REACH
789          KM        ROUTE FLOW FROM NC TO JE (SHEET FLOW).
790          KM        TYPE A CHANNEL
791          RS      12              -1       0
792          RC   0.035   0.035   0.035    5000  0.0014    0.00
793          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
794          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *

795          KK  SUBJE1   BASIN
796          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
797          KM    L=      1.1  Lca=        .6   S=   12.7  Kn= .090  LAG=  66.1
798          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
799          BA   0.248
800          LG    0.10    0.25    5.40    0.32      55
801          UI     192     630     574     304     118      57      16      11      10       0
802          UI       0       0       0       0       0       0       0       0       0       0
             *

803          KK   CPJE1
804          KM   COMBINE FLOWS FROM NC AND JE1
805          HC       2
             *

806          KK  RTJEJD   ROUTE   REACH
807          KM        ROUTE FLOW FROM JE TO JD.
808          KM        FUTURE ARTERIAL SECTION
809          RS       3              -1       0
810          RC   0.100   0.023   0.100    2500  0.0080    0.00
811          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
812          RY     105     105     105   99.75   99.75     105     105     105
             *

813          KK   SUBJD   BASIN
814          KM   BASIN JD
815          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
816          KM    L=      1.1  Lca=        .6   S=   12.7  Kn= .020  LAG=  14.7
817          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
818          BA     .51
819          LG     .25     .17    8.00     .10   22.50
820          UI    211.    648.   1201.    988.    552.    203.     82.     36.      0.      0.
821          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

822          KK   RETJD
823          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
824          KM   80% OF REQUIRED MODELED
             * KO     3                                  21
825          DT   RETJD    35.0
826          DI       0   10000
827          DQ       0   10000
             *

828          KK    CPJD
829          KM        ADD HYDROGRAPHS AT JD
830          HC       3
             *
             * KKSDDRJD
             * KM DIVERT STORM DRAIN FLOW
             * DT59SDJD
             * DI     0     207   10000
             * DQ     0     207     207
             *

831          KK  DIJDJC
832          KM        DIVERT 37% OF FLOW AT JD TO JC2.
833          DT   DIJC2
834          DI       0      25      50     100     150     200
835          DQ       0       9      19      37      56      74
             *

836          KK  RTJDFC   ROUTE   REACH
837          KM        ROUTE FLOW FROM JD TO FC.
838          KM        FUTURE ARTERIAL SECTION
839          RS       1              -1       0
840          RC   0.100   0.023   0.100    3000  0.0053    0.00
841          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
842          RY     105     105     105   99.75   99.75     105     105     105
             *

843          KK  SUBJE2   BASIN
844          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
845          KM    L=      1.1  Lca=        .5   S=   19.8  Kn= .097  LAG=  63.6
846          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
847          BA   0.253
848          LG    0.12    0.13   10.10    0.05      44
849          UI     109     427     539     421     225     108      59      33       9       8
850          UI       8       9       0       0       0       0       0       0       0       0
851          UI       0       0       0       0       0       0       0       0       0       0
             *

852          KK  RETJE2
853          KM   DIVERT RETENTION OUT OF MODEL DUE TO RIO DEL REY DEVELOPMENT. -DCF
854          KM   TOTAL RETENTION IS 5.9 AF. 80% OF THAT IS USED HERE. -DCF
855          DT   RETJE     4.7
856          DI       0   10000
857          DQ       0   10000
```

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

 858            KK  RTJEFC   ROUTE   REACH
 859            KM        ROUTE FLOW FROM JE TO FC (SHEET FLOW).
 860            KM        TYPE A CHANNEL
 861            RS       4        -1        0
 862            RC   0.035   0.035   0.035    4000  0.0080    0.00
 863            RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 864            RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                *

 865            KK   SUBFC   BASIN
 866            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 867            KM    L=       1.0  Lca=        .4   S=    18.6  Kn= .097  LAG=  55.3
 868            KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 869            BA   0.357
 870            LG    0.12    0.16    7.60    0.13      51
 871            UI     101     397     624     592     442     256     140      84      50      28
 872            UI      10       9      10      10      10       0       0       0       0       0
 873            UI       0       0       0       0       0       0       0       0       0       0
                *

 874            KK    CPFC
 875            KM         ADD HYDROGRAPHS AT FC
 876            HC       3
                *

 877            KK  CPFCSR
 878            KM   COMBINE HYDROGRAPHS INTO SALT RIVER AT FC
 879            HC       2
                *
                * ****************************************************************************
                *
                *
                * ****************************************************************************
                *
                *

 880            KK  DRUCUB
 881            KM   RETURN DIVERT FROM UC
 882            DR    DIUB
                *

 883            KK  MCUCUB   ROUTE   REACH
 884            KM   ADMP CHANNEL
 885            KM   MASTER CHANNEL ROUTE FROM UC2 TO UB
 886            KM   ROUTING RECORD ADDED, JEP 6/11/01
 887            RS       1    FLOW      -1
 888            RC   0.014   0.014   0.014    1287  0.0010    0.00
 889            RX     0.0    16.0    16.0    16.0    51.0    51.0    51.0    67.0
 890            RY     4.8     5.1     2.5     0.0     0.0     2.5     5.1     4.8
                *
                * KKRTUCUB
                * KM HEC-RAS REACH
                * KM      ROUTE FLOW FROM UC TO UB
                * KM      Channel geometry changed to match natural conditions 04.11.00  JEP
                * KM      Manning's N values changed to match approved values 04.11.00  JEP
                * RS     4        -1        0
                * RC 0.035   0.035   0.035    1400  0.0043    0.00
                * RX   0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
                * RY   5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                *
                *
```



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

 891            KK   SUBUB
 892            KM   BASIN UB
 893            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 894            KM    L=        .8  Lca=        .4   S=    16.2  Kn= .048  LAG=  26.9
 895            KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
 896            BA     .14
 897            LG     .25     .14    8.80     .08   30.00
 898            UI     18.     53.     91.    119.    176.    199.    143.    106.     76.     38.
 899            UI     27.     18.      6.      5.      5.      5.      0.      0.      0.      0.
 900            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                *

 901            KK  ~@CPUB
 902            KM        ADD HYDROGRAPHS AT UB
 903            HC       2    2.42
                *
                * KK71PASS
                * KM DIVERT LOW FLOW AROUND BASIN
                * DT71PASS
                * DI     0        0   10000
                * DQ     0        0       0
                *

 904            KK  SUBSF1
 905            KM   BASIN SF1
 906            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 907            KM    L=        .5  Lca=        .3   S=     9.2  Kn= .100  LAG=  45.9
 908            KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 909            BA     .13
 910            LG     .50     .15    9.70     .07     .00
 911            UI     10.     11.     24.     46.     58.     74.     81.     86.     86.     74.
 912            UI     75.     62.     58.     42.     35.     30.     25.     18.     15.     13.
 913            UI     10.      9.      7.      6.      6.      5.      1.      1.      1.      1.
 914            UI      1.      1.      1.      1.      1.      1.      1.      1.      1.      1.
 915            UI      1.      0.      0.      0.      0.      0.      0.      0.      0.      0.
 916            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

```
                 *
917              KK    DRTB
918              KM        RETURN DIVERT FROM UA
919              DR    DITB
                 *

920              KK  RTDITB   ROUTE   REACH
921              KM        ROUTE DIVERT TO SF1 (REACH LENGTH SUBJECT TO CHANGED
922              KM        BASED ON BASIN 3 LOCATION)
923              KM        TYPE A CHANNEL
924              RS       8              -1       0
925              RC   0.025   0.025   0.025    1400  0.0019    0.00
926              RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
927              RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *
1                                                HEC-1 INPUT                                                          PAGE 27

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

928              KK   CPBA3
929              KM   COMBINE CPUB, SF1, DITB
930              HC       3
                 *

931              KK  SUBTB2
932              KM   BASIN TB2
933              KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
934              KM    L=       1.8  Lca=        .9   S=   10.3  Kn= .046  LAG=  50.5
935              KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
936              BA     .75
937              LG     .15     .15    8.80     .06   55.00
938              UI     50.     50.    127.    204.    251.    289.    334.    391.    512.    630.
939              UI    541.    450.    392.    333.    284.    242.    184.    119.     88.     82.
940              UI     59.     50.     36.     15.     15.     15.     15.     15.     15.     15.
941              UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                 *

942              KK  RETTB
943              KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
944              KM   80% OF REQUIRED MODELED
945              DT   RETTB    19.6
946              DI       0   10000
947              DQ       0   10000
                 *

948              KK  DITBTA
949              KM        DIVERT 25% OF FLOW TO TA
950              DT    DITA
951              DI       0      25      50      75     100     150     200
952              DQ       0       6      13      19      25      38      50
                 *

953              KK  RTTBSF   ROUTE   REACH
954              KM   ROUTE FLOW FROM TB TO SF (ALONG 75TH AVENUE).
955              KM   TARGET CHANNEL
956              RS       4    ELEV   27.35       0
957              RC   0.030   0.030   0.030    2160  0.0010    0.00
958              RX     100   107.0   127.0   133.0   151.0   157.0   179.0   193.0
959              RY    32.5    32.0   27.35   27.35   27.35   27.35    32.0    32.5
                 *

960              KK  SUSFB2
961              KM   BASIN SFB2
962              KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
963              KM    L=        .5  Lca=        .3   S=    2.9  Kn= .020  LAG=  11.4
964              KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
965              BA     .11
966              LG     .15     .15    9.70     .07   50.00
967              UI     78.    231.    324.    153.     46.     13.      0.      0.      0.      0.
968              UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                 *
1                                                HEC-1 INPUT                                                          PAGE 28

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

969              KK  SUSF2A
970              KM   BASIN SF2A
971              KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
972              KM    L=        .6  Lca=        .2   S=    5.9  Kn= .020  LAG=   9.2
973              KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
974              BA     .14
975              LG     .15     .15    9.70     .07   80.00
976              UI    154.    478.    336.     89.     19.      0.      0.      0.      0.      0.
977              UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                 *

978              KK  RSSF2A
979              KM   TARGET NORTH BASIN
980              KM   28.51 Acre Feet of Sorage Provided per Target Drainage Report
981              DT  RETSF2   28.51
982              DI       0   10000
983              DQ       0   10000
                 *
                 * KKRSSF2A
                 * KM  TARGET NORTH RETENTION BASIN
                 * RS     1    STOR       0       0
                 * SA  5.57    6.03    6.50    6.98    6.56    8.03   12.56   20.42   28.51   37.
                 * SE     0       1       2       3       4       5       6       7       8
                 * SQ     0       0       0       0       0       0       0       0       0     3
                 *

984              KK  CPSF2B
985              KM    COMBINE FLOW FROM TB1, SF2A AMD SF2B
986              HC       3
                 *
```

```
 987          KK   CPBA3
 988          KM   Combine Target with regional basin
 989          HC       2
              *

 990          KK  BSN71
 991          KM   PROPOSED DETENTION BASIN DRC #4
 992          KM   INCLUDES TARGET SOUTH RETETNION BASIN AREA
 993          RS       1    ELEV    1010
 994          SV       0   0.001   0.001   10.40   15.34   53.24   74.82  118.92  163.57  349.40
 995          SQ       0   18.38   45.77   52.41   55.24   73.97   78.64   86.98   90.38   96.00
 996          SE    1010 1012.12    1015    1016 1016.47 1020.00    1021 1023.00    1024    1028
              *

 997          KK  DBSN71
 998          KM   DIVERT FLOWS FROM DETENTION BASIN DCR4 TO STORM DRAIN
 999          DT   BSN71
1000          DI       0   10000
1001          DQ       0   10000
              *
1                                        HEC-1 INPUT                                          PAGE 29

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

1002          KK  SUBPB
              * KO     3                                  21
1003          KM   BASIN PB
1004          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1005          KM    L=       1.1  Lca=       .5   S=    5.3  Kn= .020  LAG=  16.9
1006          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1007          BA     .41
1008          LG     .25      .15    8.80     .06   55.00
1009          UI    123.     405.    671.    887.    553.    301.    126.     56.     25.     25.
1010          UI      0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1011          KK   RETPB
1012          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1013          KM   80% OF REQUIRED MODELED
              * KO     3                                  21
1014          DT   RETPB    42.9
1015          DI       0   10000
1016          DQ       0   10000
              *

1017          KK   PB75
1018          KM   BASIN PB75 (ROADWAY DRAINAGE)
1019          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1020          KM    L=        .5  Lca=       .3   S=   12.0  Kn= .020  LAG=   8.1
1021          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1022          BA     .01
1023          LG     .15      .15    9.70     .04   80.00
1024          UI     14.      39.     19.      4.      0.      0.      0.      0.      0.      0.
1025          UI      0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1026          KK    PBBU
1027          KM   BASIN PBBU   (ROADWAY DRAINAGE)
1028          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1029          KM    L=      1.0  Lca=       .5   S=    6.0  Kn= .020  LAG=  15.8
1030          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1031          BA     .02
1032          LG     .15      .15    8.00     .07   80.00
1033          UI      7.      23.     42.     44.     26.     11.      5.      2.      1.      0.
1034          UI      0.       0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1035          KK  CPBSD
              * KO     3                                  21
1036          KM           COMBINE STREET DRAINAGE
1037          HC       2
              *
1                                        HEC-1 INPUT                                          PAGE 30

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

1038          KK  DPBSD1
1039          KM   DIVERT STORM DRAIN FLOW (75TH AVENUE)
1040          DT  SD75PB
1041          DI       0      23   10000
1042          DQ       0      23      23
              *
              *

1043          KK  DPBSD2
1044          KM   DIVERT STORM DRAIN FLOW (BUCKEYE ROAD DRAINAGE)
1045          DT  SDBRPB
1046          DI       0      39   10000
1047          DQ       0      39      39
              *

1048          KK    CPPB
              * KO     3                                  21
1049          KM        ADD HYDROGRAPHS AT PB
1050          HC       2
              *

1051          KK  DIPBPA
1052          KM        DIVERT 19% OF FLOW FROM PB TO PA(ADMP DIVERSION)
1053          DT   DIPA1
1054          DI       0      25      50      75     100     150     200     400     800   10000
1055          DQ       0       5      10      14      19      29      38      76     152    1900
              *

1056          KK   CPPB1
```

```
                * KO     3                                  21
1057            KM        ADD HYDROGRAPHS AT PB
1058            HC       2
                *

1059            KK  RTPBNA   ROUTE   REACH
1060            KM        ROUTE FLOW FROM PB TO NA ALONG 75th AVE.
1061            KM        FUTURE ARTERIAL SECTION
                * KO     3                                  21
1062            RS       4    ELEV      -1       0
1063            RC   0.100   0.023   0.100    5280  0.0032    0.00
1064            RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1065            RY     105     105     105   99.75   99.75     105     105     105
                *

1066            KK  SUBNA
1067            KM   BASIN NA
1068            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1069            KM    L=      2.0  Lca=      1.0   S=   10.5  Kn= .020  LAG=  24.0
1070            KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1071            BA     .94
1072            LG     .25     .15    8.00     .08   51.00
1073            UI    132.    473.    742.   1029.   1568.   1184.    859.    588.    280.    184.
1074            UI    106.     40.     40.     40.      0.      0.      0.      0.      0.      0.
1075            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                *
1                                                HEC-1 INPUT                                                    PAGE 31

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

1076            KK   RETNA
1077            KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1078            KM   80% OF REQUIRED MODELED
1079            DT   RETNA    89.6
1080            DI       0   10000
1081            DQ       0   10000
                *

1082            KK    NA75
1083            KM   BASIN NA75  (75 AVENUE ROADWAY DRAINAGE)
1084            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1085            KM    L=      1.0  Lca=       .5   S=   15.2  Kn= .020  LAG=  13.1
1086            KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1087            BA     .02
1088            LG     .15     .15    7.60     .08   80.00
1089            UI     11.     32.     55.     35.     14.      5.      2.      0.      0.      0.
1090            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                *

1091            KK    NALB
1092            KM   BASIN NALB  (LOWER BUCKEYE ROADWAY DRAINAGE)
1093            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1094            KM    L=      1.0  Lca=       .5   S=    6.0  Kn= .020  LAG=  15.8
1095            KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1096            BA     .02
1097            LG     .15     .19    6.60     .12   80.00
1098            UI      7.     23.     42.     44.     26.     11.      5.      2.      1.      0.
1099            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                *

1100            KK   CNASD
                * KO     3                                  21
1101            KM    COMBINE STREET DRAINAGE
1102            HC       2
                *

1103            KK  CPNA1
1104            KM    COMBINE ROUTED FLOW FROM PB
1105            HC       3
                *
                *

1106            KK  DNASD1
1107            KM   DIVERT STORM DRAIN FLOW (75TH AVENUE)
1108            DT  SD75NA
1109            DI       0      40   10000
1110            DQ       0      40      40
                *
1                                                HEC-1 INPUT                                                    PAGE 32

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

1111            KK  DNASD2
1112            KM   DIVERT STORM DRAIN FLOW (LOWER BUCKEYE)
1113            DT  SDLBNA
1114            DI       0      38   10000
1115            DQ       0      38      38
                *

1116            KK  DADMP1
1117            KM   DIVERT STREET FLOW TO ADMP CHANNEL
1118            DT   ADMP1
1119            DI       0     220   10000
1120            DQ       0     220   10000
                *

1121            KK  SUBJC1
1122            KM   BASIN JC1
1123            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1124            KM    L=      1.5  Lca=      1.0   S=   10.7  Kn= .020  LAG=  21.4
1125            KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1126            BA     .47
1127            LG     .25     .15    7.00     .13   30.00
1128            UI     76.    304.    456.    712.    797.    538.    365.    173.    102.     52.
1129            UI     23.     23.      0.      0.      0.      0.      0.      0.      0.      0.
1130            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
```

```
                 *
1131             KK  RETJC1
                 * KO     3                                   21
1132             KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1133             KM   80% OF REQUIRED MODELED
1134             DT  RETJC1     35.5
1135             DI        0   10000
1136             DQ        0   10000
                 *

1137             KK    JC75
1138             KM   BASIN JC75  (ROADWAY DRAINAGE)
1139             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1140             KM    L=       1.0  Lca=        .5   S=    13.0  Kn= .020  LAG=  13.6
1141             KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1142             BA     .02
1143             LG     .15      .15     7.00      .10   80.00
1144             UI     10.      31.      56.      38.     18.       7.       2.       2.       0.       0.
1145             UI      0.       0.       0.       0.      0.       0.       0.       0.       0.       0.
                 *

1146             KK  CJCSD1
                 * KO     3                                   21
1147             KM        COMBINE STREET DRAINAGE AND RETETION OVERFLOW
1148             HC       2      .49
                 *
1                                          HEC-1 INPUT                                                    PAGE 33

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

1149             KK  SUBJC2
1150             KM   BASIN JC2
1151             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1152             KM    L=       1.5  Lca=       1.0   S=    11.3  Kn= .020  LAG=  21.2
1153             KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1154             BA     .48
1155             LG     .25      .15     7.00      .13     .24
1156             UI     81.     317.     475.     753.    805.     544.     365.     165.     101.      49.
1157             UI     23.      23.       0.       0.      0.       0.       0.       0.       0.       0.
1158             UI      0.       0.       0.       0.      0.       0.       0.       0.       0.
                 *

1159             KK  RETJC2
                 * KO     3                                   21
1160             KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1161             KM    140 ACRES OF EXISITING DEVELOPMENT NOT INCLUDED IN CALCULATIONS
1162             KM   80% OF REQUIRED MODELED
1163             DT  RETJC2     19.6
1164             DI        0   10000
1165             DQ        0   10000
                 *

1166             KK  DETJC2
1167             KM   DIVERT PROPOSED RETENTION OUT OF MODEL FOR APPROXIMATELY 140 ACRES
1168             KM   OF EXISITING DEVELOPMENT THAT DOES NOT HAVE RETENTION
1169             KM   80% OF REQUIRED MODELED
1170             DT  DETJC2     16.6
1171             DI        0   10000
1172             DQ        0   10000
                 *

1173             KK  RTJCJC   ROUTE   REACH
1174             KM        ROUTE FLOW FROM JC2 TO JC1 ALONG 75th AVE.
1175             KM        FUTURE ARTERIAL SECTION
                 * KO     3                                   21
1176             RS       2    ELEV      -1       0
1177             RC   0.100   0.023   0.100    2640  0.0021    0.00
1178             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1179             RY     105     105     105   99.75   99.75     105     105     105
                 *

1180             KK  CPJC1A
1181             KM             COMBINE FLOW FROM JC2 WITH FLOW FROM JC3
1182             HC       2      .97
                 *

1183             KK    JCBR
1184             KM   BASIN JCBR  (ROADWAY DRAINAGE)
1185             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1186             KM    L=       1.0  Lca=        .5   S=    11.0  Kn= .020  LAG=  14.0
1187             KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1188             BA     .02
1189             LG     .15      .17     6.90      .11   80.00
1190             UI     10.      29.      53.      39.     20.       7.       3.       2.       0.       0.
1                                          HEC-1 INPUT                                                    PAGE 34

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

1191             UI      0.       0.       0.       0.      0.       0.       0.       0.       0.       0.
                 *

1192             KK  CJCSD2
                 * KO     3                                   21
1193             KM        COMBINE STREET DRAINAGE AND RETETION OVERFLOW
1194             HC       2
                 *

1195             KK  CPJC1B
                 * KO     3                                   21
1196             KM        COMBINE JC1, JC2 AND STREET DRAINAGE
1197             HC       2   5.96
                 *

1198             KK  DJC2SD
1199             KM   DIVERT OFFSITE TO STORM DRAIN FLOW (BROADWAY STORM DRAIN FLOW)
1200             DT  SDOSBR
```

```
1201          DI        0       41   10000
1202          DQ        0       41      41
              *

1203          KK  DJCSD1
1204          KM   DIVERT STORM DRAIN FLOW (75TH AVE. STORM DRAIN FLOW)
1205          DT  SD75JC
1206          DI        0       42   10000
1207          DQ        0       42      42
              *

1208          KK   DIJD
1209          KM   RETURN DIVERTED FLOW FROM BASIN SUBJD
1210          DR   DIJC2
              *

1211          KK  RTJCJC   ROUTE   REACH
1212          KM        ROUTE FLOW FROM JD TO JC1 ALONG 75th AVE.
1213          KM        FUTURE ARTERIAL SECTION
              * KO     3                                  21
1214          RS       5    ELEV      -1       0
1215          RC   0.100   0.023   0.100    5280  0.0021    0.00
1216          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1217          RY     105     105     105   99.75   99.75     105     105     105
              *

1218          KK   CPJC2
              * KO     3                                  21
1219          KM        COMBINE SPLIT FLOW FROM SUBJD WITH FLOW AT CPCJ1
1220          HC       2    8.11
              *
```



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

1221          KK  DIJCJB
1222          KM        DIVERT 46% OF FLOW AT JC TO JB.  (ADMP DIVERSION)
              * KO     3                                  21
1223          DT   DIJB2
1224          DI       0      25      50      75     100     150     200    1346    2000
1225          DQ       0      12      23      35      46      69      92   605.7     920
              *

1226          KK  RTJCFB   ROUTE   REACH
1227          KM        ROUTE FLOW FROM JC1 TO FB ALONG 75th AVE.
1228          KM        FUTURE ARTERIAL SECTION
              * KO     3                                  21
1229          RS       3    ELEV      -1       0
1230          RC   0.100   0.023   0.100    4200  0.0032    0.00
1231          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1232          RY     105     105     105   99.75   99.75     105     105     105
              *

1233          KK   DRB71
1234          KM   RETURN DIVERTED FLOW FROM BASIN DRC #4
1235          DR   BSN71
              *

1236          KK  RT71PB   ROUTE   REACH
1237          KM        ROUTE FLOW FROM BASIN TO PB ALONG 71th AVE AND
1238          KM        BUCKEYE RD.
1239          KM
1240          RT                      2
              *

1241          KK  RSDPB1
1242          KM   RETURN STORM DRAIN FLOW FROM PB
1243          DR  SD75PB
              *

1244          KK  CPPBS1
              * KO     3                                  21
1245          KM    COMBINE STORM DRAIN FLOWS
1246          HC       2    3.99
              *

1247          KK  RSDPB2
1248          KM   RETURN STORM DRAIN FLOW FROM PB
1249          DR  SDBRPB
              *

1250          KK  CPPBS2
              * KO     3                                  21
1251          KM    COMBINE STORM DRAIN FLOWS
1252          HC       2
              *
```



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

1253          KK  RTPBNA   ROUTE   REACH
1254          KM        ROUTE FLOW FROM PB TO NA IN STORM DRAIN
1255          KM
1256          RT                      2
              *

1257          KK  RSDNA1
1258          KM   RETURN DIVERTED STORM DRAIN FLOW FROM NA
1259          DR  SD75NA
              *

1260          KK  CPNAS1
              * KO     3                                  21
1261          KM    COMBINE STORM DRAIN FLOWS
1262          HC       2    4.97
              *
```

```
1263          KK  RSDNA2
1264          KM   RETURN DIVERTED STORM DRAIN FLOW FROM NA
1265          DR  SDLBNA
              *

1266          KK  CPNAS2
              * KO     3                                  21
1267          KM    COMBINE STORM DRAIN FLOWS
1268          HC       2
              *

1269          KK  RTNAJC   ROUTE   REACH
1270          KM        ROUTE FLOW FROM NA TO JC IN STORM DRAIN
1271          KM
1272          RT                       2
              *

1273          KK  RSDJC1
1274          KM   RETURN DIVERTED STORM DRAIN FLOW FROM JC (75TH AVENUE)
1275          DR  SD75JC
              *

1276          KK  CPJCS1
              * KO     3                                  21
1277          KM    COMBINE STORM DRAIN FLOWS
1278          HC       2    5.96
              *
              * KKRSDJC2
              * KM RETURN DIVERTED STORM DRAIN FLOW FROM JC (BROADWAY ROAD)
              * DRSDBRJC
              *
1                                   HEC-1 INPUT                                          PAGE 37

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


1279          KK  RSDJC3
1280          KM   RETURN DIVERTED STORM DRAIN FLOW FROM JC1 and JC2
1281          DR  SDOSBR
              *
              * KKCPJCS2
              * KO     3                                  21
              * KM  COMBINE STORM DRAIN FLOWS
              * HC     2    0.50
              *

1282          KK  CPJCS3
              * KO     3                                  21
1283          KM    COMBINE STORM DRAIN FLOWS
1284          HC       2    5.96
              *

1285          KK  RTJCFB   ROUTE   REACH
1286          KM        ROUTE FLOW FROM JC TO FB ALONG 75th AVE.
1287          KM
1288          RT                       2
              *

1289          KK    FB75
1290          KM   BASIN FB75(ROADWAY DRAINAGE)
1291          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1292          KM    L=        .8  Lca=       .4   S=   10.7  Kn= .020  LAG=  12.4
1293          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1294          BA     .02
1295          LG     .15     .25    4.70     .25   80.00
1296          UI     11.     32.     52.     29.     10.      3.      2.      0.      0.      0.
1297          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1298          KK    CPFB
              * KO     3                                  21
1299          KM        ADD HYDROGRAPHS AT FB
1300          HC       2    5.98
              *
              * ADDED BY SLT MAR16,2005 TO ELIMINATE ERROR

1301          KK    DUMM
1302          KM        ELIMINATE UNNECESSARY HYDROGRAPHS
1303          HC       3
              *
              *
              * ADDED RETURNS TO ADD TO DDS FOR NEW STUDY  -  SLT  3/03/05
              *
              * KK  SLT1
              * KM      RETURN DIVERT FROM TB
              * DR  DITA
              * ZW A=DURANGO B=SLT1  C=FLOW  E=5MIN F=6-HR
              *
              * KK  SLT2
              * KM      RETURN DIVERT FROM ADMP1
              * DR ADMP1
              * ZW A=DURANGO B=SLT2  C=FLOW  E=5MIN  F=6-HR
              *
1                                   HEC-1 INPUT                                          PAGE 38

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


1304          KK   SUBSH   BASIN
1305          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1306          KM    L=        .4  Lca=       .2   S=   11.1  Kn= .030  LAG=  11.5
1307          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1308          BA   0.103
1309          LG    0.15    0.16    9.70    0.07      55
1310          UI      72     211     303     147      44      13       8       0       0       0
1311          UI       0       0       0       0       0       0       0       0       0       0
              *
```

```
1312          KK   RETSH
1313          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1314          DT   RETSH    10.3
1315          DI       0   10000
1316          DQ       0   10000
              *

1317          KK    RSSH
1318          KM        MODIFIED PULS ROUTING BEHIND RID.
              * KO     1
1319          RS       1    STOR       0       0
1320          SV      19      21      24      30      37      44    46.4
1321          SE  1027.0  1027.1  1027.2  1027.5  1027.7  1028.0  1028.2
1322          SQ       0   138.6   475.2  1277.3
1323          SE  1027.0  1027.6  1027.8  1028.1
              *
              *

1324          KK  DISHRJ
1325          KM   DIVERT FLOW FROM SH TO RJ2
1326          DT   DIRJ2
1327          DI       0   138.6   475.2  1277.3
1328          DQ       0    88.6   375.2  1077.3
              *
              *

1329          KK  RTSHSG   ROUTE   REACH
1330          KM        ROUTE FLOW FROM SH TO SG
1331          KM        TYPE C CHANNEL
1332          RS       8              -1       0
1333          RC   0.035   0.035   0.035    2600  0.0008    0.00
1334          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1335          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1336          KK   SUBTA   BASIN
1337          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1338          KM    L=        .8  Lca=        .4   S=    10.5  Kn= .03  LAG=  17.1
1339          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1340          BA   0.241
1341          LG    0.15    0.15    7.00    0.18      55
1342          UI      71     234     382     523     328     186      76      35      15      14
1343          UI       3       0       0       0       0       0       0       0       0       0
1344          UI       0       0       0       0       0       0       0       0       0       0
              *
```



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

1345          KK   RETTA
1346          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1347          DT   RETTA    24.1
1348          DI       0   10000
1349          DQ       0   10000
              *

1350          KK    DRTA
1351          KM        RETURN DIVERT FROM TB
1352          KM        RETURN DIVERT FROM TB
1353          DR    DITA
              * BA     0
              * ZR  =QI A=DURANGO B=SLT1  C=FLOW  E=5MIN  F=6-HR
              *

1354          KK  RTDITA   ROUTE   REACH
1355          KM        ROUTE DIVERT TO TA
1356          KM        TYPE A CHANNEL
1357          RS       8              -1       0
1358          RC   0.025   0.025   0.024    2600  0.0004    0.00
1359          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1360          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

1361          KK   @CPTA
1362          KM        ADD HYDROGRAPHS AT TA
1363          HC       2    1.13
              *

1364          KK  RTTASG   ROUTE   REACH
1365          KM        ROUTE FLOW FROM TA TO SG (SHEET FLOW).
1366          KM        TYPE A CHANNEL
1367          RS       2              -1       0
1368          RC   0.025   0.025   0.025    2200  0.0050    0.00
1369          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1370          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

1371          KK   SUBSG   BASIN
1372          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1373          KM    L=        .6  Lca=        .3   S=     5.0  Kn= .03  LAG=  16.6
1374          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1375          BA   0.136
1376          LG    0.15    0.15    8.80    0.09      55
1377          UI      43     139     233     294     180      92      40      16       8       8
1378          UI       0       0       0       0       0       0       0       0       0       0
              *

1379          KK   RETSG
1380          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1381          DT   RETSG    13.6
1382          DI       0   10000
1383          DQ       0   10000
              *
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
1384          KK    CPSG
1385          KM        ADD HYDROGRAPHS AT SG
1386          HC       3
              *

1387          KK    RSSG
1388          KM        MODIFIED PULS ROUTING BEHIND RID AND 81ST AVENUE
              * KO     1
1389          RS       1    STOR       0       0
1390          SV    12.3    13.3    14.9    16.5    18.4    22.4    25.9    35.2
1391          SE  1026.4  1026.6  1026.8  1027.0  1027.2  1027.4  1027.6  1027.9
1392          SQ       0       9     114     525    1221    2143    3276    5343
              *

1393          KK  DISGRJ
1394          KM        DIVERT FLOW FROM SG TO RJ
1395          DT   DIRJ4
1396          DI       0       9     114     525    1221
1397          DQ       0       1      70     400     964
              *

1398          KK  RTSGSE   ROUTE   REACH
1399          KM        ROUTE FLOW FROM SG TO SE
1400          KM        TYPE C CHANNEL
1401          RS       2              -1       0
1402          RC   0.035   0.035   0.035    1200  0.0030    0.00
1403          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1404          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1405          KK   SUBSC   BASIN
1406          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1407          KM    L=      1.3  Lca=       .7   S=   15.2  Kn= .029  LAG=  23.9
1408          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1409          BA   0.453
1410          LG    0.14    0.26    5.00    0.39      58
1411          UI      64     229     360     500     758     569     409     284     133      88
1412          UI      50      19      20      20       6       0       0       0       0       0
1413          UI       0       0       0       0       0       0       0       0       0       0
              *

1414          KK   RETSC
1415          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1416          DT   RETSC    45.4
1417          DI       0   10000
1418          DQ       0   10000
              *

1419          KK  DISCSD
1420          KM        DIVERT 54% OF FLOW AT SC TO SD.
1421          DT    DISD
1422          DI       0      25      50     100     150     200
1423          DQ       0      14      27      54      81     108
              *
```



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

1424          KK  RTSCSE   ROUTE   REACH
1425          KM        ROUTE FLOW FROM SC TO SE (ALONG 83RD AVENUE).
1426          KM        FUTURE ARTERIAL SECTION
1427          RS       1              -1       0
1428          RC   0.100   0.023   0.100    1000  0.0022    0.00
1429          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1430          RY     105     105     105   99.75   99.75     105     105     105
              *

1431          KK   SUBSE   BASIN
1432          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1433          KM    L=       .3  Lca=       .2   S=   26.5  Kn= .03  LAG=  7.8
1434          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1435          BA   0.125
1436          LG    0.15    0.25    4.80    0.39      55
1437          UI     185     511     220      40      11       0       0       0       0       0
1438          UI       0       0       0       0       0       0       0       0       0       0
              *

1439          KK   RETSE
1440          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1441          DT   RETSE    12.5
1442          DI       0   10000
1443          DQ       0   10000
              *

1444          KK    CPSE
1445          KM        ADD HYDROGRAPHS AT SE
1446          HC       3
              *

1447          KK    RSSE
1448          KM        MODIFIED PULS ROUTING AT SE BEHIND THE RID CANAL
              * KO     1
1449          RS       1    STOR       0       0
1450          SV    13.5    14.8    17.6    20.5
1451          SE  1025.9  1026.0  1026.5  1026.9
1452          SQ    3.14    14.3  479.44 2013.01
              *

1453          KK  DISERJ
1454          KM   DIVERT FLOW FROM SE TO RJ
1455          DT   DIRJ5
1456          DI       0       3     142    1100
1457          DQ       0       3     142    1100
              *
```

```
1458          KK  RTSERI   ROUTE   REACH
1459          KM        ROUTE FLOW FROM SE TO RI
1460          KM        TYPE A CHANNEL
1461          RS       4              -1        0
1462          RC   0.035   0.035   0.035    2000  0.0019    0.00
1463          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1464          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
1                                          HEC-1 INPUT                                                          PAGE 42

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


1465          KK   SUBRJ   BASIN
1466          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1467          KM    L=        .7  Lca=        .4   S=    5.6  Kn= .03  LAG=  19.8
1468          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1469          BA   0.163
1470          LG    0.15    0.15    7.00    0.18      55
1471          UI      33     122     184     307     254     170      98      46      25       8
1472          UI       9       7       0       0       0       0       0       0       0       0
1473          UI       0       0       0       0       0       0       0       0       0       0
              *

1474          KK   RETRJ
1475          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1476          DT   RETRJ    16.3
1477          DI       0   10000
1478          DQ       0   10000
              *

1479          KK   CPRJ2
1480          KM        RETURN DIVERSION FROM SH
1481          DR   DIRJ2
              *

1482          KK  RTSHRJ   ROUTE   REACH
1483          KM        ROUTE HYDROGRAPH FROM SH TO RJ2
1484          KM        TYPE C CHANNEL
1485          RS       7              -1        0
1486          RC   0.050   0.050   0.050    2000  0.0015    0.00
1487          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1488          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1489          KK  RTRJ3    ROUTE   REACH
1490          KM        ROUTE HYDROGRAPH FROM RJ3 TO RJ
1491          KM        TYPE C CHANNEL
1492          RS       8              -1        0
1493          RC   0.035   0.035   0.035    3900  0.0015    0.00
1494          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1495          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1496          KK  CPRJ4A
1497          KM        RETURN DIVERT FROM SG
1498          DR   DIRJ4
              *

1499          KK  CPRJ4B
1500          KM        COMBINE HYDROGRAPHS AT RJ4
1501          HC       2     .39
              *
              *
1                                          HEC-1 INPUT                                                          PAGE 43

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


1502          KK  RTSGRJ   ROUTE   REACH
1503          KM        ROUTE DIVERT FROM SG TO RJ
1504          KM        TYPE C CHANNEL
1505          RS       3              -1        0
1506          RC   0.035   0.035   0.035    1400  0.0019    0.00
1507          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1508          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1509          KK   CPRJ5
1510          KM        RETURN DIVERT FROM SE
1511          DR   DIRJ5
              *

1512          KK  RTSERJ   ROUTE   REACH
1513          KM        ROUTE DIVERT FROM SE TO RJ
1514          KM        TYPE C CHANNEL
1515          RS       9              -1        0
1516          RC   0.035   0.035   0.035    1000  0.0001    0.00
1517          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1518          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1519          KK  @CPRJ6
1520          KM        ADD HYDROGRAPHS AT RJ
1521          HC       3    3.81
              *

1522          KK    RSRJ
1523          KM .      RESERVOIR ROUTING AT RJ BEHIND 83RD AVE AND THE SPRR
              * KO     1
1524          RS       1    STOR       0       0
1525          SV     3.5     6.2    11.0    18.4    30.9    52.2    76.3
1526          SE  1022.1  1022.5  1023.0  1023.5  1024.0  1024.5  1024.9
1527          SQ       0      50     100     506     899    1369
1528          SE  1022.1  1022.7  1022.9  1023.7  1024.0  1024.2
              *

1529          KK  DIRJPA
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1530          KM   DIVERT FLOW OVER SPRR FROM RJ TO PA
1531          DT   DIPA2
1532          DI       0      50     100     506     899    1369
1533          DQ       0       0       0       6     149     369
              *

1534          KK  RTRJRI   ROUTE   REACH
1535          KM        ROUTE FLOW FROM RJ TO RI1
1536          KM        TYPE C CHANNEL
1537          RS       5                -1       0
1538          RC   0.035   0.035   0.035    2600  0.0019    0.00
1539          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1540          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *
              * THE FOLLOWING DIVERT REMOVED TO MODEL THE ADMP CONDITION
              * KKDIRIOE
              * KM DIVERT FLOW FROM RI TO OE OVER SPRR.
              * KM 1/4 MILE WEST OF 83RD AVE.
              * DT DIOE3
              * DI   100     400    1392    1300    1400
              * DQ     0      55     370     680     730
              *
1                                          HEC-1 INPUT                                                    PAGE 44

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

1541          KK  RTRIRI
1542          KM   TYPE C CHANNEL
1543          RS       4                -1       0
1544          RC    .035    .035    .035    1550   .0019
1545          RX       0      20      35      50    50.1     250     450     550
1546          RY       5       5     2.5       0       0       2       4       5
              *

1547          KK   SUBRI   BASIN
1548          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1549          KM    L=        .6  Lca=        .2   S=   19.3  Kn= .03  LAG=  10.6
1550          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1551          BA   0.232
1552          LG    0.15    0.15    7.60    0.14      55
1553          UI     193     596     651     255      72      23       7       0       0       0
1554          UI       0       0       0       0       0       0       0       0       0       0
              *

1555          KK   RETRI
1556          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1557          DT   RETRI    23.2
1558          DI       0   10000
1559          DQ       0   10000
              *

1560          KK   SUBSB   BASIN
1561          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1562          KM    L=        .5  Lca=        .3   S=   15.1  Kn= .03   LAG=  12.3
1563          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1564          BA   0.168
1565          LG    0.15    0.15    9.70    0.07      55
1566          UI     102     299     486     271      95      30      14       5       0       0
1567          UI       0       0       0       0       0       0       0       0       0       0
              *

1568          KK   RETSB
1569          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1570          DT   RETSB    16.8
1571          DI       0   10000
1572          DQ       0   10000
              *

1573          KK    RSSB
1574          KM         MODIFIED PULS ROUTING THROUGH PONDING  BEHIND RID CANAL.
              * KO     1
1575          RS       1    STOR       0       0
1576          SV     2.2     5.6    11.9    21.4    33.8
1577          SE  1024.0  1024.5  1025.0  1025.5  1025.9
1578          SQ       0      94     581    2114    4864
              *
1                                          HEC-1 INPUT                                                    PAGE 45

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

1579          KK   SUBSD   BASIN
1580          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1581          KM    L=        .6  Lca=        .3   S=   12.3  Kn= .03  LAG=  14.4
1582          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1583          BA   0.168
1584          LG    0.15    0.28    6.60    0.18      55
1585          UI      73     222     410     319     173      61      24      12       7       0
1586          UI       0       0       0       0       0       0       0       0       0       0
              *

1587          KK   RETSD
1588          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1589          DT   RETSD    16.8
1590          DI       0   10000
1591          DQ       0   10000
              *

1592          KK    DRSD
1593          KM    RETURN DIVERT FROM SC.
1594          DR    DISD
              *

1595          KK   @CPSD
1596          KM        ADD HYDROGRAPHS AT SD.
1597          KM        ROUTING STEP NOT INCLUDED DUE TO SHORT ROUTING LENGTH
1598          HC       3     .79
```

```
                *
1599            KK    RSSD
1600            KM        MODIFIED PULS ROUTING BEHIND CANAL, NORTH OF VAN BUREN.
                * KO      1
1601            RS        1    STOR        0        0
1602            SV        0     .01       .1       .6      1.8        5        9       14       23
1603            SE   1021.4  1022.8     1023   1023.3   1023.6     1024   1024.3   1024.6     1025
1604            SQ        0     .16       46      534      939     1427     1993     2767
1605            SE   1021.4  1021.5     1022     1023   1023.5     1024   1024.5     1025
                *

1606            KK  RTSDRI   ROUTE   REACH
1607            KM        ROUTE FLOW FROM SD TO RI
1608            KM        TYPE A CHANNEL
1609            RS        3                -1        0
1610            RC    0.035    0.035    0.035     2400   0.0046     0.00
1611            RX      0.0    100.0    400.0    500.0    500.1    600.0    900.0   1000.0
1612            RY      5.0      4.0      1.0      0.0      0.0      1.0      4.0      5.0
                *

1613            KK  ~@CPRI
1614            KM   ADD HYDROGRAPHS AT RI (1/2 MILE WEST OF 83RD AVE)
1615            HC        4     4.38
                *
                * THE FOLLWOING PONDING REMOVED TO MODEL THE ADMP CONDITION
                * KK  RSRI
                * KM       MODIFIED PULS ROUTING BEHIND SPRR.
                * KO      1
                * RS      1    STOR       -1        0
                * SV      0       0       .1       .3      1.2      3.0      6.5    13.76     21.8       35
                * SE1014.0  1014.1  1014.5  1015.0  1015.5  1016.0  1016.5  1017.0  1017.5     1018
                * SQ      0       4      142      573     1333     3217     5957     9319    13343      182
                *
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LINE            ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1616            KK  MCRIRH   ROUTE   REACH
1617            KM   ADMP CHANNEL
1618            KM   ROUTE FLOW FROM RI TO RH
1619            RS        3    FLOW       -1
1620            RC    0.040    0.040    0.040     2482   0.0015     0.00
1621            RX      0.0     16.0     33.7     51.3     71.3     89.0    106.7    122.7
1622            RY      5.6      5.9      3.0      0.0      0.0      3.0      5.9      5.6
                *
                * ***********************************************************************
                *

1623            KK   SUBPA   BASIN
1624            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1625            KM    L=      1.1  Lca=       .6   S=    16.7  Kn= .03   LAG=  21.5
1626            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1627            BA   0.477
1628            LG    0.15     0.17     7.30     0.14       55
1629            UI      76      307      461      716      812      547      372      178      105       54
1630            UI      23       23       19        0        0        0        0        0        0        0
1631            UI       0        0        0        0        0        0        0        0        0        0
                *

1632            KK   RETPA
1633            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1634            DT   RETPA    47.8
1635            DI       0    10000
1636            DQ       0    10000
                *

1637            KK   DRPA2
1638            KM   RETURN DIVERT FROM RJ.
1639            DR   DIPA2
                *

1640            KK  RTRJPA   ROUTE   REACH
1641            KM        ROUTE DIVERT FROM RJ TO PA
1642            KM        FUTURE ARTERIAL SECTION
1643            RS        2                -1        0
1644            RC    0.100    0.023    0.100     2400   0.0054     0.00
1645            RX      0.0      440      445    445.1    575.1    575.2      900   1000.0
1646            RY      105      105      105    99.75    99.75      105      105      105
                *

1647            KK    CPPA
1648            KM   ADD HYDROGRAPHS AT PA
1649            HC        2
                *

1650            KK  DIPAOE
1651            KM        DIVERT 18% OF FLOW AT PA TO OE.
1652            DT    DIOE
1653            DI       0       25       50       75      100      150      200
1654            DQ       0        5        9       14       18       27       36
                *
```



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

1655            KK  RTPAMH   ROUTE   REACH
1656            KM        ROUTE FLOW FROM PA TO MH (ALONG 83RD AVENUE).
1657            KM        FUTURE ARTERIAL SECTION
1658            RS        2                -1        0
1659            RC    0.100    0.023    0.100     2640   0.0012     0.00
1660            RX      0.0      440      445    445.1    575.1    575.2      900   1000.0
1661            RY      105      105      105    99.75    99.75      105      105      105
                *

1662            KK   SUBMH   BASIN
```

```
1663        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1664        KM    L=       .7  Lca=       .3   S=     8.8  Kn= .05  LAG=  19.7
1665        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1666        BA   0.239
1667        LG    0.25    0.15    8.80    0.09      30
1668        UI      49     179     272     452     372     249     141      66      36      13
1669        UI      12      10       0       0       0       0       0       0       0       0
            *

1670        KK   RETMH
1671        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1672        DT   RETMH    19.8
1673        DI       0   10000
1674        DQ       0   10000
            *

1675        KK    CPMH
1676        KM    ADD HYDROGRAPHS AT MH
1677        HC       2
            *

1678        KK  RTMHMD   ROUTE   REACH
1679        KM        ROUTE FLOW FROM PA TO MD (ALONG 83RD AVENUE).
1680        KM        FUTURE ARTERIAL SECTION
1681        RS       2              -1       0
1682        RC   0.100   0.023   0.100    2640  0.0012    0.00
1683        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1684        RY     105     105     105   99.75   99.75     105     105     105
            *

1685        KK   SUBMD   BASIN
1686        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1687        KM    L=      1.4  Lca=       .6   S=    14.3  Kn= .05  LAG=  41.7
1688        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1689        BA   0.255
1690        LG    0.25    0.08    7.60    0.11      30
1691        UI      21      24      73     100     119     142     175     247     234     185
1692        UI     156     127     106      80      47      35      30      21      15       6
1693        UI       6       6       6       6       6       0       0       0       0       0
            *
```



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

1694        KK   RETMD
1695        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1696        DT   RETMD    21.1
1697        DI       0   10000
1698        DQ       0   10000
            *

1699        KK    CPMD
1700        KM        ADD HYDROGRAPHS AT MD
1701        HC       2
            *

1702        KK  DIMDJB
1703        KM        DIVERT 21% OF FLOW FROM MD TO JB.
1704        DT   DIJB1
1705        DI       0      25      50      75     100     150     200
1706        DQ       0       5      10      16      21      32      42
            *

1707        KK  DIMDMF
1708        KM   DIVERT FLOW FROM MD TO MF
1709        KM   DUMMY DIVERT TO ROUTE FLOW AROUND CODE SEQUENCE.
1710        DT   DIMFX
1711        DI       0   10000
1712        DQ       0   10000
            *

1713        KK   SUBMI   BASIN
1714        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1715        KM    L=       .7  Lca=       .3   S=     8.8  Kn= .043  LAG=  16.9
1716        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1717        BA   0.409
1718        LG    0.21    0.15    8.40    0.11      38
1719        UI     122     402     662     886     553     306     126      57      25      25
1720        UI       3       0       0       0       0       0       0       0       0       0
            *

1721        KK   RETMI
1722        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1723        DT   RETMI    35.3
1724        DI       0   10000
1725        DQ       0   10000
            *

1726        KK   SUBMG   BASIN
1727        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1728        KM    L=       .7  Lca=       .3   S=     8.8  Kn= .04   LAG=  11.7
1729        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1730        BA   0.082
1731        LG    0.20    0.15    7.00    0.17      43
1732        UI      55     162     241     120      37      11       7       0       0       0
            *
```



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

1733        KK   RETMG
1734        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1735        DT   RETMG     7.3
1736        DI       0   10000
1737        DQ       0   10000
            *
```

```
1738        KK    CPMG
1739        KM   COMBINE FLOWS FROM MI AND MG.
1740        HC       2
            *

1741        KK  RTMGJB   ROUTE   REACH
1742        KM        ROUTE FLOW FROM MG TO JB1 (ACROSS SUB JB1).
1743        KM        TYPE B    CHANNEL
1744        KM        ROUTE ADDED, JEP 5/10/01
1745        RS       9              -1        0
1746        RC   0.035   0.035   0.035    5050  0.0024    0.00
1747        RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1748        RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
            *
            * KK~CNAMG
            * KM COMBINE FLOWS FROM NA AND MG INTO ADMP CHANNEL
            * HC     3
            *
            * KKMCMGJB   ROUTE   REACH
            * KM ADMP CHANNEL
            * RS     3    FLOW      -1
            * RC 0.040   0.040   0.040    4374  0.0029    0.00
            * RX   0.0    16.0    33.9    51.9    86.9   104.8   122.8   138.8
            * RY   5.7     6.0     3.0     0.0     0.0     3.0     6.0     5.7
            *

1749        KK  SUBJB1   BASIN
1750        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1751        KM    L=      1.3  Lca=        .7   S=   17.4  Kn= .050  LAG=  39.7
1752        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1753        BA   0.494
1754        LG    0.25    0.25    5.00    0.41      30
1755        UI      42      58     157     209     250     303     397     524     425     348
1756        UI     286     233     186     117      73      67      42      35      13      13
1757        UI      13      13      13       9       0       0       0       0       0       0
            *

1758        KK  RETJB1
1759        KM   RETENTION MODIFIED FROM 80% REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTI
1760        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
1761        DT  RETJB1    10.5
1762        DI       0   10000
1763        DQ       0   10000
            *
```



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

1764        KK    DRJB
1765        KM   RETURN DIVERT FROM MD
1766        DR   DIJB1
            *

1767        KK  RDIJB1
1768        KM   ROUTE DIVERT FROM MD TO JB
1769        KM   FUTURE ARTERIAL SECTION
1770        RS       4              -1        0
1771        RC      .1   0.023      .1    2640   .0030
1772        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1773        RY     105     105     105   99.75   99.75     105     105     105
            *

1774        KK   ADMP1
1775        KM   RETURN DIVERT FROM 75TH SD MODEL  - SLT 3/9/2005
1776        KM        RETURN DIVERT FROM ADMP1
1777        DR   ADMP1
            * BA     0
            * ZR  =QI A=DURANGO B=SLT2  C=FLOW  E=5MIN
            *

1778        KK  MCJCJB
1779        KM   ROUTE      REACH
1780        KM   MASTER CHANNEL ROUTE FROM JC1 TO JB1
1781        KM   ASSUME FLOW OVER RETENTION BASINS AS IS CURRENT DEVELOPED CONDITION
1782        RS       6    FLOW      -1
1783        RC   0.040   0.040   0.040    5964  0.0015    0.00
1784        RX     0.0       0       0       0     250     250     250     250
1785        RY      10       0       0       0     0.0       0       0      10
            *

1786        KK  ~CPJB1
1787        KM   COMBINE FLOWS FROM MD, JC1, MG AND JB1 INTO ADMP CHANNEL
1788        KM   COMBINE ADDED, JEP 5/10/01
1789        HC       5    9.37
            *

1790        KK   RRJB1
1791        KM   MODIFIED PULS ROUTING
1792        KM   DETENTION IN DRCC RIGHT OF WAY AT JB1 (83RD AVENUE) POL
1793        KM   BASIN 6 FEET DEEP, 850 FEET LONG 165 FOOT BOTTOM 250 FOOT TOP
1794        KM   ASSUME 1 FOOT WEIR OVER THE ROAD
1795        KM   CULVERT IS 1 CELL 4 BY 8
1796        RS       1    STOR       0        0
1797        SV       0     3.4    24.2     29.1
1798        SQ       0      18     308     1094
            *
```



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

1799        KK    DIED
1800        KM   DIVERT FLOWS AT JB TO ED.  THIS IS DONE TO ROUTE FLOW AS NEEDED
1801        KM   FOR THE ADMP
1802        DT    DIED
1803        DI       0   10000
```

```
1804          DQ       0   10000
              *
              *
              *

1805          KK   SUBOE   BASIN
1806          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1807          KM    L=      1.1  Lca=       .6   S=   17.3  Kn= .03  LAG=  20.8
1808          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1809          BA   0.469
1810          LG    0.15    0.23    6.20    0.24      55
1811          UI      84     321     482     784     767     519     338     150      92      38
1812          UI      23      23      10       0       0       0       0       0       0       0
1813          UI       0       0       0       0       0       0       0       0       0       0
              *

1814          KK   RETOE
1815          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1816          DT   RETOE    47.0
1817          DI       0   10000
1818          DQ       0   10000
              *
              * REMOVED BY JCS
              * KK RETOE
              * KM DIVERT RETENTION OUT OF MODEL DUE TO WILLAMETTE IND. DEVELOPMENT. -DCF
              * KM TOTAL RETENTION IS 5.3 AF. 80% OF THAT IS USED HERE. -DCF
              * DT RETOE     4.2
              * DI      0   10000
              * DQ      0   10000
              *

1819          KK   CPOE1
1820          KM   RETURN DIVERT FROM PA.
1821          DR    DIOE
              *

1822          KK  RTDIOE   ROUTE   REACH
1823          KM   ROUTE DIVERT FROM PA T0 OE
1824          KM   FUTURE ARTERIAL SECTION
1825          RS       7              -1       0
1826          RC   0.100   0.023   0.100    5000  0.0013    0.00
1827          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1828          RY     105     105     105   99.75   99.75     105     105     105
              *
              * THE FOLLOWING RETURNS REMOVED TO MODEL THE ADMP CONDITION.
              * KK CPOE2
              * KM RETURN DIVERT FROM RH
              * DR DIOE2
              *
              * KK CPOE3
              * KM RETURN DIVERT FROM RI
              * DR DIOE3
              *
```



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

1829          KK   @CPOE
1830          KM        ADD HYDROGRAPHS AT OE
1831          HC       2     .47
              *

1832          KK  DIOEOD
1833          KM   DIVERT 17% OF FLOW FROM OE2 TO OD
1834          DT    DIOD
1835          DI       0      25      50      75     100     150     200
1836          DQ       0       4       9      12      17      26      34
              *

1837          KK  RTOEMF   ROUTE   REACH
1838          KM   ROUTE FLOW FROM OE TO MF.
1839          KM   FUTURE ARTERIAL SECTION
1840          RS       4              -1       0
1841          RC   0.100   0.023   0.100    5200  0.0021    0.00
1842          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1843          RY     105     105     105   99.75   99.75     105     105     105
              *

1844          KK   SUBMF   BASIN
1845          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1846          KM    L=      1.4  Lca=       .7   S=   12.9  Kn= .050  LAG=  44.0
1847          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1848          BA   0.971
1849          LG    0.25    0.15    8.40    0.10      30
1850          UI      74      74     256     341     414     483     581     777     936     739
1851          UI     619     520     429     362     256     153     125     105      74      56
1852          UI      23      23      23      22      22      22       6       0       0       0
              *

1853          KK   RETMF
1854          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1855          DT   RETMF    80.3
1856          DI       0   10000
1857          DQ       0   10000
              *

1858          KK    CPMF
1859          KM        RETURN ROUTING DIVERT FROM MD (DIMFX).
1860          DR   DIMFX
              *
              *

1861          KK  RTMDMF   ROUTE   REACH
1862          KM        ROUTE FLOW FROM MD TO MF (ALONG LOWER BUCKEYE ROAD).
1863          KM        FUTURE ARTERIAL SECTION
1864          RS       6              -1       0
1865          RC   0.100   0.023   0.100    5200  0.0015    0.00
```

```
1866          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1867          RY     105     105     105   99.75   99.75     105     105     105
              *
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1868          KK   CPMF1
1869          KM        ADD HYDROGRAPHS AT MF
1870          HC       3
              *

1871          KK  DIMFEB
1872          KM        DIVERT 47% OF FLOW AT MF TO EB.
1873          DT    DIEB
1874          DI       0       25      50      75     100     150     200
1875          DQ       0       12      23      35      47      71      94
              *

1876          KK  RTMFMC   ROUTE   REACH
1877          KM        ROUTE FLOW FROM MF TO MC (ALONG LOWER BUCKEYE ROAD).
1878          KM        FUTURE ARTERIAL SECTION
1879          RS       5              -1       0
1880          RC   0.100   0.023   0.100    5200  0.0015    0.00
1881          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1882          RY     105     105     105   99.75   99.75     105     105     105
              *

1883          KK   SUBOD   BASIN
1884          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1885          KM    L=      1.1  Lca=       .6   S=   18.2  Kn= .030  LAG=  20.6
1886          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1887          BA   0.509
1888          LG    0.15    0.15    9.70    0.07      55
1889          UI      94     354     533     874     825     556     357     157      97      37
1890          UI      25      26       7       0       0       0       0       0       0       0
1891          UI       0       0       0       0       0       0       0       0       0       0
              *

1892          KK   RETOD
1893          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1894          DT   RETOD    63.7
1895          DI       0   10000
1896          DQ       0   10000
              *

1897          KK    DROD
1898          KM    RETURN DIVERT FROM OE.
1899          DR    DIOD
              *

1900          KK  RTDIOD  ROUTE   REACH
1901          KM   FUTURE ARTERIAL SECTION
1902          RS       4              -1       0
1903          RC   0.100   0.023   0.100    2700  0.0013    0.00
1904          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1905          RY     105     105     105   99.75   99.75     105     105     105
              *
              * THE FOLLOWING RETURNS REMOVED TO MODEL THE ADMP CONDITION
              * KK DROD2
              * KM  RETURN DIVERT FROM OG1
              * DR DIOD1
              *
              * KK DROD3
              * KM      RETURN DIVERT FROM OG2.
              * DR DIOD2
              *
1                                          HEC-1 INPUT                                                          PAGE 54

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

1906          KK    CPOD
1907          KM   ADD HYDROGRAPHS AT OD.
1908          HC       2
              *

1909          KK  DIODOC
1910          KM        DIVERT 18% OF FLOW FROM OD TO OC.
1911          DT    DIOC
1912          DI       0       25      50      75     100     150     200
1913          DQ       0        5       9      14      18      27      36
              *

1914          KK  RTODMC   ROUTE   REACH
1915          KM   ROUTE FLOW FROM OD TO MC.
1916          KM   FUTURE ARTERIAL SECTION
1917          RS       5              -1       0
1918          RC   0.100   0.023   0.100    5200  0.0023    0.00
1919          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1920          RY     105     105     105   99.75   99.75     105     105     105
              *

1921          KK   SUBMC   BASIN
1922          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1923          KM    L=      1.4  Lca=       .7   S=   13.6  Kn= .035  LAG=  30.5
1924          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1925          BA   0.999
1926          LG    0.18    0.15    8.80    0.09      59
1927          UI     110     271     519     667     869    1308    1136     873     663     506
1928          UI     275     187     126      81      34      34      34      34       7       0
              *

1929          KK   RETMC
1930          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1931          DT   RETMC    95.4
```

```
1932          DI       0   10000
1933          DQ       0   10000
              *

1934          KK   CPMC1
1935          KM        ADD HYDROGRAPHS AT MC
1936          HC       3
              *

1937          KK  DIMCMB
1938          KM        DIVERT 39% OF FLOW AT MC TO MB.
1939          DT    DIMB
1940          DI       0      25      50      75     100     150     200
1941          DQ       0       8      20      29      39      59      78
              *
```



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

1942          KK  RTMCIE   ROUTE   REACH
1943          KM        ROUTE FLOW FROM MC TO IE (ALONG 99TH AVENUE).
1944          KM        FUTURE ARTERIAL SECTION
1945          RS       1          -1       0
1946          RC   0.100   0.023   0.100    2000  0.0030    0.00
1947          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1948          RY     105     105     105   99.75   99.75     105     105     105
              *

1949          KK  DIMCIE
1950          KM        DIVERT FLOW FOR LATER RECOMBINING
1951          DT    MCIE
1952          DI       0   10000
1953          DQ       0   10000
              *

1954          KK    DREB
1955          KM   RETURN DIVERT FROM MF TO EB
1956          DR    DIEB
              *

1957          KK   SUBEB   BASIN
1958          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1959          KM    L=        .5  Lca=        .3   S=   11.3  Kn= .050  LAG=  22.1
1960          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1961          BA   0.139
1962          LG    0.25    0.21    6.40    0.23      30
1963          UI      21      85     127     192     240     164     114      60      34      19
1964          UI       6       6       6       1       0       0       0       0       0       0
              *

1965          KK   RETEB
1966          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1967          DT   RETEB    11.5
1968          DI       0   10000
1969          DQ       0   10000
              *

1970          KK    CPEB
1971          HC       2
              *

1972          KK   RDIED
1973          KM   RETURN DIVERT FROM JB1 TO ED1
1974          DR    DIED
              *

1975          KK  RJBED1   ROUTE   REACH
1976          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 83RD TO IRRIGATION CANAL
1977          KM   ROUTING IS OVER EXISTING RETENTION BASINS 250 FOOT WIDTH
1978          RS       7          -1       0
1979          RC   0.040   0.040   0.040    2563  0.0007    0.00
1980          RX     0.0       0       0       0     250     250     250     250
1981          RY      10       1       1     1.0     1.0       1       1      10
              *
```



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

1982          KK  RJBED2   ROUTE   REACH
1983          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM IRRIGATION CANAL TO 91ST
1984          KM    ROUTING IS OVER EXISTING RETENTION BASINS MEASURED AT 420 FOOT WIDTH
1985          KM    NEW DEVELOPMENT STILL BEING GRADED AT TIME OF THIS RUN 1-22-2006
1986          RS       7          -1       0
1987          RC   0.040   0.040   0.040    2563  0.0007    0.00
1988          RX     0.0       0       0       0     420     420     420     420
1989          RY      10       1       1     1.0     1.0       1       1      10
              *

1990          KK  SUBED1   BASIN
1991          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1992          KM    L=       1.2  Lca=        .6   S=    9.4  Kn= .050  LAG=  42.1
1993          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1994          BA   0.382
1995          LG    0.25    0.25    5.70    0.31      30
1996          UI      30      35     108     147     174     208     254     357     356     280
1997          UI     237     193     161     127      75      53      49      30      27       9
1998          UI       9       9       9       9       9       2       0       0       0       0
              *

1999          KK  RETED1
2000          KM   RETENTION
2001          KM   DIVERT FIRST FLUSH AND A PORTION OF 100-YEAR 2-HOUR RETENTION
2002          KM   PORTION OF ED1 UPSTREAM OF IRRIGATION CANAL ASSUMED 100-YEAR-2HOUR RETENTION
2003          KM   PORTION OF ED1 DOWNSTREAM OF IRRIGATION CANAL ASSUMED FIRST FLUSH ONLY
2004          KM   DOWNSTREAM 100-YEAR 2-HOUR RETENTION WOULD BE REMOVED BY INSTALLING 10-YEAR
2005          KM   CULVERT AT 91ST AVENUE
```

```
2006          DT  RETED1    19.9
2007          DI       0   10000
2008          DQ       0   10000
              *

2009          KK  SUBED2   BASIN
2010          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2011          KM    L= 0.6     Lca=  .3      S=     9.4      Kn= .050     LAG=  24.5
2012          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2013          BA   0.114
2014          LG    0.30    0.25    5.70    0.31      15
2015          UI      16      54      87     118     184     146     107      76      38      24
2016          UI      15       5       5       5       3       0       0       0       0       0
              *

2017          KK  RETED2
2018          KM   RETENTION
2019          KM   DIVERT 80% OF 100-YEAR 2-HOUR  RETENTION OUT OF MODEL - JCS
2020          DT  RETED2     7.5
2021          DI       0   10000
2022          DQ       0   10000
              *
```



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

2023          KK  CPED1
2024          KM   ADD HYDROGRAPHS AT ED1
2025          HC       2
              *

2026          KK  ~CPED1
2027          KM   ADD HYDROGRAPHS AT ED1
2028          HC       2
              *

2029          KK  ~CPED2
2030          KM   COMBINE FLOW FROM EB & ED WITH FLOW FROM MF DIVERSION
2031          HC       2
              *

2032          KK  RRED
2033          KM   MODIFIED PULS ROUTING
2034          KM   DETENTION IN DRCC RIGHT OF WAY AT ED1 (91ST AVENUE)  POL
2035          RS       1    STOR       0       0
2036          SV       0    11.7    16.4
2037          SQ       0     333    1180
              *

2038          KK  RT99  ROUTE   REACH
2039          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 91ST TO 99TH BASIN
2040          RS       1              -1       0
2041          RC   0.032   0.032   0.032    5217  0.0015    0.00
2042          RX     0.0       0       0      23      45      66      66      66
2043          RY       7       7       7     0.0     0.0       7       7       7
              *
              * KT95 BASIN REMOVED BY KA - PRESTIGE ENG
              * KK95BASIN
              * KM DETENTION IN 95BSN
              *
              * SECOND LEG OF ROUTING REMOVED (FROM 95TH TO 99TH) BY KA -PRESTIGE ENG

2044          KK  SUBID1   BASIN
2045          KM   THE FOLLOWING PARMETERS WERE PROVIDED FOR THIS BASIN
2046          KM   L= 1.0 Lca= .4  S= 7.1  Kn= .05  LAG= 35.0
2047          BA   0.204
2048          LG    0.25    0.15    8.00    0.11      30
2049          UI      20      37      82     107     131     170     242     199     159     126
2050          UI     101      71      38      32      20      15       6       6       6       6
2051          UI       6       0       0       0       0       0       0       0       0       0
2052          UI       0       0       0       0       0       0       0       0       0       0
              *

2053          KK  RETID1
2054          KM   RETENTION
2055          KM   DIVERT 80% OF 100-YEAR 2 HOUR RETENTION
2056          KM   NO EXPECTED PROJECT-RELATED CHANGE IN RETENTION AS A RESULT OF THIS PROJECT
2057          DT  RETID1    16.9
2058          DI       0   10000
2059          DQ       0   10000
              *
```



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

2060          KK  SUBID2   BASIN
2061          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2062          KM    L=   1.0     Lca=  .4       S=  7.1      Kn= .05     LAG=  35.0
2063          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2064          BA   0.359
2065          LG    0.25    0.25    4.90    0.40      30
2066          UI      34      65     145     188     231     298     426     351     280     222
2067          UI     177     124      67      57      36      26      11      10      11      10
2068          UI      10       0       0       0       0       0       0       0       0       0
2069          UI       0       0       0       0       0       0       0       0       0       0
              *

2070          KK  RETID2
2071          KM   RETENTION
2072          KM   DIVERT 80% OF 100-YEAR 2 HOUR RETENTION
2073          KM   NO EXPECTED PROJECT-RELATED CHANGE IN RETENTION AS A RESULT OF THIS PROJECT
2074          DT  RETID2    29.7
2075          DI       0   10000
2076          DQ       0   10000
              *
```

```
2077          KK   SUBIE   BASIN
2078          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2079          KM    L=        .8  Lca=        .4    S=      6.0  Kn= .05    LAG=  34.3
2080          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2081          BA   0.302
2082          LG    0.25    0.15    8.80    0.09      30
2083          UI      30      58     126     164     203     267     368     289     232     181
2084          UI     137     135     135     132     113     115     126      84      88      87
2085          UI     146      93      51      44      30      16       9       9       9       9
2086          UI       5       0       0       0       0       0       0       0       0       0
              *

2087          KK   RETIE
2088          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2089          DT   RETIE    25.0
2090          DI       0   10000
2091          DQ       0   10000
              *

2092          KK  DRMCIE
2093          KM   RETURN DIVERT MCIE
2094          DR    MCIE
              *

2095          KK  ~CPID2
2096          HC       4
              *
```



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1                                        HEC-1 INPUT

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

2097          KK   RRID1
2098          KM   MODIFIED PULS ROUTING
2099          KM   DETENTION IN DRCC RIGHT OF WAY AT ID1 (99TH AVENUE)  POL
2100          KM   OUTFLOW BASED ON AN EXISTING 2 CELL 4 BY 10 CULVERT AT 99TH AVENUE
2101          KM   MAXIMUM HEADWATER IS 6 FEET WITHOUT OVERFLOW
2102          KM   ASSUME 1 FOOT OVERFLOW
2103          KM   STORAGE BASED ON EXISTING CHANNEL 20 FOOT BOTTOM WIDTH 65 FOOT TOP
2104          KM   CHANNEL 6 FEET DEEP ASSUME 1 FOOT OVERTOPPING
2105          KM   OVERTOPPING WIDTH 250 FEET
2106          KM   CHANNEL SLOPE 0.0032
2107          RS       1    STOR       0       0
2108          SV       0    0.10       6    12.9
2109          SQ       0      50     770    1611
              *

2110          KK   CPID3
2111          HC       2
              *

2112          KK  RT107  ROUTE   REACH
2113          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 99TH TO 107TH
2114          KM   APPROXIMATELY THREE FOURTHS OF THIS CHANNEL IS EXISTING
2115          KM   CHANNEL ASSUMED TO BE EXTENDED TO 500 FT UPSTREAM OF 107TH AVE
2116          KM   THIS AND PROPOSED CULVERT AT 107TH ASSUMED TO ELIMINATE
2117          KM   ALL BUT FIRST FLUSH RETENTION BETWEEN 99TH AND 107TH
2118          RS       2      -1       0
2119          RC   0.032   0.032   0.032    4765  0.0032    0.00
2120          RX     0.0       0       0      23      45      66      66      66
2121          RY       7       7       7     0.0     0.0       7       7       7
              *

2122          KK   SUBIB   BASIN
2123          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2124          KM    L=   1.1    Lca=  .6        S=   14.2      Kn= .050     LAG=  36.8
2125          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2126          BA   0.479
2127          LG    0.25    0.15    8.00    0.13      30
2128          UI      44      75     175     231     279     349     502     500     386     316
2129          UI     252     199     123      76      66      44      27      13      14      13
2130          UI      13      13       0       0       0       0       0       0       0       0
2131          UI       0       0       0       0       0       0       0       0       0       0
              *

2132          KK   RETIB
2133          KM   RETENTION MODIFIED FROM REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTING -
2134          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2135          DT   RETIB    10.2
2136          DI       0   10000
2137          DQ       0   10000
              *
```



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1                                        HEC-1 INPUT

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

2138          KK   SUBIC   BASIN
2139          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2140          KM    L=  1.1     Lca= .5       S=  4.7     Kn= .050     LAG=  43.1
2141          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2142          BA   0.461
2143          LG    0.25    0.25    5.20    0.36      30
2144          UI      36      38     127     169     203     239     289     396     442     344
2145          UI     291     240     200     162     111      64      59      43      36      18
2146          UI      11      11      11      11      11       9       0       0       0       0
2147          UI       0       0       0       0       0       0       0       0       0       0
              *

2148          KK   RETIC
2149          KM   RETENTION MODIFIED FROM 80% REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTI
2150          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2151          DT   RETIC     9.8
2152          DI       0   10000
2153          DQ       0   10000
              *

2154          KK    CPIC
```

```
2155        KM   COMBINE IB AND IC FLOWS
2156        HC       2
            *
            *

2157        KK   SUBOC   BASIN
2158        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2159        KM    L=        .8  Lca=        .4   S=    13.2    Kn= .03   LAG=  17.6
2160        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2161        BA   0.310
2162        LG    0.15    0.15    9.70    0.07      59
2163        UI      85     285     452     670     436     263     109      56      18      18
2164        UI      10       0       0       0       0       0       0       0       0       0
2165        UI       0       0       0       0       0       0       0       0       0       0
            *

2166        KK   RETOC
2167        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2168        DT   RETOC    31.1
2169        DI       0   10000
2170        DQ       0   10000
            *

2171        KK    DROC
2172        KM    RETURN DIVERT FROM OD.
2173        DR    DIOC
            *
```



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1                                   HEC-1 INPUT

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

2174        KK  RTDIOC   ROUTE   REACH
2175        KM        ROUTE DIVERT FROM OD TO OC
2176        KM        FUTURE ARTERIAL SECTION
2177        RS       7              -1       0
2178        RC   0.100   0.023   0.100    4000  0.0010    0.00
2179        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2180        RY     105     105     105   99.75   99.75     105     105     105
            *

2181        KK    CPOC
2182        KM   ADD HYDROGRAPHS AT OC
2183        HC       2
            *

2184        KK  RTOCMB   ROUTE   REACH
2185        KM        ROUTE FLOW FROM OC TO MB.
2186        KM        FUTURE ARTERIAL SECTION
2187        RS       3              -1       0
2188        RC   0.100   0.023   0.100    5200  0.0038    0.00
2189        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2190        RY     105     105     105   99.75   99.75     105     105     105
            *

2191        KK   SUBMB   BASIN
2192        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2193        KM    L=  1.4     Lca= .7     S= 17.6     Kn= .0425     LAG=  34.5
2194        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2195        BA   0.995
2196        LG    0.21    0.15    8.40    0.10      46
2197        UI      97     190     413     535     664     866    1210     956     766     598
2198        UI     486     313     171     148      98      58      30      30      30      30
2199        UI      17       0       0       0       0       0       0       0       0       0
2200        UI       0       0       0       0       0       0       0       0       0       0
            *

2201        KK   RETMB
2202        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2203        DT   RETMB    88.4
2204        DI       0   10000
2205        DQ       0   10000
            *

2206        KK    DRMB
2207        KM    RETURN DIVERT FROM MC.
2208        DR    DIMB
            *

2209        KK  RTDIMB   ROUTE   REACH
2210        KM        ROUTE DIVERT FROM MC TO MB
2211        KM        FUTURE ARTERIAL SECTION
2212        RS       4              -1       0
2213        RC   0.100   0.023   0.100    5200  0.0023    0.00
2214        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2215        RY     105     105     105   99.75   99.75     105     105     105
            *
```



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1                                   HEC-1 INPUT

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

2216        KK   @CPMB
2217        KM   ADD HYDROGRAPHS AT MB.
2218        HC       3    5.24
            *

2219        KK  RTMBIB   ROUTE   REACH
2220        KM        ROUTE FLOW FROM MB TO IB (ALONG 107TH AVENUE).
2221        KM        FUTURE ARTERIAL SECTION
2222        RS       1              -1       0
2223        RC   0.100   0.030   0.100    2600  0.0015    0.00
2224        RX     0.0     440     445   445.1   745.1   745.2     900  1000.0
2225        RY     105     105     105   100.0   100.0     105     105     105
            *

2226        KK   CPIB0
2227        KM   ADD HYDROGRAPHS AT IB.
```

```
2228        HC        2
            *
            * KK CPIB1
            * KM ADD HYDROGRAPHS AT IB.
            * HC      2
            *

2229        KK  @CPIB2
2230        KM   COMBINE TRIBUTARY FLOW WITH MAIN CHANNEL FLOW
2231        HC        3
            *
            * ADD DETENTION BASIN AT 107TH AVE - BY KA (PRESTIGE ENGR)
            *

2232        KK  DET107
2233        KO        2
2234        KM   MODIFIED PULS ROUTING
2235        KM   BASIN AT 107TH AVENUE REPLACES THE 95TH AVE BASIN BY ASPEN
2236        KM   BASIN HAS 18-AC BOTTOM AREA WITH 6:1 SIDE SLOPES
2237        KM   BASIN BOTTOMFLUSH WITH ADJACENT CHANNEL BOTTOM (IN-LINE TYPE)
2238        KM   A CULVERT TRIPLE    10x5 RBC
2239        KM   MAX CULVERT HEADWATER AND PONDING IN BASIN IS 5 FEET. OVERTOPPING ON ROAD
2240        KM   NOT ALLOWED
2241        RS        1    STOR        0        0
2242        SV        0    18.2     37.0     56.2     76.0     86.1     96.2     96.2
2243        SQ        0    21.7      140      312    527.5    647.5    775.0    912.5
2244        SE      960     961      962      963      964    964.5      965    965.5
            *
            *

2245        KK  MCIBIA   ROUTE   REACH
2246        KM   ADMP CHANNEL
2247        KM   ROUTE FLOW FROM IB TO IA
2248        RS        4    FLOW       -1
2249        RC    0.040   0.040    0.040     2493   0.0005     0.00
2250        RX      1.0    17.0     35.2     53.3    263.3    281.5    299.7    315.7
2251        RY      5.7     6.1      3.0      0.0      0.0      3.0      6.1      5.7
            *
            * KM HEC-RAS REACH
            * KM BFC
            * KM ROUTE FLOW FROM IB TO IA (ALONG 107TH AVENUE).
            * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
            * KM HEC-RAS MODEL. 06.07.00 -DCF
            * RS      3    STOR        0
            * SV      0      17     45.4       77      106    135.9    167.9    199.8    228.7        2
            * SQ      0     400      800     1200     1600     2000     2400     2800     3200       34
            *
            * KM FUTURE ARTERIAL SECTION
            * RS      1                -1        0
            * RC  0.100   0.023    0.100      500   0.0120     0.00
            * RX    0.0     440      445    445.1    575.1    575.2      900   1000.0
            * RY    105     105      105    99.75    99.75      105      105      105
            *
```



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

2252        KK   SUBME   BASIN
2253        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2254        KM    L=   1.0     Lca= .4     S=  20.6     Kn= .050     LAG=  30.1
2255        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2256        BA   0.326
2257        LG    0.29    0.26    4.70    0.44      18
2258        UI      36      91     172     222     290     437     366     282     215     161
2259        UI      83      61      39      23      11      11      11      11       0       0
2260        UI       0       0       0       0       0       0       0       0       0       0
            *

2261        KK   RETME
2262        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2263        DT   RETME    22.8
2264        DI       0   10000
2265        DQ       0   10000
            *

2266        KK  RTMEIA   ROUTE   REACH
2267        KM        ROUTE FLOW FROM ME TO IA (ALONG 107TH AVENUE).
2268        KM        FUTURE ARTERIAL SECTION
2269        RS       3                -1        0
2270        RC   0.100   0.023    0.100     3400   0.0034     0.00
2271        RX     0.0     440      445    445.1    575.1    575.2      900   1000.0
2272        RY     105     105      105    99.75    99.75      105      105      105
            *

2273        KK   SUBIA   BASIN
2274        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2275        KM    L=  .8      Lca=  .4     S= 17.1      Kn= .05     LAG=  26.2
2276        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2277        KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2278        KM   WITHOUT RETENTION. - JCS
2279        BA   0.309
2280        LG    0.27    0.25    6.00    0.25    23.1
2281        UI      40     125     210     277     426     426     309     227     152      73
2282        UI      53      32      12      12      12       8       0       0       0       0
2283        UI       0       0       0       0       0       0       0       0       0       0
            *

2284        KK   RETIA
2285        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2286        KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2287        KM   WITHOUT RETENTION. - JCS
2288        DT   RETIA     3.6
2289        DI       0   10000
2290        DQ       0   10000
            *
```

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

2291          KK   ~CPIA
2292          KM        ADD HYDROGRAPHS AT IA.
2293          HC       3
              *

2294          KK  MCIAHB   ROUTE   REACH
2295          KM   ADMP CHANNEL
2296          KM   ROUTE FLOW FROM BASIN IA TO HB
2297          RS       4    FLOW      -1
2298          RC   0.040   0.040   0.040    2646  0.0005    0.00
2299          RX     0.0    16.0    34.1    52.2   262.2   280.3   298.4   314.4
2300          RY     5.7     6.0     3.0     0.0     0.0     3.0     6.0     5.7
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM IA TO HB.
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS     2    STOR       0
              * SV     0    23.3    45.2      73   102.7   132.9   160.6   189.4   212.1   222
              * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
              *

2301          KK   SUBHB   BASIN
2302          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2303          KM    L=  .8     Lca=    .4     S=  25.0     Kn= .050     LAG=  25.1
2304          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2305          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2306          KM   WITHOUT RETENTION. - JCS
2307          BA   0.343
2308          LG    0.27    0.25    4.80    0.41    24.3
2309          UI      46     154     250     336     531     450     329     239     132      78
2310          UI      48      21      14      14      14       0       0       0       0       0
2311          UI       0       0       0       0       0       0       0       0       0       0
              *

2312          KK   RETHB
2313          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2314          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2315          KM   WITHOUT RETENTION. - JCS
2316          DT   RETHB     4.5
2317          DI       0   10000
2318          DQ       0   10000
              *

2319          KK   CPHB1
2320          KM   ADD HYDROGRAPHS AT HB.
2321          HC       2
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2322          KK   SUBDA   BASIN
2323          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2324          KM    L=  1.0    Lca= .6     S= 17.6     Kn= .05     LAG=  34.0
2325          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2326          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2327          KM   WITHOUT RETENTION. - JCS
2328          BA   0.328
2329          LG    0.30    0.17    6.80    0.18      15
2330          UI      32      65     140     181     225     302     400     311     249     195
2331          UI     154      94      56      46      33      14      10      10      10      10
2332          UI       3       0       0       0       0       0       0       0       0       0
2333          UI       0       0       0       0       0       0       0       0       0       0
              *

2334          KK   RETDA
2335          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2336          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2337          KM   WITHOUT RETENTION. - JCS
2338          DT   RETDA     4.6
2339          DI       0   10000
2340          DQ       0   10000
              *

2341          KK   ~CPDA
2342          KM   ADD HYDROGRAPHS AT DA.
2343          HC       2
              *

2344          KK   SUBLD   BASIN
2345          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2346          KM    L=       .8  Lca=       .4    S=    13.3    Kn= .05    LAG=  30
2347          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2348          BA   0.278
2349          LG    0.28    0.26    4.80    0.37      29
2350          UI      32      82     153     197     263     386     305     236     179     126
2351          UI      65      49      32      14      10      10       9       6       0       0
2352          UI       0       0       0       0       0       0       0       0       0       0
              *

2353          KK   RETLD
2354          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2355          DT   RETLD    20.7
2356          DI       0   10000
2357          DQ       0   10000
              *
              * THE FOLLOWING RETURN AND ROUTE REMOVED TO MODEL THE ADMP CONDITION
              * KK  DRLD
              * KM RETURN DIVERT FROM LE TO LD
              * DR  DILD
              *
              * KKRTDILD   ROUTE   REACH
              * KM ROUTE DIVERT FROM LE TO LD
```

```
                 * KM TYPE A CHANNEL
                 * RS     4              -1        0
                 * RC 0.025   0.025   0.025    2500  0.0016    0.00
                 * RX   0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
                 * RY   5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *
```



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1                                   HEC-1 INPUT

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

2358             KK  RTLDMA   ROUTE   REACH
2359             KM        ROUTE FLOW FROM LD TO MA
2360             KM        TYPE A CHANNEL
2361             RS       3              -1        0
2362             RC   0.025   0.025   0.025    2600  0.0035    0.00
2363             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2364             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *

2365             KK   SUBMA   BASIN
2366             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2367             KM    L=  .7       Lca= .3        S=  14.7       Kn= .050      LAG=  24.8
2368             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2369             BA   0.247
2370             LG    0.30    0.25    4.55    0.52      15
2371             UI      33     115     184     250     392     320     234     167      88      55
2372             UI      34      12      10      10       8       0       0       0       0       0
2373             UI       0       0       0       0       0       0       0       0       0       0
                 *

2374             KK   RETMA
2375             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2376             DT   RETMA    16.3
2377             DI       0   10000
2378             DQ       0   10000
                 *

2379             KK    CPMA
2380             KM        ADD HYDROGRAPHS AT MA
2381             HC       2
                 *

2382             KK  RTMAHB   ROUTE   REACH
2383             KM        ROUTE FLOW FROM MA TO HB (ALONG 115TH AVENUE).
2384             KM        FUTURE ARTERIAL SECTION
2385             RS       3              -1        0
2386             RC   0.100   0.023   0.100    4000  0.0071    0.00
2387             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2388             RY     105     105     105   99.75   99.75     105     105     105
                 *

2389             KK   CPHB2
2390             KM        ADD HYDROGRAPHS AT HB.
2391             HC       2
                 *
                 * THE FOLLOWING ROUTES REMOVED TO MODEL THE ADMP CONDITION
                 * ROUTING TO DA NO LONGER OCCURS BUT IS COMBINED INTO CHANNEL AT HB
                 * KKRTHBDA
                 * KM HEC-RAS REACH
                 * KM BFC
                 * KM ROUTE FLOW FROM HB TO DA (ALONG 115TH AVENUE).
                 * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
                 * KM HEC-RAS MODEL. 06.07.00 -DCF
                 * RS     2    STOR       0
                 * SV     0    11.3    18.3    26.4    34.3    40.3    46.2    51.7    56.5    59
                 * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
                 *
                 * KKRTDACC
                 * KM HEC-RAS REACH
                 * KM BFC
                 * KM ROUTE FLOW FROM DA TO CC.
                 * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
                 * KM HEC-RAS MODEL. 06.07.00 -DCF
                 * RS     6    STOR       0
                 * SV     0    49.6    80.6   107.1   129.8   149.2     167   184.1   200.2   207
                 * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
                 *
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1                                   HEC-1 INPUT

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

2392             KK   SUBLB   BASIN
2393             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2394             KM    L=       .7  Lca=        .3   S=      8.8  Kn= .050  LAG=  27
2395             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2396             BA   0.249
2397             LG    0.30    0.25    4.60    0.49      15
2398             UI      31      90     158     206     297     358     258     192     142      72
2399             UI      50      31      14      10      10       9       3       0       0       0
2400             UI       0       0       0       0       0       0       0       0       0       0
                 *

2401             KK   RETLB
2402             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2403             DT   RETLB    16.4
2404             DI       0   10000
2405             DQ       0   10000
                 *

2406             KK  RTLBHA   ROUTE   REACH
2407             KM        ROUTE FLOW FROM LB TO HA (SHEET FLOW).
2408             KM        TYPE A CHANNEL
2409             RS      13              -1        0
2410             RC   0.100   0.100   0.100    4000  0.0065    0.00
2411             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2412             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
```

```
                *
2413            KK   SUBHA   BASIN
2414            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2415            KM    L=  .8     Lca=  .4      S= 33.8      Kn= .05     LAG=  23.5
2416            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2417            BA   0.150
2418            LG    0.25     0.25     4.70     0.44      30
2419            UI      21       79      122      172     255      186      133      089       42       27
2420            UI      14        7        7        7       0        0        0        0        0        0
2421            UI       0        0        0        0       0        0        0        0        0        0
                *

2422            KK   RETHA
2423            KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2424            DT   RETHA     3.2
2425            DI       0   10000
2426            DQ       0   10000
                *

2427            KK    CPHA
2428            KM        ADD HYDROGRAPHS AT HA
2429            HC       3
                * ***********************************************************************
                * INSERTED SOUTH ALIGNMENT FROM 1084F6-IMP-R.DAT - JCS
                * ADDED/CHANGED SUBJB2 TO CPEE IN ORDER TO REINSERT SUBJB2 - JCS
                *
1                                          HEC-1 INPUT                                                    PAGE 68

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

2430            KK  MCHACB    ROUTE       REACH
2431            KM   ADMP CHANNEL
2432            KM   ROUTE FLOW FROM HA TO CB.
2433            RS       8    FLOW       -1
2434            RC   0.040   0.040   0.040    9163  0.0017    0.00
2435            RX     0.0    16.0    33.7    51.4   201.4   219.4   228.1   244.1
2436            RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
                *

2437            KK   SUBJB2
2438            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2439            KM    L=      1.3  Lca=      .7   S=   17.4  Kn= .050  LAG=  40
2440            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2441            BA   0.493
2442            LG    0.30     0.21     6.40     0.18      15
2443            UI      41       54      151      203     242      293      372      515      433      350
2444            UI     292      237      194      133      73       68       46       41       14       13
2445            UI      12       13       13       13       2        0        0        0        0        0
                *

2446            KK  RETJB2
2447            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2448            DT  RETJB2    32.4
2449            DI       0   10000
2450            DQ       0   10000
                *

2451            KK   DRJB2
2452            KM    RETURN DIVERT FROM JC2
2453            DR   DIJB2
                *

2454            KK   RTJCJB   ROUTE       REACH
2455            KM   ROUTE DIVERT FROM JC2 TO JB2
2456            KM   FUTURE ARTERIAL SECTION
2457            RS       4                -1       0
2458            RC   0.100   0.023   0.100     5000  0.0015    0.00
2459            RX     0.0     440     445    445.1   575.1   575.2     900  1000.0
2460            RY     105     105     105    99.75   99.75     105     105     105
                *

2461            KK  @CPJB2
2462            KM   ADD HYDROGRAPHS AT JB2
2463            HC       2    3.81
                *

2464            KK  DIJBEE
2465            KM   DIVERT 64% OF FLOW AT JB2 TO FA AND THE SALT RIVER. - JCS
2466            DT    DIFA
2467            DI       0      25      50      75     100     150    2000
2468            DQ       0      16      32      48      64      96    1280
                *
1                                          HEC-1 INPUT                                                    PAGE 69

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

2469            KK  RTJBEE  ROUTE       REACH
2470            KM        ROUTE DIVERT FROM JB TO EE
2471            KM        TYPE A CHANNEL
2472            RS      10                -1       0
2473            RC   0.100   0.023   0.100     7500  0.0015    0.00
2474            RX     0.0   100.0   400.0    500.0   500.1   600.0   900.0  1000.0
2475            RY     5.0     4.0     1.0      0.0     0.0     1.0     4.0     5.0
                *

2476            KK   SUBEE
2477            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2478            KM    L=      1.6  Lca=      1.0   S=   16.0  Kn= .05  LAG=  50.8
2479            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2480            BA   0.958
2481            LG    0.20     0.25     4.90     0.34      15
2482            UI      63       63      159      258     318      366      421      494      637      802
2483            UI     695      577      504      428     362      314      244      157      113      104
2484            UI      79       64       51       19      20       20       19       20       20       20
2485            UI       7        0        0        0       0        0        0        0        0        0
```

```
2486        UI       0       0       0       0       0       0       0       0       0       0
            *

2487        KK  RETEE
2488        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2489        DT  RETEE     63.0
2490        DI       0   10000
2491        DQ       0   10000
            *

2492        KK   CPEE
2493        KM        ADD HYDROGRAPHS AT EE
2494        HC       2
            *

2495        KK  RTEEEA
2496        KM   HEC-RAS REACH
2497        KM   ROUTE FLOW FROM EE TO EA.
2498        KM   ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES OBTAINED FROM THE
2499        KM   DIBBLE MODEL DUR-6im.DAT.   POL 9-6-2005
2500        RS       9    STOR       0
2501        SV       0    63.2    84.9     119   148.6   174.2   197.9   220.2   241.2   263.1
2502        SQ       0     100     200     400     600     800    1000    1200    1400    1600
            *
            * KKRTEEEA   ROUTE   REACH
            * KM      ROUTE FLOW FROM EE TO EA
            * KM      TYPE A CHANNEL
            * RS      9                -1       0
            * RC 0.035   0.035   0.035    5300  0.0030    0.00
            * RX   0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
            * RY   5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
            *                                                                                PAGE 70
1                                          HEC-1 INPUT

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

2503        KK   SUBEA   BASIN
2504        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2505        KM    L=      1.5  Lca=     .8     S=   21.3    Kn= .05    LAG=  44.3
2506        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2507        BA   1.321
2508        LG    0.29    0.25    5.30    0.34      16
2509        UI     100     101     340     457     556     647     776    1034    1263    1015
2510        UI     846     715     587     501     364     221     170     151     100      89
2511        UI      31      31      31      30      30      30      15       0       0       0
2512        UI       0       0       0       0       0       0       0       0       0       0
            *

2513        KK   RETEA
2514        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2515        DT   RETEA    89.2
2516        DI       0   10000
2517        DQ       0   10000
            *

2518        KK    CPEA
2519        KM        ADD HYDROGRAPHS AT EA
2520        HC       2
            *
            * KKP-99SO
            * KO      1       2
            * KM DIVERT OVERFLOW INTO BASIN - JLM 6/17/02
            * DTB-99SO
            * DI      0     260     260    2000    5000
            * DQ      0       0       1    1740    4740
            *

2521        KK  RTEADC   ROUTE   REACH
2522        KM    ROUTE FLOW FROM EA TO DC
2523        KM   SUNLAND CHANNEL
2524        RS       7                -1       0
2525        RC   0.040   0.040   0.040    4951  0.0018    0.00
2526        RX     0.0   100.0   101.0   137.0   157.0   193.0   194.0   294.0
2527        RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
            *

2528        KK   SUBDC   BASIN
2529        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2530        KM    L=      1.4  Lca=      .4   S=   22.1    Kn= .05    LAG=  33.5
2531        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2532        KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2533        KM   WITHOUT RETENTION. - JCS
2534        BA   0.830
2535        LG    0.29    0.25    6.00    0.27      16
2536        UI      83     170     363     469     584     800    1016     778     624     486
2537        UI     377     216     142     108      83      26      26      26      26      25
2538        UI       2       0       0       0       0       0       0       0       0       0
2539        UI       0       0       0       0       0       0       0       0       0       0
            *                                                                                PAGE 71
1                                          HEC-1 INPUT

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

2540        KK   RETDC
2541        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL (43%) - JCS
2542        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL (12%) - JCS
2543        KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2544        KM   WITHOUT RETENTION. (45%) - JCS
2545        DT   RETDC    25.9
2546        DI       0   10000
2547        DQ       0   10000
            *

2548        KK   ~CPDC
2549        KM        ADD HYDROGRAPHS AT DC
2550        HC       2
```

```
                *
2551            KK  RTDCCC   ROUTE   REACH
2552            KM        ROUTE FLOW FROM DC TO CC.
2553            KM   SUNLAND CHANNEL
2554            RS       5              -1        0
2555            RC   0.040   0.040   0.040    5103  0.0022    0.00
2556            RX     0.0   100.0   101.0   137.0   167.0   203.0   204.0   304.0
2557            RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
                *

2558            KK   SUBDD   BASIN
2559            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2560            KM    L=        .5  Lca=        .3   S=   28.3  Kn= .050  LAG=  18.2
2561            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2562            BA   0.133
2563            LG    0.25    0.25    4.65    0.43      30
2564            UI      34     115     178     281     193     123      53      30      10       8
2565            UI       7       0       0       0       0       0       0       0       0       0
2566            UI       0       0       0       0       0       0       0       0       0       0
                *

2567            KK   RETDD
2568            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2569            DT   RETDD    11.0
2570            DI       0   10000
2571            DQ       0   10000
                *

2572            KK  RTDDCCROUTE       REACH
2573            KM        ROUTE FLOW FROM DD TO CC.
2574            KM        TYPE A CHANNEL
2575            RS       7              -1        0
2576            RC   0.035   0.035   0.035    5000  0.0040    0.00
2577            RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2578            RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                *
```



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1                                   HEC-1 INPUT

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

2579            KK   SUBCC   BASIN
2580            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2581            KM    L=  1.4    Lca= .7     S=   22.8      Kn= .05      LAG=  38.6
2582            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2583            KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2584            KM   WITHOUT RETENTION. - JCS
2585            BA   0.981
2586            LG    0.30    0.24    6.20    0.21      15
2587            UI      85     130     328     437     522     639     869    1062     820     677
2588            UI     546     446     331     189     145     111      86      42      26      26
2589            UI      26      25      26       2       0       0       0       0       0       0
2590            UI       0       0       0       0       0       0       0       0       0       0
                *

2591            KK   RETCC
2592            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL (54%) - JCS
2593            KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL (24%) - JCS
2594            KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2595            KM   WITHOUT RETENTION. (40%) - JCS
2596            DT   RETCC    34.2
2597            DI       0   10000
2598            DQ       0   10000
                *

2599            KK   ~CPCC
2600            HC       3
                *

2601            KK  RTCCSC
2602            KM   ROUTE FLOW FROM CC TO DRCC
2603            KM   SUNLAND CHANNEL
2604            RS       4              -1        0
2605            RC   0.040   0.040   0.040    3027  0.0008    0.00
2606            RX     0.0   100.0   101.0   137.0   167.0   203.0   204.0   304.0
2607            RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
                *

2608            KK  RTCCSC
2609            KM   HEC-RAS REACH
2610            KM   BFC
2611            KM   ROUTE SUNLAND IN DRCC
2612            KM   DRCC CHANNEL
2613            RS       2              -1        0
2614            RC   0.040   0.040   0.040    2256  0.0017    0.00
2615            RX     0.0   100.0   101.0   137.0   287.0   353.0   354.0   454.0
2616            RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
                *

2617            KK   SUBCB   BASIN
2618            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2619            KM    L=  1.2    Lca=  .5     S= 11.1     Kn= .05      LAG=  36.9
2620            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2621            BA   0.739
2622            LG    0.30    0.15    9.70    0.07      15
```



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1                                   HEC-1 INPUT

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

2623            UI      67     114     268     355     429     535     768     774     596     488
2624            UI     390     310     194     117     102      68      43      21      21      21
2625            UI      21      21       1       0       0       0       0       0       0       0
2626            UI       0       0       0       0       0       0       0       0       0       0
                *

2627            KK   RETCB
2628            KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
```

```
2629          DT   RETCB    15.8
2630          DI       0   10000
2631          DQ       0   10000
              *

2632          KK  ~CPCB1
2633          HC       3
              *

2634          KK  SUBGD1   BASIN
2635          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2636          KM    L=  1.1     Lca= .6     S= 33.3     Kn= .05      LAG=  31.6
2637          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2638          BA   0.629
2639          LG    0.25    0.25    5.30    0.33      30
2640          UI      67     155     306     394     501     742     750     564     440     342
2641          UI     225     116      96      68      26      21      21      20      18       0
2642          UI       0       0       0       0       0       0       0       0       0       0
              *

2643          KK  RETGD1
2644          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2645          DT  RETGD1    13.4
2646          DI       0   10000
2647          DQ       0   10000
              *

2648          KK  SUBGD2
2649          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2650          KM    L=  1.2     Lca=  .5     S= 11.1     Kn= .05      LAG=  37.5
2651          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2652          BA   0.211
2653          LG    0.25    0.15    9.70    0.07      30
2654          UI      66     108     259     345     414     512     722     791     604     498
2655          UI     395     327     218     119     109      69      56      21      21      20
2656          UI      21      20       9       0       0       0       0       0       0       0
2657          UI       0       0       0       0       0       0       0       0       0       0
              *

2658          KK  RETGD2
2659          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2660          DT  RETGD2    15.8
2661          DI       0   10000
2662          DQ       0   10000
              *
```



```
1                                   HEC-1 INPUT

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

2663          KK   CPGD
2664          KM   RECOMBINE SUBBASIN GD - JCS
2665          HC       2
              *

2666          KK   SUBKC   BASIN
2667          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2668          KM    L=        .8  Lca=       .4   S=   26.3  Kn= .050  LAG=  25
2669          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2670          BA   0.264
2671          LG    0.25    0.25    4.60    0.50      30
2672          UI      35     119     193     260     409     346     253     183     101      60
2673          UI      37      16      11      11      11       0       0       0       0       0
2674          UI       0       0       0       0       0       0       0       0       0       0
              *

2675          KK   RETKC
2676          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2677          DT   RETKC    21.8
2678          DI       0   10000
2679          DQ       0   10000
              *

2680          KK  RTKCGDROUTE       REACH
2681          KM        ROUTE FLOW FROM KC TO GD1 (ALONG EL MIRAGE RD).
2682          KM        ASSUME NEGLIGIBLE CHANNEL TRANSMISSION LOSS.
2683          KM        FUTURE ARTERIAL SECTION
2684          RS       3      -1       0
2685          RC   0.100   0.023   0.100    4090  0.0049    0.00
2686          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2687          RY     105     105     105   99.75   99.75     105     105     105
              *

2688          KK   SUBGC   BASIN
2689          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2690          KM    L= .8      Lca=  .4      S=   26.5     Kn= .045      LAG=  23.3
2691          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2692          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2693          KM   WITHOUT RETENTION. - JCS
2694          BA   0.215
2695          LG    0.28    0.26    4.70    0.34    19.7
2696          UI      31     116     178     254     368     265     189     123      57      38
2697          UI      19      10       9       9       0       0       0       0       0       0
2698          UI       0       0       0       0       0       0       0       0       0       0
              *

2699          KK   RETGC
2700          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2701          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2702          KM   WITHOUT RETENTION. - JCS
2703          DT   RETGC     5.0
2704          DI       0   10000
2705          DQ       0   10000
              *
```



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1                                   HEC-1 INPUT

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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2706          KK  RTGCGD      ROUTE       REACH
2707          KM        ROUTE FLOW FROM GC TO GD1 (ALONG EL MIRAGE ROAD).
2708          KM        FUTURE ARTERIAL SECTION
2709          RS       1              -1        0
2710          RC   0.100   0.023   0.100     820  0.0049    0.00
2711          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2712          RY     105     105     105   99.75   99.75     105     105     105
              *

2713          KK   CPGD1
2714          KM         ADD ALL HYDROGRAPHS AT GD1.
2715          HC       3
              *

2716          KK  RTGDCB   ROUTE       REACH
2717          KM   ROUTE FLOW FROM GD1 TO CB
2718          RS       6    FLOW       -1
2719          RC   0.100   0.023   0.100    3880  0.0010    0.00
2720          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2721          RY     105     105     105   99.75   99.75     105     105     105
              *

2722          KK  ~CPCB2
2723          KM   COMBINE FLOWS FROM CB TO CHANNEL
2724          HC       2
              *

2725          KK  MCCBCA
2726          KM   ADMP CHANNEL
2727          KM   ROUTE FLOW FROM CB TO CA.
2728          RS       8    FLOW       -1
2729          RC   0.040   0.040   0.040    5026  0.0014    0.00
2730          RX     0.0    16.0    33.7    51.4   201.4   219.4   228.1   244.1
2731          RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
              *

2732          KK  SUBCA1   BASIN
2733          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2734          KM    L=      1.0  Lca=       .5   S=    6.4  Kn= .05  LAG=  38.9
2735          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2736          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2737          KM   WITHOUT RETENTION. - JCS
2738          BA   0.143
2739          LG    0.26    0.15    7.60    0.14    26.9
2740          UI      12      18      47      63      75      92     124     154     120      99
2741          UI      81      65      50      29      21      17      12       7       4       4
2742          UI       4       4       4       1       0       0       0       0       0       0
2743          UI       0       0       0       0       0       0       0       0       0       0
              *
```



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

2744          KK  RETCA1
2745          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2746          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2747          KM   WITHOUT RETENTION. - JCS
2748          DT  RETCA1     2.4
2749          DI       0   10000
2750          DQ       0   10000
              *

2751          KK  SUBCA2   BASIN
2752          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2753          KM    L=      1.0  Lca=       .5   S=    7.8    Kn= .05    LAG=  37.4
2754          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2755          BA   0.841
2756          LG    0.30    0.15    8.80    0.09      15
2757          UI      76     123     297     297     393     474     585     829     898     566
2758          UI     448     369     247     134     124      76      63      23      23      23
2759          UI      23      23       9       0       0       0       0       0       0       0
2760          UI       0       0       0       0       0       0       0       0       0       0
              *

2761          KK  RETCA2
2762          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2763          DT  RETCA2    17.9
2764          DI       0   10000
2765          DQ       0   10000
              *

2766          KK  ~CPCA1
2767          KM   COMBINE FLOWS AT CA
2768          KM   RECOMBINE SUBBASIN CA - JCS
2769          HC       3
              *

2770          KK   SUBGB   BASIN
2771          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2772          KM    L= .8      Lca= .6   S=   36.1    Kn= .05     LAG=  27.4
2773          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2774          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2775          KM   WITHOUT RETENTION. - JCS
2776          BA   0.221
2777          LG    0.30    0.25    4.55    0.42      15
2778          UI      27      79     139     181     260     318     230     171     127      65
2779          UI      45      27      13       8       8       8       3       0       0       0
2780          UI       0       0       0       0       0       0       0       0       0       0
              *

2781          KK   RETGB
2782          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2783          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2784          KM   WITHOUT RETENTION. - JCS
2785          DT   RETGB     8.3
2786          DI       0   10000
```

```
2787          DQ       0   10000
              *
1                                        HEC-1 INPUT                                                    PAGE 77

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

2788          KK  RTGBCA   ROUTE       REACH
2789          KM        ROUTE FLOW FROM GB TO CA1.
2790          KM        FUTURE ARTERIAL SECTION
2791          RS       5              -1       0
2792          RC   0.040   0.040   0.040    5136  0.0014    0.00
2793          RX     0.0    16.0    33.8    51.6   166.6   184.4   202.3   218.3
2794          RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
              *

2795          KK  ~CPCA2
2796          KM        ADD HYDROGRAPHS AT CA
2797          HC       2
              *

2798          KK  P-DRCCDIVERT
2799          KM   DIVERT OVERFLOW INTO BASIN - JLM 6/18/02
2800          DT  B-DRCC
2801          DI       0      34      34    5000    9000
2802          DQ       0       0       1    4966    8966
              *

2803          KK  MCCABC   ROUTE       REACH
2804          KM   ROUTE ADMP CHANNEL FROM CA1 TO BC1
2805          RS       5    FLOW      -1
2806          RC   0.014   0.014   0.014    3914  0.0005    0.00
2807          RX     0.0    16.0    16.0    16.0    20.0    20.0    20.0    36.0
2808          RY     3.8     4.1     2.1     0.0     0.0     2.1     4.1     3.8
              *
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM CA TO BC.
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS    11    STOR       0
              * SV     0    52.4   113.5   174.4   227.6   278.6   321.5     363   401.7     4
              * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
              *

2809          KK  SUBBC1   BASIN
2810          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2811          KM    L=  0.22x1.7   Lca=  0.22x0.8    S=  11.5    Kn= .02    LAG=  6.3
2812          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2813          BA   0.137
2814          LG    0.15    0.28    4.80    0.38      55
2815          UI     309     618     117     117      18       0       0       0       0       0
2816          UI       0       0       0       0       0       0       0       0       0       0
              *

2817          KK  RETBC1
2818          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2819          DT  RETBC1     2.9
2820          DI       0   10000
2821          DQ       0   10000
              *
1                                        HEC-1 INPUT                                                    PAGE 78

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

2822          KK  SUBBC2   BASIN
2823          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2824          KM    L=      1.7  Lca=       .8   S=   11.5  Kn= .038  LAG=  38.3
2825          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2826          BA   0.493
2827          LG    0.24    0.25    5.10    0.39      31
2828          UI      55      86     214     284     340     419     573     682     523     433
2829          UI     345     284     204     116      93      68      55      21      17      17
2830          UI      17      17      15       0       0       0       0       0       0       0
2831          UI       0       0       0       0       0       0       0       0       0       0
              *

2832          KK  RETBC2
2833          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2834          DT  RETBC2    10.5
2835          DI       0   10000
2836          DQ       0   10000
              *

2837          KK   ~CPBC
2838          KM   ADD HYDROGRAPHS AT BC1
2839          KM   RECOMBINE SUBBASIN BC - JCS
2840          HC       3
              *

2841          KK  CPAFBC
2842          KM   COMBINE FLOWS INTO AGUA FRIA RIVER AT BC
2843          HC       2
              *
              * KM      FUTURE ARTERIAL SECTION
              * RS    10              -1       0
              * RC 0.100   0.023   0.100    5700  0.0018    0.00
              * RX   0.0     440     445   445.1   575.1   575.2     900  1000.0
              * RY   105     105     105   99.75   99.75     105     105     105
              *
              *
              *
              * ***********************************************************************
              * NOTES REFERING TO CHANGES MADE TO DIBBLE MODEL HAVE BEEN OMITTED.
              * SEE 1084F6-IMP-R.DAT FOR NOTES. - JCS
2844          ZZ
1
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*** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** *** ***

              **************
              *            *
2232 KK       *    DET107  *
              *            *
              **************

2233 KO          OUTPUT CONTROL VARIABLES
                       IPRNT          2  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL         0.  HYDROGRAPH PLOT SCALE
                           MODIFIED PULS ROUTING
                           BASIN AT 107TH AVENUE REPLACES THE 95TH AVE BASIN BY ASPEN
                           BASIN HAS 18-AC BOTTOM AREA WITH 6:1 SIDE SLOPES
                           BASIN BOTTOMFLUSH WITH ADJACENT CHANNEL BOTTOM (IN-LINE TYPE)
                           A CULVERT TRIPLE    10x5 RBC
                           MAX CULVERT HEADWATER AND PONDING IN BASIN IS 5 FEET. OVERTOPPING ON ROAD
                           NOT ALLOWED

                HYDROGRAPH ROUTING DATA

2241 RS          STORAGE ROUTING
                       NSTPS          1  NUMBER OF SUBREACHES
                        ITYP       STOR  TYPE OF INITIAL CONDITION
                      RSVRIC        .00  INITIAL CONDITION
                           X        .00 WORKING R AND D COEFFICIENT

2242 SV            STORAGE         .0      18.2      37.0      56.2      76.0      86.1      96.2      96.2

2243 SQ          DISCHARGE         0.       22.      140.      312.      528.      648.      775.      913.

2244 SE          ELEVATION     960.00    961.00    962.00    963.00    964.00    964.50    965.00    965.50
                                                                  ***

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

                        HYDROGRAPH AT STATION   DET107
                      TRANSPOSITION AREA        .0 SQ MI

  PEAK FLOW      TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR        24-HR        72-HR     166.58-HR
+   (CFS)        (HR)
                           (CFS)
+    2898.       4.92                798.         213.          71.          31.
                        (INCHES)     .698         .745         .745         .745
                         (AC-FT)     396.         422.         422.         422.

 PEAK STORAGE    TIME                         MAXIMUM AVERAGE STORAGE
                                     6-HR        24-HR        72-HR     166.58-HR
+  (AC-FT)       (HR)
     101.        5.25                101.         101.         101.          99.

  PEAK STAGE     TIME                          MAXIMUM AVERAGE STAGE
                                     6-HR        24-HR        72-HR     166.58-HR
+   (FEET)       (HR)
   975.93        5.25               970.09       968.33       967.90       967.59

                       CUMULATIVE AREA =   10.63 SQ MI

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

                        HYDROGRAPH AT STATION   DET107
                      TRANSPOSITION AREA        .5 SQ MI

  PEAK FLOW      TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR        24-HR        72-HR     166.58-HR
+   (CFS)        (HR)
                           (CFS)
+    2779.       5.00                777.         208.          69.          30.
                        (INCHES)     .680         .726         .726         .726
                         (AC-FT)     385.         412.         412.         412.

 PEAK STORAGE    TIME                         MAXIMUM AVERAGE STORAGE
                                     6-HR        24-HR        72-HR     166.58-HR
+  (AC-FT)       (HR)
     102.        5.00                102.         102.         102.          99.

  PEAK STAGE     TIME                          MAXIMUM AVERAGE STAGE
                                     6-HR        24-HR        72-HR     166.58-HR
+   (FEET)       (HR)
   978.09        5.00               970.71       968.71       968.24       967.88

                       CUMULATIVE AREA =   10.63 SQ MI

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

                        HYDROGRAPH AT STATION   DET107
                      TRANSPOSITION AREA       2.8 SQ MI

  PEAK FLOW      TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR        24-HR        72-HR     166.58-HR
+   (CFS)        (HR)
                           (CFS)
+    1954.       5.25                728.         218.          74.          32.
                        (INCHES)     .637         .764         .777         .777
                         (AC-FT)     361.         433.         440.         440.

 PEAK STORAGE    TIME                         MAXIMUM AVERAGE STORAGE
                                     6-HR        24-HR        72-HR     166.58-HR
+  (AC-FT)       (HR)
      97.        5.25                 81.          35.          13.           5.
```

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
969.82	5.25	964.92	962.02	960.73	960.31

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 16.0 SQ MI

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)				
		(CFS)			
+ 751.	6.17	488.	156.	53.	23.
		(INCHES) .427	.548	.560	.560
		(AC-FT) 242.	310.	318.	318.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
94.	6.17	72.	32.	12.	5.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
964.90	6.17	963.78	961.72	960.63	960.27

CUMULATIVE AREA = 10.63 SQ MI

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

HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 90.0 SQ MI

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)				
		(CFS)			
+ 255.	6.67	173.	63.	22.	10.
		(INCHES) .151	.221	.232	.232
		(AC-FT) 86.	125.	132.	132.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
50.	6.67	40.	22.	8.	3.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
962.67	6.67	962.17	961.17	960.44	960.19

CUMULATIVE AREA = 10.63 SQ MI

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HYDROGRAPH AT STATION DET107
TRANSPOSITION AREA 500.0 SQ MI

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)				
		(CFS)			
+ 15.	6.67	13.	9.	3.	1.
		(INCHES) .012	.030	.034	.034
		(AC-FT) 7.	17.	19.	19.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
13.	6.67	11.	7.	3.	1.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
960.71	6.67	960.61	960.39	960.15	960.06

CUMULATIVE AREA = 10.63 SQ MI

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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	SUBWD	595.	4.50	86.	22.	7.	.39		
+	ROUTED TO	RTWDXA	551.	4.75	86.	22.	7.	.39		
+	HYDROGRAPH AT	SUBXA	580.	4.25	71.	18.	6.	.25		
+	2 COMBINED AT	CPXA1	740.	4.33	154.	39.	13.	.64		
+	DIVERSION TO	DIZZ1	0.	.00	0.	0.	0.	.64		
+	HYDROGRAPH AT	DIXAO	740.	4.33	154.	39.	13.	.64		
+	ROUTED TO	RTXAWC	705.	4.92	154.	39.	13.	.64		
+	HYDROGRAPH AT	SUBWB	1154.	4.42	184.	46.	15.	.67		
+	ROUTED TO	RTWBWC	1092.	4.58	183.	46.	15.	.67		
+	HYDROGRAPH AT	SUBWC	922.	4.42	138.	35.	12.	.49		
+	3 COMBINED AT	CPWC	1938.	4.67	456.	116.	39.	1.79		
+	DIVERSION TO	DIQE	0.	.00	0.	0.	0.	1.79		
+	HYDROGRAPH AT	DIWCWA	1938.	4.67	456.	116.	39.	1.79		
+	ROUTED TO	RTWCWA	948.	6.83	412.	116.	39.	1.79		
+	HYDROGRAPH AT	SUBWA	1196.	4.25	141.	35.	12.	.49		
+	2 COMBINED AT	CPWA1	941.	6.83	437.	150.	50.	2.29		
+	HYDROGRAPH AT	SUBVD	1195.	4.42	191.	48.	16.	.70		
+	ROUTED TO	RTVDWA	1156.	4.50	190.	48.	16.	.70		
+	2 COMBINED AT	CPWA2	1537.	4.33	607.	195.	65.	2.98		
+	DIVERSION TO	DIQD	1078.	4.33	255.	64.	21.	2.98		
+	HYDROGRAPH AT	DIWAVC	459.	4.33	352.	130.	43.	2.98		
+	ROUTED TO	RTWAVC	360.	12.08	321.	130.	43.	2.98		
+	HYDROGRAPH AT	SUBVC	1177.	4.25	140.	35.	12.	.49		
+	2 COMBINED AT	CPVC1	778.	4.17	321.	164.	55.	3.47		
+	HYDROGRAPH AT	SUBVB	1651.	4.17	203.	51.	17.	.72		
+	ROUTED TO	RTVBVC	1545.	4.25	202.	51.	17.	.72		
+	2 COMBINED AT	CPVC2	1800.	4.25	421.	212.	71.	4.19		
+	DIVERSION TO	DIVA	32.	4.00	20.	9.	3.	4.19		
+	HYDROGRAPH AT	DIVCQA	1768.	4.25	406.	202.	67.	4.19		
+	ROUTED TO	RTVCQA	1685.	4.42	402.	202.	67.	4.19		
+	HYDROGRAPH AT	SUBQA	779.	4.58	124.	31.	10.	.49		
+	2 COMBINED AT	CPQA2	2197.	4.42	508.	231.	77.	4.68		
+	ROUTED TO	RSQA	2174.	4.42	507.	231.	77.	4.68		

+	DIVERSION TO	DIPF	635.	4.42	192.	96.	32.	4.68
+	HYDROGRAPH AT	DIQAPF	1539.	4.42	315.	135.	45.	4.68
+	ROUTED TO	RTQAJH	1413.	5.00	310.	135.	45.	4.68
+	HYDROGRAPH AT	SUBQE	1654.	4.42	274.	69.	23.	.91
+	HYDROGRAPH AT	DRQE	0.	.00	0.	0.	0.	1.79
+	ROUTED TO	RTDIQE	0.	.00	0.	0.	0.	1.79
+	2 COMBINED AT	CPQE	1654.	4.42	274.	69.	23.	.91
+	ROUTED TO	RSQE	1575.	4.50	254.	64.	21.	.91
+	ROUTED TO	RTQEQC	1479.	4.67	253.	64.	21.	.91
+	HYDROGRAPH AT	SUBQD	600.	4.25	78.	20.	7.	.25
+	HYDROGRAPH AT	DRQD	1078.	4.33	255.	64.	21.	2.98
+	ROUTED TO	RTDIQD	1044.	4.50	251.	64.	21.	2.98
+	2 COMBINED AT	CPQD	1887.	4.42	361.	94.	31.	.25
+	ROUTED TO	RSQD	1831.	4.50	359.	93.	31.	.25
+	DIVERSION TO	DIQB	723.	4.50	100.	25.	8.	.25
+	HYDROGRAPH AT	DIQDQB	1108.	4.50	259.	68.	23.	.25
+	ROUTED TO	RTQDQC	1049.	4.58	257.	68.	23.	.25
+	HYDROGRAPH AT	SUBQC	1160.	4.33	167.	42.	14.	.61
+	3 COMBINED AT	CPQC	2913.	4.58	643.	168.	56.	1.77
+	DIVERSION TO	DISR	2330.	4.58	515.	135.	45.	1.77
+	HYDROGRAPH AT	DIQCR	583.	4.58	129.	34.	11.	1.77
+	ROUTED TO	RTQCJI	385.	6.25	121.	34.	11.	1.77
+	HYDROGRAPH AT	SUBQB	852.	4.50	141.	35.	12.	.50
+	HYDROGRAPH AT	DRQB	723.	4.50	100.	25.	8.	.25
+	ROUTED TO	RTDIQB	619.	5.00	99.	25.	8.	.25
+	2 COMBINED AT	CPQB	1061.	4.92	232.	60.	20.	.50
+	ROUTED TO	RSQB	942.	5.00	210.	55.	18.	.50
+	ROUTED TO	RTQBJH	851.	5.67	203.	55.	18.	.50
+	HYDROGRAPH AT	SUBJH	1096.	4.33	137.	34.	11.	.52
+	4 COMBINED AT	CPJH	1548.	4.92	653.	239.	80.	7.47
+	ROUTED TO	RTJHJI	1391.	5.67	647.	239.	80.	7.47
+	HYDROGRAPH AT	SUBJI	760.	4.17	82.	21.	7.	.31
+	2 COMBINED AT	CPJI	1399.	5.67	683.	257.	86.	7.78
+	DIVERSION TO	DISR1	1399.	5.67	683.	257.	86.	7.78
+	HYDROGRAPH AT	DISRX	0.	.00	0.	0.	0.	7.78
+	HYDROGRAPH AT	SUBPF	1297.	4.17	141.	35.	12.	.50

+	DIVERSION TO	RETPF	19.	.92	6.	2.	1.	.50
+	HYDROGRAPH AT	RETPF	1297.	4.17	136.	34.	11.	.50
+	HYDROGRAPH AT	DRPF	635.	4.42	192.	96.	32.	4.68
+	ROUTED TO	RTDIPF	622.	4.83	189.	96.	32.	4.68
+	2 COMBINED AT	@CPPF	1569.	4.17	378.	150.	50.	5.19
+	ROUTED TO	RSPF	769.	4.92	241.	112.	38.	5.19
+	DIVERSION TO	DIPE	0.	.00	0.	0.	0.	5.19
+	HYDROGRAPH AT	DIPFPE	769.	4.92	241.	112.	38.	5.19
+	ROUTED TO	RTPFJF	749.	5.17	238.	112.	38.	5.19
+	HYDROGRAPH AT	SUBUD	2034.	4.08	225.	56.	19.	.75
+	DIVERSION TO	RETB1	1140.	3.92	78.	20.	7.	.75
+	HYDROGRAPH AT	RETU	2034.	4.08	147.	37.	12.	.75
+	DIVERSION TO	59SD1D	102.	4.00	25.	6.	2.	.75
+	HYDROGRAPH AT	SDDRUD	1932.	4.08	122.	30.	10.	.75
+	DIVERSION TO	DIUA	466.	4.08	29.	7.	2.	.75
+	HYDROGRAPH AT	DIUDUA	1466.	4.08	92.	23.	8.	.75
+	ROUTED TO	RTUDVA	1145.	4.25	92.	23.	8.	.75
+	HYDROGRAPH AT	SUBVA	1195.	4.25	146.	37.	12.	.49
+	HYDROGRAPH AT	DRVA	32.	4.00	20.	9.	3.	4.19
+	3 COMBINED AT	CPVA1	2010.	4.25	241.	67.	22.	1.24
+	DIVERSION TO	59SD2D	59.	3.42	38.	17.	6.	1.24
+	HYDROGRAPH AT	SDDRVA	1951.	4.25	202.	51.	17.	1.24
+	DIVERSION TO	DIUC	783.	4.25	129.	32.	11.	1.24
+	HYDROGRAPH AT	DIVAPE	1168.	4.25	73.	18.	6.	1.24
+	ROUTED TO	RTVAPE	1043.	4.33	73.	18.	6.	1.24
+	HYDROGRAPH AT	SUBPE	1303.	4.17	138.	35.	12.	.50
+	HYDROGRAPH AT	DRPE	0.	.00	0.	0.	0.	5.19
+	ROUTED TO	RTDIPE	0.	.00	0.	0.	0.	5.19
+	3 COMBINED AT	CPPE	1559.	4.33	198.	50.	17.	1.75
+	ROUTED TO	RSPE	1478.	4.33	163.	42.	14.	1.75
+	DIVERSION TO	DIPD	3.	4.33	0.	0.	0.	1.75
+	HYDROGRAPH AT	DIPEPD	1476.	4.33	162.	41.	14.	1.75
+	ROUTED TO	RTPEJF	1345.	4.42	162.	41.	14.	1.75
+	HYDROGRAPH AT	SUBJF	1509.	4.08	144.	36.	12.	.50
+	3 COMBINED AT	CPJF	1306.	4.42	473.	178.	61.	7.44
+	ROUTED TO	RTJFJG	1130.	4.67	455.	174.	59.	7.44

+	HYDROGRAPH AT	SUBJG	1897.	4.17	254.	64.	21.	.90
+	2 COMBINED AT	CPJG	1904.	4.25	662.	231.	79.	8.34
+	2 COMBINED AT	CPJGSR	1706.	4.25	625.	223.	76.	16.11
+	HYDROGRAPH AT	DRUC	783.	4.25	129.	32.	11.	1.24
+	ROUTED TO	RTVAUC	500.	5.33	129.	32.	11.	1.24
+	ROUTED TO	MCUCUC	485.	5.50	129.	32.	11.	1.24
+	HYDROGRAPH AT	SUBUC	927.	4.42	128.	32.	11.	.48
+	2 COMBINED AT	@CPUC	744.	4.42	250.	64.	21.	1.73
+	HYDROGRAPH AT	SUBTB1	443.	4.00	37.	9.	3.	.14
+	DIVERSION TO	RETB1	443.	4.00	23.	6.	2.	.14
+	HYDROGRAPH AT	RETB1	347.	4.08	15.	4.	1.	.14
+	DIVERSION TO	67SD1D	17.	4.08	3.	1.	0.	.14
+	HYDROGRAPH AT	SDDTB1	330.	4.08	12.	3.	1.	.14
+	ROUTED TO	RTUAUC	122.	4.33	12.	3.	1.	.14
+	HYDROGRAPH AT	SUBUA	886.	4.58	144.	36.	12.	.56
+	HYDROGRAPH AT	DRUA	466.	4.08	29.	7.	2.	.75
+	ROUTED TO	RTDIUA	224.	4.58	29.	7.	2.	.75
+	3 COMBINED AT	@CPUA	1036.	4.58	179.	45.	15.	1.46
+	DIVERSION TO	67SD1D	96.	3.83	46.	12.	4.	1.46
+	HYDROGRAPH AT	SDDRUA	940.	4.58	133.	33.	11.	1.46
+	DIVERSION TO	DITB	188.	4.58	27.	7.	2.	1.46
+	HYDROGRAPH AT	DIUAUC	752.	4.58	106.	27.	9.	1.46
+	ROUTED TO	RTUAUC	719.	4.67	106.	27.	9.	1.46
+	2 COMBINED AT	~CPUC2	1125.	4.58	354.	91.	30.	3.19
+	DIVERSION TO	DIUB	1125.	4.58	354.	91.	30.	3.19
+	HYDROGRAPH AT	DIUCPC	0.	.00	0.	0.	0.	3.19
+	ROUTED TO	RTUCPC	0.	.00	0.	0.	0.	3.19
+	HYDROGRAPH AT	SUBPC	932.	4.08	84.	21.	7.	.30
+	2 COMBINED AT	CPPC	512.	4.08	80.	20.	7.	3.49
+	ROUTED TO	RSPC	59.	4.92	19.	9.	6.	3.49
+	ROUTED TO	RTPCNB	50.	5.75	19.	9.	6.	3.49
+	HYDROGRAPH AT	SUBNB	1154.	4.17	100.	25.	8.	.44
+	DIVERSION TO	RETNB	1150.	4.08	68.	17.	6.	.44
+	HYDROGRAPH AT	RETNB	930.	4.25	32.	8.	3.	.44
+	2 COMBINED AT	CPNB1	338.	4.42	41.	14.	8.	3.93
+	ROUTED TO	RTNBJD	164.	4.83	41.	14.	8.	3.93

+	HYDROGRAPH AT	SUBPD	1174.	4.17	111.	28.	9.	.44
+	HYDROGRAPH AT	DRPD	3.	4.33	0.	0.	0.	1.75
+	2 COMBINED AT	CPPD2	1175.	4.17	112.	28.	9.	.44
+	ROUTED TO	RSPD	95.	4.67	35.	11.	5.	.44
+	ROUTED TO	RTPDNC	82.	5.33	34.	11.	5.	.44
+	HYDROGRAPH AT	SUBNC	714.	4.08	76.	19.	6.	.31
+	2 COMBINED AT	CPNC	647.	4.08	99.	29.	11.	.75
+	ROUTED TO	RTNCJE	470.	4.75	98.	29.	11.	.75
+	HYDROGRAPH AT	SUBJE1	732.	4.08	66.	17.	6.	.25
+	2 COMBINED AT	CPJE1	612.	4.08	154.	44.	16.	1.00
+	ROUTED TO	RTJEJD	584.	4.17	153.	44.	16.	1.00
+	HYDROGRAPH AT	SUBJD	1447.	4.08	125.	31.	10.	.51
+	DIVERSION TO	RETJD	1215.	4.08	71.	18.	6.	.51
+	HYDROGRAPH AT	RETJD	1362.	4.17	55.	14.	5.	.51
+	3 COMBINED AT	CPJD	845.	4.33	213.	63.	25.	5.44
+	DIVERSION TO	DIJC2	306.	4.33	78.	23.	9.	5.44
+	HYDROGRAPH AT	DIJDJC	539.	4.33	135.	40.	16.	5.44
+	ROUTED TO	RTJDFC	457.	4.42	135.	40.	16.	5.44
+	HYDROGRAPH AT	SUBJE2	742.	4.08	74.	18.	6.	.25
+	DIVERSION TO	RETJE	123.	3.58	9.	2.	1.	.25
+	HYDROGRAPH AT	RETJE2	742.	4.08	64.	16.	5.	.25
+	ROUTED TO	RTJEFC	595.	4.33	64.	16.	5.	.25
+	HYDROGRAPH AT	SUBFC	910.	4.08	101.	25.	8.	.36
+	3 COMBINED AT	CPFC	1176.	4.33	277.	77.	29.	6.05
+	2 COMBINED AT	CPFCSR	2448.	4.33	833.	282.	98.	22.16
+	HYDROGRAPH AT	DRUCUB	1125.	4.58	354.	91.	30.	3.19
+	ROUTED TO	MCUCUB	1123.	4.67	354.	91.	30.	3.19
+	HYDROGRAPH AT	SUBUB	299.	4.33	37.	9.	3.	.14
+	2 COMBINED AT	~@CPUB	1324.	4.58	390.	100.	33.	2.42
+	HYDROGRAPH AT	SUBSF1	155.	4.50	27.	7.	2.	.13
+	HYDROGRAPH AT	DRTB	188.	4.58	27.	7.	2.	1.46
+	ROUTED TO	RTDITB	182.	4.75	27.	7.	2.	1.46
+	3 COMBINED AT	CPBA3	1574.	4.58	441.	113.	38.	2.55
+	HYDROGRAPH AT	SUBTB2	1085.	4.67	221.	56.	19.	.75
+	DIVERSION TO	RETTB	464.	4.08	40.	10.	3.	.75
+	HYDROGRAPH AT	RETTB	1085.	4.67	183.	46.	15.	.75

+	DIVERSION TO	DITA	262.	4.67	45.	11.	4.	.75
+	HYDROGRAPH AT	DITBTA	822.	4.67	138.	35.	12.	.75
+	ROUTED TO	RTTBSF	803.	4.75	138.	35.	12.	.75
+	HYDROGRAPH AT	SUSFB2	354.	4.08	32.	8.	3.	.11
+	HYDROGRAPH AT	SUSF2A	488.	4.00	45.	11.	4.	.14
+	DIVERSION TO	RETSF2	488.	4.00	45.	11.	4.	.14
+	HYDROGRAPH AT	RSSF2A	0.	.00	0.	0.	0.	.14
+	3 COMBINED AT	CPSF2B	803.	4.75	168.	42.	14.	1.00
+	2 COMBINED AT	CPBA3	2168.	4.67	595.	152.	51.	3.55
+	ROUTED TO	BSN71	93.	8.25	93.	91.	51.	3.55
+	DIVERSION TO	BSN71	93.	8.25	93.	91.	51.	3.55
+	HYDROGRAPH AT	DBSN71	0.	.00	0.	0.	0.	3.55
+	HYDROGRAPH AT	SUBPB	1132.	4.17	121.	30.	10.	.41
+	DIVERSION TO	RETPB	1132.	4.17	87.	22.	7.	.41
+	HYDROGRAPH AT	RETPB	633.	4.33	35.	9.	3.	.41
+	HYDROGRAPH AT	PB75	36.	4.00	3.	1.	0.	.01
+	HYDROGRAPH AT	PBBU	61.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CPBSD	92.	4.08	10.	2.	1.	.03
+	DIVERSION TO	SD75PB	23.	3.67	6.	1.	0.	.03
+	HYDROGRAPH AT	DPBSD1	69.	4.08	4.	1.	0.	.03
+	DIVERSION TO	SDBRPB	39.	3.92	3.	1.	0.	.03
+	HYDROGRAPH AT	DPBSD2	30.	4.08	1.	0.	0.	.03
+	2 COMBINED AT	CPPB	633.	4.33	36.	9.	3.	.44
+	DIVERSION TO	DIPA1	120.	4.33	7.	2.	1.	.44
+	HYDROGRAPH AT	DIPBPA	513.	4.33	29.	7.	2.	.44
+	2 COMBINED AT	CPPB1	296.	4.42	24.	6.	2.	3.99
+	ROUTED TO	RTPBNA	129.	5.00	24.	6.	2.	3.99
+	HYDROGRAPH AT	SUBNA	1930.	4.25	267.	67.	22.	.94
+	DIVERSION TO	RETNA	1930.	4.25	181.	45.	15.	.94
+	HYDROGRAPH AT	RETNA	1140.	4.50	87.	22.	7.	.94
+	HYDROGRAPH AT	NA75	64.	4.08	6.	2.	1.	.02
+	HYDROGRAPH AT	NALB	61.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CNASD	124.	4.08	13.	3.	1.	.04
+	3 COMBINED AT	CPNA1	1154.	4.50	119.	30.	10.	4.97
+	DIVERSION TO	SD75NA	40.	3.83	24.	6.	2.	4.97
+	HYDROGRAPH AT	DNASD1	731.	4.50	85.	21.	7.	4.97

+	DIVERSION TO	SDLBNA	38.	4.58	14.	4.	1.	4.97
+	HYDROGRAPH AT	DNASD2	705.	4.50	70.	18.	6.	4.97
+	DIVERSION TO	ADMP1	705.	4.50	70.	18.	6.	4.97
+	HYDROGRAPH AT	DADMP1	0.	.00	0.	0.	0.	4.97
+	HYDROGRAPH AT	SUBJC1	1104.	4.17	119.	30.	10.	.47
+	DIVERSION TO	RETJC1	1104.	4.17	72.	18.	6.	.47
+	HYDROGRAPH AT	RETJC1	933.	4.33	48.	12.	4.	.47
+	HYDROGRAPH AT	JC75	66.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CJCSD1	957.	4.33	55.	14.	5.	.49
+	HYDROGRAPH AT	SUBJC2	1098.	4.17	104.	26.	9.	.48
+	DIVERSION TO	RETJC2	949.	4.08	40.	10.	3.	.48
+	HYDROGRAPH AT	RETJC2	1093.	4.25	64.	16.	5.	.48
+	DIVERSION TO	DETJC2	1093.	4.25	33.	8.	3.	.48
+	HYDROGRAPH AT	DETJC2	666.	4.33	31.	8.	3.	.48
+	ROUTED TO	RTJCJC	408.	4.58	31.	8.	3.	.48
+	2 COMBINED AT	CPJC1A	949.	4.33	85.	21.	7.	.97
+	HYDROGRAPH AT	JCBR	65.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CJCSD2	924.	4.33	90.	23.	8.	.99
+	2 COMBINED AT	CPJC1B	457.	4.50	65.	16.	5.	5.96
+	DIVERSION TO	SDOSBR	41.	3.83	21.	5.	2.	5.96
+	HYDROGRAPH AT	DJC2SD	416.	4.50	45.	11.	4.	5.96
+	DIVERSION TO	SD75JC	42.	4.50	10.	3.	1.	5.96
+	HYDROGRAPH AT	DJCSD1	374.	4.50	35.	9.	3.	5.96
+	HYDROGRAPH AT	DIJD	306.	4.33	78.	23.	9.	5.44
+	ROUTED TO	RTJCJC	235.	4.75	78.	23.	9.	5.44
+	2 COMBINED AT	CPJC2	469.	4.58	103.	29.	11.	8.11
+	DIVERSION TO	DIJB2	213.	4.58	47.	13.	5.	8.11
+	HYDROGRAPH AT	DIJCJB	257.	4.58	56.	16.	6.	8.11
+	ROUTED TO	RTJCFB	209.	5.00	55.	16.	6.	8.11
+	HYDROGRAPH AT	DRB71	93.	8.25	93.	91.	51.	3.55
+	ROUTED TO	RT71PB	93.	8.42	93.	91.	51.	3.55
+	HYDROGRAPH AT	RSDPB1	23.	3.67	6.	1.	0.	.03
+	2 COMBINED AT	CPPBS1	95.	6.00	93.	91.	51.	3.99
+	HYDROGRAPH AT	RSDPB2	39.	3.92	3.	1.	0.	.03
+	2 COMBINED AT	CPPBS2	105.	4.08	94.	91.	51.	3.99
+	ROUTED TO	RTPBNA	105.	4.25	94.	91.	51.	3.99

+	HYDROGRAPH AT	RSDNA1	40.	3.83	24.	6.	2.	4.97
+	2 COMBINED AT	CPNAS1	143.	4.25	114.	96.	53.	4.97
+	HYDROGRAPH AT	RSDNA2	38.	4.58	14.	4.	1.	4.97
+	2 COMBINED AT	CPNAS2	173.	6.17	129.	100.	54.	4.97
+	ROUTED TO	RTNAJC	173.	6.33	129.	100.	54.	4.97
+	HYDROGRAPH AT	RSDJC1	42.	4.50	10.	3.	1.	5.96
+	2 COMBINED AT	CPJCS1	213.	5.33	138.	102.	54.	5.96
+	HYDROGRAPH AT	RSDJC3	41.	3.83	21.	5.	2.	5.96
+	2 COMBINED AT	CPJCS3	254.	5.33	156.	107.	56.	5.96
+	ROUTED TO	RTJCFB	254.	5.50	156.	107.	56.	5.96
+	HYDROGRAPH AT	FB75	58.	4.08	6.	1.	0.	.02
+	2 COMBINED AT	CPFB	257.	4.92	160.	108.	56.	5.98
+	3 COMBINED AT	DUMM	2444.	4.33	956.	375.	146.	36.25
+	HYDROGRAPH AT	SUBSH	333.	4.08	30.	8.	3.	.10
+	DIVERSION TO	RETSH	315.	4.08	21.	5.	2.	.10
+	HYDROGRAPH AT	RETSH	261.	4.17	10.	2.	1.	.10
+	ROUTED TO	RSSH	0.	.00	0.	0.	0.	.10
+	DIVERSION TO	DIRJ2	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	DISHRJ	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTSHSG	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	SUBTA	649.	4.17	68.	17.	6.	.24
+	DIVERSION TO	RETTA	649.	4.17	49.	12.	4.	.24
+	HYDROGRAPH AT	RETTA	365.	4.33	20.	5.	2.	.24
+	HYDROGRAPH AT	DRTA	262.	4.67	45.	11.	4.	.75
+	ROUTED TO	RTDITA	234.	5.17	45.	11.	4.	.75
+	2 COMBINED AT	@CPTA	366.	4.33	65.	16.	5.	1.13
+	ROUTED TO	RTTASG	230.	5.33	63.	16.	5.	1.13
+	HYDROGRAPH AT	SUBSG	376.	4.17	40.	10.	3.	.14
+	DIVERSION TO	RETSG	376.	4.17	27.	7.	2.	.14
+	HYDROGRAPH AT	RETSG	268.	4.25	13.	3.	1.	.14
+	3 COMBINED AT	CPSG	235.	5.33	74.	18.	6.	1.37
+	ROUTED TO	RSSG	229.	5.42	48.	12.	4.	1.37
+	DIVERSION TO	DIRJ4	163.	5.42	29.	7.	2.	1.37
+	HYDROGRAPH AT	DISGRJ	67.	5.42	19.	5.	2.	1.37
+	ROUTED TO	RTSGSE	61.	5.75	19.	5.	2.	1.37
+	HYDROGRAPH AT	SUBSC	988.	4.25	121.	30.	10.	.45

+	DIVERSION TO	RETSC	988.	4.25	92.	23.	8.	.45
+	HYDROGRAPH AT	RETSC	507.	4.50	30.	8.	3.	.45
+	DIVERSION TO	DISD	274.	4.50	16.	4.	1.	.45
+	HYDROGRAPH AT	DISCSD	233.	4.50	14.	3.	1.	.45
+	ROUTED TO	RTSCSE	155.	4.58	14.	3.	1.	.45
+	HYDROGRAPH AT	SUBSE	425.	4.00	33.	8.	3.	.13
+	DIVERSION TO	RETSE	425.	4.00	25.	6.	2.	.13
+	HYDROGRAPH AT	RETSE	160.	4.17	8.	2.	1.	.13
+	3 COMBINED AT	CPSE	144.	4.58	39.	10.	3.	1.95
+	ROUTED TO	RSSE	12.	6.58	7.	4.	3.	1.95
+	DIVERSION TO	DIRJ5	12.	6.58	7.	4.	3.	1.95
+	HYDROGRAPH AT	DISERJ	0.	.00	0.	0.	0.	1.95
+	ROUTED TO	RTSERI	0.	.00	0.	0.	0.	1.95
+	HYDROGRAPH AT	SUBRJ	413.	4.17	46.	12.	4.	.16
+	DIVERSION TO	RETRJ	413.	4.17	33.	8.	3.	.16
+	HYDROGRAPH AT	RETRJ	282.	4.33	14.	3.	1.	.16
+	HYDROGRAPH AT	CPRJ2	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTSHRJ	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTRJ3	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	CPRJ4A	163.	5.42	29.	7.	2.	1.37
+	2 COMBINED AT	CPRJ4B	177.	5.42	32.	8.	3.	.39
+	ROUTED TO	RTSGRJ	165.	5.67	32.	8.	3.	.39
+	HYDROGRAPH AT	CPRJ5	12.	6.58	7.	4.	3.	1.95
+	ROUTED TO	RTSERJ	10.	7.33	7.	4.	3.	1.95
+	3 COMBINED AT	@CPRJ6	444.	4.50	68.	20.	9.	3.81
+	ROUTED TO	RSRJ	80.	6.42	34.	11.	6.	3.81
+	DIVERSION TO	DIPA2	0.	.00	0.	0.	0.	3.81
+	HYDROGRAPH AT	DIRJPA	80.	6.42	34.	11.	6.	3.81
+	ROUTED TO	RTRJRI	76.	6.92	34.	11.	6.	3.81
+	ROUTED TO	RTRIRI	73.	7.17	33.	11.	6.	3.81
+	HYDROGRAPH AT	SUBRI	742.	4.08	67.	17.	6.	.23
+	DIVERSION TO	RETRI	738.	4.00	47.	12.	4.	.23
+	HYDROGRAPH AT	RETRI	523.	4.17	20.	5.	2.	.23
+	HYDROGRAPH AT	SUBSB	536.	4.08	50.	12.	4.	.17
+	DIVERSION TO	RETSB	536.	4.08	34.	8.	3.	.17
+	HYDROGRAPH AT	RETSB	393.	4.17	16.	4.	1.	.17

+	ROUTED TO	RSSB	74.	4.42	12.	3.	1.	.17
+	HYDROGRAPH AT	SUBSD	487.	4.08	46.	12.	4.	.17
+	DIVERSION TO	RETSD	487.	4.08	34.	8.	3.	.17
+	HYDROGRAPH AT	RETSD	309.	4.25	13.	3.	1.	.17
+	HYDROGRAPH AT	DRSD	274.	4.50	16.	4.	1.	.45
+	3 COMBINED AT	@CPSD	340.	4.50	38.	9.	3.	.79
+	ROUTED TO	RSSD	342.	4.50	38.	9.	3.	.79
+	ROUTED TO	RTSDRI	239.	4.75	38.	9.	3.	.79
+	4 COMBINED AT	~@CPRI	837.	4.33	163.	46.	17.	4.38
+	ROUTED TO	MCRIRH	164.	5.17	71.	22.	9.	4.38
+	HYDROGRAPH AT	SUBPA	1148.	4.17	136.	34.	11.	.48
+	DIVERSION TO	RETPA	1148.	4.17	96.	24.	8.	.48
+	HYDROGRAPH AT	RETPA	690.	4.42	40.	10.	3.	.48
+	HYDROGRAPH AT	DRPA2	0.	.00	0.	0.	0.	3.81
+	ROUTED TO	RTRJPA	0.	.00	0.	0.	0.	3.81
+	2 COMBINED AT	CPPA	690.	4.42	40.	10.	3.	.48
+	DIVERSION TO	DIOE	124.	4.42	7.	2.	1.	.48
+	HYDROGRAPH AT	DIPAOE	566.	4.42	33.	8.	3.	.48
+	ROUTED TO	RTPAMH	290.	4.67	33.	8.	3.	.48
+	HYDROGRAPH AT	SUBMH	601.	4.17	62.	16.	5.	.24
+	DIVERSION TO	RETMH	601.	4.17	40.	10.	3.	.24
+	HYDROGRAPH AT	RETMH	435.	4.33	22.	6.	2.	.24
+	2 COMBINED AT	CPMH	370.	4.33	54.	13.	4.	.72
+	ROUTED TO	RTMHMD	300.	4.75	54.	13.	4.	.72
+	HYDROGRAPH AT	SUBMD	423.	4.50	68.	17.	6.	.25
+	DIVERSION TO	RETMD	423.	4.50	43.	11.	4.	.25
+	HYDROGRAPH AT	RETMD	329.	4.67	26.	6.	2.	.25
+	2 COMBINED AT	CPMD	534.	4.83	77.	19.	6.	.97
+	DIVERSION TO	DIJB1	109.	4.83	16.	4.	1.	.97
+	HYDROGRAPH AT	DIMDJB	425.	4.83	61.	15.	5.	.97
+	DIVERSION TO	DIMFX	425.	4.83	61.	15.	5.	.97
+	HYDROGRAPH AT	DIMDMF	0.	.00	0.	0.	0.	.97
+	HYDROGRAPH AT	SUBMI	1098.	4.17	109.	27.	9.	.41
+	DIVERSION TO	RETMI	1078.	4.08	71.	18.	6.	.41
+	HYDROGRAPH AT	RETMI	930.	4.25	38.	10.	3.	.41
+	HYDROGRAPH AT	SUBMG	257.	4.08	22.	5.	2.	.08

+	DIVERSION TO	RETMG	240.	4.00	15.	4.	1.	.08
+	HYDROGRAPH AT	RETMG	203.	4.17	7.	2.	1.	.08
+	2 COMBINED AT	CPMG	1038.	4.25	46.	11.	4.	.49
+	ROUTED TO	RTMGJB	374.	4.92	46.	11.	4.	.49
+	HYDROGRAPH AT	SUBJB1	703.	4.50	105.	26.	9.	.49
+	DIVERSION TO	RETJB1	315.	4.08	21.	5.	2.	.49
+	HYDROGRAPH AT	RETJB1	703.	4.50	84.	21.	7.	.49
+	HYDROGRAPH AT	DRJB	109.	4.83	16.	4.	1.	.97
+	ROUTED TO	RDIJB1	84.	5.17	16.	4.	1.	.97
+	HYDROGRAPH AT	ADMP1	705.	4.50	70.	18.	6.	4.97
+	ROUTED TO	MCJCJB	290.	5.67	70.	18.	6.	4.97
+	5 COMBINED AT	~CPJB1	707.	5.33	205.	51.	17.	9.37
+	ROUTED TO	RRJB1	345.	5.50	156.	41.	14.	9.37
+	DIVERSION TO	DIED	345.	5.50	156.	41.	14.	9.37
+	HYDROGRAPH AT	DIED	0.	.00	0.	0.	0.	9.37
+	HYDROGRAPH AT	SUBOE	1120.	4.17	128.	32.	11.	.47
+	DIVERSION TO	RETOE	1120.	4.17	95.	24.	8.	.47
+	HYDROGRAPH AT	RETOE	618.	4.42	33.	8.	3.	.47
+	HYDROGRAPH AT	CPOE1	124.	4.42	7.	2.	1.	.48
+	ROUTED TO	RTDIOE	29.	5.67	7.	2.	1.	.48
+	2 COMBINED AT	@CPOE	618.	4.42	41.	10.	3.	.47
+	DIVERSION TO	DIOD	101.	4.42	7.	2.	1.	.47
+	HYDROGRAPH AT	DIOEOD	517.	4.42	34.	8.	3.	.47
+	ROUTED TO	RTOEMF	175.	4.92	34.	8.	3.	.47
+	HYDROGRAPH AT	SUBMF	1379.	4.58	245.	62.	21.	.97
+	DIVERSION TO	RETMF	1379.	4.58	162.	40.	13.	.97
+	HYDROGRAPH AT	RETMF	869.	4.83	84.	21.	7.	.97
+	HYDROGRAPH AT	CPMF	425.	4.83	61.	15.	5.	.97
+	ROUTED TO	RTMDMF	308.	5.33	61.	15.	5.	.97
+	3 COMBINED AT	CPMF1	955.	4.92	170.	43.	14.	1.44
+	DIVERSION TO	DIEB	441.	4.92	79.	20.	7.	1.44
+	HYDROGRAPH AT	DIMFEB	514.	4.92	91.	23.	8.	1.44
+	ROUTED TO	RTMFMC	393.	5.50	90.	23.	8.	1.44
+	HYDROGRAPH AT	SUBOD	1279.	4.17	150.	38.	13.	.51
+	DIVERSION TO	RETOD	1279.	4.17	128.	32.	11.	.51
+	HYDROGRAPH AT	RETOD	353.	4.50	22.	6.	2.	.51

+	HYDROGRAPH AT	DROD	101.	4.42	7.	2.	1.	.47
+	ROUTED TO	RTDIOD	29.	5.08	7.	2.	1.	.47
+	2 COMBINED AT	CPOD	355.	4.50	29.	7.	2.	.51
+	DIVERSION TO	DIOC	64.	4.50	5.	1.	0.	.51
+	HYDROGRAPH AT	DIODOC	291.	4.50	24.	6.	2.	.51
+	ROUTED TO	RTODMC	104.	5.17	24.	6.	2.	.51
+	HYDROGRAPH AT	SUBMC	1825.	4.33	291.	73.	24.	1.00
+	DIVERSION TO	RETMC	1825.	4.33	192.	48.	16.	1.00
+	HYDROGRAPH AT	RETMC	1234.	4.58	100.	25.	8.	1.00
+	3 COMBINED AT	CPMC1	1043.	4.58	196.	49.	16.	2.95
+	DIVERSION TO	DIMB	398.	4.58	75.	19.	6.	2.95
+	HYDROGRAPH AT	DIMCMB	645.	4.58	121.	30.	10.	2.95
+	ROUTED TO	RTMCIE	478.	4.83	120.	30.	10.	2.95
+	DIVERSION TO	MCIE	478.	4.83	120.	30.	10.	2.95
+	HYDROGRAPH AT	DIMCIE	0.	.00	0.	0.	0.	2.95
+	HYDROGRAPH AT	DREB	441.	4.92	79.	20.	7.	1.44
+	HYDROGRAPH AT	SUBEB	308.	4.25	32.	8.	3.	.14
+	DIVERSION TO	RETEB	308.	4.25	23.	6.	2.	.14
+	HYDROGRAPH AT	RETEB	188.	4.42	9.	2.	1.	.14
+	2 COMBINED AT	CPEB	646.	4.75	97.	24.	8.	.14
+	HYDROGRAPH AT	RDIED	345.	5.50	156.	41.	14.	9.37
+	ROUTED TO	RJBED1	323.	5.83	155.	41.	14.	9.37
+	ROUTED TO	RJBED2	291.	6.92	152.	41.	14.	9.37
+	HYDROGRAPH AT	SUBED1	536.	4.58	84.	21.	7.	.38
+	DIVERSION TO	RETED1	487.	4.42	40.	10.	3.	.38
+	HYDROGRAPH AT	RETED1	536.	4.58	44.	11.	4.	.38
+	HYDROGRAPH AT	SUBED2	218.	4.25	22.	6.	2.	.11
+	DIVERSION TO	RETED2	218.	4.25	15.	4.	1.	.11
+	HYDROGRAPH AT	RETED2	159.	4.42	7.	2.	1.	.11
+	2 COMBINED AT	CPED1	611.	4.58	51.	13.	4.	.50
+	2 COMBINED AT	~CPED1	894.	5.83	270.	73.	24.	.50
+	2 COMBINED AT	~CPED2	981.	4.75	357.	95.	32.	.63
+	ROUTED TO	RRED	876.	5.92	352.	95.	32.	.63
+	ROUTED TO	RT99	736.	6.25	344.	95.	32.	.63
+	HYDROGRAPH AT	SUBID1	370.	4.42	52.	13.	4.	.20
+	DIVERSION TO	RETID1	370.	4.42	34.	9.	3.	.20

+	HYDROGRAPH AT	RETID1	297.	4.58	19.	5.	2.	.20
+	HYDROGRAPH AT	SUBID2	560.	4.42	77.	19.	6.	.36
+	DIVERSION TO	RETID2	560.	4.42	60.	15.	5.	.36
+	HYDROGRAPH AT	RETID2	286.	4.75	17.	4.	1.	.36
+	HYDROGRAPH AT	SUBIE	574.	4.42	117.	29.	10.	.30
+	DIVERSION TO	RETIE	574.	4.42	50.	13.	4.	.30
+	HYDROGRAPH AT	RETIE	470.	4.58	67.	17.	6.	.30
+	HYDROGRAPH AT	DRMCIE	478.	4.83	120.	30.	10.	2.95
+	4 COMBINED AT	~CPID2	1308.	4.75	230.	58.	19.	.87
+	ROUTED TO	RRID1	1163.	4.83	230.	58.	19.	.87
+	2 COMBINED AT	CPID3	1167.	4.92	525.	142.	47.	1.50
+	ROUTED TO	RT107	1120.	5.25	519.	142.	47.	1.50
+	HYDROGRAPH AT	SUBIB	826.	4.42	121.	30.	10.	.48
+	DIVERSION TO	RETIB	327.	4.00	21.	5.	2.	.48
+	HYDROGRAPH AT	RETIB	826.	4.42	101.	25.	8.	.48
+	HYDROGRAPH AT	SUBIC	630.	4.58	100.	25.	8.	.46
+	DIVERSION TO	RETIC	291.	4.17	20.	5.	2.	.46
+	HYDROGRAPH AT	RETIC	630.	4.58	80.	20.	7.	.46
+	2 COMBINED AT	CPIC	1296.	4.50	174.	44.	15.	.94
+	HYDROGRAPH AT	SUBOC	847.	4.17	93.	23.	8.	.31
+	DIVERSION TO	RETOC	847.	4.17	63.	16.	5.	.31
+	HYDROGRAPH AT	RETOC	546.	4.25	30.	8.	3.	.31
+	HYDROGRAPH AT	DROC	64.	4.50	5.	1.	0.	.51
+	ROUTED TO	RTDIOC	18.	5.92	5.	1.	0.	.51
+	2 COMBINED AT	CPOC	546.	4.25	36.	9.	3.	.31
+	ROUTED TO	RTOCMB	231.	4.67	36.	9.	3.	.31
+	HYDROGRAPH AT	SUBMB	1673.	4.42	273.	68.	23.	1.00
+	DIVERSION TO	RETMB	1673.	4.42	178.	45.	15.	1.00
+	HYDROGRAPH AT	RETMB	1163.	4.67	96.	24.	8.	1.00
+	HYDROGRAPH AT	DRMB	398.	4.58	75.	19.	6.	2.95
+	ROUTED TO	RTDIMB	217.	5.17	74.	19.	6.	2.95
+	3 COMBINED AT	@CPMB	1155.	4.67	195.	49.	16.	5.24
+	ROUTED TO	RTMBIB	612.	5.17	172.	44.	15.	5.24
+	2 COMBINED AT	CPIB0	1316.	4.92	365.	93.	31.	6.18
+	3 COMBINED AT	@CPIB2	1434.	5.25	627.	175.	58.	10.63
+	ROUTED TO	DET107	855.	5.83	544.	171.	58.	10.63

+	ROUTED TO	MCIBIA	833.	6.25	538.	171.	58.	10.63
+	HYDROGRAPH AT	SUBME	521.	4.33	60.	15.	5.	.33
+	DIVERSION TO	RETME	521.	4.33	46.	11.	4.	.33
+	HYDROGRAPH AT	RETME	257.	4.58	14.	4.	1.	.33
+	ROUTED TO	RTMEIA	118.	5.00	14.	4.	1.	.33
+	HYDROGRAPH AT	SUBIA	594.	4.25	67.	17.	6.	.31
+	DIVERSION TO	RETIA	110.	3.83	7.	2.	1.	.31
+	HYDROGRAPH AT	RETIA	594.	4.25	59.	15.	5.	.31
+	3 COMBINED AT	~CPIA	834.	6.25	536.	180.	62.	11.26
+	ROUTED TO	MCIAHB	807.	6.67	525.	179.	61.	11.26
+	HYDROGRAPH AT	SUBHB	644.	4.25	69.	17.	6.	.34
+	DIVERSION TO	RETHB	119.	3.92	9.	2.	1.	.34
+	HYDROGRAPH AT	RETHB	644.	4.25	60.	15.	5.	.34
+	2 COMBINED AT	CPHB1	802.	6.67	522.	188.	64.	11.61
+	HYDROGRAPH AT	SUBDA	565.	4.42	72.	18.	6.	.33
+	DIVERSION TO	RETDA	216.	4.00	9.	2.	1.	.33
+	HYDROGRAPH AT	RETDA	565.	4.42	63.	16.	5.	.33
+	2 COMBINED AT	~CPDA	797.	6.67	547.	199.	68.	11.94
+	HYDROGRAPH AT	SUBLD	489.	4.33	60.	15.	5.	.28
+	DIVERSION TO	RETLD	489.	4.33	42.	10.	3.	.28
+	HYDROGRAPH AT	RETLD	287.	4.58	18.	4.	1.	.28
+	ROUTED TO	RTLDMA	163.	4.83	18.	4.	1.	.28
+	HYDROGRAPH AT	SUBMA	430.	4.25	42.	11.	4.	.25
+	DIVERSION TO	RETMA	430.	4.25	33.	8.	3.	.25
+	HYDROGRAPH AT	RETMA	220.	4.50	10.	2.	1.	.25
+	2 COMBINED AT	CPMA	215.	4.50	27.	7.	2.	.52
+	ROUTED TO	RTMAHB	165.	5.08	27.	7.	2.	.52
+	2 COMBINED AT	CPHB2	802.	6.67	547.	199.	68.	12.46
+	HYDROGRAPH AT	SUBLB	412.	4.33	43.	11.	4.	.25
+	DIVERSION TO	RETLB	412.	4.33	33.	8.	3.	.25
+	HYDROGRAPH AT	RETLB	189.	4.58	10.	3.	1.	.25
+	ROUTED TO	RTLBHA	51.	5.83	10.	3.	1.	.25
+	HYDROGRAPH AT	SUBHA	298.	4.25	32.	8.	3.	.15
+	DIVERSION TO	RETHA	106.	3.92	6.	2.	1.	.15
+	HYDROGRAPH AT	RETHA	298.	4.25	25.	6.	2.	.15
+	3 COMBINED AT	CPHA	792.	6.75	556.	201.	69.	12.86

+	ROUTED TO	MCHACB	767.	7.58	533.	199.	69.	12.86
+	HYDROGRAPH AT	SUBJB	744.	4.50	106.	27.	9.	.49
+	DIVERSION TO	RETJB2	744.	4.50	65.	16.	5.	.49
+	HYDROGRAPH AT	RETJB2	613.	4.67	41.	10.	3.	.49
+	HYDROGRAPH AT	DRJB2	213.	4.58	47.	13.	5.	8.11
+	ROUTED TO	RTJCJ	147.	5.25	46.	13.	5.	8.11
+	2 COMBINED AT	@CPJB2	739.	4.83	108.	29.	11.	3.81
+	DIVERSION TO	DIFA	276.	5.00	54.	15.	5.	3.81
+	HYDROGRAPH AT	DIJBEE	155.	5.00	30.	8.	3.	3.81
+	ROUTED TO	RTJBEE	86.	6.25	29.	8.	3.	3.81
+	HYDROGRAPH AT	SUBEE	1002.	4.67	177.	44.	15.	.96
+	DIVERSION TO	RETEE	1002.	4.67	127.	32.	11.	.96
+	HYDROGRAPH AT	RETEE	468.	4.92	50.	13.	4.	.96
+	2 COMBINED AT	CPEE	273.	5.17	50.	14.	5.	4.77
+	ROUTED TO	RTEEEA	43.	13.25	36.	14.	5.	4.77
+	HYDROGRAPH AT	SUBEA	1391.	4.58	231.	58.	19.	1.32
+	DIVERSION TO	RETEA	1391.	4.58	180.	45.	15.	1.32
+	HYDROGRAPH AT	RETEA	478.	4.83	52.	13.	4.	1.32
+	2 COMBINED AT	CPEA	303.	5.17	35.	19.	7.	6.09
+	ROUTED TO	RTEADC	141.	5.67	31.	17.	6.	6.09
+	HYDROGRAPH AT	SUBDC	1202.	4.42	158.	40.	13.	.83
+	DIVERSION TO	RETDC	846.	4.17	52.	13.	4.	.83
+	HYDROGRAPH AT	RETDC	1202.	4.42	107.	27.	9.	.83
+	2 COMBINED AT	~CPDC	776.	4.42	94.	34.	12.	6.92
+	ROUTED TO	RTDCCC	565.	4.92	93.	34.	12.	6.92
+	HYDROGRAPH AT	SUBDD	308.	4.17	28.	7.	2.	.13
+	DIVERSION TO	RETDD	308.	4.17	22.	6.	2.	.13
+	HYDROGRAPH AT	RETDD	119.	4.33	6.	2.	1.	.13
+	ROUTED TO	RTDDCC	28.	5.42	6.	2.	1.	.13
+	HYDROGRAPH AT	SUBCC	1311.	4.50	194.	49.	16.	.98
+	DIVERSION TO	RETCC	984.	4.25	69.	17.	6.	.98
+	HYDROGRAPH AT	RETCC	1311.	4.50	125.	31.	10.	.98
+	3 COMBINED AT	~CPCC	1122.	4.83	181.	55.	19.	8.03
+	ROUTED TO	RTCCSC	1032.	5.08	180.	55.	19.	8.03
+	ROUTED TO	RTCCSC	932.	5.25	179.	55.	19.	8.03
+	HYDROGRAPH AT	SUBCB	1204.	4.42	178.	45.	15.	.74

+	DIVERSION TO	RETCB	582.	4.08	32.	8.	3.	.74
+	HYDROGRAPH AT	RETCB	1204.	4.42	146.	37.	12.	.74
+	3 COMBINED AT	~CPCB1	1319.	5.33	632.	237.	82.	21.63
+	HYDROGRAPH AT	SUBGD1	1022.	4.42	136.	34.	11.	.63
+	DIVERSION TO	RETGD1	451.	4.00	27.	7.	2.	.63
+	HYDROGRAPH AT	RETGD1	1022.	4.42	110.	27.	9.	.63
+	HYDROGRAPH AT	SUBGD2	1299.	4.50	195.	49.	16.	.21
+	DIVERSION TO	RETGD2	527.	4.00	32.	8.	3.	.21
+	HYDROGRAPH AT	RETGD2	1299.	4.50	164.	41.	14.	.21
+	2 COMBINED AT	CPGD	2156.	4.42	268.	67.	22.	.84
+	HYDROGRAPH AT	SUBKC	492.	4.25	54.	14.	5.	.26
+	DIVERSION TO	RETKC	492.	4.25	44.	11.	4.	.26
+	HYDROGRAPH AT	RETKC	183.	4.58	10.	3.	1.	.26
+	ROUTED TO	RTKCGD	60.	5.08	10.	3.	1.	.26
+	HYDROGRAPH AT	SUBGC	432.	4.25	43.	11.	4.	.22
+	DIVERSION TO	RETGC	234.	4.00	10.	3.	1.	.22
+	HYDROGRAPH AT	RETGC	432.	4.25	33.	8.	3.	.22
+	ROUTED TO	RTGCGD	423.	4.25	33.	8.	3.	.22
+	3 COMBINED AT	CPGD1	2260.	4.42	297.	74.	25.	1.32
+	ROUTED TO	RTGDCB	2252.	4.50	297.	74.	25.	1.32
+	2 COMBINED AT	~CPCB2	2043.	4.50	839.	288.	99.	22.95
+	ROUTED TO	MCCBCA	1894.	4.92	820.	286.	99.	22.95
+	HYDROGRAPH AT	SUBCA1	238.	4.50	35.	9.	3.	.14
+	DIVERSION TO	RETCA1	86.	4.00	5.	1.	0.	.14
+	HYDROGRAPH AT	RETCA1	238.	4.50	31.	8.	3.	.14
+	HYDROGRAPH AT	SUBCA2	1249.	4.50	186.	47.	16.	.84
+	DIVERSION TO	RETCA2	621.	4.08	36.	9.	3.	.84
+	HYDROGRAPH AT	RETCA2	1249.	4.50	150.	37.	12.	.84
+	3 COMBINED AT	~CPCA1	2431.	4.92	911.	316.	109.	23.93
+	HYDROGRAPH AT	SUBGB	379.	4.33	41.	10.	3.	.22
+	DIVERSION TO	RETGB	308.	4.17	17.	4.	1.	.22
+	HYDROGRAPH AT	RETGB	379.	4.33	24.	6.	2.	.22
+	ROUTED TO	RTGBCA	111.	5.25	24.	6.	2.	.22
+	2 COMBINED AT	~CPCA2	2426.	4.92	916.	317.	109.	24.16
+	DIVERSION TO	B-DRCC	2393.	4.92	883.	285.	95.	24.16
+	HYDROGRAPH AT	P-DRCC	33.	4.92	33.	32.	14.	24.16

+	ROUTED TO	MCCABC	33.	5.17	33.	32.	14.	24.16
+	HYDROGRAPH AT	SUBBC1	494.	4.00	40.	10.	3.	.14
+	DIVERSION TO	RETBC1	50.	3.50	6.	1.	0.	.14
+	HYDROGRAPH AT	RETBC1	494.	4.00	34.	9.	3.	.14
+	HYDROGRAPH AT	SUBBC2	931.	4.50	136.	34.	11.	.49
+	DIVERSION TO	RETBC2	316.	4.00	21.	5.	2.	.49
+	HYDROGRAPH AT	RETBC2	931.	4.50	115.	29.	10.	.49
+	3 COMBINED AT	~CPBC	522.	4.50	126.	56.	23.	24.78
+	2 COMBINED AT	CPAFBC	485.	4.50	120.	54.	22.	34.15

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

APPENDIX D

HEC-1 Model Output for Option 4 (107BSNG.DAT)

```
1****************************************
*                                      *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*             JUN   1998               *
*           VERSION 4.1                *
*                                      *
*  RUN DATE   27APR09  TIME  13:58:13  *
*                                      *
****************************************
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```
****************************************
*                                      *
*    U.S. ARMY CORPS OF ENGINEERS      *
*    HYDROLOGIC ENGINEERING CENTER     *
*          609 SECOND STREET           *
*       DAVIS, CALIFORNIA 95616        *
*           (916) 756-1104             *
*                                      *
****************************************
```

```
X     X  XXXXXXX   XXXXX          X
X     X  X        X     X        XX
X     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   107BSNG.DAT
  2           ID   PRESTIGE ENGINEERING CONSULTANTS - MARCH 23, 2009
  3           ID   REMOVAL OF 95TH AVENUE BASIN & REPLACE WITH 10TH AVENUE BASIN
  4           ID   6-HOUR RAINFALL
  5           ID   DURANGO REGIONAL CONVEYANCE CHANNEL AND SUNLAND CHANNEL
  6           ID   AVONDALE AND PHOENIX ARIZONA
  7           ID   THIS HEC-1 MODEL IS THE SAME AS THE REC6FINAL.DAT MODEL FOR THE SAME AREA,
  8           ID   DATED JANUARY 25, 2006 AND DELIVERED TO THE FCDMC ON FEBRUARY 15, 2006,
  9           ID   WITH THE FOLLOWING CHANGES ADDED BY PRESTIGE ENGINEERING
 10           ID   1.  REMOVE DETENTION BASIN AT 95TH AVENUE (KK 95BASIN) FROM THE MODEL
 11           ID   2.  REPLACE THE TWO ROUTING REACHES RT95 AND RT99 BETWEEN 91ST AVE & 99 AVE
 12           ID       WITH A SINGLE ROUTING REACH, AFTER THE REMOVAL OF THR 95TH AVE BASIN
 13           ID       RENAME BOTH ROUTINGS WITH A SINGLE LABEL RT99
 14           ID   3.  REVISE THE REACH DISTANCE TO THE ONE MILE DISTANCE BETWEEN 91ST & 99TH
 15           ID   4.  FROM THE 7566 FT (2439 FT FOR RT95 PLUS 5127 FT FOR RT99) TO 5216 FT
 16           ID   5.  ADD BASIN AT 107TH AVENUE AFTER COMBINING SUB IB AND IC AND ROUTED FLOWS
 17           ID       FROM THE NORTH AT CPIB2 WHICH WAS FORMERLLY RRIB
 18           ID   6.  THE 107TH AVE BASIN IS 20 AC BOTTOM AT 6:1 SIDES BOT FLUSHED WITH CHANNE
 19           ID   7.  THE CULVERT USED IS 10FT WIDE BY 5FT HIGH TRIPLE CONCRETE BOX CULVERT
 20           ID   8.  TOP OF ROAD IS 0.5 FT ABOVE TOP OF CULVERT
 21           ID   9.  SLOPE OF CULVERT BARREL IS 0.005 FT/FT
 22           ID   10. 100-YR DISCHARGE WAS TAKEN FROM ASPEN REPORT AS 1193 CFS
 23           ID   11. CULVERT SET TO DISCHARGE ABOUT THE EXISTING CONDITION 100-YR WITH NO ROAD
 24           ID       OVERTOPPING AT 107TH AVENUE
 25           ID   12. THE CHAN ROUTING RT107 LENGTH SHORTENED BY 500 FT TO ALLOW FOR THE 107TH
 26           ID       BASIN DETENTION
              *DIAGRAM
              * MODIFIED IT CARD FOR DSS RUN  SLT
              * IT     5            1200    2000
 27           IT       5 09MAR95    1200    2000
 28           IO       5
 29           IN      15
              *
 30           JD    3.23     0.01
 31           PC   0.000    0.008   0.016   0.025   0.033   0.041   0.050   0.058   0.066   0.074
 32           PC   0.087    0.099   0.118   0.138   0.216   0.377   0.834   0.911   0.931   0.950
 33           PC   0.962    0.972   0.983   0.991   1.000
 34           JD   3.209     0.50
 35           JD   3.149     2.80
 36           PC   0.000    0.009   0.016   0.025   0.034   0.042   0.051   0.059   0.067   0.076
 37           PC   0.087    0.100   0.120   0.163   0.252   0.451   0.694   0.837   0.900   0.938
 38           PC   0.950    0.963   0.975   0.988   1.000
 39           JD   2.978     16.0
 40           PC   0.000    0.009   0.020   0.030   0.048   0.063   0.076   0.090   0.105   0.119
 41           PC   0.135    0.152   0.175   0.222   0.304   0.472   0.670   0.796   0.868   0.912
 42           PC   0.946    0.960   0.973   0.987   1.000
 43           JD   2.623     90.0
 44           PC   0.000    0.021   0.035   0.051   0.071   0.087   0.105   0.125   0.143   0.160
 45           PC   0.179    0.201   0.232   0.281   0.364   0.500   0.658   0.773   0.841   0.888
 46           PC   0.927    0.945   0.964   0.982   1.000
 47           JD   1.841    500.0
 48           PC   0.000    0.024   0.043   0.059   0.078   0.098   0.119   0.141   0.162   0.186
 49           PC   0.212    0.239   0.271   0.321   0.408   0.515   0.627   0.735   0.814   0.864
 50           PC   0.907    0.930   0.954   0.977   1.000
              *
1                                   HEC-1 INPUT                                                    PAGE  2

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

 51           KK   SUBWD   BASIN
 52           KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 53           BA   0.393
 54           LG    0.20     0.19    7.00    0.17      12
 55           UI      32       42     116     157     189     226     281     403     348     281
 56           UI     240      193     156     115      65      54      42      32      17      10
 57           UI      10       10      10       9       0       0       0       0       0       0
 58           UI       0        0       0       0       0       0       0       0       0       0
              *
```

```
 59          KK  RTWDXA   ROUTE   REACH
 60          KM        ROUTE FLOW FROM WD TO XA (ALONG 27TH AVENUE).
 61          KM        TYPE C CHANNEL
 62          RS       4              -1        0
 63          RC   0.025   0.025   0.025    2500  0.0016    0.00
 64          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 65          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *

 66          KK   SUBXA   BASIN
 67          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 68          BA   0.247
 69          LG    0.13    0.15    9.70    0.06      44
 70          UI      34     125     193     268     417     308     225     157      74      48
 71          UI      29      10      11      11       0       0       0       0       0       0
 72          UI       0       0       0       0       0       0       0       0       0       0
             *

 73          KK   CPXA1
 74          KM   ADD HYDROGRAPHS AT XA
 75          HC       2
             *
             * KK  RSXA
             * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
             * RS     1    STOR       0       0
             * SV   .01     .07     1.0     5.1    14.0    28.5    50.0    79.1   117.4   165
             * SE1063.3  1063.5  1063.6  1064.1  1064.6  1065.1  1065.6  1066.1  1066.6  1067
             * SQ     0      15      43     455    1751    3879    6999   11192   17236   253
             *

 76          KK   DIXAO
 77          KM   DIVERT FLOW FROM XA SOUTHWARD OVER SPRR AND OUT OF MODEL
 78          DT   DIZZ1
 79          DI       0       0      43     455    1751    3879    6999   11192   17236   25382
 80          DQ       0       0       0       0       0       0       0      44     960    3141
             *

 81          KK  RTXAWC   ROUTE   REACH
 82          KM        ROUTE FLOW FROM XA TO WC (ALONG SPRR).
 83          KM        TYPE C CHANNEL
 84          RS      12              -1        0
 85          RC   0.035   0.035   0.035    5100  0.0016    0.00
 86          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
 87          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
             *
1                                          HEC-1 INPUT                                                    PAGE  3

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

 88          KK   SUBWB   BASIN
 89          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 90          BA   0.667
 91          LG    0.16    0.15    9.70    0.06      36
 92          UI      60     103     240     316     391     474     689     701     538     442
 93          UI     358     278     177     107      94      61      41      19      18      19
 94          UI      19      18       0       0       0       0       0       0       0       0
 95          UI       0       0       0       0       0       0       0       0       0       0
             *

 96          KK  RTWBWC   ROUTE   REACH
 97          KM        ROUTE FLOW FROM WB TO WC (ALONG 35TH AVENUE).
 98          KM        TYPE C CHANNEL
 99          RS       3              -1        0
100          RC   0.025   0.025   0.025    2500  0.0020    0.00
101          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
102          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *

103          KK   SUBWC   BASIN
104          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
105          BA   0.487
106          LG    0.16    0.16    9.70    0.06      43
107          UI      46      90     195     255     315     404     581     477     377     302
108          UI     240     167      90      78      48      36      14      15      14      14
109          UI       0       0       0       0       0       0       0       0       0       0
             *

110          KK    CPWC
111          KM    ADD HYDROGRAPHS AT WC.
112          HC       3
             *
             * KK  RSWC
             * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
             * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
             * KO     1
             * RS     1    STOR       0       0
             * SV  16.1    27.6    44.0    65.2    90.7   121.5   159.6   206.8   263.7   329
             * SE1057.1  1057.6  1058.1  1058.6  1059.1  1059.6  1060.1  1060.6  1061.1  1061
             * SQ     0      34     456    1381    2859    4933    7982   12958   19919   288
             *

113          KK  DIWCWA
114          KM   DIVERT FLOW FROM WC TO QE
115          KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
116          DT    DIQE
117          DI       0      34     456    1381    2859    4933    7982   12958   19919   28835
118          DQ       0       0       0       0       0       0     141    1221    3463    6954
             *
             * KKDIWCQE
             * KM DIVERT FLOW FROM WC TO QE
             * DT  DIQE
             * DI     0     115     608    1579    3086    5253    8972   15024   23745   350
             * DQ     0       0       0       0       0      40     951    3350    7104   121
             *
1                                          HEC-1 INPUT                                                    PAGE  4
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 119          KK  RTWCWA
 120          KM   HEC-RAS REACH
 121          KM        ROUTE FLOW FROM WC TO WA (ALONG SPRR).
 122          KM        Channel geometry changed to match natural conditions 04.11.00  JEP
 123          KM        Manning's N values changed to match approved values 04.11.00  JEP
 124          KM        Method changed from Normal Depth Storage to Modified Puls 05.25.00 JEP
 125          KM        Stage-storage values are based on HEC-2 analysis results 06.19.00 JEP
 126          KM        Values transferred directly from HEC-2 file: Tape7_1 09.29.00 JEP
 127          RS      15    STOR       0       0
 128          SV       0     103     168     242     267     296     317     332     338     354
 129          SV     375
 130          SQ       0     200     400     800    1000    1200    1400    1600    1700    1900
 131          SQ    2200
              * RC  .129    .129    .129    4850   .0010
              * RX     0      40     200     410     870    1240    1700    2160
              * RY   4.4     3.8       0     1.6       0     1.8     2.8     4.4
              *
              *

 132          KK   SUBWA   BASIN
 133          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 134          BA   0.492
 135          LG    0.15    0.15   10.10    0.05      43
 136          UI      75     302     455     683     855     573     402     209     117      67
 137          UI      23      23      23       0       0       0       0       0       0       0
 138          UI       0       0       0       0       0       0       0       0       0       0
              *

 139          KK   CPWA1
 140          KM    ADD HYDROGRAPH SUBWA TO RTWCWA
 141          HC       2
              *

 142          KK   SUBVD   BASIN
 143          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 144          BA   0.697
 145          LG    0.16    0.16    9.70    0.06      36
 146          UI      63     108     251     330     408     495     720     733     562     461
 147          UI     375     291     185     112      98      63      44      19      20      19
 148          UI      20      19       0       0       0       0       0       0       0       0
 149          UI       0       0       0       0       0       0       0       0       0       0
              *

 150          KK  RTVDWA   ROUTE   REACH
 151          KM        ROUTE FLOW FROM VD TO WA (ALONG 43RD AVENUE).
 152          KM        FUTURE ARTERIAL SECTION
 153          RS       1      -1       0
 154          RC   0.100   0.023   0.100    2500  0.0030    0.00
 155          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 156          RY     105     105     105   99.75   99.75     105     105     105
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 157          KK   CPWA2
 158          KM    ADD HYDROGRAPHS FROM SUBWA AND RTWCWA TO RTVDWA.
 159          HC       2
              *
              * KK  RSWA
              * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
              * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
              * KO     1
              * RS     1    STOR       0       0
              * SV   1.3     1.9     2.4     3.1     4.0     8.5    16.7    29.9    48.5      74
              * SE1050.7  1050.9  1051.1  1051.3  1051.4  1051.9  1052.4  1052.9  1053.4    1053
              * SQ     0       0       0       0       0      77     562    1532    3131      53
              *

 160          KK  DIWAVC
 161          KM        DIVERT FLOW FROM WA TO QD OVER SPRR
 162          KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
 163          KM   Revised DQ records based on HEC-2 analysis results.  06.28.00 JEP
 164          DT    DIQD
 165          DI       0     200     400     800    1000    1200    1400    1600    1700    1900
 166          DQ       0       0      42     369     555     746     942    1140    1174    1370
              *
              * KKDIVCQD
              * KM DIVERT FLOW FROM VC TO QD OVER SPRR
              * DT  DIQD
              * DI     0     810    9237   10710
              * DQ     0       0       0      63
              *

 167          KK  RTWAVC
 168          KM   HEC-RAS REACH
 169          KM        MODIFIED PULS ROUTE FLOW FROM WA TO VC (ALONG SPRR).
              * KM       Channel geometry changed to match natural conditions 04.11.00  JEP
 170          KM        Manning's N values changed to match approved values 04.11.00  JEP
 171          KM        Method changed from Normal Depth Storage to Modified Puls 05.22.00 JEP
 172          KM        Stage-Storage values based on HEC-2 analysis results.  06.19.00 JEP
 173          KM        Values transferred directly from HEC-2 file:  Tape7_2  9.29.00 JEP
 174          RS      15    STOR       0       0
 175          SV       0     146     178     193     201     208     212
 176          SQ       0     400     600     800     989    1247    1487
              * RC  .317    .317    .317    5270   .0005
              * RX     0      50     120     390     810     950    1400    1700
              * RY   6.8       0       0     1.8     2.8     3.8     5.1     6.8
              *

 177          KK   SUBVC   BASIN
 178          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
```

```
 179          BA   0.490
 180          LG    0.12     0.16     8.40     0.10       50
 181          UI      75      300      454      680      852      570      400      209      116       67
 182          UI      23       23       23        0        0        0        0        0        0        0
 183          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

 184          KK   CPVC1
 185          KM    ADD HYDROGRAPH SUBVC TO RTWAVC.
 186          HC       2
              *

 187          KK   SUBVB   BASIN
 188          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 189          BA   0.720
 190          LG    0.15     0.17     9.70     0.06       45
 191          UI     121      489      718     1162     1201      810      529      243      146       66
 192          UI      36       36        0        0        0        0        0        0        0        0
 193          UI       0        0        0        0        0        0        0        0        0        0
              *

 194          KK  RTVBVC   ROUTE   REACH
 195          KM        ROUTE FLOW FROM VB TO VC (ALONG 51ST AVENUE).
 196          KM        FUTURE ARTERIAL SECTION
 197          RS       1       -1        0
 198          RC   0.100    0.023    0.100     2500   0.0017     0.00
 199          RX     0.0      440      445    445.1    575.1    575.2      900   1000.0
 200          RY     105      105      105    99.75    99.75      105      105      105
              *

 201          KK   CPVC2
 202          KM    ADD HYDROGRAPHS FROM SUBVC AND RTWAVC TO RTVBVC.
 203          HC       2
              *
              * KK  RSVC
              * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
              * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
              * KO      1
              * RS      1     STOR        0        0
              * SV     70       83       97      113      121      170      192      216      284        3
              * SE1051.4   1051.6   1051.8   1052.0   1052.1   1052.6   1052.8   1053.0   1053.3   1053
              * SQ     16      246      746     1537     2048     5354     7033     8943    12315      147
              *

 204          KK  DIVCQA
 205          KM   DIVERT FLOW FROM VC TO VA OVER 51st AVE.
 206          KM   Revised DQ records to reflect new weir analysis based on survey. 05.4.00 JEP
 207          KM   Revised DQ records based on HEC-2 analysis results.  06.19.00 JEP
 208          DT    DIVA
 209          DI       0      100      400      600      800      989     1247     1487
 210          DQ       0        1       27       32       30       32       32       32
              *
              * KKDIVCVA
              * KM DIVERT FLOW FROM VC TO VA OVER 51st AVE.
              * DT  DIVA
              * DI      0        9      654     2822     7159
              * DQ      0        4      214      753     1814
              *
1                                                HEC-1 INPUT                                                          PAGE  7

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

 211          KK  RTVCQA   ROUTE   REACH
 212          KM   ROUTE FLOW FROM VC TO QA (ALONG 51ST AVENUE).
 213          KM   FUTURE ARTERIAL SECTION
 214          RS       2       -1        0
 215          RC   0.100    0.023    0.100     5000   0.0030     0.00
 216          RX     0.0      440      445    445.1    575.1    575.2      900   1000.0
 217          RY     105      105      105    99.75    99.75      105      105      105
              *

 218          KK   SUBQA   BASIN
 219          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 220          BA   0.485
 221          LG    0.34     0.14    10.10     0.05       20
 222          UI      38       40      133      178      215      253      303      423      464      361
 223          UI     306      252      209      170      115       67       63       44       38       18
 224          UI      12       11       12       11       12        0        0        0        0        0
 225          UI       0        0        0        0        0        0        0        0        0        0
              *

 226          KK   CPQA2
 227          KM   ADD HYDROGRAPHS AT QA
 228          HC       2
              *

 229          KK    RSQA
 230          KM        MODIFIED PLUS ROUTING THROUGH PONDING BEHIND RID
 231          RS       1     STOR       -1        0
 232          SV     6.6      9.4     13.0     17.4     22.4     28.1     34.6     42.1     50.4
 233          SE  1032.2   1032.4   1032.6   1032.8   1033.0   1033.2   1033.4   1033.6   1033.8
 234          SQ       0       69     1129     6033    11213
 235          SE  1031.9   1032.4   1032.9   1033.4   1033.9
              *

 236          KK  DIQAPF
 237          KM   DIVERT FLOW FROM QA TO PF
 238          DT    DIPF
 239          DI       0       69     1129     6033    11213
 240          DQ       0       39      462     1272     2210
              *
```

```
241          KK  RTQAJH   ROUTE   REACH
242          KM        ROUTE FLOW FROM QA TO JH (SHEET FLOW).
243          KM        TYPE A CHANNEL
244          RS      11              -1       0
245          RC   0.100   0.100   0.100    2800  0.0031    0.00
246          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
247          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *
1                                          HEC-1 INPUT                                                          PAGE  8

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

248          KK   SUBQE   BASIN
249          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
250          BA   0.913
251          LG    0.15    0.13   10.10    0.04      56
252          UI      92     200     409     529     670     915    1121     854     673     525
253          UI     394     212     156     109      77      28      29      28      29       0
254          UI       0       0       0       0       0       0       0       0       0       0
             *

255          KK    DRQE
256          KM    RETURN DIVERT FROM WC
257          DR    DIQE
             *

258          KK  RTDIQE   ROUTE   REACH
259          KM        ROUTE DIVERT FROM WC TO QE
260          KM        TYPE A CHANNEL
261          RS       8              -1       0
262          RC   0.025   0.025   0.025    6600  0.0030    0.00
263          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
264          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *

265          KK    CPQE
266          KM        ADD HYDROGRAPHS AT QE
267          HC       2
             *

268          KK    RSQE
269          KM        MODIFIED PULS ROUTING BEHIND RID CANAL
270          RS       1    STOR       0       0
271          SV     9.5    11.0    14.9    20.2    26.5    33.8   55.23    82.5    95.6   159.9
272          SE  1040.1  1040.2  1040.4  1040.6  1040.8  1041.0  1041.5  1042.0  1042.2  1043.0
273          SQ       0     1.8    62.8   242.3   581.9    1158    4169    9977   13108   31180
             *

274          KK  RTQEQC   ROUTE   REACH
275          KM        ROUTE FLOW FROM QE TO QC (SHEET FLOW).
276          KM        TYPE A CHANNEL
277          RS       3              -1       0
278          RC   0.025   0.025   0.025    3000  0.0027    0.00
279          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
280          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *

281          KK   SUBQD   BASIN
282          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
283          BA   0.249
284          LG    0.17    0.06   12.40    0.02      51
285          UI      35     125     195     271     419     311     227     158      75      48
286          UI      29      10      11      11       0       0       0       0       0       0
287          UI       0       0       0       0       0       0       0       0       0       0
             *
1                                          HEC-1 INPUT                                                          PAGE  9

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

288          KK    DRQD
289          KM   RETURN DIVERT FROM WA
290          DR    DIQD
             *

291          KK  RTDIQD   ROUTE   REACH
292          KM        ROUTE DIVERT FROM WA TO QD
293          KM        TYPE C CHANNEL
294          RS       5              -1       0
295          RC   0.100   0.023   0.100    5000  0.0030    0.00
296          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
297          RY     105     105     105   99.75   99.75     105     105     105
             *

298          KK    CPQD
299          KM    ADD HYDROGRAPHS AT QD
300          HC       2
             *

301          KK    RSQD
302          KM        MODIFIED PULS ROUTING BEHIND RID CANAL.
303          RS       1    STOR       0       0
304          SV     2.8     4.8     8.6    14.6    22.5    31.9    42.6    54.8    65.5
305          SE  1038.1  1038.5  1039.0  1039.5  1040.0  1040.5  1041.0  1041.5  1042.0
306          SQ       0    30.5   388.4  1580.9  4070.0  7936.6 13214.2 19810.4 26117.2
             *

307          KK  DIQDQB
308          KM        DIVERT FLOW FROM QD TO QB
309          DT    DIQB
310          DI       0      31     388    1580    4070    7937   13214   19810   26117
311          DQ       0       0      71     591    1899    3883    6624   10067   13292
             *

312          KK  RTQDQC   ROUTE REACH
313          KM        ROUTE FLOW FROM QD TO QC.
```

```
 314          KM        FUTURE ARTERIAL SECTION
 315          RS       1              -1       0
 316          RC   0.100   0.023   0.100    2600  0.0040    0.00
 317          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
 318          RY     105     105     105   99.75   99.75     105     105     105
              *

 319          KK   SUBQC   BASIN
 320          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 321          BA   0.606
 322          LG    0.23    0.16   10.10    0.04      32
 323          UI      63     146     285     371     474     679     733     552     429     333
 324          UI     233     119      98      64      33      20      20      19      20       0
 325          UI       0       0       0       0       0       0       0       0       0       0
              *
1                                          HEC-1 INPUT                                                    PAGE 10

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

 326          KK    CPQC
 327          KM        ADD HYDROGRAPHS AT QC
 328          HC       3
              *

 329          KK   DIQCR
 330          KM   DIVERT 80% OF FLOW FROM QC TO RIVER
 331          DT    DISR
 332          DI       0      25      50      75     100     150     200
 333          DQ       0      20      40      60      80     120     160
              *

 334          KK  RTQCJI   ROUTE   REACH
 335          KM        ROUTE FLOW FROM QC TO JF
 336          KM        TYPE A CHANNEL
 337          RS      15              -1       0
 338          RC   0.100   0.100   0.100    6500  0.0028    0.00
 339          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 340          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 341          KK   SUBQB   BASIN
 342          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 343          BA   0.505
 344          LG    0.30    0.11   11.20    0.03      27
 345          UI      40      48     143     194     234     276     336     483     465     366
 346          UI     316     253     211     166      97      69      63      41      34      12
 347          UI      13      12      13      12      13       0       0       0       0       0
 348          UI       0       0       0       0       0       0       0       0       0       0
              *

 349          KK    DRQB
 350          KM        RETURN DIVERT FROM QD
 351          DR    DIQB
              *

 352          KK  RTDIQB   ROUTE   REACH
 353          KM        TYPE C CHANNEL
 354          RS      12              -1       0
 355          RC   0.100   0.100   0.100    2500  0.0028    0.00
 356          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
 357          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

 358          KK    CPQB
 359          KM   ADD HYDROGRAPHS AT QB
 360          HC       2
              *
1                                          HEC-1 INPUT                                                    PAGE 11

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

 361          KK    RSQB
 362          KM        MODIFIED PULS ROUTING THROUGH PONDING BEHIND RID.
 363          KM   THROUGH THE 43RD AVENUE.
 364          RS       1    STOR       0       0
 365          SV     9.4    13.9    19.2    25.5    33.1    41.8    51.7    62.9    75.3    89.1
 366          SE  1033.3  1033.6  1033.9  1034.2  1034.5  1034.8  1035.1  1035.4  1035.7  1036.0
 367          SQ       0    19.3   123.0   423.5   958.2  1718.8  2775.9  4426.7  6845.4  9954.3
              *

 368          KK  RTQBJH   ROUTE REACH
 369          KM   ROUTE FLOW FROM QB TO JH (SHEET FLOW).
 370          KM        TYPE A CHANNEL
 371          RS      15              -1       0
 372          RC   0.100   0.100   0.100    3500  0.0028    0.00
 373          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
 374          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

 375          KK   SUBJH   BASIN
 376          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 377          BA   0.516
 378          LG    0.37    0.11   11.20    0.03      17
 379          UI      62     175     314     402     581     733     541     418     304     176
 380          UI     107      71      41      19      19      19       0       0       0       0
 381          UI       0       0       0       0       0       0       0       0       0       0
              *

 382          KK    CPJH
 383          HC       4
              *

 384          KK  RTJHJI   ROUTE REACH
 385          KM   ROUTE FLOW FROM JH TO JI (SHEET FLOW).
 386          KM        TYPE A CHANNEL
```

```
387          RS      14                -1        0
388          RC   0.100    0.100    0.100    4000   0.0031    0.00
389          RX     0.0    100.0    400.0   500.0    500.1   600.0   900.0  1000.0
390          RY     5.0      4.0      1.0     0.0      0.0     1.0     4.0     5.0
             *

391          KK   SUBJI   BASIN
392          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
393          BA   0.308
394          LG    0.39     0.11    11.20    0.03       21
395          UI      52      209      307     497      514     346     227     104      62      28
396          UI      16       15        0       0        0       0       0       0       0       0
397          UI       0        0        0       0        0       0       0       0       0       0
             *
1                                          HEC-1 INPUT                                                    PAGE 12

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

398          KK    CPJI
399          KM   COMBINE FLOWS AT JI
400          HC       2
             *

401          KK   DISRX
402          KM    DUMMY DIVERT TO SALT RIVER (NOT RETURNED)
403          DT   DISR1
404          DI       0   10000
405          DQ       0   10000
             *

406          KK   SUBPF   BASIN
407          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
408          BA   0.502
409          LG    0.17     0.20     7.30    0.12       52
410          UI     113      407      611    1001      766     497     244     127      58      26
411          UI      28        0        0       0        0       0       0       0       0       0
412          UI       0        0        0       0        0       0       0       0       0       0
             *

413          KK   RETPF
414          KM   DIVERT RETENTION OUT OF MODEL DUE TO KNIGHT TRANSPORTATION
415          KM   PARKING LOT EXPANSION. -DCF
416          KM   TOTAL RETENTION IS 3.9 AF. 80% OF THAT IS USED HERE. -DCF
417          DT   RETPF     3.1
418          DI       0   10000
419          DQ       0   10000
             *

420          KK    DRPF
421          KM        RETURN DIVERT FROM QA.
422          DR    DIPF
             *

423          KK  RTDIPF   ROUTE   REACH
424          KM         ROUTE DIVERT FROM QA TO PF.
425          KM         TYPE C CHANNEL
426          RS      11                -1        0
427          RC   0.035    0.035    0.035    2600   0.0005    0.00
428          RX     0.0     20.0     35.0    50.0     50.1   250.0   450.0   550.0
429          RY     5.0      5.0      2.5     0.0      0.0     2.0     4.0     5.0
             *

430          KK   @CPPF
431          KM        ADD HYDROGRAPHS AT PF
432          HC       2    5.19
             *
1                                          HEC-1 INPUT                                                    PAGE 13

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

433          KK    RSPF
434          KM        MODIFIED PULS ROUTING BEHIND RID
             * KO     1
435          RS       1    STOR        0        0
436          SV    28.2     33.4     39.2     48.8     55.7    67.3    76.0    85.3   100.7   111.8
437          SE  1032.2   1032.4   1032.6   1032.8   1033.0  1033.2  1033.4  1033.6  1033.8  1034.0
438          SQ       0     19.4    124.9    457.5   1050.9  1875.2  2964.8  4437.1  6362.7  8725.9
             *

439          KK  DIPFPE
440          KM        DIVERT FLOW FROM PF TO PE
441          DT    DIPE
442          DI       0      255     1875     5340    11513
443          DQ       0        0        0      160     1143
             *

444          KK  RTPFJF   ROUTE   REACH
445          KM        ROUTE FLOW FROM PF TO JF.
446          KM        TYPE A CHANNEL
447          RS       6                -1        0
448          RC   0.035    0.035    0.035    4000   0.0040    0.00
449          RX     0.0     20.0     35.0    50.0     50.1   250.0   450.0   550.0
450          RY     5.0      5.0      2.5     0.0      0.0     2.0     4.0     5.0
             *

451          KK   SUBUD   BASIN
452          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
453          KM    L=       1.3  Lca=        .6   S=    20.0  Kn= .020  LAG=  14.9
454          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
455          BA     .759
456          LG     .15      .15     9.70     .05    55.00
457          UI    306.     941.    1739.    1494.     851.    324.    131.     53.      0.      0.
458          UI      0.       0.       0.       0.       0.      0.      0.      0.      0.
             *
```

```
459          KK    RETUD
460          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
461          KM   80% OF REQUIRED MODELED
462          DT   RETB1     38.7
463          DI        0   10000
464          DQ        0   10000
             *

465          KK  SDDRUD
466          KM   DIVERT STORM DRAIN FLOW
467          DT  59SD1D
468          DI        0     102   10000
469          DQ        0     102     102
             *
1                                   HEC-1 INPUT                                                    PAGE 14

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

470          KK  DIUDUA
471          KM   DIVERT 25% OF FLOW FROM UD TO UA.
472          DT    DIUA
473          DI        0       25       50       75      100      150      200
474          DQ        0        6       13       19       25       38       50
             *

475          KK  RTUDVA   ROUTE   REACH
476          KM         ROUTE FLOW FROM UD TO VA (ALONG 59TH AVENUE).
477          KM         FUTURE ARTERIAL SECTION
478          RS        1                -1        0
479          RC    0.100    0.023    0.100     2600   0.0019     0.00
480          RX      0.0      440      445    445.1    575.1    575.2      900  1000.0
481          RY      105      105      105    99.75    99.75      105      105     105
             *

482          KK   SUBVA   BASIN
483          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
484          BA   0.493
485          LG    0.10     0.15     8.40     0.10       58
486          UI      75      303      456      684      857      574      402      210      117       67
487          UI      23       23       24        0        0        0        0        0        0        0
488          UI       0        0        0        0        0        0        0        0        0        0
             *
             * THE FOLLOWING DIVERT RETURN IS REMOVED TO MODEL THE ADMP CONDITION

489          KK    DRVA
490          KM         RETURN DIVERT FROM VC
491          DR    DIVA
             *
             * KKRTDIVA
             * KM HEC-RAS REACH
             * KO      1
             * KM       ROUTE FLOW FROM VC TO VA (ALONG SPRR).
             * KM       Method changed from Normal Depth Storage to Modified Puls 06.19.00 JEP
             * KM       Stage-Storage values are based on HEC-2 analysis results. 06.19.00 JEP
             * KM       Values transferred directly from HEC-2 file:  Tape7_3  09.29.00  JEP
             * RS     15     STOR        0        0
             * SV      0       56       87      130      163      191      205      218      227
             * SQ      0      100      200      400      600      800     1000     1200     1500
             *

492          KK   CPVA1
493          KM         ADD HYDROGRAPH SUBVA TO RTDIVA
494          HC        3
             *
             *

495          KK  SDDRVA
496          KM   DIVERT STORM DRAIN FLOW
497          DT  59SD2D
498          DI        0       59    10000
499          DQ        0       59       59
             *
             * KK CPVA2
             * KM       ADD HYDROGRAPHS SUBVA AND RTDIVA TO RTUDVA
             * HC      2
             *
             * KK  RSVA
             * KM MODIFIED PULS ROUTING THROUGH PONDING BEHIND SPRR.
             * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
             * KO      1
             * RS      1     STOR        0        0
             * SV   10.3     13.3     15.6     23.9     34.6     48.9     67.7     90.8    118.6
             * SE1044.2   1044.3   1044.5   1045.0   1045.5   1046.0   1046.5   1047.0   1047.5
             * SQ      0        2       39      397     1279     2904     5363     8613    13175
             *
1                                   HEC-1 INPUT                                                    PAGE 15

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

500          KK  DIVAPE
501          KM   DIVERT FLOW FROM VA TO UC OVER 59TH AVE.
502          KM   Revised DQ records to reflect new weir analysis based on survey. 05.04.00 JEP
503          KM   REVISED DIVERSION RECORDS TO REROUTE DIVERSION AROUND CODE SEQUENCE.
504          KM   INSTEAD OF DIVERTING FLOW OVER THE WEIR TO THE SOUTH, FLOW IS BEING
505          KM   DIVERTED TO THE WEST. 06.02.00 -DCF
506          KM   Revised DQ records based on HEC-2 analysis results.  06.19.00 JEP
507          DT    DIUC
508          DI        0      200      400      600      800     1000     1200     1500
509          DQ        0      200      398      548      656      715      738      756
             * DI      0        2       39      397     1279
             * DQ      0        0        0        0        0
             *

510          KK  RTVAPE   ROUTE   REACH
511          KM   ROUTE FLOW FROM VA TO PE (ALONG 59TH AVENUE).
```

```
512          KM   FUTURE ARTERIAL SECTION
513          RS      2              -1       0
514          RC  0.100   0.023   0.100    3000  0.0038    0.00
515          RX    0.0     440     445   445.1   575.1   575.2     900  1000.0
516          RY    105     105     105   99.75   99.75     105     105     105
             *

517          KK   SUBPE   BASIN
518          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
519          BA  0.504
520          LG   0.13    0.26    6.20    0.22      56
521          UI    130     449     692    1071     728     453     189     108      32      29
522          UI      0       0       0       0       0       0       0       0       0       0
             *

523          KK    DRPE
524          KM    RETURN DIVERT FROM PF
525          DR    DIPE
             *

526          KK  RTDIPE
527          KM         ROUTE DIVERT FROM PF TO PE.
528          KM         TYPE C CHANNEL
529          RS      3              -1       0
530          RC   .035    .035    .035    2000   .0005
531          RX      0      20      35      50    50.1     250     450     550
532          RY      5       5     2.5       0       0       2       4       5
             *

533          KK    CPPE
534          KM        ADD HYDROGRAPHS AT PE
535          HC      3
             *
```



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

536          KK    RSPE
537          KM         RESERVOIR ROUTING BEHIND 59TH AVE AND RID CANAL
538          RS      1    STOR       0       0
539          SV   15.6    16.9    21.0    24.0    29.5    33.7    38.3    43.2
540          SE 1032.5  1032.6  1032.8  1033.0  1033.2  1033.4  1033.6  1033.7
541          SQ      0    1.44      23     194     637    1420    2516    3177
             *

542          KK  DIPEPD
543          KM         DIVERT FLOW FROM PE TO PD
544          DT    DIPD
545          DI      0     8.2     636    3177
546          DQ      0       0       0     8.1
             *

547          KK  RTPEJF   ROUTE   REACH
548          KM        ROUTE FLOW FROM PE TO JF (ALONG 59TH AVE).
549          KM        FUTURE ARTERIAL SECTION
550          RS      1              -1       0
551          RC  0.100   0.023   0.100    2600  0.0036    0.00
552          RX    0.0     440     445   445.1   575.1   575.2     900  1000.0
553          RY    105     105     105   99.75   99.75     105     105     105
             *

554          KK   SUBJF   BASIN
555          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
556          KM    L=       .7  Lca=       .4   S=   11.1  Kn= .027  LAG=  22.9
557          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
558          BA  0.501
559          LG   0.10    0.15    7.60    0.14      55
560          UI    320    1108    1172     675     319     146      67      20      19      19
561          UI      0       0       0       0       0       0       0       0       0       0
             *

562          KK    CPJF
563          KM   COMBINE FLOWS AT JF.
564          HC      3
             *

565          KK  RTJFJG   ROUTE   REACH
566          KM        ROUTE FLOW FROM JF TO JE (ALONG 59TH AVE).
567          KM        FUTURE ARTERIAL SECTION
568          RS      3              -1       0
569          RC  0.100   0.023   0.100    6000  0.0036    0.00
570          RX    0.0     440     445   445.1   575.1   575.2     900  1000.0
571          RY    105     105     105   99.75   99.75     105     105     105
             *

572          KK   SUBJG   BASIN
573          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
574          KM    L=       .7  Lca=       .4   S=   11.1  Kn= .027  LAG=  22.9
575          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
576          BA  0.901
577          LG   0.12    0.16    8.40    0.10      51
```



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

578          UI    195     717    1181    1396    1191     840     531     336     203     134
579          UI     96      35      20      21      21      20      21       0       0       0
580          UI      0       0       0       0       0       0       0       0       0       0
             *

581          KK    CPJG
582          KM   COMBINE FLOWS AT SALT RIVER.
583          HC      2
             *

584          KK  CPJGSR
```

```
585          KM   COMBINE FLOWS AT SALT RIVER
586          HC       2
             *
             * ******************************************************************************
             *

587          KK    DRUC
588          KM    RETURN DIVERT FROM VA
589          DR    DIUC
             *
             *
             * KKRTVAUC   ROUTE   REACH
             * KM       ROUTE FLOW FROM VA TO UC
             * KM       Channel geometry changed to match natural conditions 04.11.00  JEP
             * KM       Manning's N values changed to match approved values 04.11.00  JEP
             * RS     9            -1       0
             * RC 0.035   0.035   0.035    5200  0.0012    0.00
             * RX   0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
             * RY   5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
             *

590          KK  RTVAUC
591          KM   HEC-RAS REACH
592          KM        ROUTE FLOW FROM VA TO A POINT IN UC (ALONG SPRR).
593          KM        Channel geometry changed to match natural conditions 04.11.00  JEP
594          KM        Manning's N values changed to match approved values 04.11.00  JEP
595          KM        Method changed from Normal Depth Storage to Modified Puls 05.25.00 JEP
596          KM        Stage-storage values are from HEC-2 results 06.19.00 JEP
597          KM        Values transferred directly from HEC-2 file: Tape7_4  09.29.00 JEP
598          KM        Values modified to reflect channelization downstream  06.11.01 JEP
599          RS       9    STOR       0       0
600          SV       0      46      62      76      90     102     114     125     137
601          SQ       0     200     400     600     800    1000    1200    1400    1600
             *
             * KKSUBUC    BASIN
             * KM  VALLEY S-GRAPH WAS USED FOR THIS BASIN
             * BA 0.483
             * LG  0.23    0.15    9.70    0.06      28
             * UI    49     105     217     280     354     484     594     451     356     2
             * UI   208     113      83      57      41      15      15      14      15
             * UI     0       0       0       0       0       0       0       0       0
             *
             * KK@CPUC1
             * KM       ADD HYDROGRAPHS SUBUC1 TO RTVAUC
             * HC     2    1.73
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

602          KK  MCUCUC   ROUTE   REACH
603          KM   ADMP CHANNEL
604          KM   MASTER CHANNEL ROUTE FROM UC1 TO UC2
605          KM   ROUTING RECORD ADDED, JEP 6/11/01
606          RS       1    FLOW      -1
607          RC   0.014   0.014   0.014    2493  0.0014    0.00
608          RX     0.0    16.0    16.0    16.0    46.0    46.0    46.0    62.0
609          RY     4.8     5.1     2.6     0.0     0.0     2.6     5.1     4.8
             *

610          KK  SUBUC    BASIN
611          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
612          BA   0.483
613          LG    0.23    0.15    9.70    0.06      28
614          UI      49     105     217     280     354     484     594     451     356     278
615          UI     208     113      83      57      41      15      15      14      15       0
616          UI       0       0       0       0       0       0       0       0       0       0
             *

617          KK   @CPUC
618          KM        ADD HYDROGRAPHS SUBUC TO MCUCUC
619          HC       2    1.73

620          KK  SUBTB1
621          KM   BASIN TB1
622          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
623          KM    L=        .9  Lca=        .3   S=     9.4  Kn= .020  LAG=  10.4
624          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
625          BA     .14
626          LG     .25     .15    9.70     .05   30.00
627          UI    118.    367.    381.    146.     40.     14.      0.      0.      0.      0.
628          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
             *

629          KK   RETB1
630          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
631          KM   80% OF REQUIRED MODELED
632          DT   RETB1    11.2
633          DI       0   10000
634          DQ       0   10000
             *

635          KK  SDDTB1
636          KM   DIVERT STORM DRAIN FLOW
637          DT  67SD1D
638          DI       0      17   10000
639          DQ       0      17      17
             *
1                                          HEC-1 INPUT                                          PAGE 19

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

640          KK  RTUAUC   ROUTE   REACH
641          KM        ROUTE FLOW FROM TB1 TO UA (ALONG 67TH AVENUE).
642          KM        FUTURE ARTERIAL SECTION
```

```
643          RS       2                -1        0
644          RC   0.100    0.023   0.100    2450  0.0015    0.00
645          RX     0.0      440     445   445.1   575.1   575.2     900  1000.0
646          RY     105      105     105   99.75   99.75     105     105     105
             *

647          KK   SUBUA   BASIN
648          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
649          BA   0.561
650          LG    0.23    0.16    9.70    0.06      22
651          UI      44      46     155     204     249     294     350     490     536     417
652          UI     354     291     242     198     133      77      73      51      43      21
653          UI      13      13      14      13      14       0       0       0       0       0
654          UI       0       0       0       0       0       0       0       0       0       0
             *

655          KK    DRUA
656          KM    RETURN DIVERT FROM UD
657          DR    DIUA
             *

658          KK  RTDIUA   ROUTE   REACH
659          KM        ROUTE DIVERT TO UA
660          KM        FUTURE ARTERIAL SECTION
661          RS       4                -1        0
662          RC   0.100    0.023   0.100    5000  0.0014    0.00
663          RX     0.0      440     445   445.1   575.1   575.2     900  1000.0
664          RY     105      105     105   99.75   99.75     105     105     105
             *

665          KK   @CPUA
666          KM        ADD HYDROGRAPHS AT UA
667          HC       3    1.46
             *

668          KK  SDDRUA
669          KM   DIVERT STORM DRAIN FLOW
670          DT  67SD1D
671          DI       0      96   10000
672          DQ       0      96      96
             *

673          KK  DIUAUC
674          KM        DIVERT 20% OF FLOW FROM UA TO TB
675          DT    DITB
676          DI       0      25      50      75     100     150     200
677          DQ       0       5      10      15      20      30      40
             *
1                                          HEC-1 INPUT                                                    PAGE 20

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

678          KK  RTUAUC   ROUTE   REACH
679          KM        ROUTE FLOW FROM UA TO UC (ALONG 67TH AVENUE).
680          KM        FUTURE ARTERIAL SECTION
681          RS       2                -1        0
682          RC   0.100    0.023   0.100    2400  0.0017    0.00
683          RX     0.0      440     445   445.1   575.1   575.2     900  1000.0
684          RY     105      105     105   99.75   99.75     105     105     105
             *

685          KK  ~CPUC2
686          KM        ADD HYDROGRAPHS SUBUC AND MCUCUC TO RTUAUC
687          HC       2
             *
             * KK  RSUC
             * KM      ROUTE FLOW FROM UC TO UB OVER 67th AVE.
             * KM Revised SV-SQ records to reflect new weir analysis based on survey. 03.15.0
             * KO       1
             * RS       1     STOR       0       0
             * SV     4.8      6.9     9.9    19.0    33.0    52.6    77.4   108.7   148.6
             * SE1036.2  1036.3  1036.5  1037.0  1037.5  1038.0  1038.5  1039.0  1039.5
             * SQ       0       0      76     811    2294    4562    7715   11722   16588
             *

688          KK  DIUCPC
689          KM   DIVERT FLOW FROM UC TO PC OVER SPRR
690          KM   Revised DQ records to reflect new weir analysis based on survey. 05.04.00 JEP
691          KM   Revised DQ records based on HEC-2 results.  06.19.00 JEP
692          KM   REVERSE DIVERT TO ROUTE AROUND CODE SEQUENCE. 06.21.00 -DCF
693          KM   DIVERT EFFECTIVELY REMOVED DUE TO ADMP CHANNELIZATION.  06.11.01 -JEP
694          DT    DIUB
695          DI       0     100     400     800    1000    1200    1400    1600
696          DQ       0     100     400     800    1000    1200    1400    1600
             * DI     0     100     400     800    1000    1200    1400    1600
             * DQ     0     100     400     674     825     854     914     945
             * DI     0     100     400     800    1000    1200    1400    1600
             * DQ     0       0       0     126     175     346     486     655
             *

697          KK  RTUCPC   ROUTE   REACH
698          KM   ROUTE FLOW FROM UC TO PC (ALONG 67TH AVE).
699          KM   FUTURE ARTERIAL SECTION
700          RS       3                -1        0
701          RC   0.100    0.023   0.100    3000  0.0038    0.00
702          RX     0.0      440     445   445.1   575.1   575.2     900  1000.0
703          RY     105      105     105   99.75   99.75     105     105     105
             *

704          KK   SUBPC   BASIN
705          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
706          BA   0.300
707          LG    0.18    0.19    8.80    0.06      42
708          UI     160     482     829     518     214      79      23       0       0       0
709          UI       0       0       0       0       0       0       0       0       0       0
             *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 710          KK    CPPC
 711          KM   COMBINE POSSIBLE FLOWS FROM UC WITH FLOWS FROM PC
 712          HC       2
              *

 713          KK    RSPC
 714          KM   MODIFIED PULS ROUTING FROM PC TO NB.
 715          RS       1     STOR        0        0
 716          SV    29.1    31.8    34.8    38.2       42       46     50.2     78.8    107.9    135.6
 717          SE  1029.8  1029.9  1030.0  1030.1   1030.2   1030.3   1030.4   1031.0   1031.5   1032.0
 718          SQ       5      27      70     134      225      357      545     3654     9263    17876
              *

 719          KK  RTPCNB   ROUTE   REACH
 720          KM        ROUTE FLOW FROM PC TO NB (ALONG 67TH AVE).
 721          KM        FUTURE ARTERIAL SECTION
 722          RS       7                -1        0
 723          RC   0.100   0.023   0.100    4800  0.0038     0.00
 724          RX     0.0     440     445   445.1   575.1    575.2      900   1000.0
 725          RY     105     105     105   99.75   99.75      105      105      105
              *

 726          KK   SUBNB   BASIN
 727          KM   BASIN NB
 728          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 729          KM    L=      1.4  Lca=       .7   S=   16.8  Kn= .020  LAG=  16.4
 730          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
 731          BA     .44
 732          LG     .25     .15    6.80     .16   12.00
 733          UI    144.    464.    790.    956.    577.    284.    126.     48.     28.      0.
 734          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

 735          KK   RETNB
 736          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
 737          KM   80% OF REQUIRED MODELED
 738          DT   RETNB    33.5
 739          DI       0   10000
 740          DQ       0   10000
              *

 741          KK   CPNB1
 742          KM        ADD HYDROGRAPHS AT NB
 743          HC       2
              *
              * KKDINBNA
              * KM      DIVERT 65% OF FLOW FROM NB TO NA
              * DT  DINA
              * DI     0      25      50      75     100     150     200
              * DQ     0      16      33      49      65      98     130
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 744          KK  RTNBJD   ROUTE   REACH
 745          KM        ROUTE FLOW FROM NB TO JD (ALONG 67TH AVENUE).
 746          KM        FUTURE ARTERIAL SECTION
 747          RS       3                -1        0
 748          RC   0.100   0.023   0.100    5200  0.0054     0.00
 749          RX     0.0     440     445   445.1   575.1    575.2      900   1000.0
 750          RY     105     105     105   99.75   99.75      105      105      105
              *

 751          KK   SUBPD   BASIN
 752          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN
 753          BA   0.443
 754          LG    0.14    0.17    8.00    0.11      24
 755          UI     130     438     708     954     610     331     138      64      27      27
 756          UI       0       0       0       0       0       0       0       0       0       0
              *

 757          KK    DRPD
 758          KM    RETURN DIVERT FROM PE
 759          DR    DIPD
              *

 760          KK   CPPD2
 761          KM        ADD HYDROGRAPH AT PD
 762          HC       2
              *

 763          KK    RSPD
 764          KM        MODIFIED PULS ROUTING FROM PD TO NC.
              * KO     1
 765          RS       1     STOR        0        0
 766          SV    25.6    37.6    42.4    51.8    53.9    56.1    58.2
 767          SE  1030.6  1030.7  1030.8  1030.9  1031.0  1031.1  1031.2
 768          SQ       0       4      28     101     246     487     820
              *

 769          KK  RTPDNC   ROUTE   REACH
 770          KM        ROUTE FLOW FROM PD TO NC (SHEET FLOW).
 771          KM        TYPE A CHANNEL
 772          RS       5                -1        0
 773          RC   0.035   0.035   0.035    3000  0.0027     0.00
 774          RX     0.0   100.0   400.0   500.0   500.1   600.0     900.0   1000.0
 775          RY     5.0     4.0     1.0     0.0     0.0     1.0       4.0      5.0
              *

 776          KK   SUBNC   BASIN
```

```
 777          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 778          KM    L=        .7  Lca=        .3   S=   14.7  Kn= .092  LAG=  43.5
 779          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 780          BA   0.306
 781          LG    0.47     0.25     5.30     0.35       51
 782          UI      86      341      534      508      379      219      121       71       44       23
 783          UI       9        8        8        9        8        0        0        0        0        0
 784          UI       0        0        0        0        0        0        0        0        0        0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 785          KK    CPNC
 786          KM        ADD HYDROGRAPHS AT NC.
 787          HC        2
              *

 788          KK  RTNCJE   ROUTE   REACH
 789          KM        ROUTE FLOW FROM NC TO JE (SHEET FLOW).
 790          KM        TYPE A CHANNEL
 791          RS       12              -1        0
 792          RC    0.035    0.035    0.035     5000   0.0014     0.00
 793          RX      0.0    100.0    400.0    500.0    500.1    600.0    900.0   1000.0
 794          RY      5.0      4.0      1.0      0.0      0.0      1.0      4.0      5.0
              *

 795          KK  SUBJE1   BASIN
 796          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 797          KM    L=       1.1  Lca=        .6   S=   12.7  Kn= .090  LAG=  66.1
 798          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
 799          BA   0.248
 800          LG    0.10     0.25     5.40     0.32       55
 801          UI     192      630      574      304      118       57       16       11       10        0
 802          UI       0        0        0        0        0        0        0        0        0        0
              *

 803          KK   CPJE1
 804          KM   COMBINE FLOWS FROM NC AND JE1
 805          HC        2
              *

 806          KK  RTJEJD   ROUTE   REACH
 807          KM        ROUTE FLOW FROM JE TO JD.
 808          KM        FUTURE ARTERIAL SECTION
 809          RS        3              -1        0
 810          RC    0.100    0.023    0.100     2500   0.0080     0.00
 811          RX      0.0      440      445    445.1    575.1    575.2      900   1000.0
 812          RY      105      105      105    99.75    99.75      105      105      105
              *

 813          KK   SUBJD   BASIN
 814          KM   BASIN JD
 815          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 816          KM    L=       1.1  Lca=        .6   S=   12.7  Kn= .020  LAG=  14.7
 817          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
 818          BA     .51
 819          LG     .25      .17     8.00      .10    22.50
 820          UI    211.     648.    1201.     988.     552.     203.      82.      36.       0.       0.
 821          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
              *
1                                                   HEC-1 INPUT                                                    PAGE 24

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

 822          KK   RETJD
 823          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
 824          KM   80% OF REQUIRED MODELED
              * KO      3                                   21
 825          DT   RETJD    35.0
 826          DI       0   10000
 827          DQ       0   10000
              *

 828          KK    CPJD
 829          KM        ADD HYDROGRAPHS AT JD
 830          HC        3
              *
              * KKSDDRJD
              * KM DIVERT STORM DRAIN FLOW
              * DT59SDJD
              * DI       0      207    10000
              * DQ       0      207      207
              *

 831          KK  DIJDJC
 832          KM        DIVERT 37% OF FLOW AT JD TO JC2.
 833          DT   DIJC2
 834          DI       0       25       50      100      150      200
 835          DQ       0        9       19       37       56       74
              *

 836          KK  RTJDFC   ROUTE   REACH
 837          KM        ROUTE FLOW FROM JD TO FC.
 838          KM        FUTURE ARTERIAL SECTION
 839          RS        1              -1        0
 840          RC    0.100    0.023    0.100     3000   0.0053     0.00
 841          RX      0.0      440      445    445.1    575.1    575.2      900   1000.0
 842          RY      105      105      105    99.75    99.75      105      105      105
              *

 843          KK  SUBJE2   BASIN
 844          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
 845          KM    L=       1.1  Lca=        .5   S=   19.8  Kn= .097  LAG=  63.6
 846          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
```

```
847          BA   0.253
848          LG    0.12     0.13    10.10     0.05       44
849          UI     109      427      539      421      225      108       59       33        9        8
850          UI       8        9        0        0        0        0        0        0        0        0
851          UI       0        0        0        0        0        0        0        0        0        0
             *

852          KK  RETJE2
853          KM   DIVERT RETENTION OUT OF MODEL DUE TO RIO DEL REY DEVELOPMENT. -DCF
854          KM   TOTAL RETENTION IS 5.9 AF. 80% OF THAT IS USED HERE. -DCF
855          DT   RETJE      4.7
856          DI       0    10000
857          DQ       0    10000
             *
1                                          HEC-1 INPUT                                                    PAGE 25

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

858          KK  RTJEFC   ROUTE   REACH
859          KM        ROUTE FLOW FROM JE TO FC (SHEET FLOW).
860          KM        TYPE A CHANNEL
861          RS       4              -1        0
862          RC   0.035    0.035    0.035     4000  0.0080     0.00
863          RX     0.0    100.0    400.0    500.0   500.1    600.0    900.0   1000.0
864          RY     5.0      4.0      1.0      0.0     0.0      1.0      4.0      5.0
             *

865          KK   SUBFC   BASIN
866          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
867          KM    L=       1.0  Lca=        .4   S=   18.6  Kn= .097  LAG=  55.3
868          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
869          BA   0.357
870          LG    0.12     0.16     7.60     0.13       51
871          UI     101      397      624      592      442      256      140       84       50       28
872          UI      10        9       10       10       10        0        0        0        0        0
873          UI       0        0        0        0        0        0        0        0        0        0
             *

874          KK    CPFC
875          KM         ADD HYDROGRAPHS AT FC
876          HC       3
             *

877          KK  CPFCSR
878          KM   COMBINE HYDROGRAPHS INTO SALT RIVER AT FC
879          HC       2
             *
             * ***********************************************************************
             *
             *
             * ***********************************************************************
             *
             *

880          KK  DRUCUB
881          KM   RETURN DIVERT FROM UC
882          DR    DIUB
             *

883          KK  MCUCUB   ROUTE   REACH
884          KM   ADMP CHANNEL
885          KM   MASTER CHANNEL ROUTE FROM UC2 TO UB
886          KM   ROUTING RECORD ADDED, JEP 6/11/01
887          RS       1    FLOW      -1
888          RC   0.014    0.014    0.014     1287  0.0010     0.00
889          RX     0.0     16.0     16.0     16.0    51.0     51.0     51.0     67.0
890          RY     4.8      5.1      2.5      0.0     0.0      2.5      5.1      4.8
             *
             * KKRTUCUB
             * KM HEC-RAS REACH
             * KM      ROUTE FLOW FROM UC TO UB
             * KM      Channel geometry changed to match natural conditions 04.11.00  JEP
             * KM      Manning's N values changed to match approved values 04.11.00  JEP
             * RS     4              -1        0
             * RC 0.035    0.035    0.035     1400  0.0043     0.00
             * RX   0.0     20.0     35.0     50.0    50.1    250.0    450.0    550.0
             * RY   5.0      5.0      2.5      0.0     0.0      2.0      4.0      5.0
             *
             *
1                                          HEC-1 INPUT                                                    PAGE 26

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

891          KK   SUBUB
892          KM   BASIN UB
893          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
894          KM    L=        .8  Lca=        .4   S=   16.2  Kn= .048  LAG=  26.9
895          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
896          BA     .14
897          LG     .25      .14     8.80      .08   30.00
898          UI     18.      53.      91.     119.    176.     199.     143.     106.      76.      38.
899          UI     27.      18.       6.       5.      5.       5.       0.       0.       0.       0.
900          UI      0.       0.       0.       0.      0.       0.       0.       0.       0.       0.
             *

901          KK  ~@CPUB
902          KM         ADD HYDROGRAPHS AT UB
903          HC       2    2.42
             *
             * KK71PASS
             * KM DIVERT LOW FLOW AROUND BASIN
             * DT71PASS
             * DI     0       0   10000
             * DQ     0       0       0
             *
```

```
904          KK  SUBSF1
905          KM   BASIN SF1
906          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
907          KM    L=        .5  Lca=        .3   S=     9.2  Kn= .100  LAG=  45.9
908          KM    AGRICULTURAL S-GRAPH WAS USED FOR THIS BASIN
909          BA     .13
910          LG     .50      .15     9.70      .07      .00
911          UI     10.      11.      24.      46.      58.      74.      81.      86.      86.      74.
912          UI     75.      62.      58.      42.      35.      30.      25.      18.      15.      13.
913          UI     10.       9.       7.       6.       6.       5.       1.       1.       1.       1.
914          UI      1.       1.       1.       1.       1.       1.       1.       1.       1.       1.
915          UI      1.       0.       0.       0.       0.       0.       0.       0.       0.       0.
916          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
             *

917          KK    DRTB
918          KM        RETURN DIVERT FROM UA
919          DR    DITB
             *

920          KK  RTDITB   ROUTE   REACH
921          KM        ROUTE DIVERT TO SF1 (REACH LENGTH SUBJECT TO CHANGED
922          KM        BASED ON BASIN 3 LOCATION)
923          KM        TYPE A CHANNEL
924          RS       8                -1       0
925          RC   0.025   0.025   0.025    1400  0.0019    0.00
926          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
927          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
             *
1                                          HEC-1 INPUT                                                    PAGE 27

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

928          KK   CPBA3
929          KM   COMBINE CPUB, SF1, DITB
930          HC       3
             *

931          KK  SUBTB2
932          KM   BASIN TB2
933          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
934          KM    L=       1.8  Lca=       .9   S=    10.3  Kn= .046  LAG=  50.5
935          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
936          BA     .75
937          LG     .15      .15     8.80      .06    55.00
938          UI     50.      50.     127.     204.     251.     289.     334.     391.     512.     630.
939          UI    541.     450.     392.     333.     284.     242.     184.     119.      88.      82.
940          UI     59.      50.      36.      15.      15.      15.      15.      15.      15.      15.
941          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
             *

942          KK  RETTB
943          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
944          KM   80% OF REQUIRED MODELED
945          DT   RETTB    19.6
946          DI       0   10000
947          DQ       0   10000
             *

948          KK  DITBTA
949          KM        DIVERT 25% OF FLOW TO TA
950          DT    DITA
951          DI       0       25       50       75      100      150      200
952          DQ       0        6       13       19       25       38       50
             *

953          KK  RTTBSF   ROUTE   REACH
954          KM   ROUTE FLOW FROM TB TO SF (ALONG 75TH AVENUE).
955          KM   TARGET CHANNEL
956          RS       4    ELEV   27.35        0
957          RC   0.030   0.030   0.030     2160  0.0010    0.00
958          RX     100   107.0   127.0    133.0   151.0   157.0   179.0   193.0
959          RY    32.5    32.0   27.35    27.35   27.35   27.35    32.0    32.5
             *

960          KK  SUSFB2
961          KM   BASIN SFB2
962          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
963          KM    L=        .5  Lca=        .3   S=     2.9  Kn= .020  LAG=  11.4
964          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
965          BA     .11
966          LG     .15      .15     9.70      .07    50.00
967          UI     78.     231.     324.     153.      46.      13.       0.       0.       0.       0.
968          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
             *
1                                          HEC-1 INPUT                                                    PAGE 28

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

969          KK  SUSF2A
970          KM   BASIN SF2A
971          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
972          KM    L=        .6  Lca=        .2   S=     5.9  Kn= .020  LAG=   9.2
973          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
974          BA     .14
975          LG     .15      .15     9.70      .07    80.00
976          UI    154.     478.     336.      89.      19.       0.       0.       0.       0.       0.
977          UI      0.       0.       0.       0.       0.       0.       0.       0.       0.       0.
             *

978          KK  RSSF2A
979          KM   TARGET NORTH BASIN
980          KM   28.51 Acre Feet of Sorage Provided per Target Drainage Report
981          DT  RETSF2   28.51
```

```
 982          DI       0   10000
 983          DQ       0   10000
              *
              * KKRSSF2A
              * KM  TARGET NORTH RETENTION BASIN
              * RS     1    STOR       0       0
              * SA  5.57    6.03    6.50    6.98    6.56    8.03   12.56   20.42   28.51   37.
              * SE     0       1       2       3       4       5       6       7       8
              * SQ     0       0       0       0       0       0       0       0       0     3
              *

 984          KK  CPSF2B
 985          KM    COMBINE FLOW FROM TB1, SF2A AMD SF2B
 986          HC       3
              *

 987          KK   CPBA3
 988          KM   Combine Target with regional basin
 989          HC       2
              *

 990          KK  BSN71
 991          KM   PROPOSED DETENTION BASIN DRC #4
 992          KM   INCLUDES TARGET SOUTH RETETNION BASIN AREA
 993          RS       1    ELEV    1010
 994          SV       0   0.001   0.001   10.40   15.34   53.24   74.82  118.92  163.57  349.40
 995          SQ       0   18.38   45.77   52.41   55.24   73.97   78.64   86.98   90.38   96.00
 996          SE    1010 1012.12    1015    1016 1016.47 1020.00    1021 1023.00    1024    1028
              *

 997          KK  DBSN71
 998          KM   DIVERT FLOWS FROM DETENTION BASIN DCR4 TO STORM DRAIN
 999          DT   BSN71
1000          DI       0   10000
1001          DQ       0   10000
              *
1                                        HEC-1 INPUT                                          PAGE 29

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

1002          KK  SUBPB
              * KO     3                                  21
1003          KM   BASIN PB
1004          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1005          KM    L=       1.1  Lca=       .5   S=    5.3  Kn= .020  LAG=  16.9
1006          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1007          BA     .41
1008          LG     .25     .15    8.80     .06   55.00
1009          UI    123.    405.    671.    887.    553.    301.    126.     56.     25.     25.
1010          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1011          KK   RETPB
1012          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1013          KM   80% OF REQUIRED MODELED
              * KO     3                                  21
1014          DT   RETPB    42.9
1015          DI       0   10000
1016          DQ       0   10000
              *

1017          KK   PB75
1018          KM   BASIN PB75 (ROADWAY DRAINAGE)
1019          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1020          KM    L=        .5  Lca=       .3   S=   12.0  Kn= .020  LAG=   8.1
1021          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1022          BA     .01
1023          LG     .15     .15    9.70     .04   80.00
1024          UI     14.     39.     19.      4.      0.      0.      0.      0.      0.      0.
1025          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1026          KK    PBBU
1027          KM   BASIN PBBU   (ROADWAY DRAINAGE)
1028          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1029          KM    L=       1.0  Lca=       .5   S=    6.0  Kn= .020  LAG=  15.8
1030          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1031          BA     .02
1032          LG     .15     .15    8.00     .07   80.00
1033          UI      7.     23.     42.     44.     26.     11.      5.      2.      1.      0.
1034          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1035          KK  CPBSD
              * KO     3                                  21
1036          KM           COMBINE STREET DRAINAGE
1037          HC       2
              *
1                                        HEC-1 INPUT                                          PAGE 30

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

1038          KK  DPBSD1
1039          KM   DIVERT STORM DRAIN FLOW (75TH AVENUE)
1040          DT  SD75PB
1041          DI       0      23   10000
1042          DQ       0      23      23
              *
              *

1043          KK  DPBSD2
1044          KM   DIVERT STORM DRAIN FLOW (BUCKEYE ROAD DRAINAGE)
1045          DT  SDBRPB
1046          DI       0      39   10000
1047          DQ       0      39      39
```

```
                *
1048            KK    CPPB
                * KO     3                                  21
1049            KM        ADD HYDROGRAPHS AT PB
1050            HC       2
                *

1051            KK  DIPBPA
1052            KM        DIVERT 19% OF FLOW FROM PB TO PA(ADMP DIVERSION)
1053            DT   DIPA1
1054            DI       0       25       50       75      100      150      200      400      800    10000
1055            DQ       0        5       10       14       19       29       38       76      152     1900
                *

1056            KK   CPPB1
                * KO     3                                  21
1057            KM        ADD HYDROGRAPHS AT PB
1058            HC       2
                *

1059            KK  RTPBNA   ROUTE   REACH
1060            KM        ROUTE FLOW FROM PB TO NA ALONG 75th AVE.
1061            KM        FUTURE ARTERIAL SECTION
                * KO     3                                  21
1062            RS       4    ELEV      -1       0
1063            RC   0.100   0.023   0.100    5280  0.0032    0.00
1064            RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1065            RY     105     105     105   99.75   99.75     105     105     105
                *

1066            KK  SUBNA
1067            KM   BASIN NA
1068            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1069            KM    L=      2.0  Lca=       1.0   S=    10.5  Kn= .020  LAG=  24.0
1070            KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1071            BA     .94
1072            LG     .25     .15    8.00     .08   51.00
1073            UI    132.    473.    742.   1029.   1568.   1184.    859.    588.    280.    184.
1074            UI    106.     40.     40.     40.      0.      0.      0.      0.      0.      0.
1075            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                *
1                                                HEC-1 INPUT                                          PAGE 31

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

1076            KK   RETNA
1077            KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1078            KM   80% OF REQUIRED MODELED
1079            DT   RETNA    89.6
1080            DI       0   10000
1081            DQ       0   10000
                *

1082            KK    NA75
1083            KM   BASIN NA75  (75 AVENUE ROADWAY DRAINAGE)
1084            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1085            KM    L=      1.0  Lca=       .5   S=    15.2  Kn= .020  LAG=  13.1
1086            KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1087            BA     .02
1088            LG     .15     .15    7.60     .08   80.00
1089            UI     11.     32.     55.     35.     14.      5.      2.      0.      0.      0.
1090            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                *

1091            KK    NALB
1092            KM   BASIN NALB  (LOWER BUCKEYE ROADWAY DRAINAGE)
1093            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1094            KM    L=      1.0  Lca=       .5   S=     6.0  Kn= .020  LAG=  15.8
1095            KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1096            BA     .02
1097            LG     .15     .19    6.60     .12   80.00
1098            UI      7.     23.     42.     44.     26.     11.      5.      2.      1.      0.
1099            UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
                *

1100            KK   CNASD
                * KO     3                                  21
1101            KM    COMBINE STREET DRAINAGE
1102            HC       2
                *

1103            KK  CPNA1
1104            KM    COMBINE ROUTED FLOW FROM PB
1105            HC       3
                *
                *

1106            KK  DNASD1
1107            KM   DIVERT STORM DRAIN FLOW (75TH AVENUE)
1108            DT  SD75NA
1109            DI       0      40   10000
1110            DQ       0      40      40
                *
1                                                HEC-1 INPUT                                          PAGE 32

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

1111            KK  DNASD2
1112            KM   DIVERT STORM DRAIN FLOW (LOWER BUCKEYE)
1113            DT  SDLBNA
1114            DI       0      38   10000
1115            DQ       0      38      38
                *
```

```
1116          KK  DADMP1
1117          KM   DIVERT STREET FLOW TO ADMP CHANNEL
1118          DT   ADMP1
1119          DI       0     220   10000
1120          DQ       0     220   10000
              *

1121          KK  SUBJC1
1122          KM   BASIN JC1
1123          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1124          KM    L=       1.5  Lca=      1.0   S=   10.7  Kn= .020  LAG=  21.4
1125          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1126          BA     .47
1127          LG     .25     .15    7.00     .13   30.00
1128          UI     76.    304.    456.    712.    797.    538.    365.    173.    102.     52.
1129          UI     23.     23.      0.      0.      0.      0.      0.      0.      0.      0.
1130          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1131          KK  RETJC1
              * KO     3                                   21
1132          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1133          KM   80% OF REQUIRED MODELED
1134          DT  RETJC1    35.5
1135          DI       0   10000
1136          DQ       0   10000
              *

1137          KK    JC75
1138          KM   BASIN JC75  (ROADWAY DRAINAGE)
1139          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1140          KM    L=       1.0  Lca=       .5   S=   13.0  Kn= .020  LAG=  13.6
1141          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1142          BA     .02
1143          LG     .15     .15    7.00     .10   80.00
1144          UI     10.     31.     56.     38.     18.      7.      2.      2.      0.      0.
1145          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1146          KK  CJCSD1
              * KO     3                                   21
1147          KM         COMBINE STREET DRAINAGE AND RETETION OVERFLOW
1148          HC       2     .49
              *
1                                          HEC-1 INPUT                                          PAGE 33

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

1149          KK  SUBJC2
1150          KM   BASIN JC2
1151          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1152          KM    L=       1.5  Lca=      1.0   S=   11.3  Kn= .020  LAG=  21.2
1153          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1154          BA     .48
1155          LG     .25     .15    7.00     .13     .24
1156          UI     81.    317.    475.    753.    805.    544.    365.    165.    101.     49.
1157          UI     23.     23.      0.      0.      0.      0.      0.      0.      0.      0.
1158          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1159          KK  RETJC2
              * KO     3                                   21
1160          KM   DIVERT REQUIRED DEVELPMENT RETENTION OUT OF MODEL
1161          KM    140 ACRES OF EXISITING DEVELOPMENT NOT INCLUDED IN CALCULATIONS
1162          KM   80% OF REQUIRED MODELED
1163          DT  RETJC2    19.6
1164          DI       0   10000
1165          DQ       0   10000
              *

1166          KK  DETJC2
1167          KM   DIVERT PROPOSED RETENTION OUT OF MODEL FOR APPROXIMATELY 140 ACRES
1168          KM   OF EXISITING DEVELOPMENT THAT DOES NOT HAVE RETENTION
1169          KM   80% OF REQUIRED MODELED
1170          DT  DETJC2    16.6
1171          DI       0   10000
1172          DQ       0   10000
              *

1173          KK  RTJCJC   ROUTE   REACH
1174          KM         ROUTE FLOW FROM JC2 TO JC1 ALONG 75th AVE.
1175          KM         FUTURE ARTERIAL SECTION
              * KO     3                                   21
1176          RS       2    ELEV      -1       0
1177          RC   0.100   0.023   0.100    2640  0.0021    0.00
1178          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1179          RY     105     105     105   99.75   99.75     105     105     105
              *

1180          KK  CPJC1A
1181          KM             COMBINE FLOW FROM JC2 WITH FLOW FROM JC3
1182          HC       2     .97
              *

1183          KK    JCBR
1184          KM   BASIN JCBR  (ROADWAY DRAINAGE)
1185          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1186          KM    L=       1.0  Lca=       .5   S=   11.0  Kn= .020  LAG=  14.0
1187          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1188          BA     .02
1189          LG     .15     .17    6.90     .11   80.00
1190          UI     10.     29.     53.     39.     20.      7.      3.      2.      0.      0.
1                                          HEC-1 INPUT                                          PAGE 34

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

```
1191        UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
            *

1192        KK  CJCSD2
            * KO     3                                  21
1193        KM        COMBINE STREET DRAINAGE AND RETETION OVERFLOW
1194        HC       2
            *

1195        KK  CPJC1B
            * KO     3                                  21
1196        KM        COMBINE JC1, JC2 AND STREET DRAINAGE
1197        HC       2   5.96
            *

1198        KK  DJC2SD
1199        KM   DIVERT OFFSITE TO STORM DRAIN FLOW (BROADWAY STORM DRAIN FLOW)
1200        DT  SDOSBR
1201        DI       0      41   10000
1202        DQ       0      41      41
            *

1203        KK  DJCSD1
1204        KM   DIVERT STORM DRAIN FLOW (75TH AVE. STORM DRAIN FLOW)
1205        DT  SD75JC
1206        DI       0      42   10000
1207        DQ       0      42      42
            *

1208        KK   DIJD
1209        KM   RETURN DIVERTED FLOW FROM BASIN SUBJD
1210        DR   DIJC2
            *

1211        KK  RTJCJC   ROUTE   REACH
1212        KM        ROUTE FLOW FROM JD TO JC1 ALONG 75th AVE.
1213        KM        FUTURE ARTERIAL SECTION
            * KO     3                                  21
1214        RS       5    ELEV      -1       0
1215        RC   0.100   0.023   0.100    5280  0.0021    0.00
1216        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1217        RY     105     105     105   99.75   99.75     105     105     105
            *

1218        KK   CPJC2
            * KO     3                                  21
1219        KM        COMBINE SPLIT FLOW FROM SUBJD WITH FLOW AT CPCJ1
1220        HC       2    8.11
            *
```



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

1221        KK  DIJCJB
1222        KM        DIVERT 46% OF FLOW AT JC TO JB.  (ADMP DIVERSION)
            * KO     3                                  21
1223        DT   DIJB2
1224        DI       0      25      50      75     100     150     200    1346    2000
1225        DQ       0      12      23      35      46      69      92   605.7     920
            *

1226        KK  RTJCFB   ROUTE   REACH
1227        KM        ROUTE FLOW FROM JC1 TO FB ALONG 75th AVE.
1228        KM        FUTURE ARTERIAL SECTION
            * KO     3                                  21
1229        RS       3    ELEV      -1       0
1230        RC   0.100   0.023   0.100    4200  0.0032    0.00
1231        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1232        RY     105     105     105   99.75   99.75     105     105     105
            *

1233        KK   DRB71
1234        KM   RETURN DIVERTED FLOW FROM BASIN DRC #4
1235        DR   BSN71
            *

1236        KK  RT71PB   ROUTE   REACH
1237        KM        ROUTE FLOW FROM BASIN TO PB ALONG 71th AVE AND
1238        KM        BUCKEYE RD.
1239        KM
1240        RT                      2
            *

1241        KK  RSDPB1
1242        KM   RETURN STORM DRAIN FLOW FROM PB
1243        DR  SD75PB
            *

1244        KK  CPPBS1
            * KO     3                                  21
1245        KM    COMBINE STORM DRAIN FLOWS
1246        HC       2    3.99
            *

1247        KK  RSDPB2
1248        KM   RETURN STORM DRAIN FLOW FROM PB
1249        DR  SDBRPB
            *

1250        KK  CPPBS2
            * KO     3                                  21
1251        KM    COMBINE STORM DRAIN FLOWS
1252        HC       2
            *
```

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

1253          KK  RTPBNA   ROUTE   REACH
1254          KM        ROUTE FLOW FROM PB TO NA IN STORM DRAIN
1255          KM
1256          RT                      2
              *

1257          KK  RSDNA1
1258          KM   RETURN DIVERTED STORM DRAIN FLOW FROM NA
1259          DR  SD75NA
              *

1260          KK  CPNAS1
              * KO     3                                21
1261          KM    COMBINE STORM DRAIN FLOWS
1262          HC       2    4.97
              *

1263          KK  RSDNA2
1264          KM   RETURN DIVERTED STORM DRAIN FLOW FROM NA
1265          DR  SDLBNA
              *

1266          KK  CPNAS2
              * KO     3                                21
1267          KM    COMBINE STORM DRAIN FLOWS
1268          HC       2
              *

1269          KK  RTNAJC   ROUTE   REACH
1270          KM        ROUTE FLOW FROM NA TO JC IN STORM DRAIN
1271          KM
1272          RT                      2
              *

1273          KK  RSDJC1
1274          KM   RETURN DIVERTED STORM DRAIN FLOW FROM JC (75TH AVENUE)
1275          DR  SD75JC
              *

1276          KK  CPJCS1
              * KO     3                                21
1277          KM    COMBINE STORM DRAIN FLOWS
1278          HC       2    5.96
              *
              * KKRSDJC2
              * KM RETURN DIVERTED STORM DRAIN FLOW FROM JC (BROADWAY ROAD)
              * DRSDBRJC
              *
```



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

1279          KK  RSDJC3
1280          KM   RETURN DIVERTED STORM DRAIN FLOW FROM JC1 and JC2
1281          DR  SDOSBR
              *
              * KKCPJCS2
              * KO     3                                21
              * KM  COMBINE STORM DRAIN FLOWS
              * HC     2    0.50
              *

1282          KK  CPJCS3
              * KO     3                                21
1283          KM    COMBINE STORM DRAIN FLOWS
1284          HC       2    5.96
              *

1285          KK  RTJCFB   ROUTE   REACH
1286          KM        ROUTE FLOW FROM JC TO FB ALONG 75th AVE.
1287          KM
1288          RT                      2
              *

1289          KK    FB75
1290          KM   BASIN FB75(ROADWAY DRAINAGE)
1291          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1292          KM    L=        .8  Lca=        .4   S=   10.7  Kn= .020  LAG=  12.4
1293          KM    PHOENIX VALLEY S-GRAPH WAS USED FOR THIS BASIN
1294          BA     .02
1295          LG     .15     .25    4.70     .25   80.00
1296          UI     11.     32.     52.     29.     10.      3.      2.      0.      0.      0.
1297          UI      0.      0.      0.      0.      0.      0.      0.      0.      0.      0.
              *

1298          KK    CPFB
              * KO     3                                21
1299          KM        ADD HYDROGRAPHS AT FB
1300          HC       2    5.98
              *
              * ADDED BY SLT MAR16,2005 TO ELIMINATE ERROR

1301          KK    DUMM
1302          KM        ELIMINATE UNNECESSARY HYDROGRAPHS
1303          HC       3
              *
              *
              * ADDED RETURNS TO ADD TO DDS FOR NEW STUDY  -  SLT  3/03/05
              *
              * KK  SLT1
              * KM      RETURN DIVERT FROM TB
              * DR  DITA
              * ZW A=DURANGO B=SLT1  C=FLOW  E=5MIN F=6-HR
```

```
                 *
                 * KK  SLT2
                 * KM      RETURN DIVERT FROM ADMP1
                 * DR ADMP1
                 * ZW A=DURANGO B=SLT2  C=FLOW  E=5MIN  F=6-HR
                 *
1                                    HEC-1 INPUT                                                    PAGE 38

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

1304             KK   SUBSH   BASIN
1305             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1306             KM    L=        .4  Lca=       .2   S=   11.1  Kn= .030  LAG=  11.5
1307             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1308             BA   0.103
1309             LG    0.15    0.16    9.70    0.07      55
1310             UI      72     211     303     147      44      13       8       0       0       0
1311             UI       0       0       0       0       0       0       0       0       0       0
                 *

1312             KK   RETSH
1313             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1314             DT   RETSH    10.3
1315             DI       0   10000
1316             DQ       0   10000
                 *

1317             KK    RSSH
1318             KM        MODIFIED PULS ROUTING BEHIND RID.
                 * KO     1
1319             RS       1    STOR       0       0
1320             SV      19      21      24      30      37      44    46.4
1321             SE  1027.0  1027.1  1027.2  1027.5  1027.7  1028.0  1028.2
1322             SQ       0   138.6   475.2  1277.3
1323             SE  1027.0  1027.6  1027.8  1028.1
                 *
                 *

1324             KK  DISHRJ
1325             KM   DIVERT FLOW FROM SH TO RJ2
1326             DT   DIRJ2
1327             DI       0   138.6   475.2  1277.3
1328             DQ       0    88.6   375.2  1077.3
                 *
                 *

1329             KK  RTSHSG   ROUTE   REACH
1330             KM        ROUTE FLOW FROM SH TO SG
1331             KM        TYPE C CHANNEL
1332             RS       8              -1       0
1333             RC   0.035   0.035   0.035    2600  0.0008    0.00
1334             RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1335             RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                 *

1336             KK   SUBTA   BASIN
1337             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1338             KM    L=        .8  Lca=       .4   S=   10.5  Kn= .03  LAG=  17.1
1339             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1340             BA   0.241
1341             LG    0.15    0.15    7.00    0.18      55
1342             UI      71     234     382     523     328     186      76      35      15      14
1343             UI       3       0       0       0       0       0       0       0       0       0
1344             UI       0       0       0       0       0       0       0       0       0       0
                 *
1                                    HEC-1 INPUT                                                    PAGE 39

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

1345             KK   RETTA
1346             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1347             DT   RETTA    24.1
1348             DI       0   10000
1349             DQ       0   10000
                 *

1350             KK    DRTA
1351             KM        RETURN DIVERT FROM TB
1352             KM        RETURN DIVERT FROM TB
1353             DR    DITA
                 * BA     0
                 * ZR  =QI A=DURANGO B=SLT1  C=FLOW  E=5MIN  F=6-HR
                 *

1354             KK  RTDITA   ROUTE   REACH
1355             KM        ROUTE DIVERT TO TA
1356             KM        TYPE A CHANNEL
1357             RS       8              -1       0
1358             RC   0.025   0.025   0.024    2600  0.0004    0.00
1359             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1360             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *

1361             KK   @CPTA
1362             KM        ADD HYDROGRAPHS AT TA
1363             HC       2    1.13
                 *

1364             KK  RTTASG   ROUTE   REACH
1365             KM        ROUTE FLOW FROM TA TO SG (SHEET FLOW).
1366             KM        TYPE A CHANNEL
1367             RS       2              -1       0
1368             RC   0.025   0.025   0.025    2200  0.0050    0.00
1369             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1370             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
```

```
                *
1371            KK   SUBSG   BASIN
1372            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1373            KM    L=        .6  Lca=        .3   S=    5.0  Kn= .03  LAG=  16.6
1374            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1375            BA   0.136
1376            LG    0.15    0.15    8.80    0.09      55
1377            UI      43     139     233     294     180      92      40      16       8       8
1378            UI       0       0       0       0       0       0       0       0       0       0
                *

1379            KK   RETSG
1380            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1381            DT   RETSG    13.6
1382            DI       0   10000
1383            DQ       0   10000
                *
1                                          HEC-1 INPUT                                                    PAGE 40

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

1384            KK    CPSG
1385            KM        ADD HYDROGRAPHS AT SG
1386            HC       3
                *

1387            KK    RSSG
1388            KM        MODIFIED PULS ROUTING BEHIND RID AND 81ST AVENUE
                * KO     1
1389            RS       1    STOR       0       0
1390            SV    12.3    13.3    14.9    16.5    18.4    22.4    25.9    35.2
1391            SE  1026.4  1026.6  1026.8  1027.0  1027.2  1027.4  1027.6  1027.9
1392            SQ       0       9     114     525    1221    2143    3276    5343
                *

1393            KK  DISGRJ
1394            KM        DIVERT FLOW FROM SG TO RJ
1395            DT   DIRJ4
1396            DI       0       9     114     525    1221
1397            DQ       0       1      70     400     964
                *

1398            KK  RTSGSE   ROUTE   REACH
1399            KM        ROUTE FLOW FROM SG TO SE
1400            KM        TYPE C CHANNEL
1401            RS       2      -1       0
1402            RC   0.035   0.035   0.035    1200  0.0030    0.00
1403            RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1404            RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
                *

1405            KK   SUBSC   BASIN
1406            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1407            KM    L=       1.3  Lca=        .7   S=   15.2  Kn= .029  LAG=  23.9
1408            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1409            BA   0.453
1410            LG    0.14    0.26    5.00    0.39      58
1411            UI      64     229     360     500     758     569     409     284     133      88
1412            UI      50      19      20      20       6       0       0       0       0       0
1413            UI       0       0       0       0       0       0       0       0       0       0
                *

1414            KK   RETSC
1415            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1416            DT   RETSC    45.4
1417            DI       0   10000
1418            DQ       0   10000
                *

1419            KK  DISCSD
1420            KM        DIVERT 54% OF FLOW AT SC TO SD.
1421            DT    DISD
1422            DI       0      25      50     100     150     200
1423            DQ       0      14      27      54      81     108
                *
1                                          HEC-1 INPUT                                                    PAGE 41

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

1424            KK  RTSCSE   ROUTE   REACH
1425            KM        ROUTE FLOW FROM SC TO SE (ALONG 83RD AVENUE).
1426            KM        FUTURE ARTERIAL SECTION
1427            RS       1      -1       0
1428            RC   0.100   0.023   0.100    1000  0.0022    0.00
1429            RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1430            RY     105     105     105   99.75   99.75     105     105     105
                *

1431            KK   SUBSE   BASIN
1432            KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1433            KM    L=        .3  Lca=        .2   S=   26.5  Kn= .03  LAG=   7.8
1434            KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1435            BA   0.125
1436            LG    0.15    0.25    4.80    0.39      55
1437            UI     185     511     220      40      11       0       0       0       0       0
1438            UI       0       0       0       0       0       0       0       0       0       0
                *

1439            KK   RETSE
1440            KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1441            DT   RETSE    12.5
1442            DI       0   10000
1443            DQ       0   10000
                *
```

```
1444          KK    CPSE
1445          KM        ADD HYDROGRAPHS AT SE
1446          HC       3
              *

1447          KK    RSSE
1448          KM        MODIFIED PULS ROUTING AT SE BEHIND THE RID CANAL
              * KO     1
1449          RS       1    STOR       0       0
1450          SV    13.5    14.8    17.6    20.5
1451          SE  1025.9  1026.0  1026.5  1026.9
1452          SQ    3.14    14.3  479.44 2013.01
              *

1453          KK  DISERJ
1454          KM   DIVERT FLOW FROM SE TO RJ
1455          DT   DIRJ5
1456          DI       0       3     142    1100
1457          DQ       0       3     142    1100
              *

1458          KK  RTSERI   ROUTE   REACH
1459          KM        ROUTE FLOW FROM SE TO RI
1460          KM        TYPE A CHANNEL
1461          RS       4              -1       0
1462          RC   0.035   0.035   0.035    2000  0.0019    0.00
1463          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1464          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
```



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

1465          KK   SUBRJ   BASIN
1466          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1467          KM    L=        .7  Lca=        .4   S=     5.6  Kn= .03  LAG=  19.8
1468          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1469          BA   0.163
1470          LG    0.15    0.15    7.00    0.18      55
1471          UI      33     122     184     307     254     170      98      46      25       8
1472          UI       9       7       0       0       0       0       0       0       0       0
1473          UI       0       0       0       0       0       0       0       0       0       0
              *

1474          KK   RETRJ
1475          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1476          DT   RETRJ    16.3
1477          DI       0   10000
1478          DQ       0   10000
              *

1479          KK   CPRJ2
1480          KM        RETURN DIVERSION FROM SH
1481          DR   DIRJ2
              *

1482          KK  RTSHRJ   ROUTE   REACH
1483          KM        ROUTE HYDROGRAPH FROM SH TO RJ2
1484          KM        TYPE C CHANNEL
1485          RS       7              -1       0
1486          RC   0.050   0.050   0.050    2000  0.0015    0.00
1487          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1488          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1489          KK  RTRJ3    ROUTE   REACH
1490          KM        ROUTE HYDROGRAPH FROM RJ3 TO RJ
1491          KM        TYPE C CHANNEL
1492          RS       8              -1       0
1493          RC   0.035   0.035   0.035    3900  0.0015    0.00
1494          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1495          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1496          KK  CPRJ4A
1497          KM        RETURN DIVERT FROM SG
1498          DR   DIRJ4
              *

1499          KK  CPRJ4B
1500          KM        COMBINE HYDROGRAPHS AT RJ4
1501          HC       2     .39
              *
              *
```



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

1502          KK  RTSGRJ   ROUTE   REACH
1503          KM        ROUTE DIVERT FROM SG TO RJ
1504          KM        TYPE C CHANNEL
1505          RS       3              -1       0
1506          RC   0.035   0.035   0.035    1400  0.0019    0.00
1507          RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1508          RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
              *

1509          KK   CPRJ5
1510          KM        RETURN DIVERT FROM SE
1511          DR   DIRJ5
              *

1512          KK  RTSERJ   ROUTE   REACH
1513          KM        ROUTE DIVERT FROM SE TO RJ
```

```
1514        KM        TYPE C CHANNEL
1515        RS       9              -1       0
1516        RC   0.035   0.035   0.035    1000  0.0001    0.00
1517        RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1518        RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
            *

1519        KK  @CPRJ6
1520        KM        ADD HYDROGRAPHS AT RJ
1521        HC       3    3.81
            *

1522        KK    RSRJ
1523        KM        RESERVOIR ROUTING AT RJ BEHIND 83RD AVE AND THE SPRR
            * KO     1
1524        RS       1    STOR       0       0
1525        SV     3.5     6.2    11.0    18.4    30.9    52.2    76.3
1526        SE  1022.1  1022.5  1023.0  1023.5  1024.0  1024.5  1024.9
1527        SQ       0      50     100     506     899    1369
1528        SE  1022.1  1022.7  1022.9  1023.7  1024.0  1024.2
            *

1529        KK  DIRJPA
1530        KM   DIVERT FLOW OVER SPRR FROM RJ TO PA
1531        DT   DIPA2
1532        DI       0      50     100     506     899    1369
1533        DQ       0       0       0       6     149     369
            *

1534        KK  RTRJRI   ROUTE   REACH
1535        KM        ROUTE FLOW FROM RJ TO RI1
1536        KM        TYPE C CHANNEL
1537        RS       5              -1       0
1538        RC   0.035   0.035   0.035    2600  0.0019    0.00
1539        RX     0.0    20.0    35.0    50.0    50.1   250.0   450.0   550.0
1540        RY     5.0     5.0     2.5     0.0     0.0     2.0     4.0     5.0
            *
            * THE FOLLOWING DIVERT REMOVED TO MODEL THE ADMP CONDITION
            * KKDIRIOE
            * KM DIVERT FLOW FROM RI TO OE OVER SPRR.
            * KM 1/4 MILE WEST OF 83RD AVE.
            * DT DIOE3
            * DI   100     400    1392    1300    1400
            * DQ     0      55     370     680     730
            *
1                                   HEC-1 INPUT                                                    PAGE 44

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

1541        KK  RTRIRI
1542        KM   TYPE C CHANNEL
1543        RS       4              -1       0
1544        RC    .035    .035    .035    1550   .0019
1545        RX       0      20      35      50    50.1     250     450     550
1546        RY       5       5     2.5       0       0       2       4       5
            *

1547        KK   SUBRI   BASIN
1548        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1549        KM    L=       .6  Lca=       .2   S=   19.3  Kn= .03  LAG=  10.6
1550        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1551        BA   0.232
1552        LG    0.15    0.15    7.60    0.14      55
1553        UI     193     596     651     255      72      23       7       0       0       0
1554        UI       0       0       0       0       0       0       0       0       0       0
            *

1555        KK   RETRI
1556        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1557        DT   RETRI    23.2
1558        DI       0   10000
1559        DQ       0   10000
            *

1560        KK   SUBSB   BASIN
1561        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1562        KM    L=       .5  Lca=       .3   S=   15.1  Kn= .03   LAG=  12.3
1563        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1564        BA   0.168
1565        LG    0.15    0.15    9.70    0.07      55
1566        UI     102     299     486     271      95      30      14       5       0       0
1567        UI       0       0       0       0       0       0       0       0       0       0
            *

1568        KK   RETSB
1569        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1570        DT   RETSB    16.8
1571        DI       0   10000
1572        DQ       0   10000
            *

1573        KK    RSSB
1574        KM        MODIFIED PULS ROUTING THROUGH PONDING  BEHIND RID CANAL.
            * KO     1
1575        RS       1    STOR       0       0
1576        SV     2.2     5.6    11.9    21.4    33.8
1577        SE  1024.0  1024.5  1025.0  1025.5  1025.9
1578        SQ       0      94     581    2114    4864
            *
1                                   HEC-1 INPUT                                                    PAGE 45

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

1579        KK   SUBSD   BASIN
1580        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
```

```
1581        KM    L=        .6  Lca=        .3   S=   12.3  Kn= .03  LAG=  14.4
1582        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1583        BA   0.168
1584        LG    0.15    0.28    6.60    0.18      55
1585        UI      73     222     410     319     173      61      24      12       7       0
1586        UI       0       0       0       0       0       0       0       0       0       0
            *

1587        KK   RETSD
1588        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1589        DT   RETSD    16.8
1590        DI       0   10000
1591        DQ       0   10000
            *

1592        KK    DRSD
1593        KM    RETURN DIVERT FROM SC.
1594        DR    DISD
            *

1595        KK   @CPSD
1596        KM        ADD HYDROGRAPHS AT SD.
1597        KM        ROUTING STEP NOT INCLUDED DUE TO SHORT ROUTING LENGTH
1598        HC       3     .79
            *

1599        KK    RSSD
1600        KM        MODIFIED PULS ROUTING BEHIND CANAL, NORTH OF VAN BUREN.
            * KO     1
1601        RS       1    STOR       0       0
1602        SV       0     .01      .1      .6     1.8       5       9      14      23
1603        SE  1021.4  1022.8    1023  1023.3  1023.6    1024  1024.3  1024.6    1025
1604        SQ       0     .16      46     534     939    1427    1993    2767
1605        SE  1021.4  1021.5    1022    1023  1023.5    1024  1024.5    1025
            *

1606        KK  RTSDRI   ROUTE   REACH
1607        KM        ROUTE FLOW FROM SD TO RI
1608        KM        TYPE A CHANNEL
1609        RS       3              -1       0
1610        RC   0.035   0.035   0.035    2400  0.0046    0.00
1611        RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1612        RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
            *

1613        KK  ~@CPRI
1614        KM   ADD HYDROGRAPHS AT RI (1/2 MILE WEST OF 83RD AVE)
1615        HC       4    4.38
            *
            * THE FOLLWOING PONDING REMOVED TO MODEL THE ADMP CONDITION
            * KK  RSRI
            * KM      MODIFIED PULS ROUTING BEHIND SPRR.
            * KO     1
            * RS     1    STOR      -1       0
            * SV     0       0      .1      .3     1.2     3.0     6.5   13.76    21.8    35
            * SE1014.0  1014.1  1014.5  1015.0  1015.5  1016.0  1016.5  1017.0  1017.5  1018
            * SQ     0       4     142     573    1333    3217    5957    9319   13343   182
            *
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1616        KK  MCRIRH   ROUTE   REACH
1617        KM   ADMP CHANNEL
1618        KM   ROUTE FLOW FROM RI TO RH
1619        RS       3    FLOW      -1
1620        RC   0.040   0.040   0.040    2482  0.0015    0.00
1621        RX     0.0    16.0    33.7    51.3    71.3    89.0   106.7   122.7
1622        RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
            *
            * ***********************************************************************
            *

1623        KK   SUBPA   BASIN
1624        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1625        KM    L=       1.1  Lca=       .6   S=   16.7  Kn= .03   LAG=  21.5
1626        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1627        BA   0.477
1628        LG    0.15    0.17    7.30    0.14      55
1629        UI      76     307     461     716     812     547     372     178     105      54
1630        UI      23      23      19       0       0       0       0       0       0       0
1631        UI       0       0       0       0       0       0       0       0       0       0
            *

1632        KK   RETPA
1633        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1634        DT   RETPA    47.8
1635        DI       0   10000
1636        DQ       0   10000
            *

1637        KK   DRPA2
1638        KM   RETURN DIVERT FROM RJ.
1639        DR   DIPA2
            *

1640        KK  RTRJPA   ROUTE   REACH
1641        KM        ROUTE DIVERT FROM RJ TO PA
1642        KM        FUTURE ARTERIAL SECTION
1643        RS       2              -1       0
1644        RC   0.100   0.023   0.100    2400  0.0054    0.00
1645        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1646        RY     105     105     105   99.75   99.75     105     105     105
            *

1647        KK    CPPA
```

```
1648          KM   ADD HYDROGRAPHS AT PA
1649          HC       2
              *

1650          KK  DIPAOE
1651          KM        DIVERT 18% OF FLOW AT PA TO OE.
1652          DT    DIOE
1653          DI       0      25      50      75     100     150     200
1654          DQ       0       5       9      14      18      27      36
              *
1                                          HEC-1 INPUT                                                    PAGE 47

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

1655          KK  RTPAMH   ROUTE   REACH
1656          KM        ROUTE FLOW FROM PA TO MH (ALONG 83RD AVENUE).
1657          KM        FUTURE ARTERIAL SECTION
1658          RS       2                -1       0
1659          RC   0.100   0.023   0.100    2640  0.0012    0.00
1660          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1661          RY     105     105     105   99.75   99.75     105     105     105
              *

1662          KK   SUBMH   BASIN
1663          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1664          KM    L=       .7  Lca=       .3   S=     8.8  Kn= .05  LAG=  19.7
1665          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1666          BA   0.239
1667          LG    0.25    0.15    8.80    0.09      30
1668          UI      49     179     272     452     372     249     141      66      36      13
1669          UI      12      10       0       0       0       0       0       0       0       0
              *

1670          KK   RETMH
1671          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1672          DT   RETMH    19.8
1673          DI       0   10000
1674          DQ       0   10000
              *

1675          KK    CPMH
1676          KM    ADD HYDROGRAPHS AT MH
1677          HC       2
              *

1678          KK  RTMHMD   ROUTE   REACH
1679          KM        ROUTE FLOW FROM PA TO MD (ALONG 83RD AVENUE).
1680          KM        FUTURE ARTERIAL SECTION
1681          RS       2                -1       0
1682          RC   0.100   0.023   0.100    2640  0.0012    0.00
1683          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1684          RY     105     105     105   99.75   99.75     105     105     105
              *

1685          KK   SUBMD   BASIN
1686          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1687          KM    L=      1.4  Lca=      .6   S=    14.3  Kn= .05  LAG=  41.7
1688          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1689          BA   0.255
1690          LG    0.25    0.08    7.60    0.11      30
1691          UI      21      24      73     100     119     142     175     247     234     185
1692          UI     156     127     106      80      47      35      30      21      15       6
1693          UI       6       6       6       6       6       0       0       0       0       0
              *
1                                          HEC-1 INPUT                                                    PAGE 48

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

1694          KK   RETMD
1695          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1696          DT   RETMD    21.1
1697          DI       0   10000
1698          DQ       0   10000
              *

1699          KK    CPMD
1700          KM        ADD HYDROGRAPHS AT MD
1701          HC       2
              *

1702          KK  DIMDJB
1703          KM        DIVERT 21% OF FLOW FROM MD TO JB.
1704          DT   DIJB1
1705          DI       0      25      50      75     100     150     200
1706          DQ       0       5      10      16      21      32      42
              *

1707          KK  DIMDMF
1708          KM   DIVERT FLOW FROM MD TO MF
1709          KM   DUMMY DIVERT TO ROUTE FLOW AROUND CODE SEQUENCE.
1710          DT   DIMFX
1711          DI       0   10000
1712          DQ       0   10000
              *

1713          KK   SUBMI   BASIN
1714          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1715          KM    L=       .7  Lca=       .3   S=     8.8  Kn= .043  LAG=  16.9
1716          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1717          BA   0.409
1718          LG    0.21    0.15    8.40    0.11      38
1719          UI     122     402     662     886     553     306     126      57      25      25
1720          UI       3       0       0       0       0       0       0       0       0       0
              *
```

```
1721          KK   RETMI
1722          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1723          DT   RETMI    35.3
1724          DI       0   10000
1725          DQ       0   10000
              *

1726          KK   SUBMG   BASIN
1727          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1728          KM    L=        .7  Lca=        .3   S=    8.8  Kn= .04   LAG=  11.7
1729          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1730          BA   0.082
1731          LG    0.20    0.15    7.00    0.17      43
1732          UI      55     162     241     120      37      11       7       0       0       0
              *
1                                          HEC-1 INPUT                                                    PAGE 49

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

1733          KK   RETMG
1734          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1735          DT   RETMG     7.3
1736          DI       0   10000
1737          DQ       0   10000
              *

1738          KK    CPMG
1739          KM   COMBINE FLOWS FROM MI AND MG.
1740          HC       2
              *

1741          KK  RTMGJB   ROUTE   REACH
1742          KM        ROUTE FLOW FROM MG TO JB1 (ACROSS SUB JB1).
1743          KM        TYPE B     CHANNEL
1744          KM        ROUTE ADDED, JEP 5/10/01
1745          RS       9              -1       0
1746          RC   0.035   0.035   0.035    5050  0.0024    0.00
1747          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
1748          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
              * KK~CNAMG
              * KM COMBINE FLOWS FROM NA AND MG INTO ADMP CHANNEL
              * HC     3
              *
              * KKMCMGJB   ROUTE   REACH
              * KM ADMP CHANNEL
              * RS       3     FLOW      -1
              * RC 0.040   0.040   0.040    4374  0.0029    0.00
              * RX   0.0    16.0    33.9    51.9    86.9   104.8   122.8   138.8
              * RY   5.7     6.0     3.0     0.0     0.0     3.0     6.0     5.7
              *

1749          KK  SUBJB1   BASIN
1750          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1751          KM    L=       1.3  Lca=        .7   S=   17.4  Kn= .050  LAG=  39.7
1752          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1753          BA   0.494
1754          LG    0.25    0.25    5.00    0.41      30
1755          UI      42      58     157     209     250     303     397     524     425     348
1756          UI     286     233     186     117      73      67      42      35      13      13
1757          UI      13      13      13       9       0       0       0       0       0       0
              *

1758          KK  RETJB1
1759          KM   RETENTION MODIFIED FROM 80% REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTI
1760          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
1761          DT  RETJB1    10.5
1762          DI       0   10000
1763          DQ       0   10000
              *
1                                          HEC-1 INPUT                                                    PAGE 50

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

1764          KK    DRJB
1765          KM   RETURN DIVERT FROM MD
1766          DR   DIJB1
              *

1767          KK  RDIJB1
1768          KM   ROUTE DIVERT FROM MD TO JB
1769          KM   FUTURE ARTERIAL SECTION
1770          RS       4              -1       0
1771          RC      .1   0.023      .1    2640   .0030
1772          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1773          RY     105     105     105   99.75   99.75     105     105     105
              *

1774          KK   ADMP1
1775          KM   RETURN DIVERT FROM 75TH SD MODEL  - SLT 3/9/2005
1776          KM        RETURN DIVERT FROM ADMP1
1777          DR   ADMP1
              * BA     0
              * ZR  =QI A=DURANGO B=SLT2  C=FLOW  E=5MIN
              *

1778          KK  MCJCJB
1779          KM   ROUTE       REACH
1780          KM   MASTER CHANNEL ROUTE FROM JC1 TO JB1
1781          KM   ASSUME FLOW OVER RETENTION BASINS AS IS CURRENT DEVELOPED CONDITION
1782          RS       6    FLOW      -1
1783          RC   0.040   0.040   0.040    5964  0.0015    0.00
1784          RX     0.0       0       0       0     250     250     250     250
1785          RY      10       0       0       0     0.0       0       0      10
              *
```

```
1786          KK  ~CPJB1
1787          KM   COMBINE FLOWS FROM MD, JC1, MG AND JB1 INTO ADMP CHANNEL
1788          KM   COMBINE ADDED, JEP 5/10/01
1789          HC       5    9.37
              *

1790          KK   RRJB1
1791          KM   MODIFIED PULS ROUTING
1792          KM   DETENTION IN DRCC RIGHT OF WAY AT JB1 (83RD AVENUE) POL
1793          KM   BASIN 6 FEET DEEP, 850 FEET LONG 165 FOOT BOTTOM 250 FOOT TOP
1794          KM   ASSUME 1 FOOT WEIR OVER THE ROAD
1795          KM   CULVERT IS 1 CELL 4 BY 8
1796          RS       1    STOR       0       0
1797          SV       0     3.4    24.2    29.1
1798          SQ       0      18     308    1094
              *
1                                   HEC-1 INPUT                                          PAGE 51

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

1799          KK    DIED
1800          KM   DIVERT FLOWS AT JB TO ED.  THIS IS DONE TO ROUTE FLOW AS NEEDED
1801          KM   FOR THE ADMP
1802          DT    DIED
1803          DI       0   10000
1804          DQ       0   10000
              *
              *
              *

1805          KK   SUBOE   BASIN
1806          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1807          KM    L=      1.1  Lca=       .6   S=   17.3  Kn= .03  LAG=  20.8
1808          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1809          BA   0.469
1810          LG    0.15    0.23    6.20    0.24      55
1811          UI      84     321     482     784     767     519     338     150      92      38
1812          UI      23      23      10       0       0       0       0       0       0       0
1813          UI       0       0       0       0       0       0       0       0       0       0
              *

1814          KK   RETOE
1815          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1816          DT   RETOE    47.0
1817          DI       0   10000
1818          DQ       0   10000
              *
              * REMOVED BY JCS
              * KK RETOE
              * KM DIVERT RETENTION OUT OF MODEL DUE TO WILLAMETTE IND. DEVELOPMENT. -DCF
              * KM TOTAL RETENTION IS 5.3 AF. 80% OF THAT IS USED HERE. -DCF
              * DT RETOE     4.2
              * DI     0   10000
              * DQ     0   10000
              *

1819          KK   CPOE1
1820          KM   RETURN DIVERT FROM PA.
1821          DR    DIOE
              *

1822          KK  RTDIOE   ROUTE   REACH
1823          KM   ROUTE DIVERT FROM PA TO OE
1824          KM   FUTURE ARTERIAL SECTION
1825          RS       7              -1       0
1826          RC   0.100   0.023   0.100    5000  0.0013    0.00
1827          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1828          RY     105     105     105   99.75   99.75     105     105     105
              *
              * THE FOLLOWING RETURNS REMOVED TO MODEL THE ADMP CONDITION.
              * KK CPOE2
              * KM RETURN DIVERT FROM RH
              * DR DIOE2
              *
              * KK CPOE3
              * KM RETURN DIVERT FROM RI
              * DR DIOE3
              *
1                                   HEC-1 INPUT                                          PAGE 52

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

1829          KK   @CPOE
1830          KM        ADD HYDROGRAPHS AT OE
1831          HC       2     .47
              *

1832          KK  DIOEOD
1833          KM   DIVERT 17% OF FLOW FROM OE2 TO OD
1834          DT    DIOD
1835          DI       0      25      50      75     100     150     200
1836          DQ       0       4       9      12      17      26      34
              *

1837          KK  RTOEMF   ROUTE   REACH
1838          KM   ROUTE FLOW FROM OE TO MF.
1839          KM   FUTURE ARTERIAL SECTION
1840          RS       4              -1       0
1841          RC   0.100   0.023   0.100    5200  0.0021    0.00
1842          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1843          RY     105     105     105   99.75   99.75     105     105     105
              *

1844          KK   SUBMF   BASIN
```

```
1845        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1846        KM    L=       1.4  Lca=        .7   S=   12.9  Kn= .050  LAG=  44.0
1847        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1848        BA   0.971
1849        LG    0.25    0.15    8.40    0.10      30
1850        UI      74      74     256     341     414     483     581     777     936     739
1851        UI     619     520     429     362     256     153     125     105      74      56
1852        UI      23      23      23      22      22      22       6       0       0       0
            *

1853        KK   RETMF
1854        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1855        DT   RETMF    80.3
1856        DI       0   10000
1857        DQ       0   10000
            *

1858        KK    CPMF
1859        KM       RETURN ROUTING DIVERT FROM MD (DIMFX).
1860        DR   DIMFX
            *
            *

1861        KK  RTMDMF   ROUTE   REACH
1862        KM        ROUTE FLOW FROM MD TO MF (ALONG LOWER BUCKEYE ROAD).
1863        KM        FUTURE ARTERIAL SECTION
1864        RS       6              -1       0
1865        RC   0.100   0.023   0.100    5200  0.0015    0.00
1866        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1867        RY     105     105     105   99.75   99.75     105     105     105
            *
            *
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1868        KK   CPMF1
1869        KM        ADD HYDROGRAPHS AT MF
1870        HC       3
            *

1871        KK  DIMFEB
1872        KM        DIVERT 47% OF FLOW AT MF TO EB.
1873        DT    DIEB
1874        DI       0      25      50      75     100     150     200
1875        DQ       0      12      23      35      47      71      94
            *

1876        KK  RTMFMC   ROUTE   REACH
1877        KM        ROUTE FLOW FROM MF TO MC (ALONG LOWER BUCKEYE ROAD).
1878        KM        FUTURE ARTERIAL SECTION
1879        RS       5              -1       0
1880        RC   0.100   0.023   0.100    5200  0.0015    0.00
1881        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1882        RY     105     105     105   99.75   99.75     105     105     105
            *

1883        KK   SUBOD   BASIN
1884        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1885        KM    L=       1.1  Lca=        .6   S=   18.2  Kn= .030  LAG=  20.6
1886        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1887        BA   0.509
1888        LG    0.15    0.15    9.70    0.07      55
1889        UI      94     354     533     874     825     556     357     157      97      37
1890        UI      25      26       7       0       0       0       0       0       0       0
1891        UI       0       0       0       0       0       0       0       0       0       0
            *

1892        KK   RETOD
1893        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1894        DT   RETOD    63.7
1895        DI       0   10000
1896        DQ       0   10000
            *

1897        KK    DROD
1898        KM    RETURN DIVERT FROM OE.
1899        DR    DIOD
            *

1900        KK  RTDIOD  ROUTE   REACH
1901        KM   FUTURE ARTERIAL SECTION
1902        RS       4              -1       0
1903        RC   0.100   0.023   0.100    2700  0.0013    0.00
1904        RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
1905        RY     105     105     105   99.75   99.75     105     105     105
            *
            * THE FOLLOWING RETURNS REMOVED TO MODEL THE ADMP CONDITION
            * KK DROD2
            * KM  RETURN DIVERT FROM OG1
            * DR DIOD1
            *
            * KK DROD3
            * KM       RETURN DIVERT FROM OG2.
            * DR DIOD2
            *
```



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

1906        KK    CPOD
1907        KM   ADD HYDROGRAPHS AT OD.
1908        HC       2
            *
```

```
1909          KK  DIODOC
1910          KM        DIVERT 18% OF FLOW FROM OD TO OC.
1911          DT    DIOC
1912          DI       0       25       50       75      100      150      200
1913          DQ       0        5        9       14       18       27       36
              *

1914          KK  RTODMC   ROUTE   REACH
1915          KM   ROUTE FLOW FROM OD TO MC.
1916          KM   FUTURE ARTERIAL SECTION
1917          RS       5                -1        0
1918          RC   0.100    0.023    0.100     5200   0.0023     0.00
1919          RX     0.0      440      445    445.1    575.1    575.2      900   1000.0
1920          RY     105      105      105    99.75    99.75      105      105      105
              *

1921          KK   SUBMC   BASIN
1922          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1923          KM    L=       1.4  Lca=        .7   S=    13.6  Kn= .035  LAG=  30.5
1924          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1925          BA   0.999
1926          LG    0.18     0.15     8.80     0.09       59
1927          UI     110      271      519      667      869     1308     1136      873      663      506
1928          UI     275      187      126       81       34       34       34       34        7        0
              *

1929          KK   RETMC
1930          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1931          DT   RETMC     95.4
1932          DI       0    10000
1933          DQ       0    10000
              *

1934          KK   CPMC1
1935          KM        ADD HYDROGRAPHS AT MC
1936          HC       3
              *

1937          KK  DIMCMB
1938          KM        DIVERT 39% OF FLOW AT MC TO MB.
1939          DT    DIMB
1940          DI       0       25       50       75      100      150      200
1941          DQ       0        8       20       29       39       59       78
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1942          KK  RTMCIE   ROUTE   REACH
1943          KM        ROUTE FLOW FROM MC TO IE (ALONG 99TH AVENUE).
1944          KM        FUTURE ARTERIAL SECTION
1945          RS       1                -1        0
1946          RC   0.100    0.023    0.100     2000   0.0030     0.00
1947          RX     0.0      440      445    445.1    575.1    575.2      900   1000.0
1948          RY     105      105      105    99.75    99.75      105      105      105
              *

1949          KK  DIMCIE
1950          KM        DIVERT FLOW FOR LATER RECOMBINING
1951          DT    MCIE
1952          DI       0    10000
1953          DQ       0    10000
              *

1954          KK    DREB       *
1955          KM   RETURN DIVERT FROM MF TO EB
1956          DR    DIEB
              *

1957          KK   SUBEB   BASIN
1958          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1959          KM    L=        .5  Lca=        .3   S=    11.3  Kn= .050  LAG=  22.1
1960          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1961          BA   0.139
1962          LG    0.25     0.21     6.40     0.23       30
1963          UI      21       85      127      192      240      164      114       60       34       19
1964          UI       6        6        6        1        0        0        0        0        0        0
              *

1965          KK   RETEB
1966          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
1967          DT   RETEB     11.5
1968          DI       0    10000
1969          DQ       0    10000
              *

1970          KK    CPEB
1971          HC       2
              *

1972          KK   RDIED
1973          KM   RETURN DIVERT FROM JB1 TO ED1
1974          DR    DIED
              *

1975          KK  RJBED1   ROUTE   REACH
1976          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 83RD TO IRRIGATION CANAL
1977          KM   ROUTING IS OVER EXISTING RETENTION BASINS 250 FOOT WIDTH
1978          RS       7                -1        0
1979          RC   0.040    0.040    0.040     2563   0.0007     0.00
1980          RX     0.0        0        0        0      250      250      250      250
1981          RY      10        1        1      1.0      1.0        1        1       10
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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1982        KK  RJBED2   ROUTE   REACH
1983        KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM IRRIGATION CANAL TO 91ST
1984        KM    ROUTING IS OVER EXISTING RETENTION BASINS MEASURED AT 420 FOOT WIDTH
1985        KM    NEW DEVELOPMENT STILL BEING GRADED AT TIME OF THIS RUN 1-22-2006
1986        RS       7          -1       0
1987        RC   0.040   0.040   0.040    2563  0.0007    0.00
1988        RX     0.0       0       0       0     420     420     420     420
1989        RY      10       1       1     1.0     1.0       1       1      10
            *

1990        KK  SUBED1   BASIN
1991        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
1992        KM    L=      1.2  Lca=       .6   S=    9.4  Kn= .050  LAG=  42.1
1993        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
1994        BA   0.382
1995        LG    0.25    0.25    5.70    0.31      30
1996        UI      30      35     108     147     174     208     254     357     356     280
1997        UI     237     193     161     127      75      53      49      30      27       9
1998        UI       9       9       9       9       9       2       0       0       0       0
            *

1999        KK  RETED1
2000        KM   RETENTION
2001        KM   DIVERT FIRST FLUSH AND A PORTION OF 100-YEAR 2-HOUR RETENTION
2002        KM   PORTION OF ED1 UPSTREAM OF IRRIGATION CANAL ASSUMED 100-YEAR-2HOUR RETENTION
2003        KM   PORTION OF ED1 DOWNSTREAM OF IRRIGATION CANAL ASSUMED FIRST FLUSH ONLY
2004        KM   DOWNSTREAM 100-YEAR 2-HOUR RETENTION WOULD BE REMOVED BY INSTALLING 10-YEAR
2005        KM   CULVERT AT 91ST AVENUE
2006        DT  RETED1    19.9
2007        DI       0   10000
2008        DQ       0   10000
            *

2009        KK  SUBED2   BASIN
2010        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2011        KM    L= 0.6    Lca=  .3     S=    9.4      Kn= .050     LAG=  24.5
2012        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2013        BA   0.114
2014        LG    0.30    0.25    5.70    0.31      15
2015        UI      16      54      87     118     184     146     107      76      38      24
2016        UI      15       5       5       5       3       0       0       0       0       0
            *

2017        KK  RETED2
2018        KM   RETENTION
2019        KM   DIVERT 80% OF 100-YEAR 2-HOUR  RETENTION OUT OF MODEL - JCS
2020        DT  RETED2     7.5
2021        DI       0   10000
2022        DQ       0   10000
            *
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LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2023        KK  CPED1
2024        KM   ADD HYDROGRAPHS AT ED1
2025        HC       2
            *

2026        KK  ~CPED1
2027        KM   ADD HYDROGRAPHS AT ED1
2028        HC       2
            *

2029        KK  ~CPED2
2030        KM   COMBINE FLOW FROM EB & ED WITH FLOW FROM MF DIVERSION
2031        HC       2
            *

2032        KK  RRED
2033        KM   MODIFIED PULS ROUTING
2034        KM   DETENTION IN DRCC RIGHT OF WAY AT ED1 (91ST AVENUE)  POL
2035        RS       1    STOR       0       0
2036        SV       0    11.7    16.4
2037        SQ       0     333    1180
            *

2038        KK  RT99  ROUTE   REACH
2039        KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 91ST TO 99TH BASIN
2040        RS       1          -1       0
2041        RC   0.032   0.032   0.032    5217  0.0015    0.00
2042        RX     0.0       0       0      23      45      66      66      66
2043        RY       7       7       7     0.0     0.0       7       7       7
            *
            * KT95 BASIN REMOVED BY KA - PRESTIGE ENG
            * KK95BASIN
            * KM DETENTION IN 95BSN
            *
            * SECOND LEG OF ROUTING REMOVED (FROM 95TH TO 99TH) BY KA -PRESTIGE ENG

2044        KK  SUBID1   BASIN
2045        KM   THE FOLLOWING PARMETERS WERE PROVIDED FOR THIS BASIN
2046        KM   L= 1.0 Lca= .4  S= 7.1  Kn= .05  LAG= 35.0
2047        BA   0.204
2048        LG    0.25    0.15    8.00    0.11      30
2049        UI      20      37      82     107     131     170     242     199     159     126
2050        UI     101      71      38      32      20      15       6       6       6       6
2051        UI       6       0       0       0       0       0       0       0       0       0
2052        UI       0       0       0       0       0       0       0       0       0       0
            *

2053        KK  RETID1
2054        KM   RETENTION
2055        KM   DIVERT 80% OF 100-YEAR 2 HOUR RETENTION
```

```
2056          KM   NO EXPECTED PROJECT-RELATED CHANGE IN RETENTION AS A RESULT OF THIS PROJECT
2057          DT  RETID1    16.9
2058          DI       0   10000
2059          DQ       0   10000
              *
1                                          HEC-1 INPUT                                                    PAGE 58

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


2060          KK  SUBID2   BASIN
2061          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2062          KM    L=   1.0     Lca=  .4       S=  7.1      Kn= .05     LAG=  35.0
2063          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2064          BA   0.359
2065          LG    0.25    0.25    4.90    0.40     30
2066          UI      34      65     145     188    231     298     426     351     280     222
2067          UI     177     124      67      57     36      26      11      10      11      10
2068          UI      10       0       0       0      0       0       0       0       0       0
2069          UI       0       0       0       0      0       0       0       0       0       0
              *

2070          KK  RETID2
2071          KM   RETENTION
2072          KM   DIVERT 80% OF 100-YEAR 2 HOUR RETENTION
2073          KM   NO EXPECTED PROJECT-RELATED CHANGE IN RETENTION AS A RESULT OF THIS PROJECT
2074          DT  RETID2    29.7
2075          DI       0   10000
2076          DQ       0   10000
              *

2077          KK   SUBIE   BASIN
2078          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2079          KM    L=      .8  Lca=      .4    S=    6.0  Kn= .05   LAG=  34.3
2080          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2081          BA   0.302
2082          LG    0.25    0.15    8.80    0.09     30
2083          UI      30      58     126     164    203     267     368     289     232     181
2084          UI     137     135     135     132    113     115     126      84      88      87
2085          UI     146      93      51      44     30      16       9       9       9       9
2086          UI       5       0       0       0      0       0       0       0       0       0
              *

2087          KK   RETIE
2088          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2089          DT   RETIE    25.0
2090          DI       0   10000
2091          DQ       0   10000
              *

2092          KK  DRMCIE
2093          KM   RETURN DIVERT MCIE
2094          DR    MCIE
              *

2095          KK  ~CPID2
2096          HC       4
              *
1                                          HEC-1 INPUT                                                    PAGE 59

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


2097          KK   RRID1
2098          KM   MODIFIED PULS ROUTING
2099          KM   DETENTION IN DRCC RIGHT OF WAY AT ID1 (99TH AVENUE)  POL
2100          KM   OUTFLOW BASED ON AN EXISTING 2 CELL 4 BY 10 CULVERT AT 99TH AVENUE
2101          KM   MAXIMUM HEADWATER IS 6 FEET WITHOUT OVERFLOW
2102          KM   ASSUME 1 FOOT OVERFLOW
2103          KM   STORAGE BASED ON EXISTING CHANNEL 20 FOOT BOTTOM WIDTH 65 FOOT TOP
2104          KM   CHANNEL 6 FEET DEEP ASSUME 1 FOOT OVERTOPPING
2105          KM   OVERTOPPING WIDTH 250 FEET
2106          KM   CHANNEL SLOPE 0.0032
2107          RS       1    STOR       0       0
2108          SV       0    0.10       6    12.9
2109          SQ       0      50     770    1611
              *

2110          KK   CPID3
2111          HC       2
              *

2112          KK  RT107  ROUTE   REACH
2113          KM        ROUTE FLOW ALONG DRCC ALIGNMENT FROM 99TH TO 107TH
2114          KM   APPROXIMATELY THREE FOURTHS OF THIS CHANNEL IS EXISTING
2115          KM   CHANNEL ASSUMED TO BE EXTENDED TO 500 FT UPSTREAM OF 107TH AVE
2116          KM   THIS AND PROPOSED CULVERT AT 107TH ASSUMED TO ELIMINATE
2117          KM   ALL BUT FIRST FLUSH RETENTION BETWEEN 99TH AND 107TH
2118          RS       2              -1       0
2119          RC   0.032   0.032   0.032    4765  0.0032    0.00
2120          RX     0.0       0       0      23      45      66      66      66
2121          RY       7       7       7     0.0     0.0       7       7       7
              *

2122          KK   SUBIB   BASIN
2123          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2124          KM    L=   1.1    Lca=  .6       S=   14.2      Kn= .050     LAG=  36.8
2125          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2126          BA   0.479
2127          LG    0.25    0.15    8.00    0.13     30
2128          UI      44      75     175     231    279     349     502     500     386     316
2129          UI     252     199     123      76     66      44      27      13      14      13
2130          UI      13      13       0       0      0       0       0       0       0       0
2131          UI       0       0       0       0      0       0       0       0       0       0
              *

2132          KK   RETIB
```

```
2133          KM   RETENTION MODIFIED FROM REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTING -
2134          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2135          DT   RETIB    10.2
2136          DI       0   10000
2137          DQ       0   10000
              *
1                                          HEC-1 INPUT                                          PAGE 60

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

2138          KK   SUBIC   BASIN
2139          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2140          KM    L=  1.1     Lca= .5     S=  4.7     Kn= .050     LAG=  43.1
2141          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2142          BA   0.461
2143          LG    0.25    0.25    5.20    0.36      30
2144          UI      36      38     127     169     203     239     289     396     442     344
2145          UI     291     240     200     162     111      64      59      43      36      18
2146          UI      11      11      11      11      11       9       0       0       0       0
2147          UI       0       0       0       0       0       0       0       0       0       0
              *

2148          KK   RETIC
2149          KM   RETENTION MODIFIED FROM 80% REQUIRED TO FIRST FLUSH FOR DETENTION BASIN ROUTI
2150          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2151          DT   RETIC     9.8
2152          DI       0   10000
2153          DQ       0   10000
              *

2154          KK    CPIC
2155          KM   COMBINE IB AND IC FLOWS
2156          HC       2
              *
              *

2157          KK   SUBOC   BASIN
2158          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2159          KM    L=       .8  Lca=       .4   S=   13.2    Kn= .03   LAG=  17.6
2160          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2161          BA   0.310
2162          LG    0.15    0.15    9.70    0.07      59
2163          UI      85     285     452     670     436     263     109      56      18      18
2164          UI      10       0       0       0       0       0       0       0       0       0
2165          UI       0       0       0       0       0       0       0       0       0       0
              *

2166          KK   RETOC
2167          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2168          DT   RETOC    31.1
2169          DI       0   10000
2170          DQ       0   10000
              *

2171          KK    DROC
2172          KM    RETURN DIVERT FROM OD.
2173          DR    DIOC
              *
1                                          HEC-1 INPUT                                          PAGE 61

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

2174          KK  RTDIOC   ROUTE   REACH
2175          KM        ROUTE DIVERT FROM OD TO OC
2176          KM        FUTURE ARTERIAL SECTION
2177          RS       7              -1       0
2178          RC   0.100   0.023   0.100    4000  0.0010    0.00
2179          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2180          RY     105     105     105   99.75   99.75     105     105     105
              *

2181          KK    CPOC
2182          KM   ADD HYDROGRAPHS AT OC
2183          HC       2
              *

2184          KK  RTOCMB   ROUTE   REACH
2185          KM        ROUTE FLOW FROM OC TO MB.
2186          KM        FUTURE ARTERIAL SECTION
2187          RS       3              -1       0
2188          RC   0.100   0.023   0.100    5200  0.0038    0.00
2189          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2190          RY     105     105     105   99.75   99.75     105     105     105
              *

2191          KK   SUBMB   BASIN
2192          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2193          KM    L=  1.4     Lca= .7     S= 17.6     Kn= .0425     LAG=  34.5
2194          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2195          BA   0.995
2196          LG    0.21    0.15    8.40    0.10      46
2197          UI      97     190     413     535     664     866    1210     956     766     598
2198          UI     486     313     171     148      98      58      30      30      30      30
2199          UI      17       0       0       0       0       0       0       0       0       0
2200          UI       0       0       0       0       0       0       0       0       0       0
              *

2201          KK   RETMB
2202          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2203          DT   RETMB    88.4
2204          DI       0   10000
2205          DQ       0   10000
              *

2206          KK    DRMB
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```
2207          KM    RETURN DIVERT FROM MC.
2208          DR    DIMB
              *

2209          KK  RTDIMB   ROUTE   REACH
2210          KM        ROUTE DIVERT FROM MC TO MB
2211          KM        FUTURE ARTERIAL SECTION
2212          RS       4              -1       0
2213          RC   0.100   0.023   0.100    5200  0.0023    0.00
2214          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2215          RY     105     105     105   99.75   99.75     105     105     105
              *
1                                   HEC-1 INPUT                                                    PAGE 62

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

2216          KK   @CPMB
2217          KM   ADD HYDROGRAPHS AT MB.
2218          HC       3    5.24
              *

2219          KK  RTMBIB   ROUTE   REACH
2220          KM        ROUTE FLOW FROM MB TO IB (ALONG 107TH AVENUE).
2221          KM        FUTURE ARTERIAL SECTION
2222          RS       1              -1       0
2223          RC   0.100   0.030   0.100    2600  0.0015    0.00
2224          RX     0.0     440     445   445.1   745.1   745.2     900  1000.0
2225          RY     105     105     105   100.0   100.0     105     105     105
              *

2226          KK   CPIB0
2227          KM   ADD HYDROGRAPHS AT IB.
2228          HC       2
              *
              * KK CPIB1
              * KM ADD HYDROGRAPHS AT IB.
              * HC      2
              *

2229          KK  @CPIB2
2230          KM   COMBINE TRIBUTARY FLOW WITH MAIN CHANNEL FLOW
2231          HC       3
              *
              * ADD DETENTION BASIN AT 107TH AVE - BY KA (PRESTIGE ENGR)
              *

2232          KK  DET107
2233          KO       2
2234          KM   MODIFIED PULS ROUTING
2235          KM   BASIN AT 107TH AVENUE REPLACES THE 95TH AVE BASIN BY ASPEN
2236          KM   BASIN HAS 20-AC BOTTOM AREA WITH 6:1 SIDE SLOPES
2237          KM   BASIN BOTTOMFLUSH WITH ADJACENT CHANNEL BOTTOM (IN-LINE TYPE)
2238          KM   A CULVERT TRIPLE    10x5 RBC
2239          KM   MAX CULVERT HEADWATER AND PONDING IN BASIN IS 5 FEET. OVERTOPPING ON ROAD
2240          KM   NOT ALLOWED
2241          RS       1    STOR       0       0
2242          SV       0    20.3    41.0    62.3    84.2    95.4   106.6   106.6
2243          SQ       0    21.7     140     312   527.5   647.5   775.0   912.5
2244          SE     960     961     962     963     964   964.5     965   965.5
              *
              *

2245          KK  MCIBIA   ROUTE   REACH
2246          KM   ADMP CHANNEL
2247          KM   ROUTE FLOW FROM IB TO IA
2248          RS       4    FLOW      -1
2249          RC   0.040   0.040   0.040    2493  0.0005    0.00
2250          RX     1.0    17.0    35.2    53.3   263.3   281.5   299.7   315.7
2251          RY     5.7     6.1     3.0     0.0     0.0     3.0     6.1     5.7
              *
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM IB TO IA (ALONG 107TH AVENUE).
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS      3    STOR       0
              * SV      0      17    45.4      77     106   135.9   167.9   199.8   228.7     2
              * SQ      0     400     800    1200    1600    2000    2400    2800    3200    34
              *
              * KM FUTURE ARTERIAL SECTION
              * RS      1              -1       0
              * RC 0.100   0.023   0.100     500  0.0120    0.00
              * RX   0.0     440     445   445.1   575.1   575.2     900  1000.0
              * RY   105     105     105   99.75   99.75     105     105     105
              *
1                                   HEC-1 INPUT                                                    PAGE 63

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

2252          KK   SUBME   BASIN
2253          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2254          KM    L=   1.0     Lca= .4     S=  20.6     Kn= .050     LAG=  30.1
2255          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2256          BA   0.326
2257          LG    0.29    0.26    4.70    0.44      18
2258          UI      36      91     172     222     290     437     366     282     215     161
2259          UI      83      61      39      23      11      11      11      11       0       0
2260          UI       0       0       0       0       0       0       0       0       0       0
              *

2261          KK   RETME
2262          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2263          DT   RETME    22.8
2264          DI       0   10000
2265          DQ       0   10000
```

```
                 *
2266             KK  RTMEIA   ROUTE   REACH
2267             KM        ROUTE FLOW FROM ME TO IA (ALONG 107TH AVENUE).
2268             KM        FUTURE ARTERIAL SECTION
2269             RS      3          -1       0
2270             RC  0.100   0.023   0.100    3400  0.0034    0.00
2271             RX    0.0     440     445   445.1   575.1   575.2     900  1000.0
2272             RY    105     105     105   99.75   99.75     105     105     105
                 *

2273             KK   SUBIA   BASIN
2274             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2275             KM    L=  .8      Lca=  .4     S= 17.1      Kn= .05     LAG=  26.2
2276             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2277             KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2278             KM   WITHOUT RETENTION. - JCS
2279             BA   0.309
2280             LG    0.27    0.25    6.00    0.25    23.1
2281             UI      40     125     210     277     426     426     309     227     152      73
2282             UI      53      32      12      12      12       8       0       0       0       0
2283             UI       0       0       0       0       0       0       0       0       0       0
                 *

2284             KK   RETIA
2285             KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2286             KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2287             KM   WITHOUT RETENTION. - JCS
2288             DT   RETIA     3.6
2289             DI       0   10000
2290             DQ       0   10000
                 *
1                                          HEC-1 INPUT                                                    PAGE 64

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

2291             KK   ~CPIA
2292             KM        ADD HYDROGRAPHS AT IA.
2293             HC       3
                 *

2294             KK  MCIAHB   ROUTE   REACH
2295             KM   ADMP CHANNEL
2296             KM   ROUTE FLOW FROM BASIN IA TO HB
2297             RS       4    FLOW      -1
2298             RC  0.040   0.040   0.040    2646  0.0005    0.00
2299             RX    0.0    16.0    34.1    52.2   262.2   280.3   298.4   314.4
2300             RY    5.7     6.0     3.0     0.0     0.0     3.0     6.0     5.7
                 * KM HEC-RAS REACH
                 * KM BFC
                 * KM ROUTE FLOW FROM IA TO HB.
                 * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
                 * KM HEC-RAS MODEL. 06.07.00 -DCF
                 * RS      2    STOR       0
                 * SV      0    23.3    45.2      73   102.7   132.9   160.6   189.4   212.1   222
                 * SQ      0     400     800    1200    1600    2000    2400    2800    3200    34
                 *

2301             KK   SUBHB   BASIN
2302             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2303             KM    L=  .8     Lca=   .4     S=  25.0     Kn= .050     LAG=  25.1
2304             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2305             KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2306             KM   WITHOUT RETENTION. - JCS
2307             BA   0.343
2308             LG    0.27    0.25    4.80    0.41    24.3
2309             UI      46     154     250     336     531     450     329     239     132      78
2310             UI      48      21      14      14      14       0       0       0       0       0
2311             UI       0       0       0       0       0       0       0       0       0       0
                 *

2312             KK   RETHB
2313             KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2314             KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2315             KM   WITHOUT RETENTION. - JCS
2316             DT   RETHB     4.5
2317             DI       0   10000
2318             DQ       0   10000
                 *

2319             KK   CPHB1
2320             KM   ADD HYDROGRAPHS AT HB.
2321             HC       2
                 *
1                                          HEC-1 INPUT                                                    PAGE 65

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

2322             KK   SUBDA   BASIN
2323             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2324             KM    L=  1.0     Lca= .6     S= 17.6      Kn= .05     LAG=  34.0
2325             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2326             KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2327             KM   WITHOUT RETENTION. - JCS
2328             BA   0.328
2329             LG    0.30    0.17    6.80    0.18      15
2330             UI      32      65     140     181     225     302     400     311     249     195
2331             UI     154      94      56      46      33      14      10      10      10      10
2332             UI       3       0       0       0       0       0       0       0       0       0
2333             UI       0       0       0       0       0       0       0       0       0       0
                 *

2334             KK   RETDA
2335             KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2336             KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
```

```
2337          KM   WITHOUT RETENTION. - JCS
2338          DT   RETDA     4.6
2339          DI       0   10000
2340          DQ       0   10000
              *

2341          KK   ~CPDA
2342          KM   ADD HYDROGRAPHS AT DA.
2343          HC       2
              *

2344          KK   SUBLD   BASIN
2345          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2346          KM    L=       .8  Lca=        .4   S=    13.3    Kn= .05    LAG=  30
2347          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2348          BA   0.278
2349          LG    0.28    0.26    4.80    0.37      29
2350          UI      32      82     153     197     263     386     305     236     179     126
2351          UI      65      49      32      14      10      10       9       6       0       0
2352          UI       0       0       0       0       0       0       0       0       0       0
              *

2353          KK   RETLD
2354          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2355          DT   RETLD    20.7
2356          DI       0   10000
2357          DQ       0   10000
              *
              * THE FOLLOWING RETURN AND ROUTE REMOVED TO MODEL THE ADMP CONDITION
              * KK  DRLD
              * KM RETURN DIVERT FROM LE TO LD
              * DR  DILD
              *
              * KKRTDILD   ROUTE   REACH
              * KM ROUTE DIVERT FROM LE TO LD
              * KM TYPE A CHANNEL
              * RS     4              -1       0
              * RC 0.025   0.025   0.025    2500  0.0016    0.00
              * RX   0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
              * RY   5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *
1                                          HEC-1 INPUT                                                    PAGE 66

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

2358          KK  RTLDMA   ROUTE   REACH
2359          KM        ROUTE FLOW FROM LD TO MA
2360          KM        TYPE A CHANNEL
2361          RS       3              -1       0
2362          RC   0.025   0.025   0.025    2600  0.0035    0.00
2363          RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2364          RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
              *

2365          KK   SUBMA   BASIN
2366          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2367          KM    L=  .7      Lca= .3        S=  14.7      Kn= .050      LAG=  24.8
2368          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2369          BA   0.247
2370          LG    0.30    0.25    4.55    0.52      15
2371          UI      33     115     184     250     392     320     234     167      88      55
2372          UI      34      12      10      10       8       0       0       0       0       0
2373          UI       0       0       0       0       0       0       0       0       0       0
              *

2374          KK   RETMA
2375          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2376          DT   RETMA    16.3
2377          DI       0   10000
2378          DQ       0   10000
              *

2379          KK    CPMA
2380          KM        ADD HYDROGRAPHS AT MA
2381          HC       2
              *

2382          KK  RTMAHB   ROUTE   REACH
2383          KM        ROUTE FLOW FROM MA TO HB (ALONG 115TH AVENUE).
2384          KM        FUTURE ARTERIAL SECTION
2385          RS       3              -1       0
2386          RC   0.100   0.023   0.100    4000  0.0071    0.00
2387          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2388          RY     105     105     105   99.75   99.75     105     105     105
              *

2389          KK   CPHB2
2390          KM        ADD HYDROGRAPHS AT HB.
2391          HC       2
              *
              * THE FOLLOWING ROUTES REMOVED TO MODEL THE ADMP CONDITION
              * ROUTING TO DA NO LONGER OCCURS BUT IS COMBINED INTO CHANNEL AT HB
              * KKRTHBDA
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM HB TO DA (ALONG 115TH AVENUE).
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS     2    STOR       0
              * SV     0    11.3    18.3    26.4    34.3    40.3    46.2    51.7    56.5    59
              * SQ     0     400     800    1200    1600    2000    2400    2800    3200    34
              *
              * KKRTDACC
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM DA TO CC.
```

```
                 * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
                 * KM HEC-RAS MODEL. 06.07.00 -DCF
                 * RS      6    STOR       0
                 * SV      0    49.6    80.6   107.1   129.8   149.2     167   184.1   200.2   207
                 * SQ      0     400     800    1200    1600    2000    2400    2800    3200    34
                 *
1                                                HEC-1 INPUT                                                    PAGE 67

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

2392             KK   SUBLB   BASIN
2393             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2394             KM    L=       .7  Lca=       .3   S=    8.8  Kn= .050  LAG=  27
2395             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2396             BA   0.249
2397             LG    0.30    0.25    4.60    0.49      15
2398             UI      31      90     158     206     297     358     258     192     142      72
2399             UI      50      31      14      10      10       9       3       0       0       0
2400             UI       0       0       0       0       0       0       0       0       0       0
                 *

2401             KK   RETLB
2402             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2403             DT   RETLB    16.4
2404             DI       0   10000
2405             DQ       0   10000
                 *

2406             KK  RTLBHA   ROUTE   REACH
2407             KM        ROUTE FLOW FROM LB TO HA (SHEET FLOW).
2408             KM        TYPE A CHANNEL
2409             RS      13                -1       0
2410             RC   0.100   0.100   0.100    4000  0.0065    0.00
2411             RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2412             RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
                 *

2413             KK   SUBHA   BASIN
2414             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2415             KM    L=  .8     Lca=  .4     S= 33.8      Kn= .05     LAG=  23.5
2416             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2417             BA   0.150
2418             LG    0.25    0.25    4.70    0.44      30
2419             UI      21      79     122     172     255     186     133     089      42      27
2420             UI      14       7       7       7       0       0       0       0       0       0
2421             UI       0       0       0       0       0       0       0       0       0       0
                 *

2422             KK   RETHA
2423             KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2424             DT   RETHA     3.2
2425             DI       0   10000
2426             DQ       0   10000
                 *

2427             KK    CPHA
2428             KM        ADD HYDROGRAPHS AT HA
2429             HC       3
                 * ******************************************************************************
                 * INSERTED SOUTH ALIGNMENT FROM 1084F6-IMP-R.DAT - JCS
                 * ADDED/CHANGED SUBJB2 TO CPEE IN ORDER TO REINSERT SUBJB2 - JCS
                 *
1                                                HEC-1 INPUT                                                    PAGE 68

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

2430             KK  MCHACB    ROUTE      REACH
2431             KM   ADMP CHANNEL
2432             KM   ROUTE FLOW FROM HA TO CB.
2433             RS       8    FLOW       -1
2434             RC   0.040   0.040   0.040    9163  0.0017    0.00
2435             RX     0.0    16.0    33.7    51.4   201.4   219.4   228.1   244.1
2436             RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
                 *

2437             KK   SUBJB2
2438             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2439             KM    L=       1.3  Lca=       .7   S=   17.4  Kn= .050  LAG=  40
2440             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2441             BA   0.493
2442             LG    0.30    0.21    6.40    0.18      15
2443             UI      41      54     151     203     242     293     372     515     433     350
2444             UI     292     237     194     133      73      68      46      41      14      13
2445             UI      12      13      13      13       2       0       0       0       0       0
                 *

2446             KK  RETJB2
2447             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2448             DT  RETJB2    32.4
2449             DI       0   10000
2450             DQ       0   10000
                 *

2451             KK   DRJB2
2452             KM    RETURN DIVERT FROM JC2
2453             DR   DIJB2
                 *

2454             KK   RTJCJB   ROUTE      REACH
2455             KM   ROUTE DIVERT FROM JC2 TO JB2
2456             KM   FUTURE ARTERIAL SECTION
2457             RS       4                -1       0
2458             RC   0.100   0.023   0.100    5000  0.0015    0.00
2459             RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2460             RY     105     105     105   99.75   99.75     105     105     105
```

```
                 *
2461             KK  @CPJB2
2462             KM   ADD HYDROGRAPHS AT JB2
2463             HC       2     3.81
                 *

2464             KK  DIJBEE
2465             KM   DIVERT 64% OF FLOW AT JB2 TO FA AND THE SALT RIVER. - JCS
2466             DT    DIFA
2467             DI       0       25       50       75      100      150     2000
2468             DQ       0       16       32       48       64       96     1280
                 *
1                                                HEC-1 INPUT                                                          PAGE 69

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

2469             KK  RTJBEE  ROUTE      REACH
2470             KM        ROUTE DIVERT FROM JB TO EE
2471             KM        TYPE A CHANNEL
2472             RS      10                -1        0
2473             RC   0.100    0.023    0.100     7500   0.0015     0.00
2474             RX     0.0    100.0    400.0    500.0    500.1    600.0    900.0   1000.0
2475             RY     5.0      4.0      1.0      0.0      0.0      1.0      4.0      5.0
                 *

2476             KK   SUBEE
2477             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2478             KM    L=       1.6  Lca=       1.0   S=    16.0  Kn= .05  LAG=  50.8
2479             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2480             BA   0.958
2481             LG    0.20     0.25     4.90     0.34       15
2482             UI      63       63      159      258      318      366      421      494      637      802
2483             UI     695      577      504      428      362      314      244      157      113      104
2484             UI      79       64       51       19       20       20       19       20       20       20
2485             UI       7        0        0        0        0        0        0        0        0        0
2486             UI       0        0        0        0        0        0        0        0        0        0
                 *

2487             KK  RETEE
2488             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2489             DT  RETEE      63.0
2490             DI       0    10000
2491             DQ       0    10000
                 *

2492             KK   CPEE
2493             KM        ADD HYDROGRAPHS AT EE
2494             HC       2
                 *

2495             KK  RTEEEA
2496             KM   HEC-RAS REACH
2497             KM   ROUTE FLOW FROM EE TO EA.
2498             KM   ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES OBTAINED FROM THE
2499             KM   DIBBLE MODEL DUR-6im.DAT.    POL 9-6-2005
2500             RS       9    STOR        0
2501             SV       0    63.2     84.9      119    148.6    174.2    197.9    220.2    241.2    263.1
2502             SQ       0     100      200      400      600      800     1000     1200     1400     1600
                 *
                 * KKRTEEEA  . ROUTE   REACH
                 * KM       ROUTE FLOW FROM EE TO EA
                 * KM       TYPE A CHANNEL
                 * RS      9                -1        0
                 * RC 0.035    0.035    0.035     5300   0.0030     0.00
                 * RX   0.0    100.0    400.0    500.0    500.1    600.0    900.0   1000.0
                 * RY   5.0      4.0      1.0      0.0      0.0      1.0      4.0      5.0
                 *
1                                                HEC-1 INPUT                                                          PAGE 70

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

2503             KK   SUBEA   BASIN
2504             KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2505             KM    L=       1.5  Lca=       .8     S=    21.3    Kn= .05    LAG=  44.3
2506             KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2507             BA   1.321
2508             LG    0.29     0.25     5.30     0.34       16
2509             UI     100      101      340      457      556      647      776     1034     1263     1015
2510             UI     846      715      587      501      364      221      170      151      100       89
2511             UI      31       31       31       30       30       30       15        0        0        0
2512             UI       0        0        0        0        0        0        0        0        0        0
                 *

2513             KK   RETEA
2514             KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2515             DT   RETEA     89.2
2516             DI       0    10000
2517             DQ       0    10000
                 *

2518             KK    CPEA
2519             KM        ADD HYDROGRAPHS AT EA
2520             HC       2
                 *
                 * KKP-99SO
                 * KO     1       2
                 * KM DIVERT OVERFLOW INTO BASIN - JLM 6/17/02
                 * DTB-99SO
                 * DI     0     260     260    2000    5000
                 * DQ     0       0       1    1740    4740
                 *

2521             KK  RTEADC   ROUTE   REACH
2522             KM    ROUTE FLOW FROM EA TO DC
```

```
2523        KM   SUNLAND CHANNEL
2524        RS       7              -1        0
2525        RC   0.040   0.040   0.040    4951  0.0018    0.00
2526        RX     0.0   100.0   101.0   137.0   157.0   193.0   194.0   294.0
2527        RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
            *

2528        KK   SUBDC   BASIN
2529        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2530        KM    L=      1.4  Lca=        .4   S=   22.1    Kn= .05    LAG=  33.5
2531        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2532        KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2533        KM   WITHOUT RETENTION. - JCS
2534        BA   0.830
2535        LG    0.29    0.25    6.00    0.27      16
2536        UI      83     170     363     469     584     800    1016     778     624     486
2537        UI     377     216     142     108      83      26      26      26      26      25
2538        UI       2       0       0       0       0       0       0       0       0       0
2539        UI       0       0       0       0       0       0       0       0       0       0
            *
```



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

2540        KK   RETDC
2541        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL (43%) - JCS
2542        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL (12%) - JCS
2543        KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2544        KM   WITHOUT RETENTION. (45%) - JCS
2545        DT   RETDC    25.9
2546        DI       0   10000
2547        DQ       0   10000
            *

2548        KK   ~CPDC
2549        KM        ADD HYDROGRAPHS AT DC
2550        HC       2
            *

2551        KK  RTDCCC   ROUTE   REACH
2552        KM        ROUTE FLOW FROM DC TO CC.
2553        KM   SUNLAND CHANNEL
2554        RS       5              -1        0
2555        RC   0.040   0.040   0.040    5103  0.0022    0.00
2556        RX     0.0   100.0   101.0   137.0   167.0   203.0   204.0   304.0
2557        RY     6.0     6.0     6.0     0.0     0.0     6.0     6.0     6.0
            *

2558        KK   SUBDD   BASIN
2559        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2560        KM    L=        .5  Lca=        .3   S=   28.3  Kn= .050  LAG=  18.2
2561        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2562        BA   0.133
2563        LG    0.25    0.25    4.65    0.43      30
2564        UI      34     115     178     281     193     123      53      30      10       8
2565        UI       7       0       0       0       0       0       0       0       0       0
2566        UI       0       0       0       0       0       0       0       0       0       0
            *

2567        KK   RETDD
2568        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2569        DT   RETDD    11.0
2570        DI       0   10000
2571        DQ       0   10000
            *

2572        KK  RTDDCCROUTE      REACH
2573        KM        ROUTE FLOW FROM DD TO CC.
2574        KM        TYPE A CHANNEL
2575        RS       7              -1        0
2576        RC   0.035   0.035   0.035    5000  0.0040    0.00
2577        RX     0.0   100.0   400.0   500.0   500.1   600.0   900.0  1000.0
2578        RY     5.0     4.0     1.0     0.0     0.0     1.0     4.0     5.0
            *
```



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

2579        KK   SUBCC   BASIN
2580        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2581        KM    L=  1.4    Lca= .7     S=   22.8      Kn= .05      LAG=  38.6
2582        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2583        KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2584        KM   WITHOUT RETENTION. - JCS
2585        BA   0.981
2586        LG    0.30    0.24    6.20    0.21      15
2587        UI      85     130     328     437     522     639     869    1062     820     677
2588        UI     546     446     331     189     145     111      86      42      26      26
2589        UI      26      25      26       2       0       0       0       0       0       0
2590        UI       0       0       0       0       0       0       0       0       0       0
            *

2591        KK   RETCC
2592        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL (54%) - JCS
2593        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL (24%) - JCS
2594        KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2595        KM   WITHOUT RETENTION. (40%) - JCS
2596        DT   RETCC    34.2
2597        DI       0   10000
2598        DQ       0   10000
            *

2599        KK   ~CPCC
2600        HC       3
            *
```

```
2601        KK  RTCCSC
2602        KM   ROUTE FLOW FROM CC TO DRCC
2603        KM   SUNLAND CHANNEL
2604        RS       4                -1        0
2605        RC   0.040    0.040    0.040    3027   0.0008     0.00
2606        RX     0.0    100.0    101.0   137.0    167.0    203.0    204.0    304.0
2607        RY     6.0      6.0      6.0     0.0      0.0      6.0      6.0      6.0
            *

2608        KK  RTCCSC
2609        KM   HEC-RAS REACH
2610        KM   BFC
2611        KM   ROUTE SUNLAND IN DRCC
2612        KM   DRCC CHANNEL
2613        RS       2                -1        0
2614        RC   0.040    0.040    0.040    2256   0.0017     0.00
2615        RX     0.0    100.0    101.0   137.0    287.0    353.0    354.0    454.0
2616        RY     6.0      6.0      6.0     0.0      0.0      6.0      6.0      6.0
            *

2617        KK   SUBCB   BASIN
2618        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2619        KM    L=  1.2     Lca=  .5     S= 11.1     Kn= .05     LAG=  36.9
2620        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2621        BA   0.739
2622        LG    0.30     0.15     9.70     0.07      15
```



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

2623        UI      67      114      268      355      429      535      768      774      596      488
2624        UI     390      310      194      117      102       68       43       21       21       21
2625        UI      21       21        1        0        0        0        0        0        0        0
2626        UI       0        0        0        0        0        0        0        0        0        0
            *

2627        KK   RETCB
2628        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2629        DT   RETCB    15.8
2630        DI       0   10000
2631        DQ       0   10000
            *

2632        KK  ~CPCB1
2633        HC       3
            *

2634        KK  SUBGD1   BASIN
2635        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2636        KM    L=  1.1     Lca= .6     S= 33.3     Kn= .05     LAG=  31.6
2637        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2638        BA   0.629
2639        LG    0.25     0.25     5.30     0.33      30
2640        UI      67      155      306      394      501      742      750      564      440      342
2641        UI     225      116       96       68       26       21       21       20       18        0
2642        UI       0        0        0        0        0        0        0        0        0        0
            *

2643        KK  RETGD1
2644        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2645        DT  RETGD1    13.4
2646        DI       0   10000
2647        DQ       0   10000
            *

2648        KK  SUBGD2
2649        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2650        KM    L=  1.2     Lca=  .5     S= 11.1     Kn= .05     LAG=  37.5
2651        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2652        BA   0.211
2653        LG    0.25     0.15     9.70     0.07      30
2654        UI      66      108      259      345      414      512      722      791      604      498
2655        UI     395      327      218      119      109       69       56       21       21       20
2656        UI      21       20        9        0        0        0        0        0        0        0
2657        UI       0        0        0        0        0        0        0        0        0        0
            *

2658        KK  RETGD2
2659        KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2660        DT  RETGD2    15.8
2661        DI       0   10000
2662        DQ       0   10000
            *
```



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

2663        KK   CPGD
2664        KM   RECOMBINE SUBBASIN GD - JCS
2665        HC       2
            *

2666        KK   SUBKC   BASIN
2667        KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2668        KM    L=       .8  Lca=       .4   S=   26.3  Kn= .050  LAG=  25
2669        KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2670        BA   0.264
2671        LG    0.25     0.25     4.60     0.50      30
2672        UI      35      119      193      260      409      346      253      183      101       60
2673        UI      37       16       11       11       11        0        0        0        0        0
2674        UI       0        0        0        0        0        0        0        0        0        0
            *

2675        KK   RETKC
2676        KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
```

```
2677          DT   RETKC    21.8
2678          DI       0   10000
2679          DQ       0   10000
              *

2680          KK  RTKCGDROUTE       REACH
2681          KM        ROUTE FLOW FROM KC TO GD1 (ALONG EL MIRAGE RD).
2682          KM        ASSUME NEGLIGIBLE CHANNEL TRANSMISSION LOSS.
2683          KM        FUTURE ARTERIAL SECTION
2684          RS       3              -1       0
2685          RC   0.100   0.023   0.100    4090  0.0049    0.00
2686          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2687          RY     105     105     105   99.75   99.75     105     105     105
              *

2688          KK   SUBGC   BASIN
2689          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2690          KM    L= .8     Lca=  .4      S=   26.5     Kn= .045     LAG=  23.3
2691          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2692          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2693          KM   WITHOUT RETENTION. - JCS
2694          BA   0.215
2695          LG    0.28    0.26    4.70    0.34    19.7
2696          UI      31     116     178     254     368     265     189     123      57      38
2697          UI      19      10       9       9       0       0       0       0       0       0
2698          UI       0       0       0       0       0       0       0       0       0       0
              *

2699          KK   RETGC
2700          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2701          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2702          KM   WITHOUT RETENTION. - JCS
2703          DT   RETGC     5.0
2704          DI       0   10000
2705          DQ       0   10000
              *
```



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

2706          KK  RTGCGD      ROUTE       REACH
2707          KM        ROUTE FLOW FROM GC TO GD1 (ALONG EL MIRAGE ROAD).
2708          KM        FUTURE ARTERIAL SECTION
2709          RS       1              -1       0
2710          RC   0.100   0.023   0.100     820  0.0049    0.00
2711          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2712          RY     105     105     105   99.75   99.75     105     105     105
              *

2713          KK   CPGD1
2714          KM        ADD ALL HYDROGRAPHS AT GD1.
2715          HC       3
              *

2716          KK  RTGDCB   ROUTE       REACH
2717          KM   ROUTE FLOW FROM GD1 TO CB
2718          RS       6    FLOW       -1
2719          RC   0.100   0.023   0.100    3880  0.0010    0.00
2720          RX     0.0     440     445   445.1   575.1   575.2     900  1000.0
2721          RY     105     105     105   99.75   99.75     105     105     105
              *

2722          KK  ~CPCB2
2723          KM   COMBINE FLOWS FROM CB TO CHANNEL
2724          HC       2
              *

2725          KK  MCCBCA
2726          KM   ADMP CHANNEL
2727          KM   ROUTE FLOW FROM CB TO CA.
2728          RS       8    FLOW       -1
2729          RC   0.040   0.040   0.040    5026  0.0014    0.00
2730          RX     0.0    16.0    33.7    51.4   201.4   219.4   228.1   244.1
2731          RY     5.6     5.9     3.0     0.0     0.0     3.0     5.9     5.6
              *

2732          KK  SUBCA1   BASIN
2733          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2734          KM    L=      1.0  Lca=       .5   S=    6.4  Kn= .05  LAG=  38.9
2735          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2736          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2737          KM   WITHOUT RETENTION. - JCS
2738          BA   0.143
2739          LG    0.26    0.15    7.60    0.14    26.9
2740          UI      12      18      47      63      75      92     124     154     120      99
2741          UI      81      65      50      29      21      17      12       7       4       4
2742          UI       4       4       4       1       0       0       0       0       0       0
2743          UI       0       0       0       0       0       0       0       0       0       0
              *
```



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

2744          KK  RETCA1
2745          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2746          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2747          KM   WITHOUT RETENTION. - JCS
2748          DT  RETCA1     2.4
2749          DI       0   10000
2750          DQ       0   10000
              *

2751          KK  SUBCA2   BASIN
2752          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2753          KM    L=      1.0  Lca=       .5   S=    7.8    Kn= .05    LAG=  37.4
```

```
2754          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2755          BA   0.841
2756          LG    0.30     0.15     8.80     0.09       15
2757          UI      76      123      297      297      393      474      585      829      898      566
2758          UI     448      369      247      134      124       76       63       23       23       23
2759          UI      23       23        9        0        0        0        0        0        0        0
2760          UI       0        0        0        0        0        0        0        0        0        0
              *

2761          KK  RETCA2
2762          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2763          DT  RETCA2     17.9
2764          DI       0    10000
2765          DQ       0    10000
              *

2766          KK  ~CPCA1
2767          KM   COMBINE FLOWS AT CA
2768          KM   RECOMBINE SUBBASIN CA - JCS
2769          HC       3
              *

2770          KK   SUBGB    BASIN
2771          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2772          KM    L= .8      Lca= .6    S=   36.1     Kn= .05      LAG=  27.4
2773          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2774          KM   THIS SUBBASIN HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2775          KM   WITHOUT RETENTION. - JCS
2776          BA   0.221
2777          LG    0.30     0.25     4.55     0.42       15
2778          UI      27       79      139      181      260      318      230      171      127       65
2779          UI      45       27       13        8        8        8        3        0        0        0
2780          UI       0        0        0        0        0        0        0        0        0        0
              *

2781          KK   RETGB
2782          KM   DIVERT 80% REQUIRED DEVELPMENT RETENTION OUT OF MODEL - JCS
2783          KM   THIS DIVERSION HAS BE MODIFIED TO ACCOUNT FOR EXISTING DEVELOPMENT
2784          KM   WITHOUT RETENTION. - JCS
2785          DT   RETGB      8.3
2786          DI       0    10000
2787          DQ       0    10000
              *
```



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

2788          KK  RTGBCA    ROUTE       REACH
2789          KM        ROUTE FLOW FROM GB TO CA1.
2790          KM        FUTURE ARTERIAL SECTION
2791          RS       5                -1        0
2792          RC   0.040    0.040    0.040     5136   0.0014     0.00
2793          RX     0.0     16.0     33.8     51.6    166.6    184.4    202.3    218.3
2794          RY     5.6      5.9      3.0      0.0      0.0      3.0      5.9      5.6
              *

2795          KK  ~CPCA2
2796          KM        ADD HYDROGRAPHS AT CA
2797          HC       2
              *

2798          KK  P-DRCCDIVERT
2799          KM   DIVERT OVERFLOW INTO BASIN - JLM 6/18/02
2800          DT  B-DRCC
2801          DI       0       34       34     5000     9000
2802          DQ       0        0        1     4966     8966
              *

2803          KK  MCCABC    ROUTE       REACH
2804          KM   ROUTE ADMP CHANNEL FROM CA1 TO BC1
2805          RS       5     FLOW       -1
2806          RC   0.014    0.014    0.014     3914   0.0005     0.00
2807          RX     0.0     16.0     16.0     16.0     20.0     20.0     20.0     36.0
2808          RY     3.8      4.1      2.1      0.0      0.0      2.1      4.1      3.8
              *
              * KM HEC-RAS REACH
              * KM BFC
              * KM ROUTE FLOW FROM CA TO BC.
              * KM ROUTING FOR THIS REACH USES DISCHARGE-STORAGE VALUES DEVELOPED FROM THE
              * KM HEC-RAS MODEL. 06.07.00 -DCF
              * RS     11     STOR        0
              * SV      0     52.4    113.5    174.4    227.6    278.6    321.5      363    401.7      4
              * SQ      0      400      800     1200     1600     2000     2400     2800     3200     34
              *

2809          KK  SUBBC1    BASIN
2810          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2811          KM    L=  0.22x1.7   Lca=  0.22x0.8    S=  11.5    Kn= .02     LAG=  6.3
2812          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2813          BA   0.137
2814          LG    0.15     0.28     4.80     0.38       55
2815          UI     309      618      117      117       18        0        0        0        0        0
2816          UI       0        0        0        0        0        0        0        0        0        0
              *

2817          KK  RETBC1
2818          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2819          DT  RETBC1      2.9
2820          DI       0    10000
2821          DQ       0    10000
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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2822          KK  SUBBC2   BASIN
2823          KM    THE FOLLOWING PARAMETERS WERE PROVIDED FOR THIS BASIN
2824          KM    L=      1.7  Lca=       .8   S=   11.5  Kn= .038  LAG=  38.3
2825          KM    VALLEY S-GRAPH WAS USED FOR THIS BASIN - JCS
2826          BA   0.493
2827          LG    0.24    0.25    5.10    0.39      31
2828          UI      55      86     214     284     340     419     573     682     523     433
2829          UI     345     284     204     116      93      68      55      21      17      17
2830          UI      17      17      15       0       0       0       0       0       0       0
2831          UI       0       0       0       0       0       0       0       0       0       0
              *

2832          KK  RETBC2
2833          KM   DIVERT 80% OF FIRST FLUSH 1/2" RETENTION OUT OF MODEL - JCS
2834          DT  RETBC2    10.5
2835          DI       0   10000
2836          DQ       0   10000
              *

2837          KK   ~CPBC
2838          KM   ADD HYDROGRAPHS AT BC1
2839          KM   RECOMBINE SUBBASIN BC - JCS
2840          HC       3
              *

2841          KK  CPAFBC
2842          KM   COMBINE FLOWS INTO AGUA FRIA RIVER AT BC
2843          HC       2
              *
              * KM      FUTURE ARTERIAL SECTION
              * RS    10              -1       0
              * RC 0.100   0.023   0.100    5700  0.0018    0.00
              * RX   0.0     440     445   445.1   575.1   575.2     900  1000.0
              * RY   105     105     105   99.75   99.75     105     105     105
              *
              *
              *
              * ***********************************************************************
              * NOTES REFERING TO CHANGES MADE TO DIBBLE MODEL HAVE BEEN OMITTED.
              * SEE 1084F6-IMP-R.DAT FOR NOTES. - JCS
2844          ZZ
1

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

              **************
              *            *
2232 KK       *    DET107  *
              *            *
              **************

2233 KO          OUTPUT CONTROL VARIABLES
                       IPRNT          2  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL         0.  HYDROGRAPH PLOT SCALE
                          MODIFIED PULS ROUTING
                          BASIN AT 107TH AVENUE REPLACES THE 95TH AVE BASIN BY ASPEN
                          BASIN HAS 20-AC BOTTOM AREA WITH 6:1 SIDE SLOPES
                          BASIN BOTTOMFLUSH WITH ADJACENT CHANNEL BOTTOM (IN-LINE TYPE)
                          A CULVERT TRIPLE    10x5 RBC
                          MAX CULVERT HEADWATER AND PONDING IN BASIN IS 5 FEET. OVERTOPPING ON ROAD
                          NOT ALLOWED

              HYDROGRAPH ROUTING DATA

2241 RS          STORAGE ROUTING
                       NSTPS          1  NUMBER OF SUBREACHES
                        ITYP       STOR  TYPE OF INITIAL CONDITION
                      RSVRIC        .00  INITIAL CONDITION
                           X        .00 WORKING R AND D COEFFICIENT

2242 SV            STORAGE          .0      20.3      41.0      62.3      84.2      95.4     106.6     106.6

2243 SQ          DISCHARGE          0.       22.      140.      312.      528.      648.      775.      913.

2244 SE          ELEVATION      960.00    961.00    962.00    963.00    964.00    964.50    965.00    965.50
                                                                  ***

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

                        HYDROGRAPH AT STATION   DET107
                       TRANSPOSITION AREA        .0 SQ MI

  PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                     6-HR        24-HR       72-HR     166.58-HR
+   (CFS)       (HR)
                          (CFS)
+    2851.      5.00      888.        260.         88.          38.
                      (INCHES)      .776         .908        .924         .924
                       (AC-FT)      440.         515.        524.         524.

 PEAK STORAGE   TIME                         MAXIMUM AVERAGE STORAGE
                                     6-HR        24-HR       72-HR     166.58-HR
+  (AC-FT)      (HR)
     107.       5.00       90.         39.         14.           6.

  PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                     6-HR        24-HR       72-HR     166.58-HR
+   (FEET)      (HR)
    972.62      5.00     965.33      962.14      960.78       960.34

                       CUMULATIVE AREA =   10.63 SQ MI
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***          ***          ***          ***          ***

                HYDROGRAPH AT STATION   DET107
              TRANSPOSITION AREA        .5 SQ MI

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                   6-HR       24-HR       72-HR    166.58-HR
+   (CFS)      (HR)
                          (CFS)
+   2779.      5.00                763.        254.         86.          37.
                        (INCHES)   .668        .889        .906         .906
                         (AC-FT)   378.        504.        513.         513.

 PEAK STORAGE  TIME                          MAXIMUM AVERAGE STORAGE
                                   6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)     (HR)
     109.      5.92                109.         49.         18.           8.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                   6-HR       24-HR       72-HR    166.58-HR
+   (FEET)     (HR)
   969.85      5.92              966.60      962.69      960.97       960.42

                CUMULATIVE AREA =   10.63 SQ MI

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

                HYDROGRAPH AT STATION   DET107
              TRANSPOSITION AREA       2.8 SQ MI

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                   6-HR       24-HR       72-HR    166.58-HR
+   (CFS)      (HR)
                          (CFS)
+   1853.      5.33                709.        217.         74.          32.
                        (INCHES)   .620        .761        .777         .777
                         (AC-FT)   351.        431.        440.         440.

 PEAK STORAGE  TIME                          MAXIMUM AVERAGE STORAGE
                                   6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)     (HR)
     108.      5.33                 96.         41.         15.           7.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                   6-HR       24-HR       72-HR    166.58-HR
+   (FEET)     (HR)
   970.42      5.33              965.52      962.21      960.80       960.35

                CUMULATIVE AREA =   10.63 SQ MI

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

                HYDROGRAPH AT STATION   DET107
              TRANSPOSITION AREA      16.0 SQ MI

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                   6-HR       24-HR       72-HR    166.58-HR
+   (CFS)      (HR)
                          (CFS)
+    707.      6.25                478.        156.         53.          23.
                        (INCHES)   .418        .544        .560         .560
                         (AC-FT)   237.        309.        317.         318.

 PEAK STORAGE  TIME                          MAXIMUM AVERAGE STORAGE
                                   6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)     (HR)
     101.      6.25                 79.         36.         13.           6.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                   6-HR       24-HR       72-HR    166.58-HR
+   (FEET)     (HR)
   964.73      6.25              963.74      961.74      960.65       960.28

                CUMULATIVE AREA =   10.63 SQ MI

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

                HYDROGRAPH AT STATION   DET107
              TRANSPOSITION AREA      90.0 SQ MI

 PEAK FLOW     TIME                          MAXIMUM AVERAGE FLOW
                                   6-HR       24-HR       72-HR    166.58-HR
+   (CFS)      (HR)
                          (CFS)
+    238.      6.75                166.         62.         22.          10.
                        (INCHES)   .146        .218        .232         .232
                         (AC-FT)    82.        124.        132.         132.

 PEAK STORAGE  TIME                          MAXIMUM AVERAGE STORAGE
                                   6-HR       24-HR       72-HR    166.58-HR
+  (AC-FT)     (HR)
      53.      6.75                 44.         24.          9.           4.

 PEAK STAGE    TIME                          MAXIMUM AVERAGE STAGE
                                   6-HR       24-HR       72-HR    166.58-HR
+   (FEET)     (HR)
   962.57      6.75              962.13      961.18      960.45       960.20

                CUMULATIVE AREA =   10.63 SQ MI

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

                HYDROGRAPH AT STATION   DET107
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TRANSPOSITION AREA 500.0 SQ MI

PEAK FLOW (CFS)	TIME (HR)
14.	6.67

MAXIMUM AVERAGE FLOW

	6-HR	24-HR	72-HR	166.58-HR
(CFS)	12.	8.	3.	1.
(INCHES)	.011	.029	.034	.034
(AC-FT)	6.	16.	19.	19.

PEAK STORAGE (AC-FT)	TIME (HR)
13.	6.67

MAXIMUM AVERAGE STORAGE

6-HR	24-HR	72-HR	166.58-HR
11.	8.	3.	1.

PEAK STAGE (FEET)	TIME (HR)
960.65	6.67

MAXIMUM AVERAGE STAGE

6-HR	24-HR	72-HR	166.58-HR
960.57	960.38	960.15	960.06

CUMULATIVE AREA = 10.63 SQ MI

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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	SUBWD	595.	4.50	86.	22.	7.	.39		
+	ROUTED TO	RTWDXA	551.	4.75	86.	22.	7.	.39		
+	HYDROGRAPH AT	SUBXA	580.	4.25	71.	18.	6.	.25		
+	2 COMBINED AT	CPXA1	740.	4.33	154.	39.	13.	.64		
+	DIVERSION TO	DIZZ1	0.	.00	0.	0.	0.	.64		
+	HYDROGRAPH AT	DIXAO	740.	4.33	154.	39.	13.	.64		
+	ROUTED TO	RTXAWC	705.	4.92	154.	39.	13.	.64		
+	HYDROGRAPH AT	SUBWB	1154.	4.42	184.	46.	15.	.67		
+	ROUTED TO	RTWBWC	1092.	4.58	183.	46.	15.	.67		
+	HYDROGRAPH AT	SUBWC	922.	4.42	138.	35.	12.	.49		
+	3 COMBINED AT	CPWC	1938.	4.67	456.	116.	39.	1.79		
+	DIVERSION TO	DIQE	0.	.00	0.	0.	0.	1.79		
+	HYDROGRAPH AT	DIWCWA	1938.	4.67	456.	116.	39.	1.79		
+	ROUTED TO	RTWCWA	948.	6.83	412.	116.	39.	1.79		
+	HYDROGRAPH AT	SUBWA	1196.	4.25	141.	35.	12.	.49		
+	2 COMBINED AT	CPWA1	941.	6.83	437.	150.	50.	2.29		
+	HYDROGRAPH AT	SUBVD	1195.	4.42	191.	48.	16.	.70		
+	ROUTED TO	RTVDWA	1156.	4.50	190.	48.	16.	.70		
+	2 COMBINED AT	CPWA2	1537.	4.33	607.	195.	65.	2.98		
+	DIVERSION TO	DIQD	1078.	4.33	255.	64.	21.	2.98		
+	HYDROGRAPH AT	DIWAVC	459.	4.33	352.	130.	43.	2.98		
+	ROUTED TO	RTWAVC	360.	12.08	321.	130.	43.	2.98		
+	HYDROGRAPH AT	SUBVC	1177.	4.25	140.	35.	12.	.49		
+	2 COMBINED AT	CPVC1	778.	4.17	321.	164.	55.	3.47		
+	HYDROGRAPH AT	SUBVB	1651.	4.17	203.	51.	17.	.72		

+	ROUTED TO	RTVBVC	1545.	4.25	202.	51.	17.	.72
+	2 COMBINED AT	CPVC2	1800.	4.25	421.	212.	71.	4.19
+	DIVERSION TO	DIVA	32.	4.00	20.	9.	3.	4.19
+	HYDROGRAPH AT	DIVCQA	1768.	4.25	406.	202.	67.	4.19
+	ROUTED TO	RTVCQA	1685.	4.42	402.	202.	67.	4.19
+	HYDROGRAPH AT	SUBQA	779.	4.58	124.	31.	10.	.49
+	2 COMBINED AT	CPQA2	2197.	4.42	508.	231.	77.	4.68
+	ROUTED TO	RSQA	2174.	4.42	507.	231.	77.	4.68
+	DIVERSION TO	DIPF	635.	4.42	192.	96.	32.	4.68
+	HYDROGRAPH AT	DIQAPF	1539.	4.42	315.	135.	45.	4.68
+	ROUTED TO	RTQAJH	1413.	5.00	310.	135.	45.	4.68
+	HYDROGRAPH AT	SUBQE	1654.	4.42	274.	69.	23.	.91
+	HYDROGRAPH AT	DRQE	0.	.00	0.	0.	0.	1.79
+	ROUTED TO	RTDIQE	0.	.00	0.	0.	0.	1.79
+	2 COMBINED AT	CPQE	1654.	4.42	274.	69.	23.	.91
+	ROUTED TO	RSQE	1575.	4.50	254.	64.	21.	.91
+	ROUTED TO	RTQEQC	1479.	4.67	253.	64.	21.	.91
+	HYDROGRAPH AT	SUBQD	600.	4.25	78.	20.	7.	.25
+	HYDROGRAPH AT	DRQD	1078.	4.33	255.	64.	21.	2.98
+	ROUTED TO	RTDIQD	1044.	4.50	251.	64.	21.	2.98
+	2 COMBINED AT	CPQD	1887.	4.42	361.	94.	31.	.25
+	ROUTED TO	RSQD	1831.	4.50	359.	93.	31.	.25
+	DIVERSION TO	DIQB	723.	4.50	100.	25.	8.	.25
+	HYDROGRAPH AT	DIQDQB	1108.	4.50	259.	68.	23.	.25
+	ROUTED TO	RTQDQC	1049.	4.58	257.	68.	23.	.25
+	HYDROGRAPH AT	SUBQC	1160.	4.33	167.	42.	14.	.61
+	3 COMBINED AT	CPQC	2913.	4.58	643.	168.	56.	1.77
+	DIVERSION TO	DISR	2330.	4.58	515.	135.	45.	1.77
+	HYDROGRAPH AT	DIQCR	583.	4.58	129.	34.	11.	1.77
+	ROUTED TO	RTQCJI	385.	6.25	121.	34.	11.	1.77
+	HYDROGRAPH AT	SUBQB	852.	4.50	141.	35.	12.	.50
+	HYDROGRAPH AT	DRQB	723.	4.50	100.	25.	8.	.25
+	ROUTED TO	RTDIQB	619.	5.00	99.	25.	8.	.25
+	2 COMBINED AT	CPQB	1061.	4.92	232.	60.	20.	.50
+	ROUTED TO	RSQB	942.	5.00	210.	55.	18.	.50
	ROUTED TO							

+		RTQBJH	851.	5.67	203.	55.	18.	.50
+	HYDROGRAPH AT	SUBJH	1096.	4.33	137.	34.	11.	.52
+	4 COMBINED AT	CPJH	1548.	4.92	653.	239.	80.	7.47
+	ROUTED TO	RTJHJI	1391.	5.67	647.	239.	80.	7.47
+	HYDROGRAPH AT	SUBJI	760.	4.17	82.	21.	7.	.31
+	2 COMBINED AT	CPJI	1399.	5.67	683.	257.	86.	7.78
+	DIVERSION TO	DISR1	1399.	5.67	683.	257.	86.	7.78
+	HYDROGRAPH AT	DISRX	0.	.00	0.	0.	0.	7.78
+	HYDROGRAPH AT	SUBPF	1297.	4.17	141.	35.	12.	.50
+	DIVERSION TO	RETPF	19.	.92	6.	2.	1.	.50
+	HYDROGRAPH AT	RETPF	1297.	4.17	136.	34.	11.	.50
+	HYDROGRAPH AT	DRPF	635.	4.42	192.	96.	32.	4.68
+	ROUTED TO	RTDIPF	622.	4.83	189.	96.	32.	4.68
+	2 COMBINED AT	@CPPF	1569.	4.17	378.	150.	50.	5.19
+	ROUTED TO	RSPF	769.	4.92	241.	112.	38.	5.19
+	DIVERSION TO	DIPE	0.	.00	0.	0.	0.	5.19
+	HYDROGRAPH AT	DIPFPE	769.	4.92	241.	112.	38.	5.19
+	ROUTED TO	RTPFJF	749.	5.17	238.	112.	38.	5.19
+	HYDROGRAPH AT	SUBUD	2034.	4.08	225.	56.	19.	.75
+	DIVERSION TO	RETB1	1140.	3.92	78.	20.	7.	.75
+	HYDROGRAPH AT	RETU	2034.	4.08	147.	37.	12.	.75
+	DIVERSION TO	59SD1D	102.	4.00	25.	6.	2.	.75
+	HYDROGRAPH AT	SDDRUD	1932.	4.08	122.	30.	10.	.75
+	DIVERSION TO	DIUA	466.	4.08	29.	7.	2.	.75
+	HYDROGRAPH AT	DIUDUA	1466.	4.08	92.	23.	8.	.75
+	ROUTED TO	RTUDVA	1145.	4.25	92.	23.	8.	.75
+	HYDROGRAPH AT	SUBVA	1195.	4.25	146.	37.	12.	.49
+	HYDROGRAPH AT	DRVA	32.	4.00	20.	9.	3.	4.19
+	3 COMBINED AT	CPVA1	2010.	4.25	241.	67.	22.	1.24
+	DIVERSION TO	59SD2D	59.	3.42	38.	17.	6.	1.24
+	HYDROGRAPH AT	SDDRVA	1951.	4.25	202.	51.	17.	1.24
+	DIVERSION TO	DIUC	783.	4.25	129.	32.	11.	1.24
+	HYDROGRAPH AT	DIVAPE	1168.	4.25	73.	18.	6.	1.24
+	ROUTED TO	RTVAPE	1043.	4.33	73.	18.	6.	1.24
+	HYDROGRAPH AT	SUBPE	1303.	4.17	138.	35.	12.	.50
+	HYDROGRAPH AT	DRPE	0.	.00	0.	0.	0.	5.19

+	ROUTED TO	RTDIPE	0.	.00	0.	0.	0.	5.19
+	3 COMBINED AT	CPPE	1559.	4.33	198.	50.	17.	1.75
+	ROUTED TO	RSPE	1478.	4.33	163.	42.	14.	1.75
+	DIVERSION TO	DIPD	3.	4.33	0.	0.	0.	1.75
+	HYDROGRAPH AT	DIPEPD	1476.	4.33	162.	41.	14.	1.75
+	ROUTED TO	RTPEJF	1345.	4.42	162.	41.	14.	1.75
+	HYDROGRAPH AT	SUBJF	1509.	4.08	144.	36.	12.	.50
+	3 COMBINED AT	CPJF	1306.	4.42	473.	178.	61.	7.44
+	ROUTED TO	RTJFJG	1130.	4.67	455.	174.	59.	7.44
+	HYDROGRAPH AT	SUBJG	1897.	4.17	254.	64.	21.	.90
+	2 COMBINED AT	CPJG	1904.	4.25	662.	231.	79.	8.34
+	2 COMBINED AT	CPJGSR	1706.	4.25	625.	223.	76.	16.11
+	HYDROGRAPH AT	DRUC	783.	4.25	129.	32.	11.	1.24
+	ROUTED TO	RTVAUC	500.	5.33	129.	32.	11.	1.24
+	ROUTED TO	MCUCUC	485.	5.50	129.	32.	11.	1.24
+	HYDROGRAPH AT	SUBUC	927.	4.42	128.	32.	11.	.48
+	2 COMBINED AT	@CPUC	744.	4.42	250.	64.	21.	1.73
+	HYDROGRAPH AT	SUBTB1	443.	4.00	37.	9.	3.	.14
+	DIVERSION TO	RETB1	443.	4.00	23.	6.	2.	.14
+	HYDROGRAPH AT	RETB1	347.	4.08	15.	4.	1.	.14
+	DIVERSION TO	67SD1D	17.	4.08	3.	1.	0.	.14
+	HYDROGRAPH AT	SDDTB1	330.	4.08	12.	3.	1.	.14
+	ROUTED TO	RTUAUC	122.	4.33	12.	3.	1.	.14
+	HYDROGRAPH AT	SUBUA	886.	4.58	144.	36.	12.	.56
+	HYDROGRAPH AT	DRUA	466.	4.08	29.	7.	2.	.75
+	ROUTED TO	RTDIUA	224.	4.58	29.	7.	2.	.75
+	3 COMBINED AT	@CPUA	1036.	4.58	179.	45.	15.	1.46
+	DIVERSION TO	67SD1D	96.	3.83	46.	12.	4.	1.46
+	HYDROGRAPH AT	SDDRUA	940.	4.58	133.	33.	11.	1.46
+	DIVERSION TO	DITB	188.	4.58	27.	7.	2.	1.46
+	HYDROGRAPH AT	DIUAUC	752.	4.58	106.	27.	9.	1.46
+	ROUTED TO	RTUAUC	719.	4.67	106.	27.	9.	1.46
+	2 COMBINED AT	~CPUC2	1125.	4.58	354.	91.	30.	3.19
+	DIVERSION TO	DIUB	1125.	4.58	354.	91.	30.	3.19
+	HYDROGRAPH AT	DIUCPC	0.	.00	0.	0.	0.	3.19
+	ROUTED TO	RTUCPC	0.	.00	0.	0.	0.	3.19

+	HYDROGRAPH AT	SUBPC	932.	4.08	84.	21.	7.	.30
+	2 COMBINED AT	CPPC	512.	4.08	80.	20.	7.	3.49
+	ROUTED TO	RSPC	59.	4.92	19.	9.	6.	3.49
+	ROUTED TO	RTPCNB	50.	5.75	19.	9.	6.	3.49
+	HYDROGRAPH AT	SUBNB	1154.	4.17	100.	25.	8.	.44
+	DIVERSION TO	RETNB	1150.	4.08	68.	17.	6.	.44
+	HYDROGRAPH AT	RETNB	930.	4.25	32.	8.	3.	.44
+	2 COMBINED AT	CPNB1	338.	4.42	41.	14.	8.	3.93
+	ROUTED TO	RTNBJD	164.	4.83	41.	14.	8.	3.93
+	HYDROGRAPH AT	SUBPD	1174.	4.17	111.	28.	9.	.44
+	HYDROGRAPH AT	DRPD	3.	4.33	0.	0.	0.	1.75
+	2 COMBINED AT	CPPD2	1175.	4.17	112.	28.	9.	.44
+	ROUTED TO	RSPD	95.	4.67	35.	11.	5.	.44
+	ROUTED TO	RTPDNC	82.	5.33	34.	11.	5.	.44
+	HYDROGRAPH AT	SUBNC	714.	4.08	76.	19.	6.	.31
+	2 COMBINED AT	CPNC	647.	4.08	99.	29.	11.	.75
+	ROUTED TO	RTNCJE	470.	4.75	98.	29.	11.	.75
+	HYDROGRAPH AT	SUBJE1	732.	4.08	66.	17.	6.	.25
+	2 COMBINED AT	CPJE1	612.	4.08	154.	44.	16.	1.00
+	ROUTED TO	RTJEJD	584.	4.17	153.	44.	16.	1.00
+	HYDROGRAPH AT	SUBJD	1447.	4.08	125.	31.	10.	.51
+	DIVERSION TO	RETJD	1215.	4.08	71.	18.	6.	.51
+	HYDROGRAPH AT	RETJD	1362.	4.17	55.	14.	5.	.51
+	3 COMBINED AT	CPJD	845.	4.33	213.	63.	25.	5.44
+	DIVERSION TO	DIJC2	306.	4.33	78.	23.	9.	5.44
+	HYDROGRAPH AT	DIJDJC	539.	4.33	135.	40.	16.	5.44
+	ROUTED TO	RTJDFC	457.	4.42	135.	40.	16.	5.44
+	HYDROGRAPH AT	SUBJE2	742.	4.08	74.	18.	6.	.25
+	DIVERSION TO	RETJE	123.	3.58	9.	2.	1.	.25
+	HYDROGRAPH AT	RETJE2	742.	4.08	64.	16.	5.	.25
+	ROUTED TO	RTJEFC	595.	4.33	64.	16.	5.	.25
+	HYDROGRAPH AT	SUBFC	910.	4.08	101.	25.	8.	.36
+	3 COMBINED AT	CPFC	1176.	4.33	277.	77.	29.	6.05
+	2 COMBINED AT	CPFCSR	2448.	4.33	833.	282.	98.	22.16
+	HYDROGRAPH AT	DRUCUB	1125.	4.58	354.	91.	30.	3.19
	ROUTED TO							

+		MCUCUB	1123.	4.67	354.	91.	30.	3.19
+	HYDROGRAPH AT	SUBUB	299.	4.33	37.	9.	3.	.14
+	2 COMBINED AT	~@CPUB	1324.	4.58	390.	100.	33.	2.42
+	HYDROGRAPH AT	SUBSF1	155.	4.50	27.	7.	2.	.13
+	HYDROGRAPH AT	DRTB	188.	4.58	27.	7.	2.	1.46
+	ROUTED TO	RTDITB	182.	4.75	27.	7.	2.	1.46
+	3 COMBINED AT	CPBA3	1574.	4.58	441.	113.	38.	2.55
+	HYDROGRAPH AT	SUBTB2	1085.	4.67	221.	56.	19.	.75
+	DIVERSION TO	RETTB	464.	4.08	40.	10.	3.	.75
+	HYDROGRAPH AT	RETTB	1085.	4.67	183.	46.	15.	.75
+	DIVERSION TO	DITA	262.	4.67	45.	11.	4.	.75
+	HYDROGRAPH AT	DITBTA	822.	4.67	138.	35.	12.	.75
+	ROUTED TO	RTTBSF	803.	4.75	138.	35.	12.	.75
+	HYDROGRAPH AT	SUSFB2	354.	4.08	32.	8.	3.	.11
+	HYDROGRAPH AT	SUSF2A	488.	4.00	45.	11.	4.	.14
+	DIVERSION TO	RETSF2	488.	4.00	45.	11.	4.	.14
+	HYDROGRAPH AT	RSSF2A	0.	.00	0.	0.	0.	.14
+	3 COMBINED AT	CPSF2B	803.	4.75	168.	42.	14.	1.00
+	2 COMBINED AT	CPBA3	2168.	4.67	595.	152.	51.	3.55
+	ROUTED TO	BSN71	93.	8.25	93.	91.	51.	3.55
+	DIVERSION TO	BSN71	93.	8.25	93.	91.	51.	3.55
+	HYDROGRAPH AT	DBSN71	0.	.00	0.	0.	0.	3.55
+	HYDROGRAPH AT	SUBPB	1132.	4.17	121.	30.	10.	.41
+	DIVERSION TO	RETPB	1132.	4.17	87.	22.	7.	.41
+	HYDROGRAPH AT	RETPB	633.	4.33	35.	9.	3.	.41
+	HYDROGRAPH AT	PB75	36.	4.00	3.	1.	0.	.01
+	HYDROGRAPH AT	PBBU	61.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CPBSD	92.	4.08	10.	2.	1.	.03
+	DIVERSION TO	SD75PB	23.	3.67	6.	1.	0.	.03
+	HYDROGRAPH AT	DPBSD1	69.	4.08	4.	1.	0.	.03
+	DIVERSION TO	SDBRPB	39.	3.92	3.	1.	0.	.03
+	HYDROGRAPH AT	DPBSD2	30.	4.08	1.	0.	0.	.03
+	2 COMBINED AT	CPPB	633.	4.33	36.	9.	3.	.44
+	DIVERSION TO	DIPA1	120.	4.33	7.	2.	1.	.44
+	HYDROGRAPH AT	DIPBPA	513.	4.33	29.	7.	2.	.44
+	2 COMBINED AT	CPPB1	296.	4.42	24.	6.	2.	3.99

+	ROUTED TO	RTPBNA	129.	5.00	24.	6.	2.	3.99
+	HYDROGRAPH AT	SUBNA	1930.	4.25	267.	67.	22.	.94
+	DIVERSION TO	RETNA	1930.	4.25	181.	45.	15.	.94
+	HYDROGRAPH AT	RETNA	1140.	4.50	87.	22.	7.	.94
+	HYDROGRAPH AT	NA75	64.	4.08	6.	2.	1.	.02
+	HYDROGRAPH AT	NALB	61.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CNASD	124.	4.08	13.	3.	1.	.04
+	3 COMBINED AT	CPNA1	1154.	4.50	119.	30.	10.	4.97
+	DIVERSION TO	SD75NA	40.	3.83	24.	6.	2.	4.97
+	HYDROGRAPH AT	DNASD1	731.	4.50	85.	21.	7.	4.97
+	DIVERSION TO	SDLBNA	38.	4.58	14.	4.	1.	4.97
+	HYDROGRAPH AT	DNASD2	705.	4.50	70.	18.	6.	4.97
+	DIVERSION TO	ADMP1	705.	4.50	70.	18.	6.	4.97
+	HYDROGRAPH AT	DADMP1	0.	.00	0.	0.	0.	4.97
+	HYDROGRAPH AT	SUBJC1	1104.	4.17	119.	30.	10.	.47
+	DIVERSION TO	RETJC1	1104.	4.17	72.	18.	6.	.47
+	HYDROGRAPH AT	RETJC1	933.	4.33	48.	12.	4.	.47
+	HYDROGRAPH AT	JC75	66.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CJCSD1	957.	4.33	55.	14.	5.	.49
+	HYDROGRAPH AT	SUBJC2	1098.	4.17	104.	26.	9.	.48
+	DIVERSION TO	RETJC2	949.	4.08	40.	10.	3.	.48
+	HYDROGRAPH AT	RETJC2	1093.	4.25	64.	16.	5.	.48
+	DIVERSION TO	DETJC2	1093.	4.25	33.	8.	3.	.48
+	HYDROGRAPH AT	DETJC2	666.	4.33	31.	8.	3.	.48
+	ROUTED TO	RTJCJC	408.	4.58	31.	8.	3.	.48
+	2 COMBINED AT	CPJC1A	949.	4.33	85.	21.	7.	.97
+	HYDROGRAPH AT	JCBR	65.	4.08	7.	2.	1.	.02
+	2 COMBINED AT	CJCSD2	924.	4.33	90.	23.	8.	.99
+	2 COMBINED AT	CPJC1B	457.	4.50	65.	16.	5.	5.96
+	DIVERSION TO	SDOSBR	41.	3.83	21.	5.	2.	5.96
+	HYDROGRAPH AT	DJC2SD	416.	4.50	45.	11.	4.	5.96
+	DIVERSION TO	SD75JC	42.	4.50	10.	3.	1.	5.96
+	HYDROGRAPH AT	DJCSD1	374.	4.50	35.	9.	3.	5.96
+	HYDROGRAPH AT	DIJD	306.	4.33	78.	23.	9.	5.44
+	ROUTED TO	RTJCJC	235.	4.75	78.	23.	9.	5.44
+	2 COMBINED AT	CPJC2	469.	4.58	103.	29.	11.	8.11

+	DIVERSION TO	DIJB2	213.	4.58	47.	13.	5.	8.11
+	HYDROGRAPH AT	DIJCJB	257.	4.58	56.	16.	6.	8.11
+	ROUTED TO	RTJCFB	209.	5.00	55.	16.	6.	8.11
+	HYDROGRAPH AT	DRB71	93.	8.25	93.	91.	51.	3.55
+	ROUTED TO	RT71PB	93.	8.42	93.	91.	51.	3.55
+	HYDROGRAPH AT	RSDPB1	23.	3.67	6.	1.	0.	.03
+	2 COMBINED AT	CPPBS1	95.	6.00	93.	91.	51.	3.99
+	HYDROGRAPH AT	RSDPB2	39.	3.92	3.	1.	0.	.03
+	2 COMBINED AT	CPPBS2	105.	4.08	94.	91.	51.	3.99
+	ROUTED TO	RTPBNA	105.	4.25	94.	91.	51.	3.99
+	HYDROGRAPH AT	RSDNA1	40.	3.83	24.	6.	2.	4.97
+	2 COMBINED AT	CPNAS1	143.	4.25	114.	96.	53.	4.97
+	HYDROGRAPH AT	RSDNA2	38.	4.58	14.	4.	1.	4.97
+	2 COMBINED AT	CPNAS2	173.	6.17	129.	100.	54.	4.97
+	ROUTED TO	RTNAJC	173.	6.33	129.	100.	54.	4.97
+	HYDROGRAPH AT	RSDJC1	42.	4.50	10.	3.	1.	5.96
+	2 COMBINED AT	CPJCS1	213.	5.33	138.	102.	54.	5.96
+	HYDROGRAPH AT	RSDJC3	41.	3.83	21.	5.	2.	5.96
+	2 COMBINED AT	CPJCS3	254.	5.33	156.	107.	56.	5.96
+	ROUTED TO	RTJCFB	254.	5.50	156.	107.	56.	5.96
+	HYDROGRAPH AT	FB75	58.	4.08	6.	1.	0.	.02
+	2 COMBINED AT	CPFB	257.	4.92	160.	108.	56.	5.98
+	3 COMBINED AT	DUMM	2444.	4.33	956.	375.	146.	36.25
+	HYDROGRAPH AT	SUBSH	333.	4.08	30.	8.	3.	.10
+	DIVERSION TO	RETSH	315.	4.08	21.	5.	2.	.10
+	HYDROGRAPH AT	RETSH	261.	4.17	10.	2.	1.	.10
+	ROUTED TO	RSSH	0.	.00	0.	0.	0.	.10
+	DIVERSION TO	DIRJ2	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	DISHRJ	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTSHSG	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	SUBTA	649.	4.17	68.	17.	6.	.24
+	DIVERSION TO	RETTA	649.	4.17	49.	12.	4.	.24
+	HYDROGRAPH AT	RETTA	365.	4.33	20.	5.	2.	.24
+	HYDROGRAPH AT	DRTA	262.	4.67	45.	11.	4.	.75
+	ROUTED TO	RTDITA	234.	5.17	45.	11.	4.	.75
	2 COMBINED AT							

+		@CPTA	366.	4.33	65.	16.	5.	1.13
+	ROUTED TO	RTTASG	230.	5.33	63.	16.	5.	1.13
+	HYDROGRAPH AT	SUBSG	376.	4.17	40.	10.	3.	.14
+	DIVERSION TO	RETSG	376.	4.17	27.	7.	2.	.14
+	HYDROGRAPH AT	RETSG	268.	4.25	13.	3.	1.	.14
+	3 COMBINED AT	CPSG	235.	5.33	74.	18.	6.	1.37
+	ROUTED TO	RSSG	229.	5.42	48.	12.	4.	1.37
+	DIVERSION TO	DIRJ4	163.	5.42	29.	7.	2.	1.37
+	HYDROGRAPH AT	DISGRJ	67.	5.42	19.	5.	2.	1.37
+	ROUTED TO	RTSGSE	61.	5.75	19.	5.	2.	1.37
+	HYDROGRAPH AT	SUBSC	988.	4.25	121.	30.	10.	.45
+	DIVERSION TO	RETSC	988.	4.25	92.	23.	8.	.45
+	HYDROGRAPH AT	RETSC	507.	4.50	30.	8.	3.	.45
+	DIVERSION TO	DISD	274.	4.50	16.	4.	1.	.45
+	HYDROGRAPH AT	DISCSD	233.	4.50	14.	3.	1.	.45
+	ROUTED TO	RTSCSE	155.	4.58	14.	3.	1.	.45
+	HYDROGRAPH AT	SUBSE	425.	4.00	33.	8.	3.	.13
+	DIVERSION TO	RETSE	425.	4.00	25.	6.	2.	.13
+	HYDROGRAPH AT	RETSE	160.	4.17	8.	2.	1.	.13
+	3 COMBINED AT	CPSE	144.	4.58	39.	10.	3.	1.95
+	ROUTED TO	RSSE	12.	6.58	7.	4.	3.	1.95
+	DIVERSION TO	DIRJ5	12.	6.58	7.	4.	3.	1.95
+	HYDROGRAPH AT	DISERJ	0.	.00	0.	0.	0.	1.95
+	ROUTED TO	RTSERI	0.	.00	0.	0.	0.	1.95
+	HYDROGRAPH AT	SUBRJ	413.	4.17	46.	12.	4.	.16
+	DIVERSION TO	RETRJ	413.	4.17	33.	8.	3.	.16
+	HYDROGRAPH AT	RETRJ	282.	4.33	14.	3.	1.	.16
+	HYDROGRAPH AT	CPRJ2	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTSHRJ	0.	.00	0.	0.	0.	.10
+	ROUTED TO	RTRJ3	0.	.00	0.	0.	0.	.10
+	HYDROGRAPH AT	CPRJ4A	163.	5.42	29.	7.	2.	1.37
+	2 COMBINED AT	CPRJ4B	177.	5.42	32.	8.	3.	.39
+	ROUTED TO	RTSGRJ	165.	5.67	32.	8.	3.	.39
+	HYDROGRAPH AT	CPRJ5	12.	6.58	7.	4.	3.	1.95
+	ROUTED TO	RTSERJ	10.	7.33	7.	4.	3.	1.95
+	3 COMBINED AT	@CPRJ6	444.	4.50	68.	20.	9.	3.81

+	ROUTED TO	RSRJ	80.	6.42	34.	11.	6.	3.81
+	DIVERSION TO	DIPA2	0.	.00	0.	0.	0.	3.81
+	HYDROGRAPH AT	DIRJPA	80.	6.42	34.	11.	6.	3.81
+	ROUTED TO	RTRJRI	76.	6.92	34.	11.	6.	3.81
+	ROUTED TO	RTRIRI	73.	7.17	33.	11.	6.	3.81
+	HYDROGRAPH AT	SUBRI	742.	4.08	67.	17.	6.	.23
+	DIVERSION TO	RETRI	738.	4.00	47.	12.	4.	.23
+	HYDROGRAPH AT	RETRI	523.	4.17	20.	5.	2.	.23
+	HYDROGRAPH AT	SUBSB	536.	4.08	50.	12.	4.	.17
+	DIVERSION TO	RETSB	536.	4.08	34.	8.	3.	.17
+	HYDROGRAPH AT	RETSB	393.	4.17	16.	4.	1.	.17
+	ROUTED TO	RSSB	74.	4.42	12.	3.	1.	.17
+	HYDROGRAPH AT	SUBSD	487.	4.08	46.	12.	4.	.17
+	DIVERSION TO	RETSD	487.	4.08	34.	8.	3.	.17
+	HYDROGRAPH AT	RETSD	309.	4.25	13.	3.	1.	.17
+	HYDROGRAPH AT	DRSD	274.	4.50	16.	4.	1.	.45
+	3 COMBINED AT	@CPSD	340.	4.50	38.	9.	3.	.79
+	ROUTED TO	RSSD	342.	4.50	38.	9.	3.	.79
+	ROUTED TO	RTSDRI	239.	4.75	38.	9.	3.	.79
+	4 COMBINED AT	~@CPRI	837.	4.33	163.	46.	17.	4.38
+	ROUTED TO	MCRIRH	164.	5.17	71.	22.	9.	4.38
+	HYDROGRAPH AT	SUBPA	1148.	4.17	136.	34.	11.	.48
+	DIVERSION TO	RETPA	1148.	4.17	96.	24.	8.	.48
+	HYDROGRAPH AT	RETPA	690.	4.42	40.	10.	3.	.48
+	HYDROGRAPH AT	DRPA2	0.	.00	0.	0.	0.	3.81
+	ROUTED TO	RTRJPA	0.	.00	0.	0.	0.	3.81
+	2 COMBINED AT	CPPA	690.	4.42	40.	10.	3.	.48
+	DIVERSION TO	DIOE	124.	4.42	7.	2.	1.	.48
+	HYDROGRAPH AT	DIPAOE	566.	4.42	33.	8.	3.	.48
+	ROUTED TO	RTPAMH	290.	4.67	33.	8.	3.	.48
+	HYDROGRAPH AT	SUBMH	601.	4.17	62.	16.	5.	.24
+	DIVERSION TO	RETMH	601.	4.17	40.	10.	3.	.24
+	HYDROGRAPH AT	RETMH	435.	4.33	22.	6.	2.	.24
+	2 COMBINED AT	CPMH	370.	4.33	54.	13.	4.	.72
+	ROUTED TO	RTMHMD	300.	4.75	54.	13.	4.	.72
+	HYDROGRAPH AT	SUBMD	423.	4.50	68.	17.	6.	.25

+	DIVERSION TO	RETMD	423.	4.50	43.	11.	4.	.25
+	HYDROGRAPH AT	RETMD	329.	4.67	26.	6.	2.	.25
+	2 COMBINED AT	CPMD	534.	4.83	77.	19.	6.	.97
+	DIVERSION TO	DIJB1	109.	4.83	16.	4.	1.	.97
+	HYDROGRAPH AT	DIMDJB	425.	4.83	61.	15.	5.	.97
+	DIVERSION TO	DIMFX	425.	4.83	61.	15.	5.	.97
+	HYDROGRAPH AT	DIMDMF	0.	.00	0.	0.	0.	.97
+	HYDROGRAPH AT	SUBMI	1098.	4.17	109.	27.	9.	.41
+	DIVERSION TO	RETMI	1078.	4.08	71.	18.	6.	.41
+	HYDROGRAPH AT	RETMI	930.	4.25	38.	10.	3.	.41
+	HYDROGRAPH AT	SUBMG	257.	4.08	22.	5.	2.	.08
+	DIVERSION TO	RETMG	240.	4.00	15.	4.	1.	.08
+	HYDROGRAPH AT	RETMG	203.	4.17	7.	2.	1.	.08
+	2 COMBINED AT	CPMG	1038.	4.25	46.	11.	4.	.49
+	ROUTED TO	RTMGJB	374.	4.92	46.	11.	4.	.49
+	HYDROGRAPH AT	SUBJB1	703.	4.50	105.	26.	9.	.49
+	DIVERSION TO	RETJB1	315.	4.08	21.	5.	2.	.49
+	HYDROGRAPH AT	RETJB1	703.	4.50	84.	21.	7.	.49
+	HYDROGRAPH AT	DRJB	109.	4.83	16.	4.	1.	.97
+	ROUTED TO	RDIJB1	84.	5.17	16.	4.	1.	.97
+	HYDROGRAPH AT	ADMP1	705.	4.50	70.	18.	6.	4.97
+	ROUTED TO	MCJCJB	290.	5.67	70.	18.	6.	4.97
+	5 COMBINED AT	~CPJB1	707.	5.33	205.	51.	17.	9.37
+	ROUTED TO	RRJB1	345.	5.50	156.	41.	14.	9.37
+	DIVERSION TO	DIED	345.	5.50	156.	41.	14.	9.37
+	HYDROGRAPH AT	DIED	0.	.00	0.	0.	0.	9.37
+	HYDROGRAPH AT	SUBOE	1120.	4.17	128.	32.	11.	.47
+	DIVERSION TO	RETOE	1120.	4.17	95.	24.	8.	.47
+	HYDROGRAPH AT	RETOE	618.	4.42	33.	8.	3.	.47
+	HYDROGRAPH AT	CPOE1	124.	4.42	7.	2.	1.	.48
+	ROUTED TO	RTDIOE	29.	5.67	7.	2.	1.	.48
+	2 COMBINED AT	@CPOE	618.	4.42	41.	10.	3.	.47
+	DIVERSION TO	DIOD	101.	4.42	7.	2.	1.	.47
+	HYDROGRAPH AT	DIOEOD	517.	4.42	34.	8.	3.	.47
+	ROUTED TO	RTOEMF	175.	4.92	34.	8.	3.	.47
	HYDROGRAPH AT							

+		SUBMF	1379.	4.58	245.	62.	21.	.97
+	DIVERSION TO	RETMF	1379.	4.58	162.	40.	13.	.97
+	HYDROGRAPH AT	RETMF	869.	4.83	84.	21.	7.	.97
+	HYDROGRAPH AT	CPMF	425.	4.83	61.	15.	5.	.97
+	ROUTED TO	RTMDMF	308.	5.33	61.	15.	5.	.97
+	3 COMBINED AT	CPMF1	955.	4.92	170.	43.	14.	1.44
+	DIVERSION TO	DIEB	441.	4.92	79.	20.	7.	1.44
+	HYDROGRAPH AT	DIMFEB	514.	4.92	91.	23.	8.	1.44
+	ROUTED TO	RTMFMC	393.	5.50	90.	23.	8.	1.44
+	HYDROGRAPH AT	SUBOD	1279.	4.17	150.	38.	13.	.51
+	DIVERSION TO	RETOD	1279.	4.17	128.	32.	11.	.51
+	HYDROGRAPH AT	RETOD	353.	4.50	22.	6.	2.	.51
+	HYDROGRAPH AT	DROD	101.	4.42	7.	2.	1.	.47
+	ROUTED TO	RTDIOD	29.	5.08	7.	2.	1.	.47
+	2 COMBINED AT	CPOD	355.	4.50	29.	7.	2.	.51
+	DIVERSION TO	DIOC	64.	4.50	5.	1.	0.	.51
+	HYDROGRAPH AT	DIODOC	291.	4.50	24.	6.	2.	.51
+	ROUTED TO	RTODMC	104.	5.17	24.	6.	2.	.51
+	HYDROGRAPH AT	SUBMC	1825.	4.33	291.	73.	24.	1.00
+	DIVERSION TO	RETMC	1825.	4.33	192.	48.	16.	1.00
+	HYDROGRAPH AT	RETMC	1234.	4.58	100.	25.	8.	1.00
+	3 COMBINED AT	CPMC1	1043.	4.58	196.	49.	16.	2.95
+	DIVERSION TO	DIMB	398.	4.58	75.	19.	6.	2.95
+	HYDROGRAPH AT	DIMCMB	645.	4.58	121.	30.	10.	2.95
+	ROUTED TO	RTMCIE	478.	4.83	120.	30.	10.	2.95
+	DIVERSION TO	MCIE	478.	4.83	120.	30.	10.	2.95
+	HYDROGRAPH AT	DIMCIE	0.	.00	0.	0.	0.	2.95
+	HYDROGRAPH AT	DREB	441.	4.92	79.	20.	7.	1.44
+	HYDROGRAPH AT	SUBEB	308.	4.25	32.	8.	3.	.14
+	DIVERSION TO	RETEB	308.	4.25	23.	6.	2.	.14
+	HYDROGRAPH AT	RETEB	188.	4.42	9.	2.	1.	.14
+	2 COMBINED AT	CPEB	646.	4.75	97.	24.	8.	.14
+	HYDROGRAPH AT	RDIED	345.	5.50	156.	41.	14.	9.37
+	ROUTED TO	RJBED1	323.	5.83	155.	41.	14.	9.37
+	ROUTED TO	RJBED2	291.	6.92	152.	41.	14.	9.37
+	HYDROGRAPH AT	SUBED1	536.	4.58	84.	21.	7.	.38

+	DIVERSION TO	RETED1	487.	4.42	40.	10.	3.	.38
+	HYDROGRAPH AT	RETED1	536.	4.58	44.	11.	4.	.38
+	HYDROGRAPH AT	SUBED2	218.	4.25	22.	6.	2.	.11
+	DIVERSION TO	RETED2	218.	4.25	15.	4.	1.	.11
+	HYDROGRAPH AT	RETED2	159.	4.42	7.	2.	1.	.11
+	2 COMBINED AT	CPED1	611.	4.58	51.	13.	4.	.50
+	2 COMBINED AT	~CPED1	894.	5.83	270.	73.	24.	.50
+	2 COMBINED AT	~CPED2	981.	4.75	357.	95.	32.	.63
+	ROUTED TO	RRED	876.	5.92	352.	95.	32.	.63
+	ROUTED TO	RT99	736.	6.25	344.	95.	32.	.63
+	HYDROGRAPH AT	SUBID1	370.	4.42	52.	13.	4.	.20
+	DIVERSION TO	RETID1	370.	4.42	34.	9.	3.	.20
+	HYDROGRAPH AT	RETID1	297.	4.58	19.	5.	2.	.20
+	HYDROGRAPH AT	SUBID2	560.	4.42	77.	19.	6.	.36
+	DIVERSION TO	RETID2	560.	4.42	60.	15.	5.	.36
+	HYDROGRAPH AT	RETID2	286.	4.75	17.	4.	1.	.36
+	HYDROGRAPH AT	SUBIE	574.	4.42	117.	29.	10.	.30
+	DIVERSION TO	RETIE	574.	4.42	50.	13.	4.	.30
+	HYDROGRAPH AT	RETIE	470.	4.58	67.	17.	6.	.30
+	HYDROGRAPH AT	DRMCIE	478.	4.83	120.	30.	10.	2.95
+	4 COMBINED AT	~CPID2	1308.	4.75	230.	58.	19.	.87
+	ROUTED TO	RRID1	1163.	4.83	230.	58.	19.	.87
+	2 COMBINED AT	CPID3	1167.	4.92	525.	142.	47.	1.50
+	ROUTED TO	RT107	1120.	5.25	519.	142.	47.	1.50
+	HYDROGRAPH AT	SUBIB	826.	4.42	121.	30.	10.	.48
+	DIVERSION TO	RETIB	327.	4.00	21.	5.	2.	.48
+	HYDROGRAPH AT	RETIB	826.	4.42	101.	25.	8.	.48
+	HYDROGRAPH AT	SUBIC	630.	4.58	100.	25.	8.	.46
+	DIVERSION TO	RETIC	291.	4.17	20.	5.	2.	.46
+	HYDROGRAPH AT	RETIC	630.	4.58	80.	20.	7.	.46
+	2 COMBINED AT	CPIC	1296.	4.50	174.	44.	15.	.94
+	HYDROGRAPH AT	SUBOC	847.	4.17	93.	23.	8.	.31
+	DIVERSION TO	RETOC	847.	4.17	63.	16.	5.	.31
+	HYDROGRAPH AT	RETOC	546.	4.25	30.	8.	3.	.31
+	HYDROGRAPH AT	DROC	64.	4.50	5.	1.	0.	.51
+	ROUTED TO	RTDIOC	18.	5.92	5.	1.	0.	.51

+	2 COMBINED AT	CPOC	546.	4.25	36.	9.	3.	.31
+	ROUTED TO	RTOCMB	231.	4.67	36.	9.	3.	.31
+	HYDROGRAPH AT	SUBMB	1673.	4.42	273.	68.	23.	1.00
+	DIVERSION TO	RETMB	1673.	4.42	178.	45.	15.	1.00
+	HYDROGRAPH AT	RETMB	1163.	4.67	96.	24.	8.	1.00
+	HYDROGRAPH AT	DRMB	398.	4.58	75.	19.	6.	2.95
+	ROUTED TO	RTDIMB	217.	5.17	74.	19.	6.	2.95
+	3 COMBINED AT	@CPMB	1155.	4.67	195.	49.	16.	5.24
+	ROUTED TO	RTMBIB	612.	5.17	172.	44.	15.	5.24
+	2 COMBINED AT	CPIB0	1316.	4.92	365.	93.	31.	6.18
+	3 COMBINED AT	@CPIB2	1434.	5.25	627.	175.	58.	10.63
+	ROUTED TO	DET107	810.	5.92	531.	170.	58.	10.63
+	ROUTED TO	MCIBIA	788.	6.25	525.	170.	58.	10.63
+	HYDROGRAPH AT	SUBME	521.	4.33	60.	15.	5.	.33
+	DIVERSION TO	RETME	521.	4.33	46.	11.	4.	.33
+	HYDROGRAPH AT	RETME	257.	4.58	14.	4.	1.	.33
+	ROUTED TO	RTMEIA	118.	5.00	14.	4.	1.	.33
+	HYDROGRAPH AT	SUBIA	594.	4.25	67.	17.	6.	.31
+	DIVERSION TO	RETIA	110.	3.83	7.	2.	1.	.31
+	HYDROGRAPH AT	RETIA	594.	4.25	59.	15.	5.	.31
+	3 COMBINED AT	~CPIA	788.	6.25	524.	179.	62.	11.26
+	ROUTED TO	MCIAHB	764.	6.83	513.	177.	61.	11.26
+	HYDROGRAPH AT	SUBHB	644.	4.25	69.	17.	6.	.34
+	DIVERSION TO	RETHB	119.	3.92	9.	2.	1.	.34
+	HYDROGRAPH AT	RETHB	644.	4.25	60.	15.	5.	.34
+	2 COMBINED AT	CPHB1	758.	6.83	510.	187.	64.	11.61
+	HYDROGRAPH AT	SUBDA	565.	4.42	72.	18.	6.	.33
+	DIVERSION TO	RETDA	216.	4.00	9.	2.	1.	.33
+	HYDROGRAPH AT	RETDA	565.	4.42	63.	16.	5.	.33
+	2 COMBINED AT	~CPDA	754.	6.83	527.	198.	68.	11.94
+	HYDROGRAPH AT	SUBLD	489.	4.33	60.	15.	5.	.28
+	DIVERSION TO	RETLD	489.	4.33	42.	10.	3.	.28
+	HYDROGRAPH AT	RETLD	287.	4.58	18.	4.	1.	.28
+	ROUTED TO	RTLDMA	163.	4.83	18.	4.	1.	.28
+	HYDROGRAPH AT	SUBMA	430.	4.25	42.	11.	4.	.25
	DIVERSION TO							

+		RETMA	430.	4.25	33.	8.	3.	.25
+	HYDROGRAPH AT	RETMA	220.	4.50	10.	2.	1.	.25
+	2 COMBINED AT	CPMA	215.	4.50	27.	7.	2.	.52
+	ROUTED TO	RTMAHB	165.	5.08	27.	7.	2.	.52
+	2 COMBINED AT	CPHB2	758.	6.83	528.	198.	68.	12.46
+	HYDROGRAPH AT	SUBLB	412.	4.33	43.	11.	4.	.25
+	DIVERSION TO	RETLB	412.	4.33	33.	8.	3.	.25
+	HYDROGRAPH AT	RETLB	189.	4.58	10.	3.	1.	.25
+	ROUTED TO	RTLBHA	51.	5.83	10.	3.	1.	.25
+	HYDROGRAPH AT	SUBHA	298.	4.25	32.	8.	3.	.15
+	DIVERSION TO	RETHA	106.	3.92	6.	2.	1.	.15
+	HYDROGRAPH AT	RETHA	298.	4.25	25.	6.	2.	.15
+	3 COMBINED AT	CPHA	754.	4.33	537.	200.	69.	12.86
+	ROUTED TO	MCHACB	728.	7.75	515.	198.	69.	12.86
+	HYDROGRAPH AT	SUBJB	744.	4.50	106.	27.	9.	.49
+	DIVERSION TO	RETJB2	744.	4.50	65.	16.	5.	.49
+	HYDROGRAPH AT	RETJB2	613.	4.67	41.	10.	3.	.49
+	HYDROGRAPH AT	DRJB2	213.	4.58	47.	13.	5.	8.11
+	ROUTED TO	RTJCJ	147.	5.25	46.	13.	5.	8.11
+	2 COMBINED AT	@CPJB2	739.	4.83	108.	29.	11.	3.81
+	DIVERSION TO	DIFA	276.	5.00	54.	15.	5.	3.81
+	HYDROGRAPH AT	DIJBEE	155.	5.00	30.	8.	3.	3.81
+	ROUTED TO	RTJBEE	86.	6.25	29.	8.	3.	3.81
+	HYDROGRAPH AT	SUBEE	1002.	4.67	177.	44.	15.	.96
+	DIVERSION TO	RETEE	1002.	4.67	127.	32.	11.	.96
+	HYDROGRAPH AT	RETEE	468.	4.92	50.	13.	4.	.96
+	2 COMBINED AT	CPEE	273.	5.17	50.	14.	5.	4.77
+	ROUTED TO	RTEEEA	43.	13.25	36.	14.	5.	4.77
+	HYDROGRAPH AT	SUBEA	1391.	4.58	231.	58.	19.	1.32
+	DIVERSION TO	RETEA	1391.	4.58	180.	45.	15.	1.32
+	HYDROGRAPH AT	RETEA	478.	4.83	52.	13.	4.	1.32
+	2 COMBINED AT	CPEA	303.	5.17	35.	19.	7.	6.09
+	ROUTED TO	RTEADC	141.	5.67	31.	17.	6.	6.09
+	HYDROGRAPH AT	SUBDC	1202.	4.42	158.	40.	13.	.83
+	DIVERSION TO	RETDC	846.	4.17	52.	13.	4.	.83
+	HYDROGRAPH AT	RETDC	1202.	4.42	107.	27.	9.	.83

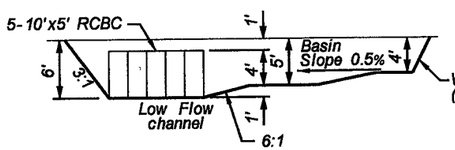
+	2 COMBINED AT	~CPDC	776.	4.42	94.	34.	12.	6.92
+	ROUTED TO	RTDCCC	565.	4.92	93.	34.	12.	6.92
+	HYDROGRAPH AT	SUBDD	308.	4.17	28.	7.	2.	.13
+	DIVERSION TO	RETDD	308.	4.17	22.	6.	2.	.13
+	HYDROGRAPH AT	RETDD	119.	4.33	6.	2.	1.	.13
+	ROUTED TO	RTDDCC	28.	5.42	6.	2.	1.	.13
+	HYDROGRAPH AT	SUBCC	1311.	4.50	194.	49.	16.	.98
+	DIVERSION TO	RETCC	984.	4.25	69.	17.	6.	.98
+	HYDROGRAPH AT	RETCC	1311.	4.50	125.	31.	10.	.98
+	3 COMBINED AT	~CPCC	1122.	4.83	181.	55.	19.	8.03
+	ROUTED TO	RTCCSC	1032.	5.08	180.	55.	19.	8.03
+	ROUTED TO	RTCCSC	932.	5.25	179.	55.	19.	8.03
+	HYDROGRAPH AT	SUBCB	1204.	4.42	178.	45.	15.	.74
+	DIVERSION TO	RETCB	582.	4.08	32.	8.	3.	.74
+	HYDROGRAPH AT	RETCB	1204.	4.42	146.	37.	12.	.74
+	3 COMBINED AT	~CPCB1	1319.	5.33	617.	236.	82.	21.63
+	HYDROGRAPH AT	SUBGD1	1022.	4.42	136.	34.	11.	.63
+	DIVERSION TO	RETGD1	451.	4.00	27.	7.	2.	.63
+	HYDROGRAPH AT	RETGD1	1022.	4.42	110.	27.	9.	.63
+	HYDROGRAPH AT	SUBGD2	1299.	4.50	195.	49.	16.	.21
+	DIVERSION TO	RETGD2	527.	4.00	32.	8.	3.	.21
+	HYDROGRAPH AT	RETGD2	1299.	4.50	164.	41.	14.	.21
+	2 COMBINED AT	CPGD	2156.	4.42	268.	67.	22.	.84
+	HYDROGRAPH AT	SUBKC	492.	4.25	54.	14.	5.	.26
+	DIVERSION TO	RETKC	492.	4.25	44.	11.	4.	.26
+	HYDROGRAPH AT	RETKC	183.	4.58	10.	3.	1.	.26
+	ROUTED TO	RTKCGD	60.	5.08	10.	3.	1.	.26
+	HYDROGRAPH AT	SUBGC	432.	4.25	43.	11.	4.	.22
+	DIVERSION TO	RETGC	234.	4.00	10.	3.	1.	.22
+	HYDROGRAPH AT	RETGC	432.	4.25	33.	8.	3.	.22
+	ROUTED TO	RTGCGD	423.	4.25	33.	8.	3.	.22
+	3 COMBINED AT	CPGD1	2260.	4.42	297.	74.	25.	1.32
+	ROUTED TO	RTGDCB	2252.	4.50	297.	74.	25.	1.32
+	2 COMBINED AT	~CPCB2	2043.	4.50	825.	287.	99.	22.95
+	ROUTED TO	MCCBCA	1894.	4.92	806.	285.	99.	22.95
+	HYDROGRAPH AT	SUBCA1	238.	4.50	35.	9.	3.	.14

+	DIVERSION TO	RETCA1	86.	4.00	5.	1.	0.	.14
+	HYDROGRAPH AT	RETCA1	238.	4.50	31.	8.	3.	.14
+	HYDROGRAPH AT	SUBCA2	1249.	4.50	186.	47.	16.	.84
+	DIVERSION TO	RETCA2	621.	4.08	36.	9.	3.	.84
+	HYDROGRAPH AT	RETCA2	1249.	4.50	150.	37.	12.	.84
+	3 COMBINED AT	~CPCA1	2431.	4.92	897.	315.	109.	23.93
+	HYDROGRAPH AT	SUBGB	379.	4.33	41.	10.	3.	.22
+	DIVERSION TO	RETGB	308.	4.17	17.	4.	1.	.22
+	HYDROGRAPH AT	RETGB	379.	4.33	24.	6.	2.	.22
+	ROUTED TO	RTGBCA	111.	5.25	24.	6.	2.	.22
+	2 COMBINED AT	~CPCA2	2426.	4.92	902.	316.	109.	24.16
+	DIVERSION TO	B-DRCC	2393.	4.92	869.	283.	94.	24.16
+	HYDROGRAPH AT	P-DRCC	33.	4.92	33.	33.	15.	24.16
+	ROUTED TO	MCCABC	33.	5.17	33.	32.	15.	24.16
+	HYDROGRAPH AT	SUBBC1	494.	4.00	40.	10.	3.	.14
+	DIVERSION TO	RETBC1	50.	3.50	6.	1.	0.	.14
+	HYDROGRAPH AT	RETBC1	494.	4.00	34.	9.	3.	.14
+	HYDROGRAPH AT	SUBBC2	931.	4.50	136.	34.	11.	.49
+	DIVERSION TO	RETBC2	316.	4.00	21.	5.	2.	.49
+	HYDROGRAPH AT	RETBC2	931.	4.50	115.	29.	10.	.49
+	3 COMBINED AT	~CPBC	522.	4.50	126.	56.	23.	24.78
+	2 COMBINED AT	CPAFBC	485.	4.50	120.	54.	22.	34.15

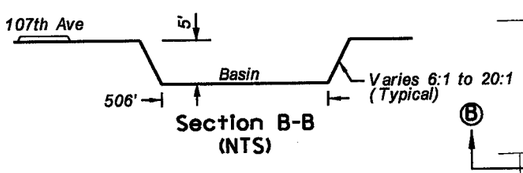
*** NORMAL END OF HEC-1 ***

EXHIBIT 1

107TH AVENUE BASIN LAYOUT (OPTION #1)

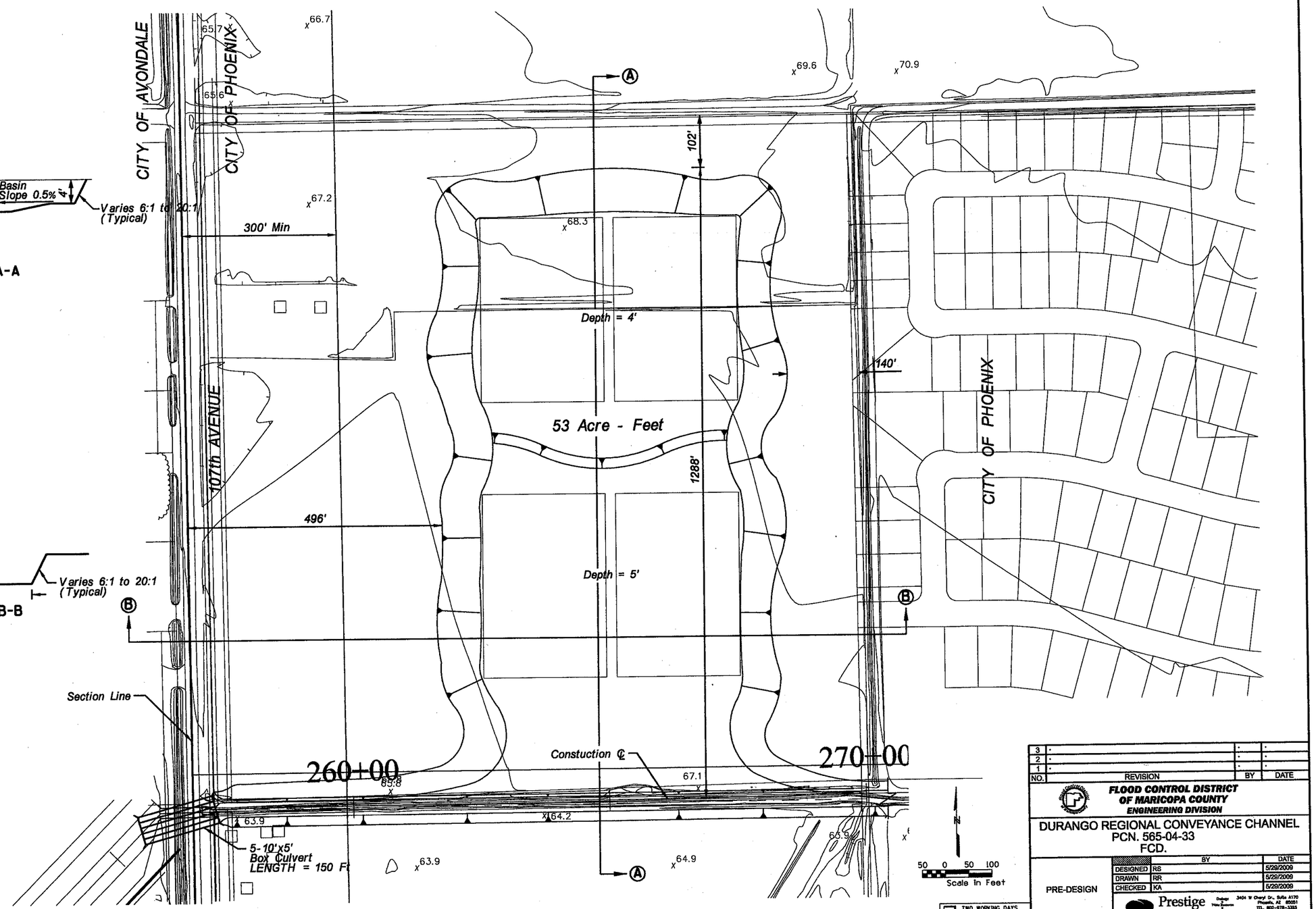


Section A-A
(NTS)



Section B-B
(NTS)

Side Slopes: Min 6:1
Max 20:1



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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
ENGINEERING DIVISION

DURANGO REGIONAL CONVEYANCE CHANNEL
PCN. 565-04-33
FCD.

PRE-DESIGN

	BY	DATE
DESIGNED	RS	5/29/2009
DRAWN	RR	5/29/2009
CHECKED	KA	5/29/2009

Prestige Engineering Consultants
Design Water Resources Civil Design
3404 W Cheryl Dr., Suite A170
Phoenix, AZ 85051
TEL. 602-678-3385
FAX. 602-678-4435

107th AVE BASIN LAYOUT (OPTION #1)

SHEET 1 OF 4

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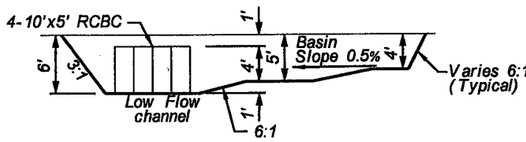
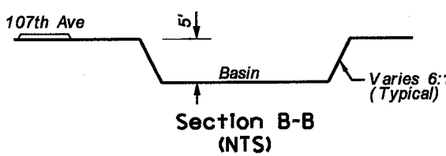
EXHIBIT 2

107TH AVENUE BASIN LAYOUT (OPTION #2)

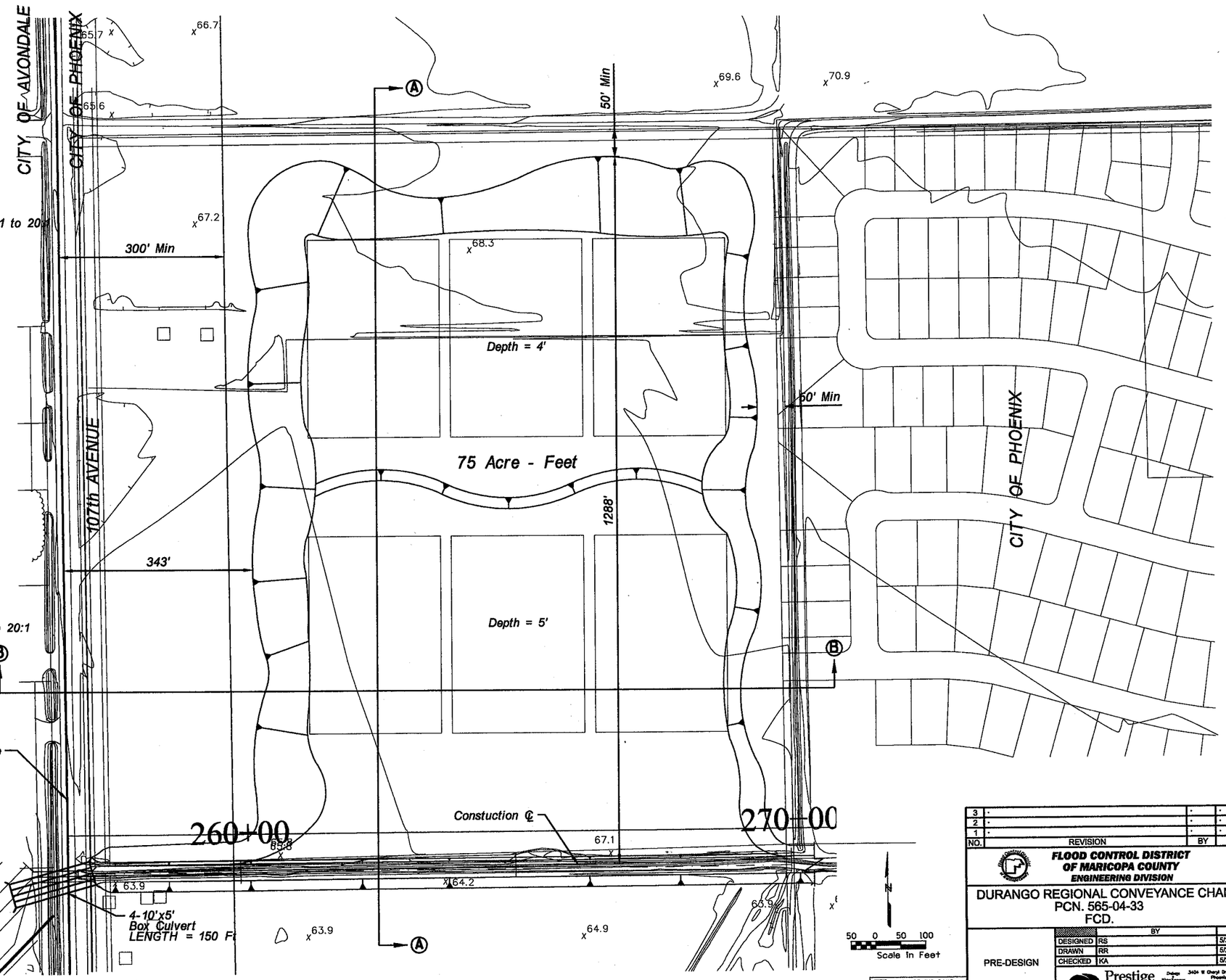


Section A-A
(NTS)



Section B-B
(NTS)

Side Slopes: Min 6:1
Max 20:1



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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
ENGINEERING DIVISION

DURANGO REGIONAL CONVEYANCE CHANNEL
PCN. 565-04-33
FCD.

PRE-DESIGN

	BY	DATE
DESIGNED	RS	5/29/2009
DRAWN	RR	5/29/2009
CHECKED	KA	5/29/2009

Prestige Engineering Consultants
Design Hydrologic Civil Design
3404 W Cheryl Dr., Suite A170
Phoenix, AZ 85051
TEL. 602-978-3355
FAX. 602-978-4455

107th AVE BASIN LAYOUT (OPTION #2)

SHEET 2 OF 4

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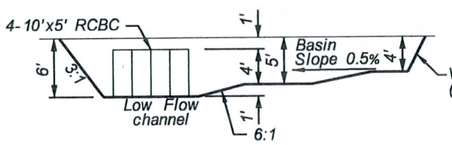
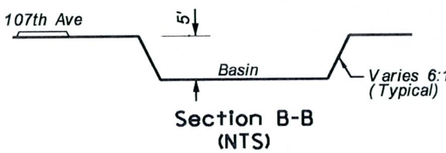
EXHIBIT 3

107TH AVENUE BASIN LAYOUT (OPTION #3)

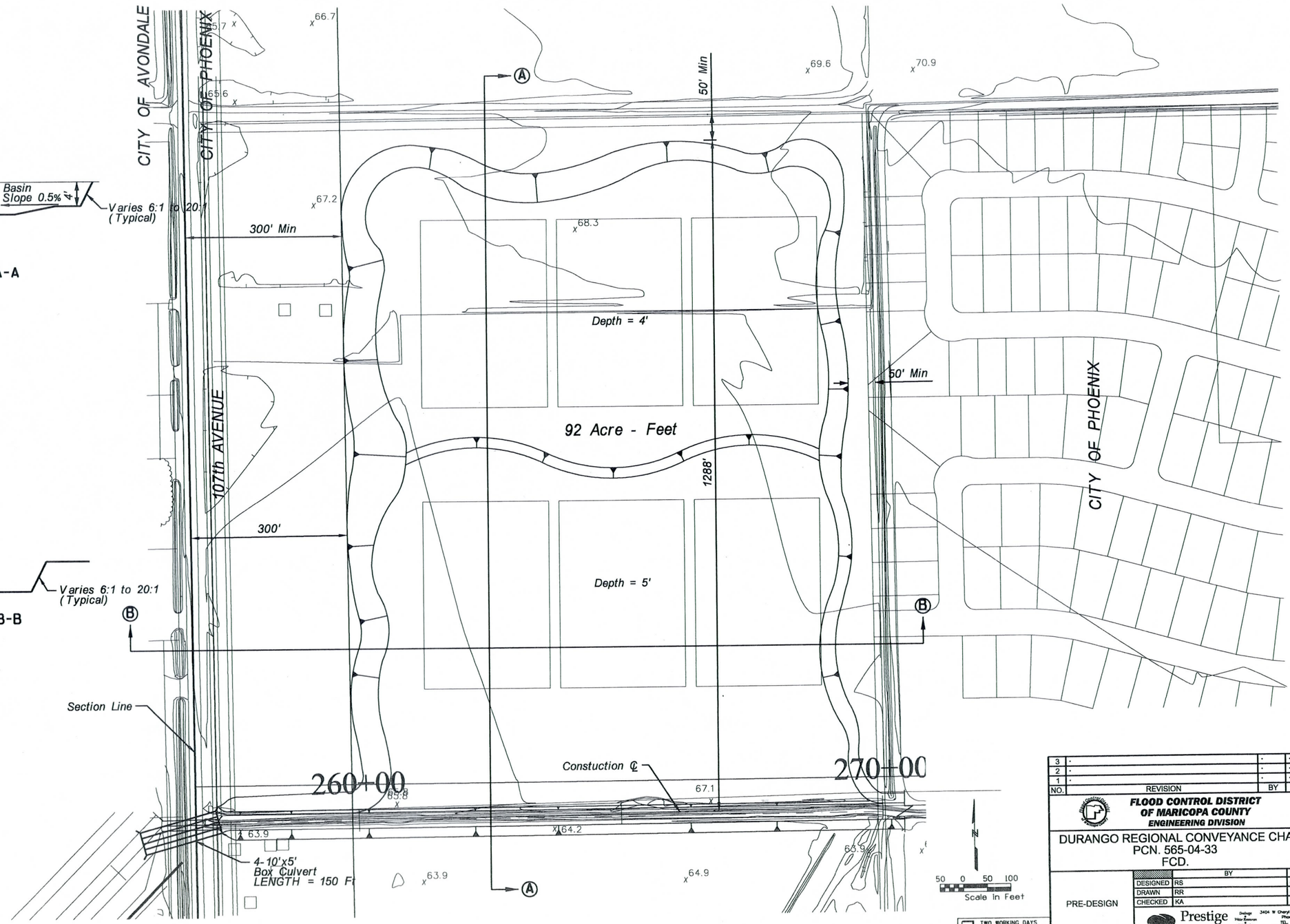


Section A-A
(NTS)



Section B-B
(NTS)

Side Slopes: Min 6:1
Max 20:1



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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
ENGINEERING DIVISION

DURANGO REGIONAL CONVEYANCE CHANNEL
PCN. 565-04-33
FCD.

PRE-DESIGN

	BY	DATE
DESIGNED	RS	5/29/2009
DRAWN	RR	5/29/2009
CHECKED	KA	5/29/2009

Prestige Engineering Consultants
Drainage, Water Resources, Civil Design
3404 W Cheryl Dr., Suite A170
Phoenix, AZ 85051
TEL: 602-978-3355
FAX: 602-978-4455

107th AVE BASIN LAYOUT (OPTION #3)

SHEET 3 OF 4

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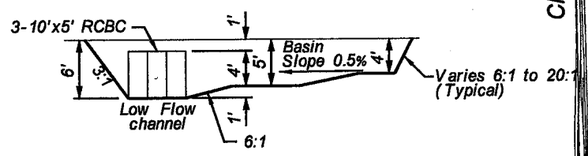
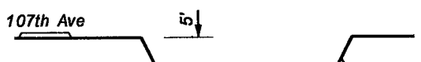
EXHIBIT 4

107TH AVENUE BASIN LAYOUT (OPTION #4)

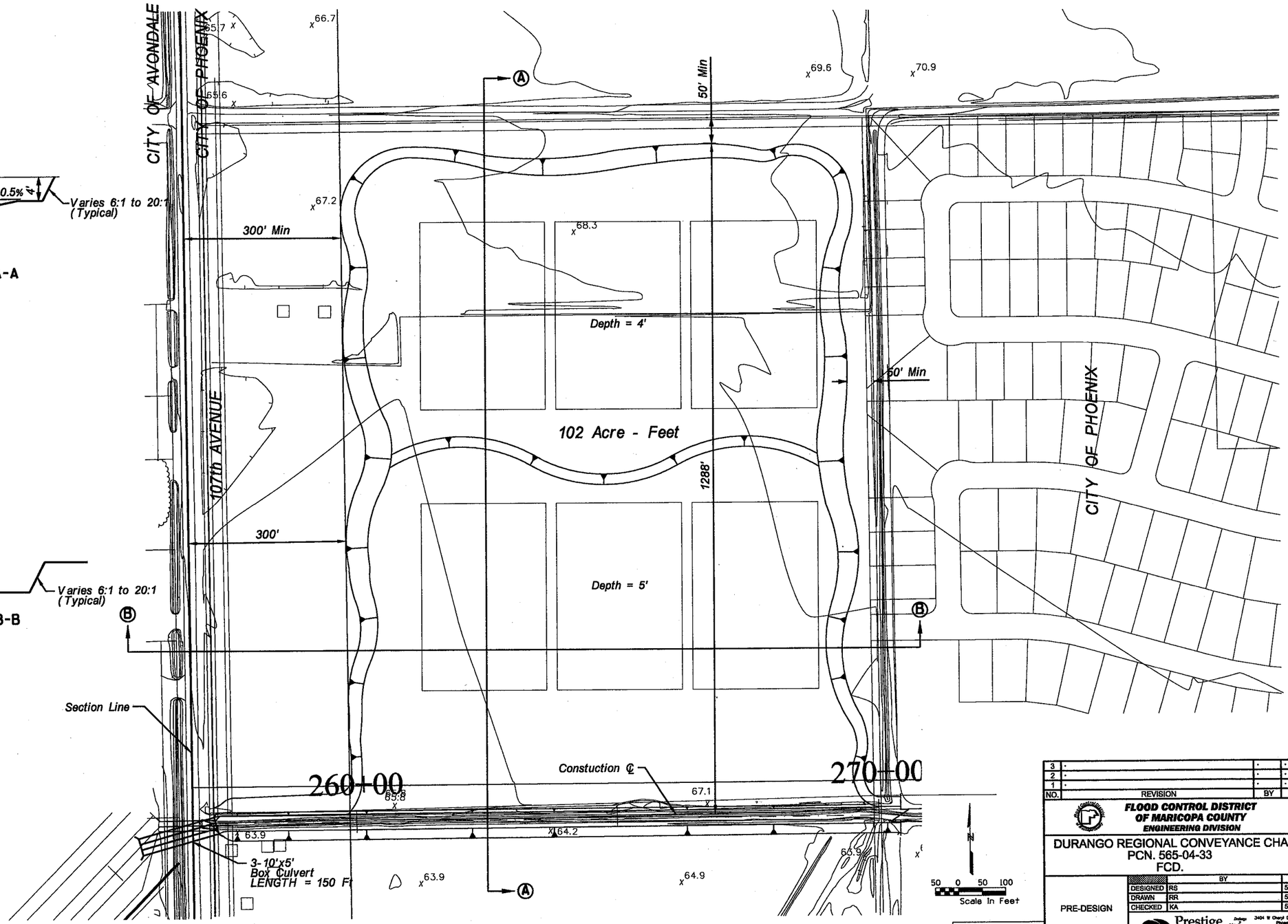


Section A-A
(NTS)



Section B-B
(NTS)

Side Slopes: Min 4:1
Max 10:1



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FLOOD CONTROL DISTRICT OF MARICOPA COUNTY
ENGINEERING DIVISION

DURANGO REGIONAL CONVEYANCE CHANNEL
PCN. 565-04-33
FCD.

PRE-DESIGN

	BY	DATE
DESIGNED	RS	5/29/2009
DRAWN	RR	5/29/2009
CHECKED	KA	5/29/2009

Prestige Engineering Consultants
Hydrology Water Resources Civil Design
3404 W Cheryl Dr., Suite A170
Phoenix, AZ 85051
TEL. 602-978-3333
FAX. 602-978-4455

107th AVE BASIN LAYOUT (LAYOUT #4)

SHEET 4 OF 4

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