Property of
Flood Control District of MC Library
Please Return to
2801 W. Durango
Phoenix, AZ 85009

CITY OF SCOTTSDALE

DESERT GREENBELT
PIMA ROAD THREE BASINS PROJECT

SYSTEM OPERATIONS DESIGN AND FINAL HYDROLOGY REPORT
(DRAFT)

The Desert Greenbelt
SCOTTSDALE, ARIZONA

SCI Project Number: 28900051

November 1997

Stantech
Consulting

CITY OF SCOTTSDALE

DESERT GREENBELT
PIMA ROAD THREE BASINS PROJECT

SYSTEM OPERATIONS DESIGN
AND FINAL HYDROLOGY REPORT
(DRAFT)

STANTECH CONSULTING INC.
7776 Pointe Parkway W., #290
Phoenix, Arizona 85044
(602) 438-2200

SCI Project No: 28900051

November 1997

PREFACE

The System Operations Design and Final Hydrology Report is issued as part of the Desert Greenbelt, **Pima Road Three Basins Project** (PR3B) by Stantech Consulting, Inc. (Stantech). This report presents the flood routing through the three detention basins at Happy Valley, Deer Valley and Union Hills as designed for the **Pima Road Three Basins Project**. The discharges through those basins are routed through the basin outlets and the intervening segments of the Pima Road channel that comprise the **Pima Road Three Basins Project**. The design of those basins, outlets, conduits and open channels are presented in the separate 10% Design Report, November 1997, by Stantech.

The basis of the watershed hydrology including mapping, methodology and model input parameters, is presented in the companion report, Watershed Hydrology and Concept Design Report. That report was issued as a final draft in January 1997 under the title Desert Greenbelt Project, Pima Road Channel, Design Hydrology Memorandum, by George V. Sabol Consulting Engineers, Inc. (GVSCE). That report was prepared and submitted as part of the design review of the Pima Road Channel for the City of Scottsdale by GVSCE. In October 1996, the firm GVSCE was acquired by Stantech Consulting, Inc., and the design review was subsequently completed by GVSCE. The previous Design Hydrology Memorandum by GVSCE was finalized by Stantech as part of the **Pima Road Three Basins Project** and was submitted as the Watershed Hydrology and Concept Design Report, November 1997.

Table of Contents

		Page
1.0	**INTRODUCTION**	**1**
1.1	GENERAL	1
1.2	BACKGROUND	1
1.3	PURPOSE AND SCOPE	2
2.0	**MAPPING**	**4**
2.1	WATERSHED BASE MAPS	4
3.0	**HYDROLOGY**	**6**
3.1	GENERAL	6
3.2	WATERSHED DELINEATION AND PARAMETER ESTIMATION	6
3.2.1	General	6
3.2.2	Refinements and Revisions	7
3.3	COMBINE AND ROUTING OPERATIONS	8
3.3.1	General	8
3.3.2	Refinements and Revisions	8
3.4	PR3B STORAGE ROUTING PARAMETERS	9
3.4.1	Conduit Hydraulics	10
3.5	WATERSHED MODEL RESULTS	11
3.6	PR3B DETENTION BASIN PERFORMANCE	15
3.6.1	General	15
3.7	SUMMARY	17
3.7.1	General	17
3.7.2	Detention Basins	17
3.7.3	Design Discharges	17

TABLES

Table 2-1: Summary of Watershed Maps
Table 3-1: Summary of HEC-1 Models
Table 3-2: Summary of Ultimate Condition 100-Year Peak Design Discharges
Table 3-3: Comparison of Ultimate and Interim Condition 100-Year Peak Discharges
Table 3-4: Summary Detention Basin Characteristics

PLATES

Plate 1: Overall Watershed Map
Plate 2: Detailed Watershed Map (4 sheets)
Plate 3: Soils Map
Plate 4: Land Use Map

Plate 5: DC Ranch Onsite Watershed Map
Plate 6: Grayhawk Onsite Watershed Map
Plate 7: Interim Condition Watershed Map

APPENDICES

Appendix A: Subbasin Input Parameter Summary Tables A1 and A2
Appendix B: Happy Valley Detention Basin Stage/Storage/Discharge Relations and Supporting Technical Calculations and Output
Appendix C: Deer Valley Detention Basin Stage/Storage/Discharge Relations and Supporting Technical Calculations and Output
Appendix D: Union Hills Detention Basin Stage/Storage/Discharge Relations and Supporting Technical Calculations and Output
Appendix E: Ultimate Conditions 100-Year, 6-Hour HEC-1 Output File Printout
Appendix F: Ultimate Conditions 100-Year, 24-Hour HEC-1 Output File Printout
Appendix G: Interim Condition 100-Year, 6-Hour HEC-1 Output File Printout
Appendix H: Interim Condition 100-Year, 24-Hour HEC-1 Output File Printout
Appendix I: Happy Valley Detention Basin Worst Case 100-Year, 24-Hour HEC-1 Output File Printout
Appendix J: Diskette of HEC-1 Files

1.0 Introduction

1.1 GENERAL

The 10 percent design package hydrologic operation of the **Pima Road Three Basins Project** (PR3B) system is presented in this Desert Greenbelt, Pima Road Three Basins Project, System Operations Design and Final Hydrology Report. All hydrologic analyses are based on the results presented in Desert Greenbelt ,Pima Road Three Basins Project, Watershed Hydrology and Concept Design Report, November 1997, by Stantech Consulting, Inc., which is herein referred to as the Concept Hydrology Report.

The PR3B designs and analyses have identified areas and locations within the project watershed that require refinement or revision to the channel peak discharges and detention basin stage/storage/discharge characteristics presented in the Concept Hydrology Report. Most of the changes are due to updated information regarding land use and drainage patterns, more detail on channel and basin designs, slight revisions to the original design concept, and a decision by the City of Scottsdale concerning which of the Deer Valley Detention Basin options to pursue in the PR3B Project design.

1.2 BACKGROUND

Several hydrology studies of the PR3B watershed have been conducted by various entities and consultants for the purposes of FEMA flood hazard delineation, highway drainage studies, land development, and the City of Scottsdale, Desert Greenbelt Project. Most of those models and analyses were either reviewed, revised, and/or incorporated into the final Concept Hydrology Report.

The Concept Hydrology Report documents the results of a detailed comparison between the predominant modeling methodology originally established for the watershed in the late 1980s and widely used to date (referred to as the City of Scottsdale method), and the Flood Control District of Maricopa County's methodology. The conclusion of that comparative analysis was to adopt the City of Scottsdale modeling methodology in order to provide regionally consistent hydrologic modeling.

The Concept Hydrology Report offers two options for routing of the northern DC Ranch collector channel (Deer Valley Road alignment) at the Deer Valley Basin location. Option 1 considers routing the collector channel flows into the Deer Valley Basin, grading a larger basin area, and maintaining a smaller design channel downstream of the outlet conduit discharge location. Option 2 considers routing the collector channel flows around the Deer Valley Basin, grading a smaller basin area, constructing a sizable box culvert under Pima Road, and providing a larger design channel downstream of the outlet conduit. Both options were concluded to be applicable and that a decision would not necessarily be based on cost, but more on environmental, aesthetic, and recreation factors.

Each of the three detention basins at Happy Valley Road, Deer Valley Road, and Union Hills Road were sized to provide approximately 5 feet of stormwater storage above the lowest adjacent natural grade. This was accomplished using a small cement stabilized aggregate spillway contained within an earthen embankment of less than 6 feet in height (non-jurisdictional per Arizona Department of Water Resource regulations). The design event for system hydrology was determined to be the 100-year, 6-hour storm, with no runoff exceeding the basin spillway for that storm. The performance of each basin for the 100-year, 24-hour storm was also modeled and evaluated. All design peak discharges for the Pima Road Channel were estimated from the 100-year, 6-hour storm.

1.3 PURPOSE AND SCOPE

The purpose of this design report is to update, refine, and/or revise the results presented in the Concept Hydrology Report as required to produce design hydrology for the PR3B Project. Hydrologic changes include subbasin additions and boundary adjustments, with a majority of those changes occurring in the watershed immediately upstream of the Union Hills Basin and in the upper portions of the watershed generally north of Deer Valley Road alignment. Other changes include revisions to the conveyance system downstream of Deer Valley Basin to the Sierra Pinta Channel confluence and a change in the design criteria for the Union Hills Detention Basin and other drainage facilities adjacent to or within ADOT right-of-way, from 100-year, 6-hour designs to 100-year, 24-hour designs.

At this time, the construction date for Grayhawk's ultimate drainage system design along the WAPA power line corridor is unknown. It is also unknown as to where and how the intercepted flows will be conveyed to the Union Hills Detention Basin. Accordingly, interim condition 100-year, 6- and 24-hour hydrology is required to assess the impact of no "power line corridor channel" to the area bounded by Grayhawk on the north, the Loop 101 freeway (ADOT) on the south, generally the Hayden Road alignment on the west, and Union Hills Detention Basin on the east. This interim hydrology assumes that Grayhawk, north of the power line corridor, is fully developed without benefit of the collector channel.

It is not the purpose of this design report to reiterate the parameter derivations and modeling comparisons presented in the Concept Hydrology Report, except in those locations where significant change has occurred. Unless otherwise stated herein, all modeling parameters and data are essentially identical to those presented in the Concept Hydrology Report.

2.0 MAPPING

2.1 WATERSHED BASE MAPS

All watershed maps for this design memorandum essentially duplicate those used in the Concept Hydrology Report, with the exception of any of the changes previously discussed. Table 2-1 summarizes the watershed maps used for this design memorandum.

TABLE 2-1

Summary of watershed maps

Map Name (1)	Map Title (2)	Description (3)	Map Scale (4)
Plate 1	Overall Watershed Map	General map of the entire watershed showing all subbasins and points of concentration.	1" = 2,000'
Plate 2	Detailed Watershed Map	Detailed watershed map showing ultimate condition subbasin delineation's, concentration points with directional flow arrows, proposed PR3B facility alignments, and detention basin locations. Topography and existing planimetrics are plotted in background. (4 sheets)	1" = 500'
Plate 3	Soils Map	Map of soils boundaries and types overlain by watershed subbasins.	1" = 2,000'
Plate 4	Land Use Map	Map of land use element boundaries overlain by watershed subbasins.	1" = 2,000'
Plate 5	DC Ranch Onsite Watershed Map	Map of subbasin delineation's, identifications, and routing schematic per Wood/Patel Associate's modeling.	1" = 300'
Plate 6	Grayhawk Onsite Watershed Map	Map of subbasin delineation's, identifications, and routing schematic per DEI Professional Services.	1" = 400'
Plate 7	Interim Condition Watershed Map	Same as Plate 2, Sheet 4 of 4 except depicting the interim condition subbasin delineation's in the vicinity of Union Hills Detention Basin	1" = 500'

Topographic base mapping for the project hydrology is supplied by the City of Scottsdale. That mapping is either 1-foot or 2-foot contour interval topography compiled at a plan scale of 1 inch = 100 feet and is based on 1993 aerial photography. Survey control for the mapping was provided by Greiner, Inc. and the photogrammetry was performed by Michael Baker Jr., Inc. Due to the density of contours and the scale of Plate 2, only the index (5- and/or 10-foot) contour intervals are plotted to simplify the exhibit. All delineation, however, was performed on working maps plotted to much smaller scales and with all contours shown.

On-site hydrology maps for DC Ranch and Grayhawk are respectively shown in Plates 5 and 6. DC Ranch hydrology modeling and mapping were obtained from Wood/Patel &Associates, Inc. Grayhawk hydrology modeling and mapping were obtained from Development Engineering, Inc. Subbasin naming and concentration point numbering for each of the models are maintained, and minor operational adjustments were made for insertion of those models into the PR3B modeling. In general, however, the models for both developments are unchanged.

3.0 HYDROLOGY

3.1 GENERAL

Hydrologic modeling is performed using the U.S. Army Corps of Engineers' (USACOE) HEC-1 Flood Hydrograph Package computer model, version 4.0.1E, September 1990, as implemented by Dodson and Associates. Both the 100-year, 6- and 24-hour storms are modeled for the entire watershed. All drainage facilities upstream of Union Hills Basin are designed using 6-hour discharges. Union Hills Basin, its outlet conduit, and the collector channels along the ADOT freeway are all designed using 24-hour discharges. Both the 6- and 24-hour rainfalls are according to the hypothetical distribution option in HEC-1. Key rainfall depth-duration-frequency statistics are obtained from the Precipitation-Frequency Atlas for Arizona (NOAA Atlas II), with point rainfall depth-duration-frequency data developed by the PREFRE program. Subbasin rainfall/runoff characteristics are modeled using kinematic wave methodology. Rainfall losses are estimated by the use of SCS curve numbers for pervious areas and an estimate of percent impervious area (RTIMP) to account for rooftops and paved areas. Channel routing is accomplished using the normal depth option of the Modified Puls method. Reservoir storage routing is performed using the level pool option of the Modified Puls method.

3.2 WATERSHED DELINEATION AND PARAMETER ESTIMATION

3.2.1 General

Subbasin boundaries and watershed flow patterns are determined from 1- or 2-foot contour interval worksheets of the watershed, field reconnaissance, construction drawings, and inspection of aerial photography. Curve number (CN) selection is generally per City of Scottsdale, Design Standards and Procedures Manual, Chapter 2, Section 2.2, Hydrology (COS Design Manual), and is based on soil type and vegetative cover. Soil type and boundary data, shown for the watershed in Plate 3, are obtained from the SCS Soil Survey of Aguila-Carefree Area and Parts of Maricopa and Pinal Counties. Vegetation cover is estimated to be natural desert in "poor" condition. Land use type and densities, shown for the watershed in Plate 4, are obtained from current zoning classifications and discussions with City of Scottsdale staff. Those densities are used to select the

RTIMP for each subbasin. With the exception of the "interim condition" model, all rainfall loss parameters assume future full build-out conditions.

3.2.2 Refinements and Revisions

In general, the overall watershed delineation and subbasin modeling parameters are essentially the same as that shown in the Concept Hydrology Report, with the exception of the following specific changes:

3.2.2a Subbasins (Ultimate)

- Subbasin S34.1 is divided into two subbasins, S34.1 and S34.2.
- Subbasin S36R1 is divided into two subbasins, S36R1A and S36R1B.
- Subbasin S36R2 is divided into two subbasins, S36R2A and S36R2B.
- Subbasin SCN5C is adjusted to reflect revised drainage boundaries along ADOT. The basin RTIMP value is adjusted to 50 percent to account for industrial zoning.
- Subbasin SCN6 is divided into four subbasins, SCN6B, SCN6C, SCN6D, and SCN6E to account for better delineation of the Water Campus, CAP Water Treatment Plant, Solid Waste Transfer Station, and refined channel alignment. Rainfall loss and kinematic wave parameters are revised to reflect the proposed land uses. Areas within the Water Campus and CAP Water Treatment Plant that will store intercepted rainfall (i.e. lagoons, filter beds, water treatment/storage structures exposed to the atmosphere, etc.) are excluded from the subbasin area and indicated as "NC" for non-contributing.
- Subbasin SCN6A is adjusted to reflect revised drainage boundaries along ADOT. The basin RTIMP value is adjusted to 50 percent to account for industrial zoning.
- Subbasin S54 RTIMP value adjusted to 50 percent to account for industrial zoning.
- Minor basin boundary shifts in Subbasins S53A and S53A1

3.2.2b Subbasins (Interim condition only)

- Subbasin SCN5C is divided into two subbasins, SCN5C and SCN5D. The new subbasins' northern limits are extended to the lower limit of the Grayhawk development. The RTIMP for both subbasins are set to 0 percent to reflect natural conditions.
- Subbasins within the Grayhawk development that drain to areas west of the Hayden Road boundary line of interim subbasin SCN5C, are removed from the hydrology model for simplification.

Guidance for the delineation of subbasin boundaries and drainage patterns, "NC" area designations, and estimation of RTIMP values for the City of Scottsdale's Water Campus, CAP Water Treatment Plant, and Solid Waste Transfer Station were obtained from the drainage reports and construction drawings for each of those facilities. Changes to the RTIMP values for subbasins SCN5C, SCN6A, and S54 are based on the current zoning classification of those areas by the City of Scottsdale.

Tables A1 and A2 of Appendix A, respectively summarize the revised/refined subbasin modeling parameters for the "ultimate" and "interim" PR3B hydrology models.

3.3 COMBINE AND ROUTING OPERATIONS

3.3.1 General

HEC-1 combine operations are performed at selected locations where peak discharge estimates are required. All channel routing (except channel routing within DC Ranch model) is accomplished by Modified Puls, with channel routing by the normal depth option and reservoir routing by the level pool option. Normal depth routing parameters are based on physical channel geometry and hydraulic data for either existing washes and channels, or the proposed PR3B channel configurations. Stage versus storage volume versus discharge relations for each of the three detention basins are estimated from proposed grading configurations and hydraulic characteristics of the outlet conduit. Outlet conduit hydraulics are obtained by analyzing the pipe both as a culvert (inlet control) and a storm drain (open channel/pressure flow). Overtopping stage versus discharge relations for Happy Valley and Deer Valley Detention Basins are also developed to evaluate the 100-year, 24-hour storm performance. Overtopping discharges are evaluated by considering weir flow over the spillway embankment.

3.3.2 Refinements and Revisions

The following are specific changes to the Concept Hydrology Report with regard to combining and routing operations:

3.3.2a HEC-1 Combine and Routing Operations

- Added combine operation C34.2 to provide a discharge entering Happy Valley Basin from the north.
- Revised the combine operation C34.1, to provide a discharge entering Happy Valley Basin from the east.
- Added combine operation HVDB-I to provided basin inflow hydrograph and renamed storage routing operation to HVDB-O.
- Added combine operation C36R1A to provide a discharge in the channel approximately 1,000 feet north of Pinnacle Peak Road and Pima Road.
- Renamed the combine operation C36R1 to C36R1B.
- Added combine operation C36R2A to provide a discharge in the channel approximately 2,000 feet south (East Paraiso Drive) of Pinnacle Peak Road and Pima Road.
- Renamed the combine operation C36R2 to C36R2B.
- Renamed combine operation C51.1I at Deer Valley Basin to DVDB-I and storage routing operation C51.1O to DVDB-O.
- Added combine operation C53A1 to provide discharge in channel at proposed culvert crossing of the Solid Waster Transfer Station/CAP Water Treatment Plant/Union Hills Basin access road alignment.
- Pima Channel routing lengths and geometry changed to reflect the proposed PR3B designs.
- Revised stage/storage/discharge rating relations for Happy Valley, Deer Valley, and Union Hills Detention Basins to reflect the refined and/or revised basin and discharge conduit configurations of the PR3B Project.

3.3.2b HEC-1 Combine and Routing Operations (Interim condition only):

- Added combine operations CNC5, CN5D, CN5, and CN6D to provide design discharges at various locations along the Union Hills Basin and Hayden-Union Hills collector channel.

3.4 PR3B STORAGE ROUTING PARAMETERS

The design discharges for the PR3B system are contingent upon the routing characteristics of the three detention basins. The storage routing parameters presented herein are based on the 10 percent design and layout of the basins and respective outlet conduits, as shown on the 10 percent construction drawings for the PR3B project. The stage versus storage versus discharge curves plus supporting technical documentation for Happy Valley, Deer Valley, and Union Hills

Detention Basins are respectively provided in Appendices B, C, and D. Refer to the 10 percent construction drawings for basin grading and outlet conduit details.

3.4.1 Conduit Hydraulics

In general, each of the outlet conduits operate under inlet control for the lower discharges. As the discharge increases, the hydraulic control shifts to backwater or pressure flow due to increasing friction losses within the conduit downstream of the inlet.

Deer Valley and Union Hills Detention Basin (DVDB and UHDB) outlet conduits are unique in the fact that their hydraulic capacities are potentially impacted by tributary flows draining to junctions downstream of the basin. Deer Valley Detention Basin outlet conduit intercepts flows draining from DC Ranch at concentration point C52A (intersection of Pima Road and Thompson Peak Parkway) in a junction structure. That junction is designed such that the incoming flows to the system from DC Ranch do not impact the hydraulics of the conduit upstream from that junction.

The conduit draining UHDB intercepts the combined flows from Subbasins SCN6A and S54 at concentration point C1A (Pima Road TI with Loop 101 Freeway) in a junction structure. That junction, however, is not economically practical to design such that the inflows at concentration point C1A do not hydraulically impact the 96-inch conduit draining UHDB. It is therefore necessary to use a trial and error approach to establishing the stage/storage/discharge rating curve for UHDB. The steps for that operation are summarized as follows:

1. Code a trial stage/storage/discharge relation into HEC-1 at operation UHDB-O based on estimates of the downstream hydraulic impacts,
2. Check the hydrographs for HEC-1 operations UHDB-O and C1A and evaluate the hydraulic impact of peak discharges at C1A on discharges leaving UHDB by hydraulic grade line calculations for the entire conduit system from the TPC Golf Course to UHDB,
3. Modify the HEC-1 code per the conclusions of step 2, rerun model and repeat step 2.

It should be noted that by this process, the curve is only specifically applicable to the design storm used, and also only directly applies to the rising limb of the hydrograph at UHDB. The possible discrepancy of applying the same rating relation to the receding limb of the hydrograph at UHDB

is negligible. The final hydraulic analyses and supporting documentation of this procedure is supplied in Appendix D.

3.5 WATERSHED MODEL RESULTS

Five (5) separate HEC-1 models are developed for hydrologic analyses of the PR3B system. Table 3-1 provides a listing and brief summary of each HEC-1 model developed. The Appendix containing the summary output from HEC-1 is shown in parenthesis at the end of each summary.

TABLE 3-1

Summary of HEC-1 models

HEC-1 Model	Summary Description
ULTMT-6.*	100-year, 6-hour model of entire watershed assuming future condition, full build-out. Flow splits are modeled per rating analysis presented in Concept Hydrology Report. Primarily provides design discharges for system upstream of Union Hills Detention Basin. (Appendix E)
ULTMT-24.*	100-year, 24-hour model of entire watershed assuming future condition, full build-out. 100% of flow splits are assumed to be directed to the Deer Valley Basin. Primarily provides design discharges for Union Hills Detention Basin and outlet conduit, and collector channels along ADOT freeway. Also used to evaluate performance of Deer Valley Detention Basin emergency spillway for the worst case scenario. (Appendix F)
INTRM-6.*	Interim condition 100-year, 6-hour model. Developed to provide design discharges for runoff draining directly to the north line of Union Hills Detention Basin without benefit of the ultimate "power line corridor channel." (Appendix G)
INTRM-24.*	Interim condition 100-year, 24-hour model developed to assess impact of Grayhawk flows draining directly to the Hayden to Union Hills Detention Basin collector channel without benefit of the ultimate "power line corridor channel." (Appendix H)
HAPPY-24.*	Worst case 100-year, 24-hour model assuming 100% of flow splits are routed to Happy Valley Basin. Used to evaluate performance of Happy Valley Detention Basin emergency spillway for worst case scenario. (Appendix I)

Digital input and output files for each of the models summarized in Table 3-1 are provided in Appendix J.

Table 3-2 summarizes the ultimate condition design peak discharges for key locations and subbasins within the PR3B watershed. Column 1 lists the HEC-1 operation identifier as found in the HEC-1 output. Column 2 lists the design peak 100-year discharge and the corresponding design storm duration is listed in column 3.

TABLE 3-2

Summary of ultimate condition 100-year peak design discharges

HEC-1 Model Operation Identifier	Peak 100-Year Design Discharge	Design Storm Duration
	cfs	cfs
(1)	(2)	(3)
S30N	1,227	6-Hour
C31.1	1,508	6-Hour
C34.2	2,177	6-Hour
C34.1	1,896	6-Hour
HVDB-I	4,015	6-Hour
HVDB-O	142	6-Hour
C36.1	250	6-Hour
C36R1A	1,236	6-Hour
C36R1B	1,811	6-Hour
C36R2A	1,869	6-Hour
C36R2B	2,025	6-Hour
S51.1	1,058	6-Hour
DVDB-I	2,973	6-Hour
DVDB-O	261	6-Hour
C52A	411	6-Hour
C52	2,251	6-Hour
CPC5	1,242	6-Hour
SCN5C	784*	6-Hour

TABLE 3-2

Summary of ultimate condition 100-year peak design discharges

HEC-1 Model Operation Identifier	Peak 100-Year Design Discharge	Design Storm Duration
	cfs	cfs
(1)	(2)	(3)
SCN6D	70	6-Hour
SCN6C	243	6-Hour
C53	2,377	6-Hour
C53A1	2,783	6-Hour
C53A	2,862	6-Hour
SCN6E	103	24-Hour
UHDB-I	5,638	24-Hour
UHDB-O	814	24-Hour
S54	196	24-Hour
SCN6A	309	24-Hour
CN6A	505	24-Hour
C1A	1,032	24-Hour

*This location is part of the ADOT drainage system; however, the 6-hour peak discharge (784 cfs) exceeds the 24-hour peak discharge (776 cfs).

Table 3-3 provides a comparison of the interim and ultimate modeling results for selected key locations in the Union Hills Detention Basin/ADOT freeway area. Column 1 lists the HEC-1 operation identifier as found in the HEC-1 output. Columns 2 and 3, respectively, list the ultimate

and interim condition design 100-year peak discharges, and the corresponding design storm duration is listed in column 4.

TABLE 3-3

Comparison of ultimate and interim condition 100-year peak discharges

HEC-1 Model Operation Identifier	Peak 100-Year Discharge Ultimate Condition	Peak 100-Year Discharge Interim Condition	Design Storm Duration
	cfs	cfs	
(1)	(2)	(3)	(4)
SCN5C*	784	406	24-Hour
CN5C	----	753	24-Hour
SCN5D	----	72	6-Hour
CN5D	----	200	6-Hour
CN5	----	835	6-Hour
CN6D	----	211	6-Hour
UHDB-I	5,638	4,977	24-Hour
UHDB-0	814	753	24-Hour
CIA	1,032	1,022	24-Hour

*The 6-hour discharge controls in the ultimate condition.
The 24-hour discharge controls in the interim condition.

3.6 PR3B DETENTION BASIN PERFORMANCE

3.6.1 General

The basins and outlets are sized to evacuate the floodwaters within 36 hours after the end of the design storm. Drain time of the basins is enhanced by excavating a sump area at the headworks of the outlet conduits and grading a low flow channel to that sump along the bottom of the basin. The sump enables the outlet to operate under a higher head for the duration of the basin operation. The sump also provides for quicker draining of the majority of the basin floor with only a relatively small area of delayed drainage due to low head on the outlet. All three basins have a minimum drain time of 24 hours and will be effectively drained within 36 hours after the end of the design storm.

Happy Valley and Deer Valley Detention Basins are sized such that the spillways do not operate for the 6-hour storm. Those basins are also checked for performance during a 100-year, 24-hour storm with an assumption that upstream flow splits direct 100 percent of the runoff to that basin. This checking presents the most severe reasonable conditions for the two basins.

The Union Hills Detention Basin is designed for the 100-year, 24-hour storm in order to satisfy ADOT drainage requirements. No elevated berm or spillway is designed for this basin. Runoff from a storm of larger magnitude than the design storm will spill overland to the south at natural grade.

Table 3-4 summarizes the physical characteristics of each detention basin. It should be noted that the storage volumes reported in columns 6 and 7 reflect an allowance for sediment deposition. Sedimentation volume estimates are discussed in the 10% Design Report. Table 3-5 summarizes the operational performance of each basin for both the 6- and 24-hour storms. All results are from the ultimate condition modeling.

TABLE 3-4

Summary detention basin characteristics

Detention Basin	Minimum Elevation	Emergency Spillway Elevation	Top of Embankment (Overtopping)	Outlet Conduit Diameter	Storage Volume to Emergency Spillway Crest	Storage Volume to Top of Embankment
	feet	feet	feet	inches	acre-feet	acre-feet
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Happy Valley	2,065.0	2,089.5	2,090.0	42	216.9	240.0
Deer Valley	1,855.0	1,879.5	1,880.0	54	203.2	224.1
Union Hills	1,585.0	---	1,610.0	96	---	370.0

TABLE 3-5

Summary detention basin operations for the 100-year, 6- and 24-hour storms

	Peak Inflow Discharge		Max. Stage Elevation		Max. Storage Volume		Peak Outflow Discharge	
Detention Basin	6-hour	24-hour	6-hour	24-hour	6-hour	24-hour	6-hour	24-hour
	cfs	cfs	feet	feet	acre-feet	acre-feet	cfs	cfs
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Happy Valley	4,015	4,742	2,089.0	2,090.5	211.8	231.1	142	680
Deer Valley	2,973	4,131	1,877.8	1,880.6	180.9	218.3	261	880
Union Hills	4,447	5,638	1,605.4	1,609.6	265.5	361.0	748	814

3.7 SUMMARY

3.7.1 General

The 10% design of PR3B facilities requires refinement and/or revisions to the Concept Hydrology Report watershed modeling. Those changes are needed to provide additional discharge estimates at specified locations and reflect the proposed PR3B improvements.

3.7.2 Detention Basins

Modifications to the three detention basins and their respective outlet conduits have resulted in minor changes to the overall hydrology as compared to the Concept Hydrology Report results. All three basins are slightly larger and provide more available storage volume, and Happy Valley and Deer Valley Detention Basins (HVDB and DVDB) are designed to detain the 100-year, 6-hour runoff without operation of the emergency spillway. The 100-year, 6-hour peak discharges from HVDB and DVDB are reduced from 219 and 360 cfs to 142 and 261 cfs, respectively. The 100-year, 24-hour peak spillway discharge from HVDB is reduced from 1,275 cfs to 540 cfs and the DVDB 100-year, 24-hour peak discharge is increased from 550 cfs to 620 cfs. During the 100-year, 24-hour storm, the emergency spillways at HVDB and DVDB will operate for approximately 5 and 6 hours, respectively.

Union Hills Detention Basin (UHDB) is no longer designed to store runoff above grade. The design storm for the basin is also changed from the 100-year, 6-hour to the 100-year, 24-hour event. The 100-year, 6- hour peak discharge from UHDB is increased from 636 to 748 cfs, and the 100-year, 24-hour peak discharge is reduced from 1,296 to 814 cfs.

3.7.3 Design Discharges

The PR3B system design discharges are summarized in Table 3-2. The maximum peak discharge in the Pima Road Channel segment is 2,862 cfs, which is nearly identical to the Concept Hydrology Report value of 2,824 cfs. The peak discharge to be conveyed by the Union Hills Outlet Conduit from concentration point C1A to the TPC is 1,032 cfs, which compares to 1,300 cfs in the Concept Hydrology Report. All other design discharges compare closely to those presented in the Concept Hydrology Report.

The design storm for the collector channels along the ADOT Loop 101 Freeway is changed from the 6-hour to the 24-hour event to satisfy ADOT drainage requirements. Also, an interim condition model is developed to evaluate the impact of delayed construction of the Grayhawk power line corridor channel. Table 3-3 provides a comparison of those values to the ultimate condition hydrology. It should be noted that the ultimate discharge from Subbasin SCN5C of 784 cfs is comparable to the interim discharge at concentration point CN5C of 662 cfs. Accordingly, the interim condition flows in the collector channel along ADOT Loop 101 Freeway from Hayden Road to UHDB will not exceed the design condition flows.

APPENDIX A

Subbasin Input Parameter Summary Tables A1 and A2

Table A-1

Subbasin input parameters for the Pima Road Three Basin design hydrology
Future full build-out conditions (ultimate)

Subbasin ID	Drainage Area sq. mi.	Rainfall Losses Curve No.	Rainfall Losses RTIMP %	Overland Flow Element Length feet	Overland Flow Element Slope ft/ft	Overland Flow Element n	Overland Flow Element % Contributing	Collector Channel Element Length feet	Collector Channel Element Slope ft/ft	Collector Channel Element n	Collector Channel Element Contrib. Area sm	Collector Channel Element Shape	Collector Channel Element Bottom Width	Collector Channel Element Side Slopes	Main Channel Element Length feet	Main Channel Element Slope ft/ft	Main Channel Element n	Main Channel Element Shape	Main Channel Element Bottom Width	Main Channel Element Side Slopes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
S30N	0.6518	82.0	13	300	0.350	0.13	20	1550	0.069	0.045	0.0096	TRAP	0	12	10520	0.038	0.040	TRAP	15	15
		82.0	13	300	0.050	0.13	80													
S31.1	0.2663	76.6	13	300	0.567	0.13	10	1950	0.056	0.045	0.0147	TRAP	0	10	7600	0.035	0.040	TRAP	22	8
		76.6	13	300	0.050	0.13	90													
S34.2	0.4441	77.3	12	50	0.100	0.13	10	2200	0.045	0.045	0.0538	TRAP	0	10	8150	0.039	0.045	TRAP	0	10
		77.3	12	300	0.040	0.13	90													
S35N	0.5482	82.0	13	300	0.491	0.13	15	2700	0.079	0.045	0.0242	TRAP	3	6	5050	0.028	0.040	TRAP	15	15
		82.0	13	300	0.113	0.13	85													
S36.2	0.2087	76.6	13	300	0.580	0.13	5	1800	0.036	0.045	0.0145	TRAP	10	10	3520	0.028	0.040	TRAP	20	6
		76.6	13	300	0.100	0.13	95													
S34.1	1.1635	77.3	12	300	0.590	0.13	25	2570	0.085	0.045	0.0214	TRAP	0	10	8800	0.033	0.040	TRAP	20	10
		77.3	12	300	0.040	0.13	75													
S36.1	0.1394	73.4	11	300	0.042	0.13	100	2330	0.032	0.045	0.0134	TRAP	10	30	3200	0.027	0.040	TRAP	20	30
S36R1A	0.6310	74.3	10	300	0.020	0.13	100	1420	0.032	0.045	0.0061	TRAP	0	13	10800	0.033	0.040	TRAP	10	9
S36R1B	0.0586	74.3	10	300	0.020	0.13	100	1420	0.032	0.045	0.0061	TRAP	0	13	8500	0.033	0.040	TRAP	10	9
S36R2A	0.1325	72.0	20	100	0.045	0.13	100	1900	0.032	0.017	0.0150	TRAP	15	7	800	0.030	0.040	TRAP	30	10
S36R2B	0.2417	72.0	12	280	0.045	0.10	100	1900	0.032	0.017	0.0150	TRAP	15	7	7360	0.030	0.040	TRAP	30	10
S51.1	1.1300	73.9	12	300	0.037	0.13	100	1800	0.038	0.045	0.0161	TRAP	0	12	14400	0.032	0.040	TRAP	40	15
*** BEGIN DC RANCH WATERSHED ***																				
52D4	0.0700	75	14.5	120	0.01	0.15	100	---	---	---	---	---	---	---	3100	0.035	0.045	TRAP	30	10
52D4B	0.0220	75	63	120	0.01	0.15	100	---	---	---	---	---	---	---	2200	0.033	0.045	TRAP	30	10
52D5A	0.0232	75	63	120	0.01	0.15	100	---	---	---	---	---	---	---	1300	0.032	0.045	TRAP	30	10
52C3	0.0060	75	65	100	0.02	0.1	100	---	---	---	---	---	---	---	800	0.033	0.045	TRAP	30	10
52C3B	0.0160	75	60	100	0.02	0.1	100	---	---	---	---	---	---	---	1400	0.034	0.045	TRAP	30	10
51C	0.0972	74	15	100	0.0213	0.1	100	---	---	---	---	---	---	---	3900	0.0375	0.045	TRAP	30	10
52C1	0.0290	75	20.5	100	0.02	0.1	100	---	---	---	---	---	---	---	1350	0.021	0.045	TRAP	30	10
52C2A	0.0190	75	2	100	0.02	0.1	100	---	---	---	---	---	---	---	1500	0.033	0.045	TRAP	30	10
52C2B	0.0275	75	11	100	0.02	0.1	100	---	---	---	---	---	---	---	2000	0.03	0.045	TRAP	30	10
52C2C	0.0140	75	62	100	0.02	0.1	100	---	---	---	---	---	---	---	1500	0.04	0.045	TRAP	30	10
52C4	0.0170	75	60	100	0.02	0.1	100	---	---	---	---	---	---	---	1550	0.03	0.045	TRAP	30	10
52C13	0.0230	75	31	100	0.02	0.1	100	---	---	---	---	---	---	---	950	0.04	0.045	TRAP	30	10
52C15	0.0460	75	64.4	100	0.02	0.1	100	---	---	---	---	---	---	---	2050	0.036	0.045	TRAP	30	10
52C14A	0.0410	75	67.7	100	0.02	0.1	100	---	---	---	---	---	---	---	2050	0.031	0.045	TRAP	30	10
52C5	0.0160	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	1200	0.03	0.045	TRAP	30	10
52C6	0.0360	75	31.4	100	0.02	0.1	100	---	---	---	---	---	---	---	3100	0.035	0.045	TRAP	30	10
51B	0.5711	71.9	13.1	100	0.0213	0.1	100	---	---	---	---	---	---	---	8900	0.03	0.045	TRAP	50	25
52C7	0.0060	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	550	0.04	0.045	TRAP	30	10
52C8	0.0080	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	750	0.034	0.045	TRAP	30	10
52C9	0.0690	75	31.85	100	0.02	0.1	100	---	---	---	---	---	---	---	3150	0.036	0.045	TRAP	30	10
52C10	0.0140	75	7.85	100	0.02	0.1	100	---	---	---	---	---	---	---	800	0.032	0.045	TRAP	30	10
52C11	0.0425	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	2800	0.031	0.045	TRAP	30	10
52C12	0.0230	75	85	100	0.02	0.1	100	---	---	---	---	---	---	---	900	0.03	0.045	TRAP	30	10
52C14B	0.0210	75	60	100	0.02	0.1	100	---	---	---	---	---	---	---	1250	0.029	0.045	TRAP	30	10
52B1	0.0030	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	600	0.039	0.045	TRAP	30	10
52B2	0.0320	75	17	100	0.02	0.1	100	---	---	---	---	---	---	---	2350	0.037	0.045	TRAP	30	10
52B3	0.0620	75	31.8	100	0.02	0.1	100	---	---	---	---	---	---	---	3450	0.03	0.045	TRAP	30	10
52B4	0.0260	75	62	100	0.02	0.1	100	---	---	---	---	---	---	---	1700	0.024	0.045	TRAP	30	10
52B5	0.0210	75	56.9	100	0.02	0.1	100	---	---	---	---	---	---	---	1400	0.03	0.045	TRAP	30	10

Table A-1

Subbasin input parameters for the Pima Road Three Basin design hydrology
Future full build-out conditions (ultimate)

Subbasin ID	Drainage Area sq. mi.	Rainfall Losses Curve No.	Rainfall Losses RTIMP %	Overland Flow Element Length feet	Overland Flow Element Slope ft/ft	Overland Flow Element n	Overland Flow Element % Contributing	Collector Channel Element Length feet	Collector Channel Element Slope ft/ft	Collector Channel Element n	Collector Channel Element Contrib. Area sm	Collector Channel Element Shape	Collector Channel Element Bottom Width	Collector Channel Element Side Slopes	Main Channel Element Length feet	Main Channel Element Slope ft/ft	Main Channel Element n	Main Channel Element Shape	Main Channel Element Bottom Width	Main Channel Element Side Slopes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
52B6	0.0960	75	13.55	100	0.02	0.1	100	---	---	---	---	---	---	---	3200	0.033	0.045	TRAP	30	10
52B7	0.0800	75	78.45	100	0.02	0.1	100	---	---	---	---	---	---	---	2750	0.028	0.045	TRAP	30	10
52A2	0.0650	75	88.8	100	0.02	0.1	100	---	---	---	---	---	---	---	2900	0.023	0.045	TRAP	30	10
52A1	0.1300	75	32.25	100	0.02	0.1	100	---	---	---	---	---	---	---	3400	0.033	0.045	TRAP	30	10
*** END DC RANCH WATERSHED ***																				
*** BEGIN GRAYHAWK WATERSHED ***																				
37A	0.6765	74	24.8	61	0.0213	0.1	100	---	---	---	---	---	---	---	4800	0.0237	0.045	TRAP	50	130
SUB5N	0.0290	77	18	100	0.013	0.15	100	1000	0.005	0.018	0.015	TRAP	50	20	500	0.015	0.025	TRAP	10	4
SUB6B	0.0320	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	1300	0.015	0.025	TRAP	10	4
SUB1N	0.0190	77	18	100	0.013	0.15	100	---	---	---	---	---	---	---	1470	0.0204	0.018	TRAP	50	20
SUB2NA	0.0150	81	0	150	0.013	0.15	100	---	---	---	---	---	---	---	1050	0.0215	0.025	TRAP	20	6
SUB2NB	0.0300	77	53	150	0.013	0.15	100	---	---	---	---	---	---	---	1200	0.015	0.025	TRAP	20	50
SUB6N	0.0490	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	1300	0.015	0.025	TRAP	10	4
SUB3N	0.0270	81	0	100	0.02	0.15	100	---	---	---	---	---	---	---	2800	0.0207	0.025	TRAP	10	4
SUB4N	0.0320	77	18	100	0.015	0.15	100	---	---	---	---	---	---	---	1200	0.007	0.018	TRAP	50	20
SUB6A	0.0130	83	68	100	0.015	0.12	100	---	---	---	---	---	---	---	800	0.01	0.025	TRAP	2	3
SUB3C	0.0104	77	68	100	0.025	0.02	100	---	---	---	---	---	---	---	600	0.015	0.035	TRAP	50	20
GC1018	0.0440	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	1800	0.0233	0.025	TRAP	10	4
GC1-9	0.0260	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	2110	0.022	0.025	TRAP	10	4
SUB3S	0.0102	77	53	100	0.01	0.15	100	---	---	---	---	---	---	---	930	0.016	0.025	TRAP	50	20
SUB4S	0.0273	77	53	100	0.01	0.15	100	---	---	---	---	---	---	---	1780	0.018	0.015	TRAP	50	20
GC2-8	0.0140	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	980	0.016	0.025	TRAP	10	4
SUB3D3	0.0140	81	0	50	0.015	0.1	100	---	---	---	---	---	---	---	2450	0.016	0.025	TRAP	5	4
GC7	0.0134	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	1380	0.02	0.025	TRAP	10	4
SUB3D1	0.0088	77	34	SCS dimensionless hydrograph with a lag time of 0.06 hrs.																
SUB3B1	0.0137	77	47	SCS dimensionless hydrograph with a lag time of 0.06 hrs.																
SUB3F	0.0344	77	68	100	0.025	0.15	100	---	---	---	---	---	---	---	1000	0.015	0.025	TRAP	100	20
SUB3B2	0.0246	77	40	SCS dimensionless hydrograph with a lag time of 0.10 hrs.																
SUB3E1	0.0246	77	40	SCS dimensionless hydrograph with a lag time of 0.10 hrs.																
SUB3D2	0.0220	77	35	SCS dimensionless hydrograph with a lag time of 0.08 hrs.																
SUB3E2	0.0120	77	35	SCS dimensionless hydrograph with a lag time of 0.06 hrs.																
PC3*	0.0434	77	10	100	0.015	0.15	100	---	---	---	---	---	---	---	2200	0.01	0.03	TRAP	30	4
SUB3E3	0.0200	77	32	SCS dimensionless hydrograph with a lag time of 0.06 hrs.																
PC4*	0.0217	77	0	100	0.015	0.15	100	---	---	---	---	---	---	---	1100	0.01	0.03	TRAP	30	4
SUB13N	0.0370	77	24	100	0.015	0.15	100	---	---	---	---	---	---	---	2400	0.007	0.018	TRAP	50	20
SUB14N	0.0490	81	0	300	0.025	0.15	100	---	---	---	---	---	---	---	2300	0.01	0.025	TRAP	10	4
SUB20N	0.0240	77	24	200	0.01	0.15	100	---	---	---	---	---	---	---	1400	0.02	0.018	TRAP	50	20
SUB19N	0.0380	77	31	150	0.01	0.15	100	---	---	---	---	---	---	---	1800	0.015	0.018	TRAP	50	20
UB18NC	0.0210	77	42	100	0.01	0.15	100	---	---	---	---	---	---	---	1550	0.02	0.018	TRAP	50	20
UB18NA	0.0220	77	42	100	0.01	0.15	100	---	---	---	---	---	---	---	1450	0.02	0.018	TRAP	50	20
UB18NB	0.0096	77	42	100	0.01	0.15	100	---	---	---	---	---	---	---	800	0.02	0.018	TRAP	50	20
PC1	0.0620	77	10	500	0.015	0.15	100	---	---	---	---	---	---	---	2700	0.01	0.03	TRAP	30	4
UB16NA	0.0139	77	42	100	0.015	0.15	100	---	---	---	---	---	---	---	1500	0.015	0.022	TRAP	50	20
UB16NB	0.0156	77	42	100	0.015	0.15	100	---	---	---	---	---	---	---	1500	0.015	0.022	TRAP	50	20
SUB7N	0.0310	77	18	100	0.015	0.15	100	---	---	---	---	---	---	---	1900	0.01	0.018	TRAP	50	20
SUB8NA	0.0046	81	0	100	0.03	0.15	100	---	---	---	---	---	---	---	450	0.03	0.025	TRAP	20	6
SUB8NB	0.0142	81	0	100	0.03	0.15	100	---	---	---	---	---	---	---	1150	0.025	0.025	TRAP	20	6
SUB8NC	0.0182	81	0	100	0.03	0.15	100	---	---	---	---	---	---	---	900	0.03	0.025	TRAP	20	6

Table A-1

Subbasin input parameters for the Pima Road Three Basin design hydrology
Future full build-out conditions (ultimate)

Subbasin	Drainage	Rainfall Losses		Overland Flow Element				Collector Channel Element							Main Channel Element					
ID	Area	Curve No.	RTIMP	Length	Slope	n	% Contributing	Length	Slope	n	Contrib. Area	Shape	Bottom Width	Side Slopes	Length	Slope	n	Shape	Bottom Width	Side Slopes
	sq. mi.		%	feet	ft/ft			feet	ft/ft		sm				feet	ft/ft				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
SUB9N	0.0550	77	28	100	0.008	0.15	100	---	---	---	---	---	---	---	1700	0.01	0.018	TRAP	50	20
SUB10B	0.0280	77	42	100	0.015	0.15	100	350	0.008	0.018	0	TRAP	50	20	600	0.008	0.025	TRAP	10	4
UB11NA	0.0076	81	0	100	0.025	0.15	100	---	---	---	---	---	---	---	500	0.03	0.025	TRAP	30	6
UB11NB	0.0078	81	0	100	0.04	0.15	100	---	---	---	---	---	---	---	700	0.025	0.025	TRAP	30	6
UB11NC	0.0069	81	0	100	0.03	0.15	100	---	---	---	---	---	---	---	650	0.028	0.025	TRAP	20	5
SUB10A	0.0300	77	42	100	0.015	0.15	100	350	0.008	0.018	0	TRAP	50	20	800	0.008	0.025	TRAP	10	4
UB12NA	0.0153	81	0	150	0.025	0.15	100	---	---	---	---	---	---	---	650	0.017	0.025	TRAP	30	6
UB12NB	0.0157	81	0	150	0.025	0.15	100	---	---	---	---	---	---	---	650	0.017	0.025	TRAP	30	6
UB16NC	0.0337	77	42	100	0.015	0.15	100	---	---	---	---	---	---	---	1600	0.015	0.022	TRAP	50	20
PC2	0.0540	77	10	100	0.015	0.15	100	---	---	---	---	---	---	---	2700	0.01	0.03	TRAP	50	4
UB17NA	0.0098	81	0	150	0.025	0.05	100	---	---	---	---	---	---	---	960	0.0292	0.025	TRAP	30	50
UB17NB	0.0111	81	0	150	0.025	0.05	100	---	---	---	---	---	---	---	1200	0.0217	0.025	TRAP	30	50
SUB17A	0.0079	77	34	75	0.03	0.05	100	---	---	---	---	---	---	---	1500	0.02	0.025	TRAP	8	4
UB17NC	0.0056	77	12	75	0.03	0.05	100	---	---	---	---	---	---	---	910	0.0187	0.025	TRAP	8	4
SUB15N	0.0391	77	68	100	0.01	0.15	100	400	0.008	0.018	0	TRAP	50	20	1700	0.015	0.025	TRAP	10	4
SUB1-2	0.0558	77	68	200	0.01	0.15	100	---	---	---	---	---	---	---	1370	0.027	0.015	TRAP	50	20
SUB5S	0.0263	77	31	100	0.01	0.15	100	---	---	---	---	---	---	---	1280	0.007	0.015	TRAP	50	20
GC1216	0.0365	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	2200	0.024	0.025	TRAP	10	4
GC1415	0.0450	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	1300	0.022	0.025	TRAP	10	4
SUB6S	0.0210	77	42	100	0.01	0.15	100	---	---	---	---	---	---	---	2150	0.013	0.025	TRAP	50	20
SUB7S	0.0270	77	42	100	0.01	0.15	100	---	---	---	---	---	---	---	2080	0.023	0.025	TRAP	50	20
SUB8S	0.0256	77	42	100	0.01	0.15	100	---	---	---	---	---	---	---	1600	0.015	0.025	TRAP	50	20
GC36	0.0406	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	2350	0.015	0.035	TRAP	10	4
SUB9S	0.0210	77	53	100	0.01	0.15	100	---	---	---	---	---	---	---	1100	0.013	0.025	TRAP	50	20
SUB7A	0.0092	77	42	100	0.025	0.15	100	---	---	---	---	---	---	---	950	0.015	0.025	TRAP	50	20
SUB10S	0.0248	77	53	100	0.01	0.15	100	---	---	---	---	---	---	---	1150	0.02	0.025	TRAP	50	20
SUB11S	0.0234	77	68	100	0.015	0.018	100	---	---	---	---	---	---	---	1050	0.015	0.025	TRAP	100	20
GC45	0.0127	81	0	200	0.015	0.025	100	---	---	---	---	---	---	---	550	0.015	0.035	TRAP	10	4
PC5*	0.0370	77	0	100	0.015	0.15	100	---	---	---	---	---	---	---	1900	0.01	0.03	TRAP	30	4
								*** END GRAYHAWK WATERSHED ***												
SCN5C	0.2629	74	50	240	0.025	0.13	100	1200	0.015	0.04	0.0248	TRAP	0	5	1500	0.005	0.03	TRAP	6	2
SCN6D	0.0143	74	80	100	0.01	0.15	90	600	0.015	0.025	0.0036	TRAP	0	5	400	0.01	0.025	TRAP	6	2
		74	0	100	0.025	0.13	10													
SCN6C	0.1008	74	80	150	0.01	0.15	50	1140	0.01	0.03	0.123	TRAP	5	10	1100	0.015	0.024	CIRC	5	---
		74	0	100	0.025	0.13	50	1320	0.015	0.04	0.0095	TRAP	0	5						
S53A	0.1794	74	11	300	0.022	0.13	100	1475	0.026	0.045	0.0111	TRAP	3	5	1750	0.021	0.040	TRAP	25	5
S53A1	0.3320	74	12	300	0.022	0.13	70	1250	0.023	0.045	0.0087	TRAP	4	5	5050	0.017	0.040	TRAP	35	5
		74	30	150	0.027	0.10	30													
SCN6B	0.0520	74	80	150	0.010	0.15	70	720	0.020	0.030	0.0084	TRAP	5	10	440	0.009	0.035	TRAP	6	3
		74	0	100	0.025	0.13	30	700	0.010	0.040	0.0050	TRAP	0	10						
SCN6E	0.0852	74	5	300	0.010	0.13	100	---	---	---	---	---	---	---	1400	0.010	0.035	TRAP	20	4
S54	0.0853	74	50	300	0.017	0.13	100	---	---	---	---	---	---	---	3460	0.012	0.040	TRAP	5	2
SCN6A	0.1335	74	50	300	0.017	0.13	100	1050	0.017	0.045	0.0057	TRAP	8	20	2250	0.012	0.040	TRAP	10	4

note *: Subbasins added by GVSCE in order to bring flow previously released to natural channels together, routing the hydrographs down to the Union Hills detention basin.

Table A-2

Subbasin input parameters for the Pima Road Three Basin design hydrology
Future full build-out conditions (interim)

Subbasin ID	Drainage Area sq. mi.	Rainfall Losses Curve No.	Rainfall Losses RTIMP %	Overland Flow Element Length feet	Overland Flow Element Slope ft/ft	Overland Flow Element n	Overland Flow Element % Contributing	Collector Channel Element Length feet	Collector Channel Element Slope ft/ft	Collector Channel Element n	Collector Channel Element Contrib. Area sm	Collector Channel Element Shape	Collector Channel Element Bottom Width	Collector Channel Element Side Slopes	Main Channel Element Length feet	Main Channel Element Slope ft/ft	Main Channel Element n	Main Channel Element Shape	Main Channel Element Bottom Width	Main Channel Element Side Slopes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
S30N	0.6518	82.0	13	300	0.350	0.13	20	1550	0.069	0.045	0.0096	TRAP	0	12	10520	0.038	0.040	TRAP	15	15
		82.0	13	300	0.050	0.13	80													
S31.1	0.2663	76.6	13	300	0.567	0.13	10	1950	0.056	0.045	0.0147	TRAP	0	10	7600	0.035	0.040	TRAP	22	8
		76.6	13	300	0.050	0.13	90													
S34.2	0.4441	77.3	12	50	0.100	0.13	10	2200	0.045	0.045	0.0538	TRAP	0	10	8150	0.039	0.045	TRAP	0	10
		77.3	12	300	0.040	0.13	90													
S35N	0.5482	82.0	13	300	0.491	0.13	15	2700	0.079	0.045	0.0242	TRAP	3	6	5050	0.028	0.040	TRAP	15	15
		82.0	13	300	0.113	0.13	85													
S36.2	0.2087	76.6	13	300	0.580	0.13	5	1800	0.036	0.045	0.0145	TRAP	10	10	3520	0.028	0.040	TRAP	20	6
		76.6	13	300	0.100	0.13	95													
S34.1	1.1635	77.3	12	300	0.590	0.13	25	2570	0.085	0.045	0.0214	TRAP	0	10	8800	0.033	0.040	TRAP	20	10
		77.3	12	300	0.040	0.13	75													
S36.1	0.1394	73.4	11	300	0.042	0.13	100	2330	0.032	0.045	0.0134	TRAP	10	30	3200	0.027	0.040	TRAP	20	30
S36R1A	0.6310	74.3	10	300	0.020	0.13	100	1420	0.032	0.045	0.0061	TRAP	0	13	10800	0.033	0.040	TRAP	10	9
S36R1B	0.0586	74.3	10	300	0.020	0.13	100	1420	0.032	0.045	0.0061	TRAP	0	13	8500	0.033	0.040	TRAP	10	9
S36R2A	0.1325	72.0	20	100	0.045	0.13	100	1900	0.032	0.017	0.0150	TRAP	15	7	800	0.030	0.040	TRAP	30	10
S36R2B	0.2417	72.0	12	280	0.045	0.10	100	1900	0.032	0.017	0.0150	TRAP	15	7	7360	0.030	0.040	TRAP	30	10
S51.1	1.1300	73.9	12	300	0.037	0.13	100	1800	0.038	0.045	0.0161	TRAP	0	12	14400	0.032	0.040	TRAP	40	15
								*** BEGIN DC RANCH WATERSHED ***												
52D4	0.0700	75	14.5	120	0.01	0.15	100	---	---	---	---	---	---	---	3100	0.035	0.045	TRAP	30	10
52D4B	0.0220	75	63	120	0.01	0.15	100	---	---	---	---	---	---	---	2200	0.033	0.045	TRAP	30	10
52D5A	0.0232	75	63	120	0.01	0.15	100	---	---	---	---	---	---	---	1300	0.032	0.045	TRAP	30	10
52C3	0.0060	75	65	100	0.02	0.1	100	---	---	---	---	---	---	---	800	0.033	0.045	TRAP	30	10
52C3B	0.0160	75	60	100	0.02	0.1	100	---	---	---	---	---	---	---	1400	0.034	0.045	TRAP	30	10
51C	0.0972	74	15	100	0.0213	0.1	100	---	---	---	---	---	---	---	3900	0.0375	0.045	TRAP	30	10
52C1	0.0290	75	20.5	100	0.02	0.1	100	---	---	---	---	---	---	---	1350	0.021	0.045	TRAP	30	10
52C2A	0.0190	75	2	100	0.02	0.1	100	---	---	---	---	---	---	---	1500	0.033	0.045	TRAP	30	10
52C2B	0.0275	75	11	100	0.02	0.1	100	---	---	---	---	---	---	---	2000	0.03	0.045	TRAP	30	10
52C2C	0.0140	75	62	100	0.02	0.1	100	---	---	---	---	---	---	---	1500	0.04	0.045	TRAP	30	10
52C4	0.0170	75	60	100	0.02	0.1	100	---	---	---	---	---	---	---	1550	0.03	0.045	TRAP	30	10
52C13	0.0230	75	31	100	0.02	0.1	100	---	---	---	---	---	---	---	950	0.04	0.045	TRAP	30	10
52C15	0.0460	75	64.4	100	0.02	0.1	100	---	---	---	---	---	---	---	2050	0.036	0.045	TRAP	30	10
52C14A	0.0410	75	67.7	100	0.02	0.1	100	---	---	---	---	---	---	---	2050	0.031	0.045	TRAP	30	10
52C5	0.0160	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	1200	0.03	0.045	TRAP	30	10
52C6	0.0360	75	31.4	100	0.02	0.1	100	---	---	---	---	---	---	---	3100	0.035	0.045	TRAP	30	10
51B	0.5711	71.9	13.1	100	0.0213	0.1	100	---	---	---	---	---	---	---	8900	0.03	0.045	TRAP	50	25
52C7	0.0060	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	550	0.04	0.045	TRAP	30	10
52C8	0.0080	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	750	0.034	0.045	TRAP	30	10
52C9	0.0690	75	31.85	100	0.02	0.1	100	---	---	---	---	---	---	---	3150	0.036	0.045	TRAP	30	10
52C10	0.0140	75	7.85	100	0.02	0.1	100	---	---	---	---	---	---	---	800	0.032	0.045	TRAP	30	10
52C11	0.0425	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	2800	0.031	0.045	TRAP	30	10
52C12	0.0230	75	85	100	0.02	0.1	100	---	---	---	---	---	---	---	900	0.03	0.045	TRAP	30	10
52C14B	0.0210	75	60	100	0.02	0.1	100	---	---	---	---	---	---	---	1250	0.029	0.045	TRAP	30	10
52B1	0.0030	75	27	100	0.02	0.1	100	---	---	---	---	---	---	---	600	0.039	0.045	TRAP	30	10
52B2	0.0320	75	17	100	0.02	0.1	100	---	---	---	---	---	---	---	2350	0.037	0.045	TRAP	30	10
52B3	0.0620	75	31.8	100	0.02	0.1	100	---	---	---	---	---	---	---	3450	0.03	0.045	TRAP	30	10
52B4	0.0260	75	62	100	0.02	0.1	100	---	---	---	---	---	---	---	1700	0.024	0.045	TRAP	30	10

Table A-2

Subbasin input parameters for the Pima Road Three Basin design hydrology
Future full build-out conditions (interim)

Subbasin ID	Drainage Area sq. mi.	Rainfall Losses		Overland Flow Element				Collector Channel Element							Main Channel Element					
		Curve No.	RTIMP %	Length feet	Slope ft/ft	n	% Contributing	Length feet	Slope ft/ft	n	Contrib. Area sm	Shape	Bottom Width	Side Slopes	Length feet	Slope ft/ft	n	Shape	Bottom Width	Side Slopes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
52B5	0.0210	75	56.9	100	0.02	0.1	100	---	---	---	---	---	---	---	1400	0.03	0.045	TRAP	30	10
52B6	0.0960	75	13.55	100	0.02	0.1	100	---	---	---	---	---	---	---	3200	0.033	0.045	TRAP	30	10
52B7	0.0800	75	78.45	100	0.02	0.1	100	---	---	---	---	---	---	---	2750	0.028	0.045	TRAP	30	10
52A2	0.0650	75	88.8	100	0.02	0.1	100	---	---	---	---	---	---	---	2900	0.023	0.045	TRAP	30	10
52A1	0.1300	75	32.25	100	0.02	0.1	100	---	---	---	---	---	---	---	3400	0.033	0.045	TRAP	30	10
								*** END DC RANCH WATERSHED ***												
								*** BEGIN GRAYHAWK WATERSHED ***												
37A	0.6765	74	24.8	61	0.0213	0.1	100	---	---	---	---	---	---	---	4800	0.0237	0.045	TRAP	50	130
SUB5N	0.0290	77	18	100	0.013	0.15	100	1000	0.005	0.018	0.015	TRAP	50	20	500	0.015	0.025	TRAP	10	4
SUB6B	0.0320	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	1300	0.015	0.025	TRAP	10	4
SUB1N	0.0190	77	18	100	0.013	0.15	100	---	---	---	---	---	---	---	1470	0.0204	0.018	TRAP	50	20
SUB2NA	0.0150	81	0	150	0.013	0.15	100	---	---	---	---	---	---	---	1050	0.0215	0.025	TRAP	20	6
SUB2NB	0.0300	77	53	150	0.013	0.15	100	---	---	---	---	---	---	---	1200	0.015	0.025	TRAP	20	50
SUB6N	0.0490	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	1300	0.015	0.025	TRAP	10	4
SUB3N	0.0270	81	0	100	0.02	0.15	100	---	---	---	---	---	---	---	2800	0.0207	0.025	TRAP	10	4
SUB4N	0.0320	77	18	100	0.015	0.15	100	---	---	---	---	---	---	---	1200	0.007	0.018	TRAP	50	20
SUB6A	0.0130	83	68	100	0.015	0.12	100	---	---	---	---	---	---	---	800	0.01	0.025	TRAP	2	3
SUB3C	0.0104	77	68	100	0.025	0.02	100	---	---	---	---	---	---	---	600	0.015	0.035	TRAP	50	20
GC1018	0.0440	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	1800	0.0233	0.025	TRAP	10	4
GC1-9	0.0260	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	2110	0.022	0.025	TRAP	10	4
SUB3S	0.0102	77	53	100	0.01	0.15	100	---	---	---	---	---	---	---	930	0.016	0.025	TRAP	50	20
SUB4S	0.0273	77	53	100	0.01	0.15	100	---	---	---	---	---	---	---	1780	0.018	0.015	TRAP	50	20
GC2-8	0.0140	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	980	0.016	0.025	TRAP	10	4
SUB3D3	0.0140	81	0	50	0.015	0.1	100	---	---	---	---	---	---	---	2450	0.016	0.025	TRAP	5	4
GC7	0.0134	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	1380	0.02	0.025	TRAP	10	4
SUB3B2	0.0246	77	40	SCS dimensionless hydrograph with a lag time of 0.10 hrs.																
SUB3E1	0.0246	77	40	SCS dimensionless hydrograph with a lag time of 0.10 hrs.																
SUB3D2	0.0220	77	35	SCS dimensionless hydrograph with a lag time of 0.08 hrs.																
SUB3E2	0.0120	77	35	SCS dimensionless hydrograph with a lag time of 0.06 hrs.																
SUB3E3	0.0200	77	32	SCS dimensionless hydrograph with a lag time of 0.06 hrs.																
SCN5C*	0.2602	74	0	240	0.025	0.13	100	1200	0.015	0.04	0.0248	TRAP	0	5	1500	0.005	0.03	TRAP	6	2
SUB8S	0.0256	77	42	100	0.01	0.15	100	---	---	---	---	---	---	---	1600	0.015	0.025	TRAP	50	20
GC36	0.0406	81	0	200	0.025	0.15	100	---	---	---	---	---	---	---	2350	0.015	0.035	TRAP	10	4
SUB9S	0.0210	77	53	100	0.01	0.15	100	---	---	---	---	---	---	---	1100	0.013	0.025	TRAP	50	20
SCN5D*	0.0553	74	0	240	0.025	0.13	100	1200	0.015	0.04	0.0248	TRAP	0	5	600	0.01	0.035	TRAP	6	2
SUB7A	0.0092	77	42	100	0.025	0.15	100	---	---	---	---	---	---	---	950	0.015	0.025	TRAP	50	20
SUB10S	0.0248	77	53	100	0.01	0.15	100	---	---	---	---	---	---	---	1150	0.02	0.025	TRAP	50	20
SUB11S	0.0234	77	68	100	0.015	0.018	100	---	---	---	---	---	---	---	1050	0.015	0.025	TRAP	100	20
GC45	0.0127	81	0	200	0.015	0.025	100	---	---	---	---	---	---	---	550	0.015	0.035	TRAP	10	4
								*** END GRAYHAWK WATERSHED ***												
SCN6D	0.0201	74	80	100	0.01	0.15	80	600	0.015	0.025	0.0036	TRAP	0	5	400	0.01	0.025	TRAP	6	2
		74	0	100	0.025	0.13	20													
SCN6C	0.1008	74	80	150	0.01	0.15	50	1140	0.01	0.03	0.123	TRAP	5	10	1100	0.015	0.024	CIRC	5	
		74	0	100	0.025	0.13	50	1320	0.015	0.04	0.0095	TRAP	0	5						
S53A	0.1794	74	11	300	0.022	0.13	100	1475	0.026	0.045	0.0111	TRAP	3	5	1750	0.021	0.040	TRAP	25	5
S53A1	0.3320	74	12	300	0.022	0.13	70	1250	0.023	0.045	0.0087	TRAP	4	5	5050	0.017	0.040	TRAP	35	5
		74	30	150	0.027	0.10	30													

Table A-2

Subbasin input parameters for the Pima Road Three Basin design hydrology
Future full build-out conditions (interim)

Subbasin ID	Drainage Area sq. mi.	Rainfall Losses		Overland Flow Element				Collector Channel Element							Main Channel Element					
		Curve No.	RTIMP %	Length feet	Slope ft/ft	n	% Contributing	Length feet	Slope ft/ft	n	Contrib. Area sm	Shape	Bottom Width	Side Slopes	Length feet	Slope ft/ft	n	Shape	Bottom Width	Side Slopes
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
SCN6B	0.0520	74	80	150	0.010	0.15	70	720	0.020	0.030	0.0084	TRAP	5	10	440	0.009	0.035	TRAP	6	3
		74	0	100	0.025	0.13	30	700	0.010	0.040	0.0050	TRAP	0	10						
SCN6E	0.0852	74	5	300	0.010	0.13	100	---	---	---	---	---	---	---	1400	0.010	0.035	TRAP	20	4
S54	0.0853	74	50	300	0.017	0.13	100	---	---	---	---	---	---	---	3460	0.012	0.040	TRAP	5	2
SCN6A	0.1335	74	50	300	0.017	0.13	100	1050	0.017	0.045	0.0057	TRAP	8	20	2250	0.012	0.040	TRAP	10	4

note *: Subbasins added by GVSCE in order to bring flow previously released to natural channels together, routing the hydrographs down to the Union Hills detention basin.

APPENDIX B

Happy Valley Detention Basin Stage/Storage/Discharge Relations
and
Supporting Technical Calculations and Output

Table B-1

HY8 Inlet Control 42" rcp			StormCad Hydraulic Gradeline 42" rcp		Interplated Values		
Discharge cfs	Depth feet	Stage feet	Discharge cfs	Stage feet	Discharge cfs	HY8 Stage feet	Winstorm Stage feet
0	0	2065	0	2065	0	2065.00	2065
25	2.21	2067.2	10	2066.13	10	2065.88	2066.13
50	3.42	2068.4	20	2066.63	20	2066.77	2066.63
75	4.75	2069.8	30	2067.04	30	2067.45	2067.04
100	6.6	2071.6	40	2067.41	40	2067.94	2067.41
125	9.03	2074	50	2067.79	50	2068.42	2067.79
150	12	2077	60	2068.23	60	2068.95	2068.23
			70	2070.44	70	2069.48	2070.44
			80	2072.26	80	2070.12	2072.26
			90	2074.32	90	2070.86	2074.32
			100	2076.62	100	2071.60	2076.62
			110	2079.16	110	2072.57	2079.16
			120	2081.95	120	2073.54	2081.95
			130	2084.98	130	2074.62	2084.98
			140	2088.25	140	2075.81	2088.25
			150	2091.77	150	2077.00	2091.77

Happy Valley Detention Basin Rating Cuves for the 100-year, 6-hour storm

Stage feet	Volume acre-feet	Discharge cfs
2065.00	0	0
2066.00	0.2	9
2066.13	0.3	10
2066.77	0.6	20
2067.00	0.7	23
2067.45	1.2	30
2067.94	1.7	40
2068.00	1.8	41
2068.42	2.5	50
2068.95	3.3	60
2069.00	3.4	60
2070.00	5.4	67
2070.44	8.1	70
2072.26	19.4	80
2074.32	32.1	90
2075.00	36.3	93
2076.62	53.1	100
2079.16	79.4	110
2080.00	88.1	113
2081.95	112.3	120
2084.98	150.0	130
2085.00	150.2	130
2088.25	198.4	140
2090.00	224.3	145
2091.00	240.0	148
2091.77	---	150

Table B-2

HY8 Inlet Control 42" rcp			Winstorm Hydraulic Gradeline 42" rcp		Interplated Values			Weir flow	
Discharge cfs	Depth feet	Stage feet	Discharge cfs	Stage feet	Discharge cfs	HY8 Stage feet	Winstorm Stage feet	Discharge cfs	Stage feet
0	0	2065	0	2065	0	2065.00	2065	0	2089.5
25	2.21	2067.2	10	2066.13	10	2065.88	2066.13	15.9	2089.6
50	3.42	2068.4	20	2066.63	20	2066.77	2066.63	45.4	2089.7
75	4.75	2069.8	30	2067.04	30	2067.45	2067.04	83.9	2089.8
100	6.6	2071.6	40	2067.41	40	2067.94	2067.41	130.1	2089.9
125	9.03	2074	50	2067.79	50	2068.42	2067.79	183	2090
150	12	2077	60	2068.23	60	2068.95	2068.23	242.1	2090.1
			70	2070.44	70	2069.48	2070.44	307.1	2090.2
			80	2072.26	80	2070.12	2072.26	377.5	2090.3
			90	2074.32	90	2070.86	2074.32	453.3	2090.4
			100	2076.62	100	2071.60	2076.62	534.3	2090.5
			110	2079.16	110	2072.57	2079.16	620.3	2090.6
			120	2081.95	120	2073.54	2081.95	711.2	2090.7
			130	2084.98	130	2074.62	2084.98	806.9	2090.8
			140	2088.25	140	2075.81	2088.25	907.3	2090.9
			150	2091.77	150	2077.00	2091.77	1012.4	2091

		Volume		
Stage feet	Area acres	Incr. acre-feet	Sed. acre-feet	Accum. acre-feet
2065	0.0	---	---	0
2066	0.3	0.2	0	0.2
2067	0.8	0.6	0	0.7
2068	1.4	1.1	0	1.8
2069	2.0	1.7	0	3.4
2070	4.2	3.0	1	5.4
2075	10.2	34.9	4	36.3
2080	12.1	55.7	4	88.1
2085	14.0	65.1	3	150.2
2090	15.7	74.1	0	224.3
2091	15.7	15.7	0	240.0

Happy Valley Detention Basin
Rating Cuves for the
100-year, 24-hour storm

		Discharge		
Stage feet	Volume acre-feet	Pipe cfs	Weir cfs	Total cfs
2065.00	0	0.00	0	0
2066.00	0.2	8.85	0	9
2066.13	0.3	10.00	0	10
2066.77	0.6	20.00	0	20
2067.00	0.7	23.39	0	23
2067.45	1.2	30.00	0	30
2067.94	1.7	40.00	0	40
2068.00	1.8	41.32	0	41
2068.42	2.5	50.00	0	50
2068.95	3.3	60.00	0	60
2069.00	3.4	60.32	0	60
2070.00	5.4	67.04	0	67
2070.44	8.1	70.00	0	70
2072.26	19.4	80.00	0	80
2074.32	32.1	90.00	0	90
2075.00	36.3	92.96	0	93
2076.62	53.1	100.00	0	100
2079.16	79.4	110.00	0	110
2080.00	88.1	113.01	0	113
2081.95	112.3	120.00	0	120
2084.98	150.0	130.00	0	130
2085.00	150.2	130.06	0	130
2088.25	198.4	140.00	0	140
2089.50	216.9	143.55	0	144
2089.60	218.4	143.84	16	160
2089.70	219.9	144.12	45	190
2089.80	221.3	144.40	84	228
2089.90	222.8	144.69	130	275
2090.00	224.3	144.97	183	328
2090.10	225.9	145.26	242	387
2090.20	227.4	145.54	307	453
2090.30	229.0	145.82	378	523
2090.40	230.6	146.11	453	599
2090.50	232.2	146.39	534	681
2090.60	233.7	146.68	620	767
2090.70	235.3	146.96	711	858
2090.80	236.9	147.24	807	954
2090.90	238.4	147.53	907	1055
2091.00	240.0	147.81	1012	1160

CURRENT DATE: 08-06-1997 FILE DATE: 08-06-1997
CURRENT TIME: 11:44:21 FILE NAME: HV-42

****
********** FHWA CULVERT ANALYSIS **********
********** HY-8, VERSION 6.0 **********
****

CULV NO.	SITE DATA: INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	CULVERT SHAPE, MATERIAL, INLET: BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	2065.00	2061.00	800.01	1 RCP	3.50	3.50	.012	CONVENTIONAL
2								
3								
4								
5								
6								

****

SUMMARY OF CULVERT FLOWS (cfs) FILE: HV-42 DATE: 08-06-1997

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
2065.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2067.21	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2068.42	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2069.75	75.0	75.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2073.32	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2078.86	125.0	125.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2085.23	150.0	150.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2092.71	175.0	175.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2101.35	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2111.14	225.0	225.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2122.08	250.0	250.0	0.0	0.0	0.0	0.0	0.0	0.00	1
2150.00	304.6	304.6	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

****

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: HV-42 DATE: 08-06-1997

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
2065.00	0.000	0.00	0.00	0.00
2067.21	0.000	25.00	0.00	0.00
2068.42	0.000	50.00	0.00	0.00
2069.75	0.000	75.00	0.00	0.00
2073.32	0.000	100.00	0.00	0.00
2078.86	0.000	125.00	0.00	0.00
2085.23	0.000	150.00	0.00	0.00
2092.71	0.000	175.00	0.00	0.00
2101.35	0.000	200.00	0.00	0.00
2111.14	0.000	225.00	0.00	0.00
2122.08	0.000	250.00	0.00	0.00

****

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

****

CURRENT DATE: 08-06-1997 FILE DATE: 08-06-1997
CURRENT TIME: 11:44:21 FILE NAME: HV-42

PERFORMANCE CURVE FOR CULVERT 1 - 1(3.50 (ft) BY 3.50 (ft)) RCP

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	2065.00	0.00	-4.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
25.00	2067.21	2.21	-0.91	1-S2n	1.37	1.53	1.23	0.94	8.26	0.00
50.00	2068.42	3.42	1.15	1-S2n	2.05	2.20	2.04	1.35	8.58	0.00
75.00	2069.75	4.75	4.72	2-M2c	2.78	2.70	2.70	1.66	9.43	0.00
100.00	2073.32	6.60	8.32	2-M2c	3.50	3.05	3.05	1.91	11.27	0.00
125.00	2078.86	9.03	13.86	2-M2c	3.50	3.37	3.37	2.13	13.25	0.00
150.00	2085.23	12.00	20.23	6-FFc	3.50	3.50	3.50	2.33	15.59	0.00
175.00	2092.71	15.47	27.71	6-FFc	3.50	3.50	3.50	2.51	18.19	0.00
200.00	2101.35	19.60	36.35	6-FFc	3.50	3.50	3.50	2.67	20.79	0.00
225.00	2111.14	24.90	46.14	6-FFc	3.50	3.50	3.50	2.82	23.39	0.00
250.00	2122.08	32.39	57.08	6-FFc	3.50	3.50	3.50	2.97	25.98	0.00

El. inlet face invert 2065.00 ft El. outlet invert 2061.00 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	2065.00 ft
OUTLET STATION	800.00 ft
OUTLET ELEVATION	2061.00 ft
NUMBER OF BARRELS	1
SLOPE (V/H)	0.0050
CULVERT LENGTH ALONG SLOPE	800.01 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	CIRCULAR
BARREL DIAMETER	3.50 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE WITH HEADWALL
INLET DEPRESSION	NONE

CURRENT DATE: 08-06-1997 FILE DATE: 08-06-1997
CURRENT TIME: 11:44:21 FILE NAME: HV-42

****
********** TAILWATER **********
****
****

TAILWATER RATING CURVE

FLOW (cfs)	W.S.E.(ft)	DEPTH (ft)
0	2061.00	0.00
25	2061.94	0.94
50	2062.35	1.35
75	2062.66	1.66
100	2062.91	1.91
125	2063.13	2.13
150	2063.33	2.33
175	2063.51	2.51
200	2063.67	2.67
225	2063.82	2.82
250	2063.97	2.97

****

****
********** ROADWAY OVERTOPPING DATA **********
****

ROADWAY SURFACE	GRAVEL
EMBANKMENT TOP WIDTH	1.00 ft
CREST LENGTH	100.00 ft
OVERTOPPING CREST ELEVATION	2150.00 ft

****

Table B-3

Happy valley basin outlet conduit node report

Node	Discharge (cfs)	Rim Elev (ft)	Sump Elev (ft)	HGL In (ft)	HGL Out (ft)
I-1	10	2,090.00	2,060.00	2,066.13	2,065.96
J-1	10	2,078.00	2,060.00	2,064.11	2,063.96
Outlet	10	2,071.00	2,060.00	2,061.95	2,061.95
I-1	20	2,090.00	2,060.00	2,066.63	2,066.37
J-1	20	2,078.00	2,060.00	2,064.60	2,064.37
Outlet	20	2,071.00	2,060.00	2,062.37	2,062.37
I-1	30	2,090.00	2,060.00	2,067.04	2,066.72
J-1	30	2,078.00	2,060.00	2,065.01	2,064.72
Outlet	30	2,071.00	2,060.00	2,062.72	2,062.72
I-1	40	2,090.00	2,060.00	2,067.41	2,067.05
J-1	40	2,078.00	2,060.00	2,065.38	2,065.05
Outlet	40	2,071.00	2,060.00	2,063.05	2,063.05
I-1	50	2,090.00	2,060.00	2,067.79	2,067.39
J-1	50	2,078.00	2,060.00	2,065.75	2,065.39
Outlet	50	2,071.00	2,060.00	2,063.39	2,063.39
I-1	60	2,090.00	2,060.00	2,068.23	2,067.83
J-1	60	2,078.00	2,060.00	2,066.16	2,065.79
Outlet	60	2,071.00	2,060.00	2,063.79	2,063.79
I-1	70	2,090.00	2,060.00	2,070.44	2,070.03
J-1	70	2,078.00	2,060.00	2,067.45	2,067.08
Outlet	70	2,071.00	2,060.00	2,064.50	2,064.50
I-1	80	2,090.00	2,060.00	2,072.26	2,071.72
J-1	80	2,078.00	2,060.00	2,068.35	2,067.87
Outlet	80	2,071.00	2,060.00	2,064.50	2,064.50
I-1	90	2,090.00	2,060.00	2,074.32	2,073.64
J-1	90	2,078.00	2,060.00	2,069.37	2,068.76
Outlet	90	2,071.00	2,060.00	2,064.50	2,064.50
I-1	100	2,090.00	2,060.00	2,076.62	2,075.78
J-1	100	2,078.00	2,060.00	2,070.52	2,069.76
Outlet	100	2,071.00	2,060.00	2,064.50	2,064.50
I-1	110	2,090.00	2,060.00	2,079.16	2,078.15
J-1	110	2,078.00	2,060.00	2,071.78	2,070.87

Table B-3

Happy valley basin outlet conduit node report

Node	Discharge (cfs)	Rim Elev (ft)	Sump Elev (ft)	HGL In (ft)	HGL Out (ft)
Outlet	110	2,071.00	2,060.00	2,064.50	2,064.50
I-1	120	2,090.00	2,060.00	2,081.95	2,080.74
J-1	120	2,078.00	2,060.00	2,073.16	2,072.08
Outlet	120	2,071.00	2,060.00	2,064.50	2,064.50
I-1	130	2,090.00	2,060.00	2,084.98	2,083.56
J-1	130	2,078.00	2,060.00	2,074.67	2,073.39
Outlet	130	2,071.00	2,060.00	2,064.50	2,064.50
I-1	140	2,090.00	2,060.00	2,088.25	2,086.61
J-1	140	2,078.00	2,060.00	2,076.29	2,074.81
Outlet	140	2,071.00	2,060.00	2,064.50	2,064.50
I-1	150	2,095.00	2,060.00	2,091.77	2,089.88
J-1	150	2,085.00	2,060.00	2,078.04	2,076.34
Outlet	150	2,071.00	2,060.00	2,064.50	2,064.50

Table B-4

Happy valley basin outlet conduit pipe report

Pipe	Upstream Node	Downstream Node	Discharge (cfs)	Length (ft)	Shape	Size	Roughness	Upstream Ground Elevation (ft)	Upstream Invert Elevation (ft)	Upstream HGL (ft)	Downstream Ground Elevation (ft)	Downstream Invert Elevation (ft)	Downstream HGL (ft)
P-1	I-1	J-1	10	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,065.96	2,078.00	2,063.00	2,064.11
P-2	J-1	Outlet	10	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,063.96	2,071.00	2,061.00	2,061.95
P-1	I-1	J-1	20	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,066.37	2,078.00	2,063.00	2,064.60
P-2	J-1	Outlet	20	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,064.37	2,071.00	2,061.00	2,062.37
P-1	I-1	J-1	30	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,066.72	2,078.00	2,063.00	2,065.01
P-2	J-1	Outlet	30	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,064.72	2,071.00	2,061.00	2,062.72
P-1	I-1	J-1	40	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,067.05	2,078.00	2,063.00	2,065.38
P-2	J-1	Outlet	40	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,065.05	2,071.00	2,061.00	2,063.05
P-1	I-1	J-1	50	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,067.39	2,078.00	2,063.00	2,065.75
P-2	J-1	Outlet	50	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,065.39	2,071.00	2,061.00	2,063.39
P-1	I-1	J-1	60	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,067.83	2,078.00	2,063.00	2,066.16
P-2	J-1	Outlet	60	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,065.79	2,071.00	2,061.00	2,063.79
P-1	I-1	J-1	70	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,070.03	2,078.00	2,063.00	2,067.45
P-2	J-1	Outlet	70	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,067.08	2,071.00	2,061.00	2,064.50
P-1	I-1	J-1	80	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,071.72	2,078.00	2,063.00	2,068.35
P-2	J-1	Outlet	80	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,067.87	2,071.00	2,061.00	2,064.50
P-1	I-1	J-1	90	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,073.64	2,078.00	2,063.00	2,069.37
P-2	J-1	Outlet	90	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,068.76	2,071.00	2,061.00	2,064.50
P-1	I-1	J-1	100	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,075.78	2,078.00	2,063.00	2,070.52
P-2	J-1	Outlet	100	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,069.76	2,071.00	2,061.00	2,064.50
P-1	I-1	J-1	110	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,078.15	2,078.00	2,063.00	2,071.78
P-2	J-1	Outlet	110	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,070.87	2,071.00	2,061.00	2,064.50
P-1	I-1	J-1	120	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,080.74	2,078.00	2,063.00	2,073.16
P-2	J-1	Outlet	120	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,072.08	2,071.00	2,061.00	2,064.50
P-1	I-1	J-1	130	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,083.56	2,078.00	2,063.00	2,074.67
P-2	J-1	Outlet	130	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,073.39	2,071.00	2,061.00	2,064.50
P-1	I-1	J-1	140	400	Circular	42 inch	0.015	2,090.00	2,065.00	2,086.61	2,078.00	2,063.00	2,076.29
P-2	J-1	Outlet	140	400	Circular	42 inch	0.015	2,078.00	2,063.00	2,074.81	2,071.00	2,061.00	2,064.50

Table B-4

Happy valley basin outlet conduit pipe report

Pipe	Upstream Node	Downstream Node	Discharge (cfs)	Length (ft)	Shape	Size	Roughness	Upstream Ground Elevation (ft)	Upstream Invert Elevation (ft)	Upstream HGL (ft)	Downstream Ground Elevation (ft)	Downstream Invert Elevation (ft)	Downstream HGL (ft)
P-1	I-1	J-1	150	400	Circular	42 inch	0.015	2,095.00	2,065.00	2,089.88	2,085.00	2,063.00	2,078.04
P-2	J-1	Outlet	150	400	Circular	42 inch	0.015	2,085.00	2,063.00	2,076.34	2,071.00	2,061.00	2,064.50

```
*********************************************
  UNEVEN WEIR FLOW PROGRAM
  FORTRAN VERSION 1.0
*********************************************


  PROJECT:  Pima Road 3 Basins:  Happy Valley DB overflow
  ENGINEER:  mcg
  DATE:  7/21/1997
  TIME:  15:35.22




-------------------------------------------
  INPUT PARAMETERS
-------------------------------------------


  STARTING WSEL:      2089.50
  MAXIMUM WSEL:       2091.05
  STEP SIZE:          0.05
  BREADTH OF WEIR:    20.00


*********************************************
  INPUT ELEVATION/STATION TABLE.
  PROJECT:  Pima Road 3 Basins:  Happy Valley DB overflow
  DATE:  7/21/1997
  TIME:  15:35.22
*********************************************
```

POINT	ELEVATION	STATION
1	2091	1000
2	2089.5	1000.1
3	2089.5	1200.1
4	2091	1200.2

****

WEIR COEFFICIENT TABLE
PROJECT: Pima Road 3 Basins: Happy Valley DB overflow
DATE: 7/21/1997
TIME: 15:35.22

****

REFERENCE: COE CHART - UPPER CURVE

POINT	HEAD	COEFFICIENT
1	0	2.5
2	0.05	2.5083
3	0.1	2.5167
4	0.15	2.525
5	0.2	2.5333
6	0.25	2.5417
7	0.3	2.55
8	0.35	2.5583
9	0.4	2.5667
10	0.45	2.575
11	0.5	2.5833
12	0.55	2.5917
13	0.6	2.6
14	0.65	2.6083
15	0.7	2.6167
16	0.75	2.625
17	0.8	2.6333
18	0.85	2.6417
19	0.9	2.65
20	0.95	2.6583
21	1	2.6667
22	1.05	2.675
23	1.1	2.6833
24	1.15	2.6917
25	1.2	2.7
26	1.25	2.7083
27	1.3	2.7167
28	1.35	2.725
29	1.4	2.7333
30	1.45	2.7417
31	1.5	2.75
32	1.55	2.7583

****

UNEVEN WEIR FLOW PROGRAM
FORTRAN VERSION 1.0
PROJECT: Pima Road 3 Basins: Happy Valley DB overflow
DATE: 7/21/1997
TIME: 15:35.22

****

ELEVATION	DISCHARGE (CFS)
2089.5	0
2089.55	5.62
2089.6	15.94
2089.65	29.38
2089.7	45.39
2089.75	63.64
2089.8	83.93
2089.85	106.11
2089.9	130.07
2089.95	155.71
2090	182.97
2090.05	211.77
2090.1	242.08
2090.15	273.84
2090.2	307.01
2090.25	341.58
2090.3	377.5
2090.35	414.75
2090.4	453.32
2090.45	493.17
2090.5	534.29
2090.55	576.66
2090.6	620.27
2090.65	665.11
2090.7	711.16
2090.75	758.41
2090.8	806.86
2090.85	856.48
2090.9	907.28
2090.95	959.25
2091	1012.37
2091.05	1066.65

APPENDIX C

Deer Valley Detention Basin Stage/Storage/Discharge Relations
and
Supporting Technical Calculations and Output

Table C-1

HY8 Inlet Control 54" rcp			StormCad Hydraulic Gradeline 54" rcp		Interplated Values		
Discharge cfs	Depth feet	Stage feet	Discharge cfs	Stage feet	Discharge cfs	HY8 Stage feet	StormCad Stage feet
0	0	1855.00	0	1855	0	1855.00	1855.00
30	2.14	1857.14	20	1856.36	20	1856.43	1856.36
60	3.31	1858.31	40	1856.96	40	1857.53	1856.96
90	4.27	1859.27	60	1857.43	60	1858.31	1857.43
120	5.29	1860.29	80	1857.84	80	1858.95	1857.84
150	6.53	1861.53	100	1858.29	100	1859.61	1858.29
180	8.05	1863.05	120	1860.08	120	1860.29	1860.08
210	9.9	1864.90	140	1861.8	140	1861.12	1861.80
240	12.04	1867.04	160	1863.71	160	1862.04	1863.71
270	14.46	1869.46	180	1865.82	180	1863.05	1865.82
300	17.14	1872.14	200	1868.14	200	1864.28	1868.14
			210	1869.38	210	1864.90	1869.38
			220	1870.67	220	1865.61	1870.67
			230	1872.02	230	1866.33	1872.02
			240	1873.43	240	1867.04	1873.43
			250	1874.89	250	1867.85	1874.89
			260	1877.29	260	1868.65	1877.29
			270	1882.35	270	1869.46	1882.35

Deer Valley Detention Basin
Rating Curves for the
100-year, 6-hour storm

Stage feet	Volume acre-feet	Discharge cfs
1855.00	0	0
1856.00	0.2	14
1856.43	0.4	20
1857.00	0.7	30
1857.53	1.2	40
1858.00	1.7	52
1858.31	2.3	60
1858.95	3.4	80
1859.00	3.5	82
1859.61	5.1	100
1860.00	6.1	111
1860.29	8.0	120
1861.80	17.8	140
1863.71	30.2	160
1865.00	38.6	172
1865.82	46.5	180
1868.14	68.9	200
1869.38	80.9	210
1870.00	86.9	215
1870.67	94.4	220
1872.02	109.6	230
1873.43	125.5	240
1874.89	142.0	250
1875.00	143.2	250
1877.29	173.7	260
1880.00	209.9	265
1881.00	224.1	267
1882.35	---	270

Table C-2

HY8 Inlet Control 54" rcp			StormCad Hydraulic Gradeline 54" rcp		Interplated Values			Weir flow	
						HY8	StormCad		
Discharge cfs	Depth feet	Stage feet	Discharge cfs	Stage feet	Discharge cfs	Stage feet	Stage feet	Discharge cfs	Stage feet
0	0	1855.00	0	1855	0	1855.00	1855.00	0	1879.5
30	2.14	1857.14	20	1856.36	20	1856.43	1856.36	15.9	1879.6
60	3.31	1858.31	40	1856.96	40	1857.53	1856.96	45.4	1879.7
90	4.27	1859.27	60	1857.43	60	1858.31	1857.43	83.9	1879.8
120	5.29	1860.29	80	1857.84	80	1858.95	1857.84	130.1	1879.9
150	6.53	1861.53	100	1858.29	100	1859.61	1858.29	183	1880
180	8.05	1863.05	120	1860.08	120	1860.29	1860.08	242.1	1880.1
210	9.9	1864.90	140	1861.8	140	1861.12	1861.80	307.1	1880.2
240	12.04	1867.04	160	1863.71	160	1862.04	1863.71	377.5	1880.3
270	14.46	1869.46	180	1865.82	180	1863.05	1865.82	453.3	1880.4
300	17.14	1872.14	200	1868.14	200	1864.28	1868.14	534.3	1880.5
			210	1869.38	210	1864.90	1869.38	620.3	1880.6
			220	1870.67	220	1865.61	1870.67	711.2	1880.7
			230	1872.02	230	1866.33	1872.02	806.9	1880.8
			240	1873.43	240	1867.04	1873.43	907.3	1880.9
			250	1874.89	250	1867.85	1874.89	1012.4	1881
			260	1877.29	260	1868.65	1877.29		
			270	1882.35	270	1869.46	1882.35		

		Volume		
Stage feet	Area acres	Incr. acre-feet	Sed. acre-feet	Accum. acre-feet
1855	0.0743	0	---	0
1856	0.3343	0.2	0	0.2
1857	0.734	0.5	0	0.7
1858	1.3783	1.0	0	1.7
1859	2.0893	1.7	0	3.5
1860	5.4852	3.7	1	6.1
1865	9.7227	37.5	5	38.6
1870	11.1895	52.2	4	86.9
1875	12.5576	59.3	3	143.2
1880	14.1306	66.7	0	209.9
1881	14.314	14.2	0	224.1

Happy Valley Detention Basin
Rating Cuves for the
100-year, 24-hour storm

		Discharge		
Stage feet	Volume acre-feet	Pipe cfs	Weir cfs	Total cfs
1855.00	0	0	0	0
1856.00	0.2	14	0	14
1856.43	0.4	20	0	20
1857.00	0.7	30	0	30
1857.53	1.2	40	0	40
1858.00	1.7	52	0	52
1858.31	2.3	60	0	60
1858.95	3.4	80	0	80
1859.00	3.5	82	0	82
1859.61	5.1	100	0	100
1860.00	6.1	111	0	111
1860.29	8.0	120	0	120
1861.80	17.8	140	0	140
1863.71	30.2	160	0	160
1865.00	38.6	172	0	172
1865.82	46.5	180	0	180
1868.14	68.9	200	0	200
1869.38	80.9	210	0	210
1870.00	86.9	215	0	215
1870.67	94.4	220	0	220
1872.02	109.6	230	0	230
1873.43	125.5	240	0	240
1874.89	142.0	250	0	250
1875.00	143.2	250	0	250
1877.29	173.7	260	0	260
1879.50	203.2	264	0	264
1879.60	204.6	265	16	280
1879.70	205.9	265	45	310
1879.80	207.2	265	84	349
1879.90	208.6	265	130	395
1880.00	209.9	265	183	448
1880.10	211.3	266	242	508
1880.20	212.7	266	307	573
1880.30	214.2	266	378	643
1880.40	215.6	266	453	719
1880.50	217.0	266	534	801
1880.60	218.4	267	620	887
1880.70	219.8	267	711	978
1880.80	221.3	267	807	1074
1880.90	222.7	267	907	1174
1881.00	224.1	267	1012	1280

CURRENT DATE: 07-24-1997 FILE DATE: 07-24-1997
CURRENT TIME: 09:13:39 FILE NAME: DV-54

****
********** FHWA CULVERT ANALYSIS **********
********** HY-8, VERSION 6.0 **********
****

C U L V NO.	SITE DATA: INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	CULVERT SHAPE, MATERIAL, INLET: BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	1855.00	1851.00	800.01	1 RCP	4.50	4.50	.012	CONVENTIONAL
2								
3								
4								
5								
6								

****

SUMMARY OF CULVERT FLOWS (cfs) FILE: DV-54 DATE: 07-24-1997

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
1855.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1857.14	30.0	30.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1858.31	60.0	60.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1859.27	90.0	90.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1860.29	120.0	120.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1861.53	150.0	150.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1863.27	180.0	180.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1867.06	210.0	210.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1870.87	240.0	240.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1874.99	270.0	270.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1879.56	300.0	300.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1885.00	332.1	332.1	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

****

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: DV-54 DATE: 07-24-1997

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
1855.00	0.000	0.00	0.00	0.00
1857.14	0.000	30.00	0.00	0.00
1858.31	0.000	60.00	0.00	0.00
1859.27	0.000	90.00	0.00	0.00
1860.29	0.000	120.00	0.00	0.00
1861.53	0.000	150.00	0.00	0.00
1863.27	0.000	180.00	0.00	0.00
1867.06	0.000	210.00	0.00	0.00
1870.87	0.000	240.00	0.00	0.00
1874.99	0.000	270.00	0.00	0.00
1879.56	0.000	300.00	0.00	0.00

****

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

****

CURRENT DATE: 07-24-1997 FILE DATE: 07-24-1997
CURRENT TIME: 09:13:39 FILE NAME: DV-54

PERFORMANCE CURVE FOR CULVERT 1 - 1(4.50 (ft) BY 4.50 (ft)) RCP

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	1855.00	0.00	-4.00	0-NF	0.00	0.00	0.00	0.00	0.00	0.00
30.00	1857.14	2.14	-0.73	1-S2n	1.36	1.55	1.25	0.93	8.25	0.00
60.00	1858.31	3.31	0.34	1-S2n	1.97	2.25	1.85	1.36	9.73	0.00
90.00	1859.27	4.27	1.80	1-S2n	2.50	2.78	2.38	1.68	10.57	0.00
120.00	1860.29	5.29	3.71	1-S2n	3.04	3.22	2.92	1.94	11.01	0.00
150.00	1861.53	6.53	6.39	2-M2c	3.68	3.59	3.59	2.18	11.02	0.00
180.00	1863.27	8.05	8.27	2-M2c	4.50	3.86	3.86	2.38	12.45	0.00
210.00	1867.06	9.90	12.06	2-M2c	4.50	4.12	4.12	2.57	13.81	0.00
240.00	1870.87	12.04	15.87	2-M2c	4.50	4.38	4.38	2.74	15.30	0.00
270.00	1874.99	14.46	19.99	6-FFc	4.50	4.50	4.50	2.90	16.98	0.00
300.00	1879.56	17.14	24.56	6-FFc	4.50	4.50	4.50	3.05	18.86	0.00

El. inlet face invert 1855.00 ft El. outlet invert 1851.00 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	1855.00 ft
OUTLET STATION	800.00 ft
OUTLET ELEVATION	1851.00 ft
NUMBER OF BARRELS	1
SLOPE (V/H)	0.0050
CULVERT LENGTH ALONG SLOPE	800.01 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	CIRCULAR
BARREL DIAMETER	4.50 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE WITH HEADWALL
INLET DEPRESSION	NONE

CURRENT DATE: 07-24-1997 FILE DATE: 07-24-1997
CURRENT TIME: 09:13:39 FILE NAME: DV-54

****
********** TAILWATER **********
****
****

TAILWATER RATING CURVE

FLOW (cfs)	W.S.E.(ft)	DEPTH (ft)
0	1851.00	0.00
30	1851.93	0.93
60	1852.36	1.36
90	1852.68	1.68
120	1852.94	1.94
150	1853.18	2.18
180	1853.38	2.38
210	1853.57	2.57
240	1853.74	2.74
270	1853.90	2.90
300	1854.05	3.05

****

****
********** ROADWAY OVERTOPPING DATA **********
****

ROADWAY SURFACE	GRAVEL
EMBANKMENT TOP WIDTH	1.00 ft
CREST LENGTH	100.00 ft
OVERTOPPING CREST ELEVATION	1885.00 ft

****

Table C-3

Deer valley basin outlet conduit node report

Node	Discharge (cfs)	Rim Elev (ft)	Sump Elev (ft)	HGL In (ft)	HGL Out (ft)
I-1	20	1,886.00	1,855.00	1,856.36	1,856.27
MH-13	20	1,875.00	1,853.18	1,854.63	1,854.45
MH-10	20	1,865.50	1,851.95	1,853.70	1,853.22
MH-9	20	1,856.40	1,846.00	1,847.29	1,847.27
MH-8	20	1,840.80	1,829.00	1,830.54	1,830.52
MH-7	20	1,825.00	1,815.01	1,816.30	1,816.28
Outlet	20	1,812.00	1,800.98	1,801.84	1,801.84
I-1	40	1,886.00	1,855.00	1,856.96	1,856.82
MH-13	40	1,875.00	1,853.18	1,855.27	1,855.00
MH-10	40	1,865.50	1,851.95	1,854.48	1,853.77
MH-9	40	1,856.40	1,846.00	1,847.86	1,847.82
MH-8	40	1,840.80	1,829.00	1,831.11	1,831.07
MH-7	40	1,825.00	1,815.01	1,816.87	1,816.83
Outlet	40	1,812.00	1,800.98	1,802.19	1,802.19
I-1	60	1,886.00	1,855.00	1,857.43	1,857.25
MH-13	60	1,875.00	1,853.18	1,855.78	1,855.43
MH-10	60	1,865.50	1,851.95	1,855.12	1,854.20
MH-9	60	1,856.40	1,846.00	1,848.29	1,848.25
MH-8	60	1,840.80	1,829.00	1,831.54	1,831.50
MH-7	60	1,825.00	1,815.01	1,817.30	1,817.26
Outlet	60	1,812.00	1,800.98	1,802.47	1,802.47
I-1	80	1,886.00	1,855.00	1,857.84	1,857.62
MH-13	80	1,875.00	1,853.18	1,856.31	1,855.94
MH-10	80	1,865.50	1,851.95	1,855.69	1,854.57
MH-9	80	1,856.40	1,846.00	1,848.67	1,848.62
MH-8	80	1,840.80	1,829.00	1,831.92	1,831.87
MH-7	80	1,825.00	1,815.01	1,817.68	1,817.63
Outlet	80	1,812.00	1,800.98	1,802.72	1,802.72
I-1	100	1,886.00	1,855.00	1,858.29	1,858.05
MH-13	100	1,875.00	1,853.18	1,857.08	1,856.75
MH-10	100	1,865.50	1,851.95	1,856.22	1,854.89
MH-9	100	1,856.40	1,846.00	1,849.00	1,848.94
MH-8	100	1,840.80	1,829.00	1,832.25	1,832.19
MH-7	100	1,825.00	1,815.01	1,818.01	1,817.95
Outlet	100	1,812.00	1,800.98	1,802.95	1,802.95
I-1	120	1,886.00	1,855.00	1,860.08	1,859.91
MH-13	120	1,875.00	1,853.18	1,858.22	1,857.88

Table C-3

Deer valley basin outlet conduit node report

Node	Discharge (cfs)	Rim Elev (ft)	Sump Elev (ft)	HGL In (ft)	HGL Out (ft)
MH-10	120	1,865.50	1,851.95	1,856.74	1,855.18
MH-9	120	1,856.40	1,846.00	1,849.30	1,849.23
MH-8	120	1,840.80	1,829.00	1,832.55	1,832.48
MH-7	120	1,825.00	1,815.01	1,818.31	1,818.24
Outlet	120	1,812.00	1,800.98	1,803.17	1,803.17
I-1	140	1,886.00	1,855.00	1,861.80	1,861.56
MH-13	140	1,875.00	1,853.18	1,859.27	1,858.80
MH-10	140	1,865.50	1,851.95	1,857.25	1,855.43
MH-9	140	1,856.40	1,846.00	1,849.57	1,849.48
MH-8	140	1,840.80	1,829.00	1,832.82	1,832.73
MH-7	140	1,825.00	1,815.01	1,818.58	1,818.49
Outlet	140	1,812.00	1,800.98	1,803.38	1,803.38
I-1	160	1,886.00	1,855.00	1,863.71	1,863.40
MH-13	160	1,875.00	1,853.18	1,860.40	1,859.79
MH-10	160	1,865.50	1,851.95	1,857.76	1,855.65
MH-9	160	1,856.40	1,846.00	1,849.80	1,849.70
MH-8	160	1,840.80	1,829.00	1,833.05	1,832.95
MH-7	160	1,825.00	1,815.01	1,818.81	1,818.71
Outlet	160	1,812.00	1,800.98	1,803.58	1,803.58
I-1	180	1,886.00	1,855.00	1,865.82	1,865.42
MH-13	180	1,875.00	1,853.18	1,861.63	1,860.85
MH-10	180	1,865.50	1,851.95	1,858.29	1,855.84
MH-9	180	1,856.40	1,846.00	1,850.00	1,849.89
MH-8	180	1,840.80	1,829.00	1,833.25	1,833.14
MH-7	180	1,825.00	1,815.01	1,819.01	1,818.90
Outlet	180	1,812.00	1,800.98	1,803.79	1,803.79
I-1	200	1,886.00	1,855.00	1,868.14	1,867.64
MH-13	200	1,875.00	1,853.18	1,862.96	1,862.00
MH-10	200	1,865.50	1,851.95	1,858.84	1,855.99
MH-9	200	1,856.40	1,846.00	1,850.17	1,850.04
MH-8	200	1,840.80	1,829.00	1,833.42	1,833.29
MH-7	200	1,825.00	1,815.01	1,819.18	1,819.05
Outlet	200	1,812.00	1,800.98	1,804.01	1,804.01
I-1	210	1,886.00	1,855.00	1,869.38	1,868.83
MH-13	210	1,875.00	1,853.18	1,863.67	1,862.61
MH-10	210	1,865.50	1,851.95	1,859.13	1,856.05
MH-9	210	1,856.40	1,846.00	1,850.25	1,850.10

Table C-3

Deer valley basin outlet conduit node report

Node	Discharge (cfs)	Rim Elev (ft)	Sump Elev (ft)	HGL In (ft)	HGL Out (ft)
MH-8	210	1,840.80	1,829.00	1,833.50	1,833.35
MH-7	210	1,825.00	1,815.01	1,819.26	1,819.11
Outlet	210	1,812.00	1,800.98	1,804.12	1,804.12
I-1	220	1,886.00	1,855.00	1,870.67	1,870.08
MH-13	220	1,875.00	1,853.18	1,864.41	1,863.25
MH-10	220	1,865.50	1,851.95	1,859.43	1,856.10
MH-9	220	1,856.40	1,846.00	1,850.31	1,850.15
MH-8	220	1,840.80	1,829.00	1,833.56	1,833.40
MH-7	220	1,825.00	1,815.01	1,819.32	1,819.16
Outlet	220	1,812.00	1,800.98	1,804.24	1,804.24
I-1	230	1,886.00	1,855.00	1,872.02	1,871.37
MH-13	230	1,875.00	1,853.18	1,865.18	1,863.91
MH-10	230	1,865.50	1,851.95	1,859.73	1,856.15
MH-9	230	1,856.40	1,846.00	1,850.37	1,850.20
MH-8	230	1,840.80	1,829.00	1,833.62	1,833.45
MH-7	230	1,825.00	1,815.01	1,819.38	1,819.21
Outlet	230	1,812.00	1,800.98	1,804.36	1,804.36
I-1	240	1,886.00	1,855.00	1,873.43	1,872.72
MH-13	240	1,875.00	1,853.18	1,865.98	1,864.60
MH-10	240	1,865.50	1,851.95	1,860.05	1,856.19
MH-9	240	1,856.40	1,846.00	1,850.43	1,850.24
MH-8	240	1,840.80	1,829.00	1,833.68	1,833.49
MH-7	240	1,825.00	1,815.01	1,819.44	1,819.25
Outlet	240	1,812.00	1,800.98	1,804.49	1,804.49
I-1	250	1,886.00	1,855.00	1,874.89	1,874.12
MH-13	250	1,875.00	1,853.18	1,866.81	1,865.31
MH-10	250	1,865.50	1,851.95	1,860.37	1,856.23
MH-9	250	1,856.40	1,846.00	1,850.48	1,850.28
MH-8	250	1,840.80	1,829.00	1,833.73	1,833.53
MH-7	250	1,825.00	1,815.01	1,819.49	1,819.29
Outlet	250	1,812.00	1,800.98	1,804.64	1,804.64
I-1	260	1,886.00	1,855.00	1,877.29	1,876.46
MH-13	260	1,875.00	1,853.18	1,868.55	1,866.93
MH-10	260	1,865.50	1,851.95	1,861.59	1,857.27
MH-9	260	1,856.40	1,846.00	1,850.52	1,850.31
MH-8	260	1,840.80	1,829.00	1,833.77	1,833.56
MH-7	260	1,825.00	1,815.01	1,819.53	1,819.32

Table C-3

Deer valley basin outlet conduit node report

Node	Discharge (cfs)	Rim Elev (ft)	Sump Elev (ft)	HGL In (ft)	HGL Out (ft)
Outlet	260	1,812.00	1,800.98	1,804.81	1,804.81
I-1	270	1,886.00	1,855.00	1,882.35	1,881.46
MH-13	270	1,875.00	1,853.18	1,872.92	1,871.18
MH-10	270	1,865.50	1,851.95	1,865.42	1,860.76
MH-9	270	1,856.40	1,846.00	1,853.48	1,853.26
MH-8	270	1,840.80	1,829.00	1,836.69	1,836.47
MH-7	270	1,825.00	1,815.01	1,819.37	1,819.13
Outlet	270	1,812.00	1,800.98	1,805.10	1,805.10

Table C-4

Deer valley basin outlet conduit pipe report

Pipe	Upstream Node	Downstream Node	Discharge (cfs)	Length (ft)	Shape	Size	Roughness	Upstream Ground Elevation (ft)	Upstream Invert Elevation (ft)	Upstream HGL (ft)	Downstream Ground Elevation (ft)	Downstream Invert Elevation (ft)	Downstream HGL (ft)
P-13	I-1	MH-13	20	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,856.27	1,875.00	1,853.18	1,854.63
P-12	MH-13	MH-10	20	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,854.45	1,865.50	1,851.95	1,853.70
P-11	MH-10	MH-9	20	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,853.22	1,856.40	1,846.00	1,847.29
P-10	MH-9	MH-8	20	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,847.27	1,840.80	1,829.25	1,830.54
P-9	MH-8	MH-7	20	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,830.52	1,825.00	1,815.51	1,816.38
P-8	MH-7	Outlet	20	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,816.28	1,812.00	1,800.98	1,801.84
P-13	I-1	MH-13	40	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,856.82	1,875.00	1,853.18	1,855.27
P-12	MH-13	MH-10	40	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,855.00	1,865.50	1,851.95	1,854.48
P-11	MH-10	MH-9	40	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,853.77	1,856.40	1,846.00	1,847.86
P-10	MH-9	MH-8	40	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,847.82	1,840.80	1,829.25	1,831.11
P-9	MH-8	MH-7	40	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,831.07	1,825.00	1,815.51	1,816.74
P-8	MH-7	Outlet	40	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,816.83	1,812.00	1,800.98	1,802.19
P-13	I-1	MH-13	60	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,857.25	1,875.00	1,853.18	1,855.78
P-12	MH-13	MH-10	60	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,855.43	1,865.50	1,851.95	1,855.12
P-11	MH-10	MH-9	60	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,854.20	1,856.40	1,846.00	1,848.29
P-10	MH-9	MH-8	60	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,848.25	1,840.80	1,829.25	1,831.54
P-9	MH-8	MH-7	60	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,831.50	1,825.00	1,815.51	1,817.02
P-8	MH-7	Outlet	60	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,817.26	1,812.00	1,800.98	1,802.47
P-13	I-1	MH-13	80	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,857.62	1,875.00	1,853.18	1,856.31
P-12	MH-13	MH-10	80	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,855.94	1,865.50	1,851.95	1,855.69
P-11	MH-10	MH-9	80	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,854.57	1,856.40	1,846.00	1,848.67
P-10	MH-9	MH-8	80	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,848.62	1,840.80	1,829.25	1,831.92
P-9	MH-8	MH-7	80	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,831.87	1,825.00	1,815.51	1,817.28
P-8	MH-7	Outlet	80	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,817.63	1,812.00	1,800.98	1,802.72
P-13	I-1	MH-13	100	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,858.05	1,875.00	1,853.18	1,857.08
P-12	MH-13	MH-10	100	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,856.75	1,865.50	1,851.95	1,856.22
P-11	MH-10	MH-9	100	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,854.89	1,856.40	1,846.00	1,849.00
P-10	MH-9	MH-8	100	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,848.94	1,840.80	1,829.25	1,832.25
P-9	MH-8	MH-7	100	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,832.19	1,825.00	1,815.51	1,817.51
P-8	MH-7	Outlet	100	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,817.95	1,812.00	1,800.98	1,802.95
P-13	I-1	MH-13	120	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,859.91	1,875.00	1,853.18	1,858.22
P-12	MH-13	MH-10	120	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,857.88	1,865.50	1,851.95	1,856.74
P-11	MH-10	MH-9	120	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,855.18	1,856.40	1,846.00	1,849.30
P-10	MH-9	MH-8	120	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,849.23	1,840.80	1,829.25	1,832.55
P-9	MH-8	MH-7	120	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,832.48	1,825.00	1,815.51	1,817.73
P-8	MH-7	Outlet	120	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,818.24	1,812.00	1,800.98	1,803.17

Table C-4

Deer valley basin outlet conduit pipe report

Pipe	Upstream Node	Downstream Node	Discharge (cfs)	Length (ft)	Shape	Size	Roughness	Upstream Ground Elevation (ft)	Upstream Invert Elevation (ft)	Upstream HGL (ft)	Downstream Ground Elevation (ft)	Downstream Invert Elevation (ft)	Downstream HGL (ft)
P-13	I-1	MH-13	140	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,861.56	1,875.00	1,853.18	1,859.27
P-12	MH-13	MH-10	140	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,858.80	1,865.50	1,851.95	1,857.25
P-11	MH-10	MH-9	140	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,855.43	1,856.40	1,846.00	1,849.57
P-10	MH-9	MH-8	140	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,849.48	1,840.80	1,829.25	1,832.82
P-9	MH-8	MH-7	140	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,832.73	1,825.00	1,815.51	1,817.94
P-8	MH-7	Outlet	140	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,818.49	1,812.00	1,800.98	1,803.38
P-13	I-1	MH-13	160	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,863.40	1,875.00	1,853.18	1,860.40
P-12	MH-13	MH-10	160	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,859.79	1,865.50	1,851.95	1,857.76
P-11	MH-10	MH-9	160	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,855.65	1,856.40	1,846.00	1,849.80
P-10	MH-9	MH-8	160	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,849.70	1,840.80	1,829.25	1,833.05
P-9	MH-8	MH-7	160	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,832.95	1,825.00	1,815.51	1,818.15
P-8	MH-7	Outlet	160	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,818.71	1,812.00	1,800.98	1,803.58
P-13	I-1	MH-13	180	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,865.42	1,875.00	1,853.18	1,861.63
P-12	MH-13	MH-10	180	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,860.85	1,865.50	1,851.95	1,858.29
P-11	MH-10	MH-9	180	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,855.84	1,856.40	1,846.00	1,850.00
P-10	MH-9	MH-8	180	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,849.89	1,840.80	1,829.25	1,833.25
P-9	MH-8	MH-7	180	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,833.14	1,825.00	1,815.51	1,818.37
P-8	MH-7	Outlet	180	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,818.90	1,812.00	1,800.98	1,803.79
P-13	I-1	MH-13	200	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,867.64	1,875.00	1,853.18	1,862.96
P-12	MH-13	MH-10	200	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,862.00	1,865.50	1,851.95	1,858.84
P-11	MH-10	MH-9	200	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,855.99	1,856.40	1,846.00	1,850.17
P-10	MH-9	MH-8	200	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,850.04	1,840.80	1,829.25	1,833.42
P-9	MH-8	MH-7	200	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,833.29	1,825.00	1,815.51	1,818.59
P-8	MH-7	Outlet	200	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,819.05	1,812.00	1,800.98	1,804.01
P-13	I-1	MH-13	210	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,868.83	1,875.00	1,853.18	1,863.67
P-12	MH-13	MH-10	210	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,862.61	1,865.50	1,851.95	1,859.13
P-11	MH-10	MH-9	210	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,856.05	1,856.40	1,846.00	1,850.25
P-10	MH-9	MH-8	210	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,850.10	1,840.80	1,829.25	1,833.50
P-9	MH-8	MH-7	210	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,833.35	1,825.00	1,815.51	1,818.71
P-8	MH-7	Outlet	210	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,819.11	1,812.00	1,800.98	1,804.12
P-13	I-1	MH-13	220	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,870.08	1,875.00	1,853.18	1,864.41
P-12	MH-13	MH-10	220	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,863.25	1,865.50	1,851.95	1,859.43
P-11	MH-10	MH-9	220	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,856.10	1,856.40	1,846.00	1,850.31
P-10	MH-9	MH-8	220	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,850.15	1,840.80	1,829.25	1,833.56
P-9	MH-8	MH-7	220	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,833.40	1,825.00	1,815.51	1,818.83

Table C-4

Deer valley basin outlet conduit pipe report

Pipe	Upstream Node	Downstream Node	Discharge (cfs)	Length (ft)	Shape	Size	Roughness	Upstream Ground Elevation (ft)	Upstream Invert Elevation (ft)	Upstream HGL (ft)	Downstream Ground Elevation (ft)	Downstream Invert Elevation (ft)	Downstream HGL (ft)
P-8	MH-7	Outlet	220	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,819.16	1,812.00	1,800.98	1,804.24
P-13	I-1	MH-13	230	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,871.37	1,875.00	1,853.18	1,865.18
P-12	MH-13	MH-10	230	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,863.91	1,865.50	1,851.95	1,859.73
P-11	MH-10	MH-9	230	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,856.15	1,856.40	1,846.00	1,850.37
P-10	MH-9	MH-8	230	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,850.20	1,840.80	1,829.25	1,833.62
P-9	MH-8	MH-7	230	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,833.45	1,825.00	1,815.51	1,818.96
P-8	MH-7	Outlet	230	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,819.21	1,812.00	1,800.98	1,804.36
P-13	I-1	MH-13	240	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,872.72	1,875.00	1,853.18	1,865.98
P-12	MH-13	MH-10	240	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,864.60	1,865.50	1,851.95	1,860.05
P-11	MH-10	MH-9	240	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,856.19	1,856.40	1,846.00	1,850.43
P-10	MH-9	MH-8	240	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,850.24	1,840.80	1,829.25	1,833.68
P-9	MH-8	MH-7	240	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,833.49	1,825.00	1,815.51	1,819.10
P-8	MH-7	Outlet	240	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,819.25	1,812.00	1,800.98	1,804.49
P-13	I-1	MH-13	250	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,874.12	1,875.00	1,853.18	1,866.81
P-12	MH-13	MH-10	250	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,865.31	1,865.50	1,851.95	1,860.37
P-11	MH-10	MH-9	250	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,856.23	1,856.40	1,846.00	1,850.48
P-10	MH-9	MH-8	250	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,850.28	1,840.80	1,829.25	1,833.73
P-9	MH-8	MH-7	250	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,833.53	1,825.00	1,815.51	1,819.27
P-8	MH-7	Outlet	250	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,819.29	1,812.00	1,800.98	1,804.64
P-13	I-1	MH-13	260	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,876.46	1,875.00	1,853.18	1,868.55
P-12	MH-13	MH-10	260	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,866.93	1,865.50	1,851.95	1,861.59
P-11	MH-10	MH-9	260	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,857.27	1,856.40	1,846.00	1,850.52
P-10	MH-9	MH-8	260	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,850.31	1,840.80	1,829.25	1,833.77
P-9	MH-8	MH-7	260	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,833.56	1,825.00	1,815.51	1,819.49
P-8	MH-7	Outlet	260	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,819.32	1,812.00	1,800.98	1,804.81
P-13	I-1	MH-13	270	340	Circular	54 inch	0.015	1,886.00	1,855.00	1,881.46	1,875.00	1,853.18	1,872.92
P-12	MH-13	MH-10	270	229.36	Circular	54 inch	0.015	1,875.00	1,853.18	1,871.18	1,865.50	1,851.95	1,865.42
P-11	MH-10	MH-9	270	290	Circular	54 inch	0.015	1,865.50	1,851.95	1,860.76	1,856.40	1,846.00	1,853.48
P-10	MH-9	MH-8	270	660	Circular	54 inch	0.015	1,856.40	1,846.00	1,853.26	1,840.80	1,829.25	1,836.69
P-9	MH-8	MH-7	270	660	Circular	54 inch	0.015	1,840.80	1,829.25	1,836.47	1,825.00	1,815.51	1,819.84
P-8	MH-7	Outlet	270	642	Circular	54 inch	0.015	1,825.00	1,815.01	1,819.13	1,812.00	1,800.98	1,805.10

```
*********************************************
  UNEVEN WEIR FLOW PROGRAM
  FORTRAN VERSION 1.0
*********************************************


  PROJECT:  Pima Road 3 Basins - Deer Valley DB overflow
  ENGINEER:  mcg
  DATE:  7/28/1997
  TIME:  11:51.46



-------------------------------------------
  INPUT PARAMETERS
-------------------------------------------


  STARTING WSEL:      1879.50
  MAXIMUM WSEL:       1881.10
  STEP SIZE:          0.05
  BREADTH OF WEIR:    20.00


*********************************************
  INPUT ELEVATION/STATION TABLE.
  PROJECT:  Pima Road 3 Basins - Deer Valley DB overflow
  DATE:  7/28/1997
  TIME:  11:51.46
*********************************************
```

POINT	ELEVATION	STATION
1	1881	1000
2	1879.5	1000.1
3	1879.5	1200.1
4	1881	1200.2

****

WEIR COEFFICIENT TABLE
PROJECT: Pima Road 3 Basins - Deer Valley DB overflow
DATE: 7/28/1997
TIME: 11:51.46

****

REFERENCE: COE CHART - UPPER CURVE

POINT	HEAD	COEFFICIENT
1	0	2.5
2	0.05	2.5083
3	0.1	2.5167
4	0.15	2.525
5	0.2	2.5333
6	0.25	2.5417
7	0.3	2.55
8	0.35	2.5583
9	0.4	2.5667
10	0.45	2.575
11	0.5	2.5833
12	0.55	2.5917
13	0.6	2.6
14	0.65	2.6083
15	0.7	2.6167
16	0.75	2.625
17	0.8	2.6333
18	0.85	2.6417
19	0.9	2.65
20	0.95	2.6583
21	1	2.6667
22	1.05	2.675
23	1.1	2.6833
24	1.15	2.6917
25	1.2	2.7
26	1.25	2.7083
27	1.3	2.7167
28	1.35	2.725
29	1.4	2.7333
30	1.45	2.7417
31	1.5	2.75
32	1.55	2.7583

****

UNEVEN WEIR FLOW PROGRAM
FORTRAN VERSION 1.0
PROJECT: Pima Road 3 Basins - Deer Valley DB overflow
DATE: 7/28/1997
TIME: 11:51.46

****

ELEVATION	DISCHARGE (CFS)
1879.5	0
1879.55	5.62
1879.6	15.94
1879.65	29.38
1879.7	45.39
1879.75	63.64
1879.8	83.93
1879.85	106.11
1879.9	130.07
1879.95	155.71
1880	182.97
1880.05	211.77
1880.1	242.08
1880.15	273.84
1880.2	307.01
1880.25	341.58
1880.3	377.5
1880.35	414.75
1880.4	453.32
1880.45	493.17
1880.5	534.29
1880.55	576.66
1880.6	620.27
1880.65	665.11
1880.7	711.16
1880.75	758.41
1880.8	806.86
1880.85	856.48
1880.9	907.28
1880.95	959.25
1881	1012.37
1881.05	1066.65

APPENDIX D

Union Hills Detention Basin Stage/Storage/Discharge Relations
and
Supporting Technical Calculations and Output

CURRENT DATE: 11-17-1997 FILE DATE: 11-17-1997
CURRENT TIME: 13:12:02 FILE NAME: UH-96

****
********** FHWA CULVERT ANALYSIS **********
********** HY-8, VERSION 6.0 **********
****

C U L V NO.	SITE DATA: INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	CULVERT SHAPE, MATERIAL, INLET: BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	1585.00	1584.00	200.00	1 RCP	8.00	8.00	.012	CONVENTIONAL
2								
3								
4								
5								
6								

****

SUMMARY OF CULVERT FLOWS (cfs) FILE: UH-96 DATE: 11-17-1997

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
1592.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1592.11	100.0	100.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1592.45	200.0	200.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1593.01	300.0	300.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1593.80	400.0	400.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1594.81	500.0	500.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1596.05	600.0	600.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1597.99	700.0	700.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1600.33	800.0	800.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1603.02	900.0	900.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1606.04	1000.0	1000.0	0.0	0.0	0.0	0.0	0.0	0.00	1
1610.00	1117.7	1117.7	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

****

SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: UH-96 DATE: 11-17-1997

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
1592.00	0.000	0.00	0.00	0.00
1592.11	0.000	100.00	0.00	0.00
1592.45	0.000	200.00	0.00	0.00
1593.01	0.000	300.00	0.00	0.00
1593.80	0.000	400.00	0.00	0.00
1594.81	0.000	500.00	0.00	0.00
1596.05	0.000	600.00	0.00	0.00
1597.99	0.000	700.00	0.00	0.00
1600.33	0.000	800.00	0.00	0.00
1603.02	0.000	900.00	0.00	0.00
1606.04	0.000	1000.00	0.00	0.00

****

<1> TOLERANCE (ft) = 0.010 <2> TOLERANCE (%) = 1.000

****

CURRENT DATE: 11-17-1997 FILE DATE: 11-17-1997
CURRENT TIME: 13:12:02 FILE NAME: UH-96

PERFORMANCE CURVE FOR CULVERT 1 - 1(8.00 (ft) BY 8.00 (ft)) RCP

DIS-CHARGE FLOW (cfs)	HEAD-WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW TYPE <F4>	NORMAL DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	1592.00	0.00	7.00	0-NF	0.00	0.00	0.00	8.00	0.00	0.00
100.00	1592.11	3.27	7.11	1-S1f	2.01	2.46	8.00	8.00	1.99	0.00
200.00	1592.45	5.10	7.45	1-S1f	2.91	3.52	8.00	8.00	3.98	0.00
300.00	1593.01	6.54	8.01	4-FFt	3.65	4.36	8.00	8.00	5.97	0.00
400.00	1593.80	7.88	8.80	4-FFt	4.33	5.07	8.00	8.00	7.96	0.00
500.00	1594.81	9.32	9.81	4-FFt	5.00	5.69	8.00	8.00	9.95	0.00
600.00	1596.05	11.00	11.05	4-FFt	5.71	6.22	8.00	8.00	11.94	0.00
700.00	1597.99	12.99	12.52	4-FFt	6.60	6.64	6.60	8.00	15.82	0.00
800.00	1600.33	15.33	13.90	3-M1f	8.00	7.01	8.00	8.00	15.92	0.00
900.00	1603.02	18.02	15.47	3-M1f	8.00	7.38	8.00	8.00	17.90	0.00
1000.00	1606.04	21.04	17.22	3-M1f	8.00	7.75	8.00	8.00	19.89	0.00

El. inlet face invert 1585.00 ft El. outlet invert 1584.00 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

***** SITE DATA ***** CULVERT INVERT **********

INLET STATION	0.00 ft
INLET ELEVATION	1585.00 ft
OUTLET STATION	200.00 ft
OUTLET ELEVATION	1584.00 ft
NUMBER OF BARRELS	1
SLOPE (V/H)	0.0050
CULVERT LENGTH ALONG SLOPE	200.00 ft

***** CULVERT DATA SUMMARY **********

BARREL SHAPE	CIRCULAR
BARREL DIAMETER	8.00 ft
BARREL MATERIAL	CONCRETE
BARREL MANNING'S n	0.012
INLET TYPE	CONVENTIONAL
INLET EDGE AND WALL	SQUARE EDGE WITH HEADWALL
INLET DEPRESSION	NONE

CURRENT DATE: 11-17-1997 FILE DATE: 11-17-1997
CURRENT TIME: 13:12:02 FILE NAME: UH-96

****
********** TAILWATER **********
****
****

CONSTANT WATER SURFACE ELEVATION
1592.00

****
********** ROADWAY OVERTOPPING DATA **********
****

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	10.00 ft
CREST LENGTH	1.00 ft
OVERTOPPING CREST ELEVATION	1610.00 ft

****

Table D-2
Union Hills Basin Outlet Conduit Node Report

Node	Discharge (cfs)	Rim Elev (ft)	Sump Elev (ft)	HGL In (ft)	HGL Out (ft)
I-1	527	1,614.00	1,585.00	1,596.49	1,596.15
MH14	527	1,610.00	1,583.26	1,595.49	1,595.40
MH13	527	1,605.50	1,579.98	1,592.48	1,592.40
MH12	527	1,600.50	1,576.67	1,589.46	1,589.38
MH11	527	1,595.30	1,573.38	1,586.44	1,586.36
I-2	1,032.00	1,591.60	1,571.35	1,584.56	1,582.68
MH9	1,032.00	1,587.00	1,567.50	1,578.90	1,578.70
MH8	1,032.00	1,583.00	1,564.00	1,574.83	1,572.81
MH7	1,032.00	1,572.20	1,553.50	1,563.66	1,562.31
MH6	1,032.00	1,564.00	1,548.50	1,557.55	1,557.31
MH5	1,032.00	1,556.50	1,538.50	1,548.74	1,548.44
MH4	1,032.00	1,547.80	1,529.00	1,542.80	1,541.57
MH3	1,032.00	1,546.00	1,527.70	1,539.95	1,538.15
MH2	1,032.00	1,538.50	1,524.15	1,533.92	1,533.71
C1	1,032.00	1,537.00	1,521.00	1,529.81	1,529.81
MH-1	1,032.00	1,537.00	1,519.00	1,529.06	1,527.81
Outlet	1,032.00	1,531.00	1,513.00	1,522.00	1,522.00
I-1	563	1,614.00	1,585.00	1,596.69	1,596.30
MH14	563	1,610.00	1,583.26	1,595.55	1,595.45
MH13	563	1,605.50	1,579.98	1,592.12	1,592.02
MH12	563	1,600.50	1,576.67	1,588.67	1,588.58
MH11	563	1,595.30	1,573.38	1,585.23	1,585.13
I-2	970	1,591.60	1,571.35	1,583.07	1,581.41
MH9	970	1,587.00	1,567.50	1,578.08	1,577.90
MH8	970	1,583.00	1,564.00	1,574.48	1,572.62
MH7	970	1,572.20	1,553.50	1,563.36	1,562.12
MH6	970	1,564.00	1,548.50	1,557.34	1,557.12
MH5	970	1,556.50	1,538.50	1,547.45	1,547.12
MH4	970	1,547.80	1,529.00	1,540.84	1,539.76
MH3	970	1,546.00	1,527.70	1,538.33	1,536.42
MH2	970	1,538.50	1,524.15	1,533.06	1,532.85
C1	970	1,537.00	1,521.00	1,529.62	1,529.62
MH-1	970	1,537.00	1,519.00	1,528.77	1,527.62
Outlet	970	1,531.00	1,513.00	1,522.00	1,522.00
I-1	595	1,614.00	1,585.00	1,596.74	1,596.30
MH14	595	1,610.00	1,583.26	1,595.47	1,595.36
MH13	595	1,605.50	1,579.98	1,591.63	1,591.53
MH12	595	1,600.50	1,576.67	1,587.79	1,587.68
MH11	595	1,595.30	1,573.38	1,583.94	1,583.83
I-2	891	1,591.60	1,571.35	1,581.53	1,579.70
MH9	891	1,587.00	1,567.50	1,576.05	1,575.85
MH8	891	1,583.00	1,564.00	1,574.02	1,572.35
MH7	891	1,572.20	1,553.50	1,562.96	1,561.85
MH6	891	1,564.00	1,548.50	1,557.05	1,556.85
MH5	891	1,556.50	1,538.50	1,547.15	1,546.85
MH4	891	1,547.80	1,529.00	1,539.92	1,539.01
MH3	891	1,546.00	1,527.70	1,537.80	1,536.05

Table D-2
Union Hills Basin Outlet Conduit Node Report

Node	Discharge (cfs)	Rim Elev (ft)	Sump Elev (ft)	HGL In (ft)	HGL Out (ft)
MH2	891	1,538.50	1,524.15	1,532.70	1,532.50
C1	891	1,537.00	1,521.00	1,529.35	1,529.35
MH-1	891	1,537.00	1,519.00	1,528.39	1,527.35
Outlet	891	1,531.00	1,513.00	1,522.00	1,522.00
I-1	620	1,614.00	1,585.00	1,597.75	1,597.28
MH14	620	1,610.00	1,583.26	1,596.37	1,596.25
MH13	620	1,605.50	1,579.98	1,592.21	1,592.09
MH12	620	1,600.50	1,576.67	1,588.03	1,587.91
MH11	620	1,595.30	1,573.38	1,583.85	1,583.73
I-2	843	1,591.60	1,571.35	1,581.24	1,579.52
MH9	843	1,587.00	1,567.50	1,575.85	1,575.67
MH8	843	1,583.00	1,564.00	1,573.74	1,572.17
MH7	843	1,572.20	1,553.50	1,562.71	1,561.67
MH6	843	1,564.00	1,548.50	1,556.85	1,556.67
MH5	843	1,556.50	1,538.50	1,546.95	1,546.67
MH4	843	1,547.80	1,529.00	1,539.15	1,538.26
MH3	843	1,546.00	1,527.70	1,537.51	1,535.87
MH2	843	1,538.50	1,524.15	1,532.50	1,532.32
C1	843	1,537.00	1,521.00	1,529.17	1,529.17
MH-1	843	1,537.00	1,519.00	1,528.14	1,527.17
Outlet	843	1,531.00	1,513.00	1,522.00	1,522.00
I-1	698	1,614.00	1,585.00	1,602.34	1,601.74
MH14	698	1,610.00	1,583.26	1,600.59	1,600.44
MH13	698	1,605.50	1,579.98	1,595.31	1,595.16
MH12	698	1,600.50	1,576.67	1,590.02	1,589.87
MH11	698	1,595.30	1,573.38	1,584.72	1,584.57
I-2	871	1,591.60	1,571.35	1,581.41	1,579.62
MH9	871	1,587.00	1,567.50	1,575.97	1,575.77
MH8	871	1,583.00	1,564.00	1,573.91	1,572.27
MH7	871	1,572.20	1,553.50	1,562.86	1,561.77
MH6	871	1,564.00	1,548.50	1,556.97	1,556.77
MH5	871	1,556.50	1,538.50	1,547.06	1,546.77
MH4	871	1,547.80	1,529.00	1,539.57	1,538.68
MH3	871	1,546.00	1,527.70	1,537.68	1,535.97
MH2	871	1,538.50	1,524.15	1,532.62	1,532.42
C1	871	1,537.00	1,521.00	1,529.27	1,529.27
MH-1	871	1,537.00	1,519.00	1,528.28	1,527.27
Outlet	871	1,531.00	1,513.00	1,522.00	1,522.00
I-1	799	1,614.00	1,585.00	1,608.55	1,607.76
MH14	799	1,610.00	1,583.26	1,606.25	1,606.05
MH13	799	1,605.50	1,579.98	1,599.34	1,599.14
MH12	799	1,600.50	1,576.67	1,592.40	1,592.20
MH11	799	1,595.30	1,573.38	1,585.46	1,585.26
I-2	825	1,591.60	1,571.35	1,581.13	1,579.44
MH9	825	1,587.00	1,567.50	1,575.78	1,575.59
MH8	825	1,583.00	1,564.00	1,573.63	1,572.09

Table D-2
Union Hills Basin Outlet Conduit Node Report

Node	Discharge (cfs)	Rim Elev (ft)	Sump Elev (ft)	HGL In (ft)	HGL Out (ft)
MH7	825	1,572.20	1,553.50	1,562.62	1,561.59
MH6	825	1,564.00	1,548.50	1,556.78	1,556.59
MH5	825	1,556.50	1,538.50	1,546.87	1,546.59
MH4	825	1,547.80	1,529.00	1,538.91	1,538.02
MH3	825	1,546.00	1,527.70	1,537.40	1,535.79
MH2	825	1,538.50	1,524.15	1,532.43	1,532.24
C1	825	1,537.00	1,521.00	1,529.09	1,529.09
MH-1	825	1,537.00	1,519.00	1,528.04	1,527.09
Outlet	825	1,531.00	1,513.00	1,522.00	1,522.00
I-1	814	1,614.00	1,585.00	1,609.61	1,608.80
MH14	814	1,610.00	1,583.26	1,607.23	1,607.02
MH13	814	1,605.50	1,579.98	1,600.06	1,599.85
MH12	814	1,600.50	1,576.67	1,592.85	1,592.65
MH11	814	1,595.30	1,573.38	1,585.65	1,585.45
I-2	829	1,591.60	1,571.35	1,581.15	1,579.46
MH9	829	1,587.00	1,567.50	1,575.79	1,575.61
MH8	829	1,583.00	1,564.00	1,573.65	1,572.11
MH7	829	1,572.20	1,553.50	1,562.64	1,561.61
MH6	829	1,564.00	1,548.50	1,556.79	1,556.61
MH5	829	1,556.50	1,538.50	1,546.89	1,546.61
MH4	829	1,547.80	1,529.00	1,538.96	1,538.08
MH3	829	1,546.00	1,527.70	1,537.43	1,535.81
MH2	829	1,538.50	1,524.15	1,532.44	1,532.26
C1	829	1,537.00	1,521.00	1,529.11	1,529.11
MH-1	829	1,537.00	1,519.00	1,528.07	1,527.11
Outlet	829	1,531.00	1,513.00	1,522.00	1,522.00

Table D-3
Union Hills Basin Outlet Conduit Pipe Report

Pipe	Upstream Node	Downstream Node	Discharge (cfs)	Length (ft)	Shape	Size	Roughness	Upstream Ground Elevation (ft)	Upstream Invert Elevation (ft)	Upstream HGL (ft)	Downstream Ground Elevation (ft)	Downstream Invert Elevation (ft)	Downstream HGI (ft)
P-7	MH6	MH5	891	526	Circular	108 inch	0.015	1,564.00	1,549.50	1,556.85	1,556.50	1,539.50	1,547.15
P-6	MH5	MH4	891	621	Circular	108 inch	0.015	1,556.50	1,539.50	1,546.85	1,547.80	1,530.00	1,539.92
P-5	MH4	MH3	891	178	Circular	108 inch	0.015	1,547.80	1,530.00	1,539.01	1,546.00	1,528.70	1,537.80
P-4	MH3	MH2	891	475	Circular	108 inch	0.015	1,546.00	1,528.70	1,536.05	1,538.50	1,525.15	1,532.70
P-3	MH2	C1	891	420	Circular	108 inch	0.015	1,538.50	1,525.15	1,532.50	1,537.00	1,522.00	1,529.35
P-2	C1	MH-1	891	47	Circular	108 inch	0.015	1,537.00	1,522.00	1,529.35	1,537.00	1,520.00	1,528.39
P-1	MH-1	Outlet	891	153	Circular	108 inch	0.015	1,537.00	1,520.00	1,527.35	1,531.00	1,513.00	1,522.00
P-16	I-1	MH14	620	148	Circular	96 inch	0.015	1,614.00	1,585.00	1,597.28	1,610.00	1,584.26	1,596.37
P-15	MH14	MH13	620	657	Circular	96 inch	0.015	1,610.00	1,584.26	1,596.25	1,605.50	1,580.98	1,592.21
P-14	MH13	MH12	620	660	Circular	96 inch	0.015	1,605.50	1,580.98	1,592.09	1,600.50	1,577.67	1,588.03
P-13	MH12	MH11	620	660	Circular	96 inch	0.015	1,600.50	1,577.67	1,587.91	1,595.30	1,574.38	1,583.85
P-12	MH11	I-2	620	405	Circular	96 inch	0.015	1,595.30	1,574.38	1,583.73	1,591.60	1,572.35	1,581.24
P-11	I-2	MH9	843	415	Circular	108 inch	0.015	1,591.60	1,572.35	1,579.52	1,587.00	1,568.50	1,575.85
P-10	MH9	MH8	843	425	Circular	108 inch	0.015	1,587.00	1,568.50	1,575.67	1,583.00	1,565.00	1,573.74
P-9	MH8	MH7	843	763	Circular	108 inch	0.015	1,583.00	1,565.00	1,572.17	1,572.20	1,554.50	1,562.71
P-8	MH7	MH6	843	562	Circular	108 inch	0.015	1,572.20	1,554.50	1,561.67	1,564.00	1,549.50	1,556.85
P-7	MH6	MH5	843	526	Circular	108 inch	0.015	1,564.00	1,549.50	1,556.67	1,556.50	1,539.50	1,546.95
P-6	MH5	MH4	843	621	Circular	108 inch	0.015	1,556.50	1,539.50	1,546.67	1,547.80	1,530.00	1,539.15
P-5	MH4	MH3	843	178	Circular	108 inch	0.015	1,547.80	1,530.00	1,538.26	1,546.00	1,528.70	1,537.51
P-4	MH3	MH2	843	475	Circular	108 inch	0.015	1,546.00	1,528.70	1,535.87	1,538.50	1,525.15	1,532.50
P-3	MH2	C1	843	420	Circular	108 inch	0.015	1,538.50	1,525.15	1,532.32	1,537.00	1,522.00	1,529.17
P-2	C1	MH-1	843	47	Circular	108 inch	0.015	1,537.00	1,522.00	1,529.17	1,537.00	1,520.00	1,528.14
P-1	MH-1	Outlet	843	153	Circular	108 inch	0.015	1,537.00	1,520.00	1,527.17	1,531.00	1,513.00	1,522.00
P-16	I-1	MH14	698	148	Circular	96 inch	0.015	1,614.00	1,585.00	1,601.74	1,610.00	1,584.26	1,600.59
P-15	MH14	MH13	698	657	Circular	96 inch	0.015	1,610.00	1,584.26	1,600.44	1,605.50	1,580.98	1,595.31
P-14	MH13	MH12	698	660	Circular	96 inch	0.015	1,605.50	1,580.98	1,595.16	1,600.50	1,577.67	1,590.02
P-13	MH12	MH11	698	660	Circular	96 inch	0.015	1,600.50	1,577.67	1,589.87	1,595.30	1,574.38	1,584.72
P-12	MH11	I-2	698	405	Circular	96 inch	0.015	1,595.30	1,574.38	1,584.57	1,591.60	1,572.35	1,581.41
P-11	I-2	MH9	871	415	Circular	108 inch	0.015	1,591.60	1,572.35	1,579.62	1,587.00	1,568.50	1,575.97
P-10	MH9	MH8	871	425	Circular	108 inch	0.015	1,587.00	1,568.50	1,575.77	1,583.00	1,565.00	1,573.91
P-9	MH8	MH7	871	763	Circular	108 inch	0.015	1,583.00	1,565.00	1,572.27	1,572.20	1,554.50	1,562.86
P-8	MH7	MH6	871	562	Circular	108 inch	0.015	1,572.20	1,554.50	1,561.77	1,564.00	1,549.50	1,556.97
P-7	MH6	MH5	871	526	Circular	108 inch	0.015	1,564.00	1,549.50	1,556.77	1,556.50	1,539.50	1,547.06
P-6	MH5	MH4	871	621	Circular	108 inch	0.015	1,556.50	1,539.50	1,546.77	1,547.80	1,530.00	1,539.57
P-5	MH4	MH3	871	178	Circular	108 inch	0.015	1,547.80	1,530.00	1,538.68	1,546.00	1,528.70	1,537.68
P-4	MH3	MH2	871	475	Circular	108 inch	0.015	1,546.00	1,528.70	1,535.97	1,538.50	1,525.15	1,532.62
P-3	MH2	C1	871	420	Circular	108 inch	0.015	1,538.50	1,525.15	1,532.42	1,537.00	1,522.00	1,529.27
P-2	C1	MH-1	871	47	Circular	108 inch	0.015	1,537.00	1,522.00	1,529.27	1,537.00	1,520.00	1,528.28
P-1	MH-1	Outlet	871	153	Circular	108 inch	0.015	1,537.00	1,520.00	1,527.27	1,531.00	1,513.00	1,522.00
P-16	I-1	MH14	799	148	Circular	96 inch	0.015	1,614.00	1,585.00	1,607.76	1,610.00	1,584.26	1,606.25

Table D-3
Union Hills Basin Outlet Conduit Pipe Report

Pipe	Upstream Node	Downstream Node	Discharge (cfs)	Length (ft)	Shape	Size	Roughness	Upstream Ground Elevation (ft)	Upstream Invert Elevation (ft)	Upstream HGL (ft)	Downstream Ground Elevation (ft)	Downstream Invert Elevation (ft)	Downstream HGl (ft)
P-15	MH14	MH13	799	657	Circular	96 inch	0.015	1,610.00	1,584.26	1,606.05	1,605.50	1,580.98	1,599.34
P-14	MH13	MH12	799	660	Circular	96 inch	0.015	1,605.50	1,580.98	1,599.14	1,600.50	1,577.67	1,592.40
P-13	MH12	MH11	799	660	Circular	96 inch	0.015	1,600.50	1,577.67	1,592.20	1,595.30	1,574.38	1,585.46
P-12	MH11	I-2	799	405	Circular	96 inch	0.015	1,595.30	1,574.38	1,585.26	1,591.60	1,572.35	1,581.13
P-11	I-2	MH9	825	415	Circular	108 inch	0.015	1,591.60	1,572.35	1,579.44	1,587.00	1,568.50	1,575.78
P-10	MH9	MH8	825	425	Circular	108 inch	0.015	1,587.00	1,568.50	1,575.59	1,583.00	1,565.00	1,573.63
P-9	MH8	MH7	825	763	Circular	108 inch	0.015	1,583.00	1,565.00	1,572.09	1,572.20	1,554.50	1,562.62
P-8	MH7	MH6	825	562	Circular	108 inch	0.015	1,572.20	1,554.50	1,561.59	1,564.00	1,549.50	1,556.78
P-7	MH6	MH5	825	526	Circular	108 inch	0.015	1,564.00	1,549.50	1,556.59	1,556.50	1,539.50	1,546.87
P-6	MH5	MH4	825	621	Circular	108 inch	0.015	1,556.50	1,539.50	1,546.59	1,547.80	1,530.00	1,538.91
P-5	MH4	MH3	825	178	Circular	108 inch	0.015	1,547.80	1,530.00	1,538.02	1,546.00	1,528.70	1,537.40
P-4	MH3	MH2	825	475	Circular	108 inch	0.015	1,546.00	1,528.70	1,535.79	1,538.50	1,525.15	1,532.43
P-3	MH2	C1	825	420	Circular	108 inch	0.015	1,538.50	1,525.15	1,532.24	1,537.00	1,522.00	1,529.09
P-2	C1	MH-1	825	47	Circular	108 inch	0.015	1,537.00	1,522.00	1,529.09	1,537.00	1,520.00	1,528.04
P-1	MH-1	Outlet	825	153	Circular	108 inch	0.015	1,537.00	1,520.00	1,527.09	1,531.00	1,513.00	1,522.00
P-16	I-1	MH14	814	148	Circular	96 inch	0.015	1,614.00	1,585.00	1,608.80	1,610.00	1,584.26	1,607.23
P-15	MH14	MH13	814	657	Circular	96 inch	0.015	1,610.00	1,584.26	1,607.02	1,605.50	1,580.98	1,600.06
P-14	MH13	MH12	814	660	Circular	96 inch	0.015	1,605.50	1,580.98	1,599.85	1,600.50	1,577.67	1,592.85
P-13	MH12	MH11	814	660	Circular	96 inch	0.015	1,600.50	1,577.67	1,592.65	1,595.30	1,574.38	1,585.65
P-12	MH11	I-2	814	405	Circular	96 inch	0.015	1,595.30	1,574.38	1,585.45	1,591.60	1,572.35	1,581.15
P-11	I-2	MH9	829	415	Circular	108 inch	0.015	1,591.60	1,572.35	1,579.46	1,587.00	1,568.50	1,575.79
P-10	MH9	MH8	829	425	Circular	108 inch	0.015	1,587.00	1,568.50	1,575.61	1,583.00	1,565.00	1,573.65
P-9	MH8	MH7	829	763	Circular	108 inch	0.015	1,583.00	1,565.00	1,572.11	1,572.20	1,554.50	1,562.64
P-8	MH7	MH6	829	562	Circular	108 inch	0.015	1,572.20	1,554.50	1,561.61	1,564.00	1,549.50	1,556.79
P-7	MH6	MH5	829	526	Circular	108 inch	0.015	1,564.00	1,549.50	1,556.61	1,556.50	1,539.50	1,546.89
P-6	MH5	MH4	829	621	Circular	108 inch	0.015	1,556.50	1,539.50	1,546.61	1,547.80	1,530.00	1,538.96
P-5	MH4	MH3	829	178	Circular	108 inch	0.015	1,547.80	1,530.00	1,538.08	1,546.00	1,528.70	1,537.43
P-4	MH3	MH2	829	475	Circular	108 inch	0.015	1,546.00	1,528.70	1,535.81	1,538.50	1,525.15	1,532.44
P-3	MH2	C1	829	420	Circular	108 inch	0.015	1,538.50	1,525.15	1,532.26	1,537.00	1,522.00	1,529.11
P-2	C1	MH-1	829	47	Circular	108 inch	0.015	1,537.00	1,522.00	1,529.11	1,537.00	1,520.00	1,528.07
P-1	MH-1	Outlet	829	153	Circular	108 inch	0.015	1,537.00	1,520.00	1,527.11	1,531.00	1,513.00	1,522.00

APPENDIX E

Ultimate Condition 100-Year, 6-Hour HEC-1 Output File Printout

```
1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*              MAY   1991           *
*           VERSION 4.0.1E          *
*     Lahey F77L-EM/32 version 5.01 *
*       Dodson & Associates, Inc.   *
*  RUN DATE  11/26/97  TIME  09:49:15 *
*************************************
```

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

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

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

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

```
1                                          HEC-1 INPUT                                                    PAGE  1

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

    1           ID    PIMA ROAD THREE BASINS                                  File:  ULTMT-6.1H1
    2           ID    by  Stantech for the City of Scottsdale            Original: 08-07-97     mcg
    3           ID        Project:  28900051
    4           ID
    5           ID
    6           ID    100-YEAR, 6-HOUR STORM
    7           ID        10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
    8           ID        10% LEVEL DESIGN FOR DEER VALLEY DETENTION BASIN ALTERNATIVE 3
    9           ID        10% LEVEL DESIGN FOR UNION HILLS DETENTION BASIN ALTERNATIVE 1B
   10           ID
   11           ID        ULTIMATE CONDITION --- POWER LINE CHANNEL:
   12           ID          GRAYHAWK RUNOFF RELEASED TO NATURAL WASHES ARE COLLECTED IN THE
   13           ID          "POWER LINE CHANNEL" AND ROUTED TO THE UNION HILLS DETENTION BASIN.
   14           ID          THE ULTIMATE LOCATION AND GEOMETRY OF THE POWER LINE CHANNEL WILL
   15           ID          BE DETERMINED BY OTHERS.
   16           ID
                *DIAGRAM
   17           IT       5                    720
   18           IO       5
   19           JD             .01
   20           JD              .1
   21           JD              .5
   22           JD               1
   23           JD               5
   24           JD              25
                *

   25           KK    S30N
   26           KM     RUNOFF FROM SUBBASIN 30N
   27           BA  0.6518
   28           PH                     .84    1.53    2.46    2.75    2.94    3.31
   29           LS              82      13              82      13
   30           UK     300   0.350    0.13      20
   31           UK     300   0.050    0.13      80
   32           RK    1550   0.069   0.045  0.0096    TRAP       0      12
   33           RK   10520   0.038   0.040            TRAP      15      15
                *

   34           KK    R30N
   35           KM     NORMAL DEPTH CHANNEL ROUTE FROM C30N TO C31.1 THROUGH PIMA CHANNEL
   36           RS       1    FLOW      -1
   37           RC   0.022   0.022   0.022    2470    0.01
   38           RX    1000    1012    1020    1028    1036    1044    1052    1064
   39           RY     107     104     102     100     100     102     104     107
                *

   40           KK   S31.1
   41           KM     RUNOFF FROM SUBBASIN 31.1
   42           BA  0.2663
   43           LS            76.6      13            76.6      13
   44           UK     300   0.567    0.13      10
   45           UK     300   0.050    0.13      90
   46           RK    1950   0.056   0.045  0.0147    TRAP       0      10
   47           RK    7600   0.035   0.040            TRAP      22       8
                *
```

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

  48          KK   C31.1
  49          KM     COMBINE ROUTED HYDROGRAPH FROM S30N WITH RUNOFF FROM SUBBASIN 31.1
  50          HC       2
              *
              *  R31.1
              *   ****  TOO SHORT TO ROUTE  ****
              *    NORMAL DEPTH CHANNEL ROUTE FROM C31.1 TO C34.1 THROUGH PIMA CHANNEL
              *       1    FLOW       -1
              *  0.022   0.022   0.022    1500    0.01
              *   1000    1012    1020    1028    1048    1056    1064    1076
              *    107     104     102     100     100     102     104     107
              *

  51          KK   S34.2
  52          KM     RUNOFF FROM SUBBASIN 34.2
  53          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
  54          BA  0.4441
  55          LS            77.3      12            77.3      12
  56          UK      50    0.10    0.13      10
  57          UK     300   0.040    0.13      90
  58          RK    2200  0.0452   0.045  0.0538    TRAP       0      10
  59          RK    8150  0.0386   0.045            TRAP       0      10
              *

  60          KK   C34.2
  61          KM     COMBINE ROUTED HYDROGRAPH FROM C31.1 WITH RUNOFF FROM SUBBASIN 34.2
  62          HC       2
              *

  63          KK    S35N
  64          KM     RUNOFF FROM SUBBASIN 35N
  65          BA  0.5482
  66          LS            82      13              82      13
  67          UK     300   0.491    0.13      15
  68          UK     300   0.113    0.13      85
  69          RK    2700   0.079   0.045  0.0242    TRAP       3       6
  70          RK    5050   0.028   0.040            TRAP      15      15
              *

  71          KK   D35NR
  72          KM     DIVERSION JUST DOWNSTREAM OF THE ALMA SCHOOL ROAD CULVERT
  73          KM        RIGHT BRANCH IS ROUTED TO C36.2
  74          KM        LEFT BRANCH (CODED ON DQ RECORD) IS ROUTED TO C36R1
  75          DT   D35NL
  76          DI       0      10      66     168     343     581     805     977    1168    1320
  77          DQ       0       4      28      73     154     261     360     435     518     575
              *

  78          KK   R35NR
  79          KM     NORMAL DEPTH CHANNEL ROUTE FROM S35N TO C36.2
  80          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
  81          RS       1    FLOW       -1
  82          RC    0.06    0.04    0.06    3500  0.0343
  83          RX    1000    1006    1026    1027    1057    1058    1078    1084
```



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

  84          RY     105     103     101     100     100     101     103     105
              *

  85          KK   S36.2
  86          KM     RUNOFF FROM SUBBASIN 36.2
  87          BA  0.2087
  88          LS            76.6      13            76.6      13
  89          UK     300   0.580    0.13       5
  90          UK     300   0.100    0.13      95
  91          RK    1800   0.036   0.045  0.0145    TRAP      10      10
  92          RK    3520   0.028   0.040            TRAP      20       6
              *

  93          KK   C36.2
  94          KM     COMBINE ROUTED HYDROGRAPH FROM S35N WITH RUNOFF FROM SUBBASIN 36.2
  95          HC       2  0.5411
              *

  96          KK  D36.2R
  97          KM     DIVERSION AT DESERT HIGHLANDS DRIVE
  98          KM        RIGHT BRANCH, AT GOLF CART CROSSING IS ROUTED TO C34.1
  99          KM        LEFT BRANCH (CODED ON DQ RECORD) IS ROUTED TO C36R1
 100          DT  D36.2L
 101          DI       0      36     166     288     360     430     538     681     859    1074
 102          DQ       0       0       0       0       0      18      60     123     208     315
              *

 103          KK  R36.2R
 104          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.2 TO C34.1
 105          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
```

```
 106          RS       4    FLOW      -1
 107          RC    0.06    0.04    0.06    7800  0.0321
 108          RX    1000    1043    1053    1068    1093    1098    1133    1218
 109          RY   102.6   100.6   100.5     100     100   100.5   100.6   102.6
              *

 110          KK   S34.1
 111          KM     RUNOFF FROM SUBBASIN 34.1
 112          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
 113          BA  1.1635
 114          LS            77.3      12            77.3      12
 115          UK     300   0.590    0.13      25
 116          UK     300   0.040    0.13      75
 117          RK    2570   0.085   0.045  0.0214    TRAP       0      10
 118          RK    8800  0.0325   0.040            TRAP      20      10
              *

 119          KK   C34.1
 120          KM     COMBINE ROUTED HYDROGRAPH FROM C36.2 W/RUNOFF FROM SUBBASIN 34.1
 121          HC       2  1.5423
              *
1                                          HEC-1 INPUT                                          PAGE  4

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

 122          KK  HVDB-I
 123          KM     COMBINE HYDROGRAPH FROM C34.2 W/ C34.1
 124          HC       2  2.9029
              *

 125          KK  HVDB-O
 126          KM     DETENTION BASIN AT HAPPY VALLEY ROAD - NONREGULATORY STRUCTURE
 127          KM        PRINCIPAL SPILLWAY:  42" x 800' RCP WITH A SLOPE OF 0.5%
 128          KM        13 ACRE-FEET OF STORAGE FOR SEDIMENTAION
 129          RS       1    STOR      -1
 130          SV       0     0.2     0.7     1.8     3.4     5.4    36.3    88.1   150.2   224.3
 131          SV   240.0
 132          SE    2065    2066    2067    2068    2069    2070    2075    2080    2085    2090
 133          SE    2091
 134          SQ       0      10      20      30      40      50      60      70      80      90
 135          SQ     100     110     120     130     140     150
 136          SE  2065.0 2066.13 2066.77 2067.45 2067.94 2068.42 2068.95 2070.44 2072.26 2074.32
 137          SE  2076.6 2079.16 2081.95 2084.98 2088.25 2091.77
              *

 138          KK   R34.1
 139          KM     NORMAL DEPTH CHANNEL ROUTE FROM C34.1 TO C36.1 THROUGH PIMA CHANNEL
 140          RS       1    FLOW      -1
 141          RC   0.022   0.022   0.022    2200    0.01
 142          RX    1000    1012    1020    1028    1036    1044    1052    1064
 143          RY     107     104     102     100     100     102     104     107
              *

 144          KK   S36.1
 145          KM     RUNOFF FROM SUBBASIN 36.1
 146          BA  0.1394
 147          LS            73.4      11
 148          UK     300  0.0420   0.130     100
 149          RK    2330  0.0320   0.045  0.0134    TRAP      10      30
 150          RK    3200  0.0270   0.040            TRAP      20      30
              *

 151          KK   C36.1
 152          KM     COMBINE ROUTED HYDROGRAPH FROM C34.1 WITH RUNOFF FROM SUBBASIN 36.1
 153          HC       2
              *

 154          KK   R36.1
 155          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.1 TO C36R1 THROUGH PIMA CHANNEL
 156          RS       1    FLOW      -1
 157          RC   0.022   0.022   0.022    1520    0.01
 158          RX    1000    1012    1020    1028    1036    1044    1052    1064
 159          RY     107     104     102     100     100     102     104     107
              *
1                                          HEC-1 INPUT                                          PAGE  5

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

 160          KK   B35NL
 161          KM     BRING BACK DIVERTED HYDROGRAPH FROM C35N
 162          DR   D35NL
              *

 163          KK   R35NL
 164          KM     NORMAL DEPTH CHANNEL ROUTE FROM S35N TO C36R1
 165          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
 166          RS       5    FLOW      -1
 167          RC    0.06    0.04    0.06   14480  0.0318
 168          RX    1000    1040    1080    1086    1091    1097    1137    1174
 169          RY     105     104     103     100     100     103     104     105
              *
```

```
170          KK  B36.2L
171          KM     BRING BACK DIVERTED HYDROGRAPH FROM C36.2
172          DR  D36.2L
             *

173          KK  R36.2L
174          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.2 TO C36R1
175          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
176          RS       3    FLOW      -1
177          RC    0.06    0.04    0.06   10160  0.0342
178          RX    1000    1030    1060    1066    1076    1082    1112    1142
179          RY     103   102.5     102     100     100     102   102.5     103
             *

180          KK  S36R1A
181          KM     RUNOFF FROM SUBBASIN 36R1A
182          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 36.3, 36R1 AND 35R ARE AREA WEIGHT
183          BA  0.6310
184          LS            74.3      10
185          UK     300   0.020   0.130     100
186          RK    1420   0.032   0.045  0.0061    TRAP       0      13
187          RK   10800   0.033   0.040            TRAP      10       9
             *

188          KK  C36R1A
189          KM     COMBINE ROUTED HYDROGRAPH FROM C36.1, D35NL & D36.2L W/RUNOFF FROM S36R1A
190          KM        AREA IS AREA FROM C36.1 + S36R1 + 40% OF AREA FROM S35N + 30% OF AREA
191          KM        FROM C36.2
192          HC       4  4.0530
             *

193          KK  S36R1B
194          KM     RUNOFF FROM SUBBASIN 36R1B
195          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 36.3, 36R1 AND 35R ARE AREA WEIGHT
196          BA  0.5863
197          LS            74.3      10
198          UK     300   0.020   0.130     100
199          RK    1420   0.032   0.045  0.0061    TRAP       0      13
200          RK    8500   0.033   0.040            TRAP      10       9
             *
1                                          HEC-1 INPUT                                          PAGE  6

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

201          KK  C36R1B
202          KM     COMBINE HYDROGRAPH FROM C36R1A W/RUNOFF FROM S36R1B AT C36R1B
203          HC       2  4.6393
             *
             * R36R1B
             *   ****  TOO SHORT TO ROUTE  ****
             *    NORMAL DEPTH CHANNEL ROUTE FROM C36R1B TO C36R2A THROUGH PIMA CHANNEL
             *       1    FLOW      -1
             *  0.022   0.022   0.022    1900    0.01
             *   1000    1012    1020    1028    1036    1044    1052    1064
             *    107     104     102     100     100     102     104     107
             *

204          KK  S36R2A
205          KM     RUNOFF FROM SUBBASIN 36R2A
206          BA  0.1325
207          LS              72      20
208          UK     100   0.045   0.130     100
209          RK    1900   0.032   0.017   0.015    TRAP      15       7
210          RK     800   0.030   0.035            TRAP      10       5
             *

211          KK  C36R2A
212          KM     COMBINE ROUTED HYDROGRAPH FROM C36R1B W/RUNOFF FROM SUBBASIN 36R2A
213          HC       2
             *

214          KK  R36R2A
215          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36R2A TO C36R2B THROUGH PIMA CHANNEL
216          KM     ****  TOO SHORT TO ROUTE  ****
217          KM       1    FLOW      -1
218          KM   0.022   0.022   0.022    2130    0.01
219          KM    1000    1012    1020    1028    1036    1044    1052    1064
220          KM     107     104     102     100     100     102     104     107
221          KM
222          KM     LAG THE HYDROGRAPH BY ONE TIME STEP TO ACCOUNT FOR SERIES OF INDIVIDUAL
223          KM     ROUTING REACHES THAT ARE TOO SHORT TO ROUTE.
224          KM        ASSUME WAVE CELERITY = 15-20 fps AND TOTAL LENGTH OF 5030'
225          RT                      1
             *

226          KK  S36R2B
227          KM     RUNOFF FROM SUBBASIN 36R2A
228          BA  0.2417
229          LS              72      12
230          UK     280   0.045   0.100     100
231          RK    1900   0.032   0.017   0.015    TRAP      15       7
```

```
 232          RK    7360   0.030   0.040            TRAP      30      10
              *
1                                          HEC-1 INPUT                                                    PAGE  7

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

 233          KK  C36R2B
 234          KM     COMBINE ROUTED HYDROGRAPH FROM C36R2A W/RUNOFF FROM SUBBASIN 36R2B
 235          HC       2
              *

 236          KK   S51.1
 237          KM     RUNOFF FROM SUBBASIN 51.1
 238          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 51.1 AND 49.1 ARE AREA WEIGHTED
 239          BA   1.130
 240          LS            73.9      12
 241          UK     300   0.037   0.130     100
 242          RK    1800   0.038   0.045  0.0161    TRAP       0      12
 243          RK   14400   0.032   0.040            TRAP      40      15
              *

 244          KK  DVDB-I
 245          KM     COMBINE HYDROGRAPH FROM C36R2 W/RUNOFF FROM SUBBASIN 51.1
 246          HC       2
              *

 247          KK  DVDB-O
 248          KM     DETENTION BASIN AT DEER VALLEY ROAD - NONREGULATORY STRUCTURE
 249          KM        PRINCIPAL SPILLWAY:  54" x 800' RCP WITH A SLOPE OF 0.5%
 250          KM        13 ACRE-FEET OF STORAGE FOR SEDIMENTAION
 251          RS       1    STOR      -1
 252          SV       0     0.2     0.7     1.7     3.5     6.1    38.6    86.9   143.2   209.9
 253          SV   224.1
 254          SE    1855    1856    1857    1858    1859    1860    1865    1870    1875    1880
 255          SE    1881
 256          SQ       0      20      40      60      80     100     120     140     160     180
 257          SQ     200     210     220     230     240     250     260     270
 258          SE    1855 1856.43 1857.53 1858.31 1858.95 1859.61 1860.29  1861.8 1863.71 1865.82
 259          SE  1868.1 1869.38 1870.67 1872.02 1873.43 1874.89 1877.29 1882.35
              *
              *  R51.1
              *     DEER VALLEY BASIN OUTLET CONDUIT TO THOMPSON PEAK PARKWAY
              *     COMBINE WITH RUNOFF FROM DC RANCH
              *       L = 2820 feet
              *

 260          KK  D51.1T
 261          KM     DIVERT 100% OF FLOW TO RETRIEVE AT THOMPSON PEAK PARKWAY
 262          DT  B51.1T
 263          DI       0   10000
 264          DQ       0   10000
              *
              *
              *     ******************  BEGIN DC RANCH WATERSHED  ******************
              *
              *       THE DC RANCH HEC-1 MODEL WAS DEVELOPED BY WOOD/PATEL ASSOCIATES
              *          WOOD/PATEL FILE NAME:  DC0721C.DAT
              *          MODEL DATE:            4 JANUARY 96
              *
1                                          HEC-1 INPUT                                                    PAGE  8

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

 265          KK    52D4
 266          KM   RUNOFF FROM SUBBASIN 52D4
 267          BA    .070
 268          LS              75    14.5
 269          UK     120    .010     .15     100
 270          RK    3100    .035    .045            TRAP      30      10
              *

 271          KK   52D4R
 272          KM   ROUTE 52D4C THROUGH 52D5 TO CP 52D5C
 273          RK    1350    .033    .045            TRAP      10      10
              *

 274          KK   52D4B
 275          KM   RUNOFF FROM SUBBASIN 52D4B
 276          BA    .022
 277          LS              75      63
 278          UK     120    .010     .15     100
 279          RK    2200    .033    .045            TRAP      30      10
              *

 280          KK  52D5C1
 281          KM   COMBINE 52D4R AND 52D4B
 282          HC       2
              *

 283          KK   52D5A
 284          KM   RUNOFF FROM 52D5A
```

```
 285          BA   .0232
 286          LS              75      63
 287          UK     120     .010     .15     100
 288          RK    1300     .032    .045            TRAP      30      10
              *

 289          KK  52D5AR
 290          KM   ROUTE 52D5A THROUGH BEARDSLEY CHANNEL TO CP 52D5C2
 291          RK     400   .0143    .035            TRAP      50       4
              *

 292          KK  52D5C2
 293          KM   COMBINE 25D5C1 AND 52D5AR
 294          HC       2
              *

 295          KK   52D5R
 296          KM   ROUTE 52D5C IN BEARDSLEY CHANNEL TO CP 52C3BC2
 297          RK     240   .0143    .035            TRAP      50       4
              *
1                                          HEC-1 INPUT                                                    PAGE  9

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

 298          KK    52C3
 299          KM   RUNOFF FROM SUBBASIN 52C3
 300          BA    .006
 301          LS              75      65
 302          UK     100     .02     .10     100
 303          RK     800    .033    .045            TRAP      30      10
              *

 304          KK   52C3R
 305          KM   ROUTE 52C3 THROUGH SUBBASIN 52C4 TO CP 52C4C1
 306          RK    1350    .034    .045            TRAP      10      10
              *

 307          KK   52C3B
 308          KM   RUNOFF FROM SUBBASIN 52C3B
 309          BA    .016
 310          LS              75      60
 311          UK     100     .02     .10     100
 312          RK    1400    .034    .045            TRAP      30      10
              *

 313          KK  2C3BC1
 314          KM   COMBINE 52C3B AND 52C3R
 315          HC       2
              *

 316          KK  2C3BC2
 317          KM   COMBINE 52C3BC1 AND 52C5R
 318          HC       2
              *

 319          KK  52C3BR
 320          KM   ROUTE 52C3BC2 IN BEARDSLEY CHANNEL TO CP 52C4C2
 321          RK     430   .0143    .035            TRAP      50       4
              *
              *

 322          KK     51C     SUB
 323          KM        RUNOFF FROM SUB 51C
 324          BA   .0972
 325          LS              74      15
 326          UK     100   .0213     .10     100
 327          RK    3900   .0375    .045            TRAP      30      10
              *

 328          KK   51C1D
 329          KM   DIVERT 67 PERCENT OF 51C TO WEST (33 PERCENT TO SOUTH)
 330          DT  51C1DV
 331          DI       0   10000
 332          DQ       0    6700
              *
1                                          HEC-1 INPUT                                                    PAGE 10

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

 333          KK   51C1R
 334          KM   ROUTE 51C1D THROUGH SUBBASIN 52C1
 335          RK    1350   .0364    .045            TRAP      10      10
              *

 336          KK    52C1
 337          KM   RUNOFF FROM SUBBASIN 52C1
 338          BA    .029
 339          LS              75    20.5
 340          UK     100     .02     .10     100
 341          RK    1350    .021    .045            TRAP      30      10
              *
```

```
342          KK   52C1C
343          KM   COMBINE 51C1R AND 52C1
344          HC       2   .0611
             *

345          KK   52C1R
346          KM   ROUTE 52C1C THROUGH BASIN 52C2A TO CP 52C2BC
347          RK    1500    .033    .045            TRAP      10       10
             *

348          KK   52C2A
349          KM   RUNOFF FROM SUBBASIN 52C2A
350          BA    .019
351          LS              75       2
352          UK     100     .02     .10     100
353          RK    1500    .033    .045            TRAP      30       10
             *

354          KK  52C2AC
355          KM   COMBINE 52C2A AND 52C1R
356          HC       2
             *

357          KK   52C2B
358          KM   RUNOFF FROM SUBBASIN 52C2B
359          BA   .0275
360          LS              75      11
361          UK     100     .02     .10     100
362          RK    2000    .030    .045            TRAP      30       10
             *

363          KK  52C2BC
364          KM   COMBINE 52C2B AND 52C2AC
365          HC       2
             *
```



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

366          KK  52C2BR
367          KM   ROUTE 52C2BC THROUGH 52C2C TO CP 52C2CC
368          RK    1500    .040    .045            TRAP      10       10
             *

369          KK   52C2C
370          KM   RUNOFF FROM SUBBASIN 52C2C
371          BA    .014
372          LS              75      62
373          UK     100     .02     .10     100
374          RK    1500     .04    .045            TRAP      30       10
             *

375          KK  52C2CC
376          KM   COMBINE 52C2C AND 52C2BR
377          HC       2
             *

378          KK   52C2R
379          KM   ROUTE 52C2CC THROUGH SUBBASIN 52C4 TO CP 52C4C1
380          RK    1550    .030    .045            TRAP      10       10
             *

381          KK    52C4
382          KM   RUNOFF FROM SUBBASIN 52C4
383          BA    .017
384          LS              75      60
385          UK     100     .02     .10     100
386          RK    1550    .030    .045            TRAP      30       10
             *

387          KK  52C4C1
388          KM   COMBINE 52C4 AND 52C2R
389          HC       2
             *

390          KK  52C4C2
391          KM   COMBINE 52C4C1 AND 52C3BR
392          HC       2
             *

393          KK   52C4R
394          KM   ROUTE 52C4C2 WEST IN BEARDSLEY CHANNEL TO CP 52C15C2
395          RK     850   .0143    .035            TRAP      50        4
             *

396          KK   52C13
397          KM   RUNOFF FROM SUBBASIN 52C13
398          BA    .023
399          LS              75      31
400          UK     100     .02     .10     100
401          RK     950    .040    .045            TRAP      30       10
```

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

                *
402             KK  2C13DV
403             KM   DIVERT FIRST 40 CFS INTO STORM DRAIN; REMAINDER FLOWS OVER ROAD
404             DT   STORM
405             DI       0      40    1000
406             DQ       0      40      40
                *
                * KK52C13R
                * KM ROUTE 52C13 THROUGH SUBBASIN 52C15 TO CP 52C15C1
                * RK  1800    .035    .045            TRAP      10      10
                *

407             KK   52C15
408             KM   RUNOFF FROM SUBBASIN 52C15
409             BA    .046
410             LS              75    64.4
411             UK     100     .02     .10     100
412             RK    2050    .036    .045            TRAP      30      10
                *

413             KK  2C15C1
414             KM   COMBINE 52C15 AND 52C13DV
415             HC       2    .046
                *

416             KK  2C15C2
417             KM   COMBINE 52C15C1 AND 52C4R
418             HC       2
                *

419             KK  52C15R
420             KM   ROUTE 52C15C2 IN BEARDSLEY CHANNEL TO CP 52C14C3
421             RK     750   .0143    .035            TRAP      50       4
                *

422             KK  52C14A
423             KM   RUNOFF FROM SUBBASIN 52C14A
424             BA    .041
425             LS              75    67.7
426             UK     100     .02     .10     100
427             RK    2050    .031    .045            TRAP      30      10
                *

428             KK  2C14AC
429             KM   COMBINE 52C14A AND 52C15R
430             HC       2
                *

431             KK  2C14AR
432             KM   ROUTE 52C14AC IN BEARDSLEY CHANNEL TO CP 52C14BC2
433             RK     380   .0143    .035            TRAP      50       4
                *
                *
```



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

434             KK  51C1DV
435             KM   RETRIEVE DIVERTED FLOW
436             DR  51C1DV
                *

437             KK   51C2D
438             KM   DIVERT 27 PERCENT OF 51C1DV TO WEST (73 PERCENT TO SOUTH)
439             DT  51C2DV
440             DI       0   10000
441             DQ       0    2700
                *

442             KK   51C2R
443             KM   ROUTE 51C2D THROUGH SUBBASIN 52C5 TO CP 52C5C
444             RK     700    .030    .045            TRAP      10      10
                *

445             KK    52C5
446             KM   RUNOFF FROM SUBBASIN 52C5
447             BA    .016
448             LS              75      27
449             UK     100     .02     .10     100
450             RK    1200     .03    .045            TRAP      30      10
                *

451             KK   52C5C
452             KM   COMBINE 51C2R AND 52C5
453             HC       2   .0635
                *
```

```
454          KK   52C5R
455          KM   ROUTE 52C5C THROUGH SUBBASIN 52C6 TO CP 52C6C
456          RK    3100    .035    .045            TRAP      10       10
             *

457          KK    52C6
458          KM   RUNOFF FROM SUBBASIN 52C6
459          BA    .036
460          LS              75    31.4
461          UK     100     .02     .10     100
462          RK    3100    .035    .045            TRAP      30       10
             *

463          KK   52C6C
464          KM   COMBINE 52C5R AND 52C6
465          HC       2
             *

466          KK   52C6R
467          KM   ROUTE 52C6C THROUGH SUBBASIN 52C10 TO CP 52C10C2
468          RK     450    .032    .045            TRAP      10       10
             *
1                                        HEC-1 INPUT                                                    PAGE 14

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

469          KK  51C2DV
470          KM   RETRIEVE 52C2DV
471          DR  51C2DV
             *

472          KK   51C3R
473          KM   ROUTE 52C2DV THROUGH SUBBASIN 52C7 TO CP 52C7C
474          RK     700    .040    .045            TRAP      10       10
             *

475          KK     51B     SUB
476          KM        RUNOFF FROM SUB 51B
477          BA   .5711
478          LS       0   71.9    13.1
479          UK     100  .0213     .10     100
480          RK    8900  .0300    .045            TRAP      50       25
             *

481          KK   51B1D
482          KM   DIVERT 92 PERCENT OF SUBBASIN 51B TO WEST (8 PERCENT TO SOUTH)
483          DT  51B1DV
484          DI       0   10000
485          DQ       0    9200
             *

486          KK   51B1R
487          KM    ROUTE 51B1D THROUGH SUBBASIN 52C7 TO CP 52C7C
488          RK     450     .04    .045            TRAP      10       10
             *

489          KK    52C7
490          KM   RUNOFF FROM SUBBASIN 52C7
491          BA    .006
492          LS              75      27
493          UK     100     .02     .10     100
494          RK     550     .04    .045            TRAP      30       10
             *

495          KK   52C7C
496          KM   COMBINE 51B1R, 51C3R, AND 52C7
497          HC       3   .0693
             *

498          KK   52C7R
499          KM   ROUTE 52C7C THROUGH SUBBASIN 52C9 TO CP 52C9C1
500          RK    1550    .036    .045            TRAP      10       10
             *

501          KK  51B1DV
502          KM   RETRIEVE DIVERTED FLOW 51B1DV
503          DR  51B1DV
             *
1                                        HEC-1 INPUT                                                    PAGE 15

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

504          KK   51B2D
505          KM   DIVERT 84 PERCENT OF 51B1DV TO WEST (16 PERCENT TO SOUTH)
506          DT  51B2DV
507          DI       0   10000
508          DQ       0    8400
             *

509          KK   51B2R
510          KM   ROUTE 51B2D THROUGH SUBBASIN 52C8 TO CP 52C8C
```

```
511          RK     750    .034    .045            TRAP      10      10
             *

512          KK    52C8
513          KM   RUNOFF FROM SUBBASIN 52C8
514          BA    .008
515          LS              75      27
516          UK     100     .02     .10     100
517          RK     750    .034    .045            TRAP      30      10
             *

518          KK   52C8C
519          KM   COMBINE 51B2R AND 52C8
520          HC       2   .4493
             *

521          KK   52C8R
522          KM   ROUTE 52C8C THROUGH SUBBASIN 52C9 TO CP 52C9C1
523          RK    1100    .036    .045            TRAP      10      10
             *

524          KK  52C9C1
525          KM   COMBINE 52C7R AND 52C8R
526          HC       2
             *

527          KK  52C9R1
528          KM   ROUTE 52C9C1 THROUGH SUBBASIN 52C9 TO CP 52C9C2
529          RK    1050    .036    .045            TRAP      10      10
             *

530          KK    52C9
531          KM   RUNOFF FROM SUBBASIN 52C9
532          BA    .069
533          LS              75   31.85
534          UK     100     .02     .10     100
535          RK    3150    .036    .045            TRAP      30      10
             *

536          KK  52C9C2
537          KM   COMBINE 52C9R1 AND 52C9
538          HC       2
             *
```



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

539          KK  52C9R2
540          KM   ROUTE 52C9C2 THROUGH SUBBASIN 52C10 TO CP 52C10C1
541          RK     500    .032    .045            TRAP      10      10
             *

542          KK  2C10C1
543          KM   COMBINE 52C9R2 AND 52C6R
544          HC       2
             *

545          KK  2C10R1
546          KM   ROUTE 52C10C1 THROUGH SUBBASIN 52C10 TO CP 52C10C2
547          RK     300    .032    .045            TRAP      10      10
             *

548          KK   52C10
549          KM   RUNOFF FROM SUBBASIN 52C10
550          BA    .014
551          LS              75    7.85
552          UK     100     .02     .10     100
553          RK     800    .032    .045            TRAP      30      10
             *

554          KK  2C10C2
555          KM   COMBINE 52C10R1 AND 52C10
556          HC       2
             *

557          KK   52C11
558          KM   RUNOFF FROM SUBBASIN 52C11
559          BA   .0425
560          LS              75      27
561          UK     100     .02     .10     100
562          RK    2800    .031    .045            TRAP      30      10
             *

563          KK  2C11R1
564          KM   PIPE ROUTE 52C11 TO CP 52C11C
565          RK     650     .02    .045            CIRC       3
             *

566          KK  52C13D
567          KM   RETRIEVE DIVERTED FLOW
568          DR   STORM
             *
```

```
 569          KK  52C11C
 570          KM   COMBINE 52C13D AND 52C11R1
 571          HC       2   .0655
              *
1                                          HEC-1 INPUT                                                    PAGE 17

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

 572          KK  2C11CR
 573          KM   PIPE ROUTE 52C11C TO CP 52C11C2
 574          RK     750     .02    .045            CIRC       3
              *

 575          KK  2C11C2
 576          KM   COMBINE 52C11CR AND 52C10C2
 577          HC       2
              *

 578          KK  2C11R2
 579          KM   ROUTE 52C11C2 THROUGH SUBBASIN 52C12 TO CP 52C12C
 580          RK     700     .03    .045            TRAP      10      10
              *

 581          KK   52C12
 582          KM   RUNOFF FROM SUBBASIN 52C12
 583          BA    .023
 584          LS              75      85
 585          UK     100     .02     .10     100
 586          RK     900     .03    .045            TRAP      30      10
              *

 587          KK  52C12C
 588          KM   COMBINE 52C11R2 AND 52C12
 589          HC       2
              *

 590          KK  52C12R
 591          KM   ROUTE 52C12C THROUGH SUBBASIN 52C14 TO CP 52C14C1
 592          RK    1150    .029    .045            TRAP      10      10
              *

 593          KK  52C14B
 594          KM   RUNOFF FROM SUBBASIN 52C14B
 595          BA    .021
 596          LS              75      60
 597          UK     100     .02     .10     100
 598          RK    1250    .029    .045            TRAP      30      10
              *

 599          KK  C14BC1
 600          KM   COMBINE 52C14B AND 52C12R
 601          HC       2
              *

 602          KK  C14BC2
 603          KM   COMBINE 52C14BC1 AND 52C14AR
 604          HC       2
              *
1                                          HEC-1 INPUT                                                    PAGE 18

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

 605          KK  52C14R
 606          KM   ROUTE 52C14C3 WEST IN BEARDSLEY CHANNEL TO CP 52B5C2
 607          RK     600   .0143    .035            TRAP      50       4
              *

 608          KK  51B2DV
 609          KM   RETRIEVE DIVERTED FLOW
 610          DR  51B2DV
              *

 611          KK   51B3D
 612          KM   DIVERT 84 PERCENT OF 51B2DV TO WEST (16 PERCENT TO SOUTH)
 613          DT  51B3DV
 614          DI       0   10000
 615          DQ       0    8400
              *

 616          KK   51B3R
 617          KM   ROUTE 51B3D THROUGH SUBBASIN 52B1 TO CP 52B1C
 618          RK     600    .039    .045            TRAP      10      10
              *

 619          KK    52B1
 620          KM   RUNOFF FROM SUBBASIN 52B1
 621          BA    .003
 622          LS              75      27
 623          UK     100     .02     .10     100
 624          RK     600    .039    .045            TRAP      30      10
```

```
                    *
 625                KK   52B1C
 626                KM   COMBINE 51B3R AND 52B1
 627                HC       2   .0736
                    *

 628                KK   52B1R
 629                KM   ROUTE 52B1C THROUGH SUBBASIN 52B2 TO CP 52B2C1
 630                RK     930    .037    .045            TRAP      10       10
                    *

 631                KK  51B3DV
 632                KM   RETRIEVE DIVERTED FLOW 51B3DV
 633                DR  51B3DV
                    *

 634                KK   51B4D
 635                KM   DIVERT 82 PERCENT OF 51B3DV TO WEST (18 PERCENT TO SOUTH)
 636                DT  51B4DV
 637                DI       0  10000
 638                DQ       0    8200
                    *
1                                                HEC-1 INPUT                                                    PAGE 19

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

 639                KK  51B4R1
 640                KM   ROUTE 51B4D THROUGH SUBBASIN 52B2 TO CP 52B2C1
 641                RK    1350    .037    .045            TRAP      10       10
                    *

 642                KK  52B2C1
 643                KM   COMBINE 51B4R1 AND 52B1R
 644                HC       2   .1403
                    *

 645                KK  52B2R1
 646                KM   ROUTE 52B2R1 THROUGH SUBBASIN 52B2 TO CP 52B2C2
 647                RK    1000    .037    .045            TRAP      10       10
                    *

 648                KK    52B2
 649                KM   RUNOFF FROM SUBBASIN 52B2
 650                BA    .032
 651                LS              75      17
 652                UK     100     .02     .10     100
 653                RK    2350    .037    .045            TRAP      30       10
                    *

 654                KK  52B2C2
 655                KM   COMBINE 52B2 AND 52B2R1
 656                HC       2
                    *

 657                KK  52B2R2
 658                KM   ROUTE 52B2C2 THROUGH SUBBASIN 52B3 TO CP 52B3C2
 659                RK     850    .026    .045            TRAP      10       10
                    *

 660                KK  52B3R1
 661                KM   ROUTE 52B3C1 THROUGH SUBBASIN 52B3 TO CP 52B3C2
 662                RK     500    .024    .045            TRAP      10       10
                    *

 663                KK    52B3
 664                KM   RUNOFF FROM SUBBASIN 52B3
 665                BA    .062
 666                LS              75    31.8
 667                UK     100     .02     .10     100
 668                RK    3450    .030    .045            TRAP      30       10
                    *

 669                KK  52B3C2
 670                KM   COMBINE 52B3 AND 52B3R1
 671                HC       2
                    *
1                                                HEC-1 INPUT                                                    PAGE 20

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

 672                KK  52B3R2
 673                KM   ROUTE 52B3C2 THROUGH 52B4 TO CP 52B4C
 674                RK    1700    .024    .045            TRAP      10       10
                    *

 675                KK    52B4
 676                KM   RUNOFF FROM SUBBASIN 52B4
 677                BA    .026
 678                LS              75      62
 679                UK     100     .02     .10     100
```

```
680          RK    1700    .024    .045            TRAP      30      10
             *

681          KK   52B4C
682          KM   COMBINE 52B4 AND 52B3R2
683          HC       2
             *

684          KK   52B4R
685          KM   ROUTE 52B4C THROUGH SUBBASIN 52B5 TO CP 52B5C1
686          RK     550    .027    .045            TRAP      10      10
             *

687          KK    52B5
688          KM   RUNOFF FROM SUBBASIN 52B5
689          BA    .021
690          LS              75    56.9
691          UK     100     .02     .10     100
692          RK    1400     .03    .045            TRAP      30      10
             *

693          KK  52B5C1
694          KM   COMBINE 52B5 AND 52B4R
695          HC       2
             *

696          KK  52B5C2
697          KM   COMBINE 52B5C1 AND 52C14R
698          HC       2
             *

699          KK   52B5R
700          KM   ROUTE 52B5C2 IN BEARDSLEY CHANNEL TO CP 52B7C2
701          RK    1100   .0143    .035            TRAP      50       4
             *

702          KK  51B4DV
703          KM   RETRIEVE DIVERTED FLOW 51B4DV
704          DR  51B4DV
             *
```



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

705          KK   51B5D
706          KM   DIVERT 68 PERCENT OF 51B4DV TO WEST (32 PERCENT TO SOUTH)
707          DT  51B5DV
708          DI       0   10000
709          DQ       0    6800
             *

710          KK   51B5R
711          KM   ROUTE 51B5D THROUGH SUBBASIN 52B6 TO CP 51B7C
712          RK    1250    .035    .045            TRAP      10      10
             *

713          KK  51B5DV
714          KM   RETRIEVE DIVERTED FLOW
715          DR  51B5DV
             *

716          KK   51B6D
717          KM   DIVERT 53 PERCENT OF 51B5DV TO WEST (47 PERCENT TO SOUTH)
718          DT  51B6DV
719          DI       0   10000
720          DQ       0    5300
             *

721          KK   51B6R
722          KM   ROUTE 51B6D THROUGH SUBBASIN 52B6 TO CP 51B7C
723          RK     925    .033    .045            TRAP      10      10
             *

724          KK  51B6DV
725          KM   RETRIEVE DIVERTED FLOW 51B6DV
726          DR  51B6DV
             *

727          KK   51B7D
728          KM   DIVERT 58 PERCENT OF 51B6DV TO WEST (42 PERCENT TO SOUTH)
729          DT  51B7DV
730          DI       0   10000
731          DQ       0    5800
             *

732          KK  51B7R1
733          KM   ROUTE 51B7D THROUGH SUBBASIN 52B6 TO CP 51B7C
734          RK     530    .033    .045            TRAP      10      10
             *

735          KK   51B7C
736          KM   COMBINE 51B7R1, 51B5R, AND 51B6R
```

```
 737          HC       3   .2404
              *
1                                          HEC-1 INPUT                                                PAGE 22

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

 738          KK  51B7R2
 739          KM   ROUTE 51B7C THROUGH SUBBASIN 52B6 TO CP 52B6C
 740          RK    2300    .033    .045            TRAP      10      10
              *

 741          KK    52B6
 742          KM   RUNOFF FROM SUBBASIN 52B6
 743          BA    .096
 744          LS              75   13.55
 745          UK     100     .02     .10     100
 746          RK    3200    .033    .045            TRAP      30      10
              *

 747          KK   52B6C
 748          KM   COMBINE 51B7R2 AND 52B6
 749          HC       2
              *

 750          KK   52B6R
 751          KM   ROUTE 52B6C THROUGH SUBBASIN 52B7 TO CP 52B7C1
 752          RK    2750    .028    .045            TRAP      10      10
              *

 753          KK    52B7
 754          KM   RUNOFF FROM SUBBASIN 52B7
 755          BA    .080
 756          LS              75   78.45
 757          UK     100     .02     .10     100
 758          RK    2750    .028    .045            TRAP      30      10
              *

 759          KK  52B7C1
 760          KM   COMBINE 52B7 AND 52B6R
 761          HC       2
              *

 762          KK  52B7C2
 763          KM   COMBINE 52B7C1 AND 52B5R
 764          HC       2
              *

 765          KK    52A2
 766          KM   RUNOFF FROM SUBBASIN 52A2
 767          BA    .065
 768          LS              75    88.8
 769          UK     100     .02     .10     100
 770          RK    2900    .023    .045            TRAP      30      10
              *
1                                          HEC-1 INPUT                                                PAGE 23

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

 771          KK  52A2C2
 772          KM   COMBINE 52B7C2 AND 52A2
 773          HC       2    1.62
              *

 774          KK  51B7DV
 775          KM   RETRIEVE DIVERTED FLOW 51B7DV
 776          DR  51B7DV
              *

 777          KK   51B8R
 778          KM   ROUTE 51B7DV THROUGH SUBBASIN 52A1 TO CP 52A1C
 779          RK    3400    .033    .045            TRAP      10      10
              *

 780          KK    52A1
 781          KM   RUNOFF FROM SUBBASIN 52A1
 782          BA    .130
 783          LS              75   32.25
 784          UK     100     .02     .10     100
 785          RK    3400    .033    .045            TRAP      30      10
              *

 786          KK   52A1C
 787          KM   COMBINE 52A1 AND 51B8R
 788          HC       2
              *
              *
              *     ****************  END DC RANCH WATERSHED  ******************
              *
              *
              *     ****************  BEGIN GVSCE MODIFICATIONS  ****************
              *
```

```
789          KK   D51.1
790          KM   RETRIEVE DIVERTED FLOW
791          DR  B51.1T
             *

792          KK    C52A
793          KM     COMBINE ROUTED HYDROGRAPH FROM C51.1 WITH HYDROGRAPH FROM C52A1C AT
794          KM     THOMPSON PEAK PARKWAY
795          HC       2  6.2735
             *
             *   R52A
             *     DEER VALLEY BASIN OUTLET CONDUIT TO OUTLET AT SIERRA PINTA CHANNEL
             *     COMBINE WITH RUNOFF FROM DC RANCH
             *       L = 3130 feet
             *
1                                        HEC-1 INPUT                                          PAGE 24

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

796          KK     C52
797          KM     COMBINE ROUTED HYDROGRAPH FROM C52A WITH HYDROGRAPH FROM C52A2C AT
798          KM     BEARDSLEY ROAD
799          HC       2  7.9160
             *

800          KK     R52
801          KM     NORMAL DEPTH CHANNEL ROUTE FROM C52 TO C53 THROUGH PIMA CHANNEL
802          RS       1    FLOW      -1
803          RC   0.022   0.022   0.022    4050    0.01
804          RX    1000    1012    1020    1028    1058    1066    1074    1086
805          RY     107     104     102     100     100     102     104     107
             *

806          KK    D52T
807          KM     DIVERT 100% OF FLOW TO RETRIEVE JUST U/S OF UNION HILLS DETENTION BASIN
808          DT    B52T
809          DI       0   10000
810          DQ       0   10000
             *

811          KK   CLEAR
812          KM     CLEAR HYDROGRAPHS FROM STACK
813          HC       2
             *
             *
             *     ******************  BEGIN GRAYHAWK WATERSHED  ******************
             *
             *       THE GREYHAWK HEC-1 MODEL (VILLAGES II AND III) WAS DEVELOPED BY DEI
             *           DEI FILE NAME:  GH23FAB.H1I
             *           MODEL DATE:     21 MAY 96
             *

814          KK     37A     SUB
815          KM        RUNOFF FROM SUB-BASIN 37A
816          BA   .6765
817          LS              74    24.8
818          UK      61   .0213     .10     100
819          RK    4800   .0237    .045            TRAP      50     130
             *

820          KK    37AE     DIV
821          KM        SPLIT FLOWS AT SOUTH BOUNDARY OF SUB 37A FOR ROUTING TO DETENTION
822          KM        BASIN 53R & 38R-1.  THIS DIVERT OPERATION REFLECTS THE BREAK IN THE
823          KM        DEER VALLEY ROAD CHANNEL BETWEEN HAYDEN & PIMA ROADS.  THIS SPLIT IS
824          KM        BASED ON NEW CORE NORTH PLAN DEVELOPED BY G.W. LARSON & ASSC., INC.
825          KM        DATED 6/16/92.  DIVERT RATIO IS BASED ON APPROXIMATE D.A. FROM SUB 37A
826          KM        THAT IS INTERCEPTED BY EACH CHANNEL SEGMENT ALONG DEER VALLEY ROAD.
827          KM
828          KM        (THIS SPLIT HAS BEEN UPDATED FROM THE OLP.6 MODEL TO REFLECT A 30% SPLIT
829          KM        TO THE SOUTH AND A 70% SPLIT TO THE WEST FOR THIS STUDY AND IS BASED ON
830          KM        UPSTREAM CONTRIBUTING WATERSHED AREA TO THIS CONCENTRATION POINT)
831          DT    37AW
832          DI       0     100     500    1000    1500
1                                        HEC-1 INPUT                                          PAGE 25

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

833          DQ       0      70     350     700    1050
             *

834          KK   37AE1      CP
835          KM        ROUTE NON-DIVERTED FLOW FROM DIV 37AE THROUGH SUB 5N.  THIS IS A
836          KM        PRELIMINARY CHANNEL CONFIGURATION FOR THE GOLF COURSE CHANNEL.
837          RS       1    FLOW
838          RC    .055    .045    .055     800    .025
839          RX       0      16      26      30      40      44      54      70
840          RY       6       2       2       0       0       2       2       6
             *

841          KK   SUB5N
842          KM        RUNOFF FROM SUBBASIN 5 IN NORTH 18 MODEL.
```

```
843          BA   0.029
844          LS              77       18
845          UK     100    .013     .15     100
846          RK    1000   0.005    .018    .015    TRAP      50       20
847          RK     500    .015    .025            TRAP      10        4
             *

848          KK    CP5N
849          KM        ADD HYDROGRAPHS AT CP5N
850          HC       2   0.232
             *

851          KK   RET5N
852          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 5.  18" PIPE OUTFLOW WILL
853          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
854          RS       1    STOR       0        0
855          SV       0     .04     .33      .93      1.8     2.35     3.16      4.2      6.1
856          SQ       0       8      10       12       15       17      102      191      668
857          SE    1797    1798    1800     1802     1804     1805     1806     1807     1808
             *

858          KK   R6N.1
859          KM        ROUTE FLOW FROM CP5 TO CP6 IN NORTH 18 MODEL
860          KM        ASSUME CHANNEL IS SAME CONFIGURATION AS ABOVE FOR PROPOSED GOLF COURSE
861          KM        CHANNEL.
862          RS       1    FLOW
863          RC    .055    .045    .055     2200     .025
864          RX       0      16      26       30       40       44       54       70
865          RY       6       2       2        0        0        2        2        6
             *

866          KK   SUB6B
867          KM        RUNOFF FROM WEST PORTION OF EXISTING SUB6N ADJACENT TO CHANNEL
868          BA    .032
869          LS              81        0
870          UK     200    .025     .15     100
871          RK    1300    .015    .025            TRAP      10        4
             *
```



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

872          KK    SR6B
873          KM        ROUTE FLOW THROUGH RETENTION BASIN IN DRIVING RANGE CHANNEL
874          RS       1    STOR       0        0
875          SV       0     .17     .57     1.12     1.78
876          SQ       0       8      10      120      380
877          SE    1772    1773    1774     1775     1776
             *

878          KK   CP6.1
879          KM        ADD HYDROGRAPHS AT CP6.1
880          HC       2
             *

881          KK   SUB1N
882          KM        RUNOFF FROM SUBBASIN 1N
883          BA    .019
884          LS              77       18
885          UK     100    .013     .15     100
886          RK    1470   .0204    .018            TRAP      50       20
             *

887          KK    R2NA
888          KM        ROUTE FLOW FROM CP1 TO CP2NA
889          RS       1    FLOW
890          RC     .03     .03     .03      400     .025
891          RX       0       8      13       17       22       26       31       39
892          RY       4       2       2        0        0        2        2        4
             *

893          KK  SUB2NA
894          KM        RUNOFF FROM SUBBASIN 2NA
895          BA    .015
896          LS              81        0
897          UK     150    .013     .15     100
898          RK    1050   .0215    .025            TRAP      20        6
             *

899          KK   CP2NA
900          KM        ADD HYDROGRAPHS AT CP2NA
901          HC       2
             *

902          KK   SR2NA
903          KM        ROUTE FLOW THROUGH DETENTION BASIN IN SUB2NA
904          RS       1    STOR       0        0
905          SV       0    .076    .291     .708      1.2
906          SQ       0       0       0        0      160
907          SE    1772    1773    1774     1775     1776
             *
```

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

 908          KK    R2NB
 909          KM        ROUTE FLOW FROM CP2NA TO CP2NB
 910          RS       1    FLOW
 911          RC     .03     .03     .03    1050    .015
 912          RX       0       8      13      17      22      26      31      39
 913          RY       4       2       2       0       0       2       2       4
              *

 914          KK  SUB2NB
 915          KM        RUNOFF FROM SUBBASIN 2NB
 916          BA     .03
 917          LS              77      53
 918          UK     150    .013     .15     100
 919          RK    1200    .015    .025            TRAP      20      50
              *

 920          KK   CP2NB
 921          KM        ADD HYDROGRAPHS AT CP2NB
 922          HC       2
              *

 923          KK   SR2NB
 924          KM        STORAGE ROUTE FLOW THROUGH DETENTION BASIN IN SUB2NB
 925          RS       1    STOR       0       0
 926          SV       0     .19     .69    1.66    3.23     4.5
 927          SQ       0       2       8      12      17     170
 928          SE    1796    1798    1800    1802    1804    1805
              *

 929          KK   RCP4N
 930          KM        ROUTE FLOW FROM CP2NB TO CP4N
 931          RS       1    FLOW
 932          RC     .03     .03     .03     740    .018
 933          RX       0       8      13      17      22      26      31      39
 934          RY       4       2       2       0       0       2       2       4
              *

 935          KK   SUB6N
 936          KM        RUNOFF FROM SUBBASIN 6 IN NORTH 18 MODEL.  TO LAKE NORTH OF CLUBHOUSE.
 937          BA    .049
 938          LS              81       0
 939          UK     200    .025     .15     100
 940          RK    1300    .015    .025            TRAP      10       4
              *

 941          KK   RET6N
 942          KM        RETENTION ROUTING THROUGH LAKE AT HOLE 18, NORTH COURSE.
 943          RS       1    STOR
 944          SV       0    3.01    6.64   10.75   13.09   15.90
 945          SQ       0       0       0      10      26     100
 946          SE    1782    1784    1786    1788    1789    1790
              *
```



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

 947          KK  RCP4N1
 948          KM        ROUTE FLOW FROM CP6N TO CP4N
 949          RS       1    FLOW
 950          RC     .03     .03     .03     550    .018
 951          RX       0       8      13      17      22      26      31      39
 952          RY       4       2       2       0       0       2       2       4
              *

 953          KK  CP4N.1
 954          KM        ADD HYDROGRAPHS AT CP4N.1
 955          HC       2
              *

 956          KK   SUB3N
 957          KM        RUNOFF FROM SUBBASIN 3N, NORTH 18 MODEL
 958          BA    .027
 959          LS              81       0
 960          UK     100     .02     .15     100
 961          RK    2800  0.0207    .025            TRAP      10       4
              *

 962          KK   RET3N
 963          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 3.  18" PIPE OUTFLOW WILL
 964          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
 965          RS       1    STOR       0       0
 966          SV       0    1.73    8.97   13.32   15.74
 967          SQ       0       4       7       9      11
 968          SE    1793    1795    1800    1803    1804
              *

 969          KK     R4N
 970          KM        ROUTE FLOW FROM CP3N TO CP4N IN NORTH MODEL
```

```
 971          RS       1    FLOW
 972          RC    .035    .035    .035     950    .018
 973          RX       0       8      13      17      22      26      31      39
 974          RY       4       2       2       0       0       2       2       4
              *

 975          KK  CP4N.2
 976          KM       ADD HYDROGRAPHS AT CPN.2
 977          HC       2
              *

 978          KK   SUB4N
 979          KM       RUNOFF FROM SUBBASIN 4N.
 980          BA    .032
 981          LS              77      18
 982          UK     100    .015     .15     100
 983          RK    1200   0.007    .018            TRAP      50      20
              *
1                                          HEC-1 INPUT                                                    PAGE 29

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

 984          KK    CP4N
 985          KM       ADD HYDROGRAPHS AT CP4N
 986          HC       2
              *

 987          KK     R6N
 988          KM       ROUTE FLOW FROM CP4N TO CP6N ALONG THOMPSON PEAK PKWY AT CLUBHOUSE
 989          RS       1    FLOW
 990          RC    .045    .035    .045     750    .025
 991          RX       0       8      13      17      22      26      31      39
 992          RY       4       2       2       0       0       2       2       4
              *

 993          KK   SUB6A
 994          KM       RUNOFF FROM SUBBASIN 6A (CLUBHOUSE AREA NORTH OF THOMPSON PEAK PKWY).
 995          BA    .013
 996          LS              83      68
 997          UK     100    .015     .12     100
 998          RK     800     .01    .025            TRAP       2       3
              *

 999          KK   CP6.2
1000          KM       ADD HYDROGRAPHS AT CP6.2
1001          HC       2
              *

1002          KK    CP6N
1003          KM       ADD HYDROGRAPHS AT CP6N
1004          HC       2
              *
              *       ABOVE DISCHARGE FROM NORTH 18 THROUGH BRIDGE AT TPP STATION 103+45
              *

1005          KK   RCP6N
1006          KM       ROUTE FLOW FROM CP6N TO CP3C
1007          RS       1    FLOW
1008          RC    .045    .035    .045     300    .015
1009          RX       0       8      13      17      37      45      51      59
1010          RY       4       2       2       0       0       2       2       4
              *

1011          KK   SUB3C
1012          KM       RUNOFF FROM SUBBASIN 3C, SOUTH COURSE AT MAINTENANCE FACILITY.
1013          BA   .0104
1014          LS              77      68
1015          UK     100    .025     .02     100
1016          RK     600    .015    .035            TRAP      50      20
              *
1                                          HEC-1 INPUT                                                    PAGE 30

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

1017          KK    CP3C
1018          KM       COMBINE NORTH COURSE HYDROGRAPH WITH FIRST SOUTH COURSE HYDROGRAPH
1019          HC       2
              *

1020          KK     R3C
1021          KM       ROUTE FLOW FROM SUB3C TO CP3 THROUGH GC1018
1022          KM       ASSUME CHANNEL IS SAME CONFIGURATION AS ABOVE FOR PROPOSED GOLF COURSE
1023          KM       CHANNEL.
1024          RS       1    FLOW
1025          RC    .055    .045    .055    2050    .025
1026          RX       0      20      30      40      60      70      80     100
1027          RY    1650    1746    1744    1742    1742    1744    1746    1750
              *

1028          KK  GC1018
1029          KM       RUNOFF FROM HOLES NO. 10, 18 AND DRIVING RANGE THAT CONTRIBUTE TO WASH
```

```
1030          BA    .044
1031          LS              81       0
1032          UK     200    .025     .15     100
1033          RK    1800   .0233    .025            TRAP      10       4
              *

1034          KK   GC1-9
1035          KM        RUNOFF FROM GOLF COURSE HOLES 1 & 9 CONTRIBUTING TO WASH
1036          BA    .026
1037          LS              81       0
1038          UK     200    .025     .15     100
1039          RK    2110    .022    .025            TRAP      10       4
              *

1040          KK   SUB3S
1041          KM        RUNOFF FROM SUB BASIN 3 SOUTH COURSE
1042          BA   .0102
1043          LS              77      53
1044          UK     100    .010     .15     100
1045          RK     930    .016    .025            TRAP      50      20
              *

1046          KK    CP3S
1047          KM        COMBINE HYDROGRAPHS AT CP3 SOUTH COURSE
1048          HC       4
              *

1049          KK    RT3S
1050          KM        ROUTE FLOW FROM CP3S TO CPGC28
1051          RS       1    FLOW       0       0
1052          RC    .055    .045    .055     900    .023
1053          RX       0      20      30      40      60      70      80     100
1054          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *
```



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

1055          KK   SUB4S
1056          KM        RUNOFF FROM SUB BASIN 4 SOUTH COURSE
1057          BA   .0273
1058          LS              77      53
1059          UK     100    .010     .15     100
1060          RK    1780    .018    .015            TRAP      50      20
              *

1061          KK    RT4S
1062          KM        ROUTE FLOW FROM CP4S TO CPGC28
1063          RS       1    FLOW       0       0
1064          RC    .035    .035    .035     650    .015
1065          RX       0      20      30      40      45      55      65      75
1066          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *

1067          KK   GC2-8
1068          KM        RUNOFF FROM SOUTH GOLF COURSE HOLES NO. 2 AND 8
1069          BA    .014
1070          LS              81       0
1071          UK     200    .025     .15     100
1072          RK     980    .016    .025            TRAP      10       4
              *

1073          KK  1PGC28
1074          KM        ADD HYDROGRAPHS AT CPGC28 AT PROPOSED LOOP ROAD, SOUTH COURSE
1075          HC       3
              *

1076          KK  SUB3D3
1077          KM        RUNOFF FROM GRAYHAWK ROAD SOUTH OF THOMPOSON PEAK
1078          BA    .014
1079          LS              81       0
1080          UK      50    .015      .1     100
1081          RK    2450    .016    .025            TRAP       5       4
              *

1082          KK  CPGC28
1083          KM        ADD HYDROGRAPHS AT CPGC28 AT PROPOSED LOOP ROAD, SOUTH COURSE
1084          HC       2
              *

1085          KK  SRGC28
1086          KM        STORAGE THRU DETENTION BASIN ON HOLES 2 AND 8.
1087          RS       1    STOR       0       0
1088          SV       0    .018    .085     .22      .5     1.0     1.7    2.68     3.9
1089          SE    1706    1707    1708    1709    1710    1711    1712    1713    1714
1090          SQ       0      10      18      20      30     108     324     651    1070
              *
```



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

```
1091          KK    RT7S
1092          KM        ROUTE FLOW FROM SRGC28 TO CP7S
1093          RS       1    STOR       0       0
1094          RC    .055    .045    .055    1700   .0187
1095          RX       0      20      30      40      60      70      80     100
1096          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *

1097          KK     GC7
1098          KM        RUNOFF FROM SOUTH GOLF COURSE HOLE NO. 7
1099          BA   .0134
1100          LS              81       0
1101          UK     200    .025     .15     100
1102          RK    1380    .020    .025            TRAP      10       4
              *

1103          KK    CP7S
1104          KM        ADD HYDROGRAPHS AT CP7S ON SOUTH COURSE
1105          HC       2  0.6083
              *

1106          KK    D7ST
1107          KM        D7ST IS A DIVERSION ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1108          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1109          KM
1110          KM        DIVERT 100% OF FLOW
1111          DT    B7ST
1112          DI       0   10000
1113          DQ       0   10000
              *

1114          KK   CLEAR
1115          KM        CLEAR HYDROGRAPHS FROM THE STACK.
1116          HC       2
              *
              *
              * THIS PORTION OF MODEL TAKEN FROM,"DRAINAGE REPORT FOR VILLAGE 3 - PHASE 1",
              * APPROVED BY THE CITY OF SCOTTSDALE 7-19-95.  MODIFIED TO ACCOUNT FOR ASBUILT
              * CONDITION
              *
              *
              *
              *

1117          KK  SUB3D1
1118          KM        RUNOFF FROM SUBBASIN 3D1, PARCEL 3D.
1119          BA   .0088
1120          LS              77      34
1121          UD     .06
              *
```



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

1122          KK   RD1B1
1123          KM        FOUTE FLOW FROM 3D1 TO 3B1
1124          RS       1    FLOW      -1
1125          RC    0.03    0.03    0.03    1250    .015
1126          RX       0     0.5       1       7      12      19    19.5      20
1127          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1128          KK  SUB3B1
1129          KM        RUNOFF FROM SUBBASIN 3B1, PARCEL 3B.
1130          BA   .0137
1131          LS              77      47
1132          UD     .06
              *

1133          KK   CP3B1
1134          KM        ADD HYDROGRAGHS AT CP3B1
1135          HC       2
              *

1136          KK   RB13F
1137          KM        ROUTE FLOW FROM 3B1 TO SUB3F
1138          RS       1    FLOW      -1
1139          RC    0.03    0.03    0.03    2150    .015
1140          RX       0     0.5       1       7      17      24    24.5      25
1141          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1142          KK   SUB3F
1143          KM        RUNOFF FROM SUBBASIN 3F, PARCEL 3F, SOUTH COURSE MODEL.
1144          BA   .0344
1145          LS              77      68
1146          UK     100    .025     .15     100
1147          RK    1000    .015    .025            TRAP     100      20
              *

1148          KK    CP3F
1149          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3F ALONG THE POWER CORRIDOR
```

```
1150          HC       2
              *

1151          KK  SUB3B2
1152          KM        RUNOFF FROM SUBBASIN 3B2, PARCEL 3B.
1153          BA   .0246
1154          LS              77      40
1155          UD     .10
              *

1156          KK   RB2E1
1157          KM        1/2 OF ENTIRE ROUTING REACH FROM 3B2 TO CP3E1
1158          RS       1    FLOW      -1
1159          RC    0.03    0.03    0.03     800    0.02
1160          RX       0     0.5       1       7      17      24    24.5      25
1161          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *
1                                          HEC-1 INPUT                                                PAGE 34

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

1162          KK   RB2E2
1163          KM       SECOND 1/2 OF ENTIRE ROUTING REACH FROM 3B2 TO CP3E1
1164          RS       1    FLOW      -1
1165          RC    0.03    0.03    0.03     600    .015
1166          RX       0     0.5       1       7      17      24    24.5      25
1167          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1168          KK  SUB3E1
1169          KM        RUNOFF FROM SUBBASIN 3E1, PARCEL 3E.
1170          BA   .0246
1171          LS              77      40
1172          UD     .10
              *

1173          KK  1CPE31
1174          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3E1 ALONG THE POWER CORRIDOR
1175          HC       2
              *

1176          KK  SUB3D2
1177          KM        RUNOFF FROM SUBBASIN 3D2, PARCEL 3D.
1178          BA    .022
1179          LS              77      35
1180          UD     .08
              *

1181          KK   RD2E2
1182          KM        ROUTE EXCESS FROM 3D2 TO CP3E2
1183          RS       1    FLOW      -1
1184          RC    0.03    0.03    0.03    1200   .0216
1185          RX       0     0.5       1       7      17      24    24.5      25
1186          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1187          KK  SUB3E2
1188          KM        RUNOFF FROM SUBBASIN 3E2, PARCEL 3E.
1189          BA    .012
1190          LS              77      35
1191          UD     .06
              *

1192          KK   CP3E2
1193          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3E2 ALONG THE POWER CORRIDOR
1194          HC       2
              *

1195          KK     PC3
1196          KM        PC3 IS A SUBBASIN ADDED BY GVSCE TO ESTIMATE THE SURFACE RUNOFF FROM
1197          KM        THE POWER LINE CORRIDOR WHICH ENTERS THE POWER LINE CHANNEL
1198          KM
1199          KM        RUNOFF FROM SUBBASIN PC3.
1200          BA  0.0434
1201          LS              77      10
1                                          HEC-1 INPUT                                                PAGE 35

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

1202          UK     300    .015     .15     100
1203          RK    2200     .01     .03             TRAP      30       4
              *

1204          KK    CPC3
1205          KM        CPC3 IS A CONCENTRATION POINT ADDED BY GVSCE TO ESTIMATE THE INFLOW TO
1206          KM        THE POWER LINE CHANNEL AT THE HAYDEN ROAD CROSSING.
1207          KM
1208          KM        COMBINE ROUTED HYDROGRAPH FROM SRPC2 W/HYDROGRAPHS FROM CP3E1, CP3E2 AND
1209          KM        CP3F AND RUNOFF FROM PC3.
1210          HC       4  0.1835
              *
```

```
1211          KK   DPC3T
1212          KM        DPC3T IS A DIVERSION ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1213          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1214          KM
1215          KM        DIVERT 100% OF FLOW
1216          DT   BPC3T
1217          DI       0   10000
1218          DQ       0   10000
              *

1219          KK  SUB3E3
1220          KM        RUNOFF FROM SUBBASIN 3E3, PARCEL 3E.
1221          BA    .020
1222          LS              77      32
1223          UD     .06
              *

1224          KK     PC4
1225          KM        PC4 IS A SUBBASIN ADDED BY GVSCE TO ESTIMATE THE SURFACE RUNOFF FROM
1226          KM        THE POWER LINE CORRIDOR WHICH ENTERS THE POWER LINE CHANNEL
1227          KM
1228          KM        RUNOFF FROM SUBBASIN PC4.
1229          BA  0.0217
1230          LS              77       0
1231          UK     300    .015     .15     100
1232          RK    1100     .01     .03            TRAP      30       4
              *

1233          KK     D7S
1234          KM        THIS OPERATION IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1235          KM        HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1236          KM
1237          KM        RETRIEVE DIVERTED FLOW
1238          DR    B7ST
              *

1239          KK    CPC4
1240          KM        THE HEC1 OPREATION TEMPAD IS CHANGED BY GVSCE TO ESTIMATE THE INFLOW TO
1241          KM        THE POWER LINE CHANNEL WHERE THE FLOW FROM CP7S ENTERS THE CHANNEL.
1242          KM
1243          KM        COMBINE HYDROGRAPH FROM CP3E3 W/RUNOFF FROM PC4.
1244          HC       3   0.650
              *
```



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

1245          KK   DPC4T
1246          KM        DPC3T IS A DIVERSION ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1247          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1248          KM
1249          KM        DIVERT 100% OF FLOW
1250          DT   BPC4T
1251          DI       0   10000
1252          DQ       0   10000
              *

1253          KK   CLEAR
1254          KM        CLEAR HYDROGRAPHS FROM THE STACK.
1255          HC       3
              *
              *
              *       THIS ENDS THE PORTION OF THE MODEL TAKEN FROM DRAINAGE REPORT
              *       FOR VILLAGE 3 - PHASE I HEC-1 MODEL BY GILBERTSON ASSOC. INC.
              *       DATED 7-19-95
              *
              *
              *
              * RETURN TO NORTH 18\VILLAGE 2\TPP3 MODEL.
              * THE REMAINDER OF THE SUBBASINS IN THIS  MODEL  WILL CONTRIBUTE TO THE
              * PROPOSED CHANNNEL IN THE POWER EASEMENT AS IDENTIFIED IN THE
              * "COMMUNITY DRAINAGE STUDY - CORE NORTH AND WILL DISCHARGE TO REGIONAL
              * RETENTION BASIN 38R1.
              *
              *

1256          KK    37AW     RET
1257          KM        RETRIEVE DIVERTED FLOW FROM SOUTH BOUNDARY OF SUB 37A TO REFLECT
1258          KM        BREAK IN DEER VALLEY ROAD CHANNEL BETWEEN HAYDEN & PIMA ROADS
1259          DR    37AW
              *

1260          KK    R14R
1261          KM        ROUTE FLOW FROM DIVERT AT DEER VALLEY ROAD (UPSTREAM OF SUBBAIN 5) TO
1262          KM        RET14.1
1263          RS       1    FLOW
1264          RC    .055    .045    .055    2900     .01
1265          RX       0      16      26      30      50      54      64      80
1266          RY       6       2       2       0       0       2       2       6
              * RET 141 HAS BEEN REVISED FOLLOWING REFINEMENT OF GRADING PLANS 11-16-94
              *
```

```
1267          KK  RET141
1268          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 14.1.  18" PIPE OUTFLOW WILL
1269          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
1270          RS       1    STOR       0       0
1271          SV       0     .46    2.79    4.56    5.71    6.92    8.24
1272          SQ       0      11      15      22     147     463     968
1273          SE    1778    1785    1790    1792    1793    1794    1795
              *
```



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

1274          KK   R14.1
1275          KM        ROUTE FLOW FROM RET14.1 TO CP14
1276          KM        RET14.1
1277          RS       1    FLOW
1278          RC    .055    .045    .055    1900     .01
1279          RX       0      16      26      30      50      54      64      80
1280          RY       6       2       2       0       0       2       2       6
              *

1281          KK  SUB13N
1282          KM        RUNOFF FROM SUBBASIN 13 NORTH 18 MODEL.
1283          BA    .037
1284          LS              77      24
1285          UK     100    .015     .15     100
1286          RK    2400    .007    .018            TRAP      50      20
              *

1287          KK   R14.1
1288          KM        ROUTE FLOW FROM CP13 TO RET14 NORTH 18 MODEL.
1289          RS       1    FLOW
1290          RC    .055    .045    .055     950    .025
1291          RX       0       8      13      17      22      26      31      39
1292          RY       4       2       2       0       0       2       2       4
              *

1293          KK  SUB14N
1294          KM        RUNOFF FROM SUBBASIN 14 NORTH 18 MODEL.
1295          BA    .049
1296          LS              81       0
1297          UK     300    .025     .15     100
1298          RK    2300     .01    .025            TRAP      10       4
              *

1299          KK    CP14
1300          KM        ADD HYDROGRAPHS AT CP14
1301          HC       3  0.5595
              *

1302          KK   RET14
1303          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 14.  18" PIPE OUTFLOW WILL
1304          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
1305          RS       1    STOR       0       0
1306          SV       0     .08     .31    1.01    2.16    3.20    4.19    5.69     7.8
1307          SQ       0      14      16      18      20      22     155     464     750
1308          SE    1744    1746    1748    1750    1752    1753    1754    1755    1756
              *

1309          KK   R18.1
1310          KM        ROUTE FLOW FROM RET14 TO CP18
1311          RS       1    FLOW
1312          RC    .055    .045    .055     500    .016
1313          RX       0      16      26      34      54      68      78      96
1314          RY       6       2       2       0       0       2       2       6
              *
```



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

1315          KK  SUB20N
1316          KM        RUNOFF FROM SUBBASIN 20.
1317          BA    .024
1318          LS              77      24
1319          UK     200     .01     .15     100
1320          RK    1400     .02    .018            TRAP      50      20
              *

1321          KK     R19
1322          KM        ROUTE FLOW FROM CP20 TO CP19
1323          RS       1    FLOW
1324          RC    .035    .035    .035     700     .02
1325          RX       0       8      13      17      22      26      31      39
1326          RY       4       2       2       0       0       2       2       4
              *

1327          KK  SUB19N
1328          KM        RUNOFF FROM SUBBASIN 19.
1329          BA    .038
1330          LS              77      31
1331          UK     150     .01     .15     100
```

```
1332          RK    1800     .015     .018            TRAP      50      20
              *

1333          KK   CP19N
1334          KM        ADD HYDROGRAPHS  AT CP19N
1335          HC       2
              *

1336          KK   R18NC
1337          KM        ROUTE FLOW FROM  CP19N TO CP18NC
1338          RS       1    FLOW
1339          RC    .035     .035     .035     700     .013
1340          RX       0        8       13      17       27      31      36      44
1341          RY       4        2        2       0        0       2       2       4
              *

1342          KK  UB18NC
1343          KM        RUNOFF FROM SUBBASIN 18NC.
1344          BA    .021
1345          LS              77       42
1346          UK     100      .01      .15     100
1347          RK    1550      .02     .018            TRAP      50      20
              *

1348          KK  CP18NC
1349          KM        ADD HYDROGRAPHS  AT CP18NC (INCLUDES R18.1, R18, AND SUB18)
1350          HC       3
              *
```



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

1351          KK    RPC1
1352          KM        ROUTE FLOW FROM CP18N TO CPC1.
1353          RS       1    FLOW
1354          RC    .035     .035     .035     510     .013
1355          RX       0       16       26      34       64      78      88     106
1356          RY       6        2        2       0        0       2       2       6
              *

1357          KK  UB18NA
1358          KM        RUNOFF FROM SUBBASIN 18NA.
1359          BA    .022
1360          LS              77       42
1361          UK     100      .01      .15     100
1362          RK    1450      .02     .018            TRAP      50      20
              *

1363          KK   1RPC1
1364          KM        ROUTE FLOW FROM CP18NA TO CPC1.
1365          RS       1    FLOW
1366          RC    .035     .035     .035    2550     .01
1367          RX       0       16       26      34       64      78      88     106
1368          RY       8        4        2       0        0       2       4       8
              *

1369          KK  UB18NB
1370          KM        RUNOFF FROM SUBBASIN 18NB.
1371          BA   .0096
1372          LS              77       42
1373          UK     100      .01      .15     100
1374          RK     800      .02     .018            TRAP      50      20
              *

1375          KK   2RPC1
1376          KM        ROUTE FLOW FROM CP18NB TO CPC1.
1377          RS       1    FLOW
1378          RC    .035     .035     .035    2000     .01
1379          RX       0       16       26      34       64      78      88     106
1380          RY       8        4        2       0        0       2       4       8
              *

1381          KK     PC1
1382          KM        RUNOFF FROM SUBBASIN PC1.
1383          BA    .062
1384          LS              77       10
1385          UK     500     .015      .15     100
1386          RK    2700      .01      .03            TRAP      30       4
              *

1387          KK   1CPC1
1388          KM        ADD HYDROGRAPHS  AT CPC1.
1389          HC       3
              *
```



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

1390          KK   SRPC1
1391          KM        STOAGE ROUTE THROUGH DET BASIN IN POWER CORRIDOR.
1392          RS       1    STOR       0       0
```

```
1393          SV       0      .29      .73
1394          SQ       0        0      350
1395          SE    1747     1748     1749
              *

1396          KK    CPC1
1397          KM        ADD HYDROGRAPHS  AT CPC1.
1398          HC       2
              *

1399          KK  R16NA1
1400          KM        ROUTE FLOW FROM CPC1 TO C16NA1.
1401          RS       1     FLOW
1402          RC    .035     .035     .035     700     .013
1403          RX       0       16       26      34       74      88      98     116
1404          RY       8        4        2       0        0       2       4       8
              *

1405          KK  UB16NA
1406          KM        RUNOFF FROM SUBBASIN 16NA.
1407          BA   .0139
1408          LS               77       42
1409          UK     100     .015      .15     100
1410          RK    1500     .015     .022             TRAP      50      20
              *

1411          KK  R16NA1
1412          KM        ROUTE FLOW FROM CP16NA TO CP16NA1.
1413          RS       1     FLOW
1414          RC    .035     .035     .035     550     .013
1415          RX       0       16       26      34       44      58      68      86
1416          RY       6        2        2       0        0       2       2       6
              *

1417          KK  C16NA1
1418          KM        ADD HYDROGRAPHS  AT CP16NA1.
1419          HC       2
              *

1420          KK  R16NB1
1421          KM        ROUTE FLOW FROM CP16NA1 TO CP16NB1.
1422          RS       1     FLOW
1423          RC    .035     .035     .035     650     .013
1424          RX       0       16       26      34       74      88      98     116
1425          RY       8        4        2       0        0       2       4       8
              *
```



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

1426          KK  UB16NB
1427          KM        RUNOFF FROM SUBBASIN 16NB.
1428          BA   .0156
1429          LS               77       42
1430          UK     100     .015      .15     100
1431          RK    1500     .015     .022             TRAP      50      20
              *

1432          KK  R16NB1
1433          KM        ROUTE FLOW FROM CP16NB TO CP16NB1.
1434          RS       1     FLOW
1435          RC    .035     .035     .035     550     .013
1436          RX       0       16       26      34       44      58      68      86
1437          RY       6        2        2       0        0       2       2       6
              *

1438          KK  C16NB1
1439          KM        ADD HYDROGRAPHS  AT CP16NB1.
1440          HC       2
              *

1441          KK  R16NC1
1442          KM        ROUTE FLOW FROM CP16NB1 TO CP16NC1.
1443          RS       1     FLOW
1444          RC    .035     .035     .035     650     .013
1445          RX       0       16       26      34       54      68      78      96
1446          RY       6        2        2       0        0       2       2       6
              *

1447          KK   SUB7N
1448          KM        RUNOFF FROM SUBBASIN 7N.
1449          BA    .031
1450          LS               77       18
1451          UK     100     .015      .15     100
1452          RK    1900      .01     .018             TRAP      50      20
              *

1453          KK    R8NC
1454          KM        ROUTE FLOW FROM CP7N TO CP8NC.
1455          RS       1     FLOW
1456          RC    .055     .045     .055     700     .025
1457          RX       0        8       13      17       22      26      31      39.
```

```
1458          RY       4       2       2       0       0       2       2       4
              *

1459          KK  SUB8NA
1460          KM        RUNOFF FROM SUBBASIN 8NA.
1461          BA   .0046
1462          LS              81       0
1463          UK     100     .03     .15     100
1464          RK     450     .03    .025            TRAP      20       6
              *
1                                          HEC-1 INPUT                                                    PAGE 42

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

1465          KK   SR8NA
1466          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB8NA.
1467          RS       1    STOR       0       0
1468          SV       0     .51    .816
1469          SQ       0       1      43
1470          SE    1791    1795    1796
              *

1471          KK    R8NB
1472          KM        ROUTE FLOW FROM CP8NA TO CP8NB.
1473          RS       1    FLOW
1474          RC    .025    .025    .025     300     .03
1475          RX       0      12      24      36      56      68      80      92
1476          RY       6       4       2       0       0       2       4       6
              *

1477          KK  SUB8NB
1478          KM        RUNOFF FROM SUBBASIN 8NB.
1479          BA   .0142
1480          LS              81       0
1481          UK     100     .03     .15     100
1482          RK    1150    .025    .025            TRAP      20       6
              *

1483          KK   CP8NB
1484          KM        ADD HYDROGRAPHS AT CP8NB.
1485          HC       2
              *

1486          KK   SR8NB
1487          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB8NB.
1488          RS       1    STOR       0       0
1489          SV       0   .0124   1.754    2.45
1490          SQ       0       2       2      72
1491          SE    1784    1785    1790    1791
              *

1492          KK    R8NC
1493          KM        ROUTE FLOW FROM CP8NB TO CP8NC.
1494          RS       1    FLOW
1495          RC    .025    .025    .025     500     .03
1496          RX       0      12      24      36      56      68      80      92
1497          RY       6       4       2       0       0       2       4       6
              *

1498          KK  SUB8NC
1499          KM        RUNOFF FROM SUBBASIN 8NC.
1500          BA   .0182
1501          LS              81       0
1502          UK     100     .03     .15     100
1503          RK     900     .03    .025            TRAP      20       6
              *
1                                          HEC-1 INPUT                                                    PAGE 43

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

1504          KK   CP8NC
1505          KM        ADD HYDROGRAPHS AT CP8NC.
1506          HC       3
              *

1507          KK   SR8NC
1508          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB8NC.
1509          RS       1    STOR       0       0
1510          SV       0    .404   2.444    3.13   3.979
1511          SQ       0      10      14     151    1004
1512          SE    1771    1775    1780    1781    1782
              *

1513          KK     R9N
1514          KM        ROUTE FLOW FROM CP8N TO CP9N.
1515          RS       1    FLOW
1516          RC    .025    .025    .025    1150    .025
1517          RX       0       8      13      17      22      26      31      39
1518          RY       4       2       2       0       0       2       2       4
              *
```

```
1519          KK   SUB9N
1520          KM        RUNOFF FROM SUBBASIN 9N.
1521          BA    .055
1522          LS              77      28
1523          UK     100    .008     .15     100
1524          RK    1700     .01    .018            TRAP      50      20
              *

1525          KK    CP9N
1526          KM        ADD HYDROGRAPHS AT CP9N
1527          HC       2
              *

1528          KK    R10B
1529          KM        ROUTE FLOW FROM CP9N TO CP10B.
1530          RS       1    FLOW
1531          RC     .03     .03     .03     400     .02
1532          RX       0       8      16      24      29      37      45      53
1533          RY       6       4       2       0       0       2       4       6
              *

1534          KK  SUB10B
1535          KM        RUNOFF FROM SUBBASIN 10B.
1536          BA    .028
1537          LS              77      42
1538          UK     100    .015     .15     100
1539          RK     350    .008    .018            TRAP      50      20
1540          RK     600    .008    .025            TRAP      10       4
              *
1                                          HEC-1 INPUT                                                    PAGE 44

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

1541          KK   CP10B
1542          KM        ADD HYDROGRAPHS AT CP10B
1543          HC       2
              *

1544          KK   R11NA
1545          KM        ROUTE FLOW FROM CP10B TO CP11NA.
1546          RS       1    FLOW
1547          RC     .03     .03     .03     200     .04
1548          RX       0       8      16      24      29      37      45      53
1549          RY       6       4       2       0       0       2       4       6
              *

1550          KK  UB11NA
1551          KM        RUNOFF FROM SUBBASIN 11NA.
1552          BA   .0076
1553          LS              81       0
1554          UK     100    .025     .15     100
1555          RK     500     .03    .025            TRAP      30       6
              *

1556          KK  CP11NA
1557          KM        ADD HYDROGRAPHS AT CP11NA
1558          HC       2
              *

1559          KK  SR11NA
1560          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB11NA.
1561          RS       1    STOR       0       0
1562          SV       0   .0462   1.425   2.480   3.109   3.856
1563          SQ       0      10      27      27      27     237
1564          SE    1734    1735    1740    1742    1743    1744
              *

1565          KK   R11NB
1566          KM        ROUTE FLOW FROM CP11NA TO CP11NB.
1567          RS       1    FLOW
1568          RC    .025    .025    .025     250     .03
1569          RX       0      12      24      36      56      68      80      92
1570          RY       6       4       2       0       0       2       4       6
              *

1571          KK  UB11NB
1572          KM        RUNOFF FROM SUBBASIN 11NB.
1573          BA   .0078
1574          LS              81       0
1575          UK     100     .04     .15     100
1576          RK     700    .025    .025            TRAP      30       6
              *
1                                          HEC-1 INPUT                                                    PAGE 45

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

1577          KK  CP11NB
1578          KM        ADD HYDROGRAPHS AT CP11NB
1579          HC       2
              *
```

```
1580          KK  SR11NB
1581          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB11NB.
1582          RS       1    STOR       0       0
1583          SV       0    1.56   2.586
1584          SQ       0      27     111
1585          SE    1732    1737    1738
              *

1586          KK   R11NC
1587          KM        ROUTE FLOW FROM CP11NB TO CP11NC.
1588          RS       1    FLOW
1589          RC    .025    .025    .025     300     .03
1590          RX       0      12      24      36      56      68      80      92
1591          RY       6       4       2       0       0       2       4       6
              *

1592          KK  UB11NC
1593          KM        RUNOFF FROM SUBBASIN 11NC.
1594          BA   .0069
1595          LS              81       0
1596          UK     100     .03     .15     100
1597          RK     650    .028    .025            TRAP      20       5
              *

1598          KK  C11NC1
1599          KM        ADD HYDROGRAPHS AT CP11NC.1
1600          HC       2
              *

1601          KK  SUB10A
1602          KM        RUNOFF FROM SUBBASIN 10A.
1603          BA    .030
1604          LS              77      42
1605          UK     100    .015     .15     100
1606          RK     350    .008    .018            TRAP      50      20
1607          RK     800    .008    .025            TRAP      10       4
              *

1608          KK   R12NB
1609          KM        ROUTE FLOW FROM CP10A TO CP12NB.
1610          RS       1    FLOW
1611          RC    .025    .025    .025     400     .03
1612          RX       0      12      24      36      46      58      70      82
1613          RY       6       4       2       0       0       2       4       6
              *
```



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

1614          KK  UB12NA
1615          KM        RUNOFF FROM SUBBASIN 12NA.
1616          BA   .0153
1617          LS              81       0
1618          UK     150    .025     .15     100
1619          RK     650    .017    .025            TRAP      30       6
              *

1620          KK  SR12NA
1621          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB1NA.
1622          RS       1    STOR       0       0
1623          SV       0    2.16   3.426   5.071
1624          SQ       0       1       2     142
1625          SE    1741    1745    1746    1747
              *

1626          KK   R12NA
1627          KM        ROUTE FLOW FROM CP12NA TO CP12NB.
1628          RS       1    FLOW
1629          RC    .025    .025    .025     550    .025
1630          RX       0      12      24      36      46      58      70      82
1631          RY       6       4       2       0       0       2       4       6
              *

1632          KK  UB12NB
1633          KM        RUNOFF FROM SUBBASIN 12NB.
1634          BA   .0157
1635          LS              81       0
1636          UK     150    .025     .15     100
1637          RK     650    .017    .025            TRAP      30       6
              *

1638          KK  CP12NB
1639          KM        ADD 3 HYDROGRAPHS AT CP12NB
1640          HC       3
              *

1641          KK  SR12NB
1642          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB12NB.
1643          RS       1    STOR       0       0
1644          SV       0    .922    4.24    7.53
1645          SQ       0       2       2     142
1646          SE    1741    1745    1746    1747
```

```
                 *
1647             KK  R11NC2
1648             KM        ROUTE FLOW FROM CP12NA TO CP11NC.
1649             RS       1    FLOW
1650             RC    .025    .025    .025     550     .01
1651             RX       0      12      24      36      46      58      70      82
1652             RY       6       4       2       0       0       2       4       6
                 *
1                                          HEC-1 INPUT                                                    PAGE 47

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

1653             KK  CP11NC
1654             KM        ADD HYDROGRAPHS  AT CP11NC
1655             HC       2
                 *
1656             KK  SR11NC
1657             KM        ROUTE FLOW THROUGH RETENTION BASIN RT11NC.  18" PIPE OUTFLOW WILL
1658             KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
1659             RS       1    STOR       0       0
1660             SV       0   1.665   2.303   3.062
1661             SQ       0      27     111     344
1662             SE    1730    1735    1736    1737
                 *
1663             KK   R16NC
1664             KM        ROUTE FLOW FROM CP11NC TO CP16NC.
1665             RS       1    FLOW
1666             RC    .035    .035   0.035     950    .025
1667             RX       0       8      13      17      22      26      31      39
1668             RY       4       2       2       0       0       2       2       4
                 *
1669             KK  UB16NC
1670             KM        RUNOFF FROM SUBBASIN 16NC.
1671             BA   .0337
1672             LS              77      42
1673             UK     100    .015     .15     100
1674             RK    1600    .015    .022            TRAP      50      20
                 *
1675             KK  CP16NC
1676             KM        ADD HYDROGRAPHS  AT CP16NC
1677             HC       2
                 *
1678             KK  R16NC1
1679             KM        ROUTE FLOW FROM CP16NC TO CP16NC1.
1680             RS       1    FLOW
1681             RC     .03     .03     .03     550    .013
1682             RX       0      16      26      34      44      58      68      86
1683             RY       6       2       2       0       0       2       2       6
                 *
1684             KK  C16NC1
1685             KM        ADD HYDROGRAPHS  AT CP16NC1.
1686             HC       2
                 *
1687             KK   R15N1
1688             KM        ROUTE FLOW FROM CP16NC1 TO CP15N1.
1689             RS       1    FLOW
1690             RC    .035    .035    .035     600    .013
1691             RX       0      16      26      34      54      68      78      96
1692             RY       6       2       2       0       0       2       2       6
                 *
1                                          HEC-1 INPUT                                                    PAGE 48

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

1693             KK     PC2
1694             KM        RUNOFF FROM SUBBASIN PC2.
1695             BA    .054
1696             LS              77      10
1697             UK     100    .015     .15     100
1698             RK    2700     .01     .03            TRAP      50       4
                 *
1699             KK  CP15N1
1700             KM        ADD HYDROGRAPHS  AT CP15N1
1701             HC       2
                 *
1702             KK   SRPC2
1703             KM        STORAGE ROUTE THRU DETENTION BASINS IN POWER CORRIDOR THIS IS THE TOTAL
1704             KM        FLOW REACHING THE UPSTREAM SIDE OF THE THOMPSON PEAK PARKWAY BRIDGE
1705             RS       1    STOR       0       0
1706             SV       0    1.02    2.70    4.48     5.8     6.9
1707             SQ       0       0     150     350     550     850
```

```
1708          SE    1730    1731    1732    1733    1734    1735
              *

1709          KK  UB17NA
1710          KM        RUNOFF FROM SUBBASIN SUB17NA.
1711          BA  .00979
1712          LS              81       0
1713          UK     150    .025     .05     100
1714          RK     960   .0292    .025            TRAP      30      50
              *

1715          KK  SR17NA
1716          KM        STORAGE ROUTE THROUGH DETENTION BASIN SR17NA.
1717          RS       1    STOR       0       0
1718          SV       0   .0078    .241    .523    1.00   1.735
1719          SQ       0       1       1       1    17.4     251
1720          SE  1755.2    1756    1758    1759    1760    1761
              *

1721          KK   R17NB
1722          KM        ROUTE FLOW FROM SR17NA TO CP17NB.
1723          RS       1    FLOW
1724          RC    0.03    0.03    0.03     280  0.0286
1725          RX       0      10      20      35      70      85      90     100
1726          RY    1757  1756.8  1756.6    1756    1756    1757    1758    1759
              *

1727          KK  UB17NB
1728          KM        RUNOFF FROM SUBBASIN SUB17NB.
1729          BA   .0111
1730          LS              81       0
1731          UK     150    .025     .05     100
1732          RK    1200   .0217    .025            TRAP      30      50
              *
```



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

1733          KK  CP17NB
1734          KM        ADD HYDROGRAPHS AT SUB17NB.
1735          HC       2
              *

1736          KK  SR17NB
1737          KM        STORAGE ROUTE THROUGH DETENTION BASIN SR17NB.
1738          RS       1    STOR       0       0
1739          SV       0   .0113   .1469    .635   .9795   1.509   2.254   3.243
1740          SQ       0       1       1       1       1       1    38.2     189
1741          SE  1751.5    1752    1753    1755    1756    1757    1758    1759
              *

1742          KK    R17A
1743          KM        ROUTE FLOW FROM SR17NB TO CP17A.
1744          RS       1    FLOW
1745          RC    0.03    0.03    0.03     280   0.033
1746          RX       0      15      18      20      24      27      30      35
1747          RY    1755    1754    1753    1752    1752    1753    1754    1755
              *

1748          KK  SUB17A
1749          KM        RUNOFF FROM SUBBASIN SUB17A.
1750          BA  .00792
1751          LS              77      34
1752          UK      75     .03     .05     100
1753          RK    1500     .02    .025            TRAP       8       4
              *

1754          KK  CP17A1
1755          KM        ADD HYDROGRAPHS AT CP17A1.
1756          HC       2
              *

1757          KK  UB17NC
1758          KM        RUNOFF FROM SUBBASIN SUB17NC.
1759          BA  .00559
1760          LS              77      12
1761          UK      75     .03     .05     100
1762          RK     910   .0187    .025            TRAP       8       4
              *

1763          KK   CP17A
1764          KM        ADD ALL HYDROGRAPHS AT CP17A.
1765          HC       2
              *

1766          KK    R15N
1767          KM        ROUTE FLOW FROM CP17A TO CP15N.
1768          RS       1    FLOW
1769          RC    .035    .035    .035    1950    .025
1770          RX       0       8      13      17      22      26      31      39
1771          RY       4       2       2       0       0       2       2       4
              *
```

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

1772          KK  SUB15N
1773          KM        RUNOFF FROM SUBBASIN 15N.
1774          BA   .0391
1775          LS              77      68
1776          UK     100     .01     .15     100
1777          RK     400    .008    .018            TRAP      50      20
1778          RK    1700    .015    .025            TRAP      10       4
              *

1779          KK   CP15N
1780          KM        ADD HYDROGRAPHS  AT CP15N
1781          HC       2
              *

1782          KK   R15N2
1783          KM        ROUTE FLOW FROM CP15N TO CP15N1.
1784          RS       1    FLOW
1785          RC     .02     .02     .02     700    .013
1786          RX       0       8      13      17      22      26      31      39
1787          RY       6       2       2       0       0       2       2       6
              *

1788          KK  CP15N2
1789          KM        ADD HYDROGRAPHS  AT CP15N1
1790          KM        THIS IS THE INTERIM OUTFLOW DISCHARGE TO NATURAL WASH.
1791          HC       2  1.1611
              *

1792          KK   R15N2
1793          KM        ROUTE 15N2 IS ADDED BY GVSCE TO ROUTE THE HYDROGRAPH FROM CP15N2 TO THE
1794          KM        POWER LINE CHANNEL CROSSING AT HAYDEN RD.
1795          KM
1796          KM        ROUTE FLOW FROM CP15N2 TO CPC3A.
1797          RS       1    FLOW      -1
1798          RC    .035    .035    .035    2200    .013
1799          RX       0      16      26      34      64      78      88     106
1800          RY       6       2       2       0       0       2       2       6
              *

1801          KK    DPC3
1802          KM        THIS OPERATION IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1803          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1804          KM
1805          KM        RETRIEVE DIVERTED FLOW
1806          DR   BPC3T
              *

1807          KK   CPC3A
1808          KM        COMBINE CPC3A IS ADDED BY GVSCE TO ESTIMATE THE TOTAL DISCHARGE AT THE
1809          KM        POWER LINE CHANNEL CROSSING AT HAYDEN RD.
1810          KM
1811          KM        COMBINE ROUTED HYDROGRAPH FROM CP15N2 WITH HYDROGRAPH FROM CPC3
1812          HC       2  1.3446
              *
```



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

1813          KK   RPC3A
1814          KM        ROUTE PC3A IS ADDED BY GVSCE TO ROUTE THE HYDROGRAPH FROM CPC3A VIA
1815          KM        THE POWER LINE CHANNEL.
1816          KM
1817          KM        ROUTE FLOW FROM CP15N2 TO CPC3A.
1818          RS       1    FLOW      -1
1819          RC    .035    .035    .035    1100    .013
1820          RX       0      16      26      34      64      78      88     106
1821          RY       6       2       2       0       0       2       2       6
              *

1822          KK    DPC4
1823          KM        THIS OPERATION IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1824          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1825          KM
1826          KM        RETRIEVE DIVERTED FLOW
1827          DR   BPC4T
              *

1828          KK   CPC4A
1829          KM        COMBINE CPC4A IS ADDED BY GVSCE TO ESTIMATE THE TOTAL DISCHARGE IN THE
1830          KM        POWER LINE CHANNEL
1831          KM
1832          KM        COMBINE ROUTED HYDROGRAPH FROM CPC3A WITH HYDROGRAPH FROM CPC4
1833          HC       2  1.9946
              *

1834          KK   RPC4A
1835          KM        ROUTE PC4A IS ADDED BY GVSCE TO ROUTE THE HYDROGRAPH FROM CPC4A TO THE
```

```
1836          KM        POWER LINE CHANNEL CROSSING AT HUALAPAI RD.
1837          KM
1838          KM        ROUTE FLOW FROM CPC4A TO CPC5.
1839          RS       1    FLOW      -1
1840          RC    .035    .035    .035    1900    .013
1841          RX       0      16      26      34      64      78      88     106
1842          RY       6       2       2       0       0       2       2       6
              *

1843          KK  DPC4AT
1844          KM        DIVERT PC4A IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE UNION
1845          KM        HILLS DETENTION BASIN VIAL THE POWER LINE CHANNEL.
1846          KM
1847          KM        DIVERT 100% OF FLOW
1848          DT  BPC4AT
1849          DI       0   10000
1850          DQ       0   10000
              *

1851          KK  SUB1-2
1852          KM        RUNOFF FROM SUB 1 AND 2, SOUTH COURSE MODEL
1853          BA   .0558
1854          LS              77      68
1855          UK     200    .010     .15     100
1856          RK    1370    .027    .015            TRAP      50      20
              *
1                                          HEC-1 INPUT                                          PAGE 52

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

1857          KK  GCRB18
1858          KM        RUNOFF FROM GOLF COURSE CONTRIBUTING TO RETENTION BASIN AT HOLE NO. 18
1859          KM        AND HOLE NO. 10, SOUTH COURSE
1860          BA    .012
1861          LS              81       0
1862          UK     200    .025     .15     100
1863          RK     300    .016    .025            TRAP      10       4
              *

1864          KK  CPRET1
1865          KM        COMBINE HYDROGRAPHS AT RETENTION BASINS ON HOLE 18 & 10
1866          HC       2
              *

1867          KK   SR18S
1868          KM        STORAGE ROUTE THRU RETENTION BASIN AT HOLE 18, SOUTH COURSE
1869          RS       1    STOR       0       0
1870          SV       0  1.7635  5.7722  12.174  21.337  28.849  30.151      32
1871          SE    1725    1730    1735    1740    1745    1748    1749    1750
1872          SQ       0       0       0       0       0      42     386     900
              *

1873          KK   SUB5S
1874          KM        RUNOFF FROM SUB 5S
1875          BA   .0263
1876          LS              77      31
1877          UK     100    .010     .15     100
1878          RK    1280    .007    .015            TRAP      50      20
              *

1879          KK  GC1216
1880          KM        RUNOFF FROM SOUTH GOLF COURSE HOLES 12, 16, AND 17
1881          BA   .0365
1882          LS              81       0
1883          UK     200    .025     .15     100
1884          RK    2200    .024    .025            TRAP      10       4
              *

1885          KK  GC1415
1886          KM        RUNOFF FROM SOUTH GOLF COURSE HOLES 13, 14, 15 AND RETENTION
1887          BA    .045
1888          LS              81       0
1889          UK     200    .025     .15     100
1890          RK    1300    .022    .025            TRAP      10       4
              *

1891          KK   SUB6S
1892          KM        RUNOFF FROM SUB BASIN 6, SOUTH COURSE
1893          BA    .021
1894          LS              77      42
1895          UK     100    .010     .15     100
1896          RK    2150    .013    .025            TRAP      50      20
              *
1                                          HEC-1 INPUT                                          PAGE 53

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

1897          KK   SUB7S
1898          KM        RUNOFF FROM SUB BASIN 7, SOUTH COURSE
1899          BA    .027
1900          LS              77      42
```

```
1901          UK     100    .010     .15     100
1902          RK    2080    .023    .025            TRAP      50      20
              *

1903          KK  CPRET2
1904          KM        COMBINE HYDROGRAPHS AT RETENTION BASIN 2, SOUTH COURSE
1905          HC       5
              *

1906          KK  SRRET2
1907          KM        STORAGE THRU RETENTION BASIN NO. 2, SOUTH COURSE
1908          RS       1    STOR       0       0
1909          SV       0    .617   3.474   9.858  20.063  35.353  52.685  57.749      62
1910          SE    1670    1675    1680    1685    1690    1695    1699    1700    1701
1911          SQ       0       0       0       0       0       0      32     386     594
              *
              *       NO FLOW RELEASED FROM RETENTION BASIN
              *

1912          KK   CLEAR
1913          KM        THIS OPERATION IS ADDED BY GVSCE
1914          KM
1915          KM        CLEAR HYDROGRAPHS FROM THE STACK
1916          HC       4
              *

1917          KK   SUB8S
1918          KM        RUNOFF FROM SUB BASIN 8, SOUTH COURSE
1919          BA   .0256
1920          LS              77      42
1921          UK     100    .010     .15     100
1922          RK    1600    .015    .025            TRAP      50      20
              *

1923          KK   RGC36
1924          KM        ROUTE SUB8S TO CPGC36
1925          RS       1    FLOW
1926          RC    .055    .045    .055     850     .02
1927          RX       0      16      26      30      40      44      54      70
1928          RY       6       2       2       0       0       2       2       6
              *

1929          KK    GC36
1930          KM        RUNOFF FROM SOUTH COURSE HOLES 3, 6, AND NORTH HALF OF HOLE 4.
1931          BA   .0406
1932          LS              81       0
1933          UK     200    .025     .15     100
1934          RK    2350    .015    .035            TRAP      10       4
              *
```



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

1935          KK  C1GC36
1936          KM        COMBINE SUBS 8 AND GC36
1937          HC       2
              *

1938          KK   SUB9S
1939          KM        RUNOFF FROM SUB BASIN 9, SOUTH COURSE
1940          BA    .021
1941          LS              77      53
1942          UK     100    .010     .15     100
1943          RK    1100    .013    .025            TRAP      50      20
              *

1944          KK     R9S
1945          KM        ROUTE SUB9S TO CPGC36
1946          RS       1    FLOW
1947          RC    .035    .035    .035     500     .02
1948          RX       0       8      12      16      18      22      26      30
1949          RY       6       4       3       2       2       3       4       6
              *

1950          KK  CPGC36
1951          KM        COMBINE SUBS 8 AND 9 SOUTH AND GC36
1952          HC       2
              *

1953          KK  SRGC36
1954          KM        STORAGE THRU DETENTION BASIN ON GC36
1955          RS       1    STOR       0       0
1956          SV       0    0.85     1.0
1957          SE    1664    1668    1669
1958          SQ       0      20     205
              *

1959          KK   SUB7A
1960          KM        RUNOFF FROM SUB7A, SOUTH COURSE EAST SIDE ADJACENT TO PIMA ROAD
1961          BA   .0092
1962          LS              77      42
1963          UK     100    .025     .15     100
```

```
1964          RK     950    .015    .025            TRAP      50      20
              *

1965          KK    SR7A
1966          KM        STORAGE THRU DETENTION BASIN ON SUB7A
1967          RS       1    STOR       0       0
1968          SV       0     .68      .8
1969          SE    1700    1703    1704
1970          SQ       0      10     150
              *
1                                          HEC-1 INPUT                                                    PAGE 55

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

1971          KK    R10S
1972          KM        ROUTE FLOW FROM CP7A TO CP10S
1973          RS       1    FLOW
1974          RC    .035    .035    .035    1400    .015
1975          RX       0       8      12      16      18      22      26      30
1976          RY       6       4       3       2       2       3       4       6
              *

1977          KK  SUB10S
1978          KM        RUNOFF FROM SUB BASIN 10, SOUTH COURSE
1979          BA   .0248
1980          LS              77      53
1981          UK     100    .010     .15     100
1982          RK    1150    .020    .025            TRAP      50      20
              *

1983          KK   CP10S
1984          KM        COMBINE HYDROGRAPHS AT CP10 SOUTH COURSE
1985          HC       2
              *

1986          KK  SUB11S
1987          KM        RUNOFF FROM SUB11, SOUTH COURSE
1988          BA   .0234
1989          LS              77      68
1990          UK     100    .015    .018     100
1991          RK    1050    .015    .025            TRAP     100      20
              *

1992          KK    R11S
1993          KM        ROUTE 11S IS ADDED BY GVSCE TO ROUTE THE RUNOFF FROM SUB11S TO THE
1994          KM        POWER LINE CHANNEL CROSSING AT HUALAPAI DR ALONG HUALAPAI DR.
1995          KM
1996          KM        ROUTE FLOW FROM SUB11S TO CPC5.
1997          RS       1    FLOW      -1
1998          RC    .035    .035    .035     900    .015
1999          RX       0       8      12      16      18      22      26      30
2000          RY       6       4       3       2       2       3       4       6
              *

2001          KK   C10SA
2002          KM        COMBINE 10SA IS ADDED BY GVSCE
2003          KM
2004          KM        COMBINE ROUTED HYDROGRAPH FROM 11S WITH HYDROGRAPH FROM CP10S
2005          HC       2
              *

2006          KK   R10SA
2007          KM        ROUTE 10SA IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE UNION
2008          KM        HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
2009          KM
2010          KM        ROUTE FLOW FROM C10SAS TO CPC5.
2011          RS       1    FLOW      -1
2012          RC    .035    .035    .035     900    .015
1                                          HEC-1 INPUT                                                    PAGE 56

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

2013          RX       0       8      12      16      18      22      26      30
2014          RY       6       4       3       2       2       3       4       6
              *

2015          KK    GC45
2016          KM        RUNOFF FROM SOUTH COURSE HOLES 4 AND 5
2017          BA   .0127
2018          LS              81       0
2019          UK     200    .015    .025     100
2020          RK     550    .015    .035            TRAP      10       4
              *

2021          KK     PC5
2022          KM        PC5 IS A SUBBASIN ADDED BY GVSCE TO ESTIMATE THE SURFACE RUNOFF FROM
2023          KM        THE POWER LINE CORRIDOR WHICH ENTERS THE POWER LINE CHANNEL
2024          KM
2025          KM        RUNOFF FROM SUBBASIN PC5.
2026          BA  0.0375
2027          LS              77       0
2028          UK     300    .015     .15     100
```

```
2029          RK    1900     .01     .03            TRAP      30       4
              *

2030          KK   DPC4A
2031          KM        THIS OPERATION IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
2032          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
2033          KM
2034          KM        RETRIEVE DIVERTED FLOW
2035          DR  BPC4AT
              *

2036          KK    CPC5
2037          KM        COMBINE PC5 IS ADDED BY GVSCE TO ESTIMATE THE TOTAL FLOW IN THE POWER
2038          KM        LINE CHANNEL AT THE HUALAPAI CROSSING
2039          KM
2040          KM        COMBINE ROUTED HYDROGRAPH FROM C10SA AND CPC4A WITH HYDROGRAPHS FROM
2041          KM        CGC45, SRGC36 AND PC5
2042          HC       5  2.1022
              *
              *     ******************  END GREYHAWK WATERSHED  ******************
              *

2043          KK     RC5
2044          KM       ROUTE CPC5 THROUGH SUBBASIN CN5C TO UNION HILLS BASIN
2045          RS       1    FLOW      -1
2046          RC    .035    .035    .035    2000    .013
2047          RX       0      16      26      34      64      78      88     106
2048          RY       6       2       2       0       0       2       2       6
              *
```



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

2049          KK   SCN5C
2050          KM     RUNOFF FROM SUBBASIN CN5C
2051          BA  0.2629
2052          LS              74      50
2053          UK     240   0.025    0.13     100
2054          RK    1200   0.015    0.04  0.0248    TRAP       0       5
2055          RK    1500   0.005    0.03            TRAP       6       2
              *

2056          KK   SCN6D
2057          KM     RUNOFF FROM SUBBASIN CN6D (CAP TREATMENT PLANT)
2058          KM      TOTAL AREA = 0.0246 sm, 0.0045 sm OF THAT IS NON-CONTRIBUTING
2059          BA  0.0201
2060          LS              74      80              74       0
2061          UK     100    0.01    0.15      80
2062          UK     100   0.025    0.13      20
2063          RK     600   0.015   0.025  0.0036    TRAP       0       5
2064          RK     400    0.01   0.025            TRAP       6       2
              *

2065          KK   SCN6C
2066          KM     RUNOFF FROM SUBBASIN CN6C (WATER CAMPUS AND CAP TREATMENT PLANT)
2067          KM      TOTAL AREA = 0.1101 sm, 0.0093 sm OF THAT IS NON-CONTRIBUTING
2068          BA  0.1008
2069          LS              74      80              74       0
2070          UK     150    0.01    0.15      50
2071          UK     100   0.025    0.13      50
2072          RK    1140    0.01    0.03  0.0123    TRAP       5      10
2073          RK    1320   0.015    0.04  0.0095    TRAP       0       5
2074          RK    1100   0.015   0.024            CIRC       5
              *

2075          KK     D52
2076          KM     BRING BACK DIVERTED HYDROGRAPH FROM R52
2077          DR    B52T
              *

2078          KK    S53A
2079          KM     RUNOFF FROM SUBBASIN 53A
2080          BA  0.1794
2081          LS              74      11
2082          UK     300   0.022    0.13     100
2083          RK    1475   0.026   0.045  0.0111    TRAP       3       5
2084          RK    1750   0.021    0.04            TRAP      25       5
              *

2085          KK     C53
2086          KM     COMBINE ROUTED HYDROGRAPH FROM FROM C52 WITH RUNOFF FROM SUBBASIN 53A
2087          HC       2  8.0954
              *
              *    R53
              *   ****  TOO SHORT TO ROUTE  ****
              *    NORMAL DEPTH CHANNEL ROUTE FROM C53 TO C53A1 THROUGH PIMA CHANNEL
              *      1    FLOW      -1
              *  0.022   0.022   0.022    1550    0.01
              *   1000    1012    1020    1028    1058    1066    1074    1086
              *    107     104     102     100     100     102     104     107
              *
```

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

2088          KK   S53A1
2089          KM     RUNOFF FROM SUBBASIN 53A1
2090          BA  0.3320
2091          LS              74      12              74      30
2092          UK     300   0.022    0.13      70
2093          UK     150   0.027    0.13      30
2094          RK    1250   0.023   0.045  0.0087    TRAP       4       5
2095          RK    5050   0.017    0.04            TRAP      35       5
              *

2096          KK   C53A1
2097          KM     COMBINE ROUTED HYDROGRAPH FROM C53 WITH RUNOFF FROM SUBBASSIN 53A1
2098          HC       2  8.4274
              *

2099          KK   SCN6B
2100          KM     RUNOFF FROM SUBBASIN CN6B (WATER CAMPUS)
2101          KM      TOTAL AREA = 0.0542 sm, 0.0022 sm OF THAT IS NON-CONTRIBUTING
2102          BA  0.0520
2103          LS              74      80              74       0
2104          UK     150    0.01    0.15      70
2105          UK     100   0.025    0.13      30
2106          RK     720    0.02    0.03  0.0084    TRAP       5      10
2107          RK     700    0.01   0.045  0.0050    TRAP       0      10
2108          RK     440   0.009   0.035            TRAP       6       3
              *

2109          KK    C53A
2110          KM     COMBINE HYDROGRAPH FROM C53A WITH RUNOFF FROM SUBBASIN CN6B
2111          HC       2
              *

2112          KK   SCN6E
2113          KM     RUNOFF FROM SUBBASIN CN6E
2114          BA  0.0852
2115          LS              74       5
2116          UK     300    0.01    0.15     100
2117          RK    1400    0.01   0.035            TRAP      20       4
              *

2118          KK  UHDB-I
2119          KM     COMBINE RUNOFF FROM SCN5C, SCN6D, SCN6C AND SCN6E W/ HYDROGRAPHS FROM C53A
2120          KM     AND CPC5
2121          HC       6
              *                    *

2122          KK  UHDB-O
2123          KM     DETENTION BASIN AT UNION HILLS ROAD - NONREGULATORY STRUCTURE
2124          KM        PRINCIPAL SPILLWAY:  CONDUIT EXTENDING TO USBR BASIN AT THE TPC
2125          KM        EMERGENCY SPILLWAY:  NO OVERTOPPING FOR 24-HOUR STORM
2126          KM        7 ACRE-FEET OF STORAGE FOR SEDIMENTAION
2127          RS       1    STOR      -1
2128          SV       0     1.6    41.7   137.3   246.6   371.0
2129          SE    1585    1590    1595    1600    1605    1610
1                                          HEC-1 INPUT                                                    PAGE 59

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

2130          SQ       0      50     100     200     400     500     527     629     657     679
2131          SQ     698     800     814
2132          SE  1585.0 1587.03 1588.27 1590.10 1592.88 1594.32 1596.46 1601.65 1601.75 1601.85
2133          SE  1602.3 1608.62 1609.62
              *
              *    RC1
              *     UNION HILLS BASIN OUTLET CONDUIT TO INTERSECTION OF PIMA ROAD AND LOOP 101
              *       L =       feet
              *

2134          KK     S54
2135          KM     RUNOFF FROM SUBBASIN 54
2136          BA  0.0853
2137          LS              74      50
2138          UK     300   0.017    0.13     100
2139          RK    3460   0.012   0.040            TRAP       5       2
              *

2140          KK   SCN6A
2141          KM     RUNOFF FROM SUBBASIN CN6A
2142          BA  0.1335
2143          LS              74      50
2144          UK     300   0.017    0.13     100
2145          RK    1050   0.017   0.045  0.0057    TRAP       8      20
2146          RK    2250   0.012   0.040            TRAP      10       4
              *

2147          KK    CN6A
2148          KM     COMBINE RUNOFF FROM  S54 WITH RUNOFF FROM SCN6A AT CN6A
2149          HC       2
              *
```

```
2150          KK     C1A
2151          KM     COMBINE ROUTED HYDROGRAPH FROM UHDB-O WITH HYDROGRAPH FROM CN6A AT C1A
2152          HC       2

2153          ZZ
```

1

SCHEMATIC DIAGRAM OF STREAM NETWORK

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

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

   25        S30N
                V
                V
   34        R30N
                .
                .
   40           .       S31.1
                .           .
                .           .
   48      C31.1............
                .
                .
   51           .       S34.2
                .           .
                .           .
   60      C34.2............
                .
                .
   63           .        S35N
                .           .
                .           .
   75           .           .-------> D35NL
   71           .       D35NR
                .           V
                .           V
   78           .       R35NR
                .           .
                .           .
   85           .           .      S36.2
                .           .          .
                .           .          .
   93           .       C36.2............
                .           .
                .           .
  100           .           .-------> D36.2L
   96           .      D36.2R
                .           V
                .           V
  103           .      R36.2R
                .           .
                .           .
  110           .           .      S34.1
                .           .          .
                .           .          .
  119           .       C34.1............
                .           .
                .           .
  122      HVDB-I............
                V
                V
  125      HVDB-O
                V
                V
  138      R34.1
                .
                .
  144           .       S36.1
                .           .
                .           .
  151      C36.1............
                V
                V
  154      R36.1
                .
                .
  162           .           .<-------  D35NL
  160           .       B35NL
                .           V
                .           V
  163           .       R35NL
                .           .
                .           .
  172           .           .          .<-------  D36.2L
  170           .           .      B36.2L
                .           .          V
                .           .          V
  173           .           .      R36.2L
                .           .          .
                .           .          .
  180           .           .          .      S36R1A
```

```
                .          .          .          .
                .          .          .          .
188     C36R1A.................................
                .
                .
193             .     S36R1B
                .          .
                .          .
201     C36R1B............
                .
                .
204             .     S36R2A
                .          .
                .          .
211     C36R2A............
                V
                V
214     R36R2A
                .
                .
226             .     S36R2B
                .          .
                .          .
233     C36R2B............
                .
                .
236             .      S51.1
                .          .
                .          .
244     DVDB-I............
                V
                V
247     DVDB-O
                .
                .
262             .-------> B51.1T
260     D51.1T
                .
                .
265             .       52D4
                .          V
                .          V
271             .      52D4R
                .          .
                .          .
274             .          .      52D4B
                .          .          .
                .          .          .
280             .     52D5C1............
                .          .
                .          .
283             .          .      52D5A
                .          .          V
                .          .          V
289             .          .     52D5AR
                .          .          .
                .          .          .
292             .     52D5C2............
                .          V
                .          V
295             .      52D5R
                .          .
                .          .
298             .          .       52C3
                .          .          V
                .          .          V
304             .          .      52C3R
                .          .          .
                .          .          .
307             .          .          .      52C3B
                .          .          .          .
                .          .          .          .
313             .          .     2C3BC1............
                .          .          .
                .          .          .
316             .     2C3BC2............
                .          V
                .          V
319             .     52C3BR
                .          .
                .          .
322             .          .        51C
                .          .          .
                .          .          .
330             .          .          .-------> 51C1DV
328             .          .      51C1D
                .          .          V
                .          .          V
333             .          .      51C1R
                .          .          .
                .          .          .
336             .          .          .       52C1
                .          .          .          .
```

```
342          .          .      52C1C............
             .          .          V
             .          .          V
345          .          .      52C1R
             .          .          .
             .          .          .
348          .          .          .      52C2A
             .          .          .          .
             .          .          .          .
354          .          .    52C2AC............
             .          .          .
             .          .          .
357          .          .          .      52C2B
             .          .          .          .
             .          .          .          .
363          .          .    52C2BC............
             .          .          V
             .          .          V
366          .          .    52C2BR
             .          .          .
             .          .          .
369          .          .          .      52C2C
             .          .          .          .
             .          .          .          .
375          .          .    52C2CC............
             .          .          V
             .          .          V
378          .          .     52C2R
             .          .          .
             .          .          .
381          .          .          .       52C4
             .          .          .          .
             .          .          .          .
387          .          .    52C4C1............
             .          .          .
             .          .          .
390          .     52C4C2............
             .          V
             .          V
393          .      52C4R
             .          .
             .          .
396          .          .      52C13
             .          .          .
             .          .          .
404          .          .          .-------> STORM
402          .          .    2C13DV
             .          .          .
             .          .          .
407          .          .          .      52C15
             .          .          .          .
             .          .          .          .
413          .          .    2C15C1............
             .          .          .
             .          .          .
416          .     2C15C2............
             .          V
             .          V
419          .     52C15R
             .          .
             .          .
422          .          .    52C14A
             .          .          .
             .          .          .
428          .     2C14AC............
             .          V
             .          V
431          .     2C14AR
             .          .
             .          .
436          .          .          .<------- 51C1DV
434          .          .    51C1DV
             .          .          .
             .          .          .
439          .          .          .-------> 51C2DV
437          .          .      51C2D
             .          .          V
             .          .          V
442          .          .      51C2R
             .          .          .
             .          .          .
445          .          .          .       52C5
             .          .          .          .
             .          .          .          .
451          .          .      52C5C............
             .          .          V
             .          .          V
454          .          .      52C5R
             .          .          .
             .          .          .
457          .          .          .       52C6
             .          .          .          .
```

```
463                 52C6C............
                        V
                        V
466                 52C6R
                        .
                        .
471                     .<-------  51C2DV
469                 51C2DV
                        V
                        V
472                 51C3R
                        .
                        .
475                     .         51B
                        .          .
                        .          .
483                     .          .-------> 51B1DV
481                     .      51B1D
                        .          V
                        .          V
486                     .      51B1R
                        .          .
                        .          .
489                     .          .       52C7
                        .          .         .
                        .          .         .
495                 52C7C......................
                        V
                        V
498                 52C7R
                        .
                        .
503                     .          .<------- 51B1DV
501                     .     51B1DV
                        .          .
                        .          .
506                     .          .-------> 51B2DV
504                     .      51B2D
                        .          V
                        .          V
509                     .      51B2R
                        .          .
                        .          .
512                     .          .       52C8
                        .          .         .
                        .          .         .
518                     .      52C8C............
                        .          V
                        .          V
521                     .      52C8R
                        .          .
                        .          .
524                 52C9C1............
                        V
                        V
527                 52C9R1
                        .
                        .
530                     .       52C9
                        .          .
                        .          .
536                 52C9C2............
                        V
                        V
539                 52C9R2
                        .
                        .
542             2C10C1............
                        V
                        V
545             2C10R1
                        .
                        .
548                 52C10
                        .
                        .
554             2C10C2............
                        .
                        .
557                 52C11
                        V
                        V
563                 2C11R1
                        .
                        .
568                     .          .<-------  STORM
566                     .     52C13D
                        .          .
                        .          .
569                 52C11C............
                        V
                        V
```

```
572          .          .          .      2C11CR
             .          .          .          .
             .          .          .          .
575          .          .     2C11C2............
             .          .          V
             .          .          V
578          .          .     2C11R2
             .          .          .
             .          .          .
581          .          .          .      52C12
             .          .          .          .
             .          .          .          .
587          .          .     52C12C............
             .          .          V
             .          .          V
590          .          .     52C12R
             .          .          .
             .          .          .
593          .          .          .      52C14B
             .          .          .          .
             .          .          .          .
599          .          .     C14BC1............
             .          .          .
             .          .          .
602          .     C14BC2............
             .          V
             .          V
605          .     52C14R
             .          .
             .          .
610          .          .          .<-------  51B2DV
608          .          .     51B2DV
             .          .          .
             .          .          .
613          .          .          .-------> 51B3DV
611          .          .      51B3D
             .          .          V
             .          .          V
616          .          .      51B3R
             .          .          .
             .          .          .
619          .          .          .       52B1
             .          .          .          .
             .          .          .          .
625          .          .      52B1C............
             .          .          V
             .          .          V
628          .          .      52B1R
             .          .          .
             .          .          .
633          .          .          .          .<-------  51B3DV
631          .          .          .      51B3DV
             .          .          .          .
             .          .          .          .
636          .          .          .          .-------> 51B4DV
634          .          .          .       51B4D
             .          .          .          V
             .          .          .          V
639          .          .          .      51B4R1
             .          .          .          .
             .          .          .          .
642          .          .     52B2C1............
             .          .          V
             .          .          V
645          .          .     52B2R1
             .          .          .
             .          .          .
648          .          .          .       52B2
             .          .          .          .
             .          .          .          .
654          .          .     52B2C2............
             .          .          V
             .          .          V
657          .          .     52B2R2
             .          .          V
             .          .          V
660          .          .     52B3R1
             .          .          .
             .          .          .
663          .          .          .       52B3
             .          .          .          .
             .          .          .          .
669          .          .     52B3C2............
             .          .          V
             .          .          V
672          .          .     52B3R2
             .          .          .
             .          .          .
675          .          .          .       52B4
             .          .          .          .
             .          .          .          .
681          .          .      52B4C............
             .          .          V
```

```
                 .          .          V
684              .          .     52B4R
                 .          .          .
                 .          .          .
687              .          .          .        52B5
                 .          .          .           .
                 .          .          .           .
693              .          .     52B5C1............
                 .          .          .
                 .          .          .
696              .     52B5C2............
                 .          V
                 .          V
699              .      52B5R
                 .          .
                 .          .
704              .          .<-------  51B4DV
702              .          .     51B4DV
                 .          .          .
                 .          .          .
707              .          .-------> 51B5DV
705              .          .      51B5D
                 .          .          V
                 .          .          V
710              .          .      51B5R
                 .          .          .
                 .          .          .
715              .          .          .           .<-------  51B5DV
713              .          .          .     51B5DV
                 .          .          .           .
                 .          .          .           .
718              .          .          .           .-------> 51B6DV
716              .          .          .       51B6D
                 .          .          .           V
                 .          .          .           V
721              .          .          .       51B6R
                 .          .          .           .
                 .          .          .           .
726              .          .          .           .           .<-------  51B6DV
724              .          .          .           .      51B6DV
                 .          .          .           .           .
                 .          .          .           .           .
729              .          .          .           .           .-------> 51B7DV
727              .          .          .           .       51B7D
                 .          .          .           .           V
                 .          .          .           .           V
732              .          .          .           .      51B7R1
                 .          .          .           .           .
                 .          .          .           .           .
735              .          .      51B7C.......................
                 .          .          V
                 .          .          V
738              .          .     51B7R2
                 .          .          .
                 .          .          .
741              .          .          .        52B6
                 .          .          .           .
                 .          .          .           .
747              .          .      52B6C............
                 .          .          V
                 .          .          V
750              .          .      52B6R
                 .          .          .
                 .          .          .
753              .          .          .        52B7
                 .          .          .           .
                 .          .          .           .
759              .          .     52B7C1............
                 .          .          .
                 .          .          .
762              .     52B7C2............
                 .          .
                 .          .
765              .          .       52A2
                 .          .          .
                 .          .          .
771              .     52A2C2............
                 .          .
                 .          .
776              .          .          .<-------  51B7DV
774              .          .     51B7DV
                 .          .          V
                 .          .          V
777              .          .      51B8R
                 .          .          .
                 .          .          .
780              .          .          .        52A1
                 .          .          .           .
                 .          .          .           .
786              .          .     52A1C............
                 .          .          .
                 .          .          .
791              .          .          .           .<-------  B51.1T
```

```
789          .           .           .       D51.1
             .           .           .           .
             .           .           .           .
792          .           .       C52A............
             .           .           .
             .           .           .
796          .         C52............
             .           V
             .           V
800          .         R52
             .           .
             .           .
808          .           .------->    B52T
806          .        D52T
             .           .
             .           .
811      CLEAR............
             .
             .
814          .         37A
             .           .
             .           .
831          .           .------->    37AW
820          .       37AE
             .           V
             .           V
834          .      37AE1
             .           .
             .           .
841          .           .      SUB5N
             .           .           .
             .           .           .
848          .       CP5N............
             .           V
             .           V
851          .      RET5N
             .           V
             .           V
858          .      R6N.1
             .           .
             .           .
866          .           .      SUB6B
             .           .          V
             .           .          V
872          .           .       SR6B
             .           .           .
             .           .           .
878          .      CP6.1............
             .           .
             .           .
881          .           .      SUB1N
             .           .          V
             .           .          V
887          .           .       R2NA
             .           .           .
             .           .           .
893          .           .           .     SUB2NA
             .           .           .           .
             .           .           .           .
899          .           .      CP2NA............
             .           .          V
             .           .          V
902          .           .      SR2NA
             .           .          V
             .           .          V
908          .           .       R2NB
             .           .           .
             .           .           .
914          .           .           .     SUB2NB
             .           .           .           .
             .           .           .           .
920          .           .      CP2NB............
             .           .          V
             .           .          V
923          .           .      SR2NB
             .           .          V
             .           .          V
929          .           .      RCP4N
             .           .           .
             .           .           .
935          .           .           .      SUB6N
             .           .           .          V
             .           .           .          V
941          .           .           .      RET6N
             .           .           .          V
             .           .           .          V
947          .           .           .     RCP4N1
             .           .           .           .
             .           .           .           .
953          .           .     CP4N.1............
             .           .           .
             .           .           .
956          .           .           .      SUB3N
```

```
                 .          .          .          V
                 .          .          .          V
 962             .          .          .       RET3N
                 .          .          .          V
                 .          .          .          V
 969             .          .          .        R4N
                 .          .          .          .
                 .          .          .          .
 975             .          .     CP4N.2...........
                 .          .          .
                 .          .          .
 978             .          .          .      SUB4N
                 .          .          .          .
                 .          .          .          .
 984             .          .       CP4N...........
                 .          .          V
                 .          .          V
 987             .          .        R6N
                 .          .          .
                 .          .          .
 993             .          .          .      SUB6A
                 .          .          .          .
                 .          .          .          .
 999             .          .     CP6.2...........
                 .          .          .
                 .          .          .
1002             .       CP6N...........
                 .          V
                 .          V
1005             .      RCP6N
                 .          .
                 .          .
1011             .          .     SUB3C
                 .          .          .
                 .          .          .
1017             .       CP3C...........
                 .          V
                 .          V
1020             .        R3C
                 .          .
                 .          .
1028             .          .     GC1018
                 .          .          .
                 .          .          .
1034             .          .          .      GC1-9
                 .          .          .          .
                 .          .          .          .
1040             .          .          .          .      SUB3S
                 .          .          .          .          .
                 .          .          .          .          .
1046             .       CP3S.................................
                 .          V
                 .          V
1049             .       RT3S
                 .          .
                 .          .
1055             .          .     SUB4S
                 .          .          V
                 .          .          V
1061             .          .      RT4S
                 .          .          .
                 .          .          .
1067             .          .          .      GC2-8
                 .          .          .          .
                 .          .          .          .
1073             .    1PGC28........................
                 .          .
                 .          .
1076             .          .     SUB3D3
                 .          .          .
                 .          .          .
1082             .    CPGC28............
                 .          V
                 .          V
1085             .    SRGC28
                 .          V
                 .          V
1091             .       RT7S
                 .          .
                 .          .
1097             .          .       GC7
                 .          .          .
                 .          .          .
1103             .       CP7S...........
                 .          .
                 .          .
1111             .          .-------->    B7ST
1106             .       D7ST
                 .          .
                 .          .
1114        CLEAR............
                 .
                 .
```

```
1117          .      SUB3D1
              .          V
              .          V
1122          .       RD1B1
              .          .
              .          .
1128          .          .      SUB3B1
              .          .          .
              .          .          .
1133          .       CP3B1............
              .          V
              .          V
1136          .       RB13F
              .          .
              .          .
1142          .          .       SUB3F
              .          .          .
              .          .          .
1148          .        CP3F............
              .          .
              .          .
1151          .          .      SUB3B2
              .          .          V
              .          .          V
1156          .          .       RB2E1
              .          .          V
              .          .          V
1162          .          .       RB2E2
              .          .          .
              .          .          .
1168          .          .          .      SUB3E1
              .          .          .          .
              .          .          .          .
1173          .          .      1CPE31............
              .          .          .
              .          .          .
1176          .          .          .      SUB3D2
              .          .          .          V
              .          .          .          V
1181          .          .          .       RD2E2
              .          .          .          .
              .          .          .          .
1187          .          .          .          .      SUB3E2
              .          .          .          .          .
              .          .          .          .          .
1192          .          .          .       CP3E2............
              .          .          .          .
              .          .          .          .
1195          .          .          .          .         PC3
              .          .          .          .          .
              .          .          .          .          .
1204          .        CPC3.................................
              .          .
              .          .
1216          .          .-------> BPC3T
1211          .       DPC3T
              .          .
              .          .
1219          .          .      SUB3E3
              .          .          .
              .          .          .
1224          .          .          .         PC4
              .          .          .          .
              .          .          .          .
1238          .          .          .          .          .<-------    B7ST
1233          .          .          .          .         D7S
              .          .          .          .          .
              .          .          .          .          .
1239          .          .        CPC4......................
              .          .          .
              .          .          .
1250          .          .          .-------> BPC4T
1245          .          .       DPC4T
              .          .          .
              .          .          .
1253       CLEAR......................
              .
              .
1259          .          .<-------    37AW
1256          .        37AW
              .          V
              .          V
1260          .        R14R
              .          V
              .          V
1267          .      RET141
              .          V
              .          V
1274          .       R14.1
              .          .
              .          .
1281          .          .      SUB13N
              .          .          V
```

```
                    .         .         V
1287                .         .     R14.1
                    .         .         .
                    .         .         .
1293                .         .         .     SUB14N
                    .         .         .         .
                    .         .         .         .
1299                .      CP14.......................
                    .         V
                    .         V
1302                .     RET14
                    .         V
                    .         V
1309                .     R18.1
                    .         .
                    .         .
1315                .         .     SUB20N
                    .         .         V
                    .         .         V
1321                .         .       R19
                    .         .         .
                    .         .         .
1327                .         .         .     SUB19N
                    .         .         .         .
                    .         .         .         .
1333                .         .     CP19N............
                    .         .         V
                    .         .         V
1336                .         .     R18NC
                    .         .         .
                    .         .         .
1342                .         .         .     UB18NC
                    .         .         .         .
                    .         .         .         .
1348                .    CP18NC.......................
                    .         V
                    .         V
1351                .      RPC1
                    .         .
                    .         .
1357                .         .     UB18NA
                    .         .         V
                    .         .         V
1363                .         .     1RPC1
                    .         .         .
                    .         .         .
1369                .         .         .     UB18NB
                    .         .         .         V
                    .         .         .         V
1375                .         .         .     2RPC1
                    .         .         .         .
                    .         .         .         .
1381                .         .         .         .         PC1
                    .         .         .         .           .
                    .         .         .         .           .
1387                .         .     1CPC1........................
                    .         .         V
                    .         .         V
1390                .         .     SRPC1
                    .         .         .
                    .         .         .
1396                .      CPC1............
                    .         V
                    .         V
1399                .    R16NA1
                    .         .
                    .         .
1405                .         .     UB16NA
                    .         .         V
                    .         .         V
1411                .         .     R16NA1
                    .         .         .
                    .         .         .
1417                .    C16NA1............
                    .         V
                    .         V
1420                .    R16NB1
                    .         .
                    .         .
1426                .         .     UB16NB
                    .         .         V
                    .         .         V
1432                .         .     R16NB1
                    .         .         .
                    .         .         .
1438                .    C16NB1............
                    .         V
                    .         V
1441                .    R16NC1
                    .         .
                    .         .
1447                .         .      SUB7N
                    .         .         V
```

```
                 .         .         V
1453             .         .      R8NC
                 .         .         .
                 .         .         .
1459             .         .         .     SUB8NA
                 .         .         .         V
                 .         .         .         V
1465             .         .         .      SR8NA
                 .         .         .         V
                 .         .         .         V
1471             .         .         .       R8NB
                 .         .         .         .
                 .         .         .         .
1477             .         .         .         .      SUB8NB
                 .         .         .         .          .
                 .         .         .         .          .
1483             .         .         .      CP8NB............
                 .         .         .         V
                 .         .         .         V
1486             .         .         .      SR8NB
                 .         .         .         V
                 .         .         .         V
1492             .         .         .       R8NC
                 .         .         .         .
                 .         .         .         .
1498             .         .         .         .      SUB8NC
                 .         .         .         .          .
                 .         .         .         .          .
1504             .         .      CP8NC........................
                 .         .         V
                 .         .         V
1507             .         .      SR8NC
                 .         .         V
                 .         .         V
1513             .         .       R9N
                 .         .         .
                 .         .         .
1519             .         .         .      SUB9N
                 .         .         .         .
                 .         .         .         .
1525             .         .      CP9N............
                 .         .         V
                 .         .         V
1528             .         .      R10B
                 .         .         .
                 .         .         .
1534             .         .         .     SUB10B
                 .         .         .         .
                 .         .         .         .
1541             .         .     CP10B............
                 .         .         V
                 .         .         V
1544             .         .     R11NA
                 .         .         .
                 .         .         .
1550             .         .         .     UB11NA
                 .         .         .         .
                 .         .         .         .
1556             .         .    CP11NA............
                 .         .         V
                 .         .         V
1559             .         .    SR11NA
                 .         .         V
                 .         .         V
1565             .         .     R11NB
                 .         .         .
                 .         .         .
1571             .         .         .     UB11NB
                 .         .         .         .
                 .         .         .         .
1577             .         .    CP11NB............
                 .         .         V
                 .         .         V
1580             .         .    SR11NB
                 .         .         V
                 .         .         V
1586             .         .     R11NC
                 .         .         .
                 .         .         .
1592             .         .         .     UB11NC
                 .         .         .         .
                 .         .         .         .
1598             .         .    C11NC1............
                 .         .         .
                 .         .         .
1601             .         .         .     SUB10A
                 .         .         .         V
                 .         .         .         V
1608             .         .         .      R12NB
                 .         .         .         .
                 .         .         .         .
1614             .         .         .         .      UB12NA
                 .         .         .         .          V
```

```
                                                  V
1620                                          SR12NA
                                                  V
                                                  V
1626                                           R12NA
                                                  .
                                                  .
1632                                                .     UB12NB
                                                  .          .
                                                  .          .
1638                                     CP12NB.......................
                                                V
                                                V
1641                                     SR12NB
                                                V
                                                V
1647                                     R11NC2
                                                .
                                                .
1653                                CP11NC............
                                         V
                                         V
1656                                SR11NC
                                         V
                                         V
1663                                 R16NC
                                         .
                                         .
1669                                     .      UB16NC
                                         .          .
                                         .          .
1675                                CP16NC............
                                         V
                                         V
1678                                R16NC1
                                         .
                                         .
1684                           C16NC1............
                                    V
                                    V
1687                            R15N1
                                    .
                                    .
1693                                   PC2
                                         .
                                         .
1699                           CP15N1............
                                    V
                                    V
1702                            SRPC2
                                    .
                                    .
1709                                UB17NA
                                         V
                                         V
1715                                SR17NA
                                         V
                                         V
1721                                 R17NB
                                         .
                                         .
1727                                     .      UB17NB
                                         .          .
                                         .          .
1733                                CP17NB............
                                         V
                                         V
1736                                SR17NB
                                         V
                                         V
1742                                  R17A
                                         .
                                         .
1748                                     .      SUB17A
                                         .          .
                                         .          .
1754                                CP17A1............
                                         .
                                         .
1757                                     .      UB17NC
                                         .          .
                                         .          .
1763                                 CP17A............
                                         V
                                         V
1766                                  R15N
                                         .
                                         .
1772                                     .      SUB15N
                                         .          .
                                         .          .
1779                                 CP15N............
                                         V
```

```
                 .          .          V
1782             .          .      R15N2
                 .          .          .
                 .          .          .
1788             .     CP15N2...........
                 .          V
                 .          V
1792             .      R15N2
                 .          .
                 .          .
1806             .          .          .<-------   BPC3T
1801             .          .       DPC3
                 .          .          .
                 .          .          .
1807             .      CPC3A...........
                 .          V
                 .          V
1813             .      RPC3A
                 .          .
                 .          .
1827             .          .          .<-------   BPC4T
1822             .          .       DPC4
                 .          .          .
                 .          .          .
1828             .      CPC4A...........
                 .          V
                 .          V
1834             .      RPC4A
                 .          .
                 .          .
1848             .          .-------> BPC4AT
1843             .     DPC4AT
                 .          .
                 .          .
1851             .          .     SUB1-2
                 .          .          .
                 .          .          .
1857             .          .          .     GCRB18
                 .          .          .          .
                 .          .          .          .
1864             .          .     CPRET1...........
                 .          .          V
                 .          .          V
1867             .          .      SR18S
                 .          .          .
                 .          .          .
1873             .          .          .      SUB5S
                 .          .          .          .
                 .          .          .          .
1879             .          .          .          .      GC1216
                 .          .          .          .          .
                 .          .          .          .          .
1885             .          .          .          .          .      GC1415
                 .          .          .          .          .          .
                 .          .          .          .          .          .
1891             .          .          .          .          .          .      SUB6S
                 .          .          .          .          .          .          .
                 .          .          .          .          .          .          .
1897             .          .          .          .          .          .          .      SUB7S
                 .          .          .          .          .          .          .          .
                 .          .          .          .          .          .          .          .
1903             .          .          .     CPRET2.......................................
                 .          .          .          V
                 .          .          .          V
1906             .          .          .     SRRET2
                 .          .          .          .
                 .          .          .          .
1912        CLEAR.................................
                 .
                 .
1917             .      SUB8S
                 .          V
                 .          V
1923             .      RGC36
                 .          .
                 .          .
1929             .          .       GC36
                 .          .          .
                 .          .          .
1935             .     C1GC36...........
                 .          .
                 .          .
1938             .          .      SUB9S
                 .          .          V
                 .          .          V
1944             .          .       R9S
                 .          .          .
                 .          .          .
1950             .     CPGC36...........
                 .          V
                 .          V
1953             .     SRGC36
                 .          .
```

```
1959          .          .      SUB7A
              .          .         V
              .          .         V
1965          .          .      SR7A
              .          .         V
              .          .         V
1971          .          .      R10S
              .          .         .
              .          .         .
1977          .          .         .     SUB10S
              .          .         .        .
              .          .         .        .
1983          .          .      CP10S............
              .          .         .
              .          .         .
1986          .          .         .     SUB11S
              .          .         .          V
              .          .         .          V
1992          .          .         .       R11S
              .          .         .          .
              .          .         .          .
2001          .          .      C10SA............
              .          .         V
              .          .         V
2006          .          .      R10SA
              .          .         .
              .          .         .
2015          .          .         .       GC45
              .          .         .          .
              .          .         .          .
2021          .          .         .          .        PC5
              .          .         .          .         .
              .          .         .          .         .
2035          .          .         .          .         .          .-------  BPC4AT
2030          .          .         .          .         .     DPC4A
              .          .         .          .         .         .
              .          .         .          .         .         .
2036          .       CPC5.............................................
              .          V
              .          V
2043          .       RC5
              .          .
              .          .
2049          .          .      SCN5C
              .          .         .
              .          .         .
2056          .          .         .     SCN6D
              .          .         .        .
              .          .         .        .
2065          .          .         .        .      SCN6C
              .          .         .        .         .
              .          .         .        .         .
2077          .          .         .        .         .          .-------    B52T
2075          .          .         .        .         .      D52
              .          .         .        .         .         .
              .          .         .        .         .         .
2078          .          .         .        .         .         .       S53A
              .          .         .        .         .         .          .
              .          .         .        .         .         .          .
2085          .          .         .        .         .      C53............
              .          .         .        .         .         .
              .          .         .        .         .         .
2088          .          .         .        .         .         .      S53A1
              .          .         .        .         .         .          .
              .          .         .        .         .         .          .
2096          .          .         .        .         .     C53A1............
              .          .         .        .         .         .
              .          .         .        .         .         .
2099          .          .         .        .         .         .      SCN6B
              .          .         .        .         .         .          .
              .          .         .        .         .         .          .
2109          .          .         .        .         .     C53A............
              .          .         .        .         .         .
              .          .         .        .         .         .
2112          .          .         .        .         .         .      SCN6E
              .          .         .        .         .         .          .
              .          .         .        .         .         .          .
2118          .     UHDB-I.......................................................
              .          V
              .          V
2122          .     UHDB-O
              .          .
              .          .
2134          .          .       S54
              .          .         .
              .          .         .
2140          .          .         .     SCN6A
              .          .         .        .
              .          .         .        .
2147          .          .      CN6A............
              .          .         .
              .          .         .
```

```
 2150          .          C1A...........

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*************************************                                    *************************************
*                                   *                                    *                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*                                    *   U.S. ARMY CORPS OF ENGINEERS    *
*             MAY   1991            *                                    *   HYDROLOGIC ENGINEERING CENTER   *
*          VERSION 4.0.1E           *                                    *         609 SECOND STREET         *
*     Lahey F77L-EM/32 version 5.01 *                                    *      DAVIS, CALIFORNIA 95616      *
*       Dodson & Associates, Inc.   *                                    *          (916) 551-1748           *
*  RUN DATE  11/26/97  TIME  09:49:15 *                                  *                                   *
*************************************                                    *************************************
```

PIMA ROAD THREE BASINS File: ULTMT-6.IH1
by Stantech for the City of Scottsdale Original: 08-07-97 mcg
Project: 28900051

100-YEAR, 6-HOUR STORM
10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
10% LEVEL DESIGN FOR DEER VALLEY DETENTION BASIN ALTERNATIVE 3
10% LEVEL DESIGN FOR UNION HILLS DETENTION BASIN ALTERNATIVE 1B

ULTIMATE CONDITION --- POWER LINE CHANNEL:
GRAYHAWK RUNOFF RELEASED TO NATURAL WASHES ARE COLLECTED IN THE "POWER LINE CHANNEL" AND ROUTED TO THE UNION HILLS DETENTION BASIN. THE ULTIMATE LOCATION AND GEOMETRY OF THE POWER LINE CHANNEL WILL BE DETERMINED BY OTHERS.

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

    IT          HYDROGRAPH TIME DATA
                       NMIN          5  MINUTES IN COMPUTATION INTERVAL
                      IDATE      1   0  STARTING DATE
                      ITIME       0000  STARTING TIME
                         NQ        720  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE      3   0  ENDING DATE
                     NDTIME       1155  ENDING TIME
                      ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL    0.08 HOURS
                      TOTAL TIME BASE   59.92 HOURS

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

 19 JD          INDEX STORM NO. 1
                       STRM       0.00  PRECIPITATION DEPTH
                       TRDA       0.01  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN


 20 JD          INDEX STORM NO. 2
                       STRM       0.00  PRECIPITATION DEPTH
                       TRDA       0.10  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN


 21 JD          INDEX STORM NO. 3
                       STRM       0.00  PRECIPITATION DEPTH
                       TRDA       0.50  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN


 22 JD          INDEX STORM NO. 4
                       STRM       0.00  PRECIPITATION DEPTH
                       TRDA       1.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN


 23 JD          INDEX STORM NO. 5
                       STRM       0.00  PRECIPITATION DEPTH
                       TRDA       5.00  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN
```

```
24 JD          INDEX STORM NO. 6
                     STRM        0.00  PRECIPITATION DEPTH
                     TRDA       25.00  TRANSPOSITION DRAINAGE AREA

 0 PI            PRECIPITATION PATTERN


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

      *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

      *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

      *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

      *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

      *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

      *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


      *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1
```

```
*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1
```

```
*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1
```

```
*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1
```

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

```
*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

1
                                    RUNOFF SUMMARY
                              FLOW IN CUBIC FEET PER SECOND
                            TIME IN HOURS,  AREA IN SQUARE MILES

                                    PEAK   TIME OF    AVERAGE FLOW FOR MAXIMUM PERIOD      BASIN    MAXIMUM    TIME OF
          OPERATION        STATION  FLOW    PEAK                                          AREA     STAGE    MAX STAGE
+                                                      6-HOUR     24-HOUR     72-HOUR

          HYDROGRAPH AT
+                           S30N    1227.   3.33        128.        32.         13.       0.65
          ROUTED TO
+                           R30N    1126.   3.42        128.        32.         13.       0.65
          HYDROGRAPH AT
```

+	S31.1	395.	3.33	43.	11.	4.	0.27
2 COMBINED AT +	C31.1	1508.	3.33	171.	43.	17.	0.92
HYDROGRAPH AT +	S34.2	691.	3.33	73.	18.	7.	0.44
2 COMBINED AT +	C34.2	2177.	3.33	243.	61.	25.	1.36
HYDROGRAPH AT +	S35N	1298.	3.25	108.	27.	11.	0.55
DIVERSION TO +	D35NL	567.	3.25	47.	12.	5.	0.55
HYDROGRAPH AT +	D35NR	731.	3.25	60.	15.	6.	0.55
ROUTED TO +	R35NR	586.	3.33	60.	15.	6.	0.55
HYDROGRAPH AT +	S36.2	400.	3.25	34.	9.	3.	0.21
2 COMBINED AT +	C36.2	906.	3.25	94.	24.	10.	0.54
DIVERSION TO +	D36.2L	231.	3.25	9.	2.	1.	0.54
HYDROGRAPH AT +	D36.2R	675.	3.25	85.	21.	9.	0.54
ROUTED TO +	R36.2R	482.	3.67	85.	21.	9.	0.54
HYDROGRAPH AT +	S34.1	1831.	3.33	190.	48.	19.	1.16
2 COMBINED AT +	C34.1	1896.	3.33	273.	69.	28.	1.54
2 COMBINED AT +	HVDB-I	4015.	3.33	512.	130.	52.	2.90
ROUTED TO +	HVDB-O	142.	6.50	139.	119.	52.	2.90
ROUTED TO +	R34.1	142.	6.58	139.	119.	52.	2.90
HYDROGRAPH AT +	S36.1	159.	3.42	19.	5.	2.	0.14
2 COMBINED AT +	C36.1	250.	3.42	154.	123.	54.	3.04
ROUTED TO +	R36.1	249.	3.50	154.	123.	54.	3.04
HYDROGRAPH AT +	B35NL	567.	3.25	47.	12.	5.	0.55
ROUTED TO +	R35NL	351.	3.58	47.	12.	5.	0.55
HYDROGRAPH AT +	B36.2L	231.	3.25	9.	2.	1.	0.54
ROUTED TO +	R36.2L	103.	3.58	9.	2.	1.	0.54
HYDROGRAPH AT +	S36R1A	652.	3.50	89.	23.	9.	0.63
4 COMBINED AT +	C36R1A	1236.	3.50	295.	159.	68.	4.05
HYDROGRAPH AT +	S36R1B	649.	3.42	83.	21.	8.	0.59
2 COMBINED AT +	C36R1B	1811.	3.50	375.	179.	76.	4.64
HYDROGRAPH AT +	S36R2A	280.	3.17	21.	5.	2.	0.13
2 COMBINED AT +	C36R2A	1869.	3.50	392.	184.	78.	4.77
ROUTED TO							

```
+                    R36R2A    1869.   3.58      392.      184.      78.     4.77
        HYDROGRAPH AT
+                    S36R2B     264.   3.42       33.        8.       3.     0.24
        2 COMBINED AT
+                    C36R2B    2025.   3.58      424.      192.      82.     5.01
        HYDROGRAPH AT
+                     S51.1    1058.   3.50      162.       41.      16.     1.13
        2 COMBINED AT
+                    DVDB-I    2973.   3.58      578.      230.      97.     6.14
        ROUTED TO
+                    DVDB-O     261.   6.75      259.      220.      97.     6.14
        DIVERSION TO
+                    B51.1T     261.   6.75      259.      220.      97.     6.14
        HYDROGRAPH AT
+                    D51.1T       0.   0.08        0.        0.       0.     6.14
        HYDROGRAPH AT
+                     52D4     116.   3.25       11.        3.       1.     0.07
        ROUTED TO
+                    52D4R     106.   3.25       11.        3.       1.     0.07
        HYDROGRAPH AT
+                    52D4B      70.   3.17        6.        1.       1.     0.02
        2 COMBINED AT
+                   52D5C1     161.   3.25       17.        4.       2.     0.09
        HYDROGRAPH AT
+                    52D5A      79.   3.17        6.        2.       1.     0.02
        ROUTED TO
+                   52D5AR      75.   3.17        6.        2.       1.     0.02
        2 COMBINED AT
+                   52D5C2     217.   3.25       23.        6.       2.     0.12
        ROUTED TO
+                    52D5R     216.   3.25       23.        6.       2.     0.12
        HYDROGRAPH AT
+                     52C3      24.   3.08        2.        0.       0.     0.01
        ROUTED TO
+                    52C3R      23.   3.17        2.        0.       0.     0.01
        HYDROGRAPH AT
+                    52C3B      53.   3.08        4.        1.       0.     0.02
        2 COMBINED AT
+                   2C3BC1      74.   3.17        6.        1.       1.     0.02
        2 COMBINED AT
+                   2C3BC2     270.   3.17       29.        7.       3.     0.14
        ROUTED TO
+                   52C3BR     261.   3.25       29.        7.       3.     0.14
        HYDROGRAPH AT
+                      51C     166.   3.17       15.        4.       1.     0.10
        DIVERSION TO
+                   51C1DV     111.   3.17       10.        3.       1.     0.10
        HYDROGRAPH AT
+                    51C1D      55.   3.17        5.        1.       0.     0.10
        ROUTED TO
+                    51C1R      53.   3.25        5.        1.       0.     0.10
        HYDROGRAPH AT
+                     52C1      69.   3.17        5.        1.       0.     0.03
        2 COMBINED AT
+                    52C1C     106.   3.17       10.        2.       1.     0.06
        ROUTED TO
+                    52C1R     101.   3.25       10.        2.       1.     0.06
        HYDROGRAPH AT
+                    52C2A      35.   3.17        2.        1.       0.     0.02
        2 COMBINED AT
+                   52C2AC     125.   3.25       12.        3.       1.     0.08
        HYDROGRAPH AT
```

+		52C2B	56.	3.17	4.	1.	0.	0.03
	2 COMBINED AT							
+		52C2BC	170.	3.17	16.	4.	2.	0.11
	ROUTED TO							
+		52C2BR	168.	3.25	16.	4.	2.	0.11
	HYDROGRAPH AT							
+		52C2C	46.	3.08	4.	1.	0.	0.01
	2 COMBINED AT							
+		52C2CC	194.	3.25	20.	5.	2.	0.12
	ROUTED TO							
+		52C2R	180.	3.25	20.	5.	2.	0.12
	HYDROGRAPH AT							
+		52C4	56.	3.17	4.	1.	0.	0.02
	2 COMBINED AT							
+		52C4C1	211.	3.25	24.	6.	2.	0.14
	2 COMBINED AT							
+		52C4C2	472.	3.25	53.	13.	5.	0.28
	ROUTED TO							
+		52C4R	462.	3.25	53.	14.	5.	0.28
	HYDROGRAPH AT							
+		52C13	69.	3.08	5.	1.	0.	0.02
	DIVERSION TO							
+		STORM	40.	3.08	4.	1.	0.	0.02
	HYDROGRAPH AT							
+		2C13DV	29.	3.08	1.	0.	0.	0.02
	HYDROGRAPH AT							
+		52C15	157.	3.08	13.	3.	1.	0.05
	2 COMBINED AT							
+		2C15C1	186.	3.08	13.	3.	1.	0.05
	2 COMBINED AT							
+		2C15C2	546.	3.17	66.	17.	7.	0.32
	ROUTED TO							
+		52C15R	544.	3.25	66.	17.	7.	0.32
	HYDROGRAPH AT							
+		52C14A	142.	3.17	11.	3.	1.	0.04
	2 COMBINED AT							
+		2C14AC	655.	3.17	78.	20.	8.	0.36
	ROUTED TO							
+		2C14AR	637.	3.17	78.	20.	8.	0.36
	HYDROGRAPH AT							
+		51C1DV	111.	3.17	10.	3.	1.	0.10
	DIVERSION TO							
+		51C2DV	30.	3.17	3.	1.	0.	0.10
	HYDROGRAPH AT							
+		51C2D	81.	3.17	7.	2.	1.	0.10
	ROUTED TO							
+		51C2R	78.	3.25	7.	2.	1.	0.10
	HYDROGRAPH AT							
+		52C5	40.	3.17	3.	1.	0.	0.02
	2 COMBINED AT							
+		52C5C	109.	3.17	10.	3.	1.	0.06
	ROUTED TO							
+		52C5R	104.	3.25	10.	3.	1.	0.06
	HYDROGRAPH AT							
+		52C6	82.	3.17	7.	2.	1.	0.04
	2 COMBINED AT							
+		52C6C	173.	3.25	17.	4.	2.	0.10
	ROUTED TO							
+		52C6R	165.	3.25	17.	4.	2.	0.10
	HYDROGRAPH AT							
+		51C2DV	30.	3.17	3.	1.	0.	0.10
	ROUTED TO							

+	51C3R	29.	3.25	3.	1.	0.	0.10
HYDROGRAPH AT							
+	51B	596.	3.42	79.	20.	8.	0.57
DIVERSION TO							
+	51B1DV	549.	3.42	72.	18.	7.	0.57
HYDROGRAPH AT							
+	51B1D	48.	3.42	6.	2.	1.	0.57
ROUTED TO							
+	51B1R	48.	3.42	6.	2.	1.	0.57
HYDROGRAPH AT							
+	52C7	18.	3.08	1.	0.	0.	0.01
3 COMBINED AT							
+	52C7C	76.	3.25	10.	3.	1.	0.07
ROUTED TO							
+	52C7R	75.	3.33	10.	3.	1.	0.07
HYDROGRAPH AT							
+	51B1DV	549.	3.42	72.	18.	7.	0.57
DIVERSION TO							
+	51B2DV	461.	3.42	61.	15.	6.	0.57
HYDROGRAPH AT							
+	51B2D	88.	3.42	12.	3.	1.	0.57
ROUTED TO							
+	51B2R	88.	3.42	12.	3.	1.	0.57
HYDROGRAPH AT							
+	52C8	21.	3.08	1.	0.	0.	0.01
2 COMBINED AT							
+	52C8C	93.	3.42	13.	3.	1.	0.45
ROUTED TO							
+	52C8R	92.	3.42	13.	3.	1.	0.45
2 COMBINED AT							
+	52C9C1	163.	3.42	23.	6.	2.	0.52
ROUTED TO							
+	52C9R1	162.	3.42	23.	6.	2.	0.52
HYDROGRAPH AT							
+	52C9	174.	3.17	14.	3.	1.	0.07
2 COMBINED AT							
+	52C9C2	255.	3.25	37.	9.	4.	0.59
ROUTED TO							
+	52C9R2	254.	3.25	37.	9.	4.	0.59
2 COMBINED AT							
+	2C10C1	418.	3.25	54.	14.	5.	0.69
ROUTED TO							
+	2C10R1	412.	3.25	54.	14.	5.	0.69
HYDROGRAPH AT							
+	52C10	28.	3.17	2.	1.	0.	0.01
2 COMBINED AT							
+	2C10C2	428.	3.25	56.	14.	6.	0.70
HYDROGRAPH AT							
+	52C11	96.	3.17	8.	2.	1.	0.04
ROUTED TO							
+	2C11R1	88.	3.17	8.	2.	1.	0.04
HYDROGRAPH AT							
+	52C13D	40.	3.08	4.	1.	0.	0.02
2 COMBINED AT							
+	52C11C	128.	3.17	12.	3.	1.	0.07
ROUTED TO							
+	2C11CR	120.	3.17	12.	3.	1.	0.07
2 COMBINED AT							
+	2C11C2	541.	3.25	68.	17.	7.	0.77
ROUTED TO							
+	2C11R2	530.	3.25	68.	17.	7.	0.77
HYDROGRAPH AT							

+	52C12	119.	3.08	7.	2.	1.	0.02
2 COMBINED AT							
+	52C12C	567.	3.25	75.	19.	8.	0.79
ROUTED TO							
+	52C12R	549.	3.25	75.	19.	8.	0.79
HYDROGRAPH AT							
+	52C14B	76.	3.08	6.	1.	1.	0.02
2 COMBINED AT							
+	C14BC1	584.	3.25	81.	20.	8.	0.81
2 COMBINED AT							
+	C14BC2	1200.	3.25	158.	40.	16.	1.17
ROUTED TO							
+	52C14R	1194.	3.25	158.	40.	16.	1.17
HYDROGRAPH AT							
+	51B2DV	461.	3.42	61.	15.	6.	0.57
DIVERSION TO							
+	51B3DV	387.	3.42	51.	13.	5.	0.57
HYDROGRAPH AT							
+	51B3D	74.	3.42	10.	2.	1.	0.57
ROUTED TO							
+	51B3R	74.	3.42	10.	2.	1.	0.57
HYDROGRAPH AT							
+	52B1	8.	3.08	1.	0.	0.	0.00
2 COMBINED AT							
+	52B1C	76.	3.42	10.	3.	1.	0.07
ROUTED TO							
+	52B1R	75.	3.42	10.	3.	1.	0.07
HYDROGRAPH AT							
+	51B3DV	387.	3.42	51.	13.	5.	0.57
DIVERSION TO							
+	51B4DV	317.	3.42	42.	11.	4.	0.57
HYDROGRAPH AT							
+	51B4D	70.	3.42	9.	2.	1.	0.57
ROUTED TO							
+	51B4R1	70.	3.42	9.	2.	1.	0.57
2 COMBINED AT							
+	52B2C1	145.	3.42	20.	5.	2.	0.14
ROUTED TO							
+	52B2R1	142.	3.42	20.	5.	2.	0.14
HYDROGRAPH AT							
+	52B2	69.	3.17	5.	1.	1.	0.03
2 COMBINED AT							
+	52B2C2	166.	3.42	25.	6.	3.	0.17
ROUTED TO							
+	52B2R2	164.	3.42	25.	6.	3.	0.17
ROUTED TO							
+	52B3R1	163.	3.42	25.	6.	3.	0.17
HYDROGRAPH AT							
+	52B3	141.	3.17	12.	3.	1.	0.06
2 COMBINED AT							
+	52B3C2	249.	3.25	37.	9.	4.	0.23
ROUTED TO							
+	52B3R2	241.	3.33	37.	9.	4.	0.23
HYDROGRAPH AT							
+	52B4	87.	3.17	7.	2.	1.	0.03
2 COMBINED AT							
+	52B4C	284.	3.25	44.	11.	4.	0.26
ROUTED TO							
+	52B4R	277.	3.25	44.	11.	4.	0.26
HYDROGRAPH AT							
+	52B5	69.	3.08	5.	1.	1.	0.02
2 COMBINED AT							

+	52B5C1	313.	3.25	49.	12.	5.	0.28
2 COMBINED AT +	52B5C2	1496.	3.25	207.	52.	21.	1.45
ROUTED TO +	52B5R	1474.	3.25	207.	53.	21.	1.45
HYDROGRAPH AT +	51B4DV	317.	3.42	42.	11.	4.	0.57
DIVERSION TO +	51B5DV	216.	3.42	28.	7.	3.	0.57
HYDROGRAPH AT +	51B5D	102.	3.42	13.	3.	1.	0.57
ROUTED TO +	51B5R	102.	3.42	13.	3.	1.	0.57
HYDROGRAPH AT +	51B5DV	216.	3.42	28.	7.	3.	0.57
DIVERSION TO +	51B6DV	114.	3.42	15.	4.	2.	0.57
HYDROGRAPH AT +	51B6D	101.	3.42	13.	3.	1.	0.57
ROUTED TO +	51B6R	101.	3.42	13.	3.	1.	0.57
HYDROGRAPH AT +	51B6DV	114.	3.42	15.	4.	2.	0.57
DIVERSION TO +	51B7DV	66.	3.42	9.	2.	1.	0.57
HYDROGRAPH AT +	51B7D	48.	3.42	6.	2.	1.	0.57
ROUTED TO +	51B7R1	48.	3.42	6.	2.	1.	0.57
3 COMBINED AT +	51B7C	252.	3.42	33.	8.	3.	0.24
ROUTED TO +	51B7R2	244.	3.42	33.	8.	3.	0.24
HYDROGRAPH AT +	52B6	190.	3.17	15.	4.	2.	0.10
2 COMBINED AT +	52B6C	313.	3.42	48.	12.	5.	0.34
ROUTED TO +	52B6R	311.	3.42	48.	12.	5.	0.34
HYDROGRAPH AT +	52B7	303.	3.17	24.	6.	2.	0.08
2 COMBINED AT +	52B7C1	411.	3.25	72.	18.	7.	0.42
2 COMBINED AT +	52B7C2	1871.	3.25	278.	71.	28.	1.87
HYDROGRAPH AT +	52A2	263.	3.17	21.	5.	2.	0.06
2 COMBINED AT +	52A2C2	2033.	3.25	299.	76.	30.	1.62
HYDROGRAPH AT +	51B7DV	66.	3.42	9.	2.	1.	0.57
ROUTED TO +	51B8R	66.	3.50	9.	2.	1.	0.57
HYDROGRAPH AT +	52A1	340.	3.17	26.	6.	3.	0.13
2 COMBINED AT +	52A1C	344.	3.17	34.	9.	3.	0.13
HYDROGRAPH AT +	D51.1	261.	6.75	259.	220.	97.	6.14
2 COMBINED AT +	C52A	411.	3.17	275.	227.	100.	6.27
2 COMBINED AT							

+	C52	2251.	3.25	546.	295.	129.	7.92
ROUTED TO +	R52	2168.	3.33	545.	295.	129.	7.92
DIVERSION TO +	B52T	2168.	3.33	545.	295.	129.	7.92
HYDROGRAPH AT +	D52T	0.	0.08	0.	0.	0.	7.92
2 COMBINED AT +	CLEAR	0.	0.08	0.	0.	0.	14.06
HYDROGRAPH AT +	37A	1164.	3.25	119.	30.	12.	0.68
DIVERSION TO +	37AW	815.	3.25	83.	21.	8.	0.68
HYDROGRAPH AT +	37AE	349.	3.25	36.	9.	4.	0.68
ROUTED TO +	37AE1	342.	3.25	36.	9.	4.	0.68
HYDROGRAPH AT +	SUB5N	70.	3.17	5.	1.	1.	0.03
2 COMBINED AT +	CP5N	394.	3.25	41.	10.	4.	0.23
ROUTED TO +	RET5N	357.	3.33	40.	10.	4.	0.23
ROUTED TO +	R6N.1	294.	3.42	40.	10.	4.	0.23
HYDROGRAPH AT +	SUB6B	74.	3.17	5.	1.	1.	0.03
ROUTED TO +	SR6B	43.	3.25	5.	1.	1.	0.03
2 COMBINED AT +	CP6.1	326.	3.42	45.	12.	5.	0.26
HYDROGRAPH AT +	SUB1N	47.	3.17	3.	1.	0.	0.02
ROUTED TO +	R2NA	46.	3.17	3.	1.	0.	0.02
HYDROGRAPH AT +	SUB2NA	34.	3.17	2.	1.	0.	0.01
2 COMBINED AT +	CP2NA	80.	3.17	6.	1.	1.	0.03
ROUTED TO +	SR2NA	70.	3.25	4.	1.	0.	0.03
ROUTED TO +	R2NB	59.	3.33	4.	1.	0.	0.03
HYDROGRAPH AT +	SUB2NB	96.	3.17	8.	2.	1.	0.03
2 COMBINED AT +	CP2NB	99.	3.33	12.	3.	1.	0.06
ROUTED TO +	SR2NB	25.	3.75	11.	3.	1.	0.06
ROUTED TO +	RCP4N	24.	3.75	11.	3.	1.	0.06
HYDROGRAPH AT +	SUB6N	114.	3.17	8.	2.	1.	0.05
ROUTED TO +	RET6N	0.	0.08	0.	0.	0.	0.05
ROUTED TO +	RCP4N1	0.	0.08	0.	0.	0.	0.05
2 COMBINED AT +	CP4N.1	24.	3.75	11.	3.	1.	0.11
HYDROGRAPH AT +	SUB3N	67.	3.17	4.	1.	0.	0.03
ROUTED TO							

+	RET3N	4.	4.17	3.	1.	0.	0.03
ROUTED TO							
+	R4N	4.	4.25	3.	1.	0.	0.03
2 COMBINED AT							
+	CP4N.2	27.	3.75	14.	4.	2.	0.14
HYDROGRAPH AT							
+	SUB4N	80.	3.17	6.	1.	1.	0.03
2 COMBINED AT							
+	CP4N	89.	3.17	19.	6.	2.	0.17
ROUTED TO							
+	R6N	82.	3.17	19.	6.	2.	0.17
HYDROGRAPH AT							
+	SUB6A	64.	3.08	4.	1.	0.	0.01
2 COMBINED AT							
+	CP6.2	121.	3.17	23.	7.	3.	0.18
2 COMBINED AT							
+	CP6N	376.	3.42	68.	18.	7.	0.45
ROUTED TO							
+	RCP6N	373.	3.42	68.	18.	7.	0.45
HYDROGRAPH AT							
+	SUB3C	55.	3.08	3.	1.	0.	0.01
2 COMBINED AT							
+	CP3C	380.	3.42	70.	19.	8.	0.46
ROUTED TO							
+	R3C	361.	3.50	70.	19.	8.	0.46
HYDROGRAPH AT							
+	GC1018	101.	3.17	7.	2.	1.	0.04
HYDROGRAPH AT							
+	GC1-9	58.	3.17	4.	1.	0.	0.03
HYDROGRAPH AT							
+	SUB3S	33.	3.17	3.	1.	0.	0.01
4 COMBINED AT							
+	CP3S	411.	3.50	84.	22.	9.	0.54
ROUTED TO							
+	RT3S	409.	3.50	84.	22.	9.	0.54
HYDROGRAPH AT							
+	SUB4S	87.	3.17	7.	2.	1.	0.03
ROUTED TO							
+	RT4S	87.	3.17	7.	2.	1.	0.03
HYDROGRAPH AT							
+	GC2-8	32.	3.17	2.	1.	0.	0.01
3 COMBINED AT							
+	1PGC28	437.	3.50	93.	25.	10.	0.58
HYDROGRAPH AT							
+	SUB3D3	35.	3.17	2.	1.	0.	0.01
2 COMBINED AT							
+	CPGC28	444.	3.50	95.	25.	10.	0.59
ROUTED TO							
+	SRGC28	443.	3.25	95.	25.	10.	0.59
ROUTED TO							
+	RT7S	431.	3.58	95.	25.	10.	0.59
HYDROGRAPH AT							
+	GC7	31.	3.17	2.	1.	0.	0.01
2 COMBINED AT							
+	CP7S	437.	3.58	97.	26.	10.	0.61
DIVERSION TO							
+	B7ST	437.	3.58	97.	26.	10.	0.61
HYDROGRAPH AT							
+	D7ST	0.	0.08	0.	0.	0.	0.61
2 COMBINED AT							
+	CLEAR	0.	0.08	0.	0.	0.	14.67
HYDROGRAPH AT							

+	SUB3D1	27.	3.08	2.	0.	0.	0.01
ROUTED TO +	RD1B1	22.	3.17	2.	0.	0.	0.01
HYDROGRAPH AT +	SUB3B1	47.	3.08	3.	1.	0.	0.01
2 COMBINED AT +	CP3B1	61.	3.08	5.	1.	1.	0.02
ROUTED TO +	RB13F	48.	3.25	5.	1.	1.	0.02
HYDROGRAPH AT +	SUB3F	141.	3.08	10.	2.	1.	0.03
2 COMBINED AT +	CP3F	169.	3.08	15.	4.	2.	0.06
HYDROGRAPH AT +	SUB3B2	67.	3.17	6.	1.	1.	0.02
ROUTED TO +	RB2E1	64.	3.17	6.	1.	1.	0.02
ROUTED TO +	RB2E2	61.	3.25	6.	1.	1.	0.02
HYDROGRAPH AT +	SUB3E1	67.	3.17	6.	1.	1.	0.02
2 COMBINED AT +	1CPE31	125.	3.17	11.	3.	1.	0.05
HYDROGRAPH AT +	SUB3D2	58.	3.17	5.	1.	0.	0.02
ROUTED TO +	RD2E2	56.	3.17	5.	1.	0.	0.02
HYDROGRAPH AT +	SUB3E2	37.	3.08	3.	1.	0.	0.01
2 COMBINED AT +	CP3E2	86.	3.17	7.	2.	1.	0.03
HYDROGRAPH AT +	PC3	59.	3.33	7.	2.	1.	0.04
4 COMBINED AT +	CPC3	400.	3.17	40.	10.	4.	0.18
DIVERSION TO +	BPC3T	400.	3.17	40.	10.	4.	0.18
HYDROGRAPH AT +	DPC3T	0.	0.08	0.	0.	0.	0.18
HYDROGRAPH AT +	SUB3E3	60.	3.08	4.	1.	0.	0.02
HYDROGRAPH AT +	PC4	25.	3.33	3.	1.	0.	0.02
HYDROGRAPH AT +	D7S	437.	3.58	97.	26.	10.	0.61
3 COMBINED AT +	CPC4	476.	3.33	104.	28.	11.	0.65
DIVERSION TO +	BPC4T	476.	3.33	104.	28.	11.	0.65
HYDROGRAPH AT +	DPC4T	0.	0.08	0.	0.	0.	0.65
3 COMBINED AT +	CLEAR	0.	0.08	0.	0.	0.	15.50
HYDROGRAPH AT +	37AW	815.	3.25	83.	21.	8.	0.68
ROUTED TO +	R14R	659.	3.33	83.	21.	8.	0.68
ROUTED TO +	RET141	631.	3.42	78.	21.	8.	0.68
ROUTED TO +	R14.1	558.	3.50	78.	21.	8.	0.68
HYDROGRAPH AT							

```
+                    SUB13N     81.   3.17      7.      2.      1.    0.04
        ROUTED TO
+                     R14.1     78.   3.25      7.      2.      1.    0.04
        HYDROGRAPH AT
+                    SUB14N     88.   3.25      8.      2.      1.    0.05
        3 COMBINED AT
+                      CP14    625.   3.50     92.     25.     10.    0.56
        ROUTED TO
+                     RET14    574.   3.58     88.     25.     10.    0.56
        ROUTED TO
+                     R18.1    570.   3.58     88.     25.     10.    0.56
        HYDROGRAPH AT
+                    SUB20N     47.   3.17      4.      1.      0.    0.02
        ROUTED TO
+                       R19     48.   3.25      4.      1.      0.    0.02
        HYDROGRAPH AT
+                    SUB19N     94.   3.17      8.      2.      1.    0.04
        2 COMBINED AT
+                     CP19N    133.   3.17     12.      3.      1.    0.06
        ROUTED TO
+                     R18NC    132.   3.25     12.      3.      1.    0.06
        HYDROGRAPH AT
+                    UB18NC     62.   3.17      5.      1.      0.    0.02
        3 COMBINED AT
+                    CP18NC    619.   3.58    103.     29.     12.    0.64
        ROUTED TO
+                      RPC1    628.   3.58    103.     29.     12.    0.64
        HYDROGRAPH AT
+                    UB18NA     65.   3.17      5.      1.      1.    0.02
        ROUTED TO
+                     1RPC1     31.   3.33      5.      1.      1.    0.02
        HYDROGRAPH AT
+                    UB18NB     27.   3.17      2.      1.      0.    0.01
        ROUTED TO
+                     2RPC1     16.   3.25      2.      1.      0.    0.01
        HYDROGRAPH AT
+                       PC1     66.   3.42     10.      2.      1.    0.06
        3 COMBINED AT
+                     1CPC1    107.   3.42     17.      4.      2.    0.09
        ROUTED TO
+                     SRPC1    108.   3.42     16.      4.      2.    0.09
        2 COMBINED AT
+                      CPC1    712.   3.58    120.     33.     13.    0.74
        ROUTED TO
+                    R16NA1    720.   3.58    119.     33.     13.    0.74
        HYDROGRAPH AT
+                    UB16NA     42.   3.17      3.      1.      0.    0.01
        ROUTED TO
+                    R16NA1     37.   3.17      3.      1.      0.    0.01
        2 COMBINED AT
+                    C16NA1    728.   3.58    122.     34.     14.    0.75
        ROUTED TO
+                    R16NB1    717.   3.58    122.     34.     14.    0.75
        HYDROGRAPH AT
+                    UB16NB     48.   3.17      4.      1.      0.    0.02
        ROUTED TO
+                    R16NB1     43.   3.17      4.      1.      0.    0.02
        2 COMBINED AT
+                    C16NB1    725.   3.58    126.     35.     14.    0.77
        ROUTED TO
+                    R16NC1    727.   3.67    126.     35.     14.    0.77
        HYDROGRAPH AT
```

+	SUB7N	74.	3.17	5.	1.	1.	0.03
ROUTED TO							
+	R8NC	64.	3.25	5.	1.	1.	0.03
HYDROGRAPH AT							
+	SUB8NA	13.	3.08	1.	0.	0.	0.00
ROUTED TO							
+	SR8NA	1.	4.17	0.	0.	0.	0.00
ROUTED TO							
+	R8NB	1.	4.17	0.	0.	0.	0.00
HYDROGRAPH AT							
+	SUB8NB	34.	3.08	2.	1.	0.	0.01
2 COMBINED AT							
+	CP8NB	34.	3.08	3.	1.	0.	0.02
ROUTED TO							
+	SR8NB	2.	3.08	2.	1.	0.	0.02
ROUTED TO							
+	R8NC	2.	3.08	2.	1.	0.	0.02
HYDROGRAPH AT							
+	SUB8NC	51.	3.08	3.	1.	0.	0.02
3 COMBINED AT							
+	CP8NC	103.	3.17	10.	3.	1.	0.07
ROUTED TO							
+	SR8NC	18.	3.75	10.	3.	1.	0.07
ROUTED TO							
+	R9N	17.	3.75	10.	3.	1.	0.07
HYDROGRAPH AT							
+	SUB9N	143.	3.17	11.	3.	1.	0.05
2 COMBINED AT							
+	CP9N	153.	3.17	21.	6.	2.	0.12
ROUTED TO							
+	R10B	148.	3.17	21.	6.	2.	0.12
HYDROGRAPH AT							
+	SUB10B	87.	3.08	6.	2.	1.	0.03
2 COMBINED AT							
+	CP10B	226.	3.17	27.	7.	3.	0.15
ROUTED TO							
+	R11NA	229.	3.17	27.	7.	3.	0.15
HYDROGRAPH AT							
+	UB11NA	21.	3.08	1.	0.	0.	0.01
2 COMBINED AT							
+	CP11NA	245.	3.17	28.	8.	3.	0.16
ROUTED TO							
+	SR11NA	145.	3.33	28.	8.	3.	0.16
ROUTED TO							
+	R11NB	140.	3.33	28.	8.	3.	0.16
HYDROGRAPH AT							
+	UB11NB	22.	3.08	1.	0.	0.	0.01
2 COMBINED AT							
+	CP11NB	146.	3.33	29.	8.	3.	0.17
ROUTED TO							
+	SR11NB	84.	3.50	28.	8.	3.	0.17
ROUTED TO							
+	R11NC	87.	3.50	28.	8.	3.	0.17
HYDROGRAPH AT							
+	UB11NC	19.	3.08	1.	0.	0.	0.01
2 COMBINED AT							
+	C11NC1	90.	3.50	30.	8.	3.	0.17
HYDROGRAPH AT							
+	SUB10A	88.	3.08	7.	2.	1.	0.03
ROUTED TO							
+	R12NB	95.	3.17	7.	2.	1.	0.03
HYDROGRAPH AT							

+		UB12NA	36.	3.17	3.	1.	0.	0.02
	ROUTED TO							
+		SR12NA	1.	6.17	0.	0.	0.	0.02
	ROUTED TO							
+		R12NA	1.	6.17	0.	0.	0.	0.02
	HYDROGRAPH AT							
+		UB12NB	37.	3.17	3.	1.	0.	0.02
	3 COMBINED AT							
+		CP12NB	132.	3.17	10.	3.	1.	0.06
	ROUTED TO							
+		SR12NB	2.	3.17	2.	2.	1.	0.06
	ROUTED TO							
+		R11NC2	2.	3.50	2.	2.	1.	0.06
	2 COMBINED AT							
+		CP11NC	92.	3.50	32.	10.	4.	0.23
	ROUTED TO							
+		SR11NC	71.	3.75	30.	10.	4.	0.23
	ROUTED TO							
+		R16NC	71.	3.75	30.	10.	4.	0.23
	HYDROGRAPH AT							
+		UB16NC	102.	3.17	8.	2.	1.	0.03
	2 COMBINED AT							
+		CP16NC	107.	3.17	36.	12.	5.	0.27
	ROUTED TO							
+		R16NC1	106.	3.17	36.	12.	5.	0.27
	2 COMBINED AT							
+		C16NC1	788.	3.67	162.	47.	19.	1.03
	ROUTED TO							
+		R15N1	793.	3.67	162.	47.	19.	1.03
	HYDROGRAPH AT							
+		PC2	93.	3.25	8.	2.	1.	0.05
	2 COMBINED AT							
+		CP15N1	815.	3.67	170.	49.	20.	1.09
	ROUTED TO							
+		SRPC2	786.	3.75	169.	48.	20.	1.09
	HYDROGRAPH AT							
+		UB17NA	28.	3.08	2.	0.	0.	0.01
	ROUTED TO							
+		SR17NA	2.	3.75	1.	0.	0.	0.01
	ROUTED TO							
+		R17NB	2.	3.75	1.	0.	0.	0.01
	HYDROGRAPH AT							
+		UB17NB	27.	3.17	2.	0.	0.	0.01
	2 COMBINED AT							
+		CP17NB	28.	3.17	3.	1.	0.	0.02
	ROUTED TO							
+		SR17NB	1.	3.00	1.	1.	0.	0.02
	ROUTED TO							
+		R17A	1.	3.08	1.	1.	0.	0.02
	HYDROGRAPH AT							
+		SUB17A	30.	3.08	2.	0.	0.	0.01
	2 COMBINED AT							
+		CP17A1	31.	3.08	3.	1.	1.	0.03
	HYDROGRAPH AT							
+		UB17NC	19.	3.08	1.	0.	0.	0.01
	2 COMBINED AT							
+		CP17A	50.	3.08	3.	2.	1.	0.03
	ROUTED TO							
+		R15N	34.	3.17	3.	2.	1.	0.03
	HYDROGRAPH AT							
+		SUB15N	142.	3.17	11.	3.	1.	0.04
	2 COMBINED AT							

+		CP15N	175.	3.17	14.	4.	2.	0.07
	ROUTED TO							
+		R15N2	179.	3.17	14.	4.	2.	0.07
	2 COMBINED AT							
+		CP15N2	804.	3.75	182.	53.	22.	1.16
	ROUTED TO							
+		R15N2	768.	3.83	182.	53.	22.	1.16
	HYDROGRAPH AT							
+		DPC3	400.	3.17	40.	10.	4.	0.18
	2 COMBINED AT							
+		CPC3A	818.	3.75	217.	62.	25.	1.34
	ROUTED TO							
+		RPC3A	820.	3.83	217.	62.	25.	1.34
	HYDROGRAPH AT							
+		DPC4	476.	3.33	104.	28.	11.	0.65
	2 COMBINED AT							
+		CPC4A	1140.	3.75	319.	90.	36.	1.99
	ROUTED TO							
+		RPC4A	1131.	3.83	319.	90.	36.	1.99
	DIVERSION TO							
+		BPC4AT	1131.	3.83	319.	90.	36.	1.99
	HYDROGRAPH AT							
+		DPC4AT	0.	0.08	0.	0.	0.	1.99
	HYDROGRAPH AT							
+		SUB1-2	181.	3.17	16.	4.	2.	0.06
	HYDROGRAPH AT							
+		GCRB18	27.	3.17	2.	1.	0.	0.01
	2 COMBINED AT							
+		CPRET1	208.	3.17	18.	4.	2.	0.07
	ROUTED TO							
+		SR18S	0.	0.08	0.	0.	0.	0.07
	HYDROGRAPH AT							
+		SUB5S	72.	3.17	5.	1.	1.	0.03
	HYDROGRAPH AT							
+		GC1216	83.	3.17	6.	2.	1.	0.04
	HYDROGRAPH AT							
+		GC1415	104.	3.17	7.	2.	1.	0.05
	HYDROGRAPH AT							
+		SUB6S	53.	3.17	5.	1.	0.	0.02
	HYDROGRAPH AT							
+		SUB7S	79.	3.17	6.	2.	1.	0.03
	5 COMBINED AT							
+		CPRET2	391.	3.17	30.	7.	3.	0.16
	ROUTED TO							
+		SRRET2	0.	0.08	0.	0.	0.	0.16
	4 COMBINED AT							
+		CLEAR	0.	0.08	0.	0.	0.	17.72
	HYDROGRAPH AT							
+		SUB8S	76.	3.17	6.	1.	1.	0.03
	ROUTED TO							
+		RGC36	64.	3.25	6.	1.	1.	0.03
	HYDROGRAPH AT							
+		GC36	77.	3.17	7.	2.	1.	0.04
	2 COMBINED AT							
+		C1GC36	141.	3.17	13.	3.	1.	0.07
	HYDROGRAPH AT							
+		SUB9S	68.	3.17	5.	1.	1.	0.02
	ROUTED TO							
+		R9S	69.	3.17	5.	1.	1.	0.02
	2 COMBINED AT							
+		CPGC36	210.	3.17	18.	4.	2.	0.09
	ROUTED TO							

+		SRGC36	202.	3.25	18.	4.	2.	0.09
	HYDROGRAPH AT							
+		SUB7A	27.	3.17	2.	1.	0.	0.01
	ROUTED TO							
+		SR7A	7.	3.42	2.	1.	0.	0.01
	ROUTED TO							
+		R10S	7.	3.58	2.	1.	0.	0.01
	HYDROGRAPH AT							
+		SUB10S	78.	3.17	6.	2.	1.	0.02
	2 COMBINED AT							
+		CP10S	81.	3.17	8.	2.	1.	0.03
	HYDROGRAPH AT							
+		SUB11S	118.	3.08	7.	2.	1.	0.02
	ROUTED TO							
+		R11S	88.	3.17	7.	2.	1.	0.02
	2 COMBINED AT							
+		C10SA	169.	3.17	15.	4.	2.	0.06
	ROUTED TO							
+		R10SA	173.	3.17	15.	4.	2.	0.06
	HYDROGRAPH AT							
+		GC45	45.	3.08	2.	1.	0.	0.01
	HYDROGRAPH AT							
+		PC5	43.	3.33	5.	1.	1.	0.04
	HYDROGRAPH AT							
+		DPC4A	1131.	3.83	319.	90.	36.	1.99
	5 COMBINED AT							
+		CPC5	1242.	3.33	356.	100.	40.	2.10
	ROUTED TO							
+		RC5	1234.	3.42	356.	100.	40.	2.10
	HYDROGRAPH AT							
+		SCN5C	784.	3.17	62.	16.	6.	0.26
	HYDROGRAPH AT							
+		SCN6D	70.	3.08	5.	1.	1.	0.02
	HYDROGRAPH AT							
+		SCN6C	243.	3.25	21.	5.	2.	0.10
	HYDROGRAPH AT							
+		D52	2168.	3.33	545.	295.	129.	7.92
	HYDROGRAPH AT							
+		S53A	247.	3.25	26.	6.	3.	0.18
	2 COMBINED AT							
+		C53	2377.	3.33	569.	301.	131.	8.10
	HYDROGRAPH AT							
+		S53A1	446.	3.33	52.	13.	5.	0.33
	2 COMBINED AT							
+		C53A1	2783.	3.33	618.	313.	136.	8.43
	HYDROGRAPH AT							
+		SCN6B	158.	3.17	13.	3.	1.	0.05
	2 COMBINED AT							
+		C53A	2862.	3.33	629.	316.	137.	8.48
	HYDROGRAPH AT							
+		SCN6E	83.	3.33	11.	3.	1.	0.09
	6 COMBINED AT							
+		UHDB-I	4447.	3.33	1052.	431.	184.	11.05
	ROUTED TO							
+		UHDB-O	748.	5.25	716.	431.	184.	11.05
	HYDROGRAPH AT							
+		S54	196.	3.25	20.	5.	2.	0.09
	HYDROGRAPH AT							
+		SCN6A	310.	3.25	31.	8.	3.	0.13
	2 COMBINED AT							
+		CN6A	505.	3.25	51.	13.	5.	0.22
	2 COMBINED AT							

```
+                          C1A      958.    3.25        749.        442.        189.      11.27
1

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

APPENDIX F

Ultimate Condition 100-Year, 24-Hour HEC-1 Output File Printout

```
1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*             MAY   1991            *
*          VERSION 4.0.1E           *
*    Lahey F77L-EM/32 version 5.01  *
*      Dodson & Associates, Inc.    *
* RUN DATE  11/26/97  TIME  09:48:33 *
*************************************

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

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


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

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

1                                          HEC-1 INPUT                                                    PAGE  1

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

    1           ID    PIMA ROAD THREE BASINS                                  File: ULTMT-24.IH1
    2           ID    by  Stantech for the City of Scottsdale            Original: 08-07-97     mcg
    3           ID        Project:  28900051
    4           ID
    5           ID
    6           ID    100-YEAR, 24-HOUR STORM
    7           ID        10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
    8           ID        10% LEVEL DESIGN FOR DEER VALLEY DETENTION BASIN ALTERNATIVE 3
    9           ID        100% OF FLOWSPLITS ARE ROUTED TO DEER VALLEY DETENTION BASIN
   10           ID        10% LEVEL DESIGN FOR UNION HILLS DETENTION BASIN ALTERNATIVE 1B
   11           ID
   12           ID        ULTIMATE CONDITION --- POWER LINE CHANNEL:
   13           ID          GRAYHAWK RUNOFF RELEASED TO NATURAL WASHES ARE COLLECTED IN THE
   14           ID          "POWER LINE CHANNEL" AND ROUTED TO THE UNION HILLS DETENTION BASIN.
   15           ID          THE ULTIMATE LOCATION AND GEOMETRY OF THE POWER LINE CHANNEL WILL
   16           ID          BE DETERMINED BY OTHERS.
   17           ID
                'DIAGRAM
   18           IT       5                    2000
   19           IO       5
                '

   20           KK    S30N
   21           KM     RUNOFF FROM SUBBASIN 30N
   22           BA  0.6518
   23           PH            11.5      .84    1.53    2.46    2.75    2.94    3.31    3.74    4.17
   24           LS              82       13              82      13
   25           UK     300   0.350    0.13      20
   26           UK     300   0.050    0.13      80
   27           RK    1550   0.069   0.045  0.0096    TRAP       0      12
   28           RK   10520   0.038   0.040            TRAP      15      15
                '

   29           KK    R30N
   30           KM     NORMAL DEPTH CHANNEL ROUTE FROM C30N TO C31.1 THROUGH PIMA CHANNEL
   31           RS       1    FLOW      -1
   32           RC   0.022   0.022   0.022    2470    0.01
   33           RX    1000    1012    1020    1028    1036    1044    1052    1064
   34           RY     107     104     102     100     100     102     104     107
                '

   35           KK   S31.1
   36           KM     RUNOFF FROM SUBBASIN 31.1
   37           BA  0.2663
   38           LS            76.6       13            76.6      13
   39           UK     300   0.567    0.13      10
   40           UK     300   0.050    0.13      90
   41           RK    1950   0.056   0.045  0.0147    TRAP       0      10
   42           RK    7600   0.035   0.040            TRAP      22       8
                '

1                                          HEC-1 INPUT                                                    PAGE  2

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

```
 43          KK   C31.1
 44          KM     COMBINE ROUTED HYDROGRAPH FROM S30N WITH RUNOFF FROM SUBBASIN 31.1
 45          HC       2
             *
             *  R31.1
             *   ****  TOO SHORT TO ROUTE  ****
             *    NORMAL DEPTH CHANNEL ROUTE FROM C31.1 TO C34.1 THROUGH PIMA CHANNEL
             *      1    FLOW      -1
             *  0.022   0.022   0.022    1500    0.01
             *   1000    1012    1020    1028    1048    1056    1064    1076
             *    107     104     102     100     100     102     104     107
             *

 46          KK   S34.2
 47          KM     RUNOFF FROM SUBBASIN 34.2
 48          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
 49          BA  0.4441
 50          LS            77.3      12            77.3      12
 51          UK      50    0.10    0.13      10
 52          UK     300   0.040    0.13      90
 53          RK    2200  0.0452   0.045  0.0538    TRAP       0       10
 54          RK    8150  0.0386   0.045            TRAP       0       10
             *

 55          KK   C34.2
 56          KM     COMBINE ROUTED HYDROGRAPH FROM C31.1 WITH RUNOFF FROM SUBBASIN 34.2
 57          HC       2
             *

 58          KK    S35N
 59          KM     RUNOFF FROM SUBBASIN 35N
 60          BA  0.5482
 61          LS              82      13              82      13
 62          UK     300   0.491    0.13      15
 63          UK     300   0.113    0.13      85
 64          RK    2700   0.079   0.045  0.0242    TRAP       3        6
 65          RK    5050   0.028   0.040            TRAP      15       15
             *

 66          KK   D35NR
 67          KM     DIVERSION JUST DOWNSTREAM OF THE ALMA SCHOOL ROAD CULVERT
 68          KM        RIGHT BRANCH IS ROUTED TO C36.2
 69          KM        LEFT BRANCH (CODED ON DQ RECORD) IS ROUTED TO C36R1
 70          DT   D35NL
 71          DI       0      10      66     168     343     581     805     977    1168    1320
 72          DQ       0      10      66     168     343     581     805     977    1168    1320
             *

 73          KK   R35NR
 74          KM     NORMAL DEPTH CHANNEL ROUTE FROM S35N TO C36.2
 75          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
 76          RS       1    FLOW      -1
 77          RC    0.06    0.04    0.06    3500  0.0343
 78          RX    1000    1006    1026    1027    1057    1058    1078    1084
1                                          HEC-1 INPUT                                                    PAGE  3

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

 79          RY     105     103     101     100     100     101     103     105
             *

 80          KK   S36.2
 81          KM     RUNOFF FROM SUBBASIN 36.2
 82          BA  0.2087
 83          LS            76.6      13            76.6      13
 84          UK     300   0.580    0.13       5
 85          UK     300   0.100    0.13      95
 86          RK    1800   0.036   0.045  0.0145    TRAP      10       10
 87          RK    3520   0.028   0.040            TRAP      20        6
             *

 88          KK   C36.2
 89          KM     COMBINE ROUTED HYDROGRAPH FROM S35N WITH RUNOFF FROM SUBBASIN 36.2
 90          HC       2
             *

 91          KK  D36.2R
 92          KM     DIVERSION AT DESERT HIGHLANDS DRIVE
 93          KM        RIGHT BRANCH, AT GOLF CART CROSSING IS ROUTED TO C34.1
 94          KM        LEFT BRANCH (CODED ON DQ RECORD) IS ROUTED TO C36R1
 95          DT  D36.2L
 96          DI       0      36     166     288     360     430     538     681     859    1074
 97          DQ       0      36     166     288     360     430     538     681     859    1074
             *

 98          KK  R36.2R
 99          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.2 TO C34.1
100          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
101          RS       4    FLOW      -1
102          RC    0.06    0.04    0.06    7800  0.0321
103          RX    1000    1043    1053    1068    1093    1098    1133    1218
104          RY   102.6   100.6   100.5     100     100   100.5   100.6   102.6
             *
```

```
105          KK   S34.1
106          KM     RUNOFF FROM SUBBASIN 34.1
107          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
108          BA  1.1635
109          LS            77.3      12            77.3      12
110          UK     300   0.590    0.13      25
111          UK     300   0.040    0.13      75
112          RK    2570   0.085   0.045  0.0214    TRAP       0      10
113          RK    8800  0.0325   0.040            TRAP      20      10
             *

114          KK   C34.1
115          KM     COMBINE ROUTED HYDROGRAPH FROM C36.2 W/RUNOFF FROM SUBBASIN 34.1
116          HC       2
             *
1                                          HEC-1 INPUT                                          PAGE  4

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

117          KK  HVDB-I
118          KM     COMBINE HYDROGRAPH FROM C34.2 W/ C34.1
119          HC       2
             *

120          KK  HVDB-O
121          KM     DETENTION BASIN AT HAPPY VALLEY ROAD - NONREGULATORY STRUCTURE
122          KM        PRINCIPAL SPILLWAY:  42" x 800' RCP WITH A SLOPE OF 0.5%
123          KM        EMERGENCY SPILLWAY:  200' x 1.5' RECT. WEIR - CREST ELEV = 2089.5
124          KM        13 ACRE-FEET OF STORAGE FOR SEDIMENTAION
125          RS       1    STOR      -1
126          SV       0     0.2     0.7     1.8     3.4     5.4    36.3    88.1   150.2   224.3
127          SV   240.0
128          SE    2065    2066    2067    2068    2069    2070    2075    2080    2085    2090
129          SE    2091
130          SQ       0      20      30      40      60      70      80      90     100     110
131          SQ     120     130     140   143.6     328   452.6   599.4     767   954.1  1160.2
132          SE  2065.0 2066.77 2067.45 2067.94 2068.95 2070.44 2072.26 2074.32 2076.62 2079.16
133          SE  2081.9 2084.98 2088.25  2089.5  2090.0  2090.2  2090.4  2090.6  2090.8    2091
             *

134          KK   R34.1
135          KM     NORMAL DEPTH CHANNEL ROUTE FROM C34.1 TO C36.1 THROUGH PIMA CHANNEL
136          RS       1    FLOW      -1
137          RC   0.022   0.022   0.022    2200    0.01
138          RX    1000    1012    1020    1028    1036    1044    1052    1064
139          RY     107     104     102     100     100     102     104     107
             *

140          KK   S36.1
141          KM     RUNOFF FROM SUBBASIN 36.1
142          BA  0.1394
143          LS            73.4      11
144          UK     300  0.0420   0.130     100
145          RK    2330  0.0320   0.045  0.0134    TRAP      10      30
146          RK    3200  0.0270   0.040            TRAP      20      30
             *

147          KK   C36.1
148          KM     COMBINE ROUTED HYDROGRAPH FROM C34.1 WITH RUNOFF FROM SUBBASIN 36.1
149          HC       2
             *

150          KK   R36.1
151          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.1 TO C36R1 THROUGH PIMA CHANNEL
152          RS       1    FLOW      -1
153          RC   0.022   0.022   0.022    1520    0.01
154          RX    1000    1012    1020    1028    1036    1044    1052    1064
155          RY     107     104     102     100     100     102     104     107
             *
1                                          HEC-1 INPUT                                          PAGE  5

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

156          KK   B35NL
157          KM     BRING BACK DIVERTED HYDROGRAPH FROM C35N
158          DR   D35NL
             *

159          KK   R35NL
160          KM     NORMAL DEPTH CHANNEL ROUTE FROM S35N TO C36R1
161          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
162          RS       5    FLOW      -1
163          RC    0.06    0.04    0.06   14480  0.0318
164          RX    1000    1040    1080    1086    1091    1097    1137    1174
165          RY     105     104     103     100     100     103     104     105
             *

166          KK  B36.2L
167          KM     BRING BACK DIVERTED HYDROGRAPH FROM C36.2
168          DR  D36.2L
```

```
                *
169             KK  R36.2L
170             KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.2 TO C36R1
171             KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
172             RS       3    FLOW      -1
173             RC    0.06    0.04    0.06   10160  0.0342
174             RX    1000    1030    1060    1066    1076    1082    1112    1142
175             RY     103   102.5     102     100     100     102   102.5     103
                *

176             KK  S36R1A
177             KM     RUNOFF FROM SUBBASIN 36R1A
178             KM        RAINFALL LOSSES FOR GREINER SUBBASINS 36.3, 36R1 AND 35R ARE AREA WEIGHT
179             BA  0.6310
180             LS           74.3      10
181             UK     300   0.020   0.130     100
182             RK    1420   0.032   0.045  0.0061    TRAP       0      13
183             RK   10800   0.033   0.040            TRAP      10       9
                *

184             KK  C36R1A
185             KM     COMBINE ROUTED HYDROGRAPH FROM C36.1, D35NL & D36.2L W/RUNOFF FROM S36R1A
186             KM        AREA IS AREA FROM C36.1 + S36R1 + 40% OF AREA FROM S35N + 30% OF AREA
187             KM        FROM C36.2
188             HC       4  4.0530
                *

189             KK  S36R1B
190             KM     RUNOFF FROM SUBBASIN 36R1B
191             KM        RAINFALL LOSSES FOR GREINER SUBBASINS 36.3, 36R1 AND 35R ARE AREA WEIGHT
192             BA  0.5863
193             LS           74.3      10
194             UK     300   0.020   0.130     100
195             RK    1420   0.032   0.045  0.0061    TRAP       0      13
196             RK    8500   0.033   0.040            TRAP      10       9
                *
```



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

197             KK  C36R1B
198             KM     COMBINE HYDROGRAPH FROM C36R1A W/RUNOFF FROM S36R1B AT C36R1B
199             HC       2  4.6393
                *
                * R36R1B
                *   ****  TOO SHORT TO ROUTE  ****
                *    NORMAL DEPTH CHANNEL ROUTE FROM C36R1B TO C36R2A THROUGH PIMA CHANNEL
                *      1    FLOW      -1
                *  0.022   0.022   0.022    1900    0.01
                *   1000    1012    1020    1028    1036    1044    1052    1064
                *    107     104     102     100     100     102     104     107
                *

200             KK  S36R2A
201             KM     RUNOFF FROM SUBBASIN 36R2A
202             BA  0.1325
203             LS             72      20
204             UK     100   0.045   0.130     100
205             RK    1900   0.032   0.017   0.015    TRAP      15       7
206             RK     800   0.030   0.035            TRAP      10       5
                *

207             KK  C36R2A
208             KM     COMBINE ROUTED HYDROGRAPH FROM C36R1B W/RUNOFF FROM SUBBASIN 36R2A
209             HC       2
                *

210             KK  R36R2A
211             KM     NORMAL DEPTH CHANNEL ROUTE FROM C36R2A TO C36R2B THROUGH PIMA CHANNEL
212             KM     ****  TOO SHORT TO ROUTE  ****
213             KM       1    FLOW      -1
214             KM   0.022   0.022   0.022    2130    0.01
215             KM    1000    1012    1020    1028    1036    1044    1052    1064
216             KM     107     104     102     100     100     102     104     107
217             KM
218             KM     LAG THE HYDROGRAPH BY ONE TIME STEP TO ACCOUNT FOR SERIES OF INDIVIDUAL
219             KM     ROUTING REACHES THAT ARE TOO SHORT TO ROUTE.
220             KM        ASSUME WAVE CELERITY = 15-20 fps AND TOTAL LENGTH OF 5030'
221             RT                      1
                *

222             KK  S36R2B
223             KM     RUNOFF FROM SUBBASIN 36R2A
224             BA  0.2417
225             LS             72      12
226             UK     280   0.045   0.100     100
227             RK    1900   0.032   0.017   0.015    TRAP      15       7
228             RK    7360   0.030   0.040            TRAP      30      10
                *
```

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

 229          KK  C36R2B
 230          KM     COMBINE ROUTED HYDROGRAPH FROM C36R2A W/RUNOFF FROM SUBBASIN 36R2B
 231          HC       2
              *

 232          KK   S51.1
 233          KM     RUNOFF FROM SUBBASIN 51.1
 234          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 51.1 AND 49.1 ARE AREA WEIGHTED
 235          BA   1.130
 236          LS            73.9       12
 237          UK     300   0.037   0.130     100
 238          RK    1800   0.038   0.045  0.0161    TRAP       0       12
 239          RK   14400   0.032   0.040            TRAP      40       15
              *

 240          KK  DVDB-I
 241          KM     COMBINE HYDROGRAPH FROM C36R2 W/RUNOFF FROM SUBBASIN 51.1
 242          HC       2
              *

 243          KK  DVDB-O
 244          KM     DETENTION BASIN AT DEER VALLEY ROAD - NONREGULATORY STRUCTURE
 245          KM        PRINCIPAL SPILLWAY:  CONDUIT EXTENDING TO BEARDSLEY ROAD
 246          KM        EMERGENCY SPILLWAY:  200' x 1.5' RECT. WEIR - CREST ELEV = 1879.5
 247          KM        13 ACRE-FEET OF STORAGE FOR SEDIMENTAION
 248          RS       1    STOR      -1
 249          SV       0     0.2     0.7     1.7     3.5     6.1    38.6    86.9   143.2   209.9
 250          SV   224.1
 251          SE    1855    1856    1857    1858    1859    1860    1865    1870    1875    1880
 252          SE    1881
 253          SQ       0      20      40      60      80     100     120     140     160     180
 254          SQ     200     220     240     260  264.38  448.42  719.57     887    1074  1279.9
 255          SE    1855 1856.43 1857.53 1858.31 1858.95 1859.61 1860.29  1861.8 1863.71 1865.82
 256          SE  1868.1 1870.67 1873.43 1877.29  1879.5  1880.0  1880.4  1880.6  1880.8  1881.0
              *
              *  R51.1
              *     DEER VALLEY BASIN OUTLET CONDUIT TO THOMPSON PEAK PARKWAY
              *     COMBINE WITH RUNOFF FROM DC RANCH
              *       L = 2820 feet
              *

 257          KK  D51.1T
 258          KM     DIVERT 100% OF FLOW TO RETRIEVE AT THOMPSON PEAK PARKWAY
 259          DT  B51.1T
 260          DI       0   10000
 261          DQ       0   10000
              *
              *
              *     ******************  BEGIN DC RANCH WATERSHED  ******************
              *
              *       THE DC RANCH HEC-1 MODEL WAS DEVELOPED BY WOOD/PATEL ASSOCIATES
              *           WOOD/PATEL FILE NAME:  DC0721C.DAT
              *           MODEL DATE:            4 JANUARY 96
              *
1                                        HEC-1 INPUT                                        PAGE  8

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

 262          KK    52D4
 263          KM   RUNOFF FROM SUBBASIN 52D4
 264          BA    .070
 265          LS              75     14.5
 266          UK     120    .010     .15     100
 267          RK    3100    .035    .045            TRAP      30       10
              *

 268          KK   52D4R
 269          KM   ROUTE 52D4C THROUGH 52D5 TO CP 52D5C
 270          RK    1350    .033    .045            TRAP      10       10
              *

 271          KK   52D4B
 272          KM   RUNOFF FROM SUBBASIN 52D4B
 273          BA    .022
 274          LS              75      63
 275          UK     120    .010     .15     100
 276          RK    2200    .033    .045            TRAP      30       10
              *

 277          KK  52D5C1
 278          KM   COMBINE 52D4R AND 52D4B
 279          HC       2
              *

 280          KK   52D5A
 281          KM   RUNOFF FROM 52D5A
 282          BA   .0232
 283          LS              75      63
 284          UK     120    .010     .15     100
```

```
 285          RK    1300    .032    .045            TRAP      30      10
              *

 286          KK  52D5AR
 287          KM   ROUTE 52D5A THROUGH BEARDSLEY CHANNEL TO CP 52D5C2
 288          RK     400   .0143    .035            TRAP      50       4
              *

 289          KK  52D5C2
 290          KM   COMBINE 25D5C1 AND 52D5AR
 291          HC       2
              *

 292          KK   52D5R
 293          KM   ROUTE 52D5C IN BEARDSLEY CHANNEL TO CP 52C3BC2
 294          RK     240   .0143    .035            TRAP      50       4
              *
1                                          HEC-1 INPUT                                                    PAGE  9

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

 295          KK    52C3
 296          KM   RUNOFF FROM SUBBASIN 52C3
 297          BA    .006
 298          LS              75      65
 299          UK     100     .02     .10     100
 300          RK     800    .033    .045            TRAP      30      10
              *

 301          KK   52C3R
 302          KM   ROUTE 52C3 THROUGH SUBBASIN 52C4 TO CP 52C4C1
 303          RK    1350    .034    .045            TRAP      10      10
              *

 304          KK   52C3B
 305          KM   RUNOFF FROM SUBBASIN 52C3B
 306          BA    .016
 307          LS              75      60
 308          UK     100     .02     .10     100
 309          RK    1400    .034    .045            TRAP      30      10
              *

 310          KK  2C3BC1
 311          KM   COMBINE 52C3B AND 52C3R
 312          HC       2
              *

 313          KK  2C3BC2
 314          KM   COMBINE 52C3BC1 AND 52C5R
 315          HC       2
              *

 316          KK  52C3BR
 317          KM   ROUTE 52C3BC2 IN BEARDSLEY CHANNEL TO CP 52C4C2
 318          RK     430   .0143    .035            TRAP      50       4
              *
              *

 319          KK     51C     SUB
 320          KM        RUNOFF FROM SUB 51C
 321          BA   .0972
 322          LS              74      15
 323          UK     100   .0213     .10     100
 324          RK    3900   .0375    .045            TRAP      30      10
              *

 325          KK   51C1D
 326          KM   DIVERT 67 PERCENT OF 51C TO WEST (33 PERCENT TO SOUTH)
 327          DT  51C1DV
 328          DI       0   10000
 329          DQ       0    6700
              *
1                                          HEC-1 INPUT                                                    PAGE 10

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

 330          KK   51C1R
 331          KM   ROUTE 51C1D THROUGH SUBBASIN 52C1
 332          RK    1350   .0364    .045            TRAP      10      10
              *

 333          KK    52C1
 334          KM   RUNOFF FROM SUBBASIN 52C1
 335          BA    .029
 336          LS              75    20.5
 337          UK     100     .02     .10     100
 338          RK    1350    .021    .045            TRAP      30      10
              *

 339          KK   52C1C
 340          KM   COMBINE 51C1R AND 52C1
```

```
341          HC       2   .0611
             *

342          KK   52C1R
343          KM   ROUTE 52C1C THROUGH BASIN 52C2A TO CP 52C2BC
344          RK    1500    .033    .045            TRAP      10       10
             *

345          KK   52C2A
346          KM   RUNOFF FROM SUBBASIN 52C2A
347          BA    .019
348          LS              75       2
349          UK     100     .02     .10     100
350          RK    1500    .033    .045            TRAP      30       10
             *

351          KK  52C2AC
352          KM   COMBINE 52C2A AND 52C1R
353          HC       2
             *

354          KK   52C2B
355          KM   RUNOFF FROM SUBBASIN 52C2B
356          BA   .0275
357          LS              75      11
358          UK     100     .02     .10     100
359          RK    2000    .030    .045            TRAP      30       10
             *

360          KK  52C2BC
361          KM   COMBINE 52C2B AND 52C2AC
362          HC       2
             *
```



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

363          KK  52C2BR
364          KM   ROUTE 52C2BC THROUGH 52C2C TO CP 52C2CC
365          RK    1500    .040    .045            TRAP      10       10
             *

366          KK   52C2C
367          KM   RUNOFF FROM SUBBASIN 52C2C
368          BA    .014
369          LS              75      62
370          UK     100     .02     .10     100
371          RK    1500     .04    .045            TRAP      30       10
             *

372          KK  52C2CC
373          KM   COMBINE 52C2C AND 52C2BR
374          HC       2
             *

375          KK   52C2R
376          KM   ROUTE 52C2CC THROUGH SUBBASIN 52C4 TO CP 52C4C1
377          RK    1550    .030    .045            TRAP      10       10
             *

378          KK    52C4
379          KM   RUNOFF FROM SUBBASIN 52C4
380          BA    .017
381          LS              75      60
382          UK     100     .02     .10     100
383          RK    1550    .030    .045            TRAP      30       10
             *

384          KK  52C4C1
385          KM   COMBINE 52C4 AND 52C2R
386          HC       2
             *

387          KK  52C4C2
388          KM   COMBINE 52C4C1 AND 52C3BR
389          HC       2
             *

390          KK   52C4R
391          KM   ROUTE 52C4C2 WEST IN BEARDSLEY CHANNEL TO CP 52C15C2
392          RK     850   .0143    .035            TRAP      50        4
             *

393          KK   52C13
394          KM   RUNOFF FROM SUBBASIN 52C13
395          BA    .023
396          LS              75      31
397          UK     100     .02     .10     100
398          RK     950    .040    .045            TRAP      30       10
             *
```

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

 399          KK  2C13DV
 400          KM   DIVERT FIRST 40 CFS INTO STORM DRAIN; REMAINDER FLOWS OVER ROAD
 401          DT   STORM
 402          DI       0      40    1000
 403          DQ       0      40      40
              *
              * KK52C13R
              * KM ROUTE 52C13 THROUGH SUBBASIN 52C15 TO CP 52C15C1
              * RK  1800    .035    .045            TRAP      10      10
              *

 404          KK   52C15
 405          KM   RUNOFF FROM SUBBASIN 52C15
 406          BA    .046
 407          LS              75    64.4
 408          UK     100     .02     .10     100
 409          RK    2050    .036    .045            TRAP      30      10
              *

 410          KK  2C15C1
 411          KM   COMBINE 52C15 AND 52C13DV
 412          HC       2    .046
              *

 413          KK  2C15C2
 414          KM   COMBINE 52C15C1 AND 52C4R
 415          HC       2
              *

 416          KK  52C15R
 417          KM   ROUTE 52C15C2 IN BEARDSLEY CHANNEL TO CP 52C14C3
 418          RK     750   .0143    .035            TRAP      50       4
              *

 419          KK  52C14A
 420          KM   RUNOFF FROM SUBBASIN 52C14A
 421          BA    .041
 422          LS              75    67.7
 423          UK     100     .02     .10     100
 424          RK    2050    .031    .045            TRAP      30      10
              *

 425          KK  2C14AC
 426          KM   COMBINE 52C14A AND 52C15R
 427          HC       2
              *

 428          KK  2C14AR
 429          KM   ROUTE 52C14AC IN BEARDSLEY CHANNEL TO CP 52C14BC2
 430          RK     380   .0143    .035            TRAP      50       4
              *
              *
1                                          HEC-1 INPUT                                          PAGE 13

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

 431          KK  51C1DV
 432          KM   RETRIEVE DIVERTED FLOW
 433          DR  51C1DV
              *

 434          KK  51C2D
 435          KM   DIVERT 27 PERCENT OF 51C1DV TO WEST (73 PERCENT TO SOUTH)
 436          DT  51C2DV
 437          DI       0   10000
 438          DQ       0    2700
              *

 439          KK   51C2R
 440          KM   ROUTE 51C2D THROUGH SUBBASIN 52C5 TO CP 52C5C
 441          RK     700    .030    .045            TRAP      10      10
              *

 442          KK    52C5
 443          KM   RUNOFF FROM SUBBASIN 52C5
 444          BA    .016
 445          LS              75      27
 446          UK     100     .02     .10     100
 447          RK    1200     .03    .045            TRAP      30      10
              *

 448          KK   52C5C
 449          KM   COMBINE 51C2R AND 52C5
 450          HC       2   .0635
              *

 451          KK   52C5R
 452          KM   ROUTE 52C5C THROUGH SUBBASIN 52C6 TO CP 52C6C
 453          RK    3100    .035    .045            TRAP      10      10
```

```
                    *
 454                KK    52C6
 455                KM   RUNOFF FROM SUBBASIN 52C6
 456                BA    .036
 457                LS              75    31.4
 458                UK     100     .02     .10     100
 459                RK    3100    .035    .045            TRAP      30      10
                    *

 460                KK   52C6C
 461                KM   COMBINE 52C5R AND 52C6
 462                HC       2
                    *

 463                KK   52C6R
 464                KM   ROUTE 52C6C THROUGH SUBBASIN 52C10 TO CP 52C10C2
 465                RK     450    .032    .045            TRAP      10      10
                    *
1                                          HEC-1 INPUT                                                    PAGE 14

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

 466                KK  51C2DV
 467                KM   RETRIEVE 52C2DV
 468                DR  51C2DV
                    *

 469                KK   51C3R
 470                KM   ROUTE 52C2DV THROUGH SUBBASIN 52C7 TO CP 52C7C
 471                RK     700    .040    .045            TRAP      10      10
                    *

 472                KK     51B     SUB
 473                KM        RUNOFF FROM SUB 51B
 474                BA   .5711
 475                LS       0    71.9    13.1
 476                UK     100   .0213     .10     100
 477                RK    8900   .0300    .045            TRAP      50      25
                    *

 478                KK   51B1D
 479                KM   DIVERT 92 PERCENT OF SUBBASIN 51B TO WEST (8 PERCENT TO SOUTH)
 480                DT  51B1DV
 481                DI       0   10000
 482                DQ       0    9200
                    *

 483                KK   51B1R
 484                KM    ROUTE 51B1D THROUGH SUBBASIN 52C7 TO CP 52C7C
 485                RK     450     .04    .045            TRAP      10      10
                    *

 486                KK    52C7
 487                KM   RUNOFF FROM SUBBASIN 52C7
 488                BA    .006
 489                LS              75      27
 490                UK     100     .02     .10     100
 491                RK     550     .04    .045            TRAP      30      10
                    *

 492                KK   52C7C
 493                KM   COMBINE 51B1R, 51C3R, AND 52C7
 494                HC       3   .0693
                    *

 495                KK   52C7R
 496                KM   ROUTE 52C7C THROUGH SUBBASIN 52C9 TO CP 52C9C1
 497                RK    1550    .036    .045            TRAP      10      10
                    *

 498                KK  51B1DV
 499                KM   RETRIEVE DIVERTED FLOW 51B1DV
 500                DR  51B1DV
                    *
1                                          HEC-1 INPUT                                                    PAGE 15

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

 501                KK   51B2D
 502                KM   DIVERT 84 PERCENT OF 51B1DV TO WEST (16 PERCENT TO SOUTH)
 503                DT  51B2DV
 504                DI       0   10000
 505                DQ       0    8400
                    *

 506                KK   51B2R
 507                KM   ROUTE 51B2D THROUGH SUBBASIN 52C8 TO CP 52C8C
 508                RK     750    .034    .045            TRAP      10      10
                    *
```

```
 509          KK    52C8
 510          KM   RUNOFF FROM SUBBASIN 52C8
 511          BA    .008
 512          LS              75       27
 513          UK     100     .02      .10     100
 514          RK     750    .034     .045            TRAP      30      10
              *

 515          KK   52C8C
 516          KM   COMBINE 51B2R AND 52C8
 517          HC       2   .4493
              *

 518          KK   52C8R
 519          KM   ROUTE 52C8C THROUGH SUBBASIN 52C9 TO CP 52C9C1
 520          RK    1100    .036     .045            TRAP      10      10
              *

 521          KK  52C9C1
 522          KM   COMBINE 52C7R AND 52C8R
 523          HC       2
              *

 524          KK  52C9R1
 525          KM   ROUTE 52C9C1 THROUGH SUBBASIN 52C9 TO CP 52C9C2
 526          RK    1050    .036     .045            TRAP      10      10
              *

 527          KK    52C9
 528          KM   RUNOFF FROM SUBBASIN 52C9
 529          BA    .069
 530          LS              75    31.85
 531          UK     100     .02      .10     100
 532          RK    3150    .036     .045            TRAP      30      10
              *

 533          KK  52C9C2
 534          KM   COMBINE 52C9R1 AND 52C9
 535          HC       2
              *
```



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

 536          KK  52C9R2
 537          KM   ROUTE 52C9C2 THROUGH SUBBASIN 52C10 TO CP 52C10C1
 538          RK     500    .032     .045            TRAP      10      10
              *

 539          KK  2C10C1
 540          KM   COMBINE 52C9R2 AND 52C6R
 541          HC       2
              *

 542          KK  2C10R1
 543          KM   ROUTE 52C10C1 THROUGH SUBBASIN 52C10 TO CP 52C10C2
 544          RK     300    .032     .045            TRAP      10      10
              *

 545          KK   52C10
 546          KM   RUNOFF FROM SUBBASIN 52C10
 547          BA    .014
 548          LS              75     7.85
 549          UK     100     .02      .10     100
 550          RK     800    .032     .045            TRAP      30      10
              *

 551          KK  2C10C2
 552          KM   COMBINE 52C10R1 AND 52C10
 553          HC       2
              *

 554          KK   52C11
 555          KM   RUNOFF FROM SUBBASIN 52C11
 556          BA   .0425
 557          LS              75       27
 558          UK     100     .02      .10     100
 559          RK    2800    .031     .045            TRAP      30      10
              *

 560          KK  2C11R1
 561          KM   PIPE ROUTE 52C11 TO CP 52C11C
 562          RK     650     .02     .045            CIRC       3
              *

 563          KK  52C13D
 564          KM   RETRIEVE DIVERTED FLOW
 565          DR   STORM
              *

 566          KK  52C11C
 567          KM   COMBINE 52C13D AND 52C11R1
```

```
 568          HC       2   .0655
              *
1                                          HEC-1 INPUT                                                PAGE 17

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

 569          KK  2C11CR
 570          KM   PIPE ROUTE 52C11C TO CP 52C11C2
 571          RK     750     .02    .045            CIRC       3
              *

 572          KK  2C11C2
 573          KM   COMBINE 52C11CR AND 52C10C2
 574          HC       2
              *

 575          KK  2C11R2
 576          KM   ROUTE 52C11C2 THROUGH SUBBASIN 52C12 TO CP 52C12C
 577          RK     700     .03    .045            TRAP      10      10
              *

 578          KK   52C12
 579          KM   RUNOFF FROM SUBBASIN 52C12
 580          BA    .023
 581          LS              75      85
 582          UK     100     .02     .10     100
 583          RK     900     .03    .045            TRAP      30      10
              *

 584          KK  52C12C
 585          KM   COMBINE 52C11R2 AND 52C12
 586          HC       2
              *

 587          KK  52C12R
 588          KM   ROUTE 52C12C THROUGH SUBBASIN 52C14 TO CP 52C14C1
 589          RK    1150    .029    .045            TRAP      10      10
              *

 590          KK  52C14B
 591          KM   RUNOFF FROM SUBBASIN 52C14B
 592          BA    .021
 593          LS              75      60
 594          UK     100     .02     .10     100
 595          RK    1250    .029    .045            TRAP      30      10
              *

 596          KK  C14BC1
 597          KM   COMBINE 52C14B AND 52C12R
 598          HC       2
              *

 599          KK  C14BC2
 600          KM   COMBINE 52C14BC1 AND 52C14AR
 601          HC       2
              *
1                                          HEC-1 INPUT                                                PAGE 18

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

 602          KK  52C14R
 603          KM   ROUTE 52C14C3 WEST IN BEARDSLEY CHANNEL TO CP 52B5C2
 604          RK     600   .0143    .035            TRAP      50       4
              *

 605          KK  51B2DV
 606          KM   RETRIEVE DIVERTED FLOW
 607          DR  51B2DV
              *

 608          KK   51B3D
 609          KM   DIVERT 84 PERCENT OF 51B2DV TO WEST (16 PERCENT TO SOUTH)
 610          DT  51B3DV
 611          DI       0   10000
 612          DQ       0    8400
              *

 613          KK   51B3R
 614          KM   ROUTE 51B3D THROUGH SUBBASIN 52B1 TO CP 52B1C
 615          RK     600    .039    .045            TRAP      10      10
              *

 616          KK    52B1
 617          KM   RUNOFF FROM SUBBASIN 52B1
 618          BA    .003
 619          LS              75      27
 620          UK     100     .02     .10     100
 621          RK     600    .039    .045            TRAP      30      10
              *

 622          KK   52B1C
```

```
623          KM   COMBINE 51B3R AND 52B1
624          HC       2   .0736
             *

625          KK   52B1R
626          KM   ROUTE 52B1C THROUGH SUBBASIN 52B2 TO CP 52B2C1
627          RK     930    .037    .045            TRAP      10      10
             *

628          KK  51B3DV
629          KM   RETRIEVE DIVERTED FLOW 51B3DV
630          DR  51B3DV
             *

631          KK   51B4D
632          KM   DIVERT 82 PERCENT OF 51B3DV TO WEST (18 PERCENT TO SOUTH)
633          DT  51B4DV
634          DI       0   10000
635          DQ       0    8200
             *
1                                        HEC-1 INPUT                                          PAGE 19

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

636          KK  51B4R1
637          KM   ROUTE 51B4D THROUGH SUBBASIN 52B2 TO CP 52B2C1
638          RK    1350    .037    .045            TRAP      10      10
             *

639          KK  52B2C1
640          KM   COMBINE 51B4R1 AND 52B1R
641          HC       2   .1403
             *

642          KK  52B2R1
643          KM   ROUTE 52B2R1 THROUGH SUBBASIN 52B2 TO CP 52B2C2
644          RK    1000    .037    .045            TRAP      10      10
             *

645          KK    52B2
646          KM   RUNOFF FROM SUBBASIN 52B2
647          BA    .032
648          LS              75      17
649          UK     100     .02     .10     100
650          RK    2350    .037    .045            TRAP      30      10
             *

651          KK  52B2C2
652          KM   COMBINE 52B2 AND 52B2R1
653          HC       2
             *

654          KK  52B2R2
655          KM   ROUTE 52B2C2 THROUGH SUBBASIN 52B3 TO CP 52B3C2
656          RK     850    .026    .045            TRAP      10      10
             *

657          KK  52B3R1
658          KM   ROUTE 52B3C1 THROUGH SUBBASIN 52B3 TO CP 52B3C2
659          RK     500    .024    .045            TRAP      10      10
             *

660          KK    52B3
661          KM   RUNOFF FROM SUBBASIN 52B3
662          BA    .062
663          LS              75    31.8
664          UK     100     .02     .10     100
665          RK    3450    .030    .045            TRAP      30      10
             *

666          KK  52B3C2
667          KM   COMBINE 52B3 AND 52B3R1
668          HC       2
             *
1                                        HEC-1 INPUT                                          PAGE 20

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

669          KK  52B3R2
670          KM   ROUTE 52B3C2 THROUGH 52B4 TO CP 52B4C
671          RK    1700    .024    .045            TRAP      10      10
             *

672          KK    52B4
673          KM   RUNOFF FROM SUBBASIN 52B4
674          BA    .026
675          LS              75      62
676          UK     100     .02     .10     100
677          RK    1700    .024    .045            TRAP      30      10
             *
```

```
 678          KK   52B4C
 679          KM   COMBINE 52B4 AND 52B3R2
 680          HC       2
              *

 681          KK   52B4R
 682          KM   ROUTE 52B4C THROUGH SUBBASIN 52B5 TO CP 52B5C1
 683          RK     550    .027    .045            TRAP      10      10
              *

 684          KK    52B5
 685          KM   RUNOFF FROM SUBBASIN 52B5
 686          BA    .021
 687          LS              75    56.9
 688          UK     100     .02     .10     100
 689          RK    1400     .03    .045            TRAP      30      10
              *

 690          KK  52B5C1
 691          KM   COMBINE 52B5 AND 52B4R
 692          HC       2
              *

 693          KK  52B5C2
 694          KM   COMBINE 52B5C1 AND 52C14R
 695          HC       2
              *

 696          KK   52B5R
 697          KM   ROUTE 52B5C2 IN BEARDSLEY CHANNEL TO CP 52B7C2
 698          RK    1100   .0143    .035            TRAP      50       4
              *

 699          KK  51B4DV
 700          KM   RETRIEVE DIVERTED FLOW 51B4DV
 701          DR  51B4DV
              *
1                                    HEC-1 INPUT                                    PAGE 21

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

 702          KK   51B5D
 703          KM   DIVERT 68 PERCENT OF 51B4DV TO WEST (32 PERCENT TO SOUTH)
 704          DT  51B5DV
 705          DI       0   10000
 706          DQ       0    6800
              *

 707          KK   51B5R
 708          KM   ROUTE 51B5D THROUGH SUBBASIN 52B6 TO CP 51B7C
 709          RK    1250    .035    .045            TRAP      10      10
              *

 710          KK  51B5DV
 711          KM   RETRIEVE DIVERTED FLOW
 712          DR  51B5DV
              *

 713          KK   51B6D
 714          KM   DIVERT 53 PERCENT OF 51B5DV TO WEST (47 PERCENT TO SOUTH)
 715          DT  51B6DV
 716          DI       0   10000
 717          DQ       0    5300
              *

 718          KK   51B6R
 719          KM   ROUTE 51B6D THROUGH SUBBASIN 52B6 TO CP 51B7C
 720          RK     925    .033    .045            TRAP      10      10
              *

 721          KK  51B6DV
 722          KM   RETRIEVE DIVERTED FLOW 51B6DV
 723          DR  51B6DV
              *

 724          KK   51B7D
 725          KM   DIVERT 58 PERCENT OF 51B6DV TO WEST (42 PERCENT TO SOUTH)
 726          DT  51B7DV
 727          DI       0   10000
 728          DQ       0    5800
              *

 729          KK  51B7R1
 730          KM   ROUTE 51B7D THROUGH SUBBASIN 52B6 TO CP 51B7C
 731          RK     530    .033    .045            TRAP      10      10
              *

 732          KK   51B7C
 733          KM   COMBINE 51B7R1, 51B5R, AND 51B6R
 734          HC       3   .2404
              *
1                                    HEC-1 INPUT                                    PAGE 22
```

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

 735          KK  51B7R2
 736          KM   ROUTE 51B7C THROUGH SUBBASIN 52B6 TO CP 52B6C
 737          RK    2300    .033    .045            TRAP      10      10
              *

 738          KK    52B6
 739          KM   RUNOFF FROM SUBBASIN 52B6
 740          BA    .096
 741          LS              75   13.55
 742          UK     100     .02     .10     100
 743          RK    3200    .033    .045            TRAP      30      10
              *

 744          KK   52B6C
 745          KM   COMBINE 51B7R2 AND 52B6
 746          HC       2
              *

 747          KK   52B6R
 748          KM   ROUTE 52B6C THROUGH SUBBASIN 52B7 TO CP 52B7C1
 749          RK    2750    .028    .045            TRAP      10      10
              *

 750          KK    52B7
 751          KM   RUNOFF FROM SUBBASIN 52B7
 752          BA    .080
 753          LS              75   78.45
 754          UK     100     .02     .10     100
 755          RK    2750    .028    .045            TRAP      30      10
              *

 756          KK  52B7C1
 757          KM   COMBINE 52B7 AND 52B6R
 758          HC       2
              *

 759          KK  52B7C2
 760          KM   COMBINE 52B7C1 AND 52B5R
 761          HC       2
              *

 762          KK    52A2
 763          KM   RUNOFF FROM SUBBASIN 52A2
 764          BA    .065
 765          LS              75    88.8
 766          UK     100     .02     .10     100
 767          RK    2900    .023    .045            TRAP      30      10
              *
```



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

 768          KK  52A2C2
 769          KM   COMBINE 52B7C2 AND 52A2
 770          HC       2    1.62
              *

 771          KK  51B7DV
 772          KM   RETRIEVE DIVERTED FLOW 51B7DV
 773          DR  51B7DV
              *

 774          KK   51B8R
 775          KM   ROUTE 51B7DV THROUGH SUBBASIN 52A1 TO CP 52A1C
 776          RK    3400    .033    .045            TRAP      10      10
              *

 777          KK    52A1
 778          KM   RUNOFF FROM SUBBASIN 52A1
 779          BA    .130
 780          LS              75   32.25
 781          UK     100     .02     .10     100
 782          RK    3400    .033    .045            TRAP      30      10
              *

 783          KK   52A1C
 784          KM   COMBINE 52A1 AND 51B8R
 785          HC       2
              *
              *
              *     ******************  END DC RANCH WATERSHED  ******************
              *
              *
              *     *****************  BEGIN GVSCE MODIFICATIONS  *****************
              *

 786          KK   D51.1
 787          KM   RETRIEVE DIVERTED FLOW
```

```
 788          DR  B51.1T
              *

 789          KK    C52A
 790          KM     COMBINE ROUTED HYDROGRAPH FROM C51.1 WITH HYDROGRAPH FROM C52A1C AT
 791          KM     THOMPSON PEAK PARKWAY
 792          HC       2  6.2735
              *
              *   R52A
              *     DEER VALLEY BASIN OUTLET CONDUIT TO OUTLET AT SIERRA PINTA CHANNEL
              *     COMBINE WITH RUNOFF FROM DC RANCH
              *       L = 3130 feet
              *
1                                          HEC-1 INPUT                                          PAGE 24

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

 793          KK     C52
 794          KM     COMBINE ROUTED HYDROGRAPH FROM C52A WITH HYDROGRAPH FROM C52A2C AT
 795          KM     BEARDSLEY ROAD
 796          HC       2  7.9160
              *

 797          KK     R52
 798          KM     NORMAL DEPTH CHANNEL ROUTE FROM C52 TO C53 THROUGH PIMA CHANNEL
 799          RS       1    FLOW      -1
 800          RC   0.022   0.022   0.022    4050    0.01
 801          RX    1000    1012    1020    1028    1058    1066    1074    1086
 802          RY     107     104     102     100     100     102     104     107
              *

 803          KK    D52T
 804          KM     DIVERT 100% OF FLOW TO RETRIEVE JUST U/S OF UNION HILLS DETENTION BASIN
 805          DT    B52T
 806          DI       0   10000
 807          DQ       0   10000
              *

 808          KK   CLEAR
 809          KM     CLEAR HYDROGRAPHS FROM STACK
 810          HC       2
              *
              *
              *
              *     ****************  BEGIN GRAYHAWK WATERSHED  ******************
              *
              *       THE GREYHAWK HEC-1 MODEL (VILLAGES II AND III) WAS DEVELOPED BY DEI
              *           DEI FILE NAME:  GH23FAB.H1I
              *           MODEL DATE:     21 MAY 96
              *

 811          KK     37A     SUB
 812          KM        RUNOFF FROM SUB-BASIN 37A
 813          BA   .6765
 814          LS              74    24.8
 815          UK      61   .0213     .10     100
 816          RK    4800   .0237    .045            TRAP      50     130
              *

 817          KK    37AE     DIV
 818          KM        SPLIT FLOWS AT SOUTH BOUNDARY OF SUB 37A FOR ROUTING TO DETENTION
 819          KM        BASIN 53R & 38R-1.  THIS DIVERT OPERATION REFLECTS THE BREAK IN THE
 820          KM        DEER VALLEY ROAD CHANNEL BETWEEN HAYDEN & PIMA ROADS.  THIS SPLIT IS
 821          KM        BASED ON NEW CORE NORTH PLAN DEVELOPED BY G.W. LARSON & ASSC., INC.
 822          KM        DATED 6/16/92.  DIVERT RATIO IS BASED ON APPROXIMATE D.A. FROM SUB 37A
 823          KM        THAT IS INTERCEPTED BY EACH CHANNEL SEGMENT ALONG DEER VALLEY ROAD.
 824          KM
 825          KM        (THIS SPLIT HAS BEEN UPDATED FROM THE OLP.6 MODEL TO REFLECT A 30% SPLIT
 826          KM        TO THE SOUTH AND A 70% SPLIT TO THE WEST FOR THIS STUDY AND IS BASED ON
 827          KM        UPSTREAM CONTRIBUTING WATERSHED AREA TO THIS CONCENTRATION POINT)
 828          DT    37AW
1                                          HEC-1 INPUT                                          PAGE 25

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

 829          DI       0     100     500    1000    1500
 830          DQ       0      70     350     700    1050
              *

 831          KK   37AE1      CP
 832          KM        ROUTE NON-DIVERTED FLOW FROM DIV 37AE THROUGH SUB 5N.  THIS IS A
 833          KM        PRELIMINARY CHANNEL CONFIGURATION FOR THE GOLF COURSE CHANNEL.
 834          RS       1    FLOW
 835          RC    .055    .045    .055     800    .025
 836          RX       0      16      26      30      40      44      54      70
 837          RY       6       2       2       0       0       2       2       6
              *

 838          KK   SUB5N
 839          KM        RUNOFF FROM SUBBASIN 5 IN NORTH 18 MODEL.
 840          BA   0.029
 841          LS              77      18
```

```
842          UK     100    .013     .15     100
843          RK    1000   0.005    .018    .015    TRAP      50      20
844          RK     500    .015    .025            TRAP      10       4
             *

845          KK    CP5N
846          KM        ADD HYDROGRAPHS AT CP5N
847          HC       2   0.232
             *

848          KK   RET5N
849          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 5.  18" PIPE OUTFLOW WILL
850          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
851          RS       1    STOR       0       0
852          SV       0     .04     .33     .93     1.8    2.35    3.16     4.2     6.1
853          SQ       0       8      10      12      15      17     102     191     668
854          SE    1797    1798    1800    1802    1804    1805    1806    1807    1808
             *

855          KK   R6N.1
856          KM        ROUTE FLOW FROM CP5 TO CP6 IN NORTH 18 MODEL
857          KM        ASSUME CHANNEL IS SAME CONFIGURATION AS ABOVE FOR PROPOSED GOLF COURSE
858          KM        CHANNEL.
859          RS       1    FLOW
860          RC    .055    .045    .055    2200    .025
861          RX       0      16      26      30      40      44      54      70
862          RY       6       2       2       0       0       2       2       6
             *

863          KK   SUB6B
864          KM        RUNOFF FROM WEST PORTION OF EXISTING SUB6N ADJACENT TO CHANNEL
865          BA    .032
866          LS              81       0
867          UK     200    .025     .15     100
868          RK    1300    .015    .025            TRAP      10       4
             *
```



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

869          KK    SR6B
870          KM        ROUTE FLOW THROUGH RETENTION BASIN IN DRIVING RANGE CHANNEL
871          RS       1    STOR       0       0
872          SV       0     .17     .57    1.12    1.78
873          SQ       0       8      10     120     380
874          SE    1772    1773    1774    1775    1776
             *

875          KK   CP6.1
876          KM        ADD HYDROGRAPHS AT CP6.1
877          HC       2
             *

878          KK   SUB1N
879          KM        RUNOFF FROM SUBBASIN 1N
880          BA    .019
881          LS              77      18
882          UK     100    .013     .15     100
883          RK    1470   .0204    .018            TRAP      50      20
             *

884          KK    R2NA
885          KM        ROUTE FLOW FROM CP1 TO CP2NA
886          RS       1    FLOW
887          RC     .03     .03     .03     400    .025
888          RX       0       8      13      17      22      26      31      39
889          RY       4       2       2       0       0       2       2       4
             *

890          KK  SUB2NA
891          KM        RUNOFF FROM SUBBASIN 2NA
892          BA    .015
893          LS              81       0
894          UK     150    .013     .15     100
895          RK    1050   .0215    .025            TRAP      20       6
             *

896          KK   CP2NA
897          KM        ADD HYDROGRAPHS AT CP2NA
898          HC       2
             *

899          KK   SR2NA
900          KM        ROUTE FLOW THROUGH DETENTION BASIN IN SUB2NA
901          RS       1    STOR       0       0
902          SV       0    .076    .291    .708     1.2
903          SQ       0       0       0       0     160
904          SE    1772    1773    1774    1775    1776
             *
```



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

```
905          KK    R2NB
906          KM        ROUTE FLOW FROM CP2NA TO CP2NB
907          RS       1    FLOW
908          RC     .03     .03     .03    1050    .015
909          RX       0       8      13      17      22      26      31      39
910          RY       4       2       2       0       0       2       2       4
             *

911          KK  SUB2NB
912          KM        RUNOFF FROM SUBBASIN 2NB
913          BA     .03
914          LS              77      53
915          UK     150    .013     .15     100
916          RK    1200    .015    .025            TRAP      20      50
             *

917          KK   CP2NB
918          KM        ADD HYDROGRAPHS AT CP2NB
919          HC       2
             *

920          KK   SR2NB
921          KM        STORAGE ROUTE FLOW THROUGH DETENTION BASIN IN SUB2NB
922          RS       1    STOR       0       0
923          SV       0     .19     .69    1.66    3.23     4.5
924          SQ       0       2       8      12      17     170
925          SE    1796    1798    1800    1802    1804    1805
             *

926          KK   RCP4N
927          KM        ROUTE FLOW FROM CP2NB TO CP4N
928          RS       1    FLOW
929          RC     .03     .03     .03     740    .018
930          RX       0       8      13      17      22      26      31      39
931          RY       4       2       2       0       0       2       2       4
             *

932          KK   SUB6N
933          KM        RUNOFF FROM SUBBASIN 6 IN NORTH 18 MODEL.  TO LAKE NORTH OF CLUBHOUSE.
934          BA    .049
935          LS              81       0
936          UK     200    .025     .15     100
937          RK    1300    .015    .025            TRAP      10       4
             *

938          KK   RET6N
939          KM        RETENTION ROUTING THROUGH LAKE AT HOLE 18, NORTH COURSE.
940          RS       1    STOR
941          SV       0    3.01    6.64   10.75   13.09   15.90
942          SQ       0       0       0      10      26     100
943          SE    1782    1784    1786    1788    1789    1790
             *
```



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

944          KK  RCP4N1
945          KM        ROUTE FLOW FROM CP6N TO CP4N
946          RS       1    FLOW
947          RC     .03     .03     .03     550    .018
948          RX       0       8      13      17      22      26      31      39
949          RY       4       2       2       0       0       2       2       4
             *

950          KK  CP4N.1
951          KM        ADD HYDROGRAPHS AT CP4N.1
952          HC       2
             *

953          KK   SUB3N
954          KM        RUNOFF FROM SUBBASIN 3N, NORTH 18 MODEL
955          BA    .027
956          LS              81       0
957          UK     100     .02     .15     100
958          RK    2800  0.0207    .025            TRAP      10       4
             *

959          KK   RET3N
960          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 3.  18" PIPE OUTFLOW WILL
961          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
962          RS       1    STOR       0       0
963          SV       0    1.73    8.97   13.32   15.74
964          SQ       0       4       7       9      11
965          SE    1793    1795    1800    1803    1804
             *

966          KK     R4N
967          KM        ROUTE FLOW FROM CP3N TO CP4N IN NORTH MODEL
968          RS       1    FLOW
969          RC    .035    .035    .035     950    .018
```

```
 970          RX       0       8      13      17      22      26      31      39
 971          RY       4       2       2       0       0       2       2       4
              *

 972          KK  CP4N.2
 973          KM        ADD HYDROGRAPHS AT CPN.2
 974          HC       2
              *

 975          KK   SUB4N
 976          KM        RUNOFF FROM SUBBASIN 4N.
 977          BA    .032
 978          LS              77      18
 979          UK     100    .015     .15     100
 980          RK    1200   0.007    .018            TRAP      50      20
              *
1                                          HEC-1 INPUT                                                    PAGE 29

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

 981          KK    CP4N
 982          KM        ADD HYDROGRAPHS AT CP4N
 983          HC       2
              *

 984          KK     R6N
 985          KM        ROUTE FLOW FROM CP4N TO CP6N ALONG THOMPSON PEAK PKWY AT CLUBHOUSE
 986          RS       1    FLOW
 987          RC    .045    .035    .045     750    .025
 988          RX       0       8      13      17      22      26      31      39
 989          RY       4       2       2       0       0       2       2       4
              *

 990          KK   SUB6A
 991          KM        RUNOFF FROM SUBBASIN 6A (CLUBHOUSE AREA NORTH OF THOMPSON PEAK PKWY).
 992          BA    .013
 993          LS              83      68
 994          UK     100    .015     .12     100
 995          RK     800     .01    .025            TRAP       2       3
              *

 996          KK   CP6.2
 997          KM        ADD HYDROGRAPHS AT CP6.2
 998          HC       2
              *

 999          KK    CP6N
1000          KM        ADD HYDROGRAPHS AT CP6N
1001          HC       2
              *
              *       ABOVE DISCHARGE FROM NORTH 18 THROUGH BRIDGE AT TPP STATION 103+45
              *

1002          KK   RCP6N
1003          KM        ROUTE FLOW FROM CP6N TO CP3C
1004          RS       1    FLOW
1005          RC    .045    .035    .045     300    .015
1006          RX       0       8      13      17      37      45      51      59
1007          RY       4       2       2       0       0       2       2       4
              *

1008          KK   SUB3C
1009          KM        RUNOFF FROM SUBBASIN 3C, SOUTH COURSE AT MAINTENANCE FACILITY.
1010          BA   .0104
1011          LS              77      68
1012          UK     100    .025     .02     100
1013          RK     600    .015    .035            TRAP      50      20
              *
1                                          HEC-1 INPUT                                                    PAGE 30

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

1014          KK    CP3C
1015          KM        COMBINE NORTH COURSE HYDROGRAPH WITH FIRST SOUTH COURSE HYDROGRAPH
1016          HC       2
              *

1017          KK     R3C
1018          KM        ROUTE FLOW FROM SUB3C TO CP3 THROUGH GC1018
1019          KM        ASSUME CHANNEL IS SAME CONFIGURATION AS ABOVE FOR PROPOSED GOLF COURSE
1020          KM        CHANNEL.
1021          RS       1    FLOW
1022          RC    .055    .045    .055    2050    .025
1023          RX       0      20      30      40      60      70      80     100
1024          RY    1650    1746    1744    1742    1742    1744    1746    1750
              *

1025          KK  GC1018
1026          KM        RUNOFF FROM HOLES NO. 10, 18 AND DRIVING RANGE THAT CONTRIBUTE TO WASH
1027          BA    .044
1028          LS              81       0
```

```
1029          UK     200    .025    .15     100
1030          RK    1800   .0233   .025            TRAP     10      4
              *

1031          KK   GC1-9
1032          KM        RUNOFF FROM GOLF COURSE HOLES 1 & 9 CONTRIBUTING TO WASH
1033          BA    .026
1034          LS              81       0
1035          UK     200    .025     .15     100
1036          RK    2110    .022    .025            TRAP     10      4
              *

1037          KK   SUB3S
1038          KM        RUNOFF FROM SUB BASIN 3 SOUTH COURSE
1039          BA   .0102
1040          LS              77      53
1041          UK     100    .010     .15     100
1042          RK     930    .016    .025            TRAP     50     20
              *

1043          KK    CP3S
1044          KM        COMBINE HYDROGRAPHS AT CP3 SOUTH COURSE
1045          HC       4
              *

1046          KK    RT3S
1047          KM        ROUTE FLOW FROM CP3S TO CPGC28
1048          RS       1    FLOW       0       0
1049          RC    .055    .045    .055     900    .023
1050          RX       0      20      30      40      60      70      80     100
1051          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *
```

1 HEC-1 INPUT PAGE 31

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

1052          KK   SUB4S
1053          KM        RUNOFF FROM SUB BASIN 4 SOUTH COURSE
1054          BA   .0273
1055          LS              77      53
1056          UK     100    .010     .15     100
1057          RK    1780    .018    .015            TRAP     50     20
              *

1058          KK    RT4S
1059          KM        ROUTE FLOW FROM CP4S TO CPGC28
1060          RS       1    FLOW       0       0
1061          RC    .035    .035    .035     650    .015
1062          RX       0      20      30      40      45      55      65      75
1063          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *

1064          KK   GC2-8
1065          KM        RUNOFF FROM SOUTH GOLF COURSE HOLES NO. 2 AND 8
1066          BA    .014
1067          LS              81       0
1068          UK     200    .025     .15     100
1069          RK     980    .016    .025            TRAP     10      4
              *

1070          KK  1PGC28
1071          KM        ADD HYDROGRAPHS AT CPGC28 AT PROPOSED LOOP ROAD, SOUTH COURSE
1072          HC       3
              *

1073          KK  SUB3D3
1074          KM        RUNOFF FROM GRAYHAWK ROAD SOUTH OF THOMPOSON PEAK
1075          BA    .014
1076          LS              81       0
1077          UK      50    .015      .1     100
1078          RK    2450    .016    .025            TRAP      5      4
              *

1079          KK  CPGC28
1080          KM        ADD HYDROGRAPHS AT CPGC28 AT PROPOSED LOOP ROAD, SOUTH COURSE
1081          HC       2
              *

1082          KK  SRGC28
1083          KM        STORAGE THRU DETENTION BASIN ON HOLES 2 AND 8.
1084          RS       1    STOR       0       0
1085          SV       0    .018    .085     .22      .5     1.0     1.7    2.68     3.9
1086          SE    1706    1707    1708    1709    1710    1711    1712    1713    1714
1087          SQ       0      10      18      20      30     108     324     651    1070
              *
```

1 HEC-1 INPUT PAGE 32

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

1088          KK    RT7S
1089          KM        ROUTE FLOW FROM SRGC28 TO CP7S
```

```
1090          RS       1    STOR       0       0
1091          RC    .055    .045    .055    1700   .0187
1092          RX       0      20      30      40      60      70      80     100
1093          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *

1094          KK     GC7
1095          KM        RUNOFF FROM SOUTH GOLF COURSE HOLE NO. 7
1096          BA   .0134
1097          LS              81       0
1098          UK     200    .025     .15     100
1099          RK    1380    .020    .025            TRAP      10       4
              *

1100          KK    CP7S
1101          KM        ADD HYDROGRAPHS AT CP7S ON SOUTH COURSE
1102          HC       2  0.6083
              *

1103          KK    D7ST
1104          KM        D7ST IS A DIVERSION ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1105          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1106          KM
1107          KM        DIVERT 100% OF FLOW
1108          DT    B7ST
1109          DI       0   10000
1110          DQ       0   10000
              *

1111          KK   CLEAR
1112          KM        CLEAR HYDROGRAPHS FROM THE STACK.
1113          HC       2
              *
              *
              * THIS PORTION OF MODEL TAKEN FROM,"DRAINAGE REPORT FOR VILLAGE 3 - PHASE 1",
              * APPROVED BY THE CITY OF SCOTTSDALE 7-19-95.  MODIFIED TO ACCOUNT FOR ASBUILT
              * CONDITION
              *
              *
              *
              *

1114          KK  SUB3D1
1115          KM        RUNOFF FROM SUBBASIN 3D1, PARCEL 3D.
1116          BA   .0088
1117          LS              77      34
1118          UD     .06
              *
```



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

1119          KK   RD1B1
1120          KM        FOUTE FLOW FROM 3D1 TO 3B1
1121          RS       1    FLOW      -1
1122          RC    0.03    0.03    0.03    1250    .015
1123          RX       0     0.5       1       7      12      19    19.5      20
1124          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1125          KK  SUB3B1
1126          KM        RUNOFF FROM SUBBASIN 3B1, PARCEL 3B.
1127          BA   .0137
1128          LS              77      47
1129          UD     .06
              *

1130          KK   CP3B1
1131          KM        ADD HYDROGRAGHS AT CP3B1
1132          HC       2
              *

1133          KK   RB13F
1134          KM        ROUTE FLOW FROM 3B1 TO SUB3F
1135          RS       1    FLOW      -1
1136          RC    0.03    0.03    0.03    2150    .015
1137          RX       0     0.5       1       7      17      24    24.5      25
1138          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1139          KK   SUB3F
1140          KM        RUNOFF FROM SUBBASIN 3F, PARCEL 3F, SOUTH COURSE MODEL.
1141          BA   .0344
1142          LS              77      68
1143          UK     100    .025     .15     100
1144          RK    1000    .015    .025            TRAP     100      20
              *

1145          KK    CP3F
1146          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3F ALONG THE POWER CORRIDOR
1147          HC       2
              *
```

```
1148          KK  SUB3B2
1149          KM        RUNOFF FROM SUBBASIN 3B2, PARCEL 3B.
1150          BA   .0246
1151          LS              77      40
1152          UD     .10
              *

1153          KK   RB2E1
1154          KM        1/2 OF ENTIRE ROUTING REACH FROM 3B2 TO CP3E1
1155          RS       1    FLOW      -1
1156          RC    0.03    0.03    0.03     800    0.02
1157          RX       0     0.5       1       7      17      24    24.5      25
1158          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *
1                                          HEC-1 INPUT                                                    PAGE 34

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

1159          KK   RB2E2
1160          KM       SECOND 1/2 OF ENTIRE ROUTING REACH FROM 3B2 TO CP3E1
1161          RS       1    FLOW      -1
1162          RC    0.03    0.03    0.03     600    .015
1163          RX       0     0.5       1       7      17      24    24.5      25
1164          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1165          KK  SUB3E1
1166          KM        RUNOFF FROM SUBBASIN 3E1, PARCEL 3E.
1167          BA   .0246
1168          LS              77      40
1169          UD     .10
              *

1170          KK  1CPE31
1171          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3E1 ALONG THE POWER CORRIDOR
1172          HC       2
              *

1173          KK  SUB3D2
1174          KM        RUNOFF FROM SUBBASIN 3D2, PARCEL 3D.
1175          BA    .022
1176          LS              77      35
1177          UD     .08
              *

1178          KK   RD2E2
1179          KM        ROUTE EXCESS FROM 3D2 TO CP3E2
1180          RS       1    FLOW      -1
1181          RC    0.03    0.03    0.03    1200   .0216
1182          RX       0     0.5       1       7      17      24    24.5      25
1183          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1184          KK  SUB3E2
1185          KM        RUNOFF FROM SUBBASIN 3E2, PARCEL 3E.
1186          BA    .012
1187          LS              77      35
1188          UD     .06
              *

1189          KK   CP3E2
1190          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3E2 ALONG THE POWER CORRIDOR
1191          HC       2
              *

1192          KK     PC3
1193          KM        PC3 IS A SUBBASIN ADDED BY GVSCE TO ESTIMATE THE SURFACE RUNOFF FROM
1194          KM        THE POWER LINE CORRIDOR WHICH ENTERS THE POWER LINE CHANNEL
1195          KM
1196          KM        RUNOFF FROM SUBBASIN PC3.
1197          BA  0.0434
1198          LS              77      10
1                                          HEC-1 INPUT                                                    PAGE 35

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

1199          UK     300    .015     .15     100
1200          RK    2200     .01     .03             TRAP      30       4
              *

1201          KK    CPC3
1202          KM        CPC3 IS A CONCENTRATION POINT ADDED BY GVSCE TO ESTIMATE THE INFLOW TO
1203          KM        THE POWER LINE CHANNEL AT THE HAYDEN ROAD CROSSING.
1204          KM
1205          KM        COMBINE ROUTED HYDROGRAPH FROM SRPC2 W/HYDROGRAPHS FROM CP3E1, CP3E2 AND
1206          KM        CP3F AND RUNOFF FROM PC3.
1207          HC       4  0.1835
              *

1208          KK   DPC3T
1209          KM        DPC3T IS A DIVERSION ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
```

```
1210          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1211          KM
1212          KM        DIVERT 100% OF FLOW
1213          DT   BPC3T
1214          DI       0   10000
1215          DQ       0   10000
              *

1216          KK  SUB3E3
1217          KM        RUNOFF FROM SUBBASIN 3E3, PARCEL 3E.
1218          BA    .020
1219          LS              77      32
1220          UD     .06
              *

1221          KK     PC4
1222          KM        PC4 IS A SUBBASIN ADDED BY GVSCE TO ESTIMATE THE SURFACE RUNOFF FROM
1223          KM        THE POWER LINE CORRIDOR WHICH ENTERS THE POWER LINE CHANNEL
1224          KM
1225          KM        RUNOFF FROM SUBBASIN PC4.
1226          BA  0.0217
1227          LS              77       0
1228          UK     300    .015     .15     100
1229          RK    1100     .01     .03            TRAP      30       4
              *

1230          KK     D7S
1231          KM        THIS OPERATION IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1232          KM        HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1233          KM
1234          KM        RETRIEVE DIVERTED FLOW
1235          DR    B7ST
              *

1236          KK    CPC4
1237          KM        THE HEC1 OPREATION TEMPAD IS CHANGED BY GVSCE TO ESTIMATE THE INFLOW TO
1238          KM        THE POWER LINE CHANNEL WHERE THE FLOW FROM CP7S ENTERS THE CHANNEL.
1239          KM
1240          KM        COMBINE HYDROGRAPH FROM CP3E3 W/RUNOFF FROM PC4.
1241          HC       3   0.650
              *
```



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

1242          KK   DPC4T
1243          KM        DPC3T IS A DIVERSION ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1244          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1245          KM
1246          KM        DIVERT 100% OF FLOW
1247          DT   BPC4T
1248          DI       0   10000
1249          DQ       0   10000
              *

1250          KK   CLEAR
1251          KM        CLEAR HYDROGRAPHS FROM THE STACK.
1252          HC       3
              *
              *
              *       THIS ENDS THE PORTION OF THE MODEL TAKEN FROM DRAINAGE REPORT
              *       FOR VILLAGE 3 - PHASE I HEC-1 MODEL BY GILBERTSON ASSOC. INC.
              *       DATED 7-19-95
              *
              *
              *
              * RETURN TO NORTH 18\VILLAGE 2\TPP3 MODEL.
              * THE REMAINDER OF THE SUBBASINS IN THIS  MODEL  WILL CONTRIBUTE TO THE
              * PROPOSED CHANNNEL IN THE POWER EASEMENT AS IDENTIFIED IN THE
              * "COMMUNITY DRAINAGE STUDY - CORE NORTH AND WILL DISCHARGE TO REGIONAL
              * RETENTION BASIN 38R1.
              *
              *

1253          KK    37AW     RET
1254          KM        RETRIEVE DIVERTED FLOW FROM SOUTH BOUNDARY OF SUB 37A TO REFLECT
1255          KM        BREAK IN DEER VALLEY ROAD CHANNEL BETWEEN HAYDEN & PIMA ROADS
1256          DR    37AW
              *

1257          KK    R14R
1258          KM        ROUTE FLOW FROM DIVERT AT DEER VALLEY ROAD (UPSTREAM OF SUBBAIN 5) TO
1259          KM        RET14.1
1260          RS       1    FLOW
1261          RC    .055    .045    .055    2900     .01
1262          RX       0      16      26      30      50      54      64      80
1263          RY       6       2       2       0       0       2       2       6
              * RET 141 HAS BEEN REVISED FOLLOWING REFINEMENT OF GRADING PLANS 11-16-94
              *

1264          KK  RET141
1265          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 14.1.  18" PIPE OUTFLOW WILL
```

```
1266          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
1267          RS       1    STOR       0       0
1268          SV       0     .46    2.79    4.56    5.71    6.92    8.24
1269          SQ       0      11      15      22     147     463     968
1270          SE    1778    1785    1790    1792    1793    1794    1795
              *
```



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

1271          KK   R14.1
1272          KM        ROUTE FLOW FROM RET14.1 TO CP14
1273          KM        RET14.1
1274          RS       1    FLOW
1275          RC    .055    .045    .055    1900     .01
1276          RX       0      16      26      30      50      54      64      80
1277          RY       6       2       2       0       0       2       2       6
              *

1278          KK  SUB13N
1279          KM        RUNOFF FROM SUBBASIN 13 NORTH 18 MODEL.
1280          BA    .037
1281          LS              77      24
1282          UK     100    .015     .15     100
1283          RK    2400    .007    .018            TRAP      50      20
              *

1284          KK   R14.1
1285          KM        ROUTE FLOW FROM CP13 TO RET14 NORTH 18 MODEL.
1286          RS       1    FLOW
1287          RC    .055    .045    .055     950    .025
1288          RX       0       8      13      17      22      26      31      39
1289          RY       4       2       2       0       0       2       2       4
              *

1290          KK  SUB14N
1291          KM        RUNOFF FROM SUBBASIN 14 NORTH 18 MODEL.
1292          BA    .049
1293          LS              81       0
1294          UK     300    .025     .15     100
1295          RK    2300     .01    .025            TRAP      10       4
              *

1296          KK    CP14
1297          KM        ADD HYDROGRAPHS AT CP14
1298          HC       3  0.5595
              *

1299          KK   RET14
1300          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 14.  18" PIPE OUTFLOW WILL
1301          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
1302          RS       1    STOR       0       0
1303          SV       0     .08     .31    1.01    2.16    3.20    4.19    5.69     7.8
1304          SQ       0      14      16     18      20      22     155     464     750
1305          SE    1744    1746    1748    1750    1752    1753    1754    1755    1756
              *

1306          KK   R18.1
1307          KM        ROUTE FLOW FROM RET14 TO CP18
1308          RS       1    FLOW
1309          RC    .055    .045    .055     500    .016
1310          RX       0      16      26      34      54      68      78      96
1311          RY       6       2       2       0       0       2       2       6
              *
```



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

1312          KK  SUB20N
1313          KM        RUNOFF FROM SUBBASIN 20.
1314          BA    .024
1315          LS              77      24
1316          UK     200     .01     .15     100
1317          RK    1400     .02    .018            TRAP      50      20
              *

1318          KK     R19
1319          KM        ROUTE FLOW FROM CP20 TO CP19
1320          RS       1    FLOW
1321          RC    .035    .035    .035     700     .02
1322          RX       0       8      13      17      22      26      31      39
1323          RY       4       2       2       0       0       2       2       4
              *

1324          KK  SUB19N
1325          KM        RUNOFF FROM SUBBASIN 19.
1326          BA    .038
1327          LS              77      31
1328          UK     150     .01     .15     100
1329          RK    1800    .015    .018            TRAP      50      20
              *
```

```
1330          KK   CP19N
1331          KM        ADD HYDROGRAPHS  AT CP19N
1332          HC       2
              *

1333          KK   R18NC
1334          KM        ROUTE FLOW FROM  CP19N TO CP18NC
1335          RS       1    FLOW
1336          RC    .035    .035    .035     700    .013
1337          RX       0       8      13      17      27      31      36      44
1338          RY       4       2       2       0       0       2       2       4
              *

1339          KK  UB18NC
1340          KM        RUNOFF FROM SUBBASIN 18NC.
1341          BA    .021
1342          LS              77      42
1343          UK     100     .01     .15     100
1344          RK    1550     .02    .018            TRAP      50      20
              *

1345          KK  CP18NC
1346          KM        ADD HYDROGRAPHS  AT CP18NC (INCLUDES R18.1, R18, AND SUB18)
1347          HC       3
              *
```



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

1348          KK    RPC1
1349          KM        ROUTE FLOW FROM CP18N TO CPC1.
1350          RS       1    FLOW
1351          RC    .035    .035    .035     510    .013
1352          RX       0      16      26      34      64      78      88     106
1353          RY       6       2       2       0       0       2       2       6
              *

1354          KK  UB18NA
1355          KM        RUNOFF FROM SUBBASIN 18NA.
1356          BA    .022
1357          LS              77      42
1358          UK     100     .01     .15     100
1359          RK    1450     .02    .018            TRAP      50      20
              *

1360          KK   1RPC1
1361          KM        ROUTE FLOW FROM CP18NA TO CPC1.
1362          RS       1    FLOW
1363          RC    .035    .035    .035    2550     .01
1364          RX       0      16      26      34      64      78      88     106
1365          RY       8       4       2       0       0       2       4       8
              *

1366          KK  UB18NB
1367          KM        RUNOFF FROM SUBBASIN 18NB.
1368          BA   .0096
1369          LS              77      42
1370          UK     100     .01     .15     100
1371          RK     800     .02    .018            TRAP      50      20
              *

1372          KK   2RPC1
1373          KM        ROUTE FLOW FROM CP18NB TO CPC1.
1374          RS       1    FLOW
1375          RC    .035    .035    .035    2000     .01
1376          RX       0      16      26      34      64      78      88     106
1377          RY       8       4       2       0       0       2       4       8
              *

1378          KK     PC1
1379          KM        RUNOFF FROM SUBBASIN PC1.
1380          BA    .062
1381          LS              77      10
1382          UK     500    .015     .15     100
1383          RK    2700     .01     .03            TRAP      30       4
              *

1384          KK   1CPC1
1385          KM        ADD HYDROGRAPHS  AT CPC1.
1386          HC       3
              *
```



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

1387          KK   SRPC1
1388          KM        STOAGE ROUTE THROUGH DET BASIN IN POWER CORRIDOR.
1389          RS       1    STOR       0       0
1390          SV       0     .29     .73
1391          SQ       0       0     350
```

```
1392          SE    1747    1748    1749
              *

1393          KK    CPC1
1394          KM        ADD HYDROGRAPHS  AT CPC1.
1395          HC       2
              *

1396          KK  R16NA1
1397          KM        ROUTE FLOW FROM CPC1 TO C16NA1.
1398          RS       1    FLOW
1399          RC    .035    .035    .035     700    .013
1400          RX       0      16      26      34      74      88      98     116
1401          RY       8       4       2       0       0       2       4       8
              *

1402          KK  UB16NA
1403          KM        RUNOFF FROM SUBBASIN 16NA.
1404          BA   .0139
1405          LS              77      42
1406          UK     100    .015     .15     100
1407          RK    1500    .015    .022            TRAP      50      20
              *

1408          KK  R16NA1
1409          KM        ROUTE FLOW FROM CP16NA TO CP16NA1.
1410          RS       1    FLOW
1411          RC    .035    .035    .035     550    .013
1412          RX       0      16      26      34      44      58      68      86
1413          RY       6       2       2       0       0       2       2       6
              *

1414          KK  C16NA1
1415          KM        ADD HYDROGRAPHS  AT CP16NA1.
1416          HC       2
              *

1417          KK  R16NB1
1418          KM        ROUTE FLOW FROM CP16NA1 TO CP16NB1.
1419          RS       1    FLOW
1420          RC    .035    .035    .035     650    .013
1421          RX       0      16      26      34      74      88      98     116
1422          RY       8       4       2       0       0       2       4       8
              *
```



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

1423          KK  UB16NB
1424          KM        RUNOFF FROM SUBBASIN 16NB.
1425          BA   .0156
1426          LS              77      42
1427          UK     100    .015     .15     100
1428          RK    1500    .015    .022            TRAP      50      20
              *

1429          KK  R16NB1
1430          KM        ROUTE FLOW FROM CP16NB TO CP16NB1.
1431          RS       1    FLOW
1432          RC    .035    .035    .035     550    .013
1433          RX       0      16      26      34      44      58      68      86
1434          RY       6       2       2       0       0       2       2       6
              *

1435          KK  C16NB1
1436          KM        ADD HYDROGRAPHS  AT CP16NB1.
1437          HC       2
              *

1438          KK  R16NC1
1439          KM        ROUTE FLOW FROM CP16NB1 TO CP16NC1.
1440          RS       1    FLOW
1441          RC    .035    .035    .035     650    .013
1442          RX       0      16      26      34      54      68      78      96
1443          RY       6       2       2       0       0       2       2       6
              *

1444          KK   SUB7N
1445          KM        RUNOFF FROM SUBBASIN 7N.
1446          BA    .031
1447          LS              77      18
1448          UK     100    .015     .15     100
1449          RK    1900     .01    .018            TRAP      50      20
              *

1450          KK    R8NC
1451          KM        ROUTE FLOW FROM CP7N TO CP8NC.
1452          RS       1    FLOW
1453          RC    .055    .045    .055     700    .025
1454          RX       0       8      13      17      22      26      31      39
1455          RY       4       2       2       0       0       2       2       4
              *
```

```
1456          KK  SUB8NA
1457          KM        RUNOFF FROM SUBBASIN 8NA.
1458          BA   .0046
1459          LS              81        0
1460          UK     100      .03      .15      100
1461          RK     450      .03     .025              TRAP      20        6
              *
1                                          HEC-1 INPUT                                                    PAGE 42

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

1462          KK   SR8NA
1463          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB8NA.
1464          RS       1    STOR        0        0
1465          SV       0     .51     .816
1466          SQ       0       1       43
1467          SE    1791    1795     1796
              *

1468          KK    R8NB
1469          KM        ROUTE FLOW FROM CP8NA TO CP8NB.
1470          RS       1    FLOW
1471          RC    .025    .025     .025      300      .03
1472          RX       0      12       24       36       56       68       80       92
1473          RY       6       4        2        0        0        2        4        6
              *

1474          KK  SUB8NB
1475          KM        RUNOFF FROM SUBBASIN 8NB.
1476          BA   .0142
1477          LS              81        0
1478          UK     100      .03      .15      100
1479          RK    1150     .025     .025              TRAP      20        6
              *

1480          KK   CP8NB
1481          KM        ADD HYDROGRAPHS AT CP8NB.
1482          HC       2
              *

1483          KK   SR8NB
1484          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB8NB.
1485          RS       1    STOR        0        0
1486          SV       0   .0124    1.754     2.45
1487          SQ       0       2        2       72
1488          SE    1784    1785     1790     1791
              *

1489          KK    R8NC
1490          KM        ROUTE FLOW FROM CP8NB TO CP8NC.
1491          RS       1    FLOW
1492          RC    .025    .025     .025      500      .03
1493          RX       0      12       24       36       56       68       80       92
1494          RY       6       4        2        0        0        2        4        6
              *

1495          KK  SUB8NC
1496          KM        RUNOFF FROM SUBBASIN 8NC.
1497          BA   .0182
1498          LS              81        0
1499          UK     100      .03      .15      100
1500          RK     900      .03     .025              TRAP      20        6
              *
1                                          HEC-1 INPUT                                                    PAGE 43

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

1501          KK   CP8NC
1502          KM        ADD HYDROGRAPHS AT CP8NC.
1503          HC       3
              *

1504          KK   SR8NC
1505          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB8NC.
1506          RS       1    STOR        0        0
1507          SV       0    .404    2.444     3.13    3.979
1508          SQ       0      10       14      151     1004
1509          SE    1771    1775     1780     1781     1782
              *

1510          KK     R9N
1511          KM        ROUTE FLOW FROM CP8N TO CP9N.
1512          RS       1    FLOW
1513          RC    .025    .025     .025     1150     .025
1514          RX       0       8       13       17       22       26       31       39
1515          RY       4       2        2        0        0        2        2        4
              *

1516          KK   SUB9N
1517          KM        RUNOFF FROM SUBBASIN 9N.
```

```
1518          BA    .055
1519          LS              77      28
1520          UK     100    .008     .15     100
1521          RK    1700     .01    .018            TRAP      50      20
              *

1522          KK    CP9N
1523          KM        ADD HYDROGRAPHS AT CP9N
1524          HC       2
              *

1525          KK    R10B
1526          KM        ROUTE FLOW FROM CP9N TO CP10B.
1527          RS       1    FLOW
1528          RC     .03     .03     .03     400     .02
1529          RX       0       8      16      24      29      37      45      53
1530          RY       6       4       2       0       0       2       4       6
              *

1531          KK  SUB10B
1532          KM        RUNOFF FROM SUBBASIN 10B.
1533          BA    .028
1534          LS              77      42
1535          UK     100    .015     .15     100
1536          RK     350    .008    .018            TRAP      50      20
1537          RK     600    .008    .025            TRAP      10       4
              *
```



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

1538          KK   CP10B
1539          KM        ADD HYDROGRAPHS AT CP10B
1540          HC       2
              *

1541          KK   R11NA
1542          KM        ROUTE FLOW FROM CP10B TO CP11NA.
1543          RS       1    FLOW
1544          RC     .03     .03     .03     200     .04
1545          RX       0       8      16      24      29      37      45      53
1546          RY       6       4       2       0       0       2       4       6
              *

1547          KK  UB11NA
1548          KM        RUNOFF FROM SUBBASIN 11NA.
1549          BA   .0076
1550          LS              81       0
1551          UK     100    .025     .15     100
1552          RK     500     .03    .025            TRAP      30       6
              *

1553          KK  CP11NA
1554          KM        ADD HYDROGRAPHS AT CP11NA
1555          HC       2
              *

1556          KK  SR11NA
1557          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB11NA.
1558          RS       1    STOR       0       0
1559          SV       0   .0462   1.425   2.480   3.109   3.856
1560          SQ       0      10      27      27      27     237
1561          SE    1734    1735    1740    1742    1743    1744
              *

1562          KK   R11NB
1563          KM        ROUTE FLOW FROM CP11NA TO CP11NB.
1564          RS       1    FLOW
1565          RC    .025    .025    .025     250     .03
1566          RX       0      12      24      36      56      68      80      92
1567          RY       6       4       2       0       0       2       4       6
              *

1568          KK  UB11NB
1569          KM        RUNOFF FROM SUBBASIN 11NB.
1570          BA   .0078
1571          LS              81       0
1572          UK     100     .04     .15     100
1573          RK     700    .025    .025            TRAP      30       6
              *
```



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

1574          KK  CP11NB
1575          KM        ADD HYDROGRAPHS AT CP11NB
1576          HC       2
              *

1577          KK  SR11NB
1578          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB11NB.
```

```
1579          RS       1    STOR       0       0
1580          SV       0    1.56   2.586
1581          SQ       0     27     111
1582          SE    1732    1737    1738
              *

1583          KK   R11NC
1584          KM        ROUTE FLOW FROM CP11NB TO CP11NC.
1585          RS       1    FLOW
1586          RC    .025    .025    .025     300     .03
1587          RX       0      12      24      36      56      68      80      92
1588          RY       6       4       2       0       0       2       4       6
              *

1589          KK  UB11NC
1590          KM        RUNOFF FROM SUBBASIN 11NC.
1591          BA   .0069
1592          LS              81       0
1593          UK     100     .03     .15     100
1594          RK     650    .028    .025            TRAP      20       5
              *

1595          KK  C11NC1
1596          KM        ADD HYDROGRAPHS AT CP11NC.1
1597          HC       2
              *

1598          KK  SUB10A
1599          KM        RUNOFF FROM SUBBASIN 10A.
1600          BA    .030
1601          LS              77      42
1602          UK     100    .015     .15     100
1603          RK     350    .008    .018            TRAP      50      20
1604          RK     800    .008    .025            TRAP      10       4
              *

1605          KK   R12NB
1606          KM        ROUTE FLOW FROM CP10A TO CP12NB.
1607          RS       1    FLOW
1608          RC    .025    .025    .025     400     .03
1609          RX       0      12      24      36      46      58      70      82
1610          RY       6       4       2       0       0       2       4       6
              *
```



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

1611          KK  UB12NA
1612          KM        RUNOFF FROM SUBBASIN 12NA.
1613          BA   .0153
1614          LS              81       0
1615          UK     150    .025     .15     100
1616          RK     650    .017    .025            TRAP      30       6
              *

1617          KK  SR12NA
1618          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB1NA.
1619          RS       1    STOR       0       0
1620          SV       0    2.16   3.426   5.071
1621          SQ       0       1       2     142
1622          SE    1741    1745    1746    1747
              *

1623          KK   R12NA
1624          KM        ROUTE FLOW FROM CP12NA TO CP12NB.
1625          RS       1    FLOW
1626          RC    .025    .025    .025     550    .025
1627          RX       0      12      24      36      46      58      70      82
1628          RY       6       4       2       0       0       2       4       6
              *

1629          KK  UB12NB
1630          KM        RUNOFF FROM SUBBASIN 12NB.
1631          BA   .0157
1632          LS              81       0
1633          UK     150    .025     .15     100
1634          RK     650    .017    .025            TRAP      30       6
              *

1635          KK  CP12NB
1636          KM        ADD 3 HYDROGRAPHS AT CP12NB
1637          HC       3
              *

1638          KK  SR12NB
1639          KM        STOAGE ROUTE THROUGH FAIRWAY DETENTION AREA IN SUB12NB.
1640          RS       1    STOR       0       0
1641          SV       0    .922    4.24    7.53
1642          SQ       0       2       2     142
1643          SE    1741    1745    1746    1747
              *
```

```
1644          KK  R11NC2
1645          KM        ROUTE FLOW FROM CP12NA TO CP11NC.
1646          RS       1    FLOW
1647          RC    .025    .025    .025     550     .01
1648          RX       0      12      24      36      46      58      70      82
1649          RY       6       4       2       0       0       2       4       6
              *
```



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

1650          KK  CP11NC
1651          KM        ADD HYDROGRAPHS  AT CP11NC
1652          HC       2
              *

1653          KK  SR11NC
1654          KM        ROUTE FLOW THROUGH RETENTION BASIN RT11NC.  18" PIPE OUTFLOW WILL
1655          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
1656          RS       1    STOR       0       0
1657          SV       0   1.665   2.303   3.062
1658          SQ       0      27     111     344
1659          SE    1730    1735    1736    1737
              *

1660          KK   R16NC
1661          KM        ROUTE FLOW FROM CP11NC TO CP16NC.
1662          RS       1    FLOW
1663          RC    .035    .035   0.035     950    .025
1664          RX       0       8      13      17      22      26      31      39
1665          RY       4       2       2       0       0       2       2       4
              *

1666          KK  UB16NC
1667          KM        RUNOFF FROM SUBBASIN 16NC.
1668          BA   .0337
1669          LS              77      42
1670          UK     100    .015     .15     100
1671          RK    1600    .015    .022            TRAP      50      20
              *

1672          KK  CP16NC
1673          KM        ADD HYDROGRAPHS  AT CP16NC
1674          HC       2
              *

1675          KK  R16NC1
1676          KM        ROUTE FLOW FROM CP16NC TO CP16NC1.
1677          RS       1    FLOW
1678          RC     .03     .03     .03     550    .013
1679          RX       0      16      26      34      44      58      68      86
1680          RY       6       2       2       0       0       2       2       6
              *

1681          KK  C16NC1
1682          KM        ADD HYDROGRAPHS  AT CP16NC1.
1683          HC       2
              *

1684          KK   R15N1
1685          KM        ROUTE FLOW FROM CP16NC1 TO CP15N1.
1686          RS       1    FLOW
1687          RC    .035    .035    .035     600    .013
1688          RX       0      16      26      34      54      68      78      96
1689          RY       6       2       2       0       0       2       2       6
              *
```



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

1690          KK     PC2
1691          KM        RUNOFF FROM SUBBASIN PC2.
1692          BA    .054
1693          LS              77      10
1694          UK     100    .015     .15     100
1695          RK    2700     .01     .03            TRAP      50       4
              *

1696          KK  CP15N1
1697          KM        ADD HYDROGRAPHS  AT CP15N1
1698          HC       2
              *

1699          KK   SRPC2
1700          KM        STORAGE ROUTE THRU DETENTION BASINS IN POWER CORRIDOR THIS IS THE TOTAL
1701          KM        FLOW REACHING THE UPSTREAM SIDE OF THE THOMPSON PEAK PARKWAY BRIDGE
1702          RS       1    STOR       0       0
1703          SV       0    1.02    2.70    4.48     5.8     6.9
1704          SQ       0       0     150     350     550     850
1705          SE    1730    1731    1732    1733    1734    1735
              *
```

```
1706          KK  UB17NA
1707          KM        RUNOFF FROM SUBBASIN SUB17NA.
1708          BA  .00979
1709          LS              81       0
1710          UK     150    .025     .05     100
1711          RK     960   .0292    .025            TRAP      30      50
              *

1712          KK  SR17NA
1713          KM        STORAGE ROUTE,THROUGH DETENTION BASIN SR17NA.
1714          RS       1    STOR       0       0
1715          SV       0   .0078    .241    .523    1.00   1.735
1716          SQ       0       1       1       1    17.4     251
1717          SE  1755.2    1756    1758    1759    1760    1761
              *

1718          KK   R17NB
1719          KM        ROUTE FLOW FROM SR17NA TO CP17NB.
1720          RS       1    FLOW
1721          RC    0.03    0.03    0.03     280  0.0286
1722          RX       0      10      20      35      70      85      90     100
1723          RY    1757  1756.8  1756.6    1756    1756    1757    1758    1759
              *

1724          KK  UB17NB
1725          KM        RUNOFF FROM SUBBASIN SUB17NB.
1726          BA   .0111
1727          LS              81       0
1728          UK     150    .025     .05     100
1729          RK    1200   .0217    .025            TRAP      30      50
              *
1                                        HEC-1 INPUT                                                PAGE 49

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

1730          KK  CP17NB
1731          KM        ADD HYDROGRAPHS AT SUB17NB.
1732          HC       2
              *

1733          KK  SR17NB
1734          KM        STORAGE ROUTE THROUGH DETENTION BASIN SR17NB.
1735          RS       1    STOR       0       0
1736          SV       0   .0113   .1469    .635   .9795   1.509   2.254   3.243
1737          SQ       0       1       1       1       1       1    38.2     189
1738          SE  1751.5    1752    1753    1755    1756    1757    1758    1759
              *

1739          KK    R17A
1740          KM        ROUTE FLOW FROM SR17NB TO CP17A.
1741          RS       1    FLOW
1742          RC    0.03    0.03    0.03     280   0.033
1743          RX       0      15      18      20      24      27      30      35
1744          RY    1755    1754    1753    1752    1752    1753    1754    1755
              *

1745          KK  SUB17A
1746          KM        RUNOFF FROM SUBBASIN SUB17A.
1747          BA  .00792
1748          LS              77      34
1749          UK      75     .03     .05     100
1750          RK    1500     .02    .025            TRAP       8       4
              *

1751          KK  CP17A1
1752          KM        ADD HYDROGRAPHS AT CP17A1.
1753          HC       2
              *

1754          KK  UB17NC
1755          KM        RUNOFF FROM SUBBASIN SUB17NC.
1756          BA  .00559
1757          LS              77      12
1758          UK      75     .03     .05     100
1759          RK     910   .0187    .025            TRAP       8       4
              *

1760          KK   CP17A
1761          KM        ADD ALL HYDROGRAPHS AT CP17A.
1762          HC       2
              *

1763          KK    R15N
1764          KM        ROUTE FLOW FROM CP17A TO CP15N.
1765          RS       1    FLOW
1766          RC    .035    .035    .035    1950    .025
1767          RX       0       8      13      17      22      26      31      39
1768          RY       4       2       2       0       0       2       2       4
              *
1                                        HEC-1 INPUT                                                PAGE 50
```

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

1769          KK  SUB15N
1770          KM        RUNOFF FROM SUBBASIN 15N.
1771          BA   .0391
1772          LS              77      68
1773          UK     100     .01     .15     100
1774          RK     400    .008    .018            TRAP      50      20
1775          RK    1700    .015    .025            TRAP      10       4
              *

1776          KK   CP15N
1777          KM        ADD HYDROGRAPHS  AT CP15N
1778          HC       2
              *

1779          KK   R15N2
1780          KM        ROUTE FLOW FROM CP15N TO CP15N1.
1781          RS       1    FLOW
1782          RC     .02     .02     .02     700    .013
1783          RX       0       8      13      17      22      26      31      39
1784          RY       6       2       2       0       0       2       2       6
              *

1785          KK  CP15N2
1786          KM        ADD HYDROGRAPHS  AT CP15N1
1787          KM        THIS IS THE INTERIM OUTFLOW DISCHARGE TO NATURAL WASH.
1788          HC       2  1.1611
              *

1789          KK   R15N2
1790          KM        ROUTE 15N2 IS ADDED BY GVSCE TO ROUTE THE HYDROGRAPH FROM CP15N2 TO THE
1791          KM        POWER LINE CHANNEL CROSSING AT HAYDEN RD.
1792          KM
1793          KM        ROUTE FLOW FROM CP15N2 TO CPC3A.
1794          RS       1    FLOW      -1
1795          RC    .035    .035    .035    2200    .013
1796          RX       0      16      26      34      64      78      88     106
1797          RY       6       2       2       0       0       2       2       6
              *

1798          KK    DPC3
1799          KM        THIS OPERATION IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1800          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1801          KM
1802          KM        RETRIEVE DIVERTED FLOW
1803          DR   BPC3T
              *

1804          KK   CPC3A
1805          KM        COMBINE CPC3A IS ADDED BY GVSCE TO ESTIMATE THE TOTAL DISCHARGE AT THE
1806          KM        POWER LINE CHANNEL CROSSING AT HAYDEN RD.
1807          KM
1808          KM        COMBINE ROUTED HYDROGRAPH FROM CP15N2 WITH HYDROGRAPH FROM CPC3
1809          HC       2  1.3446
              *
```



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

1810          KK   RPC3A
1811          KM        ROUTE PC3A IS ADDED BY GVSCE TO ROUTE THE HYDROGRAPH FROM CPC3A VIA
1812          KM        THE POWER LINE CHANNEL.
1813          KM
1814          KM        ROUTE FLOW FROM CP15N2 TO CPC3A.
1815          RS       1    FLOW      -1
1816          RC    .035    .035    .035    1100    .013
1817          RX       0      16      26      34      64      78      88     106
1818          RY       6       2       2       0       0       2       2       6
              *

1819          KK    DPC4
1820          KM        THIS OPERATION IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
1821          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1822          KM
1823          KM        RETRIEVE DIVERTED FLOW
1824          DR   BPC4T
              *

1825          KK   CPC4A
1826          KM        COMBINE CPC4A IS ADDED BY GVSCE TO ESTIMATE THE TOTAL DISCHARGE IN THE
1827          KM        POWER LINE CHANNEL
1828          KM
1829          KM        COMBINE ROUTED HYDROGRAPH FROM CPC3A WITH HYDROGRAPH FROM CPC4
1830          HC       2  1.9946
              *

1831          KK   RPC4A
1832          KM        ROUTE PC4A IS ADDED BY GVSCE TO ROUTE THE HYDROGRAPH FROM CPC4A TO THE
1833          KM        POWER LINE CHANNEL CROSSING AT HUALAPAI RD.
1834          KM
```

```
1835          KM        ROUTE FLOW FROM CPC4A TO CPC5.
1836          RS      1    FLOW      -1
1837          RC   .035    .035    .035    1900    .013
1838          RX      0      16      26      34      64      78      88     106
1839          RY      6       2       2       0       0       2       2       6
              *

1840          KK  DPC4AT
1841          KM        DIVERT PC4A IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE UNION
1842          KM        HILLS DETENTION BASIN VIAL THE POWER LINE CHANNEL.
1843          KM
1844          KM        DIVERT 100% OF FLOW
1845          DT  BPC4AT
1846          DI      0   10000
1847          DQ      0   10000
              *

1848          KK  SUB1-2
1849          KM        RUNOFF FROM SUB 1 AND 2, SOUTH COURSE MODEL
1850          BA   .0558
1851          LS              77      68
1852          UK     200    .010     .15     100
1853          RK    1370    .027    .015            TRAP      50      20
              *
1                                          HEC-1 INPUT                                          PAGE 52

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

1854          KK  GCRB18
1855          KM        RUNOFF FROM GOLF COURSE CONTRIBUTING TO RETENTION BASIN AT HOLE NO. 18
1856          KM        AND HOLE NO. 10, SOUTH COURSE
1857          BA    .012
1858          LS              81       0
1859          UK     200    .025     .15     100
1860          RK     300    .016    .025            TRAP      10       4
              *

1861          KK  CPRET1
1862          KM        COMBINE HYDROGRAPHS AT RETENTION BASINS ON HOLE 18 & 10
1863          HC       2
              *

1864          KK   SR18S
1865          KM        STORAGE ROUTE THRU RETENTION BASIN AT HOLE 18, SOUTH COURSE
1866          RS      1    STOR       0       0
1867          SV      0  1.7635  5.7722  12.174  21.337  28.849  30.151      32
1868          SE   1725    1730    1735    1740    1745    1748    1749    1750
1869          SQ      0       0       0       0       0      42     386     900
              *

1870          KK   SUB5S
1871          KM        RUNOFF FROM SUB 5S
1872          BA   .0263
1873          LS              77      31
1874          UK     100    .010     .15     100
1875          RK    1280    .007    .015            TRAP      50      20
              *

1876          KK  GC1216
1877          KM        RUNOFF FROM SOUTH GOLF COURSE HOLES 12, 16, AND 17
1878          BA   .0365
1879          LS              81       0
1880          UK     200    .025     .15     100
1881          RK    2200    .024    .025            TRAP      10       4
              *

1882          KK  GC1415
1883          KM        RUNOFF FROM SOUTH GOLF COURSE HOLES 13, 14, 15 AND RETENTION
1884          BA    .045
1885          LS              81       0
1886          UK     200    .025     .15     100
1887          RK    1300    .022    .025            TRAP      10       4
              *

1888          KK   SUB6S
1889          KM        RUNOFF FROM SUB BASIN 6, SOUTH COURSE
1890          BA    .021
1891          LS              77      42
1892          UK     100    .010     .15     100
1893          RK    2150    .013    .025            TRAP      50      20
              *
1                                          HEC-1 INPUT                                          PAGE 53

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

1894          KK   SUB7S
1895          KM        RUNOFF FROM SUB BASIN 7, SOUTH COURSE
1896          BA    .027
1897          LS              77      42
1898          UK     100    .010     .15     100
1899          RK    2080    .023    .025            TRAP      50      20
```

```
                 *
1900             KK  CPRET2
1901             KM        COMBINE HYDROGRAPHS AT RETENTION BASIN 2, SOUTH COURSE
1902             HC       5
                 *

1903             KK  SRRET2
1904             KM        STORAGE THRU RETENTION BASIN NO. 2, SOUTH COURSE
1905             RS       1    STOR       0       0
1906             SV       0    .617   3.474   9.858  20.063  35.353  52.685  57.749      62
1907             SE    1670    1675    1680    1685    1690    1695    1699    1700    1701
1908             SQ       0       0       0       0       0       0      32     386     594
                 *
                 *       NO FLOW RELEASED FROM RETENTION BASIN
                 *

1909             KK   CLEAR
1910             KM        THIS OPERATION IS ADDED BY GVSCE
1911             KM
1912             KM        CLEAR HYDROGRAPHS FROM THE STACK
1913             HC       4
                 *

1914             KK   SUB8S
1915             KM        RUNOFF FROM SUB BASIN 8, SOUTH COURSE
1916             BA   .0256
1917             LS              77      42
1918             UK     100    .010     .15     100
1919             RK    1600    .015    .025            TRAP      50      20
                 *

1920             KK   RGC36
1921             KM        ROUTE SUB8S TO CPGC36
1922             RS       1    FLOW
1923             RC    .055    .045    .055     850     .02
1924             RX       0      16      26      30      40      44      54      70
1925             RY       6       2       2       0       0       2       2       6
                 *

1926             KK    GC36
1927             KM        RUNOFF FROM SOUTH COURSE HOLES 3, 6, AND NORTH HALF OF HOLE 4.
1928             BA   .0406
1929             LS              81       0
1930             UK     200    .025     .15     100
1931             RK    2350    .015    .035            TRAP      10       4
                 *
```



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

1932             KK  C1GC36
1933             KM        COMBINE SUBS 8 AND GC36
1934             HC       2
                 *

1935             KK   SUB9S
1936             KM        RUNOFF FROM SUB BASIN 9, SOUTH COURSE
1937             BA    .021
1938             LS              77      53
1939             UK     100    .010     .15     100
1940             RK    1100    .013    .025            TRAP      50      20
                 *

1941             KK     R9S
1942             KM        ROUTE SUB9S TO CPGC36
1943             RS       1    FLOW
1944             RC    .035    .035    .035     500     .02
1945             RX       0       8      12      16      18      22      26      30
1946             RY       6       4       3       2       2       3       4       6
                 *

1947             KK  CPGC36
1948             KM        COMBINE SUBS 8 AND 9 SOUTH AND GC36
1949             HC       2
                 *

1950             KK  SRGC36
1951             KM        STORAGE THRU DETENTION BASIN ON GC36
1952             RS       1    STOR       0       0
1953             SV       0    0.85     1.0
1954             SE    1664    1668    1669
1955             SQ       0      20     205
                 *

1956             KK   SUB7A
1957             KM        RUNOFF FROM SUB7A, SOUTH COURSE EAST SIDE ADJACENT TO PIMA ROAD
1958             BA   .0092
1959             LS              77      42
1960             UK     100    .025     .15     100
1961             RK     950    .015    .025            TRAP      50      20
                 *
```

```
1962          KK    SR7A
1963          KM        STORAGE THRU DETENTION BASIN ON SUB7A
1964          RS       1    STOR       0       0
1965          SV       0     .68      .8
1966          SE    1700    1703    1704
1967          SQ       0      10     150
              *
```



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

1968          KK    R10S
1969          KM        ROUTE FLOW FROM CP7A TO CP10S
1970          RS       1    FLOW
1971          RC    .035    .035    .035    1400    .015
1972          RX       0       8      12      16      18      22      26      30
1973          RY       6       4       3       2       2       3       4       6
              *

1974          KK  SUB10S
1975          KM        RUNOFF FROM SUB BASIN 10, SOUTH COURSE
1976          BA   .0248
1977          LS              77      53
1978          UK     100    .010     .15     100
1979          RK    1150    .020    .025            TRAP      50      20
              *

1980          KK   CP10S
1981          KM        COMBINE HYDROGRAPHS AT CP10 SOUTH COURSE
1982          HC       2
              *

1983          KK  SUB11S
1984          KM        RUNOFF FROM SUB11, SOUTH COURSE
1985          BA   .0234
1986          LS              77      68
1987          UK     100    .015    .018     100
1988          RK    1050    .015    .025            TRAP     100      20
              *

1989          KK    R11S
1990          KM        ROUTE 11S IS ADDED BY GVSCE TO ROUTE THE RUNOFF FROM SUB11S TO THE
1991          KM        POWER LINE CHANNEL CROSSING AT HUALAPAI DR ALONG HUALAPAI DR.
1992          KM
1993          KM        ROUTE FLOW FROM SUB11S TO CPC5.
1994          RS       1    FLOW      -1
1995          RC    .035    .035    .035     900    .015
1996          RX       0       8      12      16      18      22      26      30
1997          RY       6       4       3       2       2       3       4       6
              *

1998          KK   C10SA
1999          KM        COMBINE 10SA IS ADDED BY GVSCE
2000          KM
2001          KM        COMBINE ROUTED HYDROGRAPH FROM 11S WITH HYDROGRAPH FROM CP10S
2002          HC       2
              *

2003          KK   R10SA
2004          KM        ROUTE 10SA IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE UNION
2005          KM        HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
2006          KM
2007          KM        ROUTE FLOW FROM C10SAS TO CPC5.
2008          RS       1    FLOW      -1
2009          RC    .035    .035    .035     900    .015
```



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

2010          RX       0       8      12      16      18      22      26      30
2011          RY       6       4       3       2       2       3       4       6
              *

2012          KK    GC45
2013          KM        RUNOFF FROM SOUTH COURSE HOLES 4 AND 5
2014          BA   .0127
2015          LS              81       0
2016          UK     200    .015    .025     100
2017          RK     550    .015    .035            TRAP      10       4
              *

2018          KK     PC5
2019          KM        PC5 IS A SUBBASIN ADDED BY GVSCE TO ESTIMATE THE SURFACE RUNOFF FROM
2020          KM        THE POWER LINE CORRIDOR WHICH ENTERS THE POWER LINE CHANNEL
2021          KM
2022          KM        RUNOFF FROM SUBBASIN PC5.
2023          BA  0.0375
2024          LS              77       0
2025          UK     300    .015     .15     100
2026          RK    1900     .01     .03            TRAP      30       4
              *
```

```
2027          KK   DPC4A
2028          KM        THIS OPERATION IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE
2029          KM        UNION HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
2030          KM
2031          KM        RETRIEVE DIVERTED FLOW
2032          DR  BPC4AT
              *

2033          KK    CPC5
2034          KM        COMBINE PC5 IS ADDED BY GVSCE TO ESTIMATE THE TOTAL FLOW IN THE POWER
2035          KM        LINE CHANNEL AT THE HUALAPAI CROSSING
2036          KM
2037          KM        COMBINE ROUTED HYDROGRAPH FROM C10SA AND CPC4A WITH HYDROGRAPHS FROM
2038          KM        CGC45, SRGC36 AND PC5
2039          HC       5  2.1022
              *
              *     ******************  END GREYHAWK WATERSHED  ******************
              *

2040          KK     RC5
2041          KM       ROUTE CPC5 THROUGH SUBBASIN CN5C TO UNION HILLS BASIN
2042          RS       1    FLOW      -1
2043          RC    .035    .035    .035    2000    .013
2044          RX       0      16      26      34      64      78      88     106
2045          RY       6       2       2       0       0       2       2       6
              *
1                                          HEC-1 INPUT                                          PAGE 57

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


2046          KK   SCN5C
2047          KM     RUNOFF FROM SUBBASIN CN5C
2048          BA  0.2629
2049          LS              74      50
2050          UK     240   0.025    0.13     100
2051          RK    1200   0.015    0.04  0.0248    TRAP       0       5
2052          RK    1500   0.005    0.03            TRAP       6       2
              *

2053          KK   SCN6D
2054          KM     RUNOFF FROM SUBBASIN CN6D (CAP TREATMENT PLANT)
2055          KM      TOTAL AREA = 0.0246 sm, 0.0045 sm OF THAT IS NON-CONTRIBUTING
2056          BA  0.0201
2057          LS              74      80              74       0
2058          UK     100    0.01    0.15      80
2059          UK     100   0.025    0.13      20
2060          RK     600   0.015   0.025  0.0036    TRAP       0       5
2061          RK     400    0.01   0.025            TRAP       6       2
              *

2062          KK   SCN6C
2063          KM     RUNOFF FROM SUBBASIN CN6C (WATER CAMPUS AND CAP TREATMENT PLANT)
2064          KM      TOTAL AREA = 0.1101 sm, 0.0093 sm OF THAT IS NON-CONTRIBUTING
2065          BA  0.1008
2066          LS              74      80              74       0
2067          UK     150    0.01    0.15      50
2068          UK     100   0.025    0.13      50
2069          RK    1140    0.01    0.03  0.0123    TRAP       5      10
2070          RK    1320   0.015    0.04  0.0095    TRAP       0       5
2071          RK    1100   0.015   0.024            CIRC       5
              *

2072          KK     D52
2073          KM     BRING BACK DIVERTED HYDROGRAPH FROM R52
2074          DR    B52T
              *

2075          KK    S53A
2076          KM     RUNOFF FROM SUBBASIN 53A
2077          BA  0.1794
2078          LS              74      11
2079          UK     300   0.022    0.13     100
2080          RK    1475   0.026   0.045  0.0111    TRAP       3       5
2081          RK    1750   0.021    0.04            TRAP      25       5
              *

2082          KK     C53
2083          KM     COMBINE ROUTED HYDROGRAPH FROM FROM C52 WITH RUNOFF FROM SUBBASIN 53A
2084          HC       2  8.0954
              *
              *    R53
              *   ****  TOO SHORT TO ROUTE  ****
              *    NORMAL DEPTH CHANNEL ROUTE FROM C53 TO C53A1 THROUGH PIMA CHANNEL
              *       1    FLOW      -1
              *  0.022   0.022   0.022    1550    0.01
              *   1000    1012    1020    1028    1058    1066    1074    1086
              *    107     104     102     100     100     102     104     107
              *
1                                          HEC-1 INPUT                                          PAGE 58

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

```
2085          KK   S53A1
2086          KM     RUNOFF FROM SUBBASIN 53A1
2087          BA  0.3320
2088          LS              74       12              74       30
2089          UK     300   0.022    0.13      70
2090          UK     150   0.027    0.13      30
2091          RK    1250   0.023   0.045  0.0087    TRAP       4       5
2092          RK    5050   0.017    0.04            TRAP      35       5
              *

2093          KK   C53A1
2094          KM     COMBINE ROUTED HYDROGRAPH FROM C53 WITH RUNOFF FROM SUBBASSIN 53A1
2095          HC       2  8.4274
              *

2096          KK   SCN6B
2097          KM     RUNOFF FROM SUBBASIN CN6B (WATER CAMPUS)
2098          KM      TOTAL AREA = 0.0542 sm, 0.0022 sm OF THAT IS NON-CONTRIBUTING
2099          BA  0.0520
2100          LS              74       80              74        0
2101          UK     150    0.01    0.15      70
2102          UK     100   0.025    0.13      30
2103          RK     720    0.02    0.03  0.0084    TRAP       5      10
2104          RK     700    0.01   0.045  0.0050    TRAP       0      10
2105          RK     440   0.009   0.035            TRAP       6       3
              *

2106          KK    C53A
2107          KM     COMBINE HYDROGRAPH FROM C53A WITH RUNOFF FROM SUBBASIN CN6B
2108          HC       2
              *

2109          KK   SCN6E
2110          KM     RUNOFF FROM SUBBASIN CN6E
2111          BA  0.0852
2112          LS              74        5
2113          UK     300    0.01    0.15     100
2114          RK    1400    0.01   0.035            TRAP      20       4
              *

2115          KK  UHDB-I
2116          KM     COMBINE RUNOFF FROM SCN5C, SCN6D, SCN6C AND SCN6E W/ HYDROGRAPHS FROM C53A
2117          KM     AND CPC5
2118          HC       6
              *

2119          KK  UHDB-O
2120          KM     DETENTION BASIN AT UNION HILLS ROAD - NONREGULATORY STRUCTURE
2121          KM        PRINCIPAL SPILLWAY:  CONDUIT EXTENDING TO USBR BASIN AT THE TPC
2122          KM        EMERGENCY SPILLWAY:  NO OVERTOPPING FOR 24-HOUR STORM
2123          KM        7 ACRE-FEET OF STORAGE FOR SEDIMENTAION
2124          RS       1    STOR      -1
2125          SV       0     1.6    41.7   137.3   246.6   371.0
2126          SE    1585    1590    1595    1600    1605    1610
```



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

2127          SQ       0      50     100     200     400     500     527     629     657     679
2128          SQ     698     800     814
2129          SE  1585.0 1587.03 1588.27 1590.10 1592.88 1594.32 1596.46 1601.65 1601.75 1601.85
2130          SE  1602.3 1608.62 1609.62
              *
              *    RC1
              *     UNION HILLS BASIN OUTLET CONDUIT TO INTERSECTION OF PIMA ROAD AND LOOP 101
              *       L =       feet
              *

2131          KK     S54
2132          KM     RUNOFF FROM SUBBASIN 54
2133          BA  0.0853
2134          LS              74       50
2135          UK     300   0.017    0.13     100
2136          RK    3460   0.012   0.040            TRAP       5       2
              *

2137          KK   SCN6A
2138          KM     RUNOFF FROM SUBBASIN CN6A
2139          BA  0.1335
2140          LS              74       50
2141          UK     300   0.017    0.13     100
2142          RK    1050   0.017   0.045  0.0057    TRAP       8      20
2143          RK    2250   0.012   0.040            TRAP      10       4
              *

2144          KK    CN6A
2145          KM     COMBINE RUNOFF FROM  S54 WITH RUNOFF FROM SCN6A AT CN6A
2146          HC       2
              *

2147          KK     C1A
```

```
          2148          KM     COMBINE ROUTED HYDROGRAPH FROM UHDB-O WITH HYDROGRAPH FROM CN6A AT C1A
          2149          HC       2
                        *
          2150          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (---->) DIVERSION OR PUMP FLOW

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

   20         S30N
                V
                V
   29         R30N
                .
                .
   35           .      S31.1
                .          .
                .          .
   43       C31.1............
                .
                .
   46           .      S34.2
                .          .
                .          .
   55       C34.2............
                .
                .
   58           .       S35N
                .          .
                .          .
   70           .          .-------> D35NL
   66           .      D35NR
                .          V
                .          V
   73           .      R35NR
                .          .
                .          .
   80           .          .      S36.2
                .          .          .
                .          .          .
   88           .      C36.2............
                .          .
                .          .
   95           .          .-------> D36.2L
   91           .     D36.2R
                .          V
                .          V
   98           .     R36.2R
                .          .
                .          .
  105           .          .      S34.1
                .          .          .
                .          .          .
  114           .      C34.1............
                .          .
                .          .
  117      HVDB-I............
                V
                V
  120      HVDB-O
                V
                V
  134       R34.1
                .
                .
  140           .      S36.1
                .          .
                .          .
  147       C36.1............
                V
                V
  150       R36.1
                .
                .
  158           .          .<-------  D35NL
  156           .      B35NL
                .          V
                .          V
  159           .      R35NL
                .          .
                .          .
  168           .          .          .<-------  D36.2L
  166           .          .     B36.2L
                .          .          V
                .          .          V
  169           .          .     R36.2L
                .          .          .
                .          .          .
  176           .          .          .     S36R1A
                .          .          .          .
                .          .          .          .
```

```
184     C36R1A...................................
            .
            .
189         .      S36R1B
            .          .
            .          .
197     C36R1B............
            .
            .
200         .      S36R2A
            .          .
            .          .
207     C36R2A............
            V
            V
210     R36R2A
            .
            .
222         .      S36R2B
            .          .
            .          .
229     C36R2B............
            .
            .
232         .       S51.1
            .          .
            .          .
240     DVDB-I............
            V
            V
243     DVDB-O
            .
            .
259         .-------> B51.1T
257     D51.1T
            .
            .
262         .        52D4
            .          V
            .          V
268         .       52D4R
            .          .
            .          .
271         .          .       52D4B
            .          .          .
            .          .          .
277         .      52D5C1............
            .          .
            .          .
280         .          .       52D5A
            .          .          V
            .          .          V
286         .          .      52D5AR
            .          .          .
            .          .          .
289         .      52D5C2............
            .          V
            .          V
292         .       52D5R
            .          .
            .          .
295         .          .        52C3
            .          .          V
            .          .          V
301         .          .       52C3R
            .          .          .
            .          .          .
304         .          .          .       52C3B
            .          .          .          .
            .          .          .          .
310         .          .      2C3BC1............
            .          .          .
            .          .          .
313         .      2C3BC2............
            .          V
            .          V
316         .      52C3BR
            .          .
            .          .
319         .          .         51C
            .          .          .
            .          .          .
327         .          .          .-------> 51C1DV
325         .          .       51C1D
            .          .          V
            .          .          V
330         .          .       51C1R
            .          .          .
            .          .          .
333         .          .          .        52C1
            .          .          .          .
            .          .          .          .
339         .          .       52C1C............
```

```
                 .          .          V
                 .          .          V
342              .          .      52C1R
                 .          .          .
                 .          .          .
345              .          .          .       52C2A
                 .          .          .          .
                 .          .          .          .
351              .          .     52C2AC...........
                 .          .          .
                 .          .          .
354              .          .          .       52C2B
                 .          .          .          .
                 .          .          .          .
360              .          .     52C2BC...........
                 .          .          V
                 .          .          V
363              .          .     52C2BR
                 .          .          .
                 .          .          .
366              .          .          .       52C2C
                 .          .          .          .
                 .          .          .          .
372              .          .     52C2CC...........
                 .          .          V
                 .          .          V
375              .          .      52C2R
                 .          .          .
                 .          .          .
378              .          .          .        52C4
                 .          .          .          .
                 .          .          .          .
384              .          .     52C4C1...........
                 .          .          .
                 .          .          .
387              .     52C4C2...........
                 .          V
                 .          V
390              .      52C4R
                 .          .
                 .          .
393              .          .      52C13
                 .          .          .
                 .          .          .
401              .          .          .-------> STORM
399              .          .     2C13DV
                 .          .          .
                 .          .          .
404              .          .          .       52C15
                 .          .          .          .
                 .          .          .          .
410              .          .     2C15C1...........
                 .          .          .
                 .          .          .
413              .     2C15C2...........
                 .          V
                 .          V
416              .     52C15R
                 .          .
                 .          .
419              .          .     52C14A
                 .          .          .
                 .          .          .
425              .     2C14AC...........
                 .          V
                 .          V
428              .     2C14AR
                 .          .
                 .          .
433              .          .<------- 51C1DV
431              .          .     51C1DV
                 .          .          .
                 .          .          .
436              .          .          .-------> 51C2DV
434              .          .      51C2D
                 .          .          V
                 .          .          V
439              .          .      51C2R
                 .          .          .
                 .          .          .
442              .          .          .        52C5
                 .          .          .          .
                 .          .          .          .
448              .          .     52C5C...........
                 .          .          V
                 .          .          V
451              .          .     52C5R
                 .          .          .
                 .          .          .
454              .          .          .        52C6
                 .          .          .          .
                 .          .          .          .
460              .          .     52C6C...........
```

```
                 .         .         V
                 .         .         V
463              .         .      52C6R
                 .         .         .
                 .         .         .
468              .         .         .          .<-------  51C2DV
466              .         .         .     51C2DV
                 .         .         .         V
                 .         .         .         V
469              .         .         .      51C3R
                 .         .         .         .
                 .         .         .         .
472              .         .         .         .        51B
                 .         .         .         .          .
                 .         .         .         .          .
480              .         .         .         .          .-------> 51B1DV
478              .         .         .         .      51B1D
                 .         .         .         .          V
                 .         .         .         .          V
483              .         .         .         .      51B1R
                 .         .         .         .          .
                 .         .         .         .          .
486              .         .         .         .          .        52C7
                 .         .         .         .          .          .
                 .         .         .         .          .          .
492              .         .         .      52C7C.......................
                 .         .         .         V
                 .         .         .         V
495              .         .         .      52C7R
                 .         .         .         .
                 .         .         .         .
500              .         .         .         .          .<-------  51B1DV
498              .         .         .         .     51B1DV
                 .         .         .         .          .
                 .         .         .         .          .
503              .         .         .         .          .-------> 51B2DV
501              .         .         .         .      51B2D
                 .         .         .         .          V
                 .         .         .         .          V
506              .         .         .         .      51B2R
                 .         .         .         .          .
                 .         .         .         .          .
509              .         .         .         .          .        52C8
                 .         .         .         .          .          .
                 .         .         .         .          .          .
515              .         .         .         .      52C8C............
                 .         .         .         .          V
                 .         .         .         .          V
518              .         .         .         .      52C8R
                 .         .         .         .          .
                 .         .         .         .          .
521              .         .         .     52C9C1............
                 .         .         .         V
                 .         .         .         V
524              .         .         .     52C9R1
                 .         .         .         .
                 .         .         .         .
527              .         .         .         .        52C9
                 .         .         .         .          .
                 .         .         .         .          .
533              .         .         .     52C9C2............
                 .         .         .         V
                 .         .         .         V
536              .         .         .     52C9R2
                 .         .         .         .
                 .         .         .         .
539              .         .      2C10C1............
                 .         .         V
                 .         .         V
542              .         .      2C10R1
                 .         .         .
                 .         .         .
545              .         .         .      52C10
                 .         .         .         .
                 .         .         .         .
551              .         .      2C10C2............
                 .         .         .
                 .         .         .
554              .         .         .      52C11
                 .         .         .         V
                 .         .         .         V
560              .         .         .     2C11R1
                 .         .         .         .
                 .         .         .         .
565              .         .         .         .          .<-------   STORM
563              .         .         .         .     52C13D
                 .         .         .         .          .
                 .         .         .         .          .
566              .         .         .     52C11C............
                 .         .         .         V
                 .         .         .         V
569              .         .         .     2C11CR
                 .         .         .         .
```

```
572          .          .     2C11C2............
             .          .         V
             .          .         V
575          .          .     2C11R2
             .          .         .
             .          .         .
578          .          .         .       52C12
             .          .         .          .
             .          .         .          .
584          .          .     52C12C...........
             .          .         V
             .          .         V
587          .          .     52C12R
             .          .         .
             .          .         .
590          .          .         .     52C14B
             .          .         .          .
             .          .         .          .
596          .          .     C14BC1...........
             .          .         .
             .          .         .
599          .     C14BC2............
             .         V
             .         V
602          .     52C14R
             .          .
             .          .
607          .          .         .<-------  51B2DV
605          .          .     51B2DV
             .          .         .
             .          .         .
610          .          .         .-------> 51B3DV
608          .          .      51B3D
             .          .         V
             .          .         V
613          .          .      51B3R
             .          .         .
             .          .         .
616          .          .         .       52B1
             .          .         .          .
             .          .         .          .
622          .          .      52B1C...........
             .          .         V
             .          .         V
625          .          .      52B1R
             .          .         .
             .          .         .
630          .          .         .          .<-------  51B3DV
628          .          .         .     51B3DV
             .          .         .          .
             .          .         .          .
633          .          .         .          .-------> 51B4DV
631          .          .         .     51B4D
             .          .         .         V
             .          .         .         V
636          .          .         .     51B4R1
             .          .         .          .
             .          .         .          .
639          .          .     52B2C1...........
             .          .         V
             .          .         V
642          .          .     52B2R1
             .          .         .
             .          .         .
645          .          .         .       52B2
             .          .         .          .
             .          .         .          .
651          .          .     52B2C2...........
             .          .         V
             .          .         V
654          .          .     52B2R2
             .          .         V
             .          .         V
657          .          .     52B3R1
             .          .         .
             .          .         .
660          .          .         .       52B3
             .          .         .          .
             .          .         .          .
666          .          .     52B3C2...........
             .          .         V
             .          .         V
669          .          .     52B3R2
             .          .         .
             .          .         .
672          .          .         .       52B4
             .          .         .          .
             .          .         .          .
678          .          .      52B4C...........
             .          .         V
             .          .         V
681          .          .      52B4R
```

```
684                                  52B5
690                          52B5C1............
693                  52B5C2............
                        V
                        V
696                  52B5R
701                                  .<-------  51B4DV
699                          51B4DV
704                                  .-------> 51B5DV
702                           51B5D
                                 V
                                 V
707                           51B5R
712                                           .<-------  51B5DV
710                                     51B5DV
715                                           .-------> 51B6DV
713                                       51B6D
                                              V
                                              V
718                                       51B6R
723                                                     .<-------  51B6DV
721                                                 51B6DV
726                                                     .-------> 51B7DV
724                                                   51B7D
                                                        V
                                                        V
729                                                 51B7R1
732                           51B7C.......................
                                 V
                                 V
735                          51B7R2
738                                  52B6
744                           52B6C............
                                 V
                                 V
747                           52B6R
750                                  52B7
756                          52B7C1............
759                  52B7C2............
762                            52A2
768                  52A2C2............
773                                  .<-------  51B7DV
771                          51B7DV
                                 V
                                 V
774                           51B8R
777                                  52A1
783                           52A1C............
788                                           .<-------  B51.1T
786                                       D51.1
```

```
789          .          .          .          .
             .          .       C52A...........
             .          .          .
             .          .          .
793          .        C52...........
             .          V
             .          V
797          .        R52
             .          .
             .          .
805          .          .------->    B52T
803          .       D52T
             .          .
             .          .
808      CLEAR...........
             .
             .
811          .        37A
             .          .
             .          .
828          .          .------->    37AW
817          .       37AE
             .          V
             .          V
831          .      37AE1
             .          .
             .          .
838          .          .      SUB5N
             .          .          .
             .          .          .
845          .       CP5N...........
             .          V
             .          V
848          .      RET5N
             .          V
             .          V
855          .      R6N.1
             .          .
             .          .
863          .          .      SUB6B
             .          .          V
             .          .          V
869          .          .       SR6B
             .          .          .
             .          .          .
875          .      CP6.1...........
             .          .
             .          .
878          .          .      SUB1N
             .          .          V
             .          .          V
884          .          .       R2NA
             .          .          .
             .          .          .
890          .          .          .     SUB2NA
             .          .          .          .
             .          .          .          .
896          .          .      CP2NA...........
             .          .          V
             .          .          V
899          .          .      SR2NA
             .          .          V
             .          .          V
905          .          .       R2NB
             .          .          .
             .          .          .
911          .          .          .     SUB2NB
             .          .          .          .
             .          .          .          .
917          .          .      CP2NB...........
             .          .          V
             .          .          V
920          .          .      SR2NB
             .          .          V
             .          .          V
926          .          .      RCP4N
             .          .          .
             .          .          .
932          .          .          .      SUB6N
             .          .          .          V
             .          .          .          V
938          .          .          .      RET6N
             .          .          .          V
             .          .          .          V
944          .          .          .     RCP4N1
             .          .          .          .
             .          .          .          .
950          .          .     CP4N.1...........
             .          .          .
             .          .          .
953          .          .          .      SUB3N
             .          .          .          V
             .          .          .          V
```

```
 959          .           .           .       RET3N
              .           .           .          V
              .           .           .          V
 966          .           .           .        R4N
              .           .           .          .
              .           .           .          .
 972          .           .      CP4N.2...........
              .           .           .
              .           .           .
 975          .           .           .       SUB4N
              .           .           .          .
              .           .           .          .
 981          .           .        CP4N...........
              .           .           V
              .           .           V
 984          .           .         R6N
              .           .           .
              .           .           .
 990          .           .           .       SUB6A
              .           .           .          .
              .           .           .          .
 996          .           .      CP6.2...........
              .           .           .
              .           .           .
 999          .        CP6N...........
              .           V
              .           V
1002          .       RCP6N
              .           .
              .           .
1008          .           .      SUB3C
              .           .           .
              .           .           .
1014          .        CP3C...........
              .           V
              .           V
1017          .         R3C
              .           .
              .           .
1025          .           .     GC1018
              .           .           .
              .           .           .
1031          .           .           .      GC1-9
              .           .           .          .
              .           .           .          .
1037          .           .           .          .       SUB3S
              .           .           .          .          .
              .           .           .          .          .
1043          .        CP3S...................................
              .           V
              .           V
1046          .        RT3S
              .           .
              .           .
1052          .           .      SUB4S
              .           .           V
              .           .           V
1058          .           .       RT4S
              .           .           .
              .           .           .
1064          .           .           .      GC2-8
              .           .           .          .
              .           .           .          .
1070          .     1PGC28........................
              .           .
              .           .
1073          .           .     SUB3D3
              .           .           .
              .           .           .
1079          .     CPGC28...........
              .           V
              .           V
1082          .     SRGC28
              .           V
              .           V
1088          .        RT7S
              .           .
              .           .
1094          .           .         GC7
              .           .           .
              .           .           .
1100          .        CP7S...........
              .           .
              .           .
1108          .           .-------->    B7ST
1103          .        D7ST
              .           .
              .           .
1111       CLEAR............
              .
              .
1114          .     SUB3D1
              .           V
```

```
                 .          V
1119             .      RD1B1
                 .          .
                 .          .
1125             .          .      SUB3B1
                 .          .          .
                 .          .          .
1130             .      CP3B1............
                 .          V
                 .          V
1133             .      RB13F
                 .          .
                 .          .
1139             .          .       SUB3F
                 .          .          .
                 .          .          .
1145             .       CP3F............
                 .          .
                 .          .
1148             .          .      SUB3B2
                 .          .          V
                 .          .          V
1153             .          .      RB2E1
                 .          .          V
                 .          .          V
1159             .          .      RB2E2
                 .          .          .
                 .          .          .
1165             .          .          .      SUB3E1
                 .          .          .          .
                 .          .          .          .
1170             .          .      1CPE31............
                 .          .          .
                 .          .          .
1173             .          .          .      SUB3D2
                 .          .          .          V
                 .          .          .          V
1178             .          .          .      RD2E2
                 .          .          .          .
                 .          .          .          .
1184             .          .          .          .      SUB3E2
                 .          .          .          .          .
                 .          .          .          .          .
1189             .          .          .      CP3E2............
                 .          .          .          .
                 .          .          .          .
1192             .          .          .          .         PC3
                 .          .          .          .          .
                 .          .          .          .          .
1201             .       CPC3..................................
                 .          .
                 .          .
1213             .          .-------> BPC3T
1208             .      DPC3T
                 .          .
                 .          .
1216             .          .      SUB3E3
                 .          .          .
                 .          .          .
1221             .          .          .         PC4
                 .          .          .          .
                 .          .          .          .
1235             .          .          .          .          .<-------    B7ST
1230             .          .          .          .         D7S
                 .          .          .          .          .
                 .          .          .          .          .
1236             .          .       CPC4......................
                 .          .          .
                 .          .          .
1247             .          .          .-------> BPC4T
1242             .          .       DPC4T
                 .          .          .
                 .          .          .
1250        CLEAR......................
                 .
                 .
1256             .          .<-------    37AW
1253             .       37AW
                 .          V
                 .          V
1257             .       R14R
                 .          V
                 .          V
1264             .      RET141
                 .          V
                 .          V
1271             .      R14.1
                 .          .
                 .          .
1278             .          .      SUB13N
                 .          .          V
                 .          .          V
1284             .          .       R14.1
```

```
                .          .          .
                .          .          .
1290            .          .          .      SUB14N
                .          .          .          .
                .          .          .          .
1296            .       CP14.......................
                .          V
                .          V
1299            .      RET14
                .          V
                .          V
1306            .      R18.1
                .          .
                .          .
1312            .          .     SUB20N
                .          .          V
                .          .          V
1318            .          .        R19
                .          .          .
                .          .          .
1324            .          .          .      SUB19N
                .          .          .          .
                .          .          .          .
1330            .          .      CP19N............
                .          .          V
                .          .          V
1333            .          .      R18NC
                .          .          .
                .          .          .
1339            .          .          .      UB18NC
                .          .          .          .
                .          .          .          .
1345            .    CP18NC........................
                .          V
                .          V
1348            .       RPC1
                .          .
                .          .
1354            .          .     UB18NA
                .          .          V
                .          .          V
1360            .          .      1RPC1
                .          .          .
                .          .          .
1366            .          .          .      UB18NB
                .          .          .          V
                .          .          .          V
1372            .          .          .       2RPC1
                .          .          .          .
                .          .          .          .
1378            .          .          .          .         PC1
                .          .          .          .           .
                .          .          .          .           .
1384            .          .      1CPC1........................
                .          .          V
                .          .          V
1387            .          .      SRPC1
                .          .          .
                .          .          .
1393            .       CPC1............
                .          V
                .          V
1396            .    R16NA1
                .          .
                .          .
1402            .          .     UB16NA
                .          .          V
                .          .          V
1408            .          .     R16NA1
                .          .          .
                .          .          .
1414            .    C16NA1............
                .          V
                .          V
1417            .    R16NB1
                .          .
                .          .
1423            .          .     UB16NB
                .          .          V
                .          .          V
1429            .          .     R16NB1
                .          .          .
                .          .          .
1435            .    C16NB1............
                .          V
                .          V
1438            .    R16NC1
                .          .
                .          .
1444            .          .      SUB7N
                .          .          V
                .          .          V
1450            .          .       R8NC
```

```
                 .         .         .
                 .         .         .
1456             .         .         .      SUB8NA
                 .         .         .          V
                 .         .         .          V
1462             .         .         .      SR8NA
                 .         .         .          V
                 .         .         .          V
1468             .         .         .      R8NB
                 .         .         .          .
                 .         .         .          .
1474             .         .         .          .      SUB8NB
                 .         .         .          .          .
                 .         .         .          .          .
1480             .         .         .      CP8NB............
                 .         .         .          V
                 .         .         .          V
1483             .         .         .      SR8NB
                 .         .         .          V
                 .         .         .          V
1489             .         .         .      R8NC
                 .         .         .          .
                 .         .         .          .
1495             .         .         .          .      SUB8NC
                 .         .         .          .          .
                 .         .         .          .          .
1501             .         .     CP8NC........................
                 .         .         V
                 .         .         V
1504             .         .     SR8NC
                 .         .         V
                 .         .         V
1510             .         .     R9N
                 .         .         .
                 .         .         .
1516             .         .         .      SUB9N
                 .         .         .          .
                 .         .         .          .
1522             .         .     CP9N............
                 .         .         V
                 .         .         V
1525             .         .     R10B
                 .         .         .
                 .         .         .
1531             .         .         .      SUB10B
                 .         .         .          .
                 .         .         .          .
1538             .         .     CP10B............
                 .         .         V
                 .         .         V
1541             .         .     R11NA
                 .         .         .
                 .         .         .
1547             .         .         .      UB11NA
                 .         .         .          .
                 .         .         .          .
1553             .         .     CP11NA............
                 .         .         V
                 .         .         V
1556             .         .     SR11NA
                 .         .         V
                 .         .         V
1562             .         .     R11NB
                 .         .         .
                 .         .         .
1568             .         .         .      UB11NB
                 .         .         .          .
                 .         .         .          .
1574             .         .     CP11NB............
                 .         .         V
                 .         .         V
1577             .         .     SR11NB
                 .         .         V
                 .         .         V
1583             .         .     R11NC
                 .         .         .
                 .         .         .
1589             .         .         .      UB11NC
                 .         .         .          .
                 .         .         .          .
1595             .         .     C11NC1............
                 .         .         .
                 .         .         .
1598             .         .         .      SUB10A
                 .         .         .          V
                 .         .         .          V
1605             .         .         .      R12NB
                 .         .         .          .
                 .         .         .          .
1611             .         .         .          .      UB12NA
                 .         .         .          .          V
                 .         .         .          .          V
1617             .         .         .          .      SR12NA
```

```
                 .         .         .         .         V
                 .         .         .         .         V
1623             .         .         .         .      R12NA
                 .         .         .         .         .
                 .         .         .         .         .
1629             .         .         .         .         .     UB12NB
                 .         .         .         .         .         .
                 .         .         .         .         .         .
1635             .         .         .     CP12NB.......................
                 .         .         .         V
                 .         .         .         V
1638             .         .         .     SR12NB
                 .         .         .         V
                 .         .         .         V
1644             .         .         .     R11NC2
                 .         .         .         .
                 .         .         .         .
1650             .         .     CP11NC............
                 .         .         V
                 .         .         V
1653             .         .     SR11NC
                 .         .         V
                 .         .         V
1660             .         .      R16NC
                 .         .         .
                 .         .         .
1666             .         .         .     UB16NC
                 .         .         .         .
                 .         .         .         .
1672             .         .     CP16NC............
                 .         .         V
                 .         .         V
1675             .         .     R16NC1
                 .         .         .
                 .         .         .
1681             .     C16NC1............
                 .         V
                 .         V
1684             .      R15N1
                 .         .
                 .         .
1690             .         .        PC2
                 .         .         .
                 .         .         .
1696             .     CP15N1............
                 .         V
                 .         V
1699             .      SRPC2
                 .         .
                 .         .
1706             .         .     UB17NA
                 .         .         V
                 .         .         V
1712             .         .     SR17NA
                 .         .         V
                 .         .         V
1718             .         .      R17NB
                 .         .         .
                 .         .         .
1724             .         .         .     UB17NB
                 .         .         .         .
                 .         .         .         .
1730             .         .     CP17NB............
                 .         .         V
                 .         .         V
1733             .         .     SR17NB
                 .         .         V
                 .         .         V
1739             .         .       R17A
                 .         .         .
                 .         .         .
1745             .         .         .     SUB17A
                 .         .         .         .
                 .         .         .         .
1751             .         .     CP17A1............
                 .         .         .
                 .         .         .
1754             .         .         .     UB17NC
                 .         .         .         .
                 .         .         .         .
1760             .         .      CP17A............
                 .         .         V
                 .         .         V
1763             .         .       R15N
                 .         .         .
                 .         .         .
1769             .         .         .     SUB15N
                 .         .         .         .
                 .         .         .         .
1776             .         .      CP15N............
                 .         .         V
                 .         .         V
1779             .         .      R15N2
```

```
                .          .          .
                .          .          .
1785            .     CP15N2...........
                .         V
                .         V
1789            .      R15N2
                .          .
                .          .
1803            .          .          .<-------   BPC3T
1798            .          .       DPC3
                .          .          .
                .          .          .
1804            .      CPC3A...........
                .         V
                .         V
1810            .      RPC3A
                .          .
                .          .
1824            .          .          .<-------   BPC4T
1819            .          .       DPC4
                .          .          .
                .          .          .
1825            .      CPC4A...........
                .         V
                .         V
1831            .      RPC4A
                .          .
                .          .
1845            .          .-------> BPC4AT
1840            .     DPC4AT
                .          .
                .          .
1848            .          .     SUB1-2
                .          .          .
                .          .          .
1854            .          .          .     GCRB18
                .          .          .          .
                .          .          .          .
1861            .          .     CPRET1...........
                .          .          V
                .          .          V
1864            .          .      SR18S
                .          .          .
                .          .          .
1870            .          .          .      SUB5S
                .          .          .          .
                .          .          .          .
1876            .          .          .          .     GC1216
                .          .          .          .          .
                .          .          .          .          .
1882            .          .          .          .          .     GC1415
                .          .          .          .          .          .
                .          .          .          .          .          .
1888            .          .          .          .          .          .      SUB6S
                .          .          .          .          .          .          .
                .          .          .          .          .          .          .
1894            .          .          .          .          .          .          .      SUB7S
                .          .          .          .          .          .          .          .
                .          .          .          .          .          .          .          .
1900            .          .          .     CPRET2.............................................
                .          .          .          V
                .          .          .          V
1903            .          .          .     SRRET2
                .          .          .          .
                .          .          .          .
1909       CLEAR...............................
                .
                .
1914            .      SUB8S
                .         V
                .         V
1920            .      RGC36
                .          .
                .          .
1926            .          .       GC36
                .          .          .
                .          .          .
1932            .     C1GC36...........
                .          .
                .          .
1935            .          .      SUB9S
                .          .          V
                .          .          V
1941            .          .       R9S
                .          .          .
                .          .          .
1947            .     CPGC36...........
                .         V
                .         V
1950            .     SRGC36
                .          .
                .          .
1956            .          .      SUB7A
```

```
                 .          .          V
                 .          .          V
1962             .          .       SR7A
                 .          .          V
                 .          .          V
1968             .          .       R10S
                 .          .          .
                 .          .          .
1974             .          .          .     SUB10S
                 .          .          .          .
                 .          .          .          .
1980             .          .      CP10S...........
                 .          .          .
                 .          .          .
1983             .          .          .     SUB11S
                 .          .          .          V
                 .          .          .          V
1989             .          .          .      R11S
                 .          .          .          .
                 .          .          .          .
1998             .          .      C10SA...........
                 .          .          V
                 .          .          V
2003             .          .      R10SA
                 .          .          .
                 .          .          .
2012             .          .          .      GC45
                 .          .          .          .
                 .          .          .          .
2018             .          .          .          .        PC5
                 .          .          .          .          .
                 .          .          .          .          .
2032             .          .          .          .          .          .<-------  BPC4AT
2027             .          .          .          .          .      DPC4A
                 .          .          .          .          .          .
                 .          .          .          .          .          .
2033             .       CPC5.............................................
                 .          V
                 .          V
2040             .        RC5
                 .          .
                 .          .
2046             .          .      SCN5C
                 .          .          .
                 .          .          .
2053             .          .          .     SCN6D
                 .          .          .          .
                 .          .          .          .
2062             .          .          .          .      SCN6C
                 .          .          .          .          .
                 .          .          .          .          .
2074             .          .          .          .          .          .<-------    B52T
2072             .          .          .          .          .      D52
                 .          .          .          .          .          .
                 .          .          .          .          .          .
2075             .          .          .          .          .          .       S53A
                 .          .          .          .          .          .          .
                 .          .          .          .          .          .          .
2082             .          .          .          .          .      C53............
                 .          .          .          .          .          .
                 .          .          .          .          .          .
2085             .          .          .          .          .          .      S53A1
                 .          .          .          .          .          .          .
                 .          .          .          .          .          .          .
2093             .          .          .          .          .      C53A1...........
                 .          .          .          .          .          .
                 .          .          .          .          .          .
2096             .          .          .          .          .          .      SCN6B
                 .          .          .          .          .          .          .
                 .          .          .          .          .          .          .
2106             .          .          .          .          .      C53A............
                 .          .          .          .          .          .
                 .          .          .          .          .          .
2109             .          .          .          .          .          .      SCN6E
                 .          .          .          .          .          .          .
                 .          .          .          .          .          .          .
2115             .     UHDB-I.......................................................
                 .          V
                 .          V
2119             .     UHDB-O
                 .          .
                 .          .
2131             .          .       S54
                 .          .          .
                 .          .          .
2137             .          .          .     SCN6A
                 .          .          .          .
                 .          .          .          .
2144             .          .      CN6A...........
                 .          .          .
                 .          .          .
2147             .       C1A............
```

```
(***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*             MAY   1991            *
*           VERSION 4.0.1E          *
*     Lahey F77L-EM/32 version 5.01 *
*       Dodson & Associates, Inc.   *
*  RUN DATE  11/26/97  TIME  09:48:33  *
*************************************
```

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

```
PIMA ROAD THREE BASINS                          File: ULTMT-24.IH1
by  Stantech for the City of Scottsdale       Original: 08-07-97     mcg
    Project:  28900051

100-YEAR, 24-HOUR STORM
    10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
    10% LEVEL DESIGN FOR DEER VALLEY DETENTION BASIN ALTERNATIVE 3
    100% OF FLOWSPLITS ARE ROUTED TO DEER VALLEY DETENTION BASIN
    10% LEVEL DESIGN FOR UNION HILLS DETENTION BASIN ALTERNATIVE 1B

    ULTIMATE CONDITION --- POWER LINE CHANNEL:
      GRAYHAWK RUNOFF RELEASED TO NATURAL WASHES ARE COLLECTED IN THE
      "POWER LINE CHANNEL" AND ROUTED TO THE UNION HILLS DETENTION BASIN.
      THE ULTIMATE LOCATION AND GEOMETRY OF THE POWER LINE CHANNEL WILL
      BE DETERMINED BY OTHERS.

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

    IT           HYDROGRAPH TIME DATA
                       NMIN          5  MINUTES IN COMPUTATION INTERVAL
                      IDATE      1   0  STARTING DATE
                      ITIME       0000  STARTING TIME
                         NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE      7   0  ENDING DATE
                     NDTIME       2235  ENDING TIME
                      ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL    0.08 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

        *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

        *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

        *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

        *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

        *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

        *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

        *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

        *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

WARNING --- ROUTED OUTFLOW (     917.) IS GREATER THAN MAXIMUM OUTFLOW (     850.) IN STORAGE-OUTFLOW TABLE
WARNING --- ROUTED OUTFLOW (     876.) IS GREATER THAN MAXIMUM OUTFLOW (     850.) IN STORAGE-OUTFLOW TABLE

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1
```

```
*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

WARNING --- ROUTED OUTFLOW (    256.) IS GREATER THAN MAXIMUM OUTFLOW (    205.) IN STORAGE-OUTFLOW TABLE

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1
```

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	S30N	1262.	12.33	151.	44.	15.	0.65		
+	ROUTED TO	R30N	1236.	12.33	151.	44.	15.	0.65		
+									103.91	12.33
+	HYDROGRAPH AT	S31.1	444.	12.33	52.	15.	5.	0.27		
+	2 COMBINED AT	C31.1	1681.	12.33	203.	60.	20.	0.92		
+	HYDROGRAPH AT	S34.2	750.	12.33	88.	26.	9.	0.44		
+	2 COMBINED AT	C34.2	2431.	12.33	291.	85.	29.	1.36		
+	HYDROGRAPH AT	S35N	1348.	12.25	127.	37.	12.	0.55		
+	DIVERSION TO	D35NL	1348.	0.08	127.	37.	12.	0.55		
+	HYDROGRAPH AT	D35NR	0.	0.08	0.	0.	0.	0.55		
+	ROUTED TO	R35NR	0.	0.08	0.	0.	0.	0.55		
+									100.00	0.00
+	HYDROGRAPH AT	S36.2	431.	12.25	41.	12.	4.	0.21		
+	2 COMBINED AT	C36.2	431.	12.25	41.	12.	4.	0.76		
+	DIVERSION TO	D36.2L	431.	0.08	41.	12.	4.	0.76		
+	HYDROGRAPH AT	D36.2R	0.	0.08	0.	0.	0.	0.76		
+	ROUTED TO	R36.2R	0.	0.08	0.	0.	0.	0.76		
+									100.00	0.00
+	HYDROGRAPH AT	S34.1	2117.	12.25	232.	68.	23.	1.16		
+	2 COMBINED AT	C34.1	2117.	12.25	232.	68.	23.	1.92		
+	2 COMBINED AT	HVDB-I	4403.	12.33	522.	154.	51.	3.28		
+	ROUTED TO	HVDB-O	141.	15.50	140.	126.	51.	3.28		
+									2088.42	15.50
+	ROUTED TO	R34.1	141.	15.58	140.	126.	51.	3.28		
+									101.48	15.58
	HYDROGRAPH AT									

+		S36.1	180.	12.42	24.	7.	2.	0.14	
	2 COMBINED AT								
+		C36.1	288.	12.42	159.	132.	54.	3.42	
	ROUTED TO								
+		R36.1	285.	12.42	159.	132.	54.	3.42	
+									102.06 12.42
	HYDROGRAPH AT								
+		B35NL	1348.	12.25	127.	37.	12.	0.00	
	ROUTED TO								
+		R35NL	726.	12.75	127.	37.	12.	0.00	
+									103.95 12.75
	HYDROGRAPH AT								
+		B36.2L	431.	12.25	41.	12.	4.	0.00	
	ROUTED TO								
+		R36.2L	279.	12.50	41.	12.	4.	0.00	
+									102.00 12.50
	HYDROGRAPH AT								
+		S36R1A	797.	12.42	111.	33.	11.	0.63	
	4 COMBINED AT								
+		C36R1A	1825.	12.50	436.	212.	81.	4.05	
	HYDROGRAPH AT								
+		S36R1B	767.	12.42	103.	30.	10.	0.59	
	2 COMBINED AT								
+		C36R1B	2544.	12.42	538.	242.	91.	4.64	
	HYDROGRAPH AT								
+		S36R2A	289.	12.17	24.	7.	2.	0.13	
	2 COMBINED AT								
+		C36R2A	2620.	12.42	561.	248.	94.	4.77	
	ROUTED TO								
+		R36R2A	2620.	12.50	561.	248.	94.	4.77	
	HYDROGRAPH AT								
+		S36R2B	329.	12.33	40.	12.	4.	0.24	
	2 COMBINED AT								
+		C36R2B	2835.	12.50	600.	260.	98.	5.01	
	HYDROGRAPH AT								
+		S51.1	1296.	12.50	199.	59.	20.	1.13	
	2 COMBINED AT								
+		DVDB-I	4131.	12.50	799.	318.	118.	6.14	
	ROUTED TO								
+		DVDB-O	880.	13.42	408.	285.	118.	6.14	
+									1880.59 13.42
	DIVERSION TO								
+		B51.1T	880.	0.08	408.	285.	118.	6.14	
	HYDROGRAPH AT								
+		D51.1T	0.	0.08	0.	0.	0.	6.14	
	HYDROGRAPH AT								
+		52D4	127.	12.25	13.	4.	1.	0.07	
	ROUTED TO								
+		52D4R	124.	12.25	13.	4.	1.	0.07	
	HYDROGRAPH AT								
+		52D4B	65.	12.17	6.	2.	1.	0.02	
	2 COMBINED AT								
+		52D5C1	178.	12.25	19.	6.	2.	0.09	
	HYDROGRAPH AT								
+		52D5A	75.	12.17	6.	2.	1.	0.02	
	ROUTED TO								
+		52D5AR	72.	12.17	6.	2.	1.	0.02	
	2 COMBINED AT								
+		52D5C2	232.	12.25	25.	8.	3.	0.12	
	ROUTED TO								
+		52D5R	231.	12.25	25.	8.	3.	0.12	
	HYDROGRAPH AT								
+		52C3	23.	12.08	2.	1.	0.	0.01	

+	ROUTED TO	52C3R	21.	12.17	2.	1.	0.	0.01
+	HYDROGRAPH AT	52C3B	52.	12.08	4.	1.	0.	0.02
+	2 COMBINED AT	2C3BC1	71.	12.17	6.	2.	1.	0.02
+	2 COMBINED AT	2C3BC2	288.	12.17	31.	10.	3.	0.14
+	ROUTED TO	52C3BR	276.	12.25	31.	10.	3.	0.14
+	HYDROGRAPH AT	51C	197.	12.17	18.	5.	2.	0.10
+	DIVERSION TO	51C1DV	132.	12.17	12.	4.	1.	0.10
+	HYDROGRAPH AT	51C1D	65.	12.17	6.	2.	1.	0.10
+	ROUTED TO	51C1R	60.	12.25	6.	2.	1.	0.10
+	HYDROGRAPH AT	52C1	71.	12.17	6.	2.	1.	0.03
+	2 COMBINED AT	52C1C	121.	12.17	12.	3.	1.	0.13
+	ROUTED TO	52C1R	111.	12.25	12.	3.	1.	0.13
+	HYDROGRAPH AT	52C2A	40.	12.17	3.	1.	0.	0.02
+	2 COMBINED AT	52C2AC	140.	12.17	15.	4.	1.	0.15
+	HYDROGRAPH AT	52C2B	62.	12.17	5.	1.	0.	0.03
+	2 COMBINED AT	52C2BC	202.	12.17	20.	6.	2.	0.17
+	ROUTED TO	52C2BR	188.	12.25	20.	6.	2.	0.17
+	HYDROGRAPH AT	52C2C	45.	12.08	4.	1.	0.	0.01
+	2 COMBINED AT	52C2CC	213.	12.25	24.	7.	2.	0.19
+	ROUTED TO	52C2R	209.	12.25	23.	7.	2.	0.19
+	HYDROGRAPH AT	52C4	54.	12.17	5.	1.	0.	0.02
+	2 COMBINED AT	52C4C1	240.	12.25	28.	8.	3.	0.20
+	2 COMBINED AT	52C4C2	516.	12.25	59.	18.	6.	0.34
+	ROUTED TO	52C4R	509.	12.25	60.	18.	6.	0.34
+	HYDROGRAPH AT	52C13	73.	12.08	5.	2.	1.	0.02
+	DIVERSION TO	STORM	40.	12.08	4.	1.	0.	0.02
+	HYDROGRAPH AT	2C13DV	33.	12.08	1.	0.	0.	0.02
+	HYDROGRAPH AT	52C15	151.	12.08	13.	4.	1.	0.05
+	2 COMBINED AT	2C15C1	184.	12.08	13.	4.	1.	0.07
+	2 COMBINED AT	2C15C2	596.	12.17	73.	22.	8.	0.41
+	ROUTED TO	52C15R	591.	12.25	73.	22.	8.	0.41

+	HYDROGRAPH AT	52C14A	136.	12.17	12.	4.	1.	0.04
+	2 COMBINED AT	2C14AC	699.	12.17	85.	26.	9.	0.45
+	ROUTED TO	2C14AR	680.	12.17	85.	26.	9.	0.45
+	HYDROGRAPH AT	51C1DV	132.	12.17	12.	4.	1.	0.00
+	DIVERSION TO	51C2DV	36.	12.17	3.	1.	0.	0.00
+	HYDROGRAPH AT	51C2D	96.	12.17	9.	3.	1.	0.00
+	ROUTED TO	51C2R	85.	12.17	9.	3.	1.	0.00
+	HYDROGRAPH AT	52C5	41.	12.17	3.	1.	0.	0.02
+	2 COMBINED AT	52C5C	126.	12.17	12.	4.	1.	0.02
+	ROUTED TO	52C5R	125.	12.25	12.	4.	1.	0.02
+	HYDROGRAPH AT	52C6	87.	12.17	8.	2.	1.	0.04
+	2 COMBINED AT	52C6C	196.	12.25	20.	6.	2.	0.05
+	ROUTED TO	52C6R	189.	12.25	20.	6.	2.	0.05
+	HYDROGRAPH AT	51C2DV	36.	12.17	3.	1.	0.	0.00
+	ROUTED TO	51C3R	31.	12.25	3.	1.	0.	0.00
+	HYDROGRAPH AT	51B	712.	12.33	95.	29.	10.	0.57
+	DIVERSION TO	51B1DV	655.	12.33	88.	26.	9.	0.57
+	HYDROGRAPH AT	51B1D	57.	12.33	8.	2.	1.	0.57
+	ROUTED TO	51B1R	56.	12.33	8.	2.	1.	0.57
+	HYDROGRAPH AT	52C7	19.	12.08	1.	0.	0.	0.01
+	3 COMBINED AT	52C7C	90.	12.25	12.	4.	1.	0.58
+	ROUTED TO	52C7R	87.	12.33	12.	4.	1.	0.58
+	HYDROGRAPH AT	51B1DV	655.	12.33	88.	26.	9.	0.00
+	DIVERSION TO	51B2DV	550.	12.33	74.	22.	7.	0.00
+	HYDROGRAPH AT	51B2D	105.	12.33	14.	4.	1.	0.00
+	ROUTED TO	51B2R	103.	12.33	14.	4.	1.	0.00
+	HYDROGRAPH AT	52C8	23.	12.08	2.	1.	0.	0.01
+	2 COMBINED AT	52C8C	110.	12.33	16.	5.	2.	0.01
+	ROUTED TO	52C8R	107.	12.33	16.	5.	2.	0.01
+	2 COMBINED AT	52C9C1	194.	12.33	28.	8.	3.	0.59
+	ROUTED TO	52C9R1	190.	12.33	28.	8.	3.	0.59

+	HYDROGRAPH AT 52C9	182.	12.17	15.	5.	2.	0.07
+	2 COMBINED AT 52C9C2	293.	12.17	43.	13.	4.	0.65
+	ROUTED TO 52C9R2	291.	12.25	43.	13.	4.	0.65
+	2 COMBINED AT 2C10C1	480.	12.25	63.	19.	6.	0.71
+	ROUTED TO 2C10R1	476.	12.25	63.	19.	6.	0.71
+	HYDROGRAPH AT 52C10	32.	12.08	2.	1.	0.	0.01
+	2 COMBINED AT 2C10C2	492.	12.25	65.	20.	7.	0.72
+	HYDROGRAPH AT 52C11	102.	12.17	9.	3.	1.	0.04
+	ROUTED TO 2C11R1	96.	12.17	9.	3.	1.	0.04
+	HYDROGRAPH AT 52C13D	40.	12.08	4.	1.	0.	0.00
+	2 COMBINED AT 52C11C	136.	12.17	13.	4.	1.	0.04
+	ROUTED TO 2C11CR	128.	12.17	13.	4.	1.	0.04
+	2 COMBINED AT 2C11C2	608.	12.25	79.	24.	8.	0.76
+	ROUTED TO 2C11R2	600.	12.25	79.	24.	8.	0.76
+	HYDROGRAPH AT 52C12	111.	12.08	7.	2.	1.	0.02
+	2 COMBINED AT 52C12C	635.	12.25	86.	26.	9.	0.79
+	ROUTED TO 52C12R	621.	12.25	86.	26.	9.	0.79
+	HYDROGRAPH AT 52C14B	73.	12.08	6.	2.	1.	0.02
+	2 COMBINED AT C14BC1	655.	12.25	92.	28.	9.	0.81
+	2 COMBINED AT C14BC2	1323.	12.25	176.	54.	18.	1.26
+	ROUTED TO 52C14R	1318.	12.25	176.	54.	18.	1.26
+	HYDROGRAPH AT 51B2DV	550.	12.33	74.	22.	7.	0.00
+	DIVERSION TO 51B3DV	462.	12.33	62.	19.	6.	0.00
+	HYDROGRAPH AT 51B3D	88.	12.33	12.	4.	1.	0.00
+	ROUTED TO 51B3R	87.	12.33	12.	4.	1.	0.00
+	HYDROGRAPH AT 52B1	9.	12.08	1.	0.	0.	0.00
+	2 COMBINED AT 52B1C	89.	12.33	12.	4.	1.	0.00
+	ROUTED TO 52B1R	87.	12.33	12.	4.	1.	0.00
+	HYDROGRAPH AT 51B3DV	462.	12.33	62.	19.	6.	0.00
+	DIVERSION TO 51B4DV	379.	12.33	51.	15.	5.	0.00
+	HYDROGRAPH AT 51B4D	83.	12.33	11.	3.	1.	0.00

	ROUTED TO						
+	51B4R1	81.	12.33	11.	3.	1.	0.00
	2 COMBINED AT						
+	52B2C1	168.	12.33	24.	7.	2.	0.00
	ROUTED TO						
+	52B2R1	163.	12.42	24.	7.	2.	0.00
	HYDROGRAPH AT						
+	52B2	75.	12.17	6.	2.	1.	0.03
	2 COMBINED AT						
+	52B2C2	194.	12.33	30.	9.	3.	0.04
	ROUTED TO						
+	52B2R2	191.	12.33	30.	9.	3.	0.04
	ROUTED TO						
+	52B3R1	189.	12.42	30.	9.	3.	0.04
	HYDROGRAPH AT						
+	52B3	150.	12.17	14.	4.	1.	0.06
	2 COMBINED AT						
+	52B3C2	288.	12.25	43.	13.	4.	0.10
	ROUTED TO						
+	52B3R2	278.	12.33	43.	13.	4.	0.10
	HYDROGRAPH AT						
+	52B4	85.	12.17	7.	2.	1.	0.03
	2 COMBINED AT						
+	52B4C	325.	12.25	50.	15.	5.	0.12
	ROUTED TO						
+	52B4R	318.	12.25	50.	15.	5.	0.12
	HYDROGRAPH AT						
+	52B5	67.	12.08	6.	2.	1.	0.02
	2 COMBINED AT						
+	52B5C1	352.	12.25	56.	17.	6.	0.14
	2 COMBINED AT						
+	52B5C2	1670.	12.25	232.	71.	24.	1.40
	ROUTED TO						
+	52B5R	1648.	12.25	232.	71.	24.	1.40
	HYDROGRAPH AT						
+	51B4DV	379.	12.33	51.	15.	5.	0.00
	DIVERSION TO						
+	51B5DV	258.	12.33	35.	10.	3.	0.00
	HYDROGRAPH AT						
+	51B5D	121.	12.33	16.	5.	2.	0.00
	ROUTED TO						
+	51B5R	118.	12.33	16.	5.	2.	0.00
	HYDROGRAPH AT						
+	51B5DV	258.	12.33	35.	10.	3.	0.00
	DIVERSION TO						
+	51B6DV	137.	12.33	18.	5.	2.	0.00
	HYDROGRAPH AT						
+	51B6D	121.	12.33	16.	5.	2.	0.00
	ROUTED TO						
+	51B6R	119.	12.33	16.	5.	2.	0.00
	HYDROGRAPH AT						
+	51B6DV	137.	12.33	18.	5.	2.	0.00
	DIVERSION TO						
+	51B7DV	79.	12.33	11.	3.	1.	0.00
	HYDROGRAPH AT						
+	51B7D	57.	12.33	8.	2.	1.	0.00
	ROUTED TO						
+	51B7R1	57.	12.33	8.	2.	1.	0.00
	3 COMBINED AT						
+	51B7C	293.	12.33	40.	12.	4.	0.00
	ROUTED TO						
+	51B7R2	286.	12.42	40.	12.	4.	0.00

	HYDROGRAPH AT								
+		52B6	215.	12.17	18.	5.	2.	0.10	
	2 COMBINED AT								
+		52B6C	372.	12.33	58.	17.	6.	0.10	
	ROUTED TO								
+		52B6R	368.	12.42	58.	17.	6.	0.10	
	HYDROGRAPH AT								
+		52B7	285.	12.17	24.	8.	3.	0.08	
	2 COMBINED AT								
+		52B7C1	485.	12.25	81.	25.	8.	0.18	
	2 COMBINED AT								
+		52B7C2	2133.	12.25	314.	96.	32.	1.58	
	HYDROGRAPH AT								
+		52A2	244.	12.17	21.	7.	2.	0.06	
	2 COMBINED AT								
+		52A2C2	2285.	12.25	334.	103.	35.	1.64	
	HYDROGRAPH AT								
+		51B7DV	79.	12.33	11.	3.	1.	0.00	
	ROUTED TO								
+		51B8R	78.	12.42	11.	3.	1.	0.00	
	HYDROGRAPH AT								
+		52A1	353.	12.17	29.	9.	3.	0.13	
	2 COMBINED AT								
+		52A1C	365.	12.17	39.	12.	4.	0.13	
	HYDROGRAPH AT								
+		D51.1	880.	13.42	408.	285.	118.	0.00	
	2 COMBINED AT								
+		C52A	906.	13.42	433.	294.	122.	0.13	
	2 COMBINED AT								
+		C52	2691.	12.25	759.	387.	156.	1.77	
	ROUTED TO								
+		R52	2587.	12.33	758.	387.	156.	1.77	
+									103.85 12.33
	DIVERSION TO								
+		B52T	2587.	0.08	758.	387.	156.	1.77	
	HYDROGRAPH AT								
+		D52T	0.	0.08	0.	0.	0.	1.77	
	2 COMBINED AT								
+		CLEAR	0.	0.08	0.	0.	0.	7.92	
	HYDROGRAPH AT								
+		37A	1212.	12.25	136.	41.	14.	0.68	
	DIVERSION TO								
+		37AW	848.	12.25	95.	29.	10.	0.68	
	HYDROGRAPH AT								
+		37AE	364.	12.25	41.	12.	4.	0.68	
	ROUTED TO								
+		37AE1	369.	12.25	41.	12.	4.	0.68	
+									2.60 12.25
	HYDROGRAPH AT								
+		SUB5N	75.	12.17	6.	2.	1.	0.03	
	2 COMBINED AT								
+		CP5N	420.	12.25	47.	14.	5.	0.71	
	ROUTED TO								
+		RET5N	378.	12.33	44.	14.	5.	0.71	
+									1807.39 12.33
	ROUTED TO								
+		R6N.1	323.	12.42	44.	14.	5.	0.71	
+									2.47 12.42
	HYDROGRAPH AT								
+		SUB6B	80.	12.17	7.	2.	1.	0.03	
	ROUTED TO								
+		SR6B	60.	12.25	7.	2.	1.	0.03	
+									1774.46 12.25
	2 COMBINED AT								

```
+                    CP6.1      356.  12.42      51.      16.      5.    0.74
     HYDROGRAPH AT
+                    SUB1N       48.  12.17       4.       1.      0.    0.02
     ROUTED TO
+                     R2NA       49.  12.17       4.       1.      0.    0.02
+                                                                          1.05      12.17
     HYDROGRAPH AT
+                   SUB2NA       37.  12.17       3.       1.      0.    0.01
     2 COMBINED AT
+                   CP2NA       86.  12.17       7.       2.      1.    0.03
     ROUTED TO
+                   SR2NA       73.  12.25       6.       2.      1.    0.03
+                                                                       1775.46      12.25
     ROUTED TO
+                    R2NB       69.  12.25       6.       2.      1.    0.03
+                                                                          1.44      12.25
     HYDROGRAPH AT
+                   SUB2NB       94.  12.17       8.       2.      1.    0.03
     2 COMBINED AT
+                   CP2NB      129.  12.25      14.       4.      1.    0.06
     ROUTED TO
+                   SR2NB       41.  12.58      13.       4.      1.    0.06
+                                                                       1804.16      12.58
     ROUTED TO
+                   RCP4N       41.  12.58      13.       4.      1.    0.06
+                                                                          1.05      12.58
     HYDROGRAPH AT
+                   SUB6N      121.  12.17      10.       3.      1.    0.05
     ROUTED TO
+                   RET6N        0.   0.08       0.       0.      0.    0.05
+                                                                       1785.53      94.00
     ROUTED TO
+                  RCP4N1        0.   0.08       0.       0.      0.    0.05
     2 COMBINED AT
+                  CP4N.1       41.  12.58      13.       4.      1.    0.11
     HYDROGRAPH AT
+                   SUB3N       72.  12.17       6.       2.      1.    0.03
     ROUTED TO
+                   RET3N        4.  13.08       4.       2.      1.    0.03
+                                                                       1795.10      13.17
     ROUTED TO
+                     R4N        4.  13.17       3.       2.      1.    0.03
+                                                                          0.29      13.25
     2 COMBINED AT
+                  CP4N.2       45.  12.58      17.       6.      2.    0.14
     HYDROGRAPH AT
+                   SUB4N       81.  12.17       7.       2.      1.    0.03
     2 COMBINED AT
+                    CP4N       92.  12.17      23.       8.      3.    0.17
     ROUTED TO
+                     R6N       90.  12.17      23.       8.      3.    0.17
+                                                                          1.57      12.17
     HYDROGRAPH AT
+                   SUB6A       60.  12.08       4.       1.      0.    0.01
     2 COMBINED AT
+                   CP6.2      127.  12.17      27.       9.      3.    0.18
     2 COMBINED AT
+                    CP6N      410.  12.42      78.      25.      8.    0.92
     ROUTED TO
+                   RCP6N      408.  12.42      78.      25.      8.    0.92
+                                                                          2.10      12.42
     HYDROGRAPH AT
+                   SUB3C       53.  12.08       3.       1.      0.    0.01
     2 COMBINED AT
+                    CP3C      414.  12.42      80.      26.      9.    0.93
```

```
          ROUTED TO
+                        R3C     397.  12.42      80.      26.      9.     0.93
+                                                                          1672.38     12.42

          HYDROGRAPH AT
+                      GC1018    110.  12.17       9.       3.      1.     0.04

          HYDROGRAPH AT
+                       GC1-9     65.  12.17       5.       2.      1.     0.03

          HYDROGRAPH AT
+                       SUB3S     32.  12.17       3.       1.      0.     0.01

          4 COMBINED AT
+                        CP3S    462.  12.42      97.      31.     10.     1.01

          ROUTED TO
+                        RT3S    456.  12.50      97.      31.     10.     1.01
+                                                                          1744.14     12.50

          HYDROGRAPH AT
+                       SUB4S     85.  12.17       7.       2.      1.     0.03

          ROUTED TO
+                        RT4S     85.  12.17       7.       2.      1.     0.03
+                                                                          1743.42     12.17

          HYDROGRAPH AT
+                       GC2-8     35.  12.17       3.       1.      0.     0.01

          3 COMBINED AT
+                      1PGC28    488.  12.42     107.      34.     11.     1.05

          HYDROGRAPH AT
+                      SUB3D3     36.  12.17       3.       1.      0.     0.01

          2 COMBINED AT
+                      CPGC28    497.  12.42     110.      35.     12.     1.07

          ROUTED TO
+                      SRGC28    498.  12.25     110.      35.     12.     1.07
+                                                                          1712.53     12.25

          ROUTED TO
+                        RT7S    490.  12.50     109.      35.     12.     1.07
+                                                                          1744.31     12.50

          HYDROGRAPH AT
+                         GC7     33.  12.17       3.       1.      0.     0.01

          2 COMBINED AT
+                        CP7S    501.  12.33     112.      35.     12.     1.08

          DIVERSION TO
+                        B7ST    501.   0.08     112.      35.     12.     1.08

          HYDROGRAPH AT
+                        D7ST      0.   0.08       0.       0.      0.     1.08

          2 COMBINED AT
+                       CLEAR      0.   0.08       0.       0.      0.     9.00

          HYDROGRAPH AT
+                      SUB3D1     27.  12.08       2.       1.      0.     0.01

          ROUTED TO
+                       RD1B1     23.  12.17       2.       1.      0.     0.01
+                                                                             1.74     12.17

          HYDROGRAPH AT
+                      SUB3B1     46.  12.08       3.       1.      0.     0.01

          2 COMBINED AT
+                       CP3B1     62.  12.08       6.       2.      1.     0.02

          ROUTED TO
+                       RB13F     49.  12.17       6.       2.      1.     0.02
+                                                                             1.83     12.17

          HYDROGRAPH AT
+                       SUB3F    134.  12.08      10.       3.      1.     0.03

          2 COMBINED AT
+                        CP3F    165.  12.08      15.       5.      2.     0.06

          HYDROGRAPH AT
+                      SUB3B2     68.  12.17       6.       2.      1.     0.02

          ROUTED TO
+                       RB2E1     65.  12.17       6.       2.      1.     0.02
+                                                                             1.89     12.17

          ROUTED TO
```

```
+                    RB2E2      61.  12.25      6.      2.      1.    0.02
+                                                                          1.93    12.25
        HYDROGRAPH AT
+                    SUB3E1     68.  12.17      6.      2.      1.    0.02
        2 COMBINED AT
+                    1CPE31    126.  12.17     12.      4.      1.    0.05
        HYDROGRAPH AT
+                    SUB3D2     59.  12.17      5.      2.      1.    0.02
        ROUTED TO
+                    RD2E2      58.  12.17      5.      2.      1.    0.02
+                                                                          1.82    12.17
        HYDROGRAPH AT
+                    SUB3E2     38.  12.08      3.      1.      0.    0.01
        2 COMBINED AT
+                    CP3E2      87.  12.17      8.      2.      1.    0.03
        HYDROGRAPH AT
+                    PC3        71.  12.25      8.      2.      1.    0.04
        4 COMBINED AT
+                    CPC3      420.  12.17     43.     13.      4.    0.18
        DIVERSION TO
+                    BPC3T     420.   0.08     43.     13.      4.    0.18
        HYDROGRAPH AT
+                    DPC3T       0.   0.08      0.      0.      0.    0.18
        HYDROGRAPH AT
+                    SUB3E3     61.  12.08      5.      1.      0.    0.02
        HYDROGRAPH AT
+                    PC4        34.  12.25      4.      1.      0.    0.02
        HYDROGRAPH AT
+                    D7S       501.  12.33    112.     35.     12.    0.00
        3 COMBINED AT
+                    CPC4      546.  12.33    120.     38.     13.    0.04
        DIVERSION TO
+                    BPC4T     546.   0.08    120.     38.     13.    0.04
        HYDROGRAPH AT
+                    DPC4T       0.   0.08      0.      0.      0.    0.04
        3 COMBINED AT
+                    CLEAR       0.   0.08      0.      0.      0.    9.22
        HYDROGRAPH AT
+                    37AW      848.  12.25     95.     29.     10.    0.00
        ROUTED TO
+                    R14R      710.  12.33     95.     29.     10.    0.00
+                                                                          3.40    12.33
        ROUTED TO
+                    RET141    708.  12.33     88.     29.     10.    0.00
+                                                                       1794.48    12.33
        ROUTED TO
+                    R14.1     608.  12.50     88.     29.     10.    0.00
+                                                                          3.17    12.50
        HYDROGRAPH AT
+                    SUB13N     90.  12.17      8.      2.      1.    0.04
        ROUTED TO
+                    R14.1      82.  12.25      8.      2.      1.    0.04
+                                                                          1.71    12.25
        HYDROGRAPH AT
+                    SUB14N    100.  12.17     10.      3.      1.    0.05
        3 COMBINED AT
+                    CP14      694.  12.42    106.     34.     11.    0.09
        ROUTED TO
+                    RET14     632.  12.50    100.     34.     11.    0.09
+                                                                       1755.59    12.50
        ROUTED TO
+                    R18.1     636.  12.58    100.     34.     11.    0.09
+                                                                          2.62    12.58
        HYDROGRAPH AT
+                    SUB20N     52.  12.17      5.      2.      1.    0.02
```

	ROUTED TO								
+		R19	50.	12.25	5.	2.	1.	0.02	
+									1.22 12.25
	HYDROGRAPH AT								
+		SUB19N	98.	12.17	9.	3.	1.	0.04	
	2 COMBINED AT								
+		CP19N	144.	12.17	14.	4.	1.	0.06	
	ROUTED TO								
+		R18NC	136.	12.25	14.	4.	1.	0.06	
+									1.73 12.25
	HYDROGRAPH AT								
+		UB18NC	62.	12.17	5.	2.	1.	0.02	
	3 COMBINED AT								
+		CP18NC	687.	12.58	118.	40.	13.	0.17	
	ROUTED TO								
+		RPC1	686.	12.58	118.	40.	13.	0.17	
+									2.23 12.58
	HYDROGRAPH AT								
+		UB18NA	64.	12.17	5.	2.	1.	0.02	
	ROUTED TO								
+		1RPC1	32.	12.33	5.	2.	1.	0.02	
+									0.42 12.33
	HYDROGRAPH AT								
+		UB18NB	28.	12.08	2.	1.	0.	0.01	
	ROUTED TO								
+		2RPC1	16.	12.25	2.	1.	0.	0.01	
+									0.22 12.25
	HYDROGRAPH AT								
+		PC1	78.	12.33	12.	3.	1.	0.06	
	3 COMBINED AT								
+		1CPC1	125.	12.33	20.	6.	2.	0.09	
	ROUTED TO								
+		SRPC1	124.	12.33	20.	6.	2.	0.09	
+									1748.36 12.33
	2 COMBINED AT								
+		CPC1	789.	12.50	137.	46.	15.	0.26	
	ROUTED TO								
+		R16NA1	786.	12.58	137.	46.	15.	0.26	
+									2.14 12.58
	HYDROGRAPH AT								
+		UB16NA	42.	12.17	3.	1.	0.	0.01	
	ROUTED TO								
+		R16NA1	38.	12.17	3.	1.	0.	0.01	
+									0.77 12.17
	2 COMBINED AT								
+		C16NA1	794.	12.58	141.	47.	16.	0.28	
	ROUTED TO								
+		R16NB1	808.	12.58	140.	47.	16.	0.28	
+									2.16 12.58
	HYDROGRAPH AT								
+		UB16NB	47.	12.17	4.	1.	0.	0.02	
	ROUTED TO								
+		R16NB1	44.	12.17	4.	1.	0.	0.02	
+									0.82 12.17
	2 COMBINED AT								
+		C16NB1	817.	12.58	144.	48.	16.	0.29	
	ROUTED TO								
+		R16NC1	821.	12.58	144.	48.	16.	0.29	
+									2.73 12.58
	HYDROGRAPH AT								
+		SUB7N	80.	12.17	6.	2.	1.	0.03	
	ROUTED TO								
+		R8NC	71.	12.17	6.	2.	1.	0.03	
+									1.58 12.17
	HYDROGRAPH AT								
+		SUB8NA	15.	12.08	1.	0.	0.	0.00	

```
          ROUTED TO
+                        SR8NA      1.   13.00       1.       0.       0.    0.00
+                                                                                   1793.62     13.08

          ROUTED TO
+                         R8NB      1.   13.00       1.       0.       0.    0.00
+                                                                                      0.01     13.08

          HYDROGRAPH AT
+                       SUB8NB     40.   12.08       3.       1.       0.    0.01

          2 COMBINED AT
+                        CP8NB     40.   12.08       3.       1.       0.    0.02

          ROUTED TO
+                        SR8NB      2.   11.83       2.       1.       0.    0.02
+                                                                                   1787.79     13.67

          ROUTED TO
+                         R8NC      2.   11.92       2.       1.       0.    0.02
+                                                                                      0.02     11.92

          HYDROGRAPH AT
+                       SUB8NC     57.   12.08       4.       1.       0.    0.02

          3 COMBINED AT
+                        CP8NC    113.   12.17      12.       4.       1.    0.07

          ROUTED TO
+                        SR8NC     35.   12.50      12.       4.       1.    0.07
+                                                                                   1780.16     12.50

          ROUTED TO
+                          R9N     33.   12.50      12.       4.       1.    0.07
+                                                                                      0.76     12.50

          HYDROGRAPH AT
+                        SUB9N    148.   12.17      12.       4.       1.    0.05

          2 COMBINED AT
+                         CP9N    159.   12.17      24.       8.       3.    0.12

          ROUTED TO
+                         R10B    158.   12.17      24.       8.       3.    0.12
+                                                                                      1.75     12.17

          HYDROGRAPH AT
+                       SUB10B     88.   12.08       7.       2.       1.    0.03

          2 COMBINED AT
+                        CP10B    235.   12.17      31.      10.       3.    0.15

          ROUTED TO
+                        R11NA    238.   12.17      31.      10.       3.    0.15
+                                                                                      1.81     12.17

          HYDROGRAPH AT
+                       UB11NA     24.   12.08       2.       0.       0.    0.01

          2 COMBINED AT
+                       CP11NA    255.   12.17      32.      10.       3.    0.16

          ROUTED TO
+                       SR11NA    149.   12.25      32.      10.       3.    0.16
+                                                                                   1743.58     12.25

          ROUTED TO
+                        R11NB    161.   12.33      32.      10.       3.    0.16
+                                                                                      0.80     12.33

          HYDROGRAPH AT
+                       UB11NB     25.   12.08       2.       0.       0.    0.01

          2 COMBINED AT
+                       CP11NB    167.   12.33      33.      11.       4.    0.17

          ROUTED TO
+                       SR11NB    101.   12.50      32.      11.       4.    0.17
+                                                                                   1737.88     12.50

          ROUTED TO
+                        R11NC    100.   12.42      32.      11.       4.    0.17
+                                                                                      0.62     12.42

          HYDROGRAPH AT
+                       UB11NC     22.   12.08       1.       0.       0.    0.01

          2 COMBINED AT
+                       C11NC1    105.   12.42      34.      11.       4.    0.17

          HYDROGRAPH AT
+                       SUB10A     90.   12.08       7.       2.       1.    0.03
```

+	ROUTED TO	R12NB	93.	12.17	7.	2.	1.	0.03	
+									0.81 12.17
+	HYDROGRAPH AT	UB12NA	38.	12.08	3.	1.	0.	0.02	
+	ROUTED TO	SR12NA	1.	16.33	1.	1.	0.	0.02	
+									1743.49 16.67
+	ROUTED TO	R12NA	1.	16.17	1.	1.	0.	0.02	
+									0.01 16.67
+	HYDROGRAPH AT	UB12NB	40.	12.08	3.	1.	0.	0.02	
+	3 COMBINED AT	CP12NB	131.	12.17	11.	4.	1.	0.06	
+	ROUTED TO	SR12NB	6.	13.50	3.	2.	1.	0.06	
+									1746.03 13.50
+	ROUTED TO	R11NC2	6.	13.58	3.	2.	1.	0.06	
+									0.19 13.58
+	2 COMBINED AT	CP11NC	107.	12.42	37.	13.	5.	0.23	
+	ROUTED TO	SR11NC	95.	12.67	35.	13.	5.	0.23	
+									1735.81 12.67
+	ROUTED TO	R16NC	94.	12.67	35.	13.	5.	0.23	
+									1.61 12.67
+	HYDROGRAPH AT	UB16NC	101.	12.17	8.	3.	1.	0.03	
+	2 COMBINED AT	CP16NC	109.	12.17	42.	16.	6.	0.27	
+	ROUTED TO	R16NC1	109.	12.17	42.	16.	6.	0.27	
+									1.25 12.17
+	2 COMBINED AT	C16NC1	910.	12.58	186.	63.	22.	0.56	
+	ROUTED TO	R15N1	893.	12.67	186.	63.	22.	0.56	
+									2.83 12.67
+	HYDROGRAPH AT	PC2	103.	12.17	10.	3.	1.	0.05	
+	2 COMBINED AT	CP15N1	923.	12.58	197.	66.	23.	0.61	
+	ROUTED TO	SRPC2	917.	12.67	196.	66.	23.	0.61	
+									1735.22 12.67
+	HYDROGRAPH AT	UB17NA	32.	12.08	2.	1.	0.	0.01	
+	ROUTED TO	SR17NA	4.	12.58	1.	1.	0.	0.01	
+									1759.16 12.58
+	ROUTED TO	R17NB	4.	12.67	1.	1.	0.	0.01	
+									1756.04 12.67
+	HYDROGRAPH AT	UB17NB	30.	12.08	2.	1.	0.	0.01	
+	2 COMBINED AT	CP17NB	31.	12.08	4.	1.	0.	0.02	
+	ROUTED TO	SR17NB	1.	11.75	1.	1.	0.	0.02	
+									1756.86 23.25
+	ROUTED TO	R17A	1.	11.75	1.	1.	0.	0.02	
+									1752.09 11.75

	HYDROGRAPH AT								
+		SUB17A	30.	12.08	2.	1.	0.	0.01	
	2 COMBINED AT								
+		CP17A1	31.	12.08	3.	2.	1.	0.03	
	HYDROGRAPH AT								
+		UB17NC	20.	12.08	1.	0.	0.	0.01	
	2 COMBINED AT								
+		CP17A	51.	12.08	4.	2.	1.	0.03	
	ROUTED TO								
+		R15N	36.	12.17	4.	2.	1.	0.03	
+									0.95 12.17
	HYDROGRAPH AT								
+		SUB15N	136.	12.17	11.	4.	1.	0.04	
	2 COMBINED AT								
+		CP15N	171.	12.17	15.	5.	2.	0.07	
	ROUTED TO								
+		R15N2	175.	12.17	15.	5.	2.	0.07	
+									1.95 12.17
	2 COMBINED AT								
+		CP15N2	942.	12.67	210.	71.	25.	0.69	
	ROUTED TO								
+		R15N2	909.	12.75	210.	71.	25.	0.69	
+									2.53 12.75
	HYDROGRAPH AT								
+		DPC3	420.	12.17	43.	13.	4.	0.00	
	2 COMBINED AT								
+		CPC3A	970.	12.75	252.	84.	29.	0.69	
	ROUTED TO								
+		RPC3A	968.	12.75	252.	84.	29.	0.69	
+									2.60 12.75
	HYDROGRAPH AT								
+		DPC4	546.	12.33	120.	38.	13.	0.00	
	2 COMBINED AT								
+		CPC4A	1365.	12.75	372.	122.	42.	0.69	
	ROUTED TO								
+		RPC4A	1361.	12.75	371.	122.	42.	0.69	
+									3.04 12.75
	DIVERSION TO								
+		BPC4AT	1361.	0.08	371.	122.	42.	0.69	
	HYDROGRAPH AT								
+		DPC4AT	0.	0.08	0.	0.	0.	0.69	
	HYDROGRAPH AT								
+		SUB1-2	173.	12.17	16.	5.	2.	0.06	
	HYDROGRAPH AT								
+		GCRB18	29.	12.17	3.	1.	0.	0.01	
	2 COMBINED AT								
+		CPRET1	202.	12.17	19.	6.	2.	0.07	
	ROUTED TO								
+		SR18S	0.	0.08	0.	0.	0.	0.07	
+									1739.51 84.25
	HYDROGRAPH AT								
+		SUB5S	73.	12.17	6.	2.	1.	0.03	
	HYDROGRAPH AT								
+		GC1216	92.	12.17	8.	2.	1.	0.04	
	HYDROGRAPH AT								
+		GC1415	111.	12.17	9.	3.	1.	0.05	
	HYDROGRAPH AT								
+		SUB6S	55.	12.17	5.	2.	1.	0.02	
	HYDROGRAPH AT								
+		SUB7S	79.	12.17	7.	2.	1.	0.03	
	5 COMBINED AT								
+		CPRET2	410.	12.17	35.	10.	3.	0.16	
	ROUTED TO								
+		SRRET2	0.	0.08	0.	0.	0.	0.16	
+									1690.13 71.00

	4 COMBINED AT								
+		CLEAR	0.	0.08	0.	0.	0.	10.13	
	HYDROGRAPH AT								
+		SUB8S	76.	12.17	6.	2.	1.	0.03	
	ROUTED TO								
+		RGC36	65.	12.17	6.	2.	1.	0.03	
+									1.16 12.17
	HYDROGRAPH AT								
+		GC36	95.	12.17	8.	2.	1.	0.04	
	2 COMBINED AT								
+		C1GC36	160.	12.17	15.	4.	1.	0.07	
	HYDROGRAPH AT								
+		SUB9S	66.	12.17	6.	2.	1.	0.02	
	ROUTED TO								
+		R9S	68.	12.17	6.	2.	1.	0.02	
+									3.46 12.17
	2 COMBINED AT								
+		CPGC36	228.	12.17	20.	6.	2.	0.09	
	ROUTED TO								
+		SRGC36	256.	12.17	20.	6.	2.	0.09	
+									1669.27 12.17
	HYDROGRAPH AT								
+		SUB7A	27.	12.17	2.	1.	0.	0.01	
	ROUTED TO								
+		SR7A	8.	12.42	2.	1.	0.	0.01	
+									1702.27 12.42
	ROUTED TO								
+		R10S	7.	12.58	2.	1.	0.	0.01	
+									2.59 12.58
	HYDROGRAPH AT								
+		SUB10S	77.	12.17	7.	2.	1.	0.02	
	2 COMBINED AT								
+		CP10S	80.	12.17	9.	3.	1.	0.03	
	HYDROGRAPH AT								
+		SUB11S	112.	12.08	7.	2.	1.	0.02	
	ROUTED TO								
+		R11S	84.	12.17	7.	2.	1.	0.02	
+									3.69 12.17
	2 COMBINED AT								
+		C10SA	163.	12.17	16.	5.	2.	0.06	
	ROUTED TO								
+		R10SA	168.	12.17	16.	5.	2.	0.06	
+									4.25 12.17
	HYDROGRAPH AT								
+		GC45	48.	12.08	3.	1.	0.	0.01	
	HYDROGRAPH AT								
+		PC5	55.	12.25	7.	2.	1.	0.04	
	HYDROGRAPH AT								
+		DPC4A	1361.	12.75	371.	122.	42.	0.00	
	5 COMBINED AT								
+		CPC5	1459.	12.33	415.	136.	47.	0.19	
	ROUTED TO								
+		RC5	1429.	12.42	415.	136.	47.	0.19	
+									3.11 12.42
	HYDROGRAPH AT								
+		SCN5C	776.	12.17	65.	20.	7.	0.26	
	HYDROGRAPH AT								
+		SCN6D	68.	12.08	6.	2.	1.	0.02	
	HYDROGRAPH AT								
+		SCN6C	242.	12.25	23.	7.	2.	0.10	
	HYDROGRAPH AT								
+		D52	2587.	12.33	758.	387.	156.	0.00	
	HYDROGRAPH AT								
+		S53A	302.	12.25	32.	9.	3.	0.18	

```
          2 COMBINED AT
+                          C53     2868.  12.25      790.      396.      159.      0.18
          HYDROGRAPH AT
+                          S53A1    516.  12.33       62.       19.        6.      0.33
          2 COMBINED AT
+                          C53A1   3372.  12.25      852.      414.      165.      0.51
          HYDROGRAPH AT
+                          SCN6B    157.  12.17       13.        4.        1.      0.05
          2 COMBINED AT
+                          C53A    3500.  12.25      864.      417.      167.      0.56
          HYDROGRAPH AT
+                          SCN6E    103.  12.25       14.        4.        1.      0.09
          6 COMBINED AT
+                          UHDB-I  5638.  12.25     1383.      578.      225.      1.23
          ROUTED TO
+                          UHDB-O   814.  15.00      797.      577.      225.      1.23
+                                                                                        1609.60      15.00
          HYDROGRAPH AT
+                          S54      196.  12.25       21.        7.        2.      0.09
          HYDROGRAPH AT
+                          SCN6A    309.  12.25       33.       10.        3.      0.13
          2 COMBINED AT
+                          CN6A     505.  12.25       54.       17.        6.      0.22
          2 COMBINED AT
+                          C1A     1032.  12.25      826.      592.      230.      1.45
1

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

APPENDIX G

Interim Condition 100-Year, 6-Hour HEC-1 Output File Printout

```
1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*             MAY   1991            *
*          VERSION 4.0.1E           *
*     Lahey F77L-EM/32 version 5.01 *
*       Dodson & Associates, Inc.   *
*  RUN DATE  11/19/97  TIME  17:33:45 *
*************************************
```

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

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

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

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

```
1                                        HEC-1 INPUT                                                    PAGE  1

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

    1           ID    PIMA ROAD THREE BASINS                                  File:  INTRM-6.IH1
    2           ID    by  Stantech for the City of Scottsdale            Original: 08-07-97     mcg
    3           ID        Project:  28900051
    4           ID
    5           ID
    6           ID    100-YEAR, 6-HOUR STORM
    7           ID        10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
    8           ID        10% LEVEL DESIGN FOR DEER VALLEY DETENTION BASIN ALTERNATIVE 3
    9           ID        10% LEVEL DESIGN FOR UNION HILLS DETENTION BASIN ALTERNATIVE 1B
   10           ID
   11           ID        INTERIM CONDITION --- NO POWER LINE CHANNEL:
   12           ID          GRAYHAWK RUNOFF RELEASED TO NATURAL WASHES AND ROUTED TO THE UNION
   13           ID          HILLS DETENTION BASIN.  PORTIONS OF THE GRAYHAWK MODEL THAT DO NOT
   14           ID          CONTRIBUTE TO THE WATERSHED AT UNION HILLS BASIN UNDER THIS CONDITION
   15           ID          ARE ELIMINATED FROM THIS MODEL.
   16           ID
                *DIAGRAM
   17           IT       5                    720
   18           IO       5
   19           JD             .01
   20           JD              .1
   21           JD              .5
   22           JD               1
   23           JD               5
   24           JD              25
                *

   25           KK    S30N
   26           KM     RUNOFF FROM SUBBASIN 30N
   27           BA  0.6518
   28           PH                     .84    1.53    2.46    2.75    2.94    3.31
   29           LS              82      13              82      13
   30           UK     300   0.350    0.13      20
   31           UK     300   0.050    0.13      80
   32           RK    1550   0.069   0.045  0.0096    TRAP       0      12
   33           RK   10520   0.038   0.040            TRAP      15      15
                *

   34           KK    R30N
   35           KM     NORMAL DEPTH CHANNEL ROUTE FROM C30N TO C31.1 THROUGH PIMA CHANNEL
   36           RS       1    FLOW      -1
   37           RC   0.022   0.022   0.022    2470    0.01
   38           RX    1000    1012    1020    1028    1036    1044    1052    1064
   39           RY     107     104     102     100     100     102     104     107
                *

   40           KK   S31.1
   41           KM     RUNOFF FROM SUBBASIN 31.1
   42           BA  0.2663
   43           LS            76.6      13            76.6      13
   44           UK     300   0.567    0.13      10
   45           UK     300   0.050    0.13      90
   46           RK    1950   0.056   0.045  0.0147    TRAP       0      10
   47           RK    7600   0.035   0.040            TRAP      22       8
                *
```

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

 48           KK   C31.1
 49           KM     COMBINE ROUTED HYDROGRAPH FROM S30N WITH RUNOFF FROM SUBBASIN 31.1
 50           HC       2
              *
              *  R31.1
              *   ****  TOO SHORT TO ROUTE  ****
              *    NORMAL DEPTH CHANNEL ROUTE FROM C31.1 TO C34.1 THROUGH PIMA CHANNEL
              *      1    FLOW      -1
              *  0.022   0.022   0.022    1500    0.01
              *   1000    1012    1020    1028    1048    1056    1064    1076
              *    107     104     102     100     100     102     104     107
              *

 51           KK   S34.2
 52           KM     RUNOFF FROM SUBBASIN 34.2
 53           KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
 54           BA  0.4441
 55           LS            77.3      12            77.3      12
 56           UK      50    0.10    0.13      10
 57           UK     300   0.040    0.13      90
 58           RK    2200  0.0452   0.045  0.0538    TRAP       0      10
 59           RK    8150  0.0386   0.045            TRAP       0      10
              *

 60           KK   C34.2
 61           KM     COMBINE ROUTED HYDROGRAPH FROM C31.1 WITH RUNOFF FROM SUBBASIN 34.2
 62           HC       2
              *

 63           KK    S35N
 64           KM     RUNOFF FROM SUBBASIN 35N
 65           BA  0.5482
 66           LS              82      13              82      13
 67           UK     300   0.491    0.13      15
 68           UK     300   0.113    0.13      85
 69           RK    2700   0.079   0.045  0.0242    TRAP       3       6
 70           RK    5050   0.028   0.040            TRAP      15      15
              *

 71           KK   D35NR
 72           KM     DIVERSION JUST DOWNSTREAM OF THE ALMA SCHOOL ROAD CULVERT
 73           KM        RIGHT BRANCH IS ROUTED TO C36.2
 74           KM        LEFT BRANCH (CODED ON DQ RECORD) IS ROUTED TO C36R1
 75           DT   D35NL
 76           DI       0      10      66     168     343     581     805     977    1168    1320
 77           DQ       0       4      28      73     154     261     360     435     518     575
              *

 78           KK   R35NR
 79           KM     NORMAL DEPTH CHANNEL ROUTE FROM S35N TO C36.2
 80           KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
 81           RS       1    FLOW      -1
 82           RC    0.06    0.04    0.06    3500  0.0343
 83           RX    1000    1006    1026    1027    1057    1058    1078    1084
```



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

 84           RY     105     103     101     100     100     101     103     105
              *

 85           KK   S36.2
 86           KM     RUNOFF FROM SUBBASIN 36.2
 87           BA  0.2087
 88           LS            76.6      13            76.6      13
 89           UK     300   0.580    0.13       5
 90           UK     300   0.100    0.13      95
 91           RK    1800   0.036   0.045  0.0145    TRAP      10      10
 92           RK    3520   0.028   0.040            TRAP      20       6
              *

 93           KK   C36.2
 94           KM     COMBINE ROUTED HYDROGRAPH FROM S35N WITH RUNOFF FROM SUBBASIN 36.2
 95           HC       2  0.5411
              *

 96           KK  D36.2R
 97           KM     DIVERSION AT DESERT HIGHLANDS DRIVE
 98           KM        RIGHT BRANCH, AT GOLF CART CROSSING IS ROUTED TO C34.1
 99           KM        LEFT BRANCH (CODED ON DQ RECORD) IS ROUTED TO C36R1
100           DT  D36.2L
101           DI       0      36     166     288     360     430     538     681     859    1074
102           DQ       0       0       0       0       0      18      60     123     208     315
              *

103           KK  R36.2R
104           KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.2 TO C34.1
105           KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
```

```
106          RS       4    FLOW      -1
107          RC    0.06    0.04    0.06    7800  0.0321
108          RX    1000    1043    1053    1068    1093    1098    1133    1218
109          RY   102.6   100.6   100.5     100     100   100.5   100.6   102.6
             *

110          KK   S34.1
111          KM     RUNOFF FROM SUBBASIN 34.1
112          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
113          BA  1.1635
114          LS            77.3      12            77.3      12
115          UK     300   0.590    0.13      25
116          UK     300   0.040    0.13      75
117          RK    2570   0.085   0.045  0.0214    TRAP       0      10
118          RK    8800  0.0325   0.040            TRAP      20      10
             *

119          KK   C34.1
120          KM     COMBINE ROUTED HYDROGRAPH FROM C36.2 W/RUNOFF FROM SUBBASIN 34.1
121          HC       2  1.5423
             *
```



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

122          KK  HVDB-I
123          KM     COMBINE HYDROGRAPH FROM C34.2 W/ C34.1
124          HC       2  2.9029
             *

125          KK  HVDB-O
126          KM     DETENTION BASIN AT HAPPY VALLEY ROAD - NONREGULATORY STRUCTURE
127          KM        PRINCIPAL SPILLWAY:  42" x 800' RCP WITH A SLOPE OF 0.5%
128          KM        13 ACRE-FEET OF STORAGE FOR SEDIMENTAION
129          RS       1    STOR      -1
130          SV       0     0.2     0.7     1.8     3.4     5.4    36.3    88.1   150.2   224.3
131          SV   240.0
132          SE    2065    2066    2067    2068    2069    2070    2075    2080    2085    2090
133          SE    2091
134          SQ       0      10      20      30      40      50      60      70      80      90
135          SQ     100     110     120     130     140     150
136          SE  2065.0 2066.13 2066.77 2067.45 2067.94 2068.42 2068.95 2070.44 2072.26 2074.32
137          SE  2076.6 2079.16 2081.95 2084.98 2088.25 2091.77
             *

138          KK   R34.1
139          KM     NORMAL DEPTH CHANNEL ROUTE FROM C34.1 TO C36.1 THROUGH PIMA CHANNEL
140          RS       1    FLOW      -1
141          RC   0.022   0.022   0.022    2200    0.01
142          RX    1000    1012    1020    1028    1036    1044    1052    1064
143          RY     107     104     102     100     100     102     104     107
             *

144          KK   S36.1
145          KM     RUNOFF FROM SUBBASIN 36.1
146          BA  0.1394
147          LS            73.4      11
148          UK     300  0.0420   0.130     100
149          RK    2330  0.0320   0.045  0.0134    TRAP      10      30
150          RK    3200  0.0270   0.040            TRAP      20      30
             *

151          KK   C36.1
152          KM     COMBINE ROUTED HYDROGRAPH FROM C34.1 WITH RUNOFF FROM SUBBASIN 36.1
153          HC       2
             *

154          KK   R36.1
155          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.1 TO C36R1 THROUGH PIMA CHANNEL
156          RS       1    FLOW      -1
157          RC   0.022   0.022   0.022    1520    0.01
158          RX    1000    1012    1020    1028    1036    1044    1052    1064
159          RY     107     104     102     100     100     102     104     107
             *
```



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

160          KK   B35NL
161          KM     BRING BACK DIVERTED HYDROGRAPH FROM C35N
162          DR   D35NL
             *

163          KK   R35NL
164          KM     NORMAL DEPTH CHANNEL ROUTE FROM S35N TO C36R1
165          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
166          RS       5    FLOW      -1
167          RC    0.06    0.04    0.06   14480  0.0318
168          RX    1000    1040    1080    1086    1091    1097    1137    1174
169          RY     105     104     103     100     100     103     104     105
             *
```

```
170          KK  B36.2L
171          KM     BRING BACK DIVERTED HYDROGRAPH FROM C36.2
172          DR  D36.2L
             *

173          KK  R36.2L
174          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.2 TO C36R1
175          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
176          RS       3    FLOW      -1
177          RC    0.06    0.04    0.06   10160  0.0342
178          RX    1000    1030    1060    1066    1076    1082    1112    1142
179          RY     103   102.5     102     100     100     102   102.5     103
             *

180          KK  S36R1A
181          KM     RUNOFF FROM SUBBASIN 36R1A
182          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 36.3, 36R1 AND 35R ARE AREA WEIGHT
183          BA  0.6310
184          LS            74.3      10
185          UK     300   0.020   0.130     100
186          RK    1420   0.032   0.045  0.0061    TRAP       0      13
187          RK   10800   0.033   0.040            TRAP      10       9
             *

188          KK  C36R1A
189          KM     COMBINE ROUTED HYDROGRAPH FROM C36.1, D35NL & D36.2L W/RUNOFF FROM S36R1A
190          KM        AREA IS AREA FROM C36.1 + S36R1 + 40% OF AREA FROM S35N + 30% OF AREA
191          KM        FROM C36.2
192          HC       4  4.0530
             *

193          KK  S36R1B
194          KM     RUNOFF FROM SUBBASIN 36R1B
195          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 36.3, 36R1 AND 35R ARE AREA WEIGHT
196          BA  0.5863
197          LS            74.3      10
198          UK     300   0.020   0.130     100
199          RK    1420   0.032   0.045  0.0061    TRAP       0      13
200          RK    8500   0.033   0.040            TRAP      10       9
             *
```



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

201          KK  C36R1B
202          KM     COMBINE HYDROGRAPH FROM C36R1A W/RUNOFF FROM S36R1B AT C36R1B
203          HC       2  4.6393
             *
             * R36R1B
             *   ****  TOO SHORT TO ROUTE  ****
             *   . NORMAL DEPTH CHANNEL ROUTE FROM C36R1B TO C36R2A THROUGH PIMA CHANNEL
             *       1    FLOW      -1
             *  0.022   0.022   0.022    1900    0.01
             *   1000    1012    1020    1028    1036    1044    1052    1064
             *    107     104     102     100     100     102     104     107
             *

204          KK  S36R2A
205          KM     RUNOFF FROM SUBBASIN 36R2A
206          BA  0.1325
207          LS              72      20
208          UK     100   0.045   0.130     100
209          RK    1900   0.032   0.017   0.015    TRAP      15       7
210          RK     800   0.030   0.035            TRAP      10       5
             *

211          KK  C36R2A
212          KM     COMBINE ROUTED HYDROGRAPH FROM C36R1B W/RUNOFF FROM SUBBASIN 36R2A
213          HC       2
             *

214          KK  R36R2A
215          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36R2A TO C36R2B THROUGH PIMA CHANNEL
216          KM     ****  TOO SHORT TO ROUTE  ****
217          KM       1    FLOW      -1
218          KM   0.022   0.022   0.022    2130    0.01
219          KM    1000    1012    1020    1028    1036    1044    1052    1064
220          KM     107     104     102     100     100     102     104     107
221          KM
222          KM     LAG THE HYDROGRAPH BY ONE TIME STEP TO ACCOUNT FOR SERIES OF INDIVIDUAL
223          KM     ROUTING REACHES THAT ARE TOO SHORT TO ROUTE.
224          KM        ASSUME WAVE CELERITY = 15-20 fps AND TOTAL LENGTH OF 5030'
225          RT                        1
             *

226          KK  S36R2B
227          KM     RUNOFF FROM SUBBASIN 36R2A
228          BA  0.2417
229          LS              72      12
230          UK     280   0.045   0.100     100
231          RK    1900   0.032   0.017   0.015    TRAP      15       7
```

```
 232          RK    7360   0.030   0.040                TRAP      30      10
              *
1                                          HEC-1 INPUT                                                    PAGE  7

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

 233          KK  C36R2B
 234          KM     COMBINE ROUTED HYDROGRAPH FROM C36R2A W/RUNOFF FROM SUBBASIN 36R2B
 235          HC       2
              *

 236          KK   S51.1
 237          KM     RUNOFF FROM SUBBASIN 51.1
 238          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 51.1 AND 49.1 ARE AREA WEIGHTED
 239          BA   1.130
 240          LS            73.9      12
 241          UK     300   0.037   0.130     100
 242          RK    1800   0.038   0.045  0.0161    TRAP       0      12
 243          RK   14400   0.032   0.040            TRAP      40      15
              *

 244          KK  DVDB-I
 245          KM     COMBINE HYDROGRAPH FROM C36R2 W/RUNOFF FROM SUBBASIN 51.1
 246          HC       2
              *

 247          KK  DVDB-O
 248          KM     DETENTION BASIN AT DEER VALLEY ROAD - NONREGULATORY STRUCTURE
 249          KM        PRINCIPAL SPILLWAY:  54" x 800' RCP WITH A SLOPE OF 0.5%
 250          KM        13 ACRE-FEET OF STORAGE FOR SEDIMENTAION
 251          RS       1    STOR      -1
 252          SV       0     0.2     0.7     1.7     3.5     6.1    38.6    86.9   143.2   209.9
 253          SV   224.1
 254          SE    1855    1856    1857    1858    1859    1860    1865    1870    1875    1880
 255          SE    1881
 256          SQ       0      20      40      60      80     100     120     140     160     180
 257          SQ     200     210     220     230     240     250     260     270
 258          SE    1855 1856.43 1857.53 1858.31 1858.95 1859.61 1860.29 1861.80 1863.71 1865.82
 259          SE  1868.1 1869.38 1870.67 1872.02 1873.43 1874.89 1877.29 1882.35
              *
              *  R51.1
              *     DEER VALLEY BASIN OUTLET CONDUIT TO THOMPSON PEAK PARKWAY
              *     COMBINE WITH RUNOFF FROM DC RANCH
              *       L = 2820 feet
              *

 260          KK  D51.1T
 261          KM     DIVERT 100% OF FLOW TO RETRIEVE AT THOMPSON PEAK PARKWAY
 262          DT  B51.1T
 263          DI       0   10000
 264          DQ       0   10000
              *
              *
              *     ****************  BEGIN DC RANCH WATERSHED  ****************
              *
              *       THE DC RANCH HEC-1 MODEL WAS DEVELOPED BY WOOD/PATEL ASSOCIATES
              *           WOOD/PATEL FILE NAME:  DC0721C.DAT
              *           MODEL DATE:            4 JANUARY 96
              *
1                                          HEC-1 INPUT                                                    PAGE  8

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

 265          KK    52D4
 266          KM   RUNOFF FROM SUBBASIN 52D4
 267          BA    .070
 268          LS              75    14.5
 269          UK     120    .010     .15     100
 270          RK    3100    .035    .045            TRAP      30      10
              *

 271          KK   52D4R
 272          KM   ROUTE 52D4C THROUGH 52D5 TO CP 52D5C
 273          RK    1350    .033    .045            TRAP      10      10
              *

 274          KK   52D4B
 275          KM   RUNOFF FROM SUBBASIN 52D4B
 276          BA    .022
 277          LS              75      63
 278          UK     120    .010     .15     100
 279          RK    2200    .033    .045            TRAP      30      10
              *

 280          KK  52D5C1
 281          KM   COMBINE 52D4R AND 52D4B
 282          HC       2
              *

 283          KK   52D5A
 284          KM   RUNOFF FROM 52D5A
```

```
 285          BA   .0232
 286          LS              75      63
 287          UK     120    .010     .15     100
 288          RK    1300    .032    .045            TRAP      30      10
              *

 289          KK  52D5AR
 290          KM   ROUTE 52D5A THROUGH BEARDSLEY CHANNEL TO CP 52D5C2
 291          RK     400   .0143    .035            TRAP      50       4
              *

 292          KK  52D5C2
 293          KM   COMBINE 25D5C1 AND 52D5AR
 294          HC       2
              *

 295          KK   52D5R
 296          KM   ROUTE 52D5C IN BEARDSLEY CHANNEL TO CP 52C3BC2
 297          RK     240   .0143    .035            TRAP      50       4
              *
1                                          HEC-1 INPUT                                                    PAGE  9

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

 298          KK    52C3
 299          KM   RUNOFF FROM SUBBASIN 52C3
 300          BA    .006
 301          LS              75      65
 302          UK     100     .02     .10     100
 303          RK     800    .033    .045            TRAP      30      10
              *

 304          KK   52C3R
 305          KM   ROUTE 52C3 THROUGH SUBBASIN 52C4 TO CP 52C4C1.
 306          RK    1350    .034    .045            TRAP      10      10
              *

 307          KK   52C3B
 308          KM   RUNOFF FROM SUBBASIN 52C3B
 309          BA    .016
 310          LS              75      60
 311          UK     100     .02     .10     100
 312          RK    1400    .034    .045            TRAP      30      10
              *

 313          KK  2C3BC1
 314          KM   COMBINE 52C3B AND 52C3R
 315          HC       2
              *

 316          KK  2C3BC2
 317          KM   COMBINE 52C3BC1 AND 52C5R
 318          HC       2
              *

 319          KK  52C3BR
 320          KM   ROUTE 52C3BC2 IN BEARDSLEY CHANNEL TO CP 52C4C2
 321          RK     430   .0143    .035            TRAP      50       4
              *
              *

 322          KK     51C     SUB
 323          KM        RUNOFF FROM SUB 51C
 324          BA   .0972
 325          LS              74      15
 326          UK     100   .0213     .10     100
 327          RK    3900   .0375    .045            TRAP      30      10
              *

 328          KK   51C1D
 329          KM   DIVERT 67 PERCENT OF 51C TO WEST (33 PERCENT TO SOUTH)
 330          DT  51C1DV
 331          DI       0   10000
 332          DQ       0    6700
              *
1                                          HEC-1 INPUT                                                    PAGE 10

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

 333          KK   51C1R
 334          KM   ROUTE 51C1D THROUGH SUBBASIN 52C1
 335          RK    1350   .0364    .045            TRAP      10      10
              *

 336          KK    52C1
 337          KM   RUNOFF FROM SUBBASIN 52C1
 338          BA    .029
 339          LS              75    20.5
 340          UK     100     .02     .10     100
 341          RK    1350    .021    .045            TRAP      30      10
              *
```

```
342          KK   52C1C
343          KM   COMBINE 51C1R AND 52C1
344          HC       2   .0611
             *

345          KK   52C1R
346          KM   ROUTE 52C1C THROUGH BASIN 52C2A TO CP 52C2BC
347          RK    1500    .033    .045            TRAP      10       10
             *

348          KK   52C2A
349          KM   RUNOFF FROM SUBBASIN 52C2A
350          BA    .019
351          LS              75       2
352          UK     100     .02     .10     100
353          RK    1500    .033    .045            TRAP      30       10
             *

354          KK  52C2AC
355          KM   COMBINE 52C2A AND 52C1R
356          HC       2
             *

357          KK   52C2B
358          KM   RUNOFF FROM SUBBASIN 52C2B
359          BA   .0275
360          LS              75      11
361          UK     100     .02     .10     100
362          RK    2000    .030    .045            TRAP      30       10
             *

363          KK  52C2BC
364          KM   COMBINE 52C2B AND 52C2AC
365          HC       2
             *
```



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

366          KK  52C2BR
367          KM   ROUTE 52C2BC THROUGH 52C2C TO CP 52C2CC
368          RK    1500    .040    .045            TRAP      10       10
             *

369          KK   52C2C
370          KM   RUNOFF FROM SUBBASIN 52C2C
371          BA    .014
372          LS              75      62
373          UK     100     .02     .10     100
374          RK    1500     .04    .045            TRAP      30       10
             *

375          KK  52C2CC
376          KM   COMBINE 52C2C AND 52C2BR
377          HC       2
             *

378          KK   52C2R
379          KM   ROUTE 52C2CC THROUGH SUBBASIN 52C4 TO CP 52C4C1
380          RK    1550    .030    .045            TRAP      10       10
             *

381          KK    52C4
382          KM   RUNOFF FROM SUBBASIN 52C4
383          BA    .017
384          LS              75      60
385          UK     100     .02     .10     100
386          RK    1550    .030    .045            TRAP      30       10
             *

387          KK  52C4C1
388          KM   COMBINE 52C4 AND 52C2R
389          HC       2
             *

390          KK  52C4C2
391          KM   COMBINE 52C4C1 AND 52C3BR
392          HC       2
             *

393          KK   52C4R
394          KM   ROUTE 52C4C2 WEST IN BEARDSLEY CHANNEL TO CP 52C15C2
395          RK     850   .0143    .035            TRAP      50        4
             *

396          KK   52C13
397          KM   RUNOFF FROM SUBBASIN 52C13
398          BA    .023
399          LS              75      31
400          UK     100     .02     .10     100
401          RK     950    .040    .045            TRAP      30       10
```

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

  402         KK  2C13DV
  403         KM   DIVERT FIRST 40 CFS INTO STORM DRAIN; REMAINDER FLOWS OVER ROAD
  404         DT   STORM
  405         DI       0      40    1000
  406         DQ       0      40      40
              *
              * KK52C13R
              * KM ROUTE 52C13 THROUGH SUBBASIN 52C15 TO CP 52C15C1
              * RK  1800    .035    .045          TRAP      10      10
              *

  407         KK   52C15
  408         KM   RUNOFF FROM SUBBASIN 52C15
  409         BA    .046
  410         LS              75    64.4
  411         UK     100     .02     .10     100
  412         RK    2050    .036    .045          TRAP      30      10
              *

  413         KK  2C15C1
  414         KM   COMBINE 52C15 AND 52C13DV
  415         HC       2    .046
              *

  416         KK  2C15C2
  417         KM   COMBINE 52C15C1 AND 52C4R
  418         HC       2
              *

  419         KK  52C15R
  420         KM   ROUTE 52C15C2 IN BEARDSLEY CHANNEL TO CP 52C14C3
  421         RK     750   .0143    .035          TRAP      50       4
              *

  422         KK  52C14A
  423         KM   RUNOFF FROM SUBBASIN 52C14A
  424         BA    .041
  425         LS              75    67.7
  426         UK     100     .02     .10     100
  427         RK    2050    .031    .045          TRAP      30      10
              *

  428         KK  2C14AC
  429         KM   COMBINE 52C14A AND 52C15R
  430         HC       2
              *

  431         KK  2C14AR
  432         KM   ROUTE 52C14AC IN BEARDSLEY CHANNEL TO CP 52C14BC2
  433         RK     380   .0143    .035          TRAP      50       4
              *
              *
```



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

  434         KK  51C1DV
  435         KM   RETRIEVE DIVERTED FLOW
  436         DR  51C1DV
              *

  437         KK   51C2D
  438         KM   DIVERT 27 PERCENT OF 51C1DV TO WEST (73 PERCENT TO SOUTH)
  439         DT  51C2DV
  440         DI       0   10000
  441         DQ       0    2700
              *

  442         KK   51C2R
  443         KM   ROUTE 51C2D THROUGH SUBBASIN 52C5 TO CP 52C5C
  444         RK     700    .030    .045          TRAP      10      10
              *

  445         KK    52C5
  446         KM   RUNOFF FROM SUBBASIN 52C5
  447         BA    .016
  448         LS              75      27
  449         UK     100     .02     .10     100
  450         RK    1200     .03    .045          TRAP      30      10
              *

  451         KK   52C5C
  452         KM   COMBINE 51C2R AND 52C5
  453         HC       2   .0635
              *
```

```
454          KK   52C5R
455          KM   ROUTE 52C5C THROUGH SUBBASIN 52C6 TO CP 52C6C
456          RK    3100    .035    .045            TRAP      10      10
             *

457          KK    52C6
458          KM   RUNOFF FROM SUBBASIN 52C6
459          BA    .036
460          LS              75    31.4
461          UK     100     .02     .10     100
462          RK    3100    .035    .045            TRAP      30      10
             *

463          KK   52C6C
464          KM   COMBINE 52C5R AND 52C6
465          HC       2
             *

466          KK   52C6R
467          KM   ROUTE 52C6C THROUGH SUBBASIN 52C10 TO CP 52C10C2
468          RK     450    .032    .045            TRAP      10      10
             *
```



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

469          KK  51C2DV
470          KM   RETRIEVE 52C2DV
471          DR  51C2DV
             *

472          KK   51C3R
473          KM   ROUTE 52C2DV THROUGH SUBBASIN 52C7 TO CP 52C7C
474          RK     700    .040    .045            TRAP      10      10
             *

475          KK     51B     SUB
476          KM         RUNOFF FROM SUB 51B
477          BA   .5711
478          LS       0    71.9    13.1
479          UK     100   .0213     .10     100
480          RK    8900   .0300    .045            TRAP      50      25
             *

481          KK   51B1D
482          KM   DIVERT 92 PERCENT OF SUBBASIN 51B TO WEST (8 PERCENT TO SOUTH)
483          DT  51B1DV
484          DI       0   10000
485          DQ       0    9200
             *

486          KK   51B1R
487          KM    ROUTE 51B1D THROUGH SUBBASIN 52C7 TO CP 52C7C
488          RK     450     .04    .045            TRAP      10      10
             *

489          KK    52C7
490          KM   RUNOFF FROM SUBBASIN 52C7
491          BA    .006
492          LS              75      27
493          UK     100     .02     .10     100
494          RK     550     .04    .045            TRAP      30      10
             *

495          KK   52C7C
496          KM   COMBINE 51B1R, 51C3R, AND 52C7
497          HC       3   .0693
             *

498          KK   52C7R
499          KM   ROUTE 52C7C THROUGH SUBBASIN 52C9 TO CP 52C9C1
500          RK    1550    .036    .045            TRAP      10      10
             *

501          KK  51B1DV
502          KM   RETRIEVE DIVERTED FLOW 51B1DV
503          DR  51B1DV
             *
```



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

504          KK   51B2D
505          KM   DIVERT 84 PERCENT OF 51B1DV TO WEST (16 PERCENT TO SOUTH)
506          DT  51B2DV
507          DI       0   10000
508          DQ       0    8400
             *

509          KK   51B2R
510          KM   ROUTE 51B2D THROUGH SUBBASIN 52C8 TO CP 52C8C
```

```
511          RK     750    .034    .045            TRAP      10       10
             *

512          KK    52C8
513          KM   RUNOFF FROM SUBBASIN 52C8
514          BA    .008
515          LS              75      27
516          UK     100     .02     .10     100
517          RK     750    .034    .045            TRAP      30       10
             *

518          KK   52C8C
519          KM   COMBINE 51B2R AND 52C8
520          HC       2   .4493
             *

521          KK   52C8R
522          KM   ROUTE 52C8C THROUGH SUBBASIN 52C9 TO CP 52C9C1
523          RK    1100    .036    .045            TRAP      10       10
             *

524          KK  52C9C1
525          KM   COMBINE 52C7R AND 52C8R
526          HC       2
             *

527          KK  52C9R1
528          KM   ROUTE 52C9C1 THROUGH SUBBASIN 52C9 TO CP 52C9C2
529          RK    1050    .036    .045            TRAP      10       10
             *

530          KK    52C9
531          KM   RUNOFF FROM SUBBASIN 52C9
532          BA    .069
533          LS              75   31.85
534          UK     100     .02     .10     100
535          RK    3150    .036    .045            TRAP      30       10
             *

536          KK  52C9C2
537          KM   COMBINE 52C9R1 AND 52C9
538          HC       2
             *
```

1 HEC-1 INPUT PAGE 16

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

539          KK  52C9R2
540          KM   ROUTE 52C9C2 THROUGH SUBBASIN 52C10 TO CP 52C10C1
541          RK     500    .032    .045            TRAP      10       10
             *

542          KK  2C10C1
543          KM   COMBINE 52C9R2 AND 52C6R
544          HC       2
             *

545          KK  2C10R1
546          KM   ROUTE 52C10C1 THROUGH SUBBASIN 52C10 TO CP 52C10C2
547          RK     300    .032    .045            TRAP      10       10
             *

548          KK   52C10
549          KM   RUNOFF FROM SUBBASIN 52C10
550          BA    .014
551          LS              75    7.85
552          UK     100     .02     .10     100
553          RK     800    .032    .045            TRAP      30       10
             *

554          KK  2C10C2
555          KM   COMBINE 52C10R1 AND 52C10
556          HC       2
             *

557          KK   52C11
558          KM   RUNOFF FROM SUBBASIN 52C11
559          BA   .0425
560          LS              75      27
561          UK     100     .02     .10     100
562          RK    2800    .031    .045            TRAP      30       10
             *

563          KK  2C11R1
564          KM   PIPE ROUTE 52C11 TO CP 52C11C
565          RK     650     .02    .045            CIRC       3
             *

566          KK  52C13D
567          KM   RETRIEVE DIVERTED FLOW
568          DR   STORM
             *
```

```
 569          KK  52C11C
 570          KM   COMBINE 52C13D AND 52C11R1
 571          HC       2   .0655
              *
1                                        HEC-1 INPUT                                                    PAGE 17

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

 572          KK  2C11CR
 573          KM   PIPE ROUTE 52C11C TO CP 52C11C2
 574          RK     750     .02    .045            CIRC      3
              *

 575          KK  2C11C2
 576          KM   COMBINE 52C11CR AND 52C10C2
 577          HC       2
              *

 578          KK  2C11R2
 579          KM   ROUTE 52C11C2 THROUGH SUBBASIN 52C12 TO CP 52C12C
 580          RK     700     .03    .045            TRAP      10       10
              *

 581          KK   52C12
 582          KM   RUNOFF FROM SUBBASIN 52C12
 583          BA    .023
 584          LS              75      85
 585          UK     100     .02     .10     100
 586          RK     900     .03    .045            TRAP      30       10
              *

 587          KK  52C12C
 588          KM   COMBINE 52C11R2 AND 52C12
 589          HC       2
              *

 590          KK  52C12R
 591          KM   ROUTE 52C12C THROUGH SUBBASIN 52C14 TO CP 52C14C1
 592          RK    1150    .029    .045            TRAP      10       10
              *

 593          KK  52C14B
 594          KM   RUNOFF FROM SUBBASIN 52C14B
 595          BA    .021
 596          LS              75      60
 597          UK     100     .02     .10     100
 598          RK    1250    .029    .045            TRAP      30       10
              *

 599          KK  C14BC1
 600          KM   COMBINE 52C14B AND 52C12R
 601          HC       2
              *

 602          KK  C14BC2
 603          KM   COMBINE 52C14BC1 AND 52C14AR
 604          HC       2
              *
1                                        HEC-1 INPUT                                                    PAGE 18

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

 605          KK  52C14R
 606          KM   ROUTE 52C14C3 WEST IN BEARDSLEY CHANNEL TO CP 52B5C2
 607          RK     600   .0143    .035            TRAP      50        4
              *

 608          KK  51B2DV
 609          KM   RETRIEVE DIVERTED FLOW
 610          DR  51B2DV
              *

 611          KK   51B3D
 612          KM   DIVERT 84 PERCENT OF 51B2DV TO WEST (16 PERCENT TO SOUTH)
 613          DT  51B3DV
 614          DI       0   10000
 615          DQ       0    8400
              *

 616          KK   51B3R
 617          KM   ROUTE 51B3D THROUGH SUBBASIN 52B1 TO CP 52B1C
 618          RK     600    .039    .045            TRAP      10       10
              *

 619          KK    52B1
 620          KM   RUNOFF FROM SUBBASIN 52B1
 621          BA    .003
 622          LS              75      27
 623          UK     100     .02     .10     100
 624          RK     600    .039    .045            TRAP      30       10
```

```
                 *
 625             KK   52B1C
 626             KM   COMBINE 51B3R AND 52B1
 627             HC       2   .0736
                 *

 628             KK   52B1R
 629             KM   ROUTE 52B1C THROUGH SUBBASIN 52B2 TO CP 52B2C1
 630             RK     930    .037    .045            TRAP      10       10
                 *

 631             KK  51B3DV
 632             KM   RETRIEVE DIVERTED FLOW 51B3DV
 633             DR  51B3DV
                 *

 634             KK   51B4D
 635             KM   DIVERT 82 PERCENT OF 51B3DV TO WEST (18 PERCENT TO SOUTH)
 636             DT  51B4DV
 637             DI       0   10000
 638             DQ       0    8200
                 *
1                                          HEC-1 INPUT                                                    PAGE 19

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

 639             KK  51B4R1
 640             KM   ROUTE 51B4D THROUGH SUBBASIN 52B2 TO CP 52B2C1
 641             RK    1350    .037    .045            TRAP      10       10
                 *

 642             KK  52B2C1
 643             KM   COMBINE 51B4R1 AND 52B1R
 644             HC       2   .1403
                 *

 645             KK  52B2R1
 646             KM   ROUTE 52B2R1 THROUGH SUBBASIN 52B2 TO CP 52B2C2
 647             RK    1000    .037    .045            TRAP      10       10
                 *

 648             KK    52B2
 649             KM   RUNOFF FROM SUBBASIN 52B2
 650             BA    .032
 651             LS              75      17
 652             UK     100     .02     .10     100
 653             RK    2350    .037    .045            TRAP      30       10
                 *

 654             KK  52B2C2
 655             KM   COMBINE 52B2 AND 52B2R1
 656             HC       2
                 *

 657             KK  52B2R2
 658             KM   ROUTE 52B2C2 THROUGH SUBBASIN 52B3 TO CP 52B3C2
 659             RK     850    .026    .045            TRAP      10       10
                 *

 660             KK  52B3R1
 661             KM   ROUTE 52B3C1 THROUGH SUBBASIN 52B3 TO CP 52B3C2
 662             RK     500    .024    .045            TRAP      10       10
                 *

 663             KK    52B3
 664             KM   RUNOFF FROM SUBBASIN 52B3
 665             BA    .062
 666             LS              75    31.8
 667             UK     100     .02     .10     100
 668             RK    3450    .030    .045            TRAP      30       10
                 *

 669             KK  52B3C2
 670             KM   COMBINE 52B3 AND 52B3R1
 671             HC       2
                 *
1                                          HEC-1 INPUT                                                    PAGE 20

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

 672             KK  52B3R2
 673             KM   ROUTE 52B3C2 THROUGH 52B4 TO CP 52B4C
 674             RK    1700    .024    .045            TRAP      10       10
                 *

 675             KK    52B4
 676             KM   RUNOFF FROM SUBBASIN 52B4
 677             BA    .026
 678             LS              75      62
 679             UK     100     .02     .10     100
```

```
680          RK    1700    .024    .045            TRAP      30      10
             *

681          KK   52B4C
682          KM   COMBINE 52B4 AND 52B3R2
683          HC       2
             *

684          KK   52B4R
685          KM   ROUTE 52B4C THROUGH SUBBASIN 52B5 TO CP 52B5C1
686          RK     550    .027    .045            TRAP      10      10
             *

687          KK    52B5
688          KM   RUNOFF FROM SUBBASIN 52B5
689          BA    .021
690          LS              75    56.9
691          UK     100     .02     .10     100
692          RK    1400     .03    .045            TRAP      30      10
             *

693          KK  52B5C1
694          KM   COMBINE 52B5 AND 52B4R
695          HC       2
             *

696          KK  52B5C2
697          KM   COMBINE 52B5C1 AND 52C14R
698          HC       2
             *

699          KK   52B5R
700          KM   ROUTE 52B5C2 IN BEARDSLEY CHANNEL TO CP 52B7C2
701          RK    1100   .0143    .035            TRAP      50       4
             *

702          KK  51B4DV
703          KM   RETRIEVE DIVERTED FLOW 51B4DV
704          DR  51B4DV
             *
1                                        HEC-1 INPUT                                          PAGE 21

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

705          KK   51B5D
706          KM   DIVERT 68 PERCENT OF 51B4DV TO WEST (32 PERCENT TO SOUTH)
707          DT  51B5DV
708          DI       0   10000
709          DQ       0    6800
             *

710          KK   51B5R
711          KM   ROUTE 51B5D THROUGH SUBBASIN 52B6 TO CP 51B7C
712          RK    1250    .035    .045            TRAP      10      10
             *

713          KK  51B5DV
714          KM   RETRIEVE DIVERTED FLOW
715          DR  51B5DV
             *

716          KK   51B6D
717          KM   DIVERT 53 PERCENT OF 51B5DV TO WEST (47 PERCENT TO SOUTH)
718          DT  51B6DV
719          DI       0   10000
720          DQ       0    5300
             *

721          KK   51B6R
722          KM   ROUTE 51B6D THROUGH SUBBASIN 52B6 TO CP 51B7C
723          RK     925    .033    .045            TRAP      10      10
             *

724          KK  51B6DV
725          KM   RETRIEVE DIVERTED FLOW 51B6DV
726          DR  51B6DV
             *

727          KK   51B7D
728          KM   DIVERT 58 PERCENT OF 51B6DV TO WEST (42 PERCENT TO SOUTH)
729          DT  51B7DV
730          DI       0   10000
731          DQ       0    5800
             *

732          KK  51B7R1
733          KM   ROUTE 51B7D THROUGH SUBBASIN 52B6 TO CP 51B7C
734          RK     530    .033    .045            TRAP      10      10
             *

735          KK   51B7C
736          KM   COMBINE 51B7R1, 51B5R, AND 51B6R
```

```
 737          HC       3   .2404
              *
1                                          HEC-1 INPUT                                                    PAGE 22

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

 738          KK  51B7R2
 739          KM   ROUTE 51B7C THROUGH SUBBASIN 52B6 TO CP 52B6C
 740          RK    2300    .033    .045            TRAP      10      10
              *

 741          KK    52B6
 742          KM   RUNOFF FROM SUBBASIN 52B6
 743          BA    .096
 744          LS              75   13.55
 745          UK     100     .02     .10     100
 746          RK    3200    .033    .045            TRAP      30      10
              *

 747          KK   52B6C
 748          KM   COMBINE 51B7R2 AND 52B6
 749          HC       2
              *

 750          KK   52B6R
 751          KM   ROUTE 52B6C THROUGH SUBBASIN 52B7 TO CP 52B7C1
 752          RK    2750    .028    .045            TRAP      10      10
              *

 753          KK    52B7
 754          KM   RUNOFF FROM SUBBASIN 52B7
 755          BA    .080
 756          LS              75   78.45
 757          UK     100     .02     .10     100
 758          RK    2750    .028    .045            TRAP      30      10
              *

 759          KK  52B7C1
 760          KM   COMBINE 52B7 AND 52B6R
 761          HC       2
              *

 762          KK  52B7C2
 763          KM   COMBINE 52B7C1 AND 52B5R
 764          HC       2
              *

 765          KK    52A2
 766          KM   RUNOFF FROM SUBBASIN 52A2
 767          BA    .065
 768          LS              75    88.8
 769          UK     100     .02     .10     100
 770          RK    2900    .023    .045            TRAP      30      10
              *
1                                          HEC-1 INPUT                                                    PAGE 23

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

 771          KK  52A2C2
 772          KM   COMBINE 52B7C2 AND 52A2
 773          HC       2    1.62
              *

 774          KK  51B7DV
 775          KM   RETRIEVE DIVERTED FLOW 51B7DV
 776          DR  51B7DV
              *

 777          KK   51B8R
 778          KM   ROUTE 51B7DV THROUGH SUBBASIN 52A1 TO CP 52A1C
 779          RK    3400    .033    .045            TRAP      10      10
              *

 780          KK    52A1
 781          KM   RUNOFF FROM SUBBASIN 52A1
 782          BA    .130
 783          LS              75   32.25
 784          UK     100     .02     .10     100
 785          RK    3400    .033    .045            TRAP      30      10
              *

 786          KK   52A1C
 787          KM   COMBINE 52A1 AND 51B8R
 788          HC       2
              *
              *
              *     ******************  END DC RANCH WATERSHED  ******************
              *
              *
              *     ******************  BEGIN GVSCE MODIFICATIONS  ******************
              *
```

```
789          KK   D51.1
790          KM   RETRIEVE DIVERTED FLOW
791          DR  B51.1T
             *

792          KK    C52A
793          KM     COMBINE ROUTED HYDROGRAPH FROM C51.1 WITH HYDROGRAPH FROM C52A1C AT
794          KM     THOMPSON PEAK PARKWAY
795          HC       2  6.2735
             *
             *   R52A
             *     DEER VALLEY BASIN OUTLET CONDUIT TO OUTLET AT SIERRA PINTA CHANNEL
             *     COMBINE WITH RUNOFF FROM DC RANCH
             *       L = 3130 feet
             *
1                                        HEC-1 INPUT                                          PAGE 24

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

796          KK     C52
797          KM     COMBINE ROUTED HYDROGRAPH FROM C52A WITH HYDROGRAPH FROM C52A2C AT
798          KM     BEARDSLEY ROAD
799          HC       2  7.9160
             *

800          KK     R52
801          KM     NORMAL DEPTH CHANNEL ROUTE FROM C52 TO C53 THROUGH PIMA CHANNEL
802          RS       1    FLOW      -1
803          RC   0.022   0.022   0.022    4050    0.01
804          RX    1000    1012    1020    1028    1058    1066    1074    1086
805          RY     107     104     102     100     100     102     104     107
             *

806          KK    D52T
807          KM     DIVERT 100% OF FLOW TO RETRIEVE JUST U/S OF UNION HILLS DETENTION BASIN
808          DT    B52T
809          DI       0   10000
810          DQ       0   10000
             *

811          KK   CLEAR
812          KM     CLEAR HYDROGRAPHS FROM STACK
813          HC       2
             *
             *     *****************  BEGIN GRAYHAWK WATERSHED  *****************
             *
             *       THE GRAYHAWK HEC-1 MODEL (VILLAGES II AND III) WAS DEVELOPED BY DEI
             *           DEI FILE NAME:  GH23FAB.H1I
             *           MODEL DATE:     21 MAY 96
             *

814          KK     37A     SUB
815          KM        RUNOFF FROM SUB-BASIN 37A
816          BA   .6765
817          LS              74    24.8
818          UK      61   .0213     .10     100
819          RK    4800   .0237    .045            TRAP      50     130
             *

820          KK    37AE     DIV
821          KM        SPLIT FLOWS AT SOUTH BOUNDARY OF SUB 37A FOR ROUTING TO DETENTION
822          KM        BASIN 53R & 38R-1.  THIS DIVERT OPERATION REFLECTS THE BREAK IN THE
823          KM        DEER VALLEY ROAD CHANNEL BETWEEN HAYDEN & PIMA ROADS.  THIS SPLIT IS
824          KM        BASED ON NEW CORE NORTH PLAN DEVELOPED BY G.W. LARSON & ASSC., INC.
825          KM        DATED 6/16/92.  DIVERT RATIO IS BASED ON APPROXIMATE D.A. FROM SUB 37A
826          KM        THAT IS INTERCEPTED BY EACH CHANNEL SEGMENT ALONG DEER VALLEY ROAD.
827          KM
828          KM        (THIS SPLIT HAS BEEN UPDATED FROM THE OLP.6 MODEL TO REFLECT A 30% SPLIT
829          KM        TO THE SOUTH AND A 70% SPLIT TO THE WEST FOR THIS STUDY AND IS BASED ON
830          KM        UPSTREAM CONTRIBUTING WATERSHED AREA TO THIS CONCENTRATION POINT)
831          DT    37AW
832          DI       0     100     500    1000    1500
833          DQ       0      70     350     700    1050
             *
1                                        HEC-1 INPUT                                          PAGE 25

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

834          KK   37AE1      CP
835          KM        ROUTE NON-DIVERTED FLOW FROM DIV 37AE THROUGH SUB 5N.  THIS IS A
836          KM        PRELIMINARY CHANNEL CONFIGURATION FOR THE GOLF COURSE CHANNEL.
837          RS       1    FLOW
838          RC    .055    .045    .055     800    .025
839          RX       0      16      26      30      40      44      54      70
840          RY       6       2       2       0       0       2       2       6
             *

841          KK   SUB5N
842          KM        RUNOFF FROM SUBBASIN 5 IN NORTH 18 MODEL.
843          BA   0.029
```

```
844          LS              77      18
845          UK     100    .013     .15     100
846          RK    1000   0.005    .018    .015    TRAP      50      20
847          RK     500    .015    .025            TRAP      10       4
             *

848          KK    CP5N
849          KM        ADD HYDROGRAPHS AT CP5N
850          HC       2   0.232
             *

851          KK   RET5N
852          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 5.  18" PIPE OUTFLOW WILL
853          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
854          RS       1    STOR       0       0
855          SV       0     .04     .33     .93     1.8    2.35    3.16     4.2     6.1
856          SQ       0       8      10      12      15      17     102     191     668
857          SE    1797    1798    1800    1802    1804    1805    1806    1807    1808
             *

858          KK   R6N.1
859          KM        ROUTE FLOW FROM CP5 TO CP6 IN NORTH 18 MODEL
860          KM        ASSUME CHANNEL IS SAME CONFIGURATION AS ABOVE FOR PROPOSED GOLF COURSE
861          KM        CHANNEL.
862          RS       1    FLOW
863          RC    .055    .045    .055    2200    .025
864          RX       0      16      26      30      40      44      54      70
865          RY       6       2       2       0       0       2       2       6
             *

866          KK   SUB6B
867          KM        RUNOFF FROM WEST PORTION OF EXISTING SUB6N ADJACENT TO CHANNEL
868          BA    .032
869          LS              81       0
870          UK     200    .025     .15     100
871          RK    1300    .015    .025            TRAP      10       4
             *
```



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

872          KK    SR6B
873          KM        ROUTE FLOW THROUGH RETENTION BASIN IN DRIVING RANGE CHANNEL
874          RS       1    STOR       0       0
875          SV       0     .17     .57    1.12    1.78
876          SQ       0       8      10     120     380
877          SE    1772    1773    1774    1775    1776
             *

878          KK   CP6.1
879          KM        ADD HYDROGRAPHS AT CP6.1
880          HC       2
             *

881          KK   SUB1N
882          KM        RUNOFF FROM SUBBASIN 1N
883          BA    .019
884          LS              77      18
885          UK     100    .013     .15     100
886          RK    1470   .0204    .018            TRAP      50      20
             *

887          KK    R2NA
888          KM        ROUTE FLOW FROM CP1 TO CP2NA
889          RS       1    FLOW
890          RC     .03     .03     .03     400     .025
891          RX       0       8      13      17      22      26      31      39
892          RY       4       2       2       0       0       2       2       4
             *

893          KK  SUB2NA
894          KM        RUNOFF FROM SUBBASIN 2NA
895          BA    .015
896          LS              81       0
897          UK     150    .013     .15     100
898          RK    1050   .0215    .025            TRAP      20       6
             *

899          KK   CP2NA
900          KM        ADD HYDROGRAPHS AT CP2NA
901          HC       2
             *

902          KK   SR2NA
903          KM        ROUTE FLOW THROUGH DETENTION BASIN IN SUB2NA
904          RS       1    STOR       0       0
905          SV       0    .076    .291    .708     1.2
906          SQ       0       0       0       0     160
907          SE    1772    1773    1774    1775    1776
             *
```

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

 908          KK    R2NB
 909          KM        ROUTE FLOW FROM CP2NA TO CP2NB
 910          RS       1    FLOW
 911          RC     .03     .03     .03    1050    .015
 912          RX       0       8      13      17      22      26      31      39
 913          RY       4       2       2       0       0       2       2       4
              *

 914          KK  SUB2NB
 915          KM        RUNOFF FROM SUBBASIN 2NB
 916          BA     .03
 917          LS              77      53
 918          UK     150    .013     .15     100
 919          RK    1200    .015    .025            TRAP      20      50
              *

 920          KK   CP2NB
 921          KM        ADD HYDROGRAPHS AT CP2NB
 922          HC       2
              *

 923          KK   SR2NB
 924          KM        STORAGE ROUTE FLOW THROUGH DETENTION BASIN IN SUB2NB
 925          RS       1    STOR       0       0
 926          SV       0     .19     .69    1.66    3.23     4.5
 927          SQ       0       2       8      12      17     170
 928          SE    1796    1798    1800    1802    1804    1805
              *

 929          KK   RCP4N
 930          KM        ROUTE FLOW FROM CP2NB TO CP4N
 931          RS       1    FLOW
 932          RC     .03     .03     .03     740    .018
 933          RX       0       8      13      17      22      26      31      39
 934          RY       4       2       2       0       0       2       2       4
              *

 935          KK   SUB6N
 936          KM        RUNOFF FROM SUBBASIN 6 IN NORTH 18 MODEL.  TO LAKE NORTH OF CLUBHOUSE.
 937          BA    .049
 938          LS              81       0
 939          UK     200    .025     .15     100
 940          RK    1300    .015    .025            TRAP      10       4
              *

 941          KK   RET6N
 942          KM        RETENTION ROUTING THROUGH LAKE AT HOLE 18, NORTH COURSE.
 943          RS       1    STOR
 944          SV       0    3.01    6.64   10.75   13.09   15.90
 945          SQ       0       0       0      10      26     100
 946          SE    1782    1784    1786    1788    1789    1790
              *
```



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

 947          KK  RCP4N1
 948          KM        ROUTE FLOW FROM CP6N TO CP4N
 949          RS       1    FLOW
 950          RC     .03     .03     .03     550    .018
 951          RX       0       8      13      17      22      26      31      39
 952          RY       4       2       2       0       0       2       2       4
              *

 953          KK  CP4N.1
 954          KM        ADD HYDROGRAPHS AT CP4N.1
 955          HC       2
              *

 956          KK   SUB3N
 957          KM        RUNOFF FROM SUBBASIN 3N, NORTH 18 MODEL
 958          BA    .027
 959          LS              81       0
 960          UK     100     .02     .15     100
 961          RK    2800  0.0207    .025            TRAP      10       4
              *

 962          KK   RET3N
 963          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 3.  18" PIPE OUTFLOW WILL
 964          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
 965          RS       1    STOR       0       0
 966          SV       0    1.73    8.97   13.32   15.74
 967          SQ       0       4       7       9      11
 968          SE    1793    1795    1800    1803    1804
              *

 969          KK     R4N
 970          KM        ROUTE FLOW FROM CP3N TO CP4N IN NORTH MODEL
 971          RS       1    FLOW
```

```
 972          RC    .035    .035    .035     950    .018
 973          RX       0       8      13      17      22      26      31      39
 974          RY       4       2       2       0       0       2       2       4
              *

 975          KK  CP4N.2
 976          KM        ADD HYDROGRAPHS AT CPN.2
 977          HC       2
              *

 978          KK   SUB4N
 979          KM        RUNOFF FROM SUBBASIN 4N.
 980          BA    .032
 981          LS              77      18
 982          UK     100    .015     .15     100
 983          RK    1200   0.007    .018            TRAP      50      20
              *
1                                          HEC-1 INPUT                                                    PAGE 29

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

 984          KK    CP4N
 985          KM        ADD HYDROGRAPHS AT CP4N
 986          HC       2
              *

 987          KK     R6N
 988          KM        ROUTE FLOW FROM CP4N TO CP6N ALONG THOMPSON PEAK PKWY AT CLUBHOUSE
 989          RS       1    FLOW
 990          RC    .045    .035    .045     750    .025
 991          RX       0       8      13      17      22      26      31      39
 992          RY       4       2       2       0       0       2       2       4
              *

 993          KK   SUB6A
 994          KM        RUNOFF FROM SUBBASIN 6A (CLUBHOUSE AREA NORTH OF THOMPSON PEAK PKWY).
 995          BA    .013
 996          LS              83      68
 997          UK     100    .015     .12     100
 998          RK     800     .01    .025            TRAP       2       3
              *

 999          KK   CP6.2
1000          KM        ADD HYDROGRAPHS AT CP6.2
1001          HC       2
              *

1002          KK    CP6N
1003          KM        ADD HYDROGRAPHS AT CP6N
1004          HC       2
              *
              *       ABOVE DISCHARGE FROM NORTH 18 THROUGH BRIDGE AT TPP STATION 103+45
              *

1005          KK   RCP6N
1006          KM        ROUTE FLOW FROM CP6N TO CP3C
1007          RS       1    FLOW
1008          RC    .045    .035    .045     300    .015
1009          RX       0       8      13      17      37      45      51      59
1010          RY       4       2       2       0       0       2       2       4
              *

1011          KK   SUB3C
1012          KM        RUNOFF FROM SUBBASIN 3C, SOUTH COURSE AT MAINTENANCE FACILITY.
1013          BA   .0104
1014          LS              77      68
1015          UK     100    .025     .02     100
1016          RK     600    .015    .035            TRAP      50      20
              *
1                                          HEC-1 INPUT                                                    PAGE 30

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

1017          KK    CP3C
1018          KM        COMBINE NORTH COURSE HYDROGRAPH WITH FIRST SOUTH COURSE HYDROGRAPH
1019          HC       2
              *

1020          KK     R3C
1021          KM        ROUTE FLOW FROM SUB3C TO CP3 THROUGH GC1018
1022          KM        ASSUME CHANNEL IS SAME CONFIGURATION AS ABOVE FOR PROPOSED GOLF COURSE
1023          KM        CHANNEL.
1024          RS       1    FLOW
1025          RC    .055    .045    .055    2050    .025
1026          RX       0      20      30      40      60      70      80     100
1027          RY    1650    1746    1744    1742    1742    1744    1746    1750
              *

1028          KK  GC1018
1029          KM        RUNOFF FROM HOLES NO. 10, 18 AND DRIVING RANGE THAT CONTRIBUTE TO WASH
1030          BA    .044
```

```
1031          LS              81        0
1032          UK     200    .025     .15     100
1033          RK    1800   .0233    .025            TRAP      10       4
              *

1034          KK   GC1-9
1035          KM        RUNOFF FROM GOLF COURSE HOLES 1 & 9 CONTRIBUTING TO WASH
1036          BA    .026
1037          LS              81        0
1038          UK     200    .025     .15     100
1039          RK    2110    .022    .025            TRAP      10       4
              *

1040          KK   SUB3S
1041          KM        RUNOFF FROM SUB BASIN 3 SOUTH COURSE
1042          BA   .0102
1043          LS              77       53
1044          UK     100    .010     .15     100
1045          RK     930    .016    .025            TRAP      50      20
              *

1046          KK    CP3S
1047          KM        COMBINE HYDROGRAPHS AT CP3 SOUTH COURSE
1048          HC       4
              *

1049          KK    RT3S
1050          KM        ROUTE FLOW FROM CP3S TO CPGC28
1051          RS       1    FLOW       0       0
1052          RC    .055    .045    .055     900    .023
1053          RX       0      20      30      40      60      70      80     100
1054          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *
```

1 HEC-1 INPUT PAGE 31

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

1055          KK   SUB4S
1056          KM        RUNOFF FROM SUB BASIN 4 SOUTH COURSE
1057          BA   .0273
1058          LS              77       53
1059          UK     100    .010     .15     100
1060          RK    1780    .018    .015            TRAP      50      20
              *

1061          KK    RT4S
1062          KM        ROUTE FLOW FROM CP4S TO CPGC28
1063          RS       1    FLOW       0       0
1064          RC    .035    .035    .035     650    .015
1065          RX       0      20      30      40      45      55      65      75
1066          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *

1067          KK   GC2-8
1068          KM        RUNOFF FROM SOUTH GOLF COURSE HOLES NO. 2 AND 8
1069          BA    .014
1070          LS              81        0
1071          UK     200    .025     .15     100
1072          RK     980    .016    .025            TRAP      10       4
              *

1073          KK  1PGC28
1074          KM        ADD HYDROGRAPHS AT CPGC28 AT PROPOSED LOOP ROAD, SOUTH COURSE
1075          HC       3
              *

1076          KK  SUB3D3
1077          KM        RUNOFF FROM GRAYHAWK ROAD SOUTH OF THOMPOSON PEAK
1078          BA    .014
1079          LS              81        0
1080          UK      50    .015      .1     100
1081          RK    2450    .016    .025            TRAP       5       4
              *

1082          KK  CPGC28
1083          KM        ADD HYDROGRAPHS AT CPGC28 AT PROPOSED LOOP ROAD, SOUTH COURSE
1084          HC       2
              *

1085          KK  SRGC28
1086          KM        STORAGE THRU DETENTION BASIN ON HOLES 2 AND 8.
1087          RS       1    STOR       0       0
1088          SV       0    .018    .085     .22      .5     1.0     1.7    2.68     3.9
1089          SE    1706    1707    1708    1709    1710    1711    1712    1713    1714
1090          SQ       0      10      18      20      30     108     324     651    1070
              *
```

1 HEC-1 INPUT PAGE 32

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

1091          KK    RT7S
```

```
1092          KM        ROUTE FLOW FROM SRGC28 TO CP7S
1093          RS      1    STOR       0       0
1094          RC   .055    .045    .055    1700   .0187
1095          RX      0      20      30      40      60      70      80     100
1096          RY   1750    1746    1744    1742    1742    1744    1746    1750
              *

1097          KK    GC7
1098          KM        RUNOFF FROM SOUTH GOLF COURSE HOLE NO. 7
1099          BA  .0134
1100          LS              81       0
1101          UK    200    .025     .15     100
1102          RK   1380    .020    .025            TRAP      10       4
              *

1103          KK    CP7S
1104          KM        ADD HYDROGRAPHS AT CP7S ON SOUTH COURSE
1105          HC       2  0.6083
              *

1106          KK    RC7S
1107          KM    THIS OPERATION IS ADDED BY STANTECH
1108          KM        ROUTE CP7S THROUGH SUBBASIN CN5C TO UNION HILLS BASIN INLET
1109          RS      1    FLOW      -1
1110          RC   0.05    0.04    0.05    4920  0.0142
1111          RX   1000    1050    1100    1102    1122    1124    1174    1224
1112          RY    104     103     102     100     100     102     103     104
              *
              *
              * THIS PORTION OF MODEL TAKEN FROM,"DRAINAGE REPORT FOR VILLAGE 3 - PHASE 1",
              * APPROVED BY THE CITY OF SCOTTSDALE 7-19-95.  MODIFIED TO ACCOUNT FOR ASBUILT
              * CONDITION
              *
              *

1113          KK  SUB3B2
1114          KM        RUNOFF FROM SUBBASIN 3B2, PARCEL 3B.
1115          BA  .0246
1116          LS              77      40
1117          UD    .10
              *

1118          KK   RB2E1
1119          KM       1/2 OF ENTIRE ROUTING REACH FROM 3B2 TO CP3E1
1120          RS      1    FLOW      -1
1121          RC   0.03    0.03    0.03     800    0.02
1122          RX      0     0.5       1       7      17      24    24.5      25
1123          RY    3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *
```



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

1124          KK   RB2E2
1125          KM       SECOND 1/2 OF ENTIRE ROUTING REACH FROM 3B2 TO CP3E1
1126          RS      1    FLOW      -1
1127          RC   0.03    0.03    0.03     600    .015
1128          RX      0     0.5       1       7      17      24    24.5      25
1129          RY    3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1130          KK  SUB3E1
1131          KM        RUNOFF FROM SUBBASIN 3E1, PARCEL 3E.
1132          BA  .0246
1133          LS              77      40
1134          UD    .10
              *

1135          KK  1CPE31
1136          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3E1 ALONG THE POWER CORRIDOR
1137          HC       2
              *

1138          KK   RCE31
1139          KM    THIS OPERATION IS ADDED BY STANTECH
1140          KM       ROUTE 1CPE31 THROUGH SUBBASIN CN5C TO UNION HILLS BASIN INLET
1141          RS      2    FLOW      -1
1142          RC   0.05    0.04    0.05    6300  0.0127
1143          RX   1000    1050    1100    1102    1112    1114    1164    1214
1144          RY    104     103     102     100     100     102     103     104
              *

1145          KK  SUB3D2
1146          KM        RUNOFF FROM SUBBASIN 3D2, PARCEL 3D.
1147          BA   .022
1148          LS              77      35
1149          UD    .08
              *

1150          KK   RD2E2
1151          KM        ROUTE EXCESS FROM 3D2 TO CP3E2
1152          RS      1    FLOW      -1
```

```
1153          RC    0.03    0.03    0.03    1200   .0216
1154          RX       0     0.5       1       7      17      24    24.5      25
1155          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1156          KK  SUB3E2
1157          KM        RUNOFF FROM SUBBASIN 3E2, PARCEL 3E.
1158          BA    .012
1159          LS              77      35
1160          UD     .06
              *
1                                          HEC-1 INPUT                                                    PAGE 34

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

1161          KK   CP3E2
1162          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3E2 ALONG THE POWER CORRIDOR
1163          HC       2
              *

1164          KK   RC3E2
1165          KM    THIS OPERATION IS ADDED BY STANTECH
1166          KM       ROUTE CP3E2 THROUGH SUBBASIN CN5C TO UNION HILLS BASIN INLET
1167          RS       2    FLOW      -1
1168          RC    0.05    0.04    0.05    5700  0.0140
1169          RX    1000    1050    1100    1102    1112    1114    1164    1214
1170          RY     104     103     102     100     100     102     103     104
              *

1171          KK  SUB3E3
1172          KM        RUNOFF FROM SUBBASIN 3E3, PARCEL 3E.
1173          BA    .020
1174          LS              77      32
1175          UD     .06
              *

1176          KK   RC3E3
1177          KM    THIS OPERATION IS ADDED BY STANTECH
1178          KM       ROUTE SUB3E3 THROUGH SUBBASIN CN5C TO UNION HILLS BASIN INLET
1179          RS       2    FLOW      -1
1180          RC    0.05    0.04    0.05    5020  0.0142
1181          RX    1000    1050    1100    1102    1112    1114    1164    1214
1182          RY     104     103     102     100     100     102     103     104
              *

1183          KK   SCN5C
1184          KM    THIS OPERATION IS ADDED BY STANTECH
1185          KM     RUNOFF FROM SUBBASIN CN5C
1186          BA  0.2602
1187          LS              74       0
1188          UK     240   0.021    0.13     100
1189          RK    1200   0.015   0.040  0.0248    TRAP       0       5
1190          RK    1500   0.005   0.030            TRAP       6       2
              *

1191          KK    CNC5
1192          KM     THIS OPERATION IS ADDED BY STANTECH
1193          KM      COMBINE ROUTED HYDROGRAPHS FROM CPE31, CP3E2, SUB3E3 AND CP7S W/RUNOFF
1194          KM      FROM SUBBASIN CN5C
1195          HC       5
              *
              *
              *       THIS ENDS THE PORTION OF THE MODEL TAKEN FROM DRAINAGE REPORT
              *       FOR VILLAGE 3 - PHASE I HEC-1 MODEL BY GILBERTSON ASSOC. INC.
              *       DATED 7-19-95
              *
              *
              * SUB1-2
              *       RUNOFF FROM SUB 1 AND 2, SOUTH COURSE MODEL
              *  .0558
              *              77      68
              *    200    .010     .15     100
              *   1370    .027    .015            TRAP      50      20
              *
              * GCRB18
              *       RUNOFF FROM GOLF COURSE CONTRIBUTING TO RETENTION BASIN AT HOLE NO. 18
              *       AND HOLE NO. 10, SOUTH COURSE
              *   .012
              *              81       0
              *    200    .025     .15     100
              *    300    .016    .025            TRAP      10       4
              *
              * CPRET1
              *       COMBINE HYDROGRAPHS AT RETENTION BASINS ON HOLE 18 & 10
              *      2
              *
              *  SR18S
              *       STORAGE ROUTE THRU RETENTION BASIN AT HOLE 18, SOUTH COURSE
              *      1    STOR       0       0
              *      0  1.7635  5.7722  12.174  21.337  28.849  30.151      32
              *   1725    1730    1735    1740    1745    1748    1749    1750
              *      0       0       0       0       0      42     386     900
```

```
*
*  SUB5S
*       RUNOFF FROM SUB 5S
*  .0263
*              77      31
*    100    .010     .15     100
*   1280    .007    .015            TRAP      50      20
*
* GC1216
*       RUNOFF FROM SOUTH GOLF COURSE HOLES 12, 16, AND 17
*  .0365
*              81       0
*    200    .025     .15     100
*   2200    .024    .025            TRAP      10       4
*
* GC1415
*       RUNOFF FROM SOUTH GOLF COURSE HOLES 13, 14, 15 AND RETENTION
*   .045
*              81       0
*    200    .025     .15     100
*   1300    .022    .025            TRAP      10       4
*
*  SUB6S
*       RUNOFF FROM SUB BASIN 6, SOUTH COURSE
*   .021
*              77      42
*    100    .010     .15     100
*   2150    .013    .025            TRAP      50      20
*
*  SUB7S
*       RUNOFF FROM SUB BASIN 7, SOUTH COURSE
*   .027
*              77      42
*    100    .010     .15     100
*   2080    .023    .025            TRAP      50      20
*
* CPRET2
*       COMBINE HYDROGRAPHS AT RETENTION BASIN 2, SOUTH COURSE
*      5
*
* SRRET2
*       STORAGE THRU RETENTION BASIN NO. 2, SOUTH COURSE
*      1    STOR       0       0
*      0    .617   3.474   9.858  20.063  35.353  52.685  57.749      62
*   1670    1675   .1680    1685    1690    1695    1699    1700    1701
*      0       0       0       0       0       0      32     386     594
*
*       NO FLOW RELEASED FROM RETENTION BASIN
*
*  CLEAR
*       THIS OPERATION IS ADDED BY GVSCE
*       CLEAR HYDROGRAPHS FROM THE STACK
*      2
*
```



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

1196          KK   SUB8S
1197          KM        RUNOFF FROM SUB BASIN 8, SOUTH COURSE
1198          BA   .0256
1199          LS              77      42
1200          UK     100    .010     .15     100
1201          RK    1600    .015    .025            TRAP      50      20
              *

1202          KK   RGC36
1203          KM        ROUTE SUB8S TO CPGC36
1204          RS       1    FLOW
1205          RC    .055    .045    .055     850     .02
1206          RX       0      16      26      30      40      44      54      70
1207          RY       6       2       2       0       0       2       2       6
              *

1208          KK    GC36
1209          KM        RUNOFF FROM SOUTH COURSE HOLES 3, 6, AND NORTH HALF OF HOLE 4.
1210          BA   .0406
1211          LS              81       0
1212          UK     200    .025     .15     100
1213          RK    2350    .015    .035            TRAP      10       4
              *

1214          KK  C1GC36
1215          KM        COMBINE SUBS 8 AND GC36
1216          HC       2
              *

1217          KK   SUB9S
1218          KM        RUNOFF FROM SUB BASIN 9, SOUTH COURSE
1219          BA    .021
1220          LS              77      53
1221          UK     100    .010     .15     100
```

```
1222          RK    1100    .013    .025            TRAP      50      20
              *

1223          KK     R9S
1224          KM        ROUTE SUB9S TO CPGC36
1225          RS       1    FLOW
1226          RC    .035    .035    .035     500     .02
1227          RX       0       8      12      16      18      22      26      30
1228          RY       6       4       3       2       2       3       4       6
              *

1229          KK  CPGC36
1230          KM        COMBINE SUBS 8 AND 9 SOUTH AND GC36
1231          HC       2
              *
```



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

1232          KK  SRGC36
1233          KM        STORAGE THRU DETENTION BASIN ON GC36
1234          RS       1    STOR       0       0
1235          SV       0    0.85     1.0
1236          SE    1664    1668    1669
1237          SQ       0      20     205
              *

1238          KK     R36
1239          KM    THIS OPERATION IS ADDED BY STANTECH
1240          KM       ROUTE SRGC36 THROUGH SUBBASIN CN5D TO UNION HILLS BASIN INLET
1241          RS       1    FLOW      -1.
1242          RC    0.05    0.04    0.05    3240  0.0154
1243          RX    1000    1050    1100    1102    1112    1114    1164    1214
1244          RY     104     103     102     100     100     102     103     104
              *

1245          KK   SCN5D
1246          KM    THIS OPERATION IS ADDED BY STANTECH
1247          KM     RUNOFF FROM SUBBASIN CN5D (UNION HILLS DETENTION BASIN PARK)
1248          BA  0.0553
1249          LS              74       0
1250          UK     240   0.025    0.13     100
1251          RK    1200   0.015    0.04  0.0248    TRAP       0       5
1252          RK     600    0.01   0.035            TRAP       6       2
              *

1253          KK    CN5D
1254          KM    THIS OPERATION IS ADDED BY STANTECH
1255          KM     COMBINE ROUTED HYDROGRAPH FROM CP45 WITH RUNOFF FROM SCN5D
1256          HC       2
              *

1257          KK     CN5
1258          KM    THIS OPERATION IS ADDED BY STANTECH
1259          KM     COMBINE HYDROGRAPHS FROM CN5C AND CN5D AT WEST INLET TO UNION HILLS BASIN
1260          HC       2
              *

1261          KK   SUB7A
1262          KM        RUNOFF FROM SUB7A, SOUTH COURSE EAST SIDE ADJACENT TO PIMA ROAD
1263          BA   .0092
1264          LS              77      42
1265          UK     100    .025     .15     100
1266          RK     950    .015    .025            TRAP      50      20
              *

1267          KK    SR7A
1268          KM        STORAGE THRU DETENTION BASIN ON SUB7A
1269          RS       1    STOR       0       0
1270          SV       0     .68      .8
1271          SE    1700    1703    1704
1272          SQ       0      10     150
              *
```



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

1273          KK    R10S
1274          KM        ROUTE FLOW FROM CP7A TO CP10S
1275          RS       1    FLOW
1276          RC    .035    .035    .035    1400    .015
1277          RX       0       8      12      16      18      22      26      30
1278          RY       6       4       3       2       2       3       4       6
              *

1279          KK  SUB10S
1280          KM        RUNOFF FROM SUB BASIN 10, SOUTH COURSE
1281          BA   .0248
1282          LS              77      53
1283          UK     100    .010     .15     100
1284          RK    1150    .020    .025            TRAP      50      20
```

```
                *
1285            KK   CP10S
1286            KM        COMBINE HYDROGRAPHS AT CP10 SOUTH COURSE
1287            HC       2
                *

1288            KK  SUB11S
1289            KM        RUNOFF FROM SUB11, SOUTH COURSE
1290            BA   .0234
1291            LS              77       68
1292            UK     100    .015    .018     100
1293            RK    1050    .015    .025            TRAP     100      20
                *

1294            KK    R11S
1295            KM        ROUTE 11S IS ADDED BY GVSCE TO ROUTE THE RUNOFF FROM SUB11S TO THE
1296            KM        POWER LINE CHANNEL CROSSING AT HUALAPAI DR ALONG HUALAPAI DR.
1297            KM
1298            KM        ROUTE FLOW FROM SUB11S TO CPC5.
1299            RS       1    FLOW
1300            RC    .035    .035    .035     900    .015
1301            RX       0       8      12      16      18      22      26      30
1302            RY       6       4       3       2       2       3       4       6
                *

1303            KK   C10SA
1304            KM        COMBINE 10SA IS ADDED BY GVSCE
1305            KM        COMBINE ROUTED HYDROGRAPH FROM 11S WITH HYDROGRAPH FROM CP10S
1306            HC       2
                *

1307            KK   R10SA
1308            KM        ROUTE 10SA IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE UNION
1309            KM        HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1310            KM
1311            KM        ROUTE FLOW FROM C10SAS TO CPC5.
1312            RS       1    FLOW
1313            RC    .035    .035    .035     900    .015
1314            RX       0       8      12      16      18      22      26      30
```



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

1315            RY       6       4       3       2       2       3       4       6
                *

1316            KK    GC45
1317            KM        RUNOFF FROM SOUTH COURSE HOLES 4 AND 5
1318            BA   .0127
1319            LS              81        0
1320            UK     200    .015    .025     100
1321            RK     550    .015    .035            TRAP      10       4
                *

1322            KK    CP45
1323            KM        COMBINE PC5 IS ADDED BY GVSCE TO ESTIMATE THE TOTAL FLOW IN THE POWER
1324            KM        LINE CHANNEL AT THE HUALAPAI CROSSING
1325            KM
1326            KM        COMBINE ROUTED HYDROGRAPH FROM C10SA AND CPC4A WITH HYDROGRAPHS FROM
1327            KM        CGC45, SRGC36 AND PC5
1328            HC       2
                *
                *     ******************  END GREYHAWK WATERSHED  ******************
                *
                *
1329            KK    RC45
1330            KM       ROUTE CP45 THROUGH SUBBASIN CN6D TO UNION HILLS BASIN INLET
1331            RS       1    FLOW      -1
1332            RC    0.05    0.04    0.05    2060  0.0146
1333            RX    1000    1002    1004    1008    1018    1022    1072    1122
1334            RY     104     103     102     100     100     102     103     104
                *

1335            KK   SCN6D
1336            KM     RUNOFF FROM SUBBASIN CN6D (CAP TREATMENT PLANT)
1337            KM      TOTAL AREA = 0.0246 sm, 0.0045 sm OF THAT IS NON-CONTRIBUTING
1338            BA  0.0201
1339            LS              74       80              74       0
1340            UK     100    0.01    0.15      80
1341            UK     100   0.025    0.13      20
1342            RK     600   0.015   0.025  0.0036    TRAP       0       5
1343            RK     400    0.01   0.025            TRAP       6       2
                *

1344            KK    CN6D
1345            KM     COMBINE ROUTED HYDROGRAPH FROM CP45 W/RUNOFF FROM SCN6D AT NORTH INLET
1346            KM      TO UNION HILLS BASIN
1347            HC       2
                *

1348            KK   SCN6C
1349            KM     RUNOFF FROM SUBBASIN CN6C (WATER CAMPUS AND CAP TREATMENT PLANT)
```

```
1350          KM      TOTAL AREA = 0.1101 sm, 0.0093 sm OF THAT IS NON-CONTRIBUTING
1351          BA  0.1008
1352          LS              74      80              74       0
1353          UK     150    0.01    0.15      50
1354          UK     100   0.025    0.13      50
1355          RK    1140    0.01    0.03  0.0123    TRAP       5      10
1                                          HEC-1 INPUT                                                    PAGE 39

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

1356          RK    1320   0.015    0.04  0.0095    TRAP       0       5
1357          RK    1100   0.015   0.024            CIRC       5
              *

1358          KK     D52
1359          KM     BRING BACK DIVERTED HYDROGRAPH FROM R52
1360          DR    B52T
              *

1361          KK    S53A
1362          KM     RUNOFF FROM SUBBASIN 53A
1363          BA  0.1794
1364          LS              74      11
1365          UK     300   0.022    0.13     100
1366          RK    1475   0.026   0.045  0.0111    TRAP       3       5
1367          RK    1750   0.021    0.04            TRAP      25       5
              *

1368          KK     C53
1369          KM     COMBINE ROUTED HYDROGRAPH FROM FROM C52 WITH RUNOFF FROM SUBBASIN 53A
1370          HC       2  8.0954
              *
              *    R53
              *   ****  TOO SHORT TO ROUTE  ****
              *    NORMAL DEPTH CHANNEL ROUTE FROM C53 TO C53A1 THROUGH PIMA CHANNEL
              *      1    FLOW      -1
              *  0.022   0.022   0.022    1550    0.01
              *   1000    1012    1020    1028    1058    1066    1074    1086
              *    107     104     102     100     100     102     104     107
              *

1371          KK   S53A1
1372          KM     RUNOFF FROM SUBBASIN 53A1
1373          BA  0.3320
1374          LS              74      12              74      30
1375          UK     300   0.022    0.13      70
1376          UK     150   0.027    0.13      30
1377          RK    1250   0.023   0.045  0.0087    TRAP       4       5
1378          RK    5050   0.017    0.04            TRAP      35       5
              *

1379          KK   C53A1
1380          KM     COMBINE ROUTED HYDROGRAPH FROM C53 WITH RUNOFF FROM SUBBASSIN 53A1
1381          HC       2  8.4274
              *

1382          KK   SCN6B
1383          KM     RUNOFF FROM SUBBASIN CN6B (WATER CAMPUS)
1384          KM      TOTAL AREA = 0.0542 sm, 0.0022 sm OF THAT IS NON-CONTRIBUTING
1385          BA  0.0520
1386          LS              74      80              74       0
1387          UK     150    0.01    0.15      70
1388          UK     100   0.025    0.13      30
1389          RK     720    0.02    0.03  0.0084    TRAP       5      10
1390          RK     700    0.01   0.045  0.0050    TRAP       0      10
1                                          HEC-1 INPUT                                                    PAGE 40

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

1391          RK     440   0.009   0.035            TRAP       6       3
              *

1392          KK    C53A
1393          KM     COMBINE HYDROGRAPH FROM C53A WITH RUNOFF FROM SUBBASIN CN6B
1394          HC       2
              *

1395          KK   SCN6E
1396          KM     RUNOFF FROM SUBBASIN CN6E
1397          BA  0.0852
1398          LS              74       5
1399          UK     300    0.01    0.15     100
1400          RK    1400    0.01   0.035            TRAP      20       4
              *

1401          KK  UHDB-I
1402          KM     COMBINE HYDROGRAPHS FROM CN5, CN6D AND C53A W/RUNOFF FROM SCN6C AND SCN6E
1403          HC       5
              *

1404          KK  UHDB-O
1405          KO       1
1406          KM     DETENTION BASIN AT UNION HILLS ROAD - NONREGULATORY STRUCTURE
```

```
1407          KM        PRINCIPAL SPILLWAY:  CONDUIT EXTENDING TO USBR BASIN AT THE TPC
1408          KM        EMERGENCY SPILLWAY:  NO OVERTOPPING FOR 24-HOUR STORM
1409          KM        7 ACRE-FEET OF STORAGE FOR SEDIMENTAION
1410          RS       1    STOR      -1
1411          SV       0     1.6    41.7   137.3   246.6   371.0
1412          SE    1585    1590    1595    1600    1605    1610
1413          SQ       0      50     100     200     400     500     527     629     657     679
1414          SQ     698     800     814
1415          SE  1585.0 1587.03 1588.27 1590.10 1592.88 1594.32 1596.46 1601.65 1601.75 1601.85
1416          SE  1602.3 1608.62 1609.62
              *
              *    RC1
              *     UNION HILLS BASIN OUTLET CONDUIT TO INTERSECTION OF PIMA ROAD AND LOOP 101
              *       L =        feet
              *

1417          KK     S54
1418          KM     RUNOFF FROM SUBBASIN 54
1419          BA  0.0853
1420          LS              74      50
1421          UK     300   0.017    0.13     100
1422          RK    3460   0.012   0.040            TRAP       5       2
              *

1423          KK   SCN6A
1424          KM     RUNOFF FROM SUBBASIN CN6A
1425          BA  0.1335
1426          LS              74      50
1427          UK     300   0.017    0.13     100
1428          RK    1050   0.017   0.045  0.0057    TRAP       8      20
1429          RK    2250   0.012   0.040            TRAP      10       4
              *
1                                          HEC-1 INPUT                                          PAGE 41

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


1430          KK    CN6A
1431          KM     COMBINE RUNOFF FROM  S54 WITH RUNOFF FROM SCN6A AT CN6A
1432          HC       2
              *

1433          KK     C1A
1434          KM     COMBINE ROUTED HYDROGRAPH FROM UHDB-O WITH HYDROGRAPH FROM CN6A AT C1A
1435          HC       2
              *
1436          ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
 LINE     (V) ROUTING          (---->) DIVERSION OR PUMP FLOW

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

   25       S30N
               V
               V
   34       R30N
               .
               .
   40          .       S31.1
               .           .
               .           .
   48      C31.1............
               .
               .
   51          .       S34.2
               .           .
               .           .
   60      C34.2............
               .
               .
   63          .        S35N
               .           .
               .           .
   75          .           .-------->   D35NL
   71          .       D35NR
               .          V
               .          V
   78          .       R35NR
               .           .
               .           .
   85          .           .       S36.2
               .           .           .
               .           .           .
   93          .       C36.2............
               .           .
               .           .
  100          .           .-------->  D36.2L
   96          .      D36.2R
               .          V
               .          V
  103          .      R36.2R
```

```
                .           .
                .           .
110             .           .       S34.1
                .           .           .
                .           .           .
119             .       C34.1............
                .           .
                .           .
122         HVDB-I............
                V
                V
125         HVDB-O
                V
                V
138          R34.1
                .
                .
144             .       S36.1
                .           .
                .           .
151          C36.1............
                V
                V
154          R36.1
                .
                .
162             .           .<-------   D35NL
160             .       B35NL
                .           V
                .           V
163             .       R35NL
                .           .
                .           .
172             .           .           .<-------  D36.2L
170             .           .     B36.2L
                .           .           V
                .           .           V
173             .           .     R36.2L
                .           .           .
                .           .           .
180             .           .           .     S36R1A
                .           .           .           .
                .           .           .           .
188         C36R1A...................................
                .
                .
193             .       S36R1B
                .           .
                .           .
201         C36R1B............
                .
                .
204             .       S36R2A
                .           .
                .           .
211         C36R2A............
                V
                V
214         R36R2A
                .
                .
226             .       S36R2B
                .           .
                .           .
233         C36R2B............
                .
                .
236             .        S51.1
                .           .
                .           .
244         DVDB-I............
                V
                V
247         DVDB-O
                .
                .
262             .-------> B51.1T
260         D51.1T
                .
                .
265             .         52D4
                .           V
                .           V
271             .        52D4R
                .           .
                .           .
274             .           .       52D4B
                .           .           .
                .           .           .
280             .       52D5C1............
                .           .
                .           .
283             .           .       52D5A
```

```
                 .          .          V
                 .          .          V
289              .          .     52D5AR
                 .          .          .
                 .          .          .
292              .     52D5C2...........
                 .          V
                 .          V
295              .      52D5R
                 .          .
                 .          .
298              .          .      52C3
                 .          .         V
                 .          .         V
304              .          .     52C3R
                 .          .         .
                 .          .         .
307              .          .         .       52C3B
                 .          .         .           .
                 .          .         .           .
313              .          .     2C3BC1...........
                 .          .         .
                 .          .         .
316              .     2C3BC2...........
                 .          V
                 .          V
319              .     52C3BR
                 .          .
                 .          .
322              .          .       51C
                 .          .         .
                 .          .         .
330              .          .         .-------> 51C1DV
328              .          .     51C1D
                 .          .         V
                 .          .         V
333              .          .     51C1R
                 .          .         .
                 .          .         .
336              .          .         .        52C1
                 .          .         .           .
                 .          .         .           .
342              .          .     52C1C...........
                 .          .         V
                 .          .         V
345              .          .     52C1R
                 .          .         .
                 .          .         .
348              .          .         .       52C2A
                 .          .         .           .
                 .          .         .           .
354              .          .     52C2AC...........
                 .          .         .
                 .          .         .
357              .          .         .      52C2B
                 .          .         .           .
                 .          .         .           .
363              .          .     52C2BC...........
                 .          .         V
                 .          .         V
366              .          .     52C2BR
                 .          .         .
                 .          .         .
369              .          .         .       52C2C
                 .          .         .           .
                 .          .         .           .
375              .          .     52C2CC...........
                 .          .         V
                 .          .         V
378              .          .     52C2R
                 .          .         .
                 .          .         .
381              .          .         .        52C4
                 .          .         .           .
                 .          .         .           .
387              .          .     52C4C1...........
                 .          .         .
                 .          .         .
390              .     52C4C2...........
                 .          V
                 .          V
393              .      52C4R
                 .          .
                 .          .
396              .          .     52C13
                 .          .         .
                 .          .         .
404              .          .         .-------> STORM
402              .          .     2C13DV
                 .          .         .
                 .          .         .
407              .          .         .       52C15
                 .          .         .           .
```

```
413          .           .      2C15C1............
             .           .           .
             .           .           .
416          .     2C15C2............
             .          V
             .          V
419          .     52C15R
             .           .
             .           .
422          .           .      52C14A
             .           .           .
             .           .           .
428          .     2C14AC............
             .          V
             .          V
431          .     2C14AR
             .           .
             .           .
436          .           .<-------  51C1DV
434          .           .      51C1DV
             .           .           .
             .           .           .
439          .           .-------> 51C2DV
437          .           .       51C2D
             .           .          V
             .           .          V
442          .           .       51C2R
             .           .           .
             .           .           .
445          .           .           .       52C5
             .           .           .          .
             .           .           .          .
451          .           .       52C5C............
             .           .          V
             .           .          V
454          .           .       52C5R
             .           .           .
             .           .           .
457          .           .           .       52C6
             .           .           .          .
             .           .           .          .
463          .           .       52C6C............
             .           .          V
             .           .          V
466          .           .       52C6R
             .           .           .
             .           .           .
471          .           .           .-------  51C2DV
469          .           .           .     51C2DV
             .           .           .        V
             .           .           .        V
472          .           .           .     51C3R
             .           .           .        .
             .           .           .        .
475          .           .           .        .         51B
             .           .           .        .          .
             .           .           .        .          .
483          .           .           .        .          .-------> 51B1DV
481          .           .           .        .      51B1D
             .           .           .        .          V
             .           .           .        .          V
486          .           .           .        .      51B1R
             .           .           .        .          .
             .           .           .        .          .
489          .           .           .        .          .        52C7
             .           .           .        .          .           .
             .           .           .        .          .           .
495          .           .           .     52C7C........................
             .           .           .        V
             .           .           .        V
498          .           .           .     52C7R
             .           .           .        .
             .           .           .        .
503          .           .           .        .          .<-------  51B1DV
501          .           .           .        .     51B1DV
             .           .           .        .          .
             .           .           .        .          .
506          .           .           .        .          .-------> 51B2DV
504          .           .           .        .      51B2D
             .           .           .        .          V
             .           .           .        .          V
509          .           .           .        .      51B2R
             .           .           .        .          .
             .           .           .        .          .
512          .           .           .        .          .        52C8
             .           .           .        .          .           .
             .           .           .        .          .           .
518          .           .           .        .      52C8C............
             .           .           .        .          V
             .           .           .        .          V
521          .           .           .        .      52C8R
             .           .           .        .          .
```

```
524                 52C9C1............
                         V
                         V
527                 52C9R1
                         .
                         .
530                                  52C9
                         .           .
                         .           .
536                 52C9C2............
                         V
                         V
539                 52C9R2
                         .
                         .
542          2C10C1............
                 V
                 V
545          2C10R1
                 .
                 .
548                  52C10
                         .
                         .
554          2C10C2............
                 .
                 .
557                  52C11
                         V
                         V
563                 2C11R1
                         .
                         .
568                                      .<-------   STORM
566                                 52C13D
                         .           .
                         .           .
569                 52C11C............
                         V
                         V
572                 2C11CR
                         .
                         .
575          2C11C2............
                 V
                 V
578          2C11R2
                 .
                 .
581                  52C12
                         .
                         .
587          52C12C............
                 V
                 V
590          52C12R
                 .
                 .
593                 52C14B
                         .
                         .
599          C14BC1............
                 .
                 .
602     C14BC2............
            V
            V
605     52C14R
            .
            .
610                  .<-------  51B2DV
608          51B2DV
                 .
                 .
613                  .------->  51B3DV
611           51B3D
                 V
                 V
616           51B3R
                 .
                 .
619                      52B1
                         .
                         .
625           52B1C............
                 V
                 V
628           52B1R
                 .
                 .
633                          .<-------  51B3DV
631                 51B3DV
```

```
                .         .         .         .
                .         .         .         .
636             .         .         .         .-------> 51B4DV
634             .         .         .      51B4D
                .         .         .         V
                .         .         .         V
639             .         .         .      51B4R1
                .         .         .         .
                .         .         .         .
642             .         .      52B2C1............
                .         .         V
                .         .         V
645             .         .      52B2R1
                .         .         .
                .         .         .
648             .         .         .      52B2
                .         .         .         .
                .         .         .         .
654             .         .      52B2C2............
                .         .         V
                .         .         V
657             .         .      52B2R2
                .         .         V
                .         .         V
660             .         .      52B3R1
                .         .         .
                .         .         .
663             .         .         .      52B3
                .         .         .         .
                .         .         .         .
669             .         .      52B3C2............
                .         .         V
                .         .         V
672             .         .      52B3R2
                .         .         .
                .         .         .
675             .         .         .      52B4
                .         .         .         .
                .         .         .         .
681             .         .       52B4C............
                .         .         V
                .         .         V
684             .         .       52B4R
                .         .         .
                .         .         .
687             .         .         .      52B5
                .         .         .         .
                .         .         .         .
693             .         .      52B5C1............
                .         .         .
                .         .         .
696             .      52B5C2............
                .         V
                .         V
699             .       52B5R
                .         .
                .         .
704             .         .<-------  51B4DV
702             .         .      51B4DV
                .         .         .
                .         .         .
707             .         .         .-------> 51B5DV
705             .         .       51B5D
                .         .         V
                .         .         V
710             .         .       51B5R
                .         .         .
                .         .         .
715             .         .         .         .<-------  51B5DV
713             .         .         .      51B5DV
                .         .         .         .
                .         .         .         .
718             .         .         .         .-------> 51B6DV
716             .         .         .      51B6D
                .         .         .         V
                .         .         .         V
721             .         .         .      51B6R
                .         .         .         .
                .         .         .         .
726             .         .         .         .         .<-------  51B6DV
724             .         .         .         .      51B6DV
                .         .         .         .         .
                .         .         .         .         .
729             .         .         .         .         .-------> 51B7DV
727             .         .         .         .       51B7D
                .         .         .         .         V
                .         .         .         .         V
732             .         .         .         .      51B7R1
                .         .         .         .         .
                .         .         .         .         .
735             .         .       51B7C.......................
                .         .         V
                .         .         V
```

```
738          .           .      51B7R2
             .           .           .
             .           .           .
741          .           .           .        52B6
             .           .           .           .
             .           .           .           .
747          .           .      52B6C............
             .           .          V
             .           .          V
750          .           .      52B6R
             .           .           .
             .           .           .
753          .           .           .        52B7
             .           .           .           .
             .           .           .           .
759          .           .      52B7C1...........
             .           .           .
             .           .           .
762          .     52B7C2............
             .           .
             .           .
765          .           .       52A2
             .           .           .
             .           .           .
771          .     52A2C2............
             .           .
             .           .
776          .           .           .<-------  51B7DV
774          .           .      51B7DV
             .           .          V
             .           .          V
777          .           .      51B8R
             .           .           .
             .           .           .
780          .           .           .        52A1
             .           .           .           .
             .           .           .           .
786          .           .      52A1C............
             .           .           .
             .           .           .
791          .           .           .           .<-------  B51.1T
789          .           .           .      D51.1
             .           .           .           .
             .           .           .           .
792          .           .       C52A............
             .           .           .
             .           .           .
796          .        C52............
             .          V
             .          V
800          .        R52
             .           .
             .           .
808          .           .------->    B52T
806          .       D52T
             .           .
             .           .
811       CLEAR............
             .
             .
814          .        37A
             .           .
             .           .
831          .           .------->    37AW
820          .       37AE
             .          V
             .          V
834          .      37AE1
             .           .
             .           .
841          .           .      SUB5N
             .           .           .
             .           .           .
848          .       CP5N............
             .          V
             .          V
851          .      RET5N
             .          V
             .          V
858          .      R6N.1
             .           .
             .           .
866          .           .      SUB6B
             .           .          V
             .           .          V
872          .           .       SR6B
             .           .           .
             .           .           .
878          .      CP6.1............
             .           .
             .           .
881          .           .      SUB1N
             .           .          V
```

```
                                  V
887                            R2NA
                                  .
                                  .
893                                  .      SUB2NA
                                  .           .
                                  .           .
899                            CP2NA............
                                  V
                                  V
902                            SR2NA
                                  V
                                  V
908                             R2NB
                                  .
                                  .
914                                  .      SUB2NB
                                  .           .
                                  .           .
920                            CP2NB............
                                  V
                                  V
923                            SR2NB
                                  V
                                  V
929                            RCP4N
                                  .
                                  .
935                                  .       SUB6N
                                  .           V
                                  .           V
941                                  .       RET6N
                                  .           V
                                  .           V
947                                  .      RCP4N1
                                  .           .
                                  .           .
953                            CP4N.1...........
                                  .
                                  .
956                                  .       SUB3N
                                  .           V
                                  .           V
962                                  .       RET3N
                                  .           V
                                  .           V
969                                  .        R4N
                                  .           .
                                  .           .
975                            CP4N.2...........
                                  .
                                  .
978                                  .       SUB4N
                                  .           .
                                  .           .
984                             CP4N............
                                  V
                                  V
987                             R6N
                                  .
                                  .
993                                  .       SUB6A
                                  .           .
                                  .           .
999                            CP6.2............
                                  .
                                  .
1002                        CP6N............
                               V
                               V
1005                        RCP6N
                               .
                               .
1011                           SUB3C
                                  .
                                  .
1017                        CP3C............
                               V
                               V
1020                         R3C
                               .
                               .
1028                           GC1018
                                  .
                                  .
1034                                 .       GC1-9
                                  .           .
                                  .           .
1040                                 .           .      SUB3S
                                  .           .          .
                                  .           .          .
1046                        CP3S...................................
                               V
```

```
                 .          V
1049             .       RT3S
                 .          .
                 .          .
1055             .          .      SUB4S
                 .          .          V
                 .          .          V
1061             .          .       RT4S
                 .          .          .
                 .          .          .
1067             .          .          .      GC2-8
                 .          .          .          .
                 .          .          .          .
1073             .     1PGC28.......................
                 .          .
                 .          .
1076             .          .     SUB3D3
                 .          .          .
                 .          .          .
1082             .     CPGC28............
                 .          V
                 .          V
1085             .     SRGC28
                 .          V
                 .          V
1091             .       RT7S
                 .          .
                 .          .
1097             .          .        GC7
                 .          .          .
                 .          .          .
1103             .       CP7S............
                 .          V
                 .          V
1106             .       RC7S
                 .          .
                 .          .
1113             .          .     SUB3B2
                 .          .          V
                 .          .          V
1118             .          .      RB2E1
                 .          .          V
                 .          .          V
1124             .          .      RB2E2
                 .          .          .
                 .          .          .
1130             .          .          .     SUB3E1
                 .          .          .          .
                 .          .          .          .
1135             .          .     1CPE31............
                 .          .          V
                 .          .          V
1138             .          .      RCE31
                 .          .          .
                 .          .          .
1145             .          .          .     SUB3D2
                 .          .          .          V
                 .          .          .          V
1150             .          .          .      RD2E2
                 .          .          .          .
                 .          .          .          .
1156             .          .          .          .     SUB3E2
                 .          .          .          .          .
                 .          .          .          .          .
1161             .          .          .      CP3E2............
                 .          .          .          V
                 .          .          .          V
1164             .          .          .      RC3E2
                 .          .          .          .
                 .          .          .          .
1171             .          .          .          .     SUB3E3
                 .          .          .          .          V
                 .          .          .          .          V
1176             .          .          .          .      RC3E3
                 .          .          .          .          .
                 .          .          .          .          .
1183             .          .          .          .          .       SCN5C
                 .          .          .          .          .          .
                 .          .          .          .          .          .
1191             .       CNC5.............................................
                 .          .
                 .          .
1196             .          .      SUB8S
                 .          .          V
                 .          .          V
1202             .          .      RGC36
                 .          .          .
                 .          .          .
1208             .          .          .       GC36
                 .          .          .          .
                 .          .          .          .
1214             .          .     C1GC36............
                 .          .          .
```

```
1217                                  SUB9S
                                          V
                                          V
1223                                    R9S
                                          .
                                          .
1229                            CPGC36............
                                          V
                                          V
1232                            SRGC36
                                          V
                                          V
1238                              R36
                                          .
                                          .
1245                                  SCN5D
                                          .
                                          .
1253                              CN5D............
                                          .
                                          .
1257                      CN5............
                                  .
                                  .
1261                            SUB7A
                                          V
                                          V
1267                              SR7A
                                          V
                                          V
1273                              R10S
                                          .
                                          .
1279                                  SUB10S
                                          .
                                          .
1285                            CP10S............
                                          .
                                          .
1288                                  SUB11S
                                          V
                                          V
1294                                    R11S
                                          .
                                          .
1303                            C10SA............
                                          V
                                          V
1307                            R10SA
                                          .
                                          .
1316                                    GC45
                                          .
                                          .
1322                              CP45............
                                          V
                                          V
1329                              RC45
                                          .
                                          .
1335                                  SCN6D
                                          .
                                          .
1344                              CN6D............
                                          .
                                          .
1348                                  SCN6C
                                          .
                                          .
1360                                          .          .<-------    B52T
1358                                          .        D52
                                              .          .
                                              .          .
1361                                          .          .        S53A
                                              .          .          .
                                              .          .          .
1368                                          .        C53............
                                              .          .
                                              .          .
1371                                          .          .       S53A1
                                              .          .          .
                                              .          .          .
1379                                          .      C53A1............
                                              .          .
                                              .          .
1382                                          .          .       SCN6B
                                              .          .          .
                                              .          .          .
1392                                          .      C53A............
                                              .          .
                                              .          .
1395                                          .          .       SCN6E
```

```
                .          .          .          .          .          .
                .          .          .          .          .          .
 1401           .      UHDB-I.............................................
                .          V
                .          V
 1404           .      UHDB-O
                .          .
                .          .
 1417           .          .        S54
                .          .          .
                .          .          .
 1423           .          .          .       SCN6A
                .          .          .          .
                .          .          .          .
 1430           .          .       CN6A............
                .          .          .
                .          .          .
 1433           .        C1A............
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*              MAY   1991           *
*           VERSION 4.0.1E          *
*     Lahey F77L-EM/32 version 5.01 *
*       Dodson & Associates, Inc.   *
*  RUN DATE  11/19/97  TIME  17:33:45*
*************************************
```

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

```
                    PIMA ROAD THREE BASINS                          File:  INTRM-6.IH1
                    by  Stantech for the City of Scottsdale        Original: 08-07-97     mcg
                        Project:  28900051

                    100-YEAR, 6-HOUR STORM
                        10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
                        10% LEVEL DESIGN FOR DEER VALLEY DETENTION BASIN ALTERNATIVE 3
                        10% LEVEL DESIGN FOR UNION HILLS DETENTION BASIN ALTERNATIVE 1B

                        INTERIM CONDITION --- NO POWER LINE CHANNEL:
                          GRAYHAWK RUNOFF RELEASED TO NATURAL WASHES AND ROUTED TO THE UNION
                          HILLS DETENTION BASIN.  PORTIONS OF THE GRAYHAWK MODEL THAT DO NOT
                          CONTRIBUTE TO THE WATERSHED AT UNION HILLS BASIN UNDER THIS CONDITION
                          ARE ELIMINATED FROM THIS MODEL.

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

    IT          HYDROGRAPH TIME DATA
                       NMIN          5  MINUTES IN COMPUTATION INTERVAL
                      IDATE      1   0  STARTING DATE
                      ITIME       0000  STARTING TIME
                         NQ        720  NUMBER OF HYDROGRAPH ORDINATES
                     NDDATE      3   0  ENDING DATE
                     NDTIME       1155  ENDING TIME
                      ICENT         19  CENTURY MARK

                  COMPUTATION INTERVAL    0.08 HOURS
                       TOTAL TIME BASE   59.92 HOURS

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

 19 JD          INDEX STORM NO. 1
                       STRM        0.00  PRECIPITATION DEPTH
                       TRDA        0.01  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN

 20 JD          INDEX STORM NO. 2
                       STRM        0.00  PRECIPITATION DEPTH
                       TRDA        0.10  TRANSPOSITION DRAINAGE AREA

  0 PI            PRECIPITATION PATTERN

 21 JD          INDEX STORM NO. 3
                       STRM        0.00  PRECIPITATION DEPTH
```

```
                TRDA        0.50  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN

22 JD        INDEX STORM NO. 4
                STRM        0.00  PRECIPITATION DEPTH
                TRDA        1.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN

23 JD        INDEX STORM NO. 5
                STRM        0.00  PRECIPITATION DEPTH
                TRDA        5.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN

24 JD        INDEX STORM NO. 6
                STRM        0.00  PRECIPITATION DEPTH
                TRDA       25.00  TRANSPOSITION DRAINAGE AREA

 0 PI          PRECIPITATION PATTERN

     *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

     *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

     *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

     *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

     *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

     *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

     *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

     *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

     *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

     *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

     *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

     *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

     *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

     *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

     *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1
```

```
*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1
```

```
*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

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

            **************
            *            *
1404 KK     *    UHDB-O  *
            *            *
            **************

1405 KO          OUTPUT CONTROL VARIABLES
                       IPRNT          1  PRINT CONTROL
                       IPLOT          0  PLOT CONTROL
                       QSCAL         0.  HYDROGRAPH PLOT SCALE
                             DETENTION BASIN AT UNION HILLS ROAD - NONREGULATORY STRUCTURE
                                PRINCIPAL SPILLWAY:  CONDUIT EXTENDING TO USBR BASIN AT THE TPC
```

EMERGENCY SPILLWAY: NO OVERTOPPING FOR 24-HOUR STORM
7 ACRE-FEET OF STORAGE FOR SEDIMENTAION

HYDROGRAPH ROUTING DATA

1410 RS STORAGE ROUTING

NSTPS	1	NUMBER OF SUBREACHES
ITYP	STOR	TYPE OF INITIAL CONDITION
RSVRIC	-1.00	INITIAL CONDITION
X	0.00	WORKING R AND D COEFFICIENT

1411 SV	STORAGE	0.0	1.6	41.7	137.3	246.6	371.0				
1412 SE	ELEVATION	1585.00	1590.00	1595.00	1600.00	1605.00	1610.00				
1413 SQ	DISCHARGE	0.	50.	100.	200.	400.	500.	527.	629.	657.	679.
		698.	800.	814.							
1415 SE	ELEVATION	1585.00	1587.03	1588.27	1590.10	1592.88	1594.32	1596.46	1601.65	1601.75	1601.85
		1602.30	1608.62	1609.62							

***

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	0.00	0.65	1.05	1.60	2.40	24.70	36.25	41.70	69.61	137.30
OUTFLOW	0.00	50.00	100.00	194.54	200.00	400.00	500.00	508.58	527.00	596.57
ELEVATION	1585.00	1587.03	1588.27	1590.00	1590.10	1592.88	1594.32	1595.00	1596.46	1600.00
STORAGE	173.37	175.56	177.74	187.58	246.60	336.67	361.55	371.00		
OUTFLOW	629.00	657.00	679.00	698.00	741.58	800.00	814.00	819.32		
ELEVATION	1601.65	1601.75	1601.85	1602.30	1605.00	1608.62	1609.62	1610.00		

****

HYDROGRAPH AT UHDB-O
TRANSPOSITION AREA 0.0 SQ MI

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.0	1585.0	1		2000	241	216.	4.2	1590.3	2		1600	481	0.	0.0	1585.0
1		0005	2	0.	0.0	1585.0	1		2005	242	216.	4.1	1590.3	2		1605	482	0.	0.0	1585.0
1		0010	3	0.	0.0	1585.0	1		2010	243	215.	4.1	1590.3	2		1610	483	0.	0.0	1585.0
1		0015	4	0.	0.0	1585.0	1		2015	244	214.	4.0	1590.3	2		1615	484	0.	0.0	1585.0
1		0020	5	0.	0.0	1585.0	1		2020	245	214.	3.9	1590.3	2		1620	485	0.	0.0	1585.0
1		0025	6	0.	0.0	1585.0	1		2025	246	213.	3.9	1590.3	2		1625	486	0.	0.0	1585.0
1		0030	7	1.	0.0	1585.0	1		2030	247	213.	3.8	1590.3	2		1630	487	0.	0.0	1585.0
1		0035	8	1.	0.0	1585.0	1		2035	248	212.	3.7	1590.3	2		1635	488	0.	0.0	1585.0
1		0040	9	2.	0.0	1585.1	1		2040	249	211.	3.7	1590.3	2		1640	489	0.	0.0	1585.0
1		0045	10	3.	0.0	1585.1	1		2045	250	211.	3.6	1590.3	2		1645	490	0.	0.0	1585.0
1		0050	11	4.	0.1	1585.2	1		2050	251	210.	3.5	1590.2	2		1650	491	0.	0.0	1585.0
1		0055	12	6.	0.1	1585.2	1		2055	252	210.	3.5	1590.2	2		1655	492	0.	0.0	1585.0
1		0100	13	8.	0.1	1585.3	1		2100	253	209.	3.4	1590.2	2		1700	493	0.	0.0	1585.0
1		0105	14	11.	0.1	1585.4	1		2105	254	209.	3.4	1590.2	2		1705	494	0.	0.0	1585.0
1		0110	15	14.	0.2	1585.6	1		2110	255	208.	3.3	1590.2	2		1710	495	0.	0.0	1585.0
1		0115	16	18.	0.2	1585.7	1		2115	256	207.	3.2	1590.2	2		1715	496	0.	0.0	1585.0
1		0120	17	21.	0.3	1585.9	1		2120	257	207.	3.2	1590.2	2		1720	497	0.	0.0	1585.0
1		0125	18	25.	0.3	1586.0	1		2125	258	206.	3.1	1590.2	2		1725	498	0.	0.0	1585.0
1		0130	19	29.	0.4	1586.2	1		2130	259	206.	3.0	1590.2	2		1730	499	0.	0.0	1585.0
1		0135	20	34.	0.4	1586.4	1		2135	260	205.	3.0	1590.2	2		1735	500	0.	0.0	1585.0
1		0140	21	38.	0.5	1586.5	1		2140	261	205.	2.9	1590.2	2		1740	501	0.	0.0	1585.0
1		0145	22	42.	0.5	1586.7	1		2145	262	204.	2.9	1590.2	2		1745	502	0.	0.0	1585.0
1		0150	23	46.	0.6	1586.9	1		2150	263	204.	2.8	1590.1	2		1750	503	0.	0.0	1585.0
1		0155	24	50.	0.7	1587.0	1		2155	264	203.	2.7	1590.1	2		1755	504	0.	0.0	1585.0
1		0200	25	57.	0.7	1587.2	1		2200	265	202.	2.7	1590.1	2		1800	505	0.	0.0	1585.0
1		0205	26	64.	0.8	1587.4	1		2205	266	202.	2.6	1590.1	2		1805	506	0.	0.0	1585.0
1		0210	27	71.	0.8	1587.6	1		2210	267	201.	2.5	1590.1	2		1810	507	0.	0.0	1585.0
1		0215	28	78.	0.9	1587.7	1		2215	268	201.	2.5	1590.1	2		1815	508	0.	0.0	1585.0
1		0220	29	85.	0.9	1587.9	1		2220	269	200.	2.4	1590.1	2		1820	509	0.	0.0	1585.0
1		0225	30	93.	1.0	1588.1	1		2225	270	200.	2.4	1590.1	2		1825	510	0.	0.0	1585.0
1		0230	31	101.	1.1	1588.3	1		2230	271	199.	2.3	1590.1	2		1830	511	0.	0.0	1585.0
1		0235	32	112.	1.1	1588.5	1		2235	272	199.	2.2	1590.1	2		1835	512	0.	0.0	1585.0
1		0240	33	126.	1.2	1588.7	1		2240	273	198.	2.2	1590.1	2		1840	513	0.	0.0	1585.0
1		0245	34	146.	1.3	1589.1	1		2245	274	198.	2.1	1590.1	2		1845	514	0.	0.0	1585.0
1		0250	35	180.	1.5	1589.7	1		2250	275	197.	2.0	1590.1	2		1850	515	0.	0.0	1585.0
1		0255	36	197.	2.0	1590.1	1		2255	276	197.	2.0	1590.0	2		1855	516	0.	0.0	1585.0
1		0300	37	209.	3.4	1590.2	1		2300	277	197.	1.9	1590.0	2		1900	517	0.	0.0	1585.0
1		0305	38	249.	7.8	1590.8	1		2305	278	196.	1.8	1590.0	2		1905	518	0.	0.0	1585.0
1		0310	39	362.	20.5	1592.4	1		2310	279	196.	1.8	1590.0	2		1910	519	0.	0.0	1585.0
1		0315	40	509.	42.7	1595.1	1		2315	280	195.	1.7	1590.0	2		1915	520	0.	0.0	1585.0
1		0320	41	527.	69.0	1596.4	1		2320	281	195.	1.6	1590.0	2		1920	521	0.	0.0	1585.0
1		0325	42	552.	93.8	1597.7	1		2325	282	188.	1.6	1589.9	2		1925	522	0.	0.0	1585.0
1		0330	43	574.	115.3	1598.8	1		2330	283	185.	1.5	1589.8	2		1930	523	0.	0.0	1585.0
1		0335	44	593.	133.4	1599.8	1		2335	284	184.	1.5	1589.8	2		1935	524	0.	0.0	1585.0
1		0340	45	607.	148.5	1600.5	1		2340	285	183.	1.5	1589.8	2		1940	525	0.	0.0	1585.0
1		0345	46	618.	160.8	1601.1	1		2345	286	182.	1.5	1589.8	2		1945	526	0.	0.0	1585.0
1		0350	47	627.	170.8	1601.5	1		2350	287	182.	1.5	1589.8	2		1950	527	0.	0.0	1585.0
1		0355	48	681.	178.6	1601.9	1		2355	288	181.	1.5	1589.8	2		1955	528	0.	0.0	1585.0
1		0400	49	692.	184.5	1602.2	2		0000	289	181.	1.5	1589.7	2		2000	529	0.	0.0	1585.0
1		0405	50	699.	189.1	1602.4	2		0005	290	180.	1.5	1589.7	2		2005	530	0.	0.0	1585.0
1		0410	51	702.	192.5	1602.5	2		0010	291	180.	1.5	1589.7	2		2010	531	0.	0.0	1585.0

1	0415	52	704.	195.1	1602.6	*	2	0015	292	179.	1.5	1589.7	*	2	2015	532	0.	0.0	1585.0
1	0420	53	705.	197.0	1602.7	*	2	0020	293	179.	1.5	1589.7	*	2	2020	533	0.	0.0	1585.0
1	0425	54	706.	198.4	1602.8	*	2	0025	294	178.	1.5	1589.7	*	2	2025	534	0.	0.0	1585.0
1	0430	55	707.	199.3	1602.8	*	2	0030	295	177.	1.5	1589.7	*	2	2030	535	0.	0.0	1585.0
1	0435	56	707.	199.9	1602.9	*	2	0035	296	177.	1.5	1589.7	*	2	2035	536	0.	0.0	1585.0
1	0440	57	707.	200.2	1602.9	*	2	0040	297	176.	1.5	1589.7	*	2	2040	537	0.	0.0	1585.0
1	0445	58	707.	200.3	1602.9	*	2	0045	298	176.	1.5	1589.7	*	2	2045	538	0.	0.0	1585.0
1	0450	59	707.	200.2	1602.9	*	2	0050	299	175.	1.5	1589.6	*	2	2050	539	0.	0.0	1585.0
1	0455	60	707.	199.9	1602.9	*	2	0055	300	175.	1.5	1589.6	*	2	2055	540	0.	0.0	1585.0
1	0500	61	707.	199.4	1602.8	*	2	0100	301	174.	1.5	1589.6	*	2	2100	541	0.	0.0	1585.0
1	0505	62	706.	198.9	1602.8	*	2	0105	302	174.	1.5	1589.6	*	2	2105	542	0.	0.0	1585.0
1	0510	63	706.	198.2	1602.8	*	2	0110	303	173.	1.5	1589.6	*	2	2110	543	0.	0.0	1585.0
1	0515	64	705.	197.4	1602.8	*	2	0115	304	172.	1.5	1589.6	*	2	2115	544	0.	0.0	1585.0
1	0520	65	705.	196.6	1602.7	*	2	0120	305	172.	1.5	1589.6	*	2	2120	545	0.	0.0	1585.0
1	0525	66	704.	195.6	1602.7	*	2	0125	306	171.	1.5	1589.6	*	2	2125	546	0.	0.0	1585.0
1	0530	67	703.	194.6	1602.6	*	2	0130	307	170.	1.5	1589.6	*	2	2130	547	0.	0.0	1585.0
1	0535	68	702.	193.6	1602.6	*	2	0135	308	169.	1.5	1589.5	*	2	2135	548	0.	0.0	1585.0
1	0540	69	702.	192.4	1602.5	*	2	0140	309	169.	1.4	1589.5	*	2	2140	549	0.	0.0	1585.0
1	0545	70	701.	191.3	1602.5	*	2	0145	310	168.	1.4	1589.5	*	2	2145	550	0.	0.0	1585.0
1	0550	71	700.	190.0	1602.4	*	2	0150	311	167.	1.4	1589.5	*	2	2150	551	0.	0.0	1585.0
1	0555	72	699.	188.7	1602.4	*	2	0155	312	166.	1.4	1589.5	*	2	2155	552	0.	0.0	1585.0
1	0600	73	698.	187.4	1602.3	*	2	0200	313	166.	1.4	1589.5	*	2	2200	553	0.	0.0	1585.0
1	0605	74	695.	186.1	1602.2	*	2	0205	314	165.	1.4	1589.5	*	2	2205	554	0.	0.0	1585.0
1	0610	75	692.	184.7	1602.2	*	2	0210	315	164.	1.4	1589.4	*	2	2210	555	0.	0.0	1585.0
1	0615	76	690.	183.2	1602.1	*	2	0215	316	163.	1.4	1589.4	*	2	2215	556	0.	0.0	1585.0
1	0620	77	687.	181.7	1602.0	*	2	0220	317	163.	1.4	1589.4	*	2	2220	557	0.	0.0	1585.0
1	0625	78	684.	180.2	1602.0	*	2	0225	318	162.	1.4	1589.4	*	2	2225	558	0.	0.0	1585.0
1	0630	79	681.	178.5	1601.9	*	2	0230	319	161.	1.4	1589.4	*	2	2230	559	0.	0.0	1585.0
1	0635	80	670.	176.9	1601.8	*	2	0235	320	160.	1.4	1589.4	*	2	2235	560	0.	0.0	1585.0
1	0640	81	653.	175.2	1601.7	*	2	0240	321	160.	1.4	1589.4	*	2	2240	561	0.	0.0	1585.0
1	0645	82	632.	173.6	1601.7	*	2	0245	322	159.	1.4	1589.3	*	2	2245	562	0.	0.0	1585.0
1	0650	83	628.	172.0	1601.6	*	2	0250	323	158.	1.4	1589.3	*	2	2250	563	0.	0.0	1585.0
1	0655	84	626.	170.3	1601.5	*	2	0255	324	157.	1.4	1589.3	*	2	2255	564	0.	0.0	1585.0
1	0700	85	625.	168.6	1601.4	*	2	0300	325	156.	1.4	1589.3	*	2	2300	565	0.	0.0	1585.0
1	0705	86	623.	166.9	1601.4	*	2	0305	326	156.	1.4	1589.3	*	2	2305	566	0.	0.0	1585.0
1	0710	87	622.	165.0	1601.3	*	2	0310	327	155.	1.4	1589.3	*	2	2310	567	0.	0.0	1585.0
1	0715	88	620.	163.2	1601.2	*	2	0315	328	154.	1.4	1589.3	*	2	2315	568	0.	0.0	1585.0
1	0720	89	618.	161.3	1601.1	*	2	0320	329	153.	1.4	1589.2	*	2	2320	569	0.	0.0	1585.0
1	0725	90	616.	159.4	1601.0	*	2	0325	330	152.	1.4	1589.2	*	2	2325	570	0.	0.0	1585.0
1	0730	91	615.	157.4	1600.9	*	2	0330	331	152.	1.3	1589.2	*	2	2330	571	0.	0.0	1585.0
1	0735	92	613.	155.5	1600.8	*	2	0335	332	151.	1.3	1589.2	*	2	2335	572	0.	0.0	1585.0
1	0740	93	611.	153.5	1600.7	*	2	0340	333	150.	1.3	1589.2	*	2	2340	573	0.	0.0	1585.0
1	0745	94	609.	151.5	1600.6	*	2	0345	334	149.	1.3	1589.2	*	2	2345	574	0.	0.0	1585.0
1	0750	95	608.	149.5	1600.6	*	2	0350	335	149.	1.3	1589.2	*	2	2350	575	0.	0.0	1585.0
1	0755	96	606.	147.5	1600.5	*	2	0355	336	148.	1.3	1589.1	*	2	2355	576	0.	0.0	1585.0
1	0800	97	604.	145.4	1600.4	*	2	0400	337	147.	1.3	1589.1	*	3	0000	577	0.	0.0	1585.0
1	0805	98	602.	143.4	1600.3	*	2	0405	338	146.	1.3	1589.1	*	3	0005	578	0.	0.0	1585.0
1	0810	99	600.	141.4	1600.2	*	2	0410	339	145.	1.3	1589.1	*	3	0010	579	0.	0.0	1585.0
1	0815	100	598.	139.3	1600.1	*	2	0415	340	145.	1.3	1589.1	*	3	0015	580	0.	0.0	1585.0
1	0820	101	597.	137.3	1600.0	*	2	0420	341	144.	1.3	1589.1	*	3	0020	581	0.	0.0	1585.0
1	0825	102	594.	135.3	1599.9	*	2	0425	342	143.	1.3	1589.1	*	3	0025	582	0.	0.0	1585.0
1	0830	103	592.	133.2	1599.8	*	2	0430	343	143.	1.3	1589.0	*	3	0030	583	0.	0.0	1585.0
1	0835	104	590.	131.2	1599.7	*	2	0435	344	142.	1.3	1589.0	*	3	0035	584	0.	0.0	1585.0
1	0840	105	588.	129.2	1599.6	*	2	0440	345	141.	1.3	1589.0	*	3	0040	585	0.	0.0	1585.0
1	0845	106	586.	127.1	1599.5	*	2	0445	346	140.	1.3	1589.0	*	3	0045	586	0.	0.0	1585.0
1	0850	107	584.	125.1	1599.4	*	2	0450	347	139.	1.3	1589.0	*	3	0050	587	0.	0.0	1585.0
1	0855	108	582.	123.1	1599.3	*	2	0455	348	139.	1.3	1589.0	*	3	0055	588	0.	0.0	1585.0
1	0900	109	580.	121.1	1599.2	*	2	0500	349	138.	1.3	1589.0	*	3	0100	589	0.	0.0	1585.0
1	0905	110	578.	119.1	1599.0	*	2	0505	350	137.	1.3	1588.9	*	3	0105	590	0.	0.0	1585.0
1	0910	111	576.	117.1	1598.9	*	2	0510	351	136.	1.3	1588.9	*	3	0110	591	0.	0.0	1585.0
1	0915	112	574.	115.1	1598.8	*	2	0515	352	135.	1.3	1588.9	*	3	0115	592	0.	0.0	1585.0
1	0920	113	572.	113.1	1598.7	*	2	0520	353	134.	1.2	1588.9	*	3	0120	593	0.	0.0	1585.0
1	0925	114	570.	111.1	1598.6	*	2	0525	354	133.	1.2	1588.9	*	3	0125	594	0.	0.0	1585.0
1	0930	115	568.	109.1	1598.5	*	2	0530	355	132.	1.2	1588.9	*	3	0130	595	0.	0.0	1585.0
1	0935	116	566.	107.1	1598.4	*	2	0535	356	131.	1.2	1588.8	*	3	0135	596	0.	0.0	1585.0
1	0940	117	564.	105.2	1598.3	*	2	0540	357	131.	1.2	1588.8	*	3	0140	597	0.	0.0	1585.0
1	0945	118	562.	103.2	1598.2	*	2	0545	358	130.	1.2	1588.8	*	3	0145	598	0.	0.0	1585.0
1	0950	119	559.	101.2	1598.1	*	2	0550	359	129.	1.2	1588.8	*	3	0150	599	0.	0.0	1585.0
1	0955	120	557.	99.2	1598.0	*	2	0555	360	128.	1.2	1588.8	*	3	0155	600	0.	0.0	1585.0
1	1000	121	555.	97.3	1597.9	*	2	0600	361	127.	1.2	1588.8	*	3	0200	601	0.	0.0	1585.0
1	1005	122	553.	95.3	1597.8	*	2	0605	362	126.	1.2	1588.8	*	3	0205	602	0.	0.0	1585.0
1	1010	123	551.	93.4	1597.7	*	2	0610	363	126.	1.2	1588.7	*	3	0210	603	0.	0.0	1585.0
1	1015	124	549.	91.4	1597.6	*	2	0615	364	125.	1.2	1588.7	*	3	0215	604	0.	0.0	1585.0
1	1020	125	547.	89.5	1597.5	*	2	0620	365	124.	1.2	1588.7	*	3	0220	605	0.	0.0	1585.0
1	1025	126	545.	87.5	1597.4	*	2	0625	366	123.	1.2	1588.7	*	3	0225	606	0.	0.0	1585.0
1	1030	127	543.	85.6	1597.3	*	2	0630	367	122.	1.2	1588.7	*	3	0230	607	0.	0.0	1585.0
1	1035	128	541.	83.7	1597.2	*	2	0635	368	121.	1.2	1588.7	*	3	0235	608	0.	0.0	1585.0
1	1040	129	539.	81.8	1597.1	*	2	0640	369	120.	1.2	1588.6	*	3	0240	609	0.	0.0	1585.0
1	1045	130	538.	79.9	1597.0	*	2	0645	370	118.	1.2	1588.6	*	3	0245	610	0.	0.0	1585.0
1	1050	131	536.	78.0	1596.9	*	2	0650	371	116.	1.1	1588.6	*	3	0250	611	0.	0.0	1585.0
1	1055	132	534.	76.1	1596.8	*	2	0655	372	114.	1.1	1588.5	*	3	0255	612	0.	0.0	1585.0
1	1100	133	532.	74.2	1596.7	*	2	0700	373	110.	1.1	1588.5	*	3	0300	613	0.	0.0	1585.0
1	1105	134	530.	72.4	1596.6	*	2	0705	374	106.	1.1	1588.4	*	3	0305	614	0.	0.0	1585.0
1	1110	135	528.	70.5	1596.5	*	2	0710	375	101.	1.1	1588.3	*	3	0310	615	0.	0.0	1585.0
1	1115	136	526.	68.7	1596.4	*	2	0715	376	97.	1.0	1588.2	*	3	0315	616	0.	0.0	1585.0
1	1120	137	525.	66.8	1596.3	*	2	0720	377	92.	1.0	1588.1	*	3	0320	617	0.	0.0	1585.0
1	1125	138	524.	65.0	1596.2	*	2	0725	378	87.	0.9	1587.9	*	3	0325	618	0.	0.0	1585.0
1	1130	139	523.	63.2	1596.1	*	2	0730	379	81.	0.9	1587.8	*	3	0330	619	0.	0.0	1585.0
1	1135	140	522.	61.4	1596.0	*	2	0735	380	75.	0.8	1587.6	*	3	0335	620	0.	0.0	1585.0
1	1140	141	520.	59.6	1595.9	*	2	0740	381	69.	0.8	1587.5	*	3	0340	621	0.	0.0	1585.0
1	1145	142	519.	57.7	1595.8	*	2	0745	382	63.	0.8	1587.4	*	3	0345	622	0.	0.0	1585.0
1	1150	143	518.	55.9	1595.7	*	2	0750	383	57.	0.7	1587.2	*	3	0350	623	0.	0.0	1585.0
1	1155	144	517.	54.1	1595.7	*	2	0755	384	52.	0.7	1587.1	*	3	0355	624	0.	0.0	1585.0

1	1200	145	516.	52.3	1595.6	*	2	0800	385	47.	0.6	1586.9	*	3	0400	625	0.	0.0	1585.0
1	1205	146	514.	50.6	1595.5	*	2	0805	386	44.	0.6	1586.8	*	3	0405	626	0.	0.0	1585.0
1	1210	147	513.	48.8	1595.4	*	2	0810	387	40.	0.5	1586.6	*	3	0410	627	0.	0.0	1585.0
1	1215	148	512.	47.0	1595.3	*	2	0815	388	37.	0.5	1586.5	*	3	0415	628	0.	0.0	1585.0
1	1220	149	511.	45.2	1595.2	*	2	0820	389	34.	0.4	1586.4	*	3	0420	629	0.	0.0	1585.0
1	1225	150	510.	43.5	1595.1	*	2	0825	390	30.	0.4	1586.2	*	3	0425	630	0.	0.0	1585.0
1	1230	151	509.	41.7	1595.0	*	2	0830	391	27.	0.4	1586.1	*	3	0430	631	0.	0.0	1585.0
1	1235	152	506.	39.9	1594.8	*	2	0835	392	24.	0.3	1586.0	*	3	0435	632	0.	0.0	1585.0
1	1240	153	503.	38.2	1594.6	*	2	0840	393	20.	0.3	1585.8	*	3	0440	633	0.	0.0	1585.0
1	1245	154	500.	36.5	1594.3	*	2	0845	394	17.	0.2	1585.7	*	3	0445	634	0.	0.0	1585.0
1	1250	155	488.	34.8	1594.1	*	2	0850	395	14.	0.2	1585.6	*	3	0450	635	0.	0.0	1585.0
1	1255	156	474.	33.2	1593.9	*	2	0855	396	12.	0.2	1585.5	*	3	0455	636	0.	0.0	1585.0
1	1300	157	461.	31.7	1593.8	*	2	0900	397	10.	0.1	1585.4	*	3	0500	637	0.	0.0	1585.0
1	1305	158	449.	30.3	1593.6	*	2	0905	398	8.	0.1	1585.3	*	3	0505	638	0.	0.0	1585.0
1	1310	159	437.	29.0	1593.4	*	2	0910	399	6.	0.1	1585.3	*	3	0510	639	0.	0.0	1585.0
1	1315	160	426.	27.7	1593.3	*	2	0915	400	5.	0.1	1585.2	*	3	0515	640	0.	0.0	1585.0
1	1320	161	416.	26.5	1593.1	*	2	0920	401	4.	0.1	1585.2	*	3	0520	641	0.	0.0	1585.0
1	1325	162	406.	25.4	1593.0	*	2	0925	402	3.	0.0	1585.1	*	3	0525	642	0.	0.0	1585.0
1	1330	163	397.	24.3	1592.8	*	2	0930	403	3.	0.0	1585.1	*	3	0530	643	0.	0.0	1585.0
1	1335	164	388.	23.3	1592.7	*	2	0935	404	2.	0.0	1585.1	*	3	0535	644	0.	0.0	1585.0
1	1340	165	379.	22.4	1592.6	*	2	0940	405	2.	0.0	1585.1	*	3	0540	645	0.	0.0	1585.0
1	1345	166	371.	21.5	1592.5	*	2	0945	406	1.	0.0	1585.1	*	3	0545	646	0.	0.0	1585.0
1	1350	167	363.	20.6	1592.4	*	2	0950	407	1.	0.0	1585.0	*	3	0550	647	0.	0.0	1585.0
1	1355	168	356.	19.8	1592.3	*	2	0955	408	1.	0.0	1585.0	*	3	0555	648	0.	0.0	1585.0
1	1400	169	350.	19.1	1592.2	*	2	1000	409	1.	0.0	1585.0	*	3	0600	649	0.	0.0	1585.0
1	1405	170	343.	18.4	1592.1	*	2	1005	410	1.	0.0	1585.0	*	3	0605	650	0.	0.0	1585.0
1	1410	171	337.	17.7	1592.0	*	2	1010	411	0.	0.0	1585.0	*	3	0610	651	0.	0.0	1585.0
1	1415	172	331.	17.1	1591.9	*	2	1015	412	0.	0.0	1585.0	*	3	0615	652	0.	0.0	1585.0
1	1420	173	326.	16.5	1591.9	*	2	1020	413	0.	0.0	1585.0	*	3	0620	653	0.	0.0	1585.0
1	1425	174	321.	15.9	1591.8	*	2	1025	414	0.	0.0	1585.0	*	3	0625	654	0.	0.0	1585.0
1	1430	175	316.	15.3	1591.7	*	2	1030	415	0.	0.0	1585.0	*	3	0630	655	0.	0.0	1585.0
1	1435	176	312.	14.8	1591.7	*	2	1035	416	0.	0.0	1585.0	*	3	0635	656	0.	0.0	1585.0
1	1440	177	307.	14.4	1591.6	*	2	1040	417	0.	0.0	1585.0	*	3	0640	657	0.	0.0	1585.0
1	1445	178	303.	13.9	1591.5	*	2	1045	418	0.	0.0	1585.0	*	3	0645	658	0.	0.0	1585.0
1	1450	179	299.	13.5	1591.5	*	2	1050	419	0.	0.0	1585.0	*	3	0650	659	0.	0.0	1585.0
1	1455	180	296.	13.0	1591.4	*	2	1055	420	0.	0.0	1585.0	*	3	0655	660	0.	0.0	1585.0
1	1500	181	292.	12.7	1591.4	*	2	1100	421	0.	0.0	1585.0	*	3	0700	661	0.	0.0	1585.0
1	1505	182	289.	12.3	1591.3	*	2	1105	422	0.	0.0	1585.0	*	3	0705	662	0.	0.0	1585.0
1	1510	183	286.	11.9	1591.3	*	2	1110	423	0.	0.0	1585.0	*	3	0710	663	0.	0.0	1585.0
1	1515	184	283.	11.6	1591.2	*	2	1115	424	0.	0.0	1585.0	*	3	0715	664	0.	0.0	1585.0
1	1520	185	280.	11.3	1591.2	*	2	1120	425	0.	0.0	1585.0	*	3	0720	665	0.	0.0	1585.0
1	1525	186	277.	11.0	1591.2	*	2	1125	426	0.	0.0	1585.0	*	3	0725	666	0.	0.0	1585.0
1	1530	187	274.	10.7	1591.1	*	2	1130	427	0.	0.0	1585.0	*	3	0730	667	0.	0.0	1585.0
1	1535	188	272.	10.4	1591.1	*	2	1135	428	0.	0.0	1585.0	*	3	0735	668	0.	0.0	1585.0
1	1540	189	270.	10.2	1591.1	*	2	1140	429	0.	0.0	1585.0	*	3	0740	669	0.	0.0	1585.0
1	1545	190	267.	9.9	1591.0	*	2	1145	430	0.	0.0	1585.0	*	3	0745	670	0.	0.0	1585.0
1	1550	191	265.	9.7	1591.0	*	2	1150	431	0.	0.0	1585.0	*	3	0750	671	0.	0.0	1585.0
1	1555	192	263.	9.5	1591.0	*	2	1155	432	0.	0.0	1585.0	*	3	0755	672	0.	0.0	1585.0
1	1600	193	261.	9.2	1591.0	*	2	1200	433	0.	0.0	1585.0	*	3	0800	673	0.	0.0	1585.0
1	1605	194	260.	9.0	1590.9	*	2	1205	434	0.	0.0	1585.0	*	3	0805	674	0.	0.0	1585.0
1	1610	195	258.	8.8	1590.9	*	2	1210	435	0.	0.0	1585.0	*	3	0810	675	0.	0.0	1585.0
1	1615	196	256.	8.7	1590.9	*	2	1215	436	0.	0.0	1585.0	*	3	0815	676	0.	0.0	1585.0
1	1620	197	255.	8.5	1590.9	*	2	1220	437	0.	0.0	1585.0	*	3	0820	677	0.	0.0	1585.0
1	1625	198	253.	8.3	1590.8	*	2	1225	438	0.	0.0	1585.0	*	3	0825	678	0.	0.0	1585.0
1	1630	199	251.	8.1	1590.8	*	2	1230	439	0.	0.0	1585.0	*	3	0830	679	0.	0.0	1585.0
1	1635	200	250.	8.0	1590.8	*	2	1235	440	0.	0.0	1585.0	*	3	0835	680	0.	0.0	1585.0
1	1640	201	249.	7.8	1590.8	*	2	1240	441	0.	0.0	1585.0	*	3	0840	681	0.	0.0	1585.0
1	1645	202	247.	7.7	1590.8	*	2	1245	442	0.	0.0	1585.0	*	3	0845	682	0.	0.0	1585.0
1	1650	203	246.	7.5	1590.7	*	2	1250	443	0.	0.0	1585.0	*	3	0850	683	0.	0.0	1585.0
1	1655	204	245.	7.4	1590.7	*	2	1255	444	0.	0.0	1585.0	*	3	0855	684	0.	0.0	1585.0
1	1700	205	244.	7.3	1590.7	*	2	1300	445	0.	0.0	1585.0	*	3	0900	685	0.	0.0	1585.0
1	1705	206	243.	7.1	1590.7	*	2	1305	446	0.	0.0	1585.0	*	3	0905	686	0.	0.0	1585.0
1	1710	207	241.	7.0	1590.7	*	2	1310	447	0.	0.0	1585.0	*	3	0910	687	0.	0.0	1585.0
1	1715	208	240.	6.9	1590.7	*	2	1315	448	0.	0.0	1585.0	*	3	0915	688	0.	0.0	1585.0
1	1720	209	239.	6.8	1590.6	*	2	1320	449	0.	0.0	1585.0	*	3	0920	689	0.	0.0	1585.0
1	1725	210	238.	6.7	1590.6	*	2	1325	450	0.	0.0	1585.0	*	3	0925	690	0.	0.0	1585.0
1	1730	211	237.	6.6	1590.6	*	2	1330	451	0.	0.0	1585.0	*	3	0930	691	0.	0.0	1585.0
1	1735	212	236.	6.5	1590.6	*	2	1335	452	0.	0.0	1585.0	*	3	0935	692	0.	0.0	1585.0
1	1740	213	236.	6.4	1590.6	*	2	1340	453	0.	0.0	1585.0	*	3	0940	693	0.	0.0	1585.0
1	1745	214	235.	6.3	1590.6	*	2	1345	454	0.	0.0	1585.0	*	3	0945	694	0.	0.0	1585.0
1	1750	215	234.	6.2	1590.6	*	2	1350	455	0.	0.0	1585.0	*	3	0950	695	0.	0.0	1585.0
1	1755	216	233.	6.1	1590.6	*	2	1355	456	0.	0.0	1585.0	*	3	0955	696	0.	0.0	1585.0
1	1800	217	232.	6.0	1590.5	*	2	1400	457	0.	0.0	1585.0	*	3	1000	697	0.	0.0	1585.0
1	1805	218	231.	5.9	1590.5	*	2	1405	458	0.	0.0	1585.0	*	3	1005	698	0.	0.0	1585.0
1	1810	219	231.	5.8	1590.5	*	2	1410	459	0.	0.0	1585.0	*	3	1010	699	0.	0.0	1585.0
1	1815	220	230.	5.7	1590.5	*	2	1415	460	0.	0.0	1585.0	*	3	1015	700	0.	0.0	1585.0
1	1820	221	229.	5.6	1590.5	*	2	1420	461	0.	0.0	1585.0	*	3	1020	701	0.	0.0	1585.0
1	1825	222	228.	5.6	1590.5	*	2	1425	462	0.	0.0	1585.0	*	3	1025	702	0.	0.0	1585.0
1	1830	223	228.	5.5	1590.5	*	2	1430	463	0.	0.0	1585.0	*	3	1030	703	0.	0.0	1585.0
1	1835	224	227.	5.4	1590.5	*	2	1435	464	0.	0.0	1585.0	*	3	1035	704	0.	0.0	1585.0
1	1840	225	226.	5.3	1590.5	*	2	1440	465	0.	0.0	1585.0	*	3	1040	705	0.	0.0	1585.0
1	1845	226	226.	5.3	1590.5	*	2	1445	466	0.	0.0	1585.0	*	3	1045	706	0.	0.0	1585.0
1	1850	227	225.	5.2	1590.4	*	2	1450	467	0.	0.0	1585.0	*	3	1050	707	0.	0.0	1585.0
1	1855	228	224.	5.1	1590.4	*	2	1455	468	0.	0.0	1585.0	*	3	1055	708	0.	0.0	1585.0
1	1900	229	224.	5.0	1590.4	*	2	1500	469	0.	0.0	1585.0	*	3	1100	709	0.	0.0	1585.0
1	1905	230	223.	5.0	1590.4	*	2	1505	470	0.	0.0	1585.0	*	3	1105	710	0.	0.0	1585.0
1	1910	231	222.	4.9	1590.4	*	2	1510	471	0.	0.0	1585.0	*	3	1110	711	0.	0.0	1585.0
1	1915	232	222.	4.8	1590.4	*	2	1515	472	0.	0.0	1585.0	*	3	1115	712	0.	0.0	1585.0
1	1920	233	221.	4.7	1590.4	*	2	1520	473	0.	0.0	1585.0	*	3	1120	713	0.	0.0	1585.0
1	1925	234	220.	4.7	1590.4	*	2	1525	474	0.	0.0	1585.0	*	3	1125	714	0.	0.0	1585.0
1	1930	235	220.	4.6	1590.4	*	2	1530	475	0.	0.0	1585.0	*	3	1130	715	0.	0.0	1585.0
1	1935	236	219.	4.5	1590.4	*	2	1535	476	0.	0.0	1585.0	*	3	1135	716	0.	0.0	1585.0
1	1940	237	219.	4.5	1590.4	*	2	1540	477	0.	0.0	1585.0	*	3	1140	717	0.	0.0	1585.0

1	1945	238	218.	4.4	1590.3	*	2	1545	478	0.	0.0	1585.0	*	3	1145	718	0.	0.0	1585.0
1	1950	239	217.	4.3	1590.3	*	2	1550	479	0.	0.0	1585.0	*	3	1150	719	0.	0.0	1585.0
1	1955	240	217.	4.3	1590.3	*	2	1555	480	0.	0.0	1585.0	*	3	1155	720	0.	0.0	1585.0

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 707.	4.75		647.	383.	167.	167.
		(INCHES)	0.609	1.444	1.570	1.570
		(AC-FT)	321.	760.	826.	826.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	59.92-HR
+ (AC-FT)	(HR)				
200.	4.75	166.	56.	23.	23.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	59.92-HR
+ (FEET)	(HR)				
1602.88	4.75	1601.30	1594.15	1589.07	1589.07

CUMULATIVE AREA = 9.87 SQ MI

****

HYDROGRAPH AT UHDB-O
TRANSPOSITION AREA 0.1 SQ MI

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	*	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.0	1585.0	*	1		2000	241	216.	4.2	1590.3	*	2		1600	481	0.	0.0	1585.0
1		0005	2	0.	0.0	1585.0	*	1		2005	242	215.	4.1	1590.3	*	2		1605	482	0.	0.0	1585.0
1		0010	3	0.	0.0	1585.0	*	1		2010	243	215.	4.1	1590.3	*	2		1610	483	0.	0.0	1585.0
1		0015	4	0.	0.0	1585.0	*	1		2015	244	214.	4.0	1590.3	*	2		1615	484	0.	0.0	1585.0
1		0020	5	0.	0.0	1585.0	*	1		2020	245	214.	3.9	1590.3	*	2		1620	485	0.	0.0	1585.0
1		0025	6	0.	0.0	1585.0	*	1		2025	246	213.	3.9	1590.3	*	2		1625	486	0.	0.0	1585.0
1		0030	7	1.	0.0	1585.0	*	1		2030	247	213.	3.8	1590.3	*	2		1630	487	0.	0.0	1585.0
1		0035	8	1.	0.0	1585.0	*	1		2035	248	212.	3.7	1590.3	*	2		1635	488	0.	0.0	1585.0
1		0040	9	2.	0.0	1585.1	*	1		2040	249	211.	3.7	1590.3	*	2		1640	489	0.	0.0	1585.0
1		0045	10	3.	0.0	1585.1	*	1		2045	250	211.	3.6	1590.3	*	2		1645	490	0.	0.0	1585.0
1		0050	11	4.	0.1	1585.2	*	1		2050	251	210.	3.5	1590.2	*	2		1650	491	0.	0.0	1585.0
1		0055	12	6.	0.1	1585.2	*	1		2055	252	210.	3.5	1590.2	*	2		1655	492	0.	0.0	1585.0
1		0100	13	8.	0.1	1585.3	*	1		2100	253	209.	3.4	1590.2	*	2		1700	493	0.	0.0	1585.0
1		0105	14	11.	0.1	1585.4	*	1		2105	254	209.	3.4	1590.2	*	2		1705	494	0.	0.0	1585.0
1		0110	15	14.	0.2	1585.6	*	1		2110	255	208.	3.3	1590.2	*	2		1710	495	0.	0.0	1585.0
1		0115	16	18.	0.2	1585.7	*	1		2115	256	207.	3.2	1590.2	*	2		1715	496	0.	0.0	1585.0
1		0120	17	21.	0.3	1585.9	*	1		2120	257	207.	3.2	1590.2	*	2		1720	497	0.	0.0	1585.0
1		0125	18	25.	0.3	1586.0	*	1		2125	258	206.	3.1	1590.2	*	2		1725	498	0.	0.0	1585.0
1		0130	19	29.	0.4	1586.2	*	1		2130	259	206.	3.0	1590.2	*	2		1730	499	0.	0.0	1585.0
1		0135	20	34.	0.4	1586.4	*	1		2135	260	205.	3.0	1590.2	*	2		1735	500	0.	0.0	1585.0
1		0140	21	38.	0.5	1586.5	*	1		2140	261	205.	2.9	1590.2	*	2		1740	501	0.	0.0	1585.0
1		0145	22	42.	0.5	1586.7	*	1		2145	262	204.	2.8	1590.2	*	2		1745	502	0.	0.0	1585.0
1		0150	23	46.	0.6	1586.9	*	1		2150	263	203.	2.8	1590.1	*	2		1750	503	0.	0.0	1585.0
1		0155	24	50.	0.7	1587.0	*	1		2155	264	203.	2.7	1590.1	*	2		1755	504	0.	0.0	1585.0
1		0200	25	57.	0.7	1587.2	*	1		2200	265	202.	2.7	1590.1	*	2		1800	505	0.	0.0	1585.0
1		0205	26	64.	0.8	1587.4	*	1		2205	266	202.	2.6	1590.1	*	2		1805	506	0.	0.0	1585.0
1		0210	27	71.	0.8	1587.6	*	1		2210	267	201.	2.5	1590.1	*	2		1810	507	0.	0.0	1585.0
1		0215	28	78.	0.9	1587.7	*	1		2215	268	201.	2.5	1590.1	*	2		1815	508	0.	0.0	1585.0
1		0220	29	85.	0.9	1587.9	*	1		2220	269	200.	2.4	1590.1	*	2		1820	509	0.	0.0	1585.0
1		0225	30	93.	1.0	1588.1	*	1		2225	270	200.	2.3	1590.1	*	2		1825	510	0.	0.0	1585.0
1		0230	31	101.	1.1	1588.3	*	1		2230	271	199.	2.3	1590.1	*	2		1830	511	0.	0.0	1585.0
1		0235	32	112.	1.1	1588.5	*	1		2235	272	199.	2.2	1590.1	*	2		1835	512	0.	0.0	1585.0
1		0240	33	126.	1.2	1588.7	*	1		2240	273	198.	2.2	1590.1	*	2		1840	513	0.	0.0	1585.0
1		0245	34	146.	1.3	1589.1	*	1		2245	274	198.	2.1	1590.1	*	2		1845	514	0.	0.0	1585.0
1		0250	35	180.	1.5	1589.7	*	1		2250	275	197.	2.0	1590.1	*	2		1850	515	0.	0.0	1585.0
1		0255	36	197.	2.0	1590.1	*	1		2255	276	197.	1.9	1590.0	*	2		1855	516	0.	0.0	1585.0
1		0300	37	209.	3.4	1590.2	*	1		2300	277	196.	1.9	1590.0	*	2		1900	517	0.	0.0	1585.0
1		0305	38	249.	7.8	1590.8	*	1		2305	278	196.	1.8	1590.0	*	2		1905	518	0.	0.0	1585.0
1		0310	39	362.	20.5	1592.4	*	1		2310	279	196.	1.7	1590.0	*	2		1910	519	0.	0.0	1585.0
1		0315	40	509.	42.7	1595.1	*	1		2315	280	195.	1.7	1590.0	*	2		1915	520	0.	0.0	1585.0
1		0320	41	527.	69.0	1596.4	*	1		2320	281	195.	1.6	1590.0	*	2		1920	521	0.	0.0	1585.0
1		0325	42	552.	93.7	1597.7	*	1		2325	282	187.	1.6	1589.9	*	2		1925	522	0.	0.0	1585.0
1		0330	43	574.	115.2	1598.8	*	1		2330	283	185.	1.5	1589.8	*	2		1930	523	0.	0.0	1585.0
1		0335	44	592.	133.3	1599.8	*	1		2335	284	183.	1.5	1589.8	*	2		1935	524	0.	0.0	1585.0
1		0340	45	607.	148.4	1600.5	*	1		2340	285	183.	1.5	1589.8	*	2		1940	525	0.	0.0	1585.0
1		0345	46	618.	160.7	1601.1	*	1		2345	286	182.	1.5	1589.8	*	2		1945	526	0.	0.0	1585.0
1		0350	47	627.	170.7	1601.5	*	1		2350	287	182.	1.5	1589.8	*	2		1950	527	0.	0.0	1585.0
1		0355	48	680.	178.5	1601.9	*	1		2355	288	181.	1.5	1589.8	*	2		1955	528	0.	0.0	1585.0
1		0400	49	692.	184.4	1602.2	*	2		0000	289	181.	1.5	1589.7	*	2		2000	529	0.	0.0	1585.0
1		0405	50	699.	189.0	1602.4	*	2		0005	290	180.	1.5	1589.7	*	2		2005	530	0.	0.0	1585.0
1		0410	51	702.	192.4	1602.5	*	2		0010	291	180.	1.5	1589.7	*	2		2010	531	0.	0.0	1585.0
1		0415	52	703.	195.0	1602.6	*	2		0015	292	179.	1.5	1589.7	*	2		2015	532	0.	0.0	1585.0
1		0420	53	705.	196.9	1602.7	*	2		0020	293	178.	1.5	1589.7	*	2		2020	533	0.	0.0	1585.0
1		0425	54	706.	198.3	1602.8	*	2		0025	294	178.	1.5	1589.7	*	2		2025	534	0.	0.0	1585.0
1		0430	55	707.	199.3	1602.8	*	2		0030	295	177.	1.5	1589.7	*	2		2030	535	0.	0.0	1585.0
1		0435	56	707.	199.8	1602.9	*	2		0035	296	177.	1.5	1589.7	*	2		2035	536	0.	0.0	1585.0
1		0440	57	707.	200.2	1602.9	*	2		0040	297	176.	1.5	1589.7	*	2		2040	537	0.	0.0	1585.0

1	0445	58	707.	200.2	1602.9	*	2	0045	298	176.	1.5	1589.7	*	2	2045	538	0.	0.0	1585.0
1	0450	59	707.	200.1	1602.9	*	2	0050	299	175.	1.5	1589.6	*	2	2050	539	0.	0.0	1585.0
1	0455	60	707.	199.8	1602.9	*	2	0055	300	175.	1.5	1589.6	*	2	2055	540	0.	0.0	1585.0
1	0500	61	707.	199.3	1602.8	*	2	0100	301	174.	1.5	1589.6	*	2	2100	541	0.	0.0	1585.0
1	0505	62	706.	198.8	1602.8	*	2	0105	302	174.	1.5	1589.6	*	2	2105	542	0.	0.0	1585.0
1	0510	63	706.	198.1	1602.8	*	2	0110	303	173.	1.5	1589.6	*	2	2110	543	0.	0.0	1585.0
1	0515	64	705.	197.3	1602.7	*	2	0115	304	172.	1.5	1589.6	*	2	2115	544	0.	0.0	1585.0
1	0520	65	705.	196.5	1602.7	*	2	0120	305	172.	1.5	1589.6	*	2	2120	545	0.	0.0	1585.0
1	0525	66	704.	195.6	1602.7	*	2	0125	306	171.	1.5	1589.6	*	2	2125	546	0.	0.0	1585.0
1	0530	67	703.	194.6	1602.6	*	2	0130	307	170.	1.5	1589.6	*	2	2130	547	0.	0.0	1585.0
1	0535	68	702.	193.5	1602.6	*	2	0135	308	169.	1.5	1589.5	*	2	2135	548	0.	0.0	1585.0
1	0540	69	702.	192.4	1602.5	*	2	0140	309	169.	1.4	1589.5	*	2	2140	549	0.	0.0	1585.0
1	0545	70	701.	191.2	1602.5	*	2	0145	310	168.	1.4	1589.5	*	2	2145	550	0.	0.0	1585.0
1	0550	71	700.	189.9	1602.4	*	2	0150	311	167.	1.4	1589.5	*	2	2150	551	0.	0.0	1585.0
1	0555	72	699.	188.7	1602.3	*	2	0155	312	166.	1.4	1589.5	*	2	2155	552	0.	0.0	1585.0
1	0600	73	698.	187.3	1602.3	*	2	0200	313	166.	1.4	1589.5	*	2	2200	553	0.	0.0	1585.0
1	0605	74	695.	186.0	1602.2	*	2	0205	314	165.	1.4	1589.5	*	2	2205	554	0.	0.0	1585.0
1	0610	75	692.	184.6	1602.2	*	2	0210	315	164.	1.4	1589.4	*	2	2210	555	0.	0.0	1585.0
1	0615	76	689.	183.1	1602.1	*	2	0215	316	163.	1.4	1589.4	*	2	2215	556	0.	0.0	1585.0
1	0620	77	687.	181.7	1602.0	*	2	0220	317	163.	1.4	1589.4	*	2	2220	557	0.	0.0	1585.0
1	0625	78	684.	180.1	1602.0	*	2	0225	318	162.	1.4	1589.4	*	2	2225	558	0.	0.0	1585.0
1	0630	79	680.	178.5	1601.9	*	2	0230	319	161.	1.4	1589.4	*	2	2230	559	0.	0.0	1585.0
1	0635	80	670.	176.8	1601.8	*	2	0235	320	160.	1.4	1589.4	*	2	2235	560	0.	0.0	1585.0
1	0640	81	652.	175.2	1601.7	*	2	0240	321	159.	1.4	1589.4	*	2	2240	561	0.	0.0	1585.0
1	0645	82	631.	173.6	1601.7	*	2	0245	322	159.	1.4	1589.3	*	2	2245	562	0.	0.0	1585.0
1	0650	83	628.	172.0	1601.6	*	2	0250	323	158.	1.4	1589.3	*	2	2250	563	0.	0.0	1585.0
1	0655	84	626.	170.3	1601.5	*	2	0255	324	157.	1.4	1589.3	*	2	2255	564	0.	0.0	1585.0
1	0700	85	625.	168.6	1601.4	*	2	0300	325	156.	1.4	1589.3	*	2	2300	565	0.	0.0	1585.0
1	0705	86	623.	166.8	1601.3	*	2	0305	326	155.	1.4	1589.3	*	2	2305	566	0.	0.0	1585.0
1	0710	87	621.	165.0	1601.3	*	2	0310	327	155.	1.4	1589.3	*	2	2310	567	0.	0.0	1585.0
1	0715	88	620.	163.1	1601.2	*	2	0315	328	154.	1.4	1589.3	*	2	2315	568	0.	0.0	1585.0
1	0720	89	618.	161.2	1601.1	*	2	0320	329	153.	1.4	1589.2	*	2	2320	569	0.	0.0	1585.0
1	0725	90	616.	159.3	1601.0	*	2	0325	330	152.	1.4	1589.2	*	2	2325	570	0.	0.0	1585.0
1	0730	91	615.	157.4	1600.9	*	2	0330	331	152.	1.3	1589.2	*	2	2330	571	0.	0.0	1585.0
1	0735	92	613.	155.4	1600.8	*	2	0335	332	151.	1.3	1589.2	*	2	2335	572	0.	0.0	1585.0
1	0740	93	611.	153.4	1600.7	*	2	0340	333	150.	1.3	1589.2	*	2	2340	573	0.	0.0	1585.0
1	0745	94	609.	151.4	1600.6	*	2	0345	334	149.	1.3	1589.2	*	2	2345	574	0.	0.0	1585.0
1	0750	95	607.	149.4	1600.6	*	2	0350	335	148.	1.3	1589.2	*	2	2350	575	0.	0.0	1585.0
1	0755	96	606.	147.4	1600.5	*	2	0355	336	148.	1.3	1589.1	*	2	2355	576	0.	0.0	1585.0
1	0800	97	604.	145.4	1600.4	*	2	0400	337	147.	1.3	1589.1	*	3	0000	577	0.	0.0	1585.0
1	0805	98	602.	143.4	1600.3	*	2	0405	338	146.	1.3	1589.1	*	3	0005	578	0.	0.0	1585.0
1	0810	99	600.	141.3	1600.2	*	2	0410	339	145.	1.3	1589.1	*	3	0010	579	0.	0.0	1585.0
1	0815	100	598.	139.3	1600.1	*	2	0415	340	145.	1.3	1589.1	*	3	0015	580	0.	0.0	1585.0
1	0820	101	597.	137.2	1600.0	*	2	0420	341	144.	1.3	1589.1	*	3	0020	581	0.	0.0	1585.0
1	0825	102	594.	135.2	1599.9	*	2	0425	342	143.	1.3	1589.1	*	3	0025	582	0.	0.0	1585.0
1	0830	103	592.	133.2	1599.8	*	2	0430	343	142.	1.3	1589.0	*	3	0030	583	0.	0.0	1585.0
1	0835	104	590.	131.1	1599.7	*	2	0435	344	142.	1.3	1589.0	*	3	0035	584	0.	0.0	1585.0
1	0840	105	588.	129.1	1599.6	*	2	0440	345	141.	1.3	1589.0	*	3	0040	585	0.	0.0	1585.0
1	0845	106	586.	127.1	1599.5	*	2	0445	346	140.	1.3	1589.0	*	3	0045	586	0.	0.0	1585.0
1	0850	107	584.	125.1	1599.4	*	2	0450	347	139.	1.3	1589.0	*	3	0050	587	0.	0.0	1585.0
1	0855	108	582.	123.0	1599.3	*	2	0455	348	138.	1.3	1589.0	*	3	0055	588	0.	0.0	1585.0
1	0900	109	580.	121.0	1599.1	*	2	0500	349	138.	1.3	1589.0	*	3	0100	589	0.	0.0	1585.0
1	0905	110	578.	119.0	1599.0	*	2	0505	350	137.	1.3	1588.9	*	3	0105	590	0.	0.0	1585.0
1	0910	111	576.	117.0	1598.9	*	2	0510	351	136.	1.3	1588.9	*	3	0110	591	0.	0.0	1585.0
1	0915	112	574.	115.0	1598.8	*	2	0515	352	135.	1.3	1588.9	*	3	0115	592	0.	0.0	1585.0
1	0920	113	572.	113.1	1598.7	*	2	0520	353	134.	1.2	1588.9	*	3	0120	593	0.	0.0	1585.0
1	0925	114	570.	111.1	1598.6	*	2	0525	354	133.	1.2	1588.9	*	3	0125	594	0.	0.0	1585.0
1	0930	115	568.	109.1	1598.5	*	2	0530	355	132.	1.2	1588.9	*	3	0130	595	0.	0.0	1585.0
1	0935	116	566.	107.1	1598.4	*	2	0535	356	131.	1.2	1588.8	*	3	0135	596	0.	0.0	1585.0
1	0940	117	563.	105.1	1598.3	*	2	0540	357	131.	1.2	1588.8	*	3	0140	597	0.	0.0	1585.0
1	0945	118	561.	103.1	1598.2	*	2	0545	358	130.	1.2	1588.8	*	3	0145	598	0.	0.0	1585.0
1	0950	119	559.	101.2	1598.1	*	2	0550	359	129.	1.2	1588.8	*	3	0150	599	0.	0.0	1585.0
1	0955	120	557.	99.2	1598.0	*	2	0555	360	128.	1.2	1588.8	*	3	0155	600	0.	0.0	1585.0
1	1000	121	555.	97.2	1597.9	*	2	0600	361	127.	1.2	1588.8	*	3	0200	601	0.	0.0	1585.0
1	1005	122	553.	95.3	1597.8	*	2	0605	362	126.	1.2	1588.8	*	3	0205	602	0.	0.0	1585.0
1	1010	123	551.	93.3	1597.7	*	2	0610	363	126.	1.2	1588.7	*	3	0210	603	0.	0.0	1585.0
1	1015	124	549.	91.4	1597.6	*	2	0615	364	125.	1.2	1588.7	*	3	0215	604	0.	0.0	1585.0
1	1020	125	547.	89.4	1597.5	*	2	0620	365	124.	1.2	1588.7	*	3	0220	605	0.	0.0	1585.0
1	1025	126	545.	87.5	1597.4	*	2	0625	366	123.	1.2	1588.7	*	3	0225	606	0.	0.0	1585.0
1	1030	127	543.	85.6	1597.3	*	2	0630	367	122.	1.2	1588.7	*	3	0230	607	0.	0.0	1585.0
1	1035	128	541.	83.6	1597.2	*	2	0635	368	121.	1.2	1588.7	*	3	0235	608	0.	0.0	1585.0
1	1040	129	539.	81.7	1597.1	*	2	0640	369	120.	1.2	1588.6	*	3	0240	609	0.	0.0	1585.0
1	1045	130	538.	79.8	1597.0	*	2	0645	370	118.	1.2	1588.6	*	3	0245	610	0.	0.0	1585.0
1	1050	131	536.	77.9	1596.9	*	2	0650	371	116.	1.1	1588.6	*	3	0250	611	0.	0.0	1585.0
1	1055	132	534.	76.1	1596.8	*	2	0655	372	114.	1.1	1588.5	*	3	0255	612	0.	0.0	1585.0
1	1100	133	532.	74.2	1596.7	*	2	0700	373	110.	1.1	1588.5	*	3	0300	613	0.	0.0	1585.0
1	1105	134	530.	72.3	1596.6	*	2	0705	374	106.	1.1	1588.4	*	3	0305	614	0.	0.0	1585.0
1	1110	135	528.	70.5	1596.5	*	2	0710	375	101.	1.1	1588.3	*	3	0310	615	0.	0.0	1585.0
1	1115	136	526.	68.6	1596.4	*	2	0715	376	97.	1.0	1588.2	*	3	0315	616	0.	0.0	1585.0
1	1120	137	525.	66.8	1596.3	*	2	0720	377	92.	1.0	1588.1	*	3	0320	617	0.	0.0	1585.0
1	1125	138	524.	65.0	1596.2	*	2	0725	378	86.	0.9	1587.9	*	3	0325	618	0.	0.0	1585.0
1	1130	139	523.	63.1	1596.1	*	2	0730	379	80.	0.9	1587.8	*	3	0330	619	0.	0.0	1585.0
1	1135	140	522.	61.3	1596.0	*	2	0735	380	74.	0.8	1587.6	*	3	0335	620	0.	0.0	1585.0
1	1140	141	520.	59.5	1595.9	*	2	0740	381	68.	0.8	1587.5	*	3	0340	621	0.	0.0	1585.0
1	1145	142	519.	57.7	1595.8	*	2	0745	382	63.	0.7	1587.3	*	3	0345	622	0.	0.0	1585.0
1	1150	143	518.	55.9	1595.7	*	2	0750	383	57.	0.7	1587.2	*	3	0350	623	0.	0.0	1585.0
1	1155	144	517.	54.1	1595.6	*	2	0755	384	51.	0.7	1587.1	*	3	0355	624	0.	0.0	1585.0
1	1200	145	516.	52.3	1595.6	*	2	0800	385	47.	0.6	1586.9	*	3	0400	625	0.	0.0	1585.0
1	1205	146	514.	50.5	1595.5	*	2	0805	386	43.	0.6	1586.8	*	3	0405	626	0.	0.0	1585.0
1	1210	147	513.	48.7	1595.4	*	2	0810	387	40.	0.5	1586.6	*	3	0410	627	0.	0.0	1585.0
1	1215	148	512.	47.0	1595.3	*	2	0815	388	37.	0.5	1586.5	*	3	0415	628	0.	0.0	1585.0
1	1220	149	511.	45.2	1595.2	*	2	0820	389	33.	0.4	1586.4	*	3	0420	629	0.	0.0	1585.0
1	1225	150	510.	43.4	1595.1	*	2	0825	390	30.	0.4	1586.2	*	3	0425	630	0.	0.0	1585.0

1	1230	151	509.	41.7	1595.0	*	2	0830	391	27.	0.3	1586.1	*	3	0430	631	0.	0.0	1585.0
1	1235	152	506.	39.9	1594.8	*	2	0835	392	23.	0.3	1586.0	*	3	0435	632	0.	0.0	1585.0
1	1240	153	503.	38.2	1594.6	*	2	0840	393	20.	0.3	1585.8	*	3	0440	633	0.	0.0	1585.0
1	1245	154	500.	36.4	1594.3	*	2	0845	394	17.	0.2	1585.7	*	3	0445	634	0.	0.0	1585.0
1	1250	155	487.	34.8	1594.1	*	2	0850	395	14.	0.2	1585.6	*	3	0450	635	0.	0.0	1585.0
1	1255	156	473.	33.2	1593.9	*	2	0855	396	12.	0.2	1585.5	*	3	0455	636	0.	0.0	1585.0
1	1300	157	461.	31.7	1593.8	*	2	0900	397	10.	0.1	1585.4	*	3	0500	637	0.	0.0	1585.0
1	1305	158	448.	30.3	1593.6	*	2	0905	398	8.	0.1	1585.3	*	3	0505	638	0.	0.0	1585.0
1	1310	159	437.	28.9	1593.4	*	2	0910	399	6.	0.1	1585.3	*	3	0510	639	0.	0.0	1585.0
1	1315	160	426.	27.7	1593.3	*	2	0915	400	5.	0.1	1585.2	*	3	0515	640	0.	0.0	1585.0
1	1320	161	416.	26.5	1593.1	*	2	0920	401	4.	0.1	1585.2	*	3	0520	641	0.	0.0	1585.0
1	1325	162	406.	25.4	1593.0	*	2	0925	402	3.	0.0	1585.1	*	3	0525	642	0.	0.0	1585.0
1	1330	163	396.	24.3	1592.8	*	2	0930	403	3.	0.0	1585.1	*	3	0530	643	0.	0.0	1585.0
1	1335	164	387.	23.3	1592.7	*	2	0935	404	2.	0.0	1585.1	*	3	0535	644	0.	0.0	1585.0
1	1340	165	379.	22.3	1592.6	*	2	0940	405	2.	0.0	1585.1	*	3	0540	645	0.	0.0	1585.0
1	1345	166	371.	21.5	1592.5	*	2	0945	406	1.	0.0	1585.1	*	3	0545	646	0.	0.0	1585.0
1	1350	167	363.	20.6	1592.4	*	2	0950	407	1.	0.0	1585.0	*	3	0550	647	0.	0.0	1585.0
1	1355	168	356.	19.8	1592.3	*	2	0955	408	1.	0.0	1585.0	*	3	0555	648	0.	0.0	1585.0
1	1400	169	349.	19.1	1592.2	*	2	1000	409	1.	0.0	1585.0	*	3	0600	649	0.	0.0	1585.0
1	1405	170	343.	18.3	1592.1	*	2	1005	410	1.	0.0	1585.0	*	3	0605	650	0.	0.0	1585.0
1	1410	171	337.	17.7	1592.0	*	2	1010	411	0.	0.0	1585.0	*	3	0610	651	0.	0.0	1585.0
1	1415	172	331.	17.0	1591.9	*	2	1015	412	0.	0.0	1585.0	*	3	0615	652	0.	0.0	1585.0
1	1420	173	326.	16.4	1591.8	*	2	1020	413	0.	0.0	1585.0	*	3	0620	653	0.	0.0	1585.0
1	1425	174	321.	15.9	1591.8	*	2	1025	414	0.	0.0	1585.0	*	3	0625	654	0.	0.0	1585.0
1	1430	175	316.	15.3	1591.7	*	2	1030	415	0.	0.0	1585.0	*	3	0630	655	0.	0.0	1585.0
1	1435	176	311.	14.8	1591.6	*	2	1035	416	0.	0.0	1585.0	*	3	0635	656	0.	0.0	1585.0
1	1440	177	307.	14.3	1591.6	*	2	1040	417	0.	0.0	1585.0	*	3	0640	657	0.	0.0	1585.0
1	1445	178	303.	13.9	1591.5	*	2	1045	418	0.	0.0	1585.0	*	3	0645	658	0.	0.0	1585.0
1	1450	179	299.	13.4	1591.5	*	2	1050	419	0.	0.0	1585.0	*	3	0650	659	0.	0.0	1585.0
1	1455	180	295.	13.0	1591.4	*	2	1055	420	0.	0.0	1585.0	*	3	0655	660	0.	0.0	1585.0
1	1500	181	292.	12.6	1591.4	*	2	1100	421	0.	0.0	1585.0	*	3	0700	661	0.	0.0	1585.0
1	1505	182	289.	12.3	1591.3	*	2	1105	422	0.	0.0	1585.0	*	3	0705	662	0.	0.0	1585.0
1	1510	183	285.	11.9	1591.3	*	2	1110	423	0.	0.0	1585.0	*	3	0710	663	0.	0.0	1585.0
1	1515	184	282.	11.6	1591.2	*	2	1115	424	0.	0.0	1585.0	*	3	0715	664	0.	0.0	1585.0
1	1520	185	280.	11.3	1591.2	*	2	1120	425	0.	0.0	1585.0	*	3	0720	665	0.	0.0	1585.0
1	1525	186	277.	11.0	1591.2	*	2	1125	426	0.	0.0	1585.0	*	3	0725	666	0.	0.0	1585.0
1	1530	187	274.	10.7	1591.1	*	2	1130	427	0.	0.0	1585.0	*	3	0730	667	0.	0.0	1585.0
1	1535	188	272.	10.4	1591.1	*	2	1135	428	0.	0.0	1585.0	*	3	0735	668	0.	0.0	1585.0
1	1540	189	270.	10.2	1591.1	*	2	1140	429	0.	0.0	1585.0	*	3	0740	669	0.	0.0	1585.0
1	1545	190	267.	9.9	1591.0	*	2	1145	430	0.	0.0	1585.0	*	3	0745	670	0.	0.0	1585.0
1	1550	191	265.	9.7	1591.0	*	2	1150	431	0.	0.0	1585.0	*	3	0750	671	0.	0.0	1585.0
1	1555	192	263.	9.5	1591.0	*	2	1155	432	0.	0.0	1585.0	*	3	0755	672	0.	0.0	1585.0
1	1600	193	261.	9.2	1591.0	*	2	1200	433	0.	0.0	1585.0	*	3	0800	673	0.	0.0	1585.0
1	1605	194	259.	9.0	1590.9	*	2	1205	434	0.	0.0	1585.0	*	3	0805	674	0.	0.0	1585.0
1	1610	195	258.	8.8	1590.9	*	2	1210	435	0.	0.0	1585.0	*	3	0810	675	0.	0.0	1585.0
1	1615	196	256.	8.6	1590.9	*	2	1215	436	0.	0.0	1585.0	*	3	0815	676	0.	0.0	1585.0
1	1620	197	254.	8.5	1590.9	*	2	1220	437	0.	0.0	1585.0	*	3	0820	677	0.	0.0	1585.0
1	1625	198	253.	8.3	1590.8	*	2	1225	438	0.	0.0	1585.0	*	3	0825	678	0.	0.0	1585.0
1	1630	199	251.	8.1	1590.8	*	2	1230	439	0.	0.0	1585.0	*	3	0830	679	0.	0.0	1585.0
1	1635	200	250.	8.0	1590.8	*	2	1235	440	0.	0.0	1585.0	*	3	0835	680	0.	0.0	1585.0
1	1640	201	249.	7.8	1590.8	*	2	1240	441	0.	0.0	1585.0	*	3	0840	681	0.	0.0	1585.0
1	1645	202	247.	7.7	1590.8	*	2	1245	442	0.	0.0	1585.0	*	3	0845	682	0.	0.0	1585.0
1	1650	203	246.	7.5	1590.7	*	2	1250	443	0.	0.0	1585.0	*	3	0850	683	0.	0.0	1585.0
1	1655	204	245.	7.4	1590.7	*	2	1255	444	0.	0.0	1585.0	*	3	0855	684	0.	0.0	1585.0
1	1700	205	244.	7.3	1590.7	*	2	1300	445	0.	0.0	1585.0	*	3	0900	685	0.	0.0	1585.0
1	1705	206	242.	7.1	1590.7	*	2	1305	446	0.	0.0	1585.0	*	3	0905	686	0.	0.0	1585.0
1	1710	207	241.	7.0	1590.7	*	2	1310	447	0.	0.0	1585.0	*	3	0910	687	0.	0.0	1585.0
1	1715	208	240.	6.9	1590.7	*	2	1315	448	0.	0.0	1585.0	*	3	0915	688	0.	0.0	1585.0
1	1720	209	239.	6.8	1590.6	*	2	1320	449	0.	0.0	1585.0	*	3	0920	689	0.	0.0	1585.0
1	1725	210	238.	6.7	1590.6	*	2	1325	450	0.	0.0	1585.0	*	3	0925	690	0.	0.0	1585.0
1	1730	211	237.	6.6	1590.6	*	2	1330	451	0.	0.0	1585.0	*	3	0930	691	0.	0.0	1585.0
1	1735	212	236.	6.5	1590.6	*	2	1335	452	0.	0.0	1585.0	*	3	0935	692	0.	0.0	1585.0
1	1740	213	236.	6.4	1590.6	*	2	1340	453	0.	0.0	1585.0	*	3	0940	693	0.	0.0	1585.0
1	1745	214	235.	6.3	1590.6	*	2	1345	454	0.	0.0	1585.0	*	3	0945	694	0.	0.0	1585.0
1	1750	215	234.	6.2	1590.6	*	2	1350	455	0.	0.0	1585.0	*	3	0950	695	0.	0.0	1585.0
1	1755	216	233.	6.1	1590.6	*	2	1355	456	0.	0.0	1585.0	*	3	0955	696	0.	0.0	1585.0
1	1800	217	232.	6.0	1590.5	*	2	1400	457	0.	0.0	1585.0	*	3	1000	697	0.	0.0	1585.0
1	1805	218	231.	5.9	1590.5	*	2	1405	458	0.	0.0	1585.0	*	3	1005	698	0.	0.0	1585.0
1	1810	219	231.	5.8	1590.5	*	2	1410	459	0.	0.0	1585.0	*	3	1010	699	0.	0.0	1585.0
1	1815	220	230.	5.7	1590.5	*	2	1415	460	0.	0.0	1585.0	*	3	1015	700	0.	0.0	1585.0
1	1820	221	229.	5.6	1590.5	*	2	1420	461	0.	0.0	1585.0	*	3	1020	701	0.	0.0	1585.0
1	1825	222	228.	5.6	1590.5	*	2	1425	462	0.	0.0	1585.0	*	3	1025	702	0.	0.0	1585.0
1	1830	223	228.	5.5	1590.5	*	2	1430	463	0.	0.0	1585.0	*	3	1030	703	0.	0.0	1585.0
1	1835	224	227.	5.4	1590.5	*	2	1435	464	0.	0.0	1585.0	*	3	1035	704	0.	0.0	1585.0
1	1840	225	226.	5.3	1590.5	*	2	1440	465	0.	0.0	1585.0	*	3	1040	705	0.	0.0	1585.0
1	1845	226	226.	5.2	1590.5	*	2	1445	466	0.	0.0	1585.0	*	3	1045	706	0.	0.0	1585.0
1	1850	227	225.	5.2	1590.4	*	2	1450	467	0.	0.0	1585.0	*	3	1050	707	0.	0.0	1585.0
1	1855	228	224.	5.1	1590.4	*	2	1455	468	0.	0.0	1585.0	*	3	1055	708	0.	0.0	1585.0
1	1900	229	224.	5.0	1590.4	*	2	1500	469	0.	0.0	1585.0	*	3	1100	709	0.	0.0	1585.0
1	1905	230	223.	5.0	1590.4	*	2	1505	470	0.	0.0	1585.0	*	3	1105	710	0.	0.0	1585.0
1	1910	231	222.	4.9	1590.4	*	2	1510	471	0.	0.0	1585.0	*	3	1110	711	0.	0.0	1585.0
1	1915	232	222.	4.8	1590.4	*	2	1515	472	0.	0.0	1585.0	*	3	1115	712	0.	0.0	1585.0
1	1920	233	221.	4.7	1590.4	*	2	1520	473	0.	0.0	1585.0	*	3	1120	713	0.	0.0	1585.0
1	1925	234	220.	4.7	1590.4	*	2	1525	474	0.	0.0	1585.0	*	3	1125	714	0.	0.0	1585.0
1	1930	235	220.	4.6	1590.4	*	2	1530	475	0.	0.0	1585.0	*	3	1130	715	0.	0.0	1585.0
1	1935	236	219.	4.5	1590.4	*	2	1535	476	0.	0.0	1585.0	*	3	1135	716	0.	0.0	1585.0
1	1940	237	218.	4.5	1590.4	*	2	1540	477	0.	0.0	1585.0	*	3	1140	717	0.	0.0	1585.0
1	1945	238	218.	4.4	1590.3	*	2	1545	478	0.	0.0	1585.0	*	3	1145	718	0.	0.0	1585.0
1	1950	239	217.	4.3	1590.3	*	2	1550	479	0.	0.0	1585.0	*	3	1150	719	0.	0.0	1585.0
1	1955	240	217.	4.3	1590.3	*	2	1555	480	0.	0.0	1585.0	*	3	1155	720	0.	0.0	1585.0

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 707.	4.75		647.	383.	167.	167.
		(INCHES)	0.609	1.444	1.569	1.569
		(AC-FT)	321.	760.	826.	826.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	59.92-HR
+ (AC-FT)	(HR)				
200.	4.75	166.	56.	23.	23.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	59.92-HR
+ (FEET)	(HR)				
1602.88	4.75	1601.29	1594.15	1589.07	1589.07

CUMULATIVE AREA = 9.87 SQ MI

****

HYDROGRAPH AT UHDB-O
TRANSPOSITION AREA 0.5 SQ MI

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.0	1585.0	1		2000	241	216.	4.1	1590.3	2		1600	481	0.	0.0	1585.0
1		0005	2	0.	0.0	1585.0	1		2005	242	215.	4.1	1590.3	2		1605	482	0.	0.0	1585.0
1		0010	3	0.	0.0	1585.0	1		2010	243	214.	4.0	1590.3	2		1610	483	0.	0.0	1585.0
1		0015	4	0.	0.0	1585.0	1		2015	244	214.	4.0	1590.3	2		1615	484	0.	0.0	1585.0
1		0020	5	0.	0.0	1585.0	1		2020	245	213.	3.9	1590.3	2		1620	485	0.	0.0	1585.0
1		0025	6	0.	0.0	1585.0	1		2025	246	213.	3.8	1590.3	2		1625	486	0.	0.0	1585.0
1		0030	7	1.	0.0	1585.0	1		2030	247	212.	3.8	1590.3	2		1630	487	0.	0.0	1585.0
1		0035	8	1.	0.0	1585.0	1		2035	248	212.	3.7	1590.3	2		1635	488	0.	0.0	1585.0
1		0040	9	2.	0.0	1585.1	1		2040	249	211.	3.6	1590.3	2		1640	489	0.	0.0	1585.0
1		0045	10	3.	0.0	1585.1	1		2045	250	210.	3.6	1590.2	2		1645	490	0.	0.0	1585.0
1		0050	11	4.	0.1	1585.2	1		2050	251	210.	3.5	1590.2	2		1650	491	0.	0.0	1585.0
1		0055	12	6.	0.1	1585.2	1		2055	252	209.	3.4	1590.2	2		1655	492	0.	0.0	1585.0
1		0100	13	8.	0.1	1585.3	1		2100	253	209.	3.4	1590.2	2		1700	493	0.	0.0	1585.0
1		0105	14	11.	0.1	1585.4	1		2105	254	208.	3.3	1590.2	2		1705	494	0.	0.0	1585.0
1		0110	15	14.	0.2	1585.6	1		2110	255	208.	3.3	1590.2	2		1710	495	0.	0.0	1585.0
1		0115	16	18.	0.2	1585.7	1		2115	256	207.	3.2	1590.2	2		1715	496	0.	0.0	1585.0
1		0120	17	22.	0.3	1585.9	1		2120	257	206.	3.1	1590.2	2		1720	497	0.	0.0	1585.0
1		0125	18	25.	0.3	1586.0	1		2125	258	206.	3.1	1590.2	2		1725	498	0.	0.0	1585.0
1		0130	19	30.	0.4	1586.2	1		2130	259	205.	3.0	1590.2	2		1730	499	0.	0.0	1585.0
1		0135	20	34.	0.4	1586.4	1		2135	260	205.	2.9	1590.2	2		1735	500	0.	0.0	1585.0
1		0140	21	38.	0.5	1586.5	1		2140	261	204.	2.9	1590.2	2		1740	501	0.	0.0	1585.0
1		0145	22	42.	0.5	1586.7	1		2145	262	204.	2.8	1590.2	2		1745	502	0.	0.0	1585.0
1		0150	23	46.	0.6	1586.9	1		2150	263	203.	2.7	1590.1	2		1750	503	0.	0.0	1585.0
1		0155	24	50.	0.7	1587.0	1		2155	264	203.	2.7	1590.1	2		1755	504	0.	0.0	1585.0
1		0200	25	57.	0.7	1587.2	1		2200	265	202.	2.6	1590.1	2		1800	505	0.	0.0	1585.0
1		0205	26	65.	0.8	1587.4	1		2205	266	201.	2.6	1590.1	2		1805	506	0.	0.0	1585.0
1		0210	27	72.	0.8	1587.6	1		2210	267	201.	2.5	1590.1	2		1810	507	0.	0.0	1585.0
1		0215	28	78.	0.9	1587.7	1		2215	268	200.	2.4	1590.1	2		1815	508	0.	0.0	1585.0
1		0220	29	86.	0.9	1587.9	1		2220	269	200.	2.4	1590.1	2		1820	509	0.	0.0	1585.0
1		0225	30	93.	1.0	1588.1	1		2225	270	199.	2.3	1590.1	2		1825	510	0.	0.0	1585.0
1		0230	31	101.	1.1	1588.3	1		2230	271	199.	2.2	1590.1	2		1830	511	0.	0.0	1585.0
1		0235	32	113.	1.1	1588.5	1		2235	272	198.	2.2	1590.1	2		1835	512	0.	0.0	1585.0
1		0240	33	126.	1.2	1588.7	1		2240	273	198.	2.1	1590.1	2		1840	513	0.	0.0	1585.0
1		0245	34	146.	1.3	1589.1	1		2245	274	198.	2.0	1590.1	2		1845	514	0.	0.0	1585.0
1		0250	35	181.	1.5	1589.7	1		2250	275	197.	2.0	1590.0	2		1850	515	0.	0.0	1585.0
1		0255	36	197.	2.0	1590.1	1		2255	276	197.	1.9	1590.0	2		1855	516	0.	0.0	1585.0
1		0300	37	209.	3.4	1590.2	1		2300	277	196.	1.8	1590.0	2		1900	517	0.	0.0	1585.0
1		0305	38	249.	7.8	1590.8	1		2305	278	196.	1.8	1590.0	2		1905	518	0.	0.0	1585.0
1		0310	39	362.	20.4	1592.3	1		2310	279	195.	1.7	1590.0	2		1910	519	0.	0.0	1585.0
1		0315	40	509.	42.5	1595.0	1		2315	280	195.	1.6	1590.0	2		1915	520	0.	0.0	1585.0
1		0320	41	526.	68.6	1596.4	1		2320	281	190.	1.6	1589.9	2		1920	521	0.	0.0	1585.0
1		0325	42	551.	93.3	1597.7	1		2325	282	185.	1.5	1589.8	2		1925	522	0.	0.0	1585.0
1		0330	43	573.	114.7	1598.8	1		2330	283	184.	1.5	1589.8	2		1930	523	0.	0.0	1585.0
1		0335	44	592.	132.8	1599.8	1		2335	284	183.	1.5	1589.8	2		1935	524	0.	0.0	1585.0
1		0340	45	606.	147.8	1600.5	1		2340	285	182.	1.5	1589.8	2		1940	525	0.	0.0	1585.0
1		0345	46	617.	160.2	1601.0	1		2345	286	182.	1.5	1589.8	2		1945	526	0.	0.0	1585.0
1		0350	47	626.	170.1	1601.5	1		2350	287	181.	1.5	1589.8	2		1950	527	0.	0.0	1585.0
1		0355	48	679.	177.9	1601.9	1		2355	288	181.	1.5	1589.7	2		1955	528	0.	0.0	1585.0
1		0400	49	691.	183.8	1602.1	2		0000	289	180.	1.5	1589.7	2		2000	529	0.	0.0	1585.0
1		0405	50	699.	188.4	1602.3	2		0005	290	180.	1.5	1589.7	2		2005	530	0.	0.0	1585.0
1		0410	51	701.	191.9	1602.5	2		0010	291	179.	1.5	1589.7	2		2010	531	0.	0.0	1585.0
1		0415	52	703.	194.4	1602.6	2		0015	292	179.	1.5	1589.7	2		2015	532	0.	0.0	1585.0
1		0420	53	704.	196.4	1602.7	2		0020	293	178.	1.5	1589.7	2		2020	533	0.	0.0	1585.0
1		0425	54	706.	197.7	1602.8	2		0025	294	178.	1.5	1589.7	2		2025	534	0.	0.0	1585.0
1		0430	55	706.	198.7	1602.8	2		0030	295	177.	1.5	1589.7	2		2030	535	0.	0.0	1585.0
1		0435	56	707.	199.3	1602.8	2		0035	296	176.	1.5	1589.7	2		2035	536	0.	0.0	1585.0
1		0440	57	707.	199.6	1602.8	2		0040	297	176.	1.5	1589.7	2		2040	537	0.	0.0	1585.0
1		0445	58	707.	199.7	1602.9	2		0045	298	175.	1.5	1589.6	2		2045	538	0.	0.0	1585.0
1		0450	59	707.	199.5	1602.8	2		0050	299	175.	1.5	1589.6	2		2050	539	0.	0.0	1585.0
1		0455	60	707.	199.2	1602.8	2		0055	300	174.	1.5	1589.6	2		2055	540	0.	0.0	1585.0
1		0500	61	706.	198.8	1602.8	2		0100	301	174.	1.5	1589.6	2		2100	541	0.	0.0	1585.0
1		0505	62	706.	198.3	1602.8	2		0105	302	173.	1.5	1589.6	2		2105	542	0.	0.0	1585.0
1		0510	63	705.	197.6	1602.8	2		0110	303	173.	1.5	1589.6	2		2110	543	0.	0.0	1585.0

1	0515	64	705.	196.8	1602.7	*	2	0115	304	172.	1.5	1589.6	*	2	2115	544	0.	0.0	1585.0
1	0520	65	704.	196.0	1602.7	*	2	0120	305	171.	1.5	1589.6	*	2	2120	545	0.	0.0	1585.0
1	0525	66	704.	195.0	1602.6	*	2	0125	306	170.	1.5	1589.6	*	2	2125	546	0.	0.0	1585.0
1	0530	67	703.	194.0	1602.6	*	2	0130	307	170.	1.5	1589.5	*	2	2130	547	0.	0.0	1585.0
1	0535	68	702.	193.0	1602.5	*	2	0135	308	169.	1.4	1589.5	*	2	2135	548	0.	0.0	1585.0
1	0540	69	701.	191.9	1602.5	*	2	0140	309	168.	1.4	1589.5	*	2	2140	549	0.	0.0	1585.0
1	0545	70	700.	190.7	1602.4	*	2	0145	310	167.	1.4	1589.5	*	2	2145	550	0.	0.0	1585.0
1	0550	71	699.	189.4	1602.4	*	2	0150	311	167.	1.4	1589.5	*	2	2150	551	0.	0.0	1585.0
1	0555	72	698.	188.2	1602.3	*	2	0155	312	166.	1.4	1589.5	*	2	2155	552	0.	0.0	1585.0
1	0600	73	697.	186.9	1602.3	*	2	0200	313	165.	1.4	1589.5	*	2	2200	553	0.	0.0	1585.0
1	0605	74	694.	185.5	1602.2	*	2	0205	314	164.	1.4	1589.4	*	2	2205	554	0.	0.0	1585.0
1	0610	75	691.	184.1	1602.1	*	2	0210	315	164.	1.4	1589.4	*	2	2210	555	0.	0.0	1585.0
1	0615	76	689.	182.7	1602.1	*	2	0215	316	163.	1.4	1589.4	*	2	2215	556	0.	0.0	1585.0
1	0620	77	686.	181.2	1602.0	*	2	0220	317	162.	1.4	1589.4	*	2	2220	557	0.	0.0	1585.0
1	0625	78	683.	179.6	1601.9	*	2	0225	318	161.	1.4	1589.4	*	2	2225	558	0.	0.0	1585.0
1	0630	79	680.	178.0	1601.9	*	2	0230	319	161.	1.4	1589.4	*	2	2230	559	0.	0.0	1585.0
1	0635	80	665.	176.4	1601.8	*	2	0235	320	160.	1.4	1589.4	*	2	2235	560	0.	0.0	1585.0
1	0640	81	647.	174.8	1601.7	*	2	0240	321	159.	1.4	1589.3	*	2	2240	561	0.	0.0	1585.0
1	0645	82	629.	173.2	1601.6	*	2	0245	322	158.	1.4	1589.3	*	2	2245	562	0.	0.0	1585.0
1	0650	83	627.	171.6	1601.6	*	2	0250	323	157.	1.4	1589.3	*	2	2250	563	0.	0.0	1585.0
1	0655	84	626.	169.9	1601.5	*	2	0255	324	157.	1.4	1589.3	*	2	2255	564	0.	0.0	1585.0
1	0700	85	624.	168.2	1601.4	*	2	0300	325	156.	1.4	1589.3	*	2	2300	565	0.	0.0	1585.0
1	0705	86	623.	166.4	1601.3	*	2	0305	326	155.	1.4	1589.3	*	2	2305	566	0.	0.0	1585.0
1	0710	87	621.	164.6	1601.3	*	2	0310	327	154.	1.4	1589.3	*	2	2310	567	0.	0.0	1585.0
1	0715	88	619.	162.8	1601.2	*	2	0315	328	153.	1.4	1589.2	*	2	2315	568	0.	0.0	1585.0
1	0720	89	618.	160.9	1601.1	*	2	0320	329	153.	1.4	1589.2	*	2	2320	569	0.	0.0	1585.0
1	0725	90	616.	159.0	1601.0	*	2	0325	330	152.	1.3	1589.2	*	2	2325	570	0.	0.0	1585.0
1	0730	91	614.	157.0	1600.9	*	2	0330	331	151.	1.3	1589.2	*	2	2330	571	0.	0.0	1585.0
1	0735	92	613.	155.1	1600.8	*	2	0335	332	150.	1.3	1589.2	*	2	2335	572	0.	0.0	1585.0
1	0740	93	611.	153.1	1600.7	*	2	0340	333	150.	1.3	1589.2	*	2	2340	573	0.	0.0	1585.0
1	0745	94	609.	151.1	1600.6	*	2	0345	334	149.	1.3	1589.2	*	2	2345	574	0.	0.0	1585.0
1	0750	95	607.	149.1	1600.5	*	2	0350	335	148.	1.3	1589.1	*	2	2350	575	0.	0.0	1585.0
1	0755	96	605.	147.1	1600.4	*	2	0355	336	147.	1.3	1589.1	*	2	2355	576	0.	0.0	1585.0
1	0800	97	604.	145.0	1600.4	*	2	0400	337	146.	1.3	1589.1	*	3	0000	577	0.	0.0	1585.0
1	0805	98	602.	143.0	1600.3	*	2	0405	338	146.	1.3	1589.1	*	3	0005	578	0.	0.0	1585.0
1	0810	99	600.	141.0	1600.2	*	2	0410	339	145.	1.3	1589.1	*	3	0010	579	0.	0.0	1585.0
1	0815	100	598.	138.9	1600.1	*	2	0415	340	144.	1.3	1589.1	*	3	0015	580	0.	0.0	1585.0
1	0820	101	596.	136.9	1600.0	*	2	0420	341	143.	1.3	1589.1	*	3	0020	581	0.	0.0	1585.0
1	0825	102	594.	134.9	1599.9	*	2	0425	342	143.	1.3	1589.1	*	3	0025	582	0.	0.0	1585.0
1	0830	103	592.	132.8	1599.8	*	2	0430	343	142.	1.3	1589.0	*	3	0030	583	0.	0.0	1585.0
1	0835	104	590.	130.8	1599.7	*	2	0435	344	141.	1.3	1589.0	*	3	0035	584	0.	0.0	1585.0
1	0840	105	588.	128.8	1599.6	*	2	0440	345	140.	1.3	1589.0	*	3	0040	585	0.	0.0	1585.0
1	0845	106	586.	126.8	1599.4	*	2	0445	346	140.	1.3	1589.0	*	3	0045	586	0.	0.0	1585.0
1	0850	107	584.	124.7	1599.3	*	2	0450	347	139.	1.3	1589.0	*	3	0050	587	0.	0.0	1585.0
1	0855	108	582.	122.7	1599.2	*	2	0455	348	138.	1.3	1589.0	*	3	0055	588	0.	0.0	1585.0
1	0900	109	580.	120.7	1599.1	*	2	0500	349	137.	1.3	1588.9	*	3	0100	589	0.	0.0	1585.0
1	0905	110	577.	118.7	1599.0	*	2	0505	350	136.	1.3	1588.9	*	3	0105	590	0.	0.0	1585.0
1	0910	111	575.	116.7	1598.9	*	2	0510	351	135.	1.3	1588.9	*	3	0110	591	0.	0.0	1585.0
1	0915	112	573.	114.7	1598.8	*	2	0515	352	134.	1.2	1588.9	*	3	0115	592	0.	0.0	1585.0
1	0920	113	571.	112.7	1598.7	*	2	0520	353	134.	1.2	1588.9	*	3	0120	593	0.	0.0	1585.0
1	0925	114	569.	110.7	1598.6	*	2	0525	354	133.	1.2	1588.9	*	3	0125	594	0.	0.0	1585.0
1	0930	115	567.	108.8	1598.5	*	2	0530	355	132.	1.2	1588.9	*	3	0130	595	0.	0.0	1585.0
1	0935	116	565.	106.8	1598.4	*	2	0535	356	131.	1.2	1588.8	*	3	0135	596	0.	0.0	1585.0
1	0940	117	563.	104.8	1598.3	*	2	0540	357	130.	1.2	1588.8	*	3	0140	597	0.	0.0	1585.0
1	0945	118	561.	102.8	1598.2	*	2	0545	358	129.	1.2	1588.8	*	3	0145	598	0.	0.0	1585.0
1	0950	119	559.	100.9	1598.1	*	2	0550	359	128.	1.2	1588.8	*	3	0150	599	0.	0.0	1585.0
1	0955	120	557.	98.9	1598.0	*	2	0555	360	128.	1.2	1588.8	*	3	0155	600	0.	0.0	1585.0
1	1000	121	555.	96.9	1597.9	*	2	0600	361	127.	1.2	1588.8	*	3	0200	601	0.	0.0	1585.0
1	1005	122	553.	95.0	1597.8	*	2	0605	362	126.	1.2	1588.7	*	3	0205	602	0.	0.0	1585.0
1	1010	123	551.	93.0	1597.7	*	2	0610	363	125.	1.2	1588.7	*	3	0210	603	0.	0.0	1585.0
1	1015	124	549.	91.0	1597.6	*	2	0615	364	124.	1.2	1588.7	*	3	0215	604	0.	0.0	1585.0
1	1020	125	547.	89.1	1597.5	*	2	0620	365	124.	1.2	1588.7	*	3	0220	605	0.	0.0	1585.0
1	1025	126	545.	87.2	1597.4	*	2	0625	366	123.	1.2	1588.7	*	3	0225	606	0.	0.0	1585.0
1	1030	127	543.	85.2	1597.3	*	2	0630	367	122.	1.2	1588.7	*	3	0230	607	0.	0.0	1585.0
1	1035	128	541.	83.3	1597.2	*	2	0635	368	121.	1.2	1588.6	*	3	0235	608	0.	0.0	1585.0
1	1040	129	539.	81.4	1597.1	*	2	0640	369	119.	1.2	1588.6	*	3	0240	609	0.	0.0	1585.0
1	1045	130	537.	79.5	1597.0	*	2	0645	370	117.	1.1	1588.6	*	3	0245	610	0.	0.0	1585.0
1	1050	131	535.	77.6	1596.9	*	2	0650	371	115.	1.1	1588.5	*	3	0250	611	0.	0.0	1585.0
1	1055	132	533.	75.8	1596.8	*	2	0655	372	112.	1.1	1588.5	*	3	0255	612	0.	0.0	1585.0
1	1100	133	531.	73.9	1596.7	*	2	0700	373	108.	1.1	1588.4	*	3	0300	613	0.	0.0	1585.0
1	1105	134	529.	72.0	1596.6	*	2	0705	374	103.	1.1	1588.3	*	3	0305	614	0.	0.0	1585.0
1	1110	135	528.	70.2	1596.5	*	2	0710	375	99.	1.0	1588.2	*	3	0310	615	0.	0.0	1585.0
1	1115	136	526.	68.3	1596.4	*	2	0715	376	94.	1.0	1588.1	*	3	0315	616	0.	0.0	1585.0
1	1120	137	525.	66.5	1596.3	*	2	0720	377	89.	1.0	1588.0	*	3	0320	617	0.	0.0	1585.0
1	1125	138	524.	64.7	1596.2	*	2	0725	378	84.	0.9	1587.9	*	3	0325	618	0.	0.0	1585.0
1	1130	139	523.	62.8	1596.1	*	2	0730	379	78.	0.9	1587.7	*	3	0330	619	0.	0.0	1585.0
1	1135	140	521.	61.0	1596.0	*	2	0735	380	72.	0.8	1587.6	*	3	0335	620	0.	0.0	1585.0
1	1140	141	520.	59.2	1595.9	*	2	0740	381	66.	0.8	1587.4	*	3	0340	621	0.	0.0	1585.0
1	1145	142	519.	57.4	1595.8	*	2	0745	382	60.	0.7	1587.3	*	3	0345	622	0.	0.0	1585.0
1	1150	143	518.	55.6	1595.7	*	2	0750	383	54.	0.7	1587.1	*	3	0350	623	0.	0.0	1585.0
1	1155	144	517.	53.8	1595.6	*	2	0755	384	49.	0.6	1587.0	*	3	0355	624	0.	0.0	1585.0
1	1200	145	515.	52.0	1595.5	*	2	0800	385	46.	0.6	1586.8	*	3	0400	625	0.	0.0	1585.0
1	1205	146	514.	50.2	1595.4	*	2	0805	386	42.	0.5	1586.7	*	3	0405	626	0.	0.0	1585.0
1	1210	147	513.	48.4	1595.4	*	2	0810	387	39.	0.5	1586.6	*	3	0410	627	0.	0.0	1585.0
1	1215	148	512.	46.7	1595.3	*	2	0815	388	35.	0.5	1586.4	*	3	0415	628	0.	0.0	1585.0
1	1220	149	511.	44.9	1595.2	*	2	0820	389	32.	0.4	1586.3	*	3	0420	629	0.	0.0	1585.0
1	1225	150	510.	43.1	1595.1	*	2	0825	390	29.	0.4	1586.2	*	3	0425	630	0.	0.0	1585.0
1	1230	151	508.	41.3	1595.0	*	2	0830	391	25.	0.3	1586.0	*	3	0430	631	0.	0.0	1585.0
1	1235	152	505.	39.6	1594.7	*	2	0835	392	22.	0.3	1585.9	*	3	0435	632	0.	0.0	1585.0
1	1240	153	503.	37.9	1594.5	*	2	0840	393	19.	0.2	1585.8	*	3	0440	633	0.	0.0	1585.0
1	1245	154	499.	36.1	1594.3	*	2	0845	394	16.	0.2	1585.6	*	3	0445	634	0.	0.0	1585.0
1	1250	155	485.	34.5	1594.1	*	2	0850	395	13.	0.2	1585.5	*	3	0450	635	0.	0.0	1585.0
1	1255	156	471.	32.9	1593.9	*	2	0855	396	11.	0.1	1585.4	*	3	0455	636	0.	0.0	1585.0

1	1300	157	458.	31.4	1593.7	*	2	0900	397	9.	0.1	1585.4	*	3	0500	637	0.	0.0	1585.0
1	1305	158	446.	30.0	1593.5	*	2	0905	398	7.	0.1	1585.3	*	3	0505	638	0.	0.0	1585.0
1	1310	159	435.	28.7	1593.4	*	2	0910	399	6.	0.1	1585.2	*	3	0510	639	0.	0.0	1585.0
1	1315	160	424.	27.5	1593.2	*	2	0915	400	5.	0.1	1585.2	*	3	0515	640	0.	0.0	1585.0
1	1320	161	414.	26.3	1593.1	*	2	0920	401	4.	0.0	1585.2	*	3	0520	641	0.	0.0	1585.0
1	1325	162	404.	25.2	1592.9	*	2	0925	402	3.	0.0	1585.1	*	3	0525	642	0.	0.0	1585.0
1	1330	163	395.	24.1	1592.8	*	2	0930	403	2.	0.0	1585.1	*	3	0530	643	0.	0.0	1585.0
1	1335	164	386.	23.1	1592.7	*	2	0935	404	2.	0.0	1585.1	*	3	0535	644	0.	0.0	1585.0
1	1340	165	377.	22.2	1592.6	*	2	0940	405	2.	0.0	1585.1	*	3	0540	645	0.	0.0	1585.0
1	1345	166	369.	21.3	1592.5	*	2	0945	406	1.	0.0	1585.1	*	3	0545	646	0.	0.0	1585.0
1	1350	167	362.	20.4	1592.3	*	2	0950	407	1.	0.0	1585.0	*	3	0550	647	0.	0.0	1585.0
1	1355	168	355.	19.7	1592.3	*	2	0955	408	1.	0.0	1585.0	*	3	0555	648	0.	0.0	1585.0
1	1400	169	348.	18.9	1592.2	*	2	1000	409	1.	0.0	1585.0	*	3	0600	649	0.	0.0	1585.0
1	1405	170	342.	18.2	1592.1	*	2	1005	410	1.	0.0	1585.0	*	3	0605	650	0.	0.0	1585.0
1	1410	171	336.	17.5	1592.0	*	2	1010	411	0.	0.0	1585.0	*	3	0610	651	0.	0.0	1585.0
1	1415	172	330.	16.9	1591.9	*	2	1015	412	0.	0.0	1585.0	*	3	0615	652	0.	0.0	1585.0
1	1420	173	325.	16.3	1591.8	*	2	1020	413	0.	0.0	1585.0	*	3	0620	653	0.	0.0	1585.0
1	1425	174	320.	15.7	1591.8	*	2	1025	414	0.	0.0	1585.0	*	3	0625	654	0.	0.0	1585.0
1	1430	175	315.	15.2	1591.7	*	2	1030	415	0.	0.0	1585.0	*	3	0630	655	0.	0.0	1585.0
1	1435	176	310.	14.7	1591.6	*	2	1035	416	0.	0.0	1585.0	*	3	0635	656	0.	0.0	1585.0
1	1440	177	306.	14.2	1591.6	*	2	1040	417	0.	0.0	1585.0	*	3	0640	657	0.	0.0	1585.0
1	1445	178	302.	13.8	1591.5	*	2	1045	418	0.	0.0	1585.0	*	3	0645	658	0.	0.0	1585.0
1	1450	179	298.	13.3	1591.5	*	2	1050	419	0.	0.0	1585.0	*	3	0650	659	0.	0.0	1585.0
1	1455	180	295.	12.9	1591.4	*	2	1055	420	0.	0.0	1585.0	*	3	0655	660	0.	0.0	1585.0
1	1500	181	291.	12.6	1591.4	*	2	1100	421	0.	0.0	1585.0	*	3	0700	661	0.	0.0	1585.0
1	1505	182	288.	12.2	1591.3	*	2	1105	422	0.	0.0	1585.0	*	3	0705	662	0.	0.0	1585.0
1	1510	183	285.	11.8	1591.3	*	2	1110	423	0.	0.0	1585.0	*	3	0710	663	0.	0.0	1585.0
1	1515	184	282.	11.5	1591.2	*	2	1115	424	0.	0.0	1585.0	*	3	0715	664	0.	0.0	1585.0
1	1520	185	279.	11.2	1591.2	*	2	1120	425	0.	0.0	1585.0	*	3	0720	665	0.	0.0	1585.0
1	1525	186	276.	10.9	1591.2	*	2	1125	426	0.	0.0	1585.0	*	3	0725	666	0.	0.0	1585.0
1	1530	187	274.	10.6	1591.1	*	2	1130	427	0.	0.0	1585.0	*	3	0730	667	0.	0.0	1585.0
1	1535	188	271.	10.3	1591.1	*	2	1135	428	0.	0.0	1585.0	*	3	0735	668	0.	0.0	1585.0
1	1540	189	269.	10.1	1591.1	*	2	1140	429	0.	0.0	1585.0	*	3	0740	669	0.	0.0	1585.0
1	1545	190	267.	9.8	1591.0	*	2	1145	430	0.	0.0	1585.0	*	3	0745	670	0.	0.0	1585.0
1	1550	191	265.	9.6	1591.0	*	2	1150	431	0.	0.0	1585.0	*	3	0750	671	0.	0.0	1585.0
1	1555	192	263.	9.4	1591.0	*	2	1155	432	0.	0.0	1585.0	*	3	0755	672	0.	0.0	1585.0
1	1600	193	261.	9.2	1590.9	*	2	1200	433	0.	0.0	1585.0	*	3	0800	673	0.	0.0	1585.0
1	1605	194	259.	9.0	1590.9	*	2	1205	434	0.	0.0	1585.0	*	3	0805	674	0.	0.0	1585.0
1	1610	195	257.	8.8	1590.9	*	2	1210	435	0.	0.0	1585.0	*	3	0810	675	0.	0.0	1585.0
1	1615	196	256.	8.6	1590.9	*	2	1215	436	0.	0.0	1585.0	*	3	0815	676	0.	0.0	1585.0
1	1620	197	254.	8.4	1590.8	*	2	1220	437	0.	0.0	1585.0	*	3	0820	677	0.	0.0	1585.0
1	1625	198	252.	8.2	1590.8	*	2	1225	438	0.	0.0	1585.0	*	3	0825	678	0.	0.0	1585.0
1	1630	199	251.	8.1	1590.8	*	2	1230	439	0.	0.0	1585.0	*	3	0830	679	0.	0.0	1585.0
1	1635	200	249.	7.9	1590.8	*	2	1235	440	0.	0.0	1585.0	*	3	0835	680	0.	0.0	1585.0
1	1640	201	248.	7.8	1590.8	*	2	1240	441	0.	0.0	1585.0	*	3	0840	681	0.	0.0	1585.0
1	1645	202	247.	7.6	1590.8	*	2	1245	442	0.	0.0	1585.0	*	3	0845	682	0.	0.0	1585.0
1	1650	203	246.	7.5	1590.7	*	2	1250	443	0.	0.0	1585.0	*	3	0850	683	0.	0.0	1585.0
1	1655	204	244.	7.3	1590.7	*	2	1255	444	0.	0.0	1585.0	*	3	0855	684	0.	0.0	1585.0
1	1700	205	243.	7.2	1590.7	*	2	1300	445	0.	0.0	1585.0	*	3	0900	685	0.	0.0	1585.0
1	1705	206	242.	7.1	1590.7	*	2	1305	446	0.	0.0	1585.0	*	3	0905	686	0.	0.0	1585.0
1	1710	207	241.	7.0	1590.7	*	2	1310	447	0.	0.0	1585.0	*	3	0910	687	0.	0.0	1585.0
1	1715	208	240.	6.9	1590.7	*	2	1315	448	0.	0.0	1585.0	*	3	0915	688	0.	0.0	1585.0
1	1720	209	239.	6.7	1590.6	*	2	1320	449	0.	0.0	1585.0	*	3	0920	689	0.	0.0	1585.0
1	1725	210	238.	6.6	1590.6	*	2	1325	450	0.	0.0	1585.0	*	3	0925	690	0.	0.0	1585.0
1	1730	211	237.	6.5	1590.6	*	2	1330	451	0.	0.0	1585.0	*	3	0930	691	0.	0.0	1585.0
1	1735	212	236.	6.4	1590.6	*	2	1335	452	0.	0.0	1585.0	*	3	0935	692	0.	0.0	1585.0
1	1740	213	235.	6.3	1590.6	*	2	1340	453	0.	0.0	1585.0	*	3	0940	693	0.	0.0	1585.0
1	1745	214	234.	6.2	1590.6	*	2	1345	454	0.	0.0	1585.0	*	3	0945	694	0.	0.0	1585.0
1	1750	215	233.	6.1	1590.6	*	2	1350	455	0.	0.0	1585.0	*	3	0950	695	0.	0.0	1585.0
1	1755	216	233.	6.0	1590.6	*	2	1355	456	0.	0.0	1585.0	*	3	0955	696	0.	0.0	1585.0
1	1800	217	232.	5.9	1590.5	*	2	1400	457	0.	0.0	1585.0	*	3	1000	697	0.	0.0	1585.0
1	1805	218	231.	5.9	1590.5	*	2	1405	458	0.	0.0	1585.0	*	3	1005	698	0.	0.0	1585.0
1	1810	219	230.	5.8	1590.5	*	2	1410	459	0.	0.0	1585.0	*	3	1010	699	0.	0.0	1585.0
1	1815	220	229.	5.7	1590.5	*	2	1415	460	0.	0.0	1585.0	*	3	1015	700	0.	0.0	1585.0
1	1820	221	229.	5.6	1590.5	*	2	1420	461	0.	0.0	1585.0	*	3	1020	701	0.	0.0	1585.0
1	1825	222	228.	5.5	1590.5	*	2	1425	462	0.	0.0	1585.0	*	3	1025	702	0.	0.0	1585.0
1	1830	223	227.	5.4	1590.5	*	2	1430	463	0.	0.0	1585.0	*	3	1030	703	0.	0.0	1585.0
1	1835	224	227.	5.4	1590.5	*	2	1435	464	0.	0.0	1585.0	*	3	1035	704	0.	0.0	1585.0
1	1840	225	226.	5.3	1590.5	*	2	1440	465	0.	0.0	1585.0	*	3	1040	705	0.	0.0	1585.0
1	1845	226	225.	5.2	1590.4	*	2	1445	466	0.	0.0	1585.0	*	3	1045	706	0.	0.0	1585.0
1	1850	227	224.	5.1	1590.4	*	2	1450	467	0.	0.0	1585.0	*	3	1050	707	0.	0.0	1585.0
1	1855	228	224.	5.1	1590.4	*	2	1455	468	0.	0.0	1585.0	*	3	1055	708	0.	0.0	1585.0
1	1900	229	223.	5.0	1590.4	*	2	1500	469	0.	0.0	1585.0	*	3	1100	709	0.	0.0	1585.0
1	1905	230	223.	4.9	1590.4	*	2	1505	470	0.	0.0	1585.0	*	3	1105	710	0.	0.0	1585.0
1	1910	231	222.	4.8	1590.4	*	2	1510	471	0.	0.0	1585.0	*	3	1110	711	0.	0.0	1585.0
1	1915	232	221.	4.8	1590.4	*	2	1515	472	0.	0.0	1585.0	*	3	1115	712	0.	0.0	1585.0
1	1920	233	221.	4.7	1590.4	*	2	1520	473	0.	0.0	1585.0	*	3	1120	713	0.	0.0	1585.0
1	1925	234	220.	4.6	1590.4	*	2	1525	474	0.	0.0	1585.0	*	3	1125	714	0.	0.0	1585.0
1	1930	235	219.	4.6	1590.4	*	2	1530	475	0.	0.0	1585.0	*	3	1130	715	0.	0.0	1585.0
1	1935	236	219.	4.5	1590.4	*	2	1535	476	0.	0.0	1585.0	*	3	1135	716	0.	0.0	1585.0
1	1940	237	218.	4.4	1590.4	*	2	1540	477	0.	0.0	1585.0	*	3	1140	717	0.	0.0	1585.0
1	1945	238	217.	4.4	1590.3	*	2	1545	478	0.	0.0	1585.0	*	3	1145	718	0.	0.0	1585.0
1	1950	239	217.	4.3	1590.3	*	2	1550	479	0.	0.0	1585.0	*	3	1150	719	0.	0.0	1585.0
1	1955	240	216.	4.2	1590.3	*	2	1555	480	0.	0.0	1585.0	*	3	1155	720	0.	0.0	1585.0

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 707.	4.75		646.	383.	166.	166.
		(INCHES)	0.609	1.441	1.566	1.566

	(AC-FT)	320.	759.	824.	824.

PEAK STORAGE + (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE 6-HR	24-HR	72-HR	59.92-HR
200.	4.75	166.	56.	23.	23.

PEAK STAGE + (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	59.92-HR
1602.85	4.75	1601.27	1594.13	1589.06	1589.06

CUMULATIVE AREA = 9.87 SQ MI

****

HYDROGRAPH AT UHDB-O
TRANSPOSITION AREA 1.0 SQ MI

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.0	1585.0	1		2000	241	215.	4.1	1590.3	2		1600	481	0.	0.0	1585.0
1		0005	2	0.	0.0	1585.0	1		2005	242	215.	4.0	1590.3	2		1605	482	0.	0.0	1585.0
1		0010	3	0.	0.0	1585.0	1		2010	243	214.	4.0	1590.3	2		1610	483	0.	0.0	1585.0
1		0015	4	0.	0.0	1585.0	1		2015	244	214.	3.9	1590.3	2		1615	484	0.	0.0	1585.0
1		0020	5	0.	0.0	1585.0	1		2020	245	213.	3.9	1590.3	2		1620	485	0.	0.0	1585.0
1		0025	6	0.	0.0	1585.0	1		2025	246	212.	3.8	1590.3	2		1625	486	0.	0.0	1585.0
1		0030	7	1.	0.0	1585.0	1		2030	247	212.	3.7	1590.3	2		1630	487	0.	0.0	1585.0
1		0035	8	1.	0.0	1585.0	1		2035	248	211.	3.7	1590.3	2		1635	488	0.	0.0	1585.0
1		0040	9	2.	0.0	1585.1	1		2040	249	211.	3.6	1590.2	2		1640	489	0.	0.0	1585.0
1		0045	10	3.	0.0	1585.1	1		2045	250	210.	3.5	1590.2	2		1645	490	0.	0.0	1585.0
1		0050	11	4.	0.1	1585.2	1		2050	251	210.	3.5	1590.2	2		1650	491	0.	0.0	1585.0
1		0055	12	6.	0.1	1585.2	1		2055	252	209.	3.4	1590.2	2		1655	492	0.	0.0	1585.0
1		0100	13	8.	0.1	1585.3	1		2100	253	208.	3.3	1590.2	2		1700	493	0.	0.0	1585.0
1		0105	14	11.	0.1	1585.4	1		2105	254	208.	3.3	1590.2	2		1705	494	0.	0.0	1585.0
1		0110	15	14.	0.2	1585.6	1		2110	255	207.	3.2	1590.2	2		1710	495	0.	0.0	1585.0
1		0115	16	18.	0.2	1585.7	1		2115	256	207.	3.2	1590.2	2		1715	496	0.	0.0	1585.0
1		0120	17	22.	0.3	1585.9	1		2120	257	206.	3.1	1590.2	2		1720	497	0.	0.0	1585.0
1		0125	18	26.	0.3	1586.0	1		2125	258	206.	3.0	1590.2	2		1725	498	0.	0.0	1585.0
1		0130	19	30.	0.4	1586.2	1		2130	259	205.	3.0	1590.2	2		1730	499	0.	0.0	1585.0
1		0135	20	34.	0.4	1586.4	1		2135	260	204.	2.9	1590.2	2		1735	500	0.	0.0	1585.0
1		0140	21	38.	0.5	1586.5	1		2140	261	204.	2.8	1590.2	2		1740	501	0.	0.0	1585.0
1		0145	22	42.	0.5	1586.7	1		2145	262	203.	2.8	1590.1	2		1745	502	0.	0.0	1585.0
1		0150	23	46.	0.6	1586.9	1		2150	263	203.	2.7	1590.1	2		1750	503	0.	0.0	1585.0
1		0155	24	51.	0.7	1587.0	1		2155	264	202.	2.6	1590.1	2		1755	504	0.	0.0	1585.0
1		0200	25	58.	0.7	1587.2	1		2200	265	202.	2.6	1590.1	2		1800	505	0.	0.0	1585.0
1		0205	26	65.	0.8	1587.4	1		2205	266	201.	2.5	1590.1	2		1805	506	0.	0.0	1585.0
1		0210	27	72.	0.8	1587.6	1		2210	267	200.	2.5	1590.1	2		1810	507	0.	0.0	1585.0
1		0215	28	79.	0.9	1587.7	1		2215	268	200.	2.4	1590.1	2		1815	508	0.	0.0	1585.0
1		0220	29	86.	0.9	1587.9	1		2220	269	200.	2.3	1590.1	2		1820	509	0.	0.0	1585.0
1		0225	30	93.	1.0	1588.1	1		2225	270	199.	2.3	1590.1	2		1825	510	0.	0.0	1585.0
1		0230	31	102.	1.1	1588.3	1		2230	271	199.	2.2	1590.1	2		1830	511	0.	0.0	1585.0
1		0235	32	113.	1.1	1588.5	1		2235	272	198.	2.1	1590.1	2		1835	512	0.	0.0	1585.0
1		0240	33	127.	1.2	1588.8	1		2240	273	198.	2.1	1590.1	2		1840	513	0.	0.0	1585.0
1		0245	34	147.	1.3	1589.1	1		2245	274	197.	2.0	1590.1	2		1845	514	0.	0.0	1585.0
1		0250	35	181.	1.5	1589.8	1		2250	275	197.	1.9	1590.0	2		1850	515	0.	0.0	1585.0
1		0255	36	197.	2.0	1590.1	1		2255	276	196.	1.9	1590.0	2		1855	516	0.	0.0	1585.0
1		0300	37	209.	3.4	1590.2	1		2300	277	196.	1.8	1590.0	2		1900	517	0.	0.0	1585.0
1		0305	38	249.	7.8	1590.8	1		2305	278	195.	1.7	1590.0	2		1905	518	0.	0.0	1585.0
1		0310	39	361.	20.3	1592.3	1		2310	279	195.	1.7	1590.0	2		1910	519	0.	0.0	1585.0
1		0315	40	509.	42.4	1595.0	1		2315	280	194.	1.6	1590.0	2		1915	520	0.	0.0	1585.0
1		0320	41	526.	68.5	1596.4	1		2320	281	187.	1.6	1589.9	2		1920	521	0.	0.0	1585.0
1		0325	42	551.	93.1	1597.7	1		2325	282	184.	1.5	1589.8	2		1925	522	0.	0.0	1585.0
1		0330	43	573.	114.3	1598.8	1		2330	283	183.	1.5	1589.8	2		1930	523	0.	0.0	1585.0
1		0335	44	591.	132.2	1599.7	1		2335	284	183.	1.5	1589.8	2		1935	524	0.	0.0	1585.0
1		0340	45	605.	147.2	1600.5	1		2340	285	182.	1.5	1589.8	2		1940	525	0.	0.0	1585.0
1		0345	46	617.	159.5	1601.0	1		2345	286	182.	1.5	1589.8	2		1945	526	0.	0.0	1585.0
1		0350	47	625.	169.5	1601.5	1		2350	287	181.	1.5	1589.8	2		1950	527	0.	0.0	1585.0
1		0355	48	674.	177.3	1601.8	1		2355	288	181.	1.5	1589.7	2		1955	528	0.	0.0	1585.0
1		0400	49	690.	183.2	1602.1	2		0000	289	180.	1.5	1589.7	2		2000	529	0.	0.0	1585.0
1		0405	50	698.	187.8	1602.3	2		0005	290	179.	1.5	1589.7	2		2005	530	0.	0.0	1585.0
1		0410	51	701.	191.2	1602.5	2		0010	291	179.	1.5	1589.7	2		2010	531	0.	0.0	1585.0
1		0415	52	703.	193.8	1602.6	2		0015	292	178.	1.5	1589.7	2		2015	532	0.	0.0	1585.0
1		0420	53	704.	195.8	1602.7	2		0020	293	178.	1.5	1589.7	2		2020	533	0.	0.0	1585.0
1		0425	54	705.	197.1	1602.7	2		0025	294	177.	1.5	1589.7	2		2025	534	0.	0.0	1585.0
1		0430	55	706.	198.1	1602.8	2		0030	295	177.	1.5	1589.7	2		2030	535	0.	0.0	1585.0
1		0435	56	706.	198.7	1602.8	2		0035	296	176.	1.5	1589.7	2		2035	536	0.	0.0	1585.0
1		0440	57	706.	199.0	1602.8	2		0040	297	176.	1.5	1589.7	2		2040	537	0.	0.0	1585.0
1		0445	58	707.	199.1	1602.8	2		0045	298	175.	1.5	1589.6	2		2045	538	0.	0.0	1585.0
1		0450	59	706.	199.0	1602.8	2		0050	299	175.	1.5	1589.6	2		2050	539	0.	0.0	1585.0
1		0455	60	706.	198.7	1602.8	2		0055	300	174.	1.5	1589.6	2		2055	540	0.	0.0	1585.0
1		0500	61	706.	198.3	1602.8	2		0100	301	173.	1.5	1589.6	2		2100	541	0.	0.0	1585.0
1		0505	62	705.	197.7	1602.8	2		0105	302	173.	1.5	1589.6	2		2105	542	0.	0.0	1585.0
1		0510	63	705.	197.0	1602.7	2		0110	303	172.	1.5	1589.6	2		2110	543	0.	0.0	1585.0
1		0515	64	704.	196.3	1602.7	2		0115	304	172.	1.5	1589.6	2		2115	544	0.	0.0	1585.0
1		0520	65	704.	195.4	1602.7	2		0120	305	171.	1.5	1589.6	2		2120	545	0.	0.0	1585.0
1		0525	66	703.	194.5	1602.6	2		0125	306	170.	1.5	1589.6	2		2125	546	0.	0.0	1585.0
1		0530	67	702.	193.5	1602.6	2		0130	307	169.	1.5	1589.5	2		2130	547	0.	0.0	1585.0
1		0535	68	702.	192.5	1602.5	2		0135	308	168.	1.4	1589.5	2		2135	548	0.	0.0	1585.0
1		0540	69	701.	191.3	1602.5	2		0140	309	168.	1.4	1589.5	2		2140	549	0.	0.0	1585.0

1	0545	70	700.	190.2	1602.4	*	2	0145	310	167.	1.4	1589.5	*	2	2145	550	0.	0.0	1585.0
1	0550	71	699.	188.9	1602.4	*	2	0150	311	166.	1.4	1589.5	*	2	2150	551	0.	0.0	1585.0
1	0555	72	698.	187.7	1602.3	*	2	0155	312	165.	1.4	1589.5	*	2	2155	552	0.	0.0	1585.0
1	0600	73	696.	186.4	1602.2	*	2	0200	313	165.	1.4	1589.5	*	2	2200	553	0.	0.0	1585.0
1	0605	74	693.	185.0	1602.2	*	2	0205	314	164.	1.4	1589.4	*	2	2205	554	0.	0.0	1585.0
1	0610	75	690.	183.6	1602.1	*	2	0210	315	163.	1.4	1589.4	*	2	2210	555	0.	0.0	1585.0
1	0615	76	688.	182.2	1602.1	*	2	0215	316	162.	1.4	1589.4	*	2	2215	556	0.	0.0	1585.0
1	0620	77	685.	180.7	1602.0	*	2	0220	317	162.	1.4	1589.4	*	2	2220	557	0.	0.0	1585.0
1	0625	78	682.	179.2	1601.9	*	2	0225	318	161.	1.4	1589.4	*	2	2225	558	0.	0.0	1585.0
1	0630	79	677.	177.6	1601.8	*	2	0230	319	160.	1.4	1589.4	*	2	2230	559	0.	0.0	1585.0
1	0635	80	661.	176.0	1601.8	*	2	0235	320	159.	1.4	1589.4	*	2	2235	560	0.	0.0	1585.0
1	0640	81	642.	174.4	1601.7	*	2	0240	321	159.	1.4	1589.3	*	2	2240	561	0.	0.0	1585.0
1	0645	82	629.	172.8	1601.6	*	2	0245	322	158.	1.4	1589.3	*	2	2245	562	0.	0.0	1585.0
1	0650	83	627.	171.2	1601.6	*	2	0250	323	157.	1.4	1589.3	*	2	2250	563	0.	0.0	1585.0
1	0655	84	626.	169.6	1601.5	*	2	0255	324	156.	1.4	1589.3	*	2	2255	564	0.	0.0	1585.0
1	0700	85	624.	167.9	1601.4	*	2	0300	325	155.	1.4	1589.3	*	2	2300	565	0.	0.0	1585.0
1	0705	86	622.	166.1	1601.3	*	2	0305	326	155.	1.4	1589.3	*	2	2305	566	0.	0.0	1585.0
1	0710	87	621.	164.3	1601.2	*	2	0310	327	154.	1.4	1589.3	*	2	2310	567	0.	0.0	1585.0
1	0715	88	619.	162.4	1601.1	*	2	0315	328	153.	1.4	1589.2	*	2	2315	568	0.	0.0	1585.0
1	0720	89	617.	160.5	1601.1	*	2	0320	329	152.	1.4	1589.2	*	2	2320	569	0.	0.0	1585.0
1	0725	90	616.	158.6	1601.0	*	2	0325	330	151.	1.3	1589.2	*	2	2325	570	0.	0.0	1585.0
1	0730	91	614.	156.7	1600.9	*	2	0330	331	151.	1.3	1589.2	*	2	2330	571	0.	0.0	1585.0
1	0735	92	612.	154.7	1600.8	*	2	0335	332	150.	1.3	1589.2	*	2	2335	572	0.	0.0	1585.0
1	0740	93	610.	152.7	1600.7	*	2	0340	333	149.	1.3	1589.2	*	2	2340	573	0.	0.0	1585.0
1	0745	94	609.	150.7	1600.6	*	2	0345	334	148.	1.3	1589.2	*	2	2345	574	0.	0.0	1585.0
1	0750	95	607.	148.7	1600.5	*	2	0350	335	148.	1.3	1589.1	*	2	2350	575	0.	0.0	1585.0
1	0755	96	605.	146.7	1600.4	*	2	0355	336	147.	1.3	1589.1	*	2	2355	576	0.	0.0	1585.0
1	0800	97	603.	144.7	1600.3	*	2	0400	337	146.	1.3	1589.1	*	3	0000	577	0.	0.0	1585.0
1	0805	98	601.	142.7	1600.2	*	2	0405	338	145.	1.3	1589.1	*	3	0005	578	0.	0.0	1585.0
1	0810	99	600.	140.6	1600.2	*	2	0410	339	145.	1.3	1589.1	*	3	0010	579	0.	0.0	1585.0
1	0815	100	598.	138.6	1600.1	*	2	0415	340	144.	1.3	1589.1	*	3	0015	580	0.	0.0	1585.0
1	0820	101	596.	136.6	1600.0	*	2	0420	341	143.	1.3	1589.1	*	3	0020	581	0.	0.0	1585.0
1	0825	102	594.	134.5	1599.9	*	2	0425	342	142.	1.3	1589.0	*	3	0025	582	0.	0.0	1585.0
1	0830	103	592.	132.5	1599.7	*	2	0430	343	142.	1.3	1589.0	*	3	0030	583	0.	0.0	1585.0
1	0835	104	590.	130.5	1599.6	*	2	0435	344	141.	1.3	1589.0	*	3	0035	584	0.	0.0	1585.0
1	0840	105	587.	128.5	1599.5	*	2	0440	345	140.	1.3	1589.0	*	3	0040	585	0.	0.0	1585.0
1	0845	106	585.	126.4	1599.4	*	2	0445	346	139.	1.3	1589.0	*	3	0045	586	0.	0.0	1585.0
1	0850	107	583.	124.4	1599.3	*	2	0450	347	138.	1.3	1589.0	*	3	0050	587	0.	0.0	1585.0
1	0855	108	581.	122.4	1599.2	*	2	0455	348	137.	1.3	1589.0	*	3	0055	588	0.	0.0	1585.0
1	0900	109	579.	120.4	1599.1	*	2	0500	349	137.	1.3	1588.9	*	3	0100	589	0.	0.0	1585.0
1	0905	110	577.	118.4	1599.0	*	2	0505	350	136.	1.3	1588.9	*	3	0105	590	0.	0.0	1585.0
1	0910	111	575.	116.4	1598.9	*	2	0510	351	135.	1.3	1588.9	*	3	0110	591	0.	0.0	1585.0
1	0915	112	573.	114.4	1598.8	*	2	0515	352	134.	1.2	1588.9	*	3	0115	592	0.	0.0	1585.0
1	0920	113	571.	112.4	1598.7	*	2	0520	353	133.	1.2	1588.9	*	3	0120	593	0.	0.0	1585.0
1	0925	114	569.	110.4	1598.6	*	2	0525	354	132.	1.2	1588.9	*	3	0125	594	0.	0.0	1585.0
1	0930	115	567.	108.5	1598.5	*	2	0530	355	131.	1.2	1588.8	*	3	0130	595	0.	0.0	1585.0
1	0935	116	565.	106.5	1598.4	*	2	0535	356	130.	1.2	1588.8	*	3	0135	596	0.	0.0	1585.0
1	0940	117	563.	104.5	1598.3	*	2	0540	357	130.	1.2	1588.8	*	3	0140	597	0.	0.0	1585.0
1	0945	118	561.	102.5	1598.2	*	2	0545	358	129.	1.2	1588.8	*	3	0145	598	0.	0.0	1585.0
1	0950	119	559.	100.5	1598.1	*	2	0550	359	128.	1.2	1588.8	*	3	0150	599	0.	0.0	1585.0
1	0955	120	557.	98.6	1598.0	*	2	0555	360	127.	1.2	1588.8	*	3	0155	600	0.	0.0	1585.0
1	1000	121	555.	96.6	1597.9	*	2	0600	361	126.	1.2	1588.8	*	3	0200	601	0.	0.0	1585.0
1	1005	122	553.	94.7	1597.8	*	2	0605	362	126.	1.2	1588.7	*	3	0205	602	0.	0.0	1585.0
1	1010	123	551.	92.7	1597.7	*	2	0610	363	125.	1.2	1588.7	*	3	0210	603	0.	0.0	1585.0
1	1015	124	549.	90.7	1597.6	*	2	0615	364	124.	1.2	1588.7	*	3	0215	604	0.	0.0	1585.0
1	1020	125	547.	88.8	1597.5	*	2	0620	365	123.	1.2	1588.7	*	3	0220	605	0.	0.0	1585.0
1	1025	126	545.	86.9	1597.4	*	2	0625	366	122.	1.2	1588.7	*	3	0225	606	0.	0.0	1585.0
1	1030	127	543.	85.0	1597.3	*	2	0630	367	121.	1.2	1588.7	*	3	0230	607	0.	0.0	1585.0
1	1035	128	541.	83.0	1597.2	*	2	0635	368	120.	1.2	1588.6	*	3	0235	608	0.	0.0	1585.0
1	1040	129	539.	81.1	1597.1	*	2	0640	369	118.	1.2	1588.6	*	3	0240	609	0.	0.0	1585.0
1	1045	130	537.	79.2	1597.0	*	2	0645	370	116.	1.1	1588.6	*	3	0245	610	0.	0.0	1585.0
1	1050	131	535.	77.3	1596.9	*	2	0650	371	114.	1.1	1588.5	*	3	0250	611	0.	0.0	1585.0
1	1055	132	533.	75.5	1596.8	*	2	0655	372	110.	1.1	1588.5	*	3	0255	612	0.	0.0	1585.0
1	1100	133	531.	73.6	1596.7	*	2	0700	373	106.	1.1	1588.4	*	3	0300	613	0.	0.0	1585.0
1	1105	134	529.	71.7	1596.6	*	2	0705	374	101.	1.1	1588.3	*	3	0305	614	0.	0.0	1585.0
1	1110	135	527.	69.9	1596.5	*	2	0710	375	97.	1.0	1588.2	*	3	0310	615	0.	0.0	1585.0
1	1115	136	526.	68.1	1596.4	*	2	0715	376	92.	1.0	1588.1	*	3	0315	616	0.	0.0	1585.0
1	1120	137	525.	66.2	1596.3	*	2	0720	377	87.	0.9	1587.9	*	3	0320	617	0.	0.0	1585.0
1	1125	138	524.	64.4	1596.2	*	2	0725	378	81.	0.9	1587.8	*	3	0325	618	0.	0.0	1585.0
1	1130	139	522.	62.6	1596.1	*	2	0730	379	75.	0.8	1587.6	*	3	0330	619	0.	0.0	1585.0
1	1135	140	521.	60.7	1596.0	*	2	0735	380	69.	0.8	1587.5	*	3	0335	620	0.	0.0	1585.0
1	1140	141	520.	58.9	1595.9	*	2	0740	381	63.	0.8	1587.4	*	3	0340	621	0.	0.0	1585.0
1	1145	142	519.	57.1	1595.8	*	2	0745	382	57.	0.7	1587.2	*	3	0345	622	0.	0.0	1585.0
1	1150	143	518.	55.3	1595.7	*	2	0750	383	52.	0.7	1587.1	*	3	0350	623	0.	0.0	1585.0
1	1155	144	516.	53.5	1595.6	*	2	0755	384	47.	0.6	1586.9	*	3	0355	624	0.	0.0	1585.0
1	1200	145	515.	51.7	1595.5	*	2	0800	385	44.	0.6	1586.8	*	3	0400	625	0.	0.0	1585.0
1	1205	146	514.	49.9	1595.4	*	2	0805	386	40.	0.5	1586.6	*	3	0405	626	0.	0.0	1585.0
1	1210	147	513.	48.1	1595.3	*	2	0810	387	37.	0.5	1586.5	*	3	0410	627	0.	0.0	1585.0
1	1215	148	512.	46.4	1595.2	*	2	0815	388	34.	0.4	1586.4	*	3	0415	628	0.	0.0	1585.0
1	1220	149	510.	44.6	1595.2	*	2	0820	389	30.	0.4	1586.2	*	3	0420	629	0.	0.0	1585.0
1	1225	150	509.	42.8	1595.1	*	2	0825	390	27.	0.4	1586.1	*	3	0425	630	0.	0.0	1585.0
1	1230	151	508.	41.1	1594.9	*	2	0830	391	24.	0.3	1586.0	*	3	0430	631	0.	0.0	1585.0
1	1235	152	505.	39.3	1594.7	*	2	0835	392	20.	0.3	1585.8	*	3	0435	632	0.	0.0	1585.0
1	1240	153	502.	37.6	1594.5	*	2	0840	393	17.	0.2	1585.7	*	3	0440	633	0.	0.0	1585.0
1	1245	154	497.	35.9	1594.3	*	2	0845	394	15.	0.2	1585.6	*	3	0445	634	0.	0.0	1585.0
1	1250	155	482.	34.2	1594.1	*	2	0850	395	12.	0.2	1585.5	*	3	0450	635	0.	0.0	1585.0
1	1255	156	469.	32.7	1593.9	*	2	0855	396	10.	0.1	1585.4	*	3	0455	636	0.	0.0	1585.0
1	1300	157	456.	31.2	1593.7	*	2	0900	397	8.	0.1	1585.3	*	3	0500	637	0.	0.0	1585.0
1	1305	158	444.	29.8	1593.5	*	2	0905	398	7.	0.1	1585.3	*	3	0505	638	0.	0.0	1585.0
1	1310	159	433.	28.5	1593.4	*	2	0910	399	5.	0.1	1585.2	*	3	0510	639	0.	0.0	1585.0
1	1315	160	422.	27.3	1593.2	*	2	0915	400	4.	0.1	1585.2	*	3	0515	640	0.	0.0	1585.0
1	1320	161	412.	26.1	1593.1	*	2	0920	401	3.	0.0	1585.1	*	3	0520	641	0.	0.0	1585.0
1	1325	162	402.	25.0	1592.9	*	2	0925	402	3.	0.0	1585.1	*	3	0525	642	0.	0.0	1585.0

1	1330	163	393.	23.9	1592.8	*	2	0930	403	2.	0.0	1585.1	*	3	0530	643	0.	0.0	1585.0
1	1335	164	384.	22.9	1592.7	*	2	0935	404	2.	0.0	1585.1	*	3	0535	644	0.	0.0	1585.0
1	1340	165	376.	22.0	1592.5	*	2	0940	405	1.	0.0	1585.1	*	3	0540	645	0.	0.0	1585.0
1	1345	166	368.	21.1	1592.4	*	2	0945	406	1.	0.0	1585.0	*	3	0545	646	0.	0.0	1585.0
1	1350	167	361.	20.3	1592.3	*	2	0950	407	1.	0.0	1585.0	*	3	0550	647	0.	0.0	1585.0
1	1355	168	354.	19.5	1592.2	*	2	0955	408	1.	0.0	1585.0	*	3	0555	648	0.	0.0	1585.0
1	1400	169	347.	18.8	1592.1	*	2	1000	409	1.	0.0	1585.0	*	3	0600	649	0.	0.0	1585.0
1	1405	170	341.	18.1	1592.1	*	2	1005	410	0.	0.0	1585.0	*	3	0605	650	0.	0.0	1585.0
1	1410	171	335.	17.4	1592.0	*	2	1010	411	0.	0.0	1585.0	*	3	0610	651	0.	0.0	1585.0
1	1415	172	329.	16.8	1591.9	*	2	1015	412	0.	0.0	1585.0	*	3	0615	652	0.	0.0	1585.0
1	1420	173	324.	16.2	1591.8	*	2	1020	413	0.	0.0	1585.0	*	3	0620	653	0.	0.0	1585.0
1	1425	174	319.	15.6	1591.8	*	2	1025	414	0.	0.0	1585.0	*	3	0625	654	0.	0.0	1585.0
1	1430	175	314.	15.1	1591.7	*	2	1030	415	0.	0.0	1585.0	*	3	0630	655	0.	0.0	1585.0
1	1435	176	310.	14.6	1591.6	*	2	1035	416	0.	0.0	1585.0	*	3	0635	656	0.	0.0	1585.0
1	1440	177	305.	14.1	1591.6	*	2	1040	417	0.	0.0	1585.0	*	3	0640	657	0.	0.0	1585.0
1	1445	178	301.	13.7	1591.5	*	2	1045	418	0.	0.0	1585.0	*	3	0645	658	0.	0.0	1585.0
1	1450	179	297.	13.3	1591.5	*	2	1050	419	0.	0.0	1585.0	*	3	0650	659	0.	0.0	1585.0
1	1455	180	294.	12.9	1591.4	*	2	1055	420	0.	0.0	1585.0	*	3	0655	660	0.	0.0	1585.0
1	1500	181	290.	12.5	1591.4	*	2	1100	421	0.	0.0	1585.0	*	3	0700	661	0.	0.0	1585.0
1	1505	182	287.	12.1	1591.3	*	2	1105	422	0.	0.0	1585.0	*	3	0705	662	0.	0.0	1585.0
1	1510	183	284.	11.8	1591.3	*	2	1110	423	0.	0.0	1585.0	*	3	0710	663	0.	0.0	1585.0
1	1515	184	281.	11.4	1591.2	*	2	1115	424	0.	0.0	1585.0	*	3	0715	664	0.	0.0	1585.0
1	1520	185	278.	11.1	1591.2	*	2	1120	425	0.	0.0	1585.0	*	3	0720	665	0.	0.0	1585.0
1	1525	186	276.	10.8	1591.2	*	2	1125	426	0.	0.0	1585.0	*	3	0725	666	0.	0.0	1585.0
1	1530	187	273.	10.6	1591.1	*	2	1130	427	0.	0.0	1585.0	*	3	0730	667	0.	0.0	1585.0
1	1535	188	271.	10.3	1591.1	*	2	1135	428	0.	0.0	1585.0	*	3	0735	668	0.	0.0	1585.0
1	1540	189	268.	10.0	1591.1	*	2	1140	429	0.	0.0	1585.0	*	3	0740	669	0.	0.0	1585.0
1	1545	190	266.	9.8	1591.0	*	2	1145	430	0.	0.0	1585.0	*	3	0745	670	0.	0.0	1585.0
1	1550	191	264.	9.6	1591.0	*	2	1150	431	0.	0.0	1585.0	*	3	0750	671	0.	0.0	1585.0
1	1555	192	262.	9.3	1591.0	*	2	1155	432	0.	0.0	1585.0	*	3	0755	672	0.	0.0	1585.0
1	1600	193	260.	9.1	1590.9	*	2	1200	433	0.	0.0	1585.0	*	3	0800	673	0.	0.0	1585.0
1	1605	194	258.	8.9	1590.9	*	2	1205	434	0.	0.0	1585.0	*	3	0805	674	0.	0.0	1585.0
1	1610	195	257.	8.7	1590.9	*	2	1210	435	0.	0.0	1585.0	*	3	0810	675	0.	0.0	1585.0
1	1615	196	255.	8.5	1590.9	*	2	1215	436	0.	0.0	1585.0	*	3	0815	676	0.	0.0	1585.0
1	1620	197	253.	8.4	1590.8	*	2	1220	437	0.	0.0	1585.0	*	3	0820	677	0.	0.0	1585.0
1	1625	198	252.	8.2	1590.8	*	2	1225	438	0.	0.0	1585.0	*	3	0825	678	0.	0.0	1585.0
1	1630	199	250.	8.0	1590.8	*	2	1230	439	0.	0.0	1585.0	*	3	0830	679	0.	0.0	1585.0
1	1635	200	249.	7.9	1590.8	*	2	1235	440	0.	0.0	1585.0	*	3	0835	680	0.	0.0	1585.0
1	1640	201	248.	7.7	1590.8	*	2	1240	441	0.	0.0	1585.0	*	3	0840	681	0.	0.0	1585.0
1	1645	202	246.	7.6	1590.7	*	2	1245	442	0.	0.0	1585.0	*	3	0845	682	0.	0.0	1585.0
1	1650	203	245.	7.4	1590.7	*	2	1250	443	0.	0.0	1585.0	*	3	0850	683	0.	0.0	1585.0
1	1655	204	244.	7.3	1590.7	*	2	1255	444	0.	0.0	1585.0	*	3	0855	684	0.	0.0	1585.0
1	1700	205	243.	7.2	1590.7	*	2	1300	445	0.	0.0	1585.0	*	3	0900	685	0.	0.0	1585.0
1	1705	206	242.	7.0	1590.7	*	2	1305	446	0.	0.0	1585.0	*	3	0905	686	0.	0.0	1585.0
1	1710	207	241.	6.9	1590.7	*	2	1310	447	0.	0.0	1585.0	*	3	0910	687	0.	0.0	1585.0
1	1715	208	240.	6.8	1590.6	*	2	1315	448	0.	0.0	1585.0	*	3	0915	688	0.	0.0	1585.0
1	1720	209	239.	6.7	1590.6	*	2	1320	449	0.	0.0	1585.0	*	3	0920	689	0.	0.0	1585.0
1	1725	210	238.	6.6	1590.6	*	2	1325	450	0.	0.0	1585.0	*	3	0925	690	0.	0.0	1585.0
1	1730	211	237.	6.5	1590.6	*	2	1330	451	0.	0.0	1585.0	*	3	0930	691	0.	0.0	1585.0
1	1735	212	236.	6.4	1590.6	*	2	1335	452	0.	0.0	1585.0	*	3	0935	692	0.	0.0	1585.0
1	1740	213	235.	6.3	1590.6	*	2	1340	453	0.	0.0	1585.0	*	3	0940	693	0.	0.0	1585.0
1	1745	214	234.	6.2	1590.6	*	2	1345	454	0.	0.0	1585.0	*	3	0945	694	0.	0.0	1585.0
1	1750	215	233.	6.1	1590.6	*	2	1350	455	0.	0.0	1585.0	*	3	0950	695	0.	0.0	1585.0
1	1755	216	232.	6.0	1590.5	*	2	1355	456	0.	0.0	1585.0	*	3	0955	696	0.	0.0	1585.0
1	1800	217	231.	5.9	1590.5	*	2	1400	457	0.	0.0	1585.0	*	3	1000	697	0.	0.0	1585.0
1	1805	218	231.	5.8	1590.5	*	2	1405	458	0.	0.0	1585.0	*	3	1005	698	0.	0.0	1585.0
1	1810	219	230.	5.7	1590.5	*	2	1410	459	0.	0.0	1585.0	*	3	1010	699	0.	0.0	1585.0
1	1815	220	229.	5.6	1590.5	*	2	1415	460	0.	0.0	1585.0	*	3	1015	700	0.	0.0	1585.0
1	1820	221	228.	5.6	1590.5	*	2	1420	461	0.	0.0	1585.0	*	3	1020	701	0.	0.0	1585.0
1	1825	222	228.	5.5	1590.5	*	2	1425	462	0.	0.0	1585.0	*	3	1025	702	0.	0.0	1585.0
1	1830	223	227.	5.4	1590.5	*	2	1430	463	0.	0.0	1585.0	*	3	1030	703	0.	0.0	1585.0
1	1835	224	226.	5.3	1590.5	*	2	1435	464	0.	0.0	1585.0	*	3	1035	704	0.	0.0	1585.0
1	1840	225	226.	5.2	1590.5	*	2	1440	465	0.	0.0	1585.0	*	3	1040	705	0.	0.0	1585.0
1	1845	226	225.	5.2	1590.4	*	2	1445	466	0.	0.0	1585.0	*	3	1045	706	0.	0.0	1585.0
1	1850	227	224.	5.1	1590.4	*	2	1450	467	0.	0.0	1585.0	*	3	1050	707	0.	0.0	1585.0
1	1855	228	224.	5.0	1590.4	*	2	1455	468	0.	0.0	1585.0	*	3	1055	708	0.	0.0	1585.0
1	1900	229	223.	4.9	1590.4	*	2	1500	469	0.	0.0	1585.0	*	3	1100	709	0.	0.0	1585.0
1	1905	230	222.	4.9	1590.4	*	2	1505	470	0.	0.0	1585.0	*	3	1105	710	0.	0.0	1585.0
1	1910	231	222.	4.8	1590.4	*	2	1510	471	0.	0.0	1585.0	*	3	1110	711	0.	0.0	1585.0
1	1915	232	221.	4.7	1590.4	*	2	1515	472	0.	0.0	1585.0	*	3	1115	712	0.	0.0	1585.0
1	1920	233	220.	4.7	1590.4	*	2	1520	473	0.	0.0	1585.0	*	3	1120	713	0.	0.0	1585.0
1	1925	234	220.	4.6	1590.4	*	2	1525	474	0.	0.0	1585.0	*	3	1125	714	0.	0.0	1585.0
1	1930	235	219.	4.5	1590.4	*	2	1530	475	0.	0.0	1585.0	*	3	1130	715	0.	0.0	1585.0
1	1935	236	218.	4.5	1590.4	*	2	1535	476	0.	0.0	1585.0	*	3	1135	716	0.	0.0	1585.0
1	1940	237	218.	4.4	1590.3	*	2	1540	477	0.	0.0	1585.0	*	3	1140	717	0.	0.0	1585.0
1	1945	238	217.	4.3	1590.3	*	2	1545	478	0.	0.0	1585.0	*	3	1145	718	0.	0.0	1585.0
1	1950	239	217.	4.2	1590.3	*	2	1550	479	0.	0.0	1585.0	*	3	1150	719	0.	0.0	1585.0
1	1955	240	216.	4.2	1590.3	*	2	1555	480	0.	0.0	1585.0	*	3	1155	720	0.	0.0	1585.0

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 707.	4.75		646.	382.	166.	166.
		(INCHES)	0.608	1.440	1.563	1.563
		(AC-FT)	320.	758.	823.	823.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	59.92-HR
+ (AC-FT)	(HR)				
199.	4.75	165.	56.	23.	23.

PEAK STAGE (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE 6-HR	24-HR	72-HR	59.92-HR
1602.83	4.75	1601.25	1594.12	1589.06	1589.06

CUMULATIVE AREA = 9.87 SQ MI

****

HYDROGRAPH AT UHDB-O
TRANSPOSITION AREA 5.0 SQ MI

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.0	1585.0	1		2000	241	213.	3.9	1590.3	2		1600	481	0.	0.0	1585.0
1		0005	2	0.	0.0	1585.0	1		2005	242	212.	3.8	1590.3	2		1605	482	0.	0.0	1585.0
1		0010	3	0.	0.0	1585.0	1		2010	243	212.	3.7	1590.3	2		1610	483	0.	0.0	1585.0
1		0015	4	0.	0.0	1585.0	1		2015	244	211.	3.7	1590.3	2		1615	484	0.	0.0	1585.0
1		0020	5	0.	0.0	1585.0	1		2020	245	211.	3.6	1590.2	2		1620	485	0.	0.0	1585.0
1		0025	6	0.	0.0	1585.0	1		2025	246	210.	3.5	1590.2	2		1625	486	0.	0.0	1585.0
1		0030	7	1.	0.0	1585.0	1		2030	247	210.	3.5	1590.2	2		1630	487	0.	0.0	1585.0
1		0035	8	1.	0.0	1585.0	1		2035	248	209.	3.4	1590.2	2		1635	488	0.	0.0	1585.0
1		0040	9	2.	0.0	1585.1	1		2040	249	208.	3.3	1590.2	2		1640	489	0.	0.0	1585.0
1		0045	10	3.	0.0	1585.1	1		2045	250	208.	3.3	1590.2	2		1645	490	0.	0.0	1585.0
1		0050	11	4.	0.1	1585.2	1		2050	251	207.	3.2	1590.2	2		1650	491	0.	0.0	1585.0
1		0055	12	6.	0.1	1585.2	1		2055	252	207.	3.1	1590.2	2		1655	492	0.	0.0	1585.0
1		0100	13	8.	0.1	1585.3	1		2100	253	206.	3.1	1590.2	2		1700	493	0.	0.0	1585.0
1		0105	14	11.	0.1	1585.4	1		2105	254	206.	3.0	1590.2	2		1705	494	0.	0.0	1585.0
1		0110	15	14.	0.2	1585.6	1		2110	255	205.	3.0	1590.2	2		1710	495	0.	0.0	1585.0
1		0115	16	18.	0.2	1585.7	1		2115	256	204.	2.9	1590.2	2		1715	496	0.	0.0	1585.0
1		0120	17	22.	0.3	1585.9	1		2120	257	204.	2.8	1590.2	2		1720	497	0.	0.0	1585.0
1		0125	18	26.	0.3	1586.1	1		2125	258	203.	2.8	1590.1	2		1725	498	0.	0.0	1585.0
1		0130	19	30.	0.4	1586.2	1		2130	259	203.	2.7	1590.1	2		1730	499	0.	0.0	1585.0
1		0135	20	34.	0.4	1586.4	1		2135	260	202.	2.6	1590.1	2		1735	500	0.	0.0	1585.0
1		0140	21	38.	0.5	1586.6	1		2140	261	202.	2.6	1590.1	2		1740	501	0.	0.0	1585.0
1		0145	22	43.	0.6	1586.7	1		2145	262	201.	2.5	1590.1	2		1745	502	0.	0.0	1585.0
1		0150	23	47.	0.6	1586.9	1		2150	263	200.	2.4	1590.1	2		1750	503	0.	0.0	1585.0
1		0155	24	52.	0.7	1587.1	1		2155	264	200.	2.4	1590.1	2		1755	504	0.	0.0	1585.0
1		0200	25	59.	0.7	1587.3	1		2200	265	199.	2.3	1590.1	2		1800	505	0.	0.0	1585.0
1		0205	26	66.	0.8	1587.4	1		2205	266	199.	2.3	1590.1	2		1805	506	0.	0.0	1585.0
1		0210	27	73.	0.8	1587.6	1		2210	267	199.	2.2	1590.1	2		1810	507	0.	0.0	1585.0
1		0215	28	80.	0.9	1587.8	1		2215	268	198.	2.1	1590.1	2		1815	508	0.	0.0	1585.0
1		0220	29	88.	0.9	1588.0	1		2220	269	198.	2.1	1590.1	2		1820	509	0.	0.0	1585.0
1		0225	30	96.	1.0	1588.2	1		2225	270	197.	2.0	1590.0	2		1825	510	0.	0.0	1585.0
1		0230	31	105.	1.1	1588.4	1		2230	271	197.	1.9	1590.0	2		1830	511	0.	0.0	1585.0
1		0235	32	116.	1.1	1588.6	1		2235	272	196.	1.9	1590.0	2		1835	512	0.	0.0	1585.0
1		0240	33	130.	1.2	1588.8	1		2240	273	196.	1.8	1590.0	2		1840	513	0.	0.0	1585.0
1		0245	34	151.	1.3	1589.2	1		2245	274	195.	1.7	1590.0	2		1845	514	0.	0.0	1585.0
1		0250	35	187.	1.6	1589.9	1		2250	275	195.	1.6	1590.0	2		1850	515	0.	0.0	1585.0
1		0255	36	198.	2.1	1590.1	1		2255	276	192.	1.6	1590.0	2		1855	516	0.	0.0	1585.0
1		0300	37	209.	3.4	1590.2	1		2300	277	186.	1.6	1589.8	2		1900	517	0.	0.0	1585.0
1		0305	38	248.	7.7	1590.8	1		2305	278	184.	1.5	1589.8	2		1905	518	0.	0.0	1585.0
1		0310	39	355.	19.7	1592.3	1		2310	279	183.	1.5	1589.8	2		1910	519	0.	0.0	1585.0
1		0315	40	507.	40.7	1594.9	1		2315	280	183.	1.5	1589.8	2		1915	520	0.	0.0	1585.0
1		0320	41	524.	65.7	1596.3	1		2320	281	182.	1.5	1589.8	2		1920	521	0.	0.0	1585.0
1		0325	42	547.	89.5	1597.5	1		2325	282	182.	1.5	1589.8	2		1925	522	0.	0.0	1585.0
1		0330	43	569.	110.1	1598.6	1		2330	283	181.	1.5	1589.8	2		1930	523	0.	0.0	1585.0
1		0335	44	587.	127.5	1599.5	1		2335	284	180.	1.5	1589.7	2		1935	524	0.	0.0	1585.0
1		0340	45	601.	142.2	1600.2	1		2340	285	180.	1.5	1589.7	2		1940	525	0.	0.0	1585.0
1		0345	46	612.	154.3	1600.8	1		2345	286	179.	1.5	1589.7	2		1945	526	0.	0.0	1585.0
1		0350	47	621.	164.1	1601.2	1		2350	287	179.	1.5	1589.7	2		1950	527	0.	0.0	1585.0
1		0355	48	628.	172.0	1601.6	1		2355	288	178.	1.5	1589.7	2		1955	528	0.	0.0	1585.0
1		0400	49	680.	178.1	1601.9	2		0000	289	178.	1.5	1589.7	2		2000	529	0.	0.0	1585.0
1		0405	50	689.	182.7	1602.1	2		0005	290	177.	1.5	1589.7	2		2005	530	0.	0.0	1585.0
1		0410	51	695.	186.1	1602.2	2		0010	291	177.	1.5	1589.7	2		2010	531	0.	0.0	1585.0
1		0415	52	699.	188.8	1602.4	2		0015	292	176.	1.5	1589.7	2		2015	532	0.	0.0	1585.0
1		0420	53	700.	190.7	1602.4	2		0020	293	176.	1.5	1589.7	2		2020	533	0.	0.0	1585.0
1		0425	54	701.	192.2	1602.5	2		0025	294	175.	1.5	1589.6	2		2025	534	0.	0.0	1585.0
1		0430	55	702.	193.2	1602.6	2		0030	295	174.	1.5	1589.6	2		2030	535	0.	0.0	1585.0
1		0435	56	703.	193.8	1602.6	2		0035	296	174.	1.5	1589.6	2		2035	536	0.	0.0	1585.0
1		0440	57	703.	194.2	1602.6	2		0040	297	173.	1.5	1589.6	2		2040	537	0.	0.0	1585.0
1		0445	58	703.	194.3	1602.6	2		0045	298	173.	1.5	1589.6	2		2045	538	0.	0.0	1585.0
1		0450	59	703.	194.2	1602.6	2		0050	299	172.	1.5	1589.6	2		2050	539	0.	0.0	1585.0
1		0455	60	703.	194.0	1602.6	2		0055	300	171.	1.5	1589.6	2		2055	540	0.	0.0	1585.0
1		0500	61	702.	193.6	1602.6	2		0100	301	171.	1.5	1589.6	2		2100	541	0.	0.0	1585.0
1		0505	62	702.	193.1	1602.6	2		0105	302	170.	1.5	1589.5	2		2105	542	0.	0.0	1585.0
1		0510	63	702.	192.5	1602.5	2		0110	303	169.	1.5	1589.5	2		2110	543	0.	0.0	1585.0
1		0515	64	701.	191.8	1602.5	2		0115	304	168.	1.4	1589.5	2		2115	544	0.	0.0	1585.0
1		0520	65	701.	191.0	1602.5	2		0120	305	168.	1.4	1589.5	2		2120	545	0.	0.0	1585.0
1		0525	66	700.	190.1	1602.4	2		0125	306	167.	1.4	1589.5	2		2125	546	0.	0.0	1585.0
1		0530	67	699.	189.1	1602.4	2		0130	307	166.	1.4	1589.5	2		2130	547	0.	0.0	1585.0
1		0535	68	698.	188.1	1602.3	2		0135	308	165.	1.4	1589.5	2		2135	548	0.	0.0	1585.0
1		0540	69	697.	187.0	1602.3	2		0140	309	165.	1.4	1589.5	2		2140	549	0.	0.0	1585.0
1		0545	70	695.	185.9	1602.2	2		0145	310	164.	1.4	1589.4	2		2145	550	0.	0.0	1585.0
1		0550	71	692.	184.7	1602.2	2		0150	311	163.	1.4	1589.4	2		2150	551	0.	0.0	1585.0
1		0555	72	690.	183.5	1602.1	2		0155	312	162.	1.4	1589.4	2		2155	552	0.	0.0	1585.0
1		0600	73	688.	182.2	1602.1	2		0200	313	162.	1.4	1589.4	2		2200	553	0.	0.0	1585.0
1		0605	74	685.	181.0	1602.0	2		0205	314	161.	1.4	1589.4	2		2205	554	0.	0.0	1585.0
1		0610	75	683.	179.6	1601.9	2		0210	315	160.	1.4	1589.4	2		2210	555	0.	0.0	1585.0

1	0615	76	680.	178.3	1601.9	*	2	0215	316	159.	1.4	1589.4	*	2	2215	556	0.	0.0	1585.0
1	0620	77	670.	176.9	1601.8	*	2	0220	317	159.	1.4	1589.3	*	2	2220	557	0.	0.0	1585.0
1	0625	78	656.	175.5	1601.7	*	2	0225	318	158.	1.4	1589.3	*	2	2225	558	0.	0.0	1585.0
1	0630	79	639.	174.1	1601.7	*	2	0230	319	157.	1.4	1589.3	*	2	2230	559	0.	0.0	1585.0
1	0635	80	628.	172.7	1601.6	*	2	0235	320	156.	1.4	1589.3	*	2	2235	560	0.	0.0	1585.0
1	0640	81	627.	171.3	1601.6	*	2	0240	321	155.	1.4	1589.3	*	2	2240	561	0.	0.0	1585.0
1	0645	82	626.	169.8	1601.5	*	2	0245	322	155.	1.4	1589.3	*	2	2245	562	0.	0.0	1585.0
1	0650	83	624.	168.2	1601.4	*	2	0250	323	154.	1.4	1589.3	*	2	2250	563	0.	0.0	1585.0
1	0655	84	623.	166.6	1601.3	*	2	0255	324	153.	1.4	1589.2	*	2	2255	564	0.	0.0	1585.0
1	0700	85	621.	164.9	1601.3	*	2	0300	325	152.	1.4	1589.2	*	2	2300	565	0.	0.0	1585.0
1	0705	86	620.	163.2	1601.2	*	2	0305	326	151.	1.3	1589.2	*	2	2305	566	0.	0.0	1585.0
1	0710	87	618.	161.4	1601.1	*	2	0310	327	151.	1.3	1589.2	*	2	2310	567	0.	0.0	1585.0
1	0715	88	617.	159.5	1601.0	*	2	0315	328	150.	1.3	1589.2	*	2	2315	568	0.	0.0	1585.0
1	0720	89	615.	157.7	1600.9	*	2	0320	329	149.	1.3	1589.2	*	2	2320	569	0.	0.0	1585.0
1	0725	90	613.	155.8	1600.8	*	2	0325	330	148.	1.3	1589.2	*	2	2325	570	0.	0.0	1585.0
1	0730	91	611.	153.8	1600.8	*	2	0330	331	148.	1.3	1589.1	*	2	2330	571	0.	0.0	1585.0
1	0735	92	610.	151.9	1600.7	*	2	0335	332	147.	1.3	1589.1	*	2	2335	572	0.	0.0	1585.0
1	0740	93	608.	149.9	1600.6	*	2	0340	333	146.	1.3	1589.1	*	2	2340	573	0.	0.0	1585.0
1	0745	94	606.	147.9	1600.5	*	2	0345	334	145.	1.3	1589.1	*	2	2345	574	0.	0.0	1585.0
1	0750	95	604.	145.9	1600.4	*	2	0350	335	145.	1.3	1589.1	*	2	2350	575	0.	0.0	1585.0
1	0755	96	603.	143.9	1600.3	*	2	0355	336	144.	1.3	1589.1	*	2	2355	576	0.	0.0	1585.0
1	0800	97	601.	141.9	1600.2	*	2	0400	337	143.	1.3	1589.1	*	3	0000	577	0.	0.0	1585.0
1	0805	98	599.	139.9	1600.1	*	2	0405	338	142.	1.3	1589.0	*	3	0005	578	0.	0.0	1585.0
1	0810	99	597.	137.9	1600.0	*	2	0410	339	142.	1.3	1589.0	*	3	0010	579	0.	0.0	1585.0
1	0815	100	595.	135.9	1599.9	*	2	0415	340	141.	1.3	1589.0	*	3	0015	580	0.	0.0	1585.0
1	0820	101	593.	133.9	1599.8	*	2	0420	341	140.	1.3	1589.0	*	3	0020	581	0.	0.0	1585.0
1	0825	102	591.	131.9	1599.7	*	2	0425	342	139.	1.3	1589.0	*	3	0025	582	0.	0.0	1585.0
1	0830	103	589.	129.8	1599.6	*	2	0430	343	138.	1.3	1589.0	*	3	0030	583	0.	0.0	1585.0
1	0835	104	587.	127.8	1599.5	*	2	0435	344	138.	1.3	1589.0	*	3	0035	584	0.	0.0	1585.0
1	0840	105	585.	125.8	1599.4	*	2	0440	345	137.	1.3	1588.9	*	3	0040	585	0.	0.0	1585.0
1	0845	106	583.	123.8	1599.3	*	2	0445	346	136.	1.3	1588.9	*	3	0045	586	0.	0.0	1585.0
1	0850	107	581.	121.8	1599.2	*	2	0450	347	135.	1.3	1588.9	*	3	0050	587	0.	0.0	1585.0
1	0855	108	579.	119.8	1599.1	*	2	0455	348	134.	1.2	1588.9	*	3	0055	588	0.	0.0	1585.0
1	0900	109	577.	117.8	1599.0	*	2	0500	349	133.	1.2	1588.9	*	3	0100	589	0.	0.0	1585.0
1	0905	110	574.	115.8	1598.9	*	2	0505	350	132.	1.2	1588.9	*	3	0105	590	0.	0.0	1585.0
1	0910	111	572.	113.8	1598.8	*	2	0510	351	131.	1.2	1588.8	*	3	0110	591	0.	0.0	1585.0
1	0915	112	570.	111.8	1598.7	*	2	0515	352	131.	1.2	1588.8	*	3	0115	592	0.	0.0	1585.0
1	0920	113	568.	109.9	1598.6	*	2	0520	353	130.	1.2	1588.8	*	3	0120	593	0.	0.0	1585.0
1	0925	114	566.	107.9	1598.5	*	2	0525	354	129.	1.2	1588.8	*	3	0125	594	0.	0.0	1585.0
1	0930	115	564.	105.9	1598.4	*	2	0530	355	128.	1.2	1588.8	*	3	0130	595	0.	0.0	1585.0
1	0935	116	562.	104.0	1598.3	*	2	0535	356	127.	1.2	1588.8	*	3	0135	596	0.	0.0	1585.0
1	0940	117	560.	102.0	1598.2	*	2	0540	357	126.	1.2	1588.8	*	3	0140	597	0.	0.0	1585.0
1	0945	118	558.	100.0	1598.1	*	2	0545	358	126.	1.2	1588.7	*	3	0145	598	0.	0.0	1585.0
1	0950	119	556.	98.1	1597.9	*	2	0550	359	125.	1.2	1588.7	*	3	0150	599	0.	0.0	1585.0
1	0955	120	554.	96.1	1597.8	*	2	0555	360	124.	1.2	1588.7	*	3	0155	600	0.	0.0	1585.0
1	1000	121	552.	94.1	1597.7	*	2	0600	361	123.	1.2	1588.7	*	3	0200	601	0.	0.0	1585.0
1	1005	122	550.	92.2	1597.6	*	2	0605	362	123.	1.2	1588.7	*	3	0205	602	0.	0.0	1585.0
1	1010	123	548.	90.2	1597.5	*	2	0610	363	122.	1.2	1588.7	*	3	0210	603	0.	0.0	1585.0
1	1015	124	546.	88.3	1597.4	*	2	0615	364	120.	1.2	1588.6	*	3	0215	604	0.	0.0	1585.0
1	1020	125	544.	86.4	1597.3	*	2	0620	365	119.	1.2	1588.6	*	3	0220	605	0.	0.0	1585.0
1	1025	126	542.	84.5	1597.2	*	2	0625	366	117.	1.1	1588.6	*	3	0225	606	0.	0.0	1585.0
1	1030	127	540.	82.5	1597.1	*	2	0630	367	115.	1.1	1588.5	*	3	0230	607	0.	0.0	1585.0
1	1035	128	538.	80.6	1597.0	*	2	0635	368	111.	1.1	1588.5	*	3	0235	608	0.	0.0	1585.0
1	1040	129	536.	78.7	1596.9	*	2	0640	369	107.	1.1	1588.4	*	3	0240	609	0.	0.0	1585.0
1	1045	130	534.	76.8	1596.8	*	2	0645	370	103.	1.1	1588.3	*	3	0245	610	0.	0.0	1585.0
1	1050	131	533.	75.0	1596.7	*	2	0650	371	98.	1.0	1588.2	*	3	0250	611	0.	0.0	1585.0
1	1055	132	531.	73.1	1596.6	*	2	0655	372	94.	1.0	1588.1	*	3	0255	612	0.	0.0	1585.0
1	1100	133	529.	71.2	1596.5	*	2	0700	373	89.	1.0	1588.0	*	3	0300	613	0.	0.0	1585.0
1	1105	134	527.	69.4	1596.4	*	2	0705	374	83.	0.9	1587.9	*	3	0305	614	0.	0.0	1585.0
1	1110	135	526.	67.6	1596.4	*	2	0710	375	77.	0.9	1587.7	*	3	0310	615	0.	0.0	1585.0
1	1115	136	524.	65.7	1596.3	*	2	0715	376	71.	0.8	1587.6	*	3	0315	616	0.	0.0	1585.0
1	1120	137	523.	63.9	1596.2	*	2	0720	377	65.	0.8	1587.4	*	3	0320	617	0.	0.0	1585.0
1	1125	138	522.	62.1	1596.1	*	2	0725	378	60.	0.7	1587.3	*	3	0325	618	0.	0.0	1585.0
1	1130	139	521.	60.2	1596.0	*	2	0730	379	54.	0.7	1587.1	*	3	0330	619	0.	0.0	1585.0
1	1135	140	520.	58.4	1595.9	*	2	0735	380	49.	0.6	1587.0	*	3	0335	620	0.	0.0	1585.0
1	1140	141	518.	56.6	1595.8	*	2	0740	381	45.	0.6	1586.8	*	3	0340	621	0.	0.0	1585.0
1	1145	142	517.	54.8	1595.7	*	2	0745	382	42.	0.5	1586.7	*	3	0345	622	0.	0.0	1585.0
1	1150	143	516.	53.0	1595.6	*	2	0750	383	39.	0.5	1586.6	*	3	0350	623	0.	0.0	1585.0
1	1155	144	515.	51.2	1595.5	*	2	0755	384	35.	0.5	1586.4	*	3	0355	624	0.	0.0	1585.0
1	1200	145	514.	49.4	1595.4	*	2	0800	385	32.	0.4	1586.3	*	3	0400	625	0.	0.0	1585.0
1	1205	146	512.	47.6	1595.3	*	2	0805	386	29.	0.4	1586.2	*	3	0405	626	0.	0.0	1585.0
1	1210	147	511.	45.8	1595.2	*	2	0810	387	25.	0.3	1586.0	*	3	0410	627	0.	0.0	1585.0
1	1215	148	510.	44.0	1595.1	*	2	0815	388	22.	0.3	1585.9	*	3	0415	628	0.	0.0	1585.0
1	1220	149	509.	42.3	1595.0	*	2	0820	389	19.	0.2	1585.8	*	3	0420	629	0.	0.0	1585.0
1	1225	150	507.	40.5	1594.9	*	2	0825	390	16.	0.2	1585.6	*	3	0425	630	0.	0.0	1585.0
1	1230	151	504.	38.7	1594.6	*	2	0830	391	13.	0.2	1585.5	*	3	0430	631	0.	0.0	1585.0
1	1235	152	501.	37.0	1594.4	*	2	0835	392	11.	0.1	1585.4	*	3	0435	632	0.	0.0	1585.0
1	1240	153	492.	35.3	1594.2	*	2	0840	393	9.	0.1	1585.4	*	3	0440	633	0.	0.0	1585.0
1	1245	154	478.	33.7	1594.0	*	2	0845	394	7.	0.1	1585.3	*	3	0445	634	0.	0.0	1585.0
1	1250	155	464.	32.1	1593.8	*	2	0850	395	6.	0.1	1585.2	*	3	0450	635	0.	0.0	1585.0
1	1255	156	452.	30.7	1593.6	*	2	0855	396	5.	0.1	1585.2	*	3	0455	636	0.	0.0	1585.0
1	1300	157	440.	29.3	1593.5	*	2	0900	397	4.	0.0	1585.2	*	3	0500	637	0.	0.0	1585.0
1	1305	158	429.	28.0	1593.3	*	2	0905	398	3.	0.0	1585.1	*	3	0505	638	0.	0.0	1585.0
1	1310	159	418.	26.8	1593.1	*	2	0910	399	2.	0.0	1585.1	*	3	0510	639	0.	0.0	1585.0
1	1315	160	408.	25.7	1593.0	*	2	0915	400	2.	0.0	1585.1	*	3	0515	640	0.	0.0	1585.0
1	1320	161	399.	24.6	1592.9	*	2	0920	401	2.	0.0	1585.1	*	3	0520	641	0.	0.0	1585.0
1	1325	162	389.	23.5	1592.7	*	2	0925	402	1.	0.0	1585.1	*	3	0525	642	0.	0.0	1585.0
1	1330	163	381.	22.6	1592.6	*	2	0930	403	1.	0.0	1585.0	*	3	0530	643	0.	0.0	1585.0
1	1335	164	373.	21.6	1592.5	*	2	0935	404	1.	0.0	1585.0	*	3	0535	644	0.	0.0	1585.0
1	1340	165	365.	20.8	1592.4	*	2	0940	405	1.	0.0	1585.0	*	3	0540	645	0.	0.0	1585.0
1	1345	166	357.	19.9	1592.3	*	2	0945	406	1.	0.0	1585.0	*	3	0545	646	0.	0.0	1585.0
1	1350	167	350.	19.2	1592.2	*	2	0950	407	0.	0.0	1585.0	*	3	0550	647	0.	0.0	1585.0
1	1355	168	344.	18.4	1592.1	*	2	0955	408	0.	0.0	1585.0	*	3	0555	648	0.	0.0	1585.0

1	1400	169	338.	17.8	1592.0	*	2	1000	409	0.	0.0	1585.0	*	3	0600	649	0.	0.0	1585.0
1	1405	170	332.	17.1	1591.9	*	2	1005	410	0.	0.0	1585.0	*	3	0605	650	0.	0.0	1585.0
1	1410	171	326.	16.5	1591.9	*	2	1010	411	0.	0.0	1585.0	*	3	0610	651	0.	0.0	1585.0
1	1415	172	321.	15.9	1591.8	*	2	1015	412	0.	0.0	1585.0	*	3	0615	652	0.	0.0	1585.0
1	1420	173	316.	15.3	1591.7	*	2	1020	413	0.	0.0	1585.0	*	3	0620	653	0.	0.0	1585.0
1	1425	174	311.	14.8	1591.6	*	2	1025	414	0.	0.0	1585.0	*	3	0625	654	0.	0.0	1585.0
1	1430	175	307.	14.3	1591.6	*	2	1030	415	0.	0.0	1585.0	*	3	0630	655	0.	0.0	1585.0
1	1435	176	303.	13.9	1591.5	*	2	1035	416	0.	0.0	1585.0	*	3	0635	656	0.	0.0	1585.0
1	1440	177	299.	13.4	1591.5	*	2	1040	417	0.	0.0	1585.0	*	3	0640	657	0.	0.0	1585.0
1	1445	178	295.	13.0	1591.4	*	2	1045	418	0.	0.0	1585.0	*	3	0645	658	0.	0.0	1585.0
1	1450	179	291.	12.6	1591.4	*	2	1050	419	0.	0.0	1585.0	*	3	0650	659	0.	0.0	1585.0
1	1455	180	288.	12.2	1591.3	*	2	1055	420	0.	0.0	1585.0	*	3	0655	660	0.	0.0	1585.0
1	1500	181	285.	11.9	1591.3	*	2	1100	421	0.	0.0	1585.0	*	3	0700	661	0.	0.0	1585.0
1	1505	182	282.	11.5	1591.2	*	2	1105	422	0.	0.0	1585.0	*	3	0705	662	0.	0.0	1585.0
1	1510	183	279.	11.2	1591.2	*	2	1110	423	0.	0.0	1585.0	*	3	0710	663	0.	0.0	1585.0
1	1515	184	276.	10.9	1591.2	*	2	1115	424	0.	0.0	1585.0	*	3	0715	664	0.	0.0	1585.0
1	1520	185	274.	10.6	1591.1	*	2	1120	425	0.	0.0	1585.0	*	3	0720	665	0.	0.0	1585.0
1	1525	186	271.	10.3	1591.1	*	2	1125	426	0.	0.0	1585.0	*	3	0725	666	0.	0.0	1585.0
1	1530	187	269.	10.1	1591.1	*	2	1130	427	0.	0.0	1585.0	*	3	0730	667	0.	0.0	1585.0
1	1535	188	266.	9.8	1591.0	*	2	1135	428	0.	0.0	1585.0	*	3	0735	668	0.	0.0	1585.0
1	1540	189	264.	9.6	1591.0	*	2	1140	429	0.	0.0	1585.0	*	3	0740	669	0.	0.0	1585.0
1	1545	190	262.	9.3	1591.0	*	2	1145	430	0.	0.0	1585.0	*	3	0745	670	0.	0.0	1585.0
1	1550	191	260.	9.1	1590.9	*	2	1150	431	0.	0.0	1585.0	*	3	0750	671	0.	0.0	1585.0
1	1555	192	258.	8.9	1590.9	*	2	1155	432	0.	0.0	1585.0	*	3	0755	672	0.	0.0	1585.0
1	1600	193	257.	8.7	1590.9	*	2	1200	433	0.	0.0	1585.0	*	3	0800	673	0.	0.0	1585.0
1	1605	194	255.	8.5	1590.9	*	2	1205	434	0.	0.0	1585.0	*	3	0805	674	0.	0.0	1585.0
1	1610	195	253.	8.3	1590.8	*	2	1210	435	0.	0.0	1585.0	*	3	0810	675	0.	0.0	1585.0
1	1615	196	252.	8.2	1590.8	*	2	1215	436	0.	0.0	1585.0	*	3	0815	676	0.	0.0	1585.0
1	1620	197	250.	8.0	1590.8	*	2	1220	437	0.	0.0	1585.0	*	3	0820	677	0.	0.0	1585.0
1	1625	198	249.	7.8	1590.8	*	2	1225	438	0.	0.0	1585.0	*	3	0825	678	0.	0.0	1585.0
1	1630	199	247.	7.7	1590.8	*	2	1230	439	0.	0.0	1585.0	*	3	0830	679	0.	0.0	1585.0
1	1635	200	246.	7.5	1590.7	*	2	1235	440	0.	0.0	1585.0	*	3	0835	680	0.	0.0	1585.0
1	1640	201	245.	7.4	1590.7	*	2	1240	441	0.	0.0	1585.0	*	3	0840	681	0.	0.0	1585.0
1	1645	202	243.	7.2	1590.7	*	2	1245	442	0.	0.0	1585.0	*	3	0845	682	0.	0.0	1585.0
1	1650	203	242.	7.1	1590.7	*	2	1250	443	0.	0.0	1585.0	*	3	0850	683	0.	0.0	1585.0
1	1655	204	241.	7.0	1590.7	*	2	1255	444	0.	0.0	1585.0	*	3	0855	684	0.	0.0	1585.0
1	1700	205	240.	6.9	1590.7	*	2	1300	445	0.	0.0	1585.0	*	3	0900	685	0.	0.0	1585.0
1	1705	206	239.	6.7	1590.6	*	2	1305	446	0.	0.0	1585.0	*	3	0905	686	0.	0.0	1585.0
1	1710	207	238.	6.6	1590.6	*	2	1310	447	0.	0.0	1585.0	*	3	0910	687	0.	0.0	1585.0
1	1715	208	237.	6.5	1590.6	*	2	1315	448	0.	0.0	1585.0	*	3	0915	688	0.	0.0	1585.0
1	1720	209	236.	6.4	1590.6	*	2	1320	449	0.	0.0	1585.0	*	3	0920	689	0.	0.0	1585.0
1	1725	210	235.	6.3	1590.6	*	2	1325	450	0.	0.0	1585.0	*	3	0925	690	0.	0.0	1585.0
1	1730	211	234.	6.2	1590.6	*	2	1330	451	0.	0.0	1585.0	*	3	0930	691	0.	0.0	1585.0
1	1735	212	233.	6.1	1590.6	*	2	1335	452	0.	0.0	1585.0	*	3	0935	692	0.	0.0	1585.0
1	1740	213	232.	6.0	1590.5	*	2	1340	453	0.	0.0	1585.0	*	3	0940	693	0.	0.0	1585.0
1	1745	214	231.	5.9	1590.5	*	2	1345	454	0.	0.0	1585.0	*	3	0945	694	0.	0.0	1585.0
1	1750	215	231.	5.8	1590.5	*	2	1350	455	0.	0.0	1585.0	*	3	0950	695	0.	0.0	1585.0
1	1755	216	230.	5.7	1590.5	*	2	1355	456	0.	0.0	1585.0	*	3	0955	696	0.	0.0	1585.0
1	1800	217	229.	5.6	1590.5	*	2	1400	457	0.	0.0	1585.0	*	3	1000	697	0.	0.0	1585.0
1	1805	218	228.	5.5	1590.5	*	2	1405	458	0.	0.0	1585.0	*	3	1005	698	0.	0.0	1585.0
1	1810	219	227.	5.5	1590.5	*	2	1410	459	0.	0.0	1585.0	*	3	1010	699	0.	0.0	1585.0
1	1815	220	227.	5.4	1590.5	*	2	1415	460	0.	0.0	1585.0	*	3	1015	700	0.	0.0	1585.0
1	1820	221	226.	5.3	1590.5	*	2	1420	461	0.	0.0	1585.0	*	3	1020	701	0.	0.0	1585.0
1	1825	222	225.	5.2	1590.5	*	2	1425	462	0.	0.0	1585.0	*	3	1025	702	0.	0.0	1585.0
1	1830	223	225.	5.1	1590.4	*	2	1430	463	0.	0.0	1585.0	*	3	1030	703	0.	0.0	1585.0
1	1835	224	224.	5.1	1590.4	*	2	1435	464	0.	0.0	1585.0	*	3	1035	704	0.	0.0	1585.0
1	1840	225	223.	5.0	1590.4	*	2	1440	465	0.	0.0	1585.0	*	3	1040	705	0.	0.0	1585.0
1	1845	226	222.	4.9	1590.4	*	2	1445	466	0.	0.0	1585.0	*	3	1045	706	0.	0.0	1585.0
1	1850	227	222.	4.8	1590.4	*	2	1450	467	0.	0.0	1585.0	*	3	1050	707	0.	0.0	1585.0
1	1855	228	221.	4.8	1590.4	*	2	1455	468	0.	0.0	1585.0	*	3	1055	708	0.	0.0	1585.0
1	1900	229	220.	4.7	1590.4	*	2	1500	469	0.	0.0	1585.0	*	3	1100	709	0.	0.0	1585.0
1	1905	230	220.	4.6	1590.4	*	2	1505	470	0.	0.0	1585.0	*	3	1105	710	0.	0.0	1585.0
1	1910	231	219.	4.5	1590.4	*	2	1510	471	0.	0.0	1585.0	*	3	1110	711	0.	0.0	1585.0
1	1915	232	219.	4.5	1590.4	*	2	1515	472	0.	0.0	1585.0	*	3	1115	712	0.	0.0	1585.0
1	1920	233	218.	4.4	1590.3	*	2	1520	473	0.	0.0	1585.0	*	3	1120	713	0.	0.0	1585.0
1	1925	234	217.	4.3	1590.3	*	2	1525	474	0.	0.0	1585.0	*	3	1125	714	0.	0.0	1585.0
1	1930	235	217.	4.3	1590.3	*	2	1530	475	0.	0.0	1585.0	*	3	1130	715	0.	0.0	1585.0
1	1935	236	216.	4.2	1590.3	*	2	1535	476	0.	0.0	1585.0	*	3	1135	716	0.	0.0	1585.0
1	1940	237	215.	4.1	1590.3	*	2	1540	477	0.	0.0	1585.0	*	3	1140	717	0.	0.0	1585.0
1	1945	238	215.	4.1	1590.3	*	2	1545	478	0.	0.0	1585.0	*	3	1145	718	0.	0.0	1585.0
1	1950	239	214.	4.0	1590.3	*	2	1550	479	0.	0.0	1585.0	*	3	1150	719	0.	0.0	1585.0
1	1955	240	214.	3.9	1590.3	*	2	1555	480	0.	0.0	1585.0	*	3	1155	720	0.	0.0	1585.0

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 703.	4.75		640.	378.	104.	164.
		(INCHES)	0.603	1.423	1.540	1.540
		(AC-FT)	317.	749.	811.	811.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	59.92-HR
+ (AC-FT)	(HR)				
194.	4.75	161.	55.	22.	22.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	59.92-HR
+ (FEET)	(HR)				
1602.61	4.75	1601.08	1594.02	1588.99	1588.99

CUMULATIVE AREA = 9.87 SQ MI

HYDROGRAPH AT UHDB-O
TRANSPOSITION AREA 25.0 SQ MI

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.0	1585.0	1		2000	241	203.	2.7	1590.1	2		1600	481	0.	0.0	1585.0
1		0005	2	0.	0.0	1585.0	1		2005	242	203.	2.7	1590.1	2		1605	482	0.	0.0	1585.0
1		0010	3	0.	0.0	1585.0	1		2010	243	202.	2.6	1590.1	2		1610	483	0.	0.0	1585.0
1		0015	4	0.	0.0	1585.0	1		2015	244	201.	2.6	1590.1	2		1615	484	0.	0.0	1585.0
1		0020	5	0.	0.0	1585.0	1		2020	245	201.	2.5	1590.1	2		1620	485	0.	0.0	1585.0
1		0025	6	0.	0.0	1585.0	1		2025	246	200.	2.4	1590.1	2		1625	486	0.	0.0	1585.0
1		0030	7	1.	0.0	1585.0	1		2030	247	200.	2.4	1590.1	2		1630	487	0.	0.0	1585.0
1		0035	8	1.	0.0	1585.0	1		2035	248	199.	2.3	1590.1	2		1635	488	0.	0.0	1585.0
1		0040	9	2.	0.0	1585.1	1		2040	249	199.	2.2	1590.1	2		1640	489	0.	0.0	1585.0
1		0045	10	3.	0.0	1585.1	1		2045	250	198.	2.2	1590.1	2		1645	490	0.	0.0	1585.0
1		0050	11	4.	0.1	1585.2	1		2050	251	198.	2.1	1590.1	2		1650	491	0.	0.0	1585.0
1		0055	12	6.	0.1	1585.3	1		2055	252	197.	2.0	1590.1	2		1655	492	0.	0.0	1585.0
1		0100	13	9.	0.1	1585.4	1		2100	253	197.	2.0	1590.0	2		1700	493	0.	0.0	1585.0
1		0105	14	12.	0.2	1585.5	1		2105	254	196.	1.9	1590.0	2		1705	494	0.	0.0	1585.0
1		0110	15	16.	0.2	1585.6	1		2110	255	196.	1.8	1590.0	2		1710	495	0.	0.0	1585.0
1		0115	16	20.	0.3	1585.8	1		2115	256	196.	1.7	1590.0	2		1715	496	0.	0.0	1585.0
1		0120	17	24.	0.3	1586.0	1		2120	257	195.	1.7	1590.0	2		1720	497	0.	0.0	1585.0
1		0125	18	28.	0.4	1586.2	1		2125	258	195.	1.6	1590.0	2		1725	498	0.	0.0	1585.0
1		0130	19	33.	0.4	1586.3	1		2130	259	187.	1.6	1589.9	2		1730	499	0.	0.0	1585.0
1		0135	20	37.	0.5	1586.5	1		2135	260	185.	1.5	1589.8	2		1735	500	0.	0.0	1585.0
1		0140	21	41.	0.5	1586.7	1		2140	261	183.	1.5	1589.8	2		1740	501	0.	0.0	1585.0
1		0145	22	46.	0.6	1586.9	1		2145	262	183.	1.5	1589.8	2		1745	502	0.	0.0	1585.0
1		0150	23	51.	0.7	1587.0	1		2150	263	182.	1.5	1589.8	2		1750	503	0.	0.0	1585.0
1		0155	24	58.	0.7	1587.2	1		2155	264	182.	1.5	1589.8	2		1755	504	0.	0.0	1585.0
1		0200	25	66.	0.8	1587.4	1		2200	265	181.	1.5	1589.8	2		1800	505	0.	0.0	1585.0
1		0205	26	73.	0.8	1587.6	1		2205	266	181.	1.5	1589.7	2		1805	506	0.	0.0	1585.0
1		0210	27	81.	0.9	1587.8	1		2210	267	180.	1.5	1589.7	2		1810	507	0.	0.0	1585.0
1		0215	28	88.	1.0	1588.0	1		2215	268	180.	1.5	1589.7	2		1815	508	0.	0.0	1585.0
1		0220	29	97.	1.0	1588.2	1		2220	269	179.	1.5	1589.7	2		1820	509	0.	0.0	1585.0
1		0225	30	107.	1.1	1588.4	1		2225	270	178.	1.5	1589.7	2		1825	510	0.	0.0	1585.0
1		0230	31	117.	1.1	1588.6	1		2230	271	178.	1.5	1589.7	2		1830	511	0.	0.0	1585.0
1		0235	32	129.	1.2	1588.8	1		2235	272	177.	1.5	1589.7	2		1835	512	0.	0.0	1585.0
1		0240	33	145.	1.3	1589.1	1		2240	273	177.	1.5	1589.7	2		1840	513	0.	0.0	1585.0
1		0245	34	169.	1.5	1589.5	1		2245	274	176.	1.5	1589.7	2		1845	514	0.	0.0	1585.0
1		0250	35	195.	1.7	1590.0	1		2250	275	176.	1.5	1589.7	2		1850	515	0.	0.0	1585.0
1		0255	36	200.	2.4	1590.1	1		2255	276	175.	1.5	1589.6	2		1855	516	0.	0.0	1585.0
1		0300	37	212.	3.8	1590.3	1		2300	277	175.	1.5	1589.6	2		1900	517	0.	0.0	1585.0
1		0305	38	245.	7.4	1590.7	1		2305	278	174.	1.5	1589.6	2		1905	518	0.	0.0	1585.0
1		0310	39	331.	17.0	1591.9	1		2310	279	174.	1.5	1589.6	2		1910	519	0.	0.0	1585.0
1		0315	40	479.	33.8	1594.0	1		2315	280	173.	1.5	1589.6	2		1915	520	0.	0.0	1585.0
1		0320	41	517.	54.3	1595.7	1		2320	281	172.	1.5	1589.6	2		1920	521	0.	0.0	1585.0
1		0325	42	532.	74.4	1596.7	1		2325	282	172.	1.5	1589.6	2		1925	522	0.	0.0	1585.0
1		0330	43	550.	92.3	1597.6	1		2330	283	171.	1.5	1589.6	2		1930	523	0.	0.0	1585.0
1		0335	44	566.	107.8	1598.5	1		2335	284	170.	1.5	1589.6	2		1935	524	0.	0.0	1585.0
1		0340	45	580.	121.2	1599.2	1		2340	285	169.	1.5	1589.5	2		1940	525	0.	0.0	1585.0
1		0345	46	592.	132.5	1599.7	1		2345	286	169.	1.4	1589.5	2		1945	526	0.	0.0	1585.0
1		0350	47	601.	141.8	1600.2	1		2350	287	168.	1.4	1589.5	2		1950	527	0.	0.0	1585.0
1		0355	48	607.	149.3	1600.6	1		2355	288	167.	1.4	1589.5	2		1955	528	0.	0.0	1585.0
1		0400	49	613.	155.5	1600.8	2		0000	289	166.	1.4	1589.5	2		2000	529	0.	0.0	1585.0
1		0405	50	617.	160.4	1601.1	2		0005	290	166.	1.4	1589.5	2		2005	530	0.	0.0	1585.0
1		0410	51	621.	164.3	1601.2	2		0010	291	165.	1.4	1589.5	2		2010	531	0.	0.0	1585.0
1		0415	52	624.	167.4	1601.4	2		0015	292	164.	1.4	1589.4	2		2015	532	0.	0.0	1585.0
1		0420	53	626.	170.0	1601.5	2		0020	293	163.	1.4	1589.4	2		2020	533	0.	0.0	1585.0
1		0425	54	628.	172.0	1601.6	2		0025	294	163.	1.4	1589.4	2		2025	534	0.	0.0	1585.0
1		0430	55	632.	173.6	1601.7	2		0030	295	162.	1.4	1589.4	2		2030	535	0.	0.0	1585.0
1		0435	56	647.	174.8	1601.7	2		0035	296	161.	1.4	1589.4	2		2035	536	0.	0.0	1585.0
1		0440	57	657.	175.6	1601.8	2		0040	297	161.	1.4	1589.4	2		2040	537	0.	0.0	1585.0
1		0445	58	663.	176.1	1601.8	2		0045	298	160.	1.4	1589.4	2		2045	538	0.	0.0	1585.0
1		0450	59	666.	176.4	1601.8	2		0050	299	159.	1.4	1589.3	2		2050	539	0.	0.0	1585.0
1		0455	60	667.	176.5	1601.8	2		0055	300	158.	1.4	1589.3	2		2055	540	0.	0.0	1585.0
1		0500	61	666.	176.4	1601.8	2		0100	301	157.	1.4	1589.3	2		2100	541	0.	0.0	1585.0
1		0505	62	664.	176.3	1601.8	2		0105	302	157.	1.4	1589.3	2		2105	542	0.	0.0	1585.0
1		0510	63	661.	176.0	1601.8	2		0110	303	156.	1.4	1589.3	2		2110	543	0.	0.0	1585.0
1		0515	64	657.	175.6	1601.8	2		0115	304	155.	1.4	1589.3	2		2115	544	0.	0.0	1585.0
1		0520	65	652.	175.1	1601.7	2		0120	305	154.	1.4	1589.3	2		2120	545	0.	0.0	1585.0
1		0525	66	645.	174.6	1601.7	2		0125	306	154.	1.4	1589.2	2		2125	546	0.	0.0	1585.0
1		0530	67	639.	174.1	1601.7	2		0130	307	153.	1.4	1589.2	2		2130	547	0.	0.0	1585.0
1		0535	68	631.	173.6	1601.7	2		0135	308	152.	1.4	1589.2	2		2135	548	0.	0.0	1585.0
1		0540	69	629.	173.0	1601.6	2		0140	309	151.	1.3	1589.2	2		2140	549	0.	0.0	1585.0
1		0545	70	628.	172.3	1601.6	2		0145	310	150.	1.3	1589.2	2		2145	550	0.	0.0	1585.0
1		0550	71	627.	171.6	1601.6	2		0150	311	150.	1.3	1589.2	2		2150	551	0.	0.0	1585.0
1		0555	72	627.	170.9	1601.5	2		0155	312	149.	1.3	1589.2	2		2155	552	0.	0.0	1585.0
1		0600	73	626.	170.1	1601.5	2		0200	313	148.	1.3	1589.2	2		2200	553	0.	0.0	1585.0
1		0605	74	625.	169.2	1601.5	2		0205	314	147.	1.3	1589.1	2		2205	554	0.	0.0	1585.0
1		0610	75	624.	168.3	1601.4	2		0210	315	147.	1.3	1589.1	2		2210	555	0.	0.0	1585.0
1		0615	76	624.	167.4	1601.4	2		0215	316	146.	1.3	1589.1	2		2215	556	0.	0.0	1585.0
1		0620	77	623.	166.4	1601.3	2		0220	317	145.	1.3	1589.1	2		2220	557	0.	0.0	1585.0
1		0625	78	622.	165.3	1601.3	2		0225	318	145.	1.3	1589.1	2		2225	558	0.	0.0	1585.0
1		0630	79	621.	164.1	1601.2	2		0230	319	144.	1.3	1589.1	2		2230	559	0.	0.0	1585.0
1		0635	80	619.	162.8	1601.2	2		0235	320	143.	1.3	1589.1	2		2235	560	0.	0.0	1585.0
1		0640	81	618.	161.4	1601.1	2		0240	321	142.	1.3	1589.0	2		2240	561	0.	0.0	1585.0

1	0645	82	617.	160.0	1601.0	*	2	0245	322	142.	1.3	1589.0	*	2	2245	562	0.	0.0	1585.0
1	0650	83	616.	158.4	1601.0	*	2	0250	323	141.	1.3	1589.0	*	2	2250	563	0.	0.0	1585.0
1	0655	84	614.	156.9	1600.9	*	2	0255	324	140.	1.3	1589.0	*	2	2255	564	0.	0.0	1585.0
1	0700	85	613.	155.2	1600.8	*	2	0300	325	139.	1.3	1589.0	*	2	2300	565	0.	0.0	1585.0
1	0705	86	611.	153.5	1600.7	*	2	0305	326	138.	1.3	1589.0	*	2	2305	566	0.	0.0	1585.0
1	0710	87	610.	151.7	1600.7	*	2	0310	327	138.	1.3	1589.0	*	2	2310	567	0.	0.0	1585.0
1	0715	88	608.	149.9	1600.6	*	2	0315	328	137.	1.3	1588.9	*	2	2315	568	0.	0.0	1585.0
1	0720	89	606.	148.1	1600.5	*	2	0320	329	136.	1.3	1588.9	*	2	2320	569	0.	0.0	1585.0
1	0725	90	605.	146.2	1600.4	*	2	0325	330	135.	1.3	1588.9	*	2	2325	570	0.	0.0	1585.0
1	0730	91	603.	144.3	1600.3	*	2	0330	331	134.	1.2	1588.9	*	2	2330	571	0.	0.0	1585.0
1	0735	92	601.	142.4	1600.2	*	2	0335	332	133.	1.2	1588.9	*	2	2335	572	0.	0.0	1585.0
1	0740	93	599.	140.5	1600.1	*	2	0340	333	132.	1.2	1588.9	*	2	2340	573	0.	0.0	1585.0
1	0745	94	598.	138.6	1600.1	*	2	0345	334	132.	1.2	1588.8	*	2	2345	574	0.	0.0	1585.0
1	0750	95	596.	136.6	1600.0	*	2	0350	335	131.	1.2	1588.8	*	2	2350	575	0.	0.0	1585.0
1	0755	96	594.	134.6	1599.9	*	2	0355	336	130.	1.2	1588.8	*	2	2355	576	0.	0.0	1585.0
1	0800	97	592.	132.7	1599.8	*	2	0400	337	129.	1.2	1588.8	*	3	0000	577	0.	0.0	1585.0
1	0805	98	590.	130.7	1599.7	*	2	0405	338	128.	1.2	1588.8	*	3	0005	578	0.	0.0	1585.0
1	0810	99	588.	128.7	1599.5	*	2	0410	339	127.	1.2	1588.8	*	3	0010	579	0.	0.0	1585.0
1	0815	100	586.	126.7	1599.4	*	2	0415	340	127.	1.2	1588.8	*	3	0015	580	0.	0.0	1585.0
1	0820	101	584.	124.7	1599.3	*	2	0420	341	126.	1.2	1588.7	*	3	0020	581	0.	0.0	1585.0
1	0825	102	582.	122.7	1599.2	*	2	0425	342	125.	1.2	1588.7	*	3	0025	582	0.	0.0	1585.0
1	0830	103	580.	120.7	1599.1	*	2	0430	343	124.	1.2	1588.7	*	3	0030	583	0.	0.0	1585.0
1	0835	104	578.	118.7	1599.0	*	2	0435	344	124.	1.2	1588.7	*	3	0035	584	0.	0.0	1585.0
1	0840	105	575.	116.8	1598.9	*	2	0440	345	123.	1.2	1588.7	*	3	0040	585	0.	0.0	1585.0
1	0845	106	573.	114.8	1598.8	*	2	0445	346	122.	1.2	1588.7	*	3	0045	586	0.	0.0	1585.0
1	0850	107	571.	112.8	1598.7	*	2	0450	347	121.	1.2	1588.7	*	3	0050	587	0.	0.0	1585.0
1	0855	108	569.	110.8	1598.6	*	2	0455	348	120.	1.2	1588.6	*	3	0055	588	0.	0.0	1585.0
1	0900	109	567.	108.9	1598.5	*	2	0500	349	118.	1.2	1588.6	*	3	0100	589	0.	0.0	1585.0
1	0905	110	565.	106.9	1598.4	*	2	0505	350	116.	1.1	1588.6	*	3	0105	590	0.	0.0	1585.0
1	0910	111	563.	104.9	1598.3	*	2	0510	351	114.	1.1	1588.5	*	3	0110	591	0.	0.0	1585.0
1	0915	112	561.	103.0	1598.2	*	2	0515	352	111.	1.1	1588.5	*	3	0115	592	0.	0.0	1585.0
1	0920	113	559.	101.0	1598.1	*	2	0520	353	107.	1.1	1588.4	*	3	0120	593	0.	0.0	1585.0
1	0925	114	557.	99.1	1598.0	*	2	0525	354	103.	1.1	1588.3	*	3	0125	594	0.	0.0	1585.0
1	0930	115	555.	97.1	1597.9	*	2	0530	355	98.	1.0	1588.2	*	3	0130	595	0.	0.0	1585.0
1	0935	116	553.	95.2	1597.8	*	2	0535	356	94.	1.0	1588.1	*	3	0135	596	0.	0.0	1585.0
1	0940	117	551.	93.2	1597.7	*	2	0540	357	89.	1.0	1588.0	*	3	0140	597	0.	0.0	1585.0
1	0945	118	549.	91.3	1597.6	*	2	0545	358	84.	0.9	1587.9	*	3	0145	598	0.	0.0	1585.0
1	0950	119	547.	89.4	1597.5	*	2	0550	359	78.	0.9	1587.7	*	3	0150	599	0.	0.0	1585.0
1	0955	120	545.	87.4	1597.4	*	2	0555	360	72.	0.8	1587.6	*	3	0155	600	0.	0.0	1585.0
1	1000	121	543.	85.5	1597.3	*	2	0600	361	67.	0.8	1587.4	*	3	0200	601	0.	0.0	1585.0
1	1005	122	541.	83.6	1597.2	*	2	0605	362	61.	0.7	1587.3	*	3	0205	602	0.	0.0	1585.0
1	1010	123	539.	81.7	1597.1	*	2	0610	363	56.	0.7	1587.2	*	3	0210	603	0.	0.0	1585.0
1	1015	124	537.	79.8	1597.0	*	2	0615	364	50.	0.7	1587.0	*	3	0215	604	0.	0.0	1585.0
1	1020	125	535.	77.8	1596.9	*	2	0620	365	47.	0.6	1586.9	*	3	0220	605	0.	0.0	1585.0
1	1025	126	534.	75.9	1596.8	*	2	0625	366	43.	0.6	1586.8	*	3	0225	606	0.	0.0	1585.0
1	1030	127	532.	74.1	1596.7	*	2	0630	367	40.	0.5	1586.6	*	3	0230	607	0.	0.0	1585.0
1	1035	128	530.	72.2	1596.6	*	2	0635	368	37.	0.5	1586.5	*	3	0235	608	0.	0.0	1585.0
1	1040	129	528.	70.3	1596.5	*	2	0640	369	33.	0.4	1586.4	*	3	0240	609	0.	0.0	1585.0
1	1045	130	526.	68.4	1596.4	*	2	0645	370	30.	0.4	1586.2	*	3	0245	610	0.	0.0	1585.0
1	1050	131	525.	66.6	1596.3	*	2	0650	371	27.	0.4	1586.1	*	3	0250	611	0.	0.0	1585.0
1	1055	132	524.	64.7	1596.2	*	2	0655	372	24.	0.3	1586.0	*	3	0255	612	0.	0.0	1585.0
1	1100	133	523.	62.8	1596.1	*	2	0700	373	20.	0.3	1585.8	*	3	0300	613	0.	0.0	1585.0
1	1105	134	521.	61.0	1596.0	*	2	0705	374	17.	0.2	1585.7	*	3	0305	614	0.	0.0	1585.0
1	1110	135	520.	59.1	1595.9	*	2	0710	375	15.	0.2	1585.6	*	3	0310	615	0.	0.0	1585.0
1	1115	136	519.	57.3	1595.8	*	2	0715	376	12.	0.2	1585.5	*	3	0315	616	0.	0.0	1585.0
1	1120	137	518.	55.4	1595.7	*	2	0720	377	10.	0.1	1585.4	*	3	0320	617	0.	0.0	1585.0
1	1125	138	516.	53.6	1595.6	*	2	0725	378	8.	0.1	1585.3	*	3	0325	618	0.	0.0	1585.0
1	1130	139	515.	51.7	1595.5	*	2	0730	379	7.	0.1	1585.3	*	3	0330	619	0.	0.0	1585.0
1	1135	140	514.	49.9	1595.4	*	2	0735	380	5.	0.1	1585.2	*	3	0335	620	0.	0.0	1585.0
1	1140	141	513.	48.1	1595.3	*	2	0740	381	4.	0.1	1585.2	*	3	0340	621	0.	0.0	1585.0
1	1145	142	512.	46.3	1595.2	*	2	0745	382	3.	0.0	1585.1	*	3	0345	622	0.	0.0	1585.0
1	1150	143	510.	44.4	1595.1	*	2	0750	383	3.	0.0	1585.1	*	3	0350	623	0.	0.0	1585.0
1	1155	144	509.	42.6	1595.0	*	2	0755	384	2.	0.0	1585.1	*	3	0355	624	0.	0.0	1585.0
1	1200	145	507.	40.8	1594.9	*	2	0800	385	2.	0.0	1585.1	*	3	0400	625	0.	0.0	1585.0
1	1205	146	504.	39.0	1594.7	*	2	0805	386	1.	0.0	1585.1	*	3	0405	626	0.	0.0	1585.0
1	1210	147	502.	37.2	1594.4	*	2	0810	387	1.	0.0	1585.0	*	3	0410	627	0.	0.0	1585.0
1	1215	148	493.	35.5	1594.2	*	2	0815	388	1.	0.0	1585.0	*	3	0415	628	0.	0.0	1585.0
1	1220	149	479.	33.8	1594.0	*	2	0820	389	1.	0.0	1585.0	*	3	0420	629	0.	0.0	1585.0
1	1225	150	465.	32.2	1593.8	*	2	0825	390	1.	0.0	1585.0	*	3	0425	630	0.	0.0	1585.0
1	1230	151	452.	30.7	1593.6	*	2	0830	391	1.	0.0	1585.0	*	3	0430	631	0.	0.0	1585.0
1	1235	152	440.	29.3	1593.5	*	2	0835	392	0.	0.0	1585.0	*	3	0435	632	0.	0.0	1585.0
1	1240	153	428.	28.0	1593.3	*	2	0840	393	0.	0.0	1585.0	*	3	0440	633	0.	0.0	1585.0
1	1245	154	417.	26.7	1593.1	*	2	0845	394	0.	0.0	1585.0	*	3	0445	634	0.	0.0	1585.0
1	1250	155	407.	25.5	1593.0	*	2	0850	395	0.	0.0	1585.0	*	3	0450	635	0.	0.0	1585.0
1	1255	156	397.	24.4	1592.8	*	2	0855	396	0.	0.0	1585.0	*	3	0455	636	0.	0.0	1585.0
1	1300	157	388.	23.3	1592.7	*	2	0900	397	0.	0.0	1585.0	*	3	0500	637	0.	0.0	1585.0
1	1305	158	379.	22.3	1592.6	*	2	0905	398	0.	0.0	1585.0	*	3	0505	638	0.	0.0	1585.0
1	1310	159	370.	21.4	1592.5	*	2	0910	399	0.	0.0	1585.0	*	3	0510	639	0.	0.0	1585.0
1	1315	160	362.	20.5	1592.4	*	2	0915	400	0.	0.0	1585.0	*	3	0515	640	0.	0.0	1585.0
1	1320	161	354.	19.6	1592.2	*	2	0920	401	0.	0.0	1585.0	*	3	0520	641	0.	0.0	1585.0
1	1325	162	347.	18.8	1592.1	*	2	0925	402	0.	0.0	1585.0	*	3	0525	642	0.	0.0	1585.0
1	1330	163	341.	18.1	1592.1	*	2	0930	403	0.	0.0	1585.0	*	3	0530	643	0.	0.0	1585.0
1	1335	164	334.	17.4	1592.0	*	2	0935	404	0.	0.0	1585.0	*	3	0535	644	0.	0.0	1585.0
1	1340	165	328.	16.7	1591.9	*	2	0940	405	0.	0.0	1585.0	*	3	0540	645	0.	0.0	1585.0
1	1345	166	322.	16.1	1591.8	*	2	0945	406	0.	0.0	1585.0	*	3	0545	646	0.	0.0	1585.0
1	1350	167	317.	15.5	1591.7	*	2	0950	407	0.	0.0	1585.0	*	3	0550	647	0.	0.0	1585.0
1	1355	168	312.	14.9	1591.7	*	2	0955	408	0.	0.0	1585.0	*	3	0555	648	0.	0.0	1585.0
1	1400	169	307.	14.3	1591.6	*	2	1000	409	0.	0.0	1585.0	*	3	0600	649	0.	0.0	1585.0
1	1405	170	303.	13.8	1591.5	*	2	1005	410	0.	0.0	1585.0	*	3	0605	650	0.	0.0	1585.0
1	1410	171	298.	13.4	1591.5	*	2	1010	411	0.	0.0	1585.0	*	3	0610	651	0.	0.0	1585.0
1	1415	172	294.	12.9	1591.4	*	2	1015	412	0.	0.0	1585.0	*	3	0615	652	0.	0.0	1585.0
1	1420	173	290.	12.5	1591.4	*	2	1020	413	0.	0.0	1585.0	*	3	0620	653	0.	0.0	1585.0
1	1425	174	287.	12.1	1591.3	*	2	1025	414	0.	0.0	1585.0	*	3	0625	654	0.	0.0	1585.0

1	1430	175	283.	11.7	1591.3	*	2	1030	415	0.	0.0	1585.0	*	3	0630	655	0.	0.0	1585.0
1	1435	176	280.	11.3	1591.2	*	2	1035	416	0.	0.0	1585.0	*	3	0635	656	0.	0.0	1585.0
1	1440	177	277.	11.0	1591.2	*	2	1040	417	0.	0.0	1585.0	*	3	0640	657	0.	0.0	1585.0
1	1445	178	274.	10.6	1591.1	*	2	1045	418	0.	0.0	1585.0	*	3	0645	658	0.	0.0	1585.0
1	1450	179	271.	10.3	1591.1	*	2	1050	419	0.	0.0	1585.0	*	3	0650	659	0.	0.0	1585.0
1	1455	180	268.	10.0	1591.0	*	2	1055	420	0.	0.0	1585.0	*	3	0655	660	0.	0.0	1585.0
1	1500	181	266.	9.7	1591.0	*	2	1100	421	0.	0.0	1585.0	*	3	0700	661	0.	0.0	1585.0
1	1505	182	263.	9.4	1591.0	*	2	1105	422	0.	0.0	1585.0	*	3	0705	662	0.	0.0	1585.0
1	1510	183	261.	9.2	1590.9	*	2	1110	423	0.	0.0	1585.0	*	3	0710	663	0.	0.0	1585.0
1	1515	184	259.	8.9	1590.9	*	2	1115	424	0.	0.0	1585.0	*	3	0715	664	0.	0.0	1585.0
1	1520	185	257.	8.7	1590.9	*	2	1120	425	0.	0.0	1585.0	*	3	0720	665	0.	0.0	1585.0
1	1525	186	255.	8.5	1590.9	*	2	1125	426	0.	0.0	1585.0	*	3	0725	666	0.	0.0	1585.0
1	1530	187	253.	8.3	1590.8	*	2	1130	427	0.	0.0	1585.0	*	3	0730	667	0.	0.0	1585.0
1	1535	188	251.	8.1	1590.8	*	2	1135	428	0.	0.0	1585.0	*	3	0735	668	0.	0.0	1585.0
1	1540	189	249.	7.9	1590.8	*	2	1140	429	0.	0.0	1585.0	*	3	0740	669	0.	0.0	1585.0
1	1545	190	247.	7.7	1590.8	*	2	1145	430	0.	0.0	1585.0	*	3	0745	670	0.	0.0	1585.0
1	1550	191	246.	7.5	1590.7	*	2	1150	431	0.	0.0	1585.0	*	3	0750	671	0.	0.0	1585.0
1	1555	192	244.	7.3	1590.7	*	2	1155	432	0.	0.0	1585.0	*	3	0755	672	0.	0.0	1585.0
1	1600	193	243.	7.2	1590.7	*	2	1200	433	0.	0.0	1585.0	*	3	0800	673	0.	0.0	1585.0
1	1605	194	241.	7.0	1590.7	*	2	1205	434	0.	0.0	1585.0	*	3	0805	674	0.	0.0	1585.0
1	1610	195	240.	6.9	1590.7	*	2	1210	435	0.	0.0	1585.0	*	3	0810	675	0.	0.0	1585.0
1	1615	196	239.	6.7	1590.6	*	2	1215	436	0.	0.0	1585.0	*	3	0815	676	0.	0.0	1585.0
1	1620	197	237.	6.6	1590.6	*	2	1220	437	0.	0.0	1585.0	*	3	0820	677	0.	0.0	1585.0
1	1625	198	236.	6.4	1590.6	*	2	1225	438	0.	0.0	1585.0	*	3	0825	678	0.	0.0	1585.0
1	1630	199	235.	6.3	1590.6	*	2	1230	439	0.	0.0	1585.0	*	3	0830	679	0.	0.0	1585.0
1	1635	200	234.	6.2	1590.6	*	2	1235	440	0.	0.0	1585.0	*	3	0835	680	0.	0.0	1585.0
1	1640	201	233.	6.1	1590.6	*	2	1240	441	0.	0.0	1585.0	*	3	0840	681	0.	0.0	1585.0
1	1645	202	232.	5.9	1590.5	*	2	1245	442	0.	0.0	1585.0	*	3	0845	682	0.	0.0	1585.0
1	1650	203	231.	5.8	1590.5	*	2	1250	443	0.	0.0	1585.0	*	3	0850	683	0.	0.0	1585.0
1	1655	204	230.	5.7	1590.5	*	2	1255	444	0.	0.0	1585.0	*	3	0855	684	0.	0.0	1585.0
1	1700	205	229.	5.6	1590.5	*	2	1300	445	0.	0.0	1585.0	*	3	0900	685	0.	0.0	1585.0
1	1705	206	228.	5.5	1590.5	*	2	1305	446	0.	0.0	1585.0	*	3	0905	686	0.	0.0	1585.0
1	1710	207	227.	5.4	1590.5	*	2	1310	447	0.	0.0	1585.0	*	3	0910	687	0.	0.0	1585.0
1	1715	208	226.	5.3	1590.5	*	2	1315	448	0.	0.0	1585.0	*	3	0915	688	0.	0.0	1585.0
1	1720	209	225.	5.2	1590.4	*	2	1320	449	0.	0.0	1585.0	*	3	0920	689	0.	0.0	1585.0
1	1725	210	224.	5.1	1590.4	*	2	1325	450	0.	0.0	1585.0	*	3	0925	690	0.	0.0	1585.0
1	1730	211	223.	5.0	1590.4	*	2	1330	451	0.	0.0	1585.0	*	3	0930	691	0.	0.0	1585.0
1	1735	212	222.	4.9	1590.4	*	2	1335	452	0.	0.0	1585.0	*	3	0935	692	0.	0.0	1585.0
1	1740	213	222.	4.8	1590.4	*	2	1340	453	0.	0.0	1585.0	*	3	0940	693	0.	0.0	1585.0
1	1745	214	221.	4.7	1590.4	*	2	1345	454	0.	0.0	1585.0	*	3	0945	694	0.	0.0	1585.0
1	1750	215	220.	4.6	1590.4	*	2	1350	455	0.	0.0	1585.0	*	3	0950	695	0.	0.0	1585.0
1	1755	216	219.	4.6	1590.4	*	2	1355	456	0.	0.0	1585.0	*	3	0955	696	0.	0.0	1585.0
1	1800	217	219.	4.5	1590.4	*	2	1400	457	0.	0.0	1585.0	*	3	1000	697	0.	0.0	1585.0
1	1805	218	218.	4.4	1590.3	*	2	1405	458	0.	0.0	1585.0	*	3	1005	698	0.	0.0	1585.0
1	1810	219	217.	4.3	1590.3	*	2	1410	459	0.	0.0	1585.0	*	3	1010	699	0.	0.0	1585.0
1	1815	220	216.	4.2	1590.3	*	2	1415	460	0.	0.0	1585.0	*	3	1015	700	0.	0.0	1585.0
1	1820	221	216.	4.2	1590.3	*	2	1420	461	0.	0.0	1585.0	*	3	1020	701	0.	0.0	1585.0
1	1825	222	215.	4.1	1590.3	*	2	1425	462	0.	0.0	1585.0	*	3	1025	702	0.	0.0	1585.0
1	1830	223	214.	4.0	1590.3	*	2	1430	463	0.	0.0	1585.0	*	3	1030	703	0.	0.0	1585.0
1	1835	224	214.	3.9	1590.3	*	2	1435	464	0.	0.0	1585.0	*	3	1035	704	0.	0.0	1585.0
1	1840	225	213.	3.9	1590.3	*	2	1440	465	0.	0.0	1585.0	*	3	1040	705	0.	0.0	1585.0
1	1845	226	212.	3.8	1590.3	*	2	1445	466	0.	0.0	1585.0	*	3	1045	706	0.	0.0	1585.0
1	1850	227	212.	3.7	1590.3	*	2	1450	467	0.	0.0	1585.0	*	3	1050	707	0.	0.0	1585.0
1	1855	228	211.	3.6	1590.3	*	2	1455	468	0.	0.0	1585.0	*	3	1055	708	0.	0.0	1585.0
1	1900	229	210.	3.6	1590.2	*	2	1500	469	0.	0.0	1585.0	*	3	1100	709	0.	0.0	1585.0
1	1905	230	210.	3.5	1590.2	*	2	1505	470	0.	0.0	1585.0	*	3	1105	710	0.	0.0	1585.0
1	1910	231	209.	3.4	1590.2	*	2	1510	471	0.	0.0	1585.0	*	3	1110	711	0.	0.0	1585.0
1	1915	232	209.	3.4	1590.2	*	2	1515	472	0.	0.0	1585.0	*	3	1115	712	0.	0.0	1585.0
1	1920	233	208.	3.3	1590.2	*	2	1520	473	0.	0.0	1585.0	*	3	1120	713	0.	0.0	1585.0
1	1925	234	207.	3.2	1590.2	*	2	1525	474	0.	0.0	1585.0	*	3	1125	714	0.	0.0	1585.0
1	1930	235	207.	3.2	1590.2	*	2	1530	475	0.	0.0	1585.0	*	3	1130	715	0.	0.0	1585.0
1	1935	236	206.	3.1	1590.2	*	2	1535	476	0.	0.0	1585.0	*	3	1135	716	0.	0.0	1585.0
1	1940	237	206.	3.0	1590.2	*	2	1540	477	0.	0.0	1585.0	*	3	1140	717	0.	0.0	1585.0
1	1945	238	205.	2.9	1590.2	*	2	1545	478	0.	0.0	1585.0	*	3	1145	718	0.	0.0	1585.0
1	1950	239	204.	2.9	1590.2	*	2	1550	479	0.	0.0	1585.0	*	3	1150	719	0.	0.0	1585.0
1	1955	240	204.	2.8	1590.2	*	2	1555	480	0.	0.0	1585.0	*	3	1155	720	0.	0.0	1585.0

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	59.92-HR
+ (CFS)	(HR)					
		(CFS)				
+ 667.	4.92		610.	359.	153.	153.
		(INCHES)	0.575	1.352	1.439	1.439
		(AC-FT)	302.	712.	758.	758.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	59.92-HR
+ (AC-FT)	(HR)				
177.	4.92	148.	49.	20.	20.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	59.92-HR
+ (FEET)	(HR)				
1601.79	4.92	1600.46	1593.64	1588.75	1588.75

CUMULATIVE AREA = 9.87 SQ MI

****

INTERPOLATED HYDROGRAPH AT UHDB-O

DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW	DA	MON	HRMN	ORD	FLOW
1		0000	1	0.	1		1500	181	277.	2		0600	361	99.	2		2100	541	0.
1		0005	2	0.	1		1505	182	274.	2		0605	362	97.	2		2105	542	0.
1		0010	3	0.	1		1510	183	271.	2		0610	363	94.	2		2110	543	0.
1		0015	4	0.	1		1515	184	269.	2		0615	364	91.	2		2115	544	0.
1		0020	5	0.	1		1520	185	266.	2		0620	365	88.	2		2120	545	0.
1		0025	6	0.	1		1525	186	264.	2		0625	366	86.	2		2125	546	0.
1		0030	7	1.	1		1530	187	262.	2		0630	367	83.	2		2130	547	0.
1		0035	8	1.	1		1535	188	260.	2		0635	368	80.	2		2135	548	0.
1		0040	9	2.	1		1540	189	258.	2		0640	369	76.	2		2140	549	0.
1		0045	10	3.	1		1545	190	256.	2		0645	370	72.	2		2145	550	0.
1		0050	11	4.	1		1550	191	254.	2		0650	371	68.	2		2150	551	0.
1		0055	12	6.	1		1555	192	252.	2		0655	372	64.	2		2155	552	0.
1		0100	13	9.	1		1600	193	251.	2		0700	373	60.	2		2200	553	0.
1		0105	14	12.	1		1605	194	249.	2		0705	374	55.	2		2205	554	0.
1		0110	15	15.	1		1610	195	248.	2		0710	375	51.	2		2210	555	0.
1		0115	16	19.	1		1615	196	246.	2		0715	376	46.	2		2215	556	0.
1		0120	17	23.	1		1620	197	245.	2		0720	377	42.	2		2220	557	0.
1		0125	18	27.	1		1625	198	243.	2		0725	378	38.	2		2225	558	0.
1		0130	19	31.	1		1630	199	242.	2		0730	379	34.	2		2230	559	0.
1		0135	20	35.	1		1635	200	241.	2		0735	380	31.	2		2235	560	0.
1		0140	21	40.	1		1640	201	240.	2		0740	381	28.	2		2240	561	0.
1		0145	22	44.	1		1645	202	238.	2		0745	382	26.	2		2245	562	0.
1		0150	23	49.	1		1650	203	237.	2		0750	383	23.	2		2250	563	0.
1		0155	24	55.	1		1655	204	236.	2		0755	384	21.	2		2255	564	0.
1		0200	25	62.	1		1700	205	235.	2		0800	385	19.	2		2300	565	0.
1		0205	26	69.	1		1705	206	234.	2		0805	386	17.	2		2305	566	0.
1		0210	27	77.	1		1710	207	233.	2		0810	387	15.	2		2310	567	0.
1		0215	28	84.	1		1715	208	232.	2		0815	388	13.	2		2315	568	0.
1		0220	29	92.	1		1720	209	231.	2		0820	389	11.	2		2320	569	0.
1		0225	30	100.	1		1725	210	230.	2		0825	390	9.	2		2325	570	0.
1		0230	31	110.	1		1730	211	229.	2		0830	391	8.	2		2330	571	0.
1		0235	32	122.	1		1735	212	229.	2		0835	392	6.	2		2335	572	0.
1		0240	33	136.	1		1740	213	228.	2		0840	393	5.	2		2340	573	0.
1		0245	34	159.	1		1745	214	227.	2		0845	394	4.	2		2345	574	0.
1		0250	35	190.	1		1750	215	226.	2		0850	395	4.	2		2350	575	0.
1		0255	36	199.	1		1755	216	225.	2		0855	396	3.	2		2355	576	0.
1		0300	37	211.	1		1800	217	225.	2		0900	397	2.	3		0000	577	0.
1		0305	38	247.	1		1805	218	224.	2		0905	398	2.	3		0005	578	0.
1		0310	39	345.	1		1810	219	223.	2		0910	399	1.	3		0010	579	0.
1		0315	40	495.	1		1815	220	222.	2		0915	400	1.	3		0015	580	0.
1		0320	41	521.	1		1820	221	222.	2		0920	401	1.	3		0020	581	0.
1		0325	42	541.	1		1825	222	221.	2		0925	402	1.	3		0025	582	0.
1		0330	43	561.	1		1830	223	220.	2		0930	403	1.	3		0030	583	0.
1		0335	44	578.	1		1835	224	220.	2		0935	404	1.	3		0035	584	0.
1		0340	45	592.	1		1840	225	219.	2		0940	405	0.	3		0040	585	0.
1		0345	46	603.	1		1845	226	218.	2		0945	406	0.	3		0045	586	0.
1		0350	47	612.	1		1850	227	218.	2		0950	407	0.	3		0050	587	0.
1		0355	48	619.	1		1855	228	217.	2		0955	408	0.	3		0055	588	0.
1		0400	49	651.	1		1900	229	216.	2		1000	409	0.	3		0100	589	0.
1		0405	50	658.	1		1905	230	216.	2		1005	410	0.	3		0105	590	0.
1		0410	51	664.	1		1910	231	215.	2		1010	411	0.	3		0110	591	0.
1		0415	52	667.	1		1915	232	214.	2		1015	412	0.	3		0115	592	0.
1		0420	53	669.	1		1920	233	214.	2		1020	413	0.	3		0120	593	0.
1		0425	54	670.	1		1925	234	213.	2		1025	414	0.	3		0125	594	0.
1		0430	55	672.	1		1930	235	212.	2		1030	415	0.	3		0130	595	0.
1		0435	56	679.	1		1935	236	212.	2		1035	416	0.	3		0135	596	0.
1		0440	57	684.	1		1940	237	211.	2		1040	417	0.	3		0140	597	0.
1		0445	58	686.	1		1945	238	211.	2		1045	418	0.	3		0145	598	0.
1		0450	59	687.	1		1950	239	210.	2		1050	419	0.	3		0150	599	0.
1		0455	60	687.	1		1955	240	209.	2		1055	420	0.	3		0155	600	0.
1		0500	61	687.	1		2000	241	209.	2		1100	421	0.	3		0200	601	0.
1		0505	62	686.	1		2005	242	208.	2		1105	422	0.	3		0205	602	0.
1		0510	63	685.	1		2010	243	208.	2		1110	423	0.	3		0210	603	0.
1		0515	64	683.	1		2015	244	207.	2		1115	424	0.	3		0215	604	0.
1		0520	65	680.	1		2020	245	207.	2		1120	425	0.	3		0220	605	0.
1		0525	66	677.	1		2025	246	206.	2		1125	426	0.	3		0225	606	0.
1		0530	67	674.	1		2030	247	205.	2		1130	427	0.	3		0230	607	0.
1		0535	68	670.	1		2035	248	205.	2		1135	428	0.	3		0235	608	0.
1		0540	69	668.	1		2040	249	204.	2		1140	429	0.	3		0240	609	0.
1		0545	70	667.	1		2045	250	204.	2		1145	430	0.	3		0245	610	0.
1		0550	71	665.	1		2050	251	203.	2		1150	431	0.	3		0250	611	0.
1		0555	72	663.	1		2055	252	203.	2		1155	432	0.	3		0255	612	0.
1		0600	73	662.	1		2100	253	202.	2		1200	433	0.	3		0300	613	0.
1		0605	74	660.	1		2105	254	202.	2		1205	434	0.	3		0305	614	0.
1		0610	75	658.	1		2110	255	201.	2		1210	435	0.	3		0310	615	0.
1		0615	76	656.	1		2115	256	201.	2		1215	436	0.	3		0315	616	0.
1		0620	77	650.	1		2120	257	200.	2		1220	437	0.	3		0320	617	0.
1		0625	78	642.	1		2125	258	200.	2		1225	438	0.	3		0325	618	0.
1		0630	79	631.	1		2130	259	196.	2		1230	439	0.	3		0330	619	0.
1		0635	80	625.	1		2135	260	195.	2		1235	440	0.	3		0335	620	0.
1		0640	81	623.	1		2140	261	194.	2		1240	441	0.	3		0340	621	0.
1		0645	82	622.	1		2145	262	193.	2		1245	442	0.	3		0345	622	0.
1		0650	83	621.	1		2150	263	193.	2		1250	443	0.	3		0350	623	0.
1		0655	84	619.	1		2155	264	192.	2		1255	444	0.	3		0355	624	0.
1		0700	85	618.	1		2200	265	192.	2		1300	445	0.	3		0400	625	0.
1		0705	86	616.	1		2205	266	191.	2		1305	446	0.	3		0405	626	0.
1		0710	87	615.	1		2210	267	191.	2		1310	447	0.	3		0410	627	0.
1		0715	88	613.	1		2215	268	190.	2		1315	448	0.	3		0415	628	0.

1	0720	89	611.	*	1	2220	269	190.	*	2	1320	449	0.	*	3	0420	629	0.
1	0725	90	610.	*	1	2225	270	189.	*	2	1325	450	0.	*	3	0425	630	0.
1	0730	91	608.	*	1	2230	271	189.	*	2	1330	451	0.	*	3	0430	631	0.
1	0735	92	606.	*	1	2235	272	188.	*	2	1335	452	0.	*	3	0435	632	0.
1	0740	93	604.	*	1	2240	273	188.	*	2	1340	453	0.	*	3	0440	633	0.
1	0745	94	603.	*	1	2245	274	187.	*	2	1345	454	0.	*	3	0445	634	0.
1	0750	95	601.	*	1	2250	275	187.	*	2	1350	455	0.	*	3	0450	635	0.
1	0755	96	599.	*	1	2255	276	185.	*	2	1355	456	0.	*	3	0455	636	0.
1	0800	97	597.	*	1	2300	277	181.	*	2	1400	457	0.	*	3	0500	637	0.
1	0805	98	595.	*	1	2305	278	180.	*	2	1405	458	0.	*	3	0505	638	0.
1	0810	99	593.	*	1	2310	279	179.	*	2	1410	459	0.	*	3	0510	639	0.
1	0815	100	591.	*	1	2315	280	179.	*	2	1415	460	0.	*	3	0515	640	0.
1	0820	101	589.	*	1	2320	281	178.	*	2	1420	461	0.	*	3	0520	641	0.
1	0825	102	587.	*	1	2325	282	177.	*	2	1425	462	0.	*	3	0525	642	0.
1	0830	103	585.	*	1	2330	283	177.	*	2	1430	463	0.	*	3	0530	643	0.
1	0835	104	583.	*	1	2335	284	176.	*	2	1435	464	0.	*	3	0535	644	0.
1	0840	105	581.	*	1	2340	285	176.	*	2	1440	465	0.	*	3	0540	645	0.
1	0845	106	579.	*	1	2345	286	175.	*	2	1445	466	0.	*	3	0545	646	0.
1	0850	107	577.	*	1	2350	287	174.	*	2	1450	467	0.	*	3	0550	647	0.
1	0855	108	575.	*	1	2355	288	174.	*	2	1455	468	0.	*	3	0555	648	0.
1	0900	109	573.	*	2	0000	289	173.	*	2	1500	469	0.	*	3	0600	649	0.
1	0905	110	571.	*	2	0005	290	172.	*	2	1505	470	0.	*	3	0605	650	0.
1	0910	111	569.	*	2	0010	291	172.	*	2	1510	471	0.	*	3	0610	651	0.
1	0915	112	567.	*	2	0015	292	171.	*	2	1515	472	0.	*	3	0615	652	0.
1	0920	113	565.	*	2	0020	293	170.	*	2	1520	473	0.	*	3	0620	653	0.
1	0925	114	563.	*	2	0025	294	170.	*	2	1525	474	0.	*	3	0625	654	0.
1	0930	115	561.	*	2	0030	295	169.	*	2	1530	475	0.	*	3	0630	655	0.
1	0935	116	558.	*	2	0035	296	169.	*	2	1535	476	0.	*	3	0635	656	0.
1	0940	117	556.	*	2	0040	297	168.	*	2	1540	477	0.	*	3	0640	657	0.
1	0945	118	554.	*	2	0045	298	167.	*	2	1545	478	0.	*	3	0645	658	0.
1	0950	119	552.	*	2	0050	299	167.	*	2	1550	479	0.	*	3	0650	659	0.
1	0955	120	550.	*	2	0055	300	166.	*	2	1555	480	0.	*	3	0655	660	0.
1	1000	121	548.	*	2	0100	301	165.	*	2	1600	481	0.	*	3	0700	661	0.
1	1005	122	546.	*	2	0105	302	164.	*	2	1605	482	0.	*	3	0705	662	0.
1	1010	123	544.	*	2	0110	303	164.	*	2	1610	483	0.	*	3	0710	663	0.
1	1015	124	542.	*	2	0115	304	163.	*	2	1615	484	0.	*	3	0715	664	0.
1	1020	125	541.	*	2	0120	305	162.	*	2	1620	485	0.	*	3	0720	665	0.
1	1025	126	539.	*	2	0125	306	161.	*	2	1625	486	0.	*	3	0725	666	0.
1	1030	127	537.	*	2	0130	307	160.	*	2	1630	487	0.	*	3	0730	667	0.
1	1035	128	535.	*	2	0135	308	160.	*	2	1635	488	0.	*	3	0735	668	0.
1	1040	129	533.	*	2	0140	309	159.	*	2	1640	489	0.	*	3	0740	669	0.
1	1045	130	531.	*	2	0145	310	158.	*	2	1645	490	0.	*	3	0745	670	0.
1	1050	131	529.	*	2	0150	311	157.	*	2	1650	491	0.	*	3	0750	671	0.
1	1055	132	528.	*	2	0155	312	157.	*	2	1655	492	0.	*	3	0755	672	0.
1	1100	133	526.	*	2	0200	313	156.	*	2	1700	493	0.	*	3	0800	673	0.
1	1105	134	525.	*	2	0205	314	155.	*	2	1705	494	0.	*	3	0805	674	0.
1	1110	135	523.	*	2	0210	315	154.	*	2	1710	495	0.	*	3	0810	675	0.
1	1115	136	522.	*	2	0215	316	154.	*	2	1715	496	0.	*	3	0815	676	0.
1	1120	137	521.	*	2	0220	317	153.	*	2	1720	497	0.	*	3	0820	677	0.
1	1125	138	520.	*	2	0225	318	152.	*	2	1725	498	0.	*	3	0825	678	0.
1	1130	139	518.	*	2	0230	319	151.	*	2	1730	499	0.	*	3	0830	679	0.
1	1135	140	517.	*	2	0235	320	151.	*	2	1735	500	0.	*	3	0835	680	0.
1	1140	141	516.	*	2	0240	321	150.	*	2	1740	501	0.	*	3	0840	681	0.
1	1145	142	515.	*	2	0245	322	149.	*	2	1745	502	0.	*	3	0845	682	0.
1	1150	143	514.	*	2	0250	323	148.	*	2	1750	503	0.	*	3	0850	683	0.
1	1155	144	512.	*	2	0255	324	148.	*	2	1755	504	0.	*	3	0855	684	0.
1	1200	145	511.	*	2	0300	325	147.	*	2	1800	505	0.	*	3	0900	685	0.
1	1205	146	509.	*	2	0305	326	146.	*	2	1805	506	0.	*	3	0905	686	0.
1	1210	147	507.	*	2	0310	327	145.	*	2	1810	507	0.	*	3	0910	687	0.
1	1215	148	503.	*	2	0315	328	144.	*	2	1815	508	0.	*	3	0915	688	0.
1	1220	149	496.	*	2	0320	329	143.	*	2	1820	509	0.	*	3	0920	689	0.
1	1225	150	489.	*	2	0325	330	143.	*	2	1825	510	0.	*	3	0925	690	0.
1	1230	151	482.	*	2	0330	331	142.	*	2	1830	511	0.	*	3	0930	691	0.
1	1235	152	475.	*	2	0335	332	141.	*	2	1835	512	0.	*	3	0935	692	0.
1	1240	153	465.	*	2	0340	333	140.	*	2	1840	513	0.	*	3	0940	693	0.
1	1245	154	452.	*	2	0345	334	140.	*	2	1845	514	0.	*	3	0945	694	0.
1	1250	155	440.	*	2	0350	335	139.	*	2	1850	515	0.	*	3	0950	695	0.
1	1255	156	429.	*	2	0355	336	138.	*	2	1855	516	0.	*	3	0955	696	0.
1	1300	157	418.	*	2	0400	337	137.	*	2	1900	517	0.	*	3	1000	697	0.
1	1305	158	408.	*	2	0405	338	136.	*	2	1905	518	0.	*	3	1005	698	0.
1	1310	159	398.	*	2	0410	339	136.	*	2	1910	519	0.	*	3	1010	699	0.
1	1315	160	389.	*	2	0415	340	135.	*	2	1915	520	0.	*	3	1015	700	0.
1	1320	161	380.	*	2	0420	341	134.	*	2	1920	521	0.	*	3	1020	701	0.
1	1325	162	372.	*	2	0425	342	133.	*	2	1925	522	0.	*	3	1025	702	0.
1	1330	163	364.	*	2	0430	343	132.	*	2	1930	523	0.	*	3	1030	703	0.
1	1335	164	356.	*	2	0435	344	132.	*	2	1935	524	0.	*	3	1035	704	0.
1	1340	165	349.	*	2	0440	345	131.	*	2	1940	525	0.	*	3	1040	705	0.
1	1345	166	343.	*	2	0445	346	130.	*	2	1945	526	0.	*	3	1045	706	0.
1	1350	167	336.	*	2	0450	347	129.	*	2	1950	527	0.	*	3	1050	707	0.
1	1355	168	330.	*	2	0455	348	128.	*	2	1955	528	0.	*	3	1055	708	0.
1	1400	169	325.	*	2	0500	349	127.	*	2	2000	529	0.	*	3	1100	709	0.
1	1405	170	319.	*	2	0505	350	126.	*	2	2005	530	0.	*	3	1105	710	0.
1	1410	171	314.	*	2	0510	351	124.	*	2	2010	531	0.	*	3	1110	711	0.
1	1415	172	310.	*	2	0515	352	122.	*	2	2015	532	0.	*	3	1115	712	0.
1	1420	173	305.	*	2	0520	353	120.	*	2	2020	533	0.	*	3	1120	713	0.
1	1425	174	301.	*	2	0525	354	118.	*	2	2025	534	0.	*	3	1125	714	0.
1	1430	175	297.	*	2	0530	355	115.	*	2	2030	535	0.	*	3	1130	715	0.
1	1435	176	293.	*	2	0535	356	113.	*	2	2035	536	0.	*	3	1135	716	0.
1	1440	177	289.	*	2	0540	357	111.	*	2	2040	537	0.	*	3	1140	717	0.
1	1445	178	286.	*	2	0545	358	108.	*	2	2045	538	0.	*	3	1145	718	0.
1	1450	179	283.	*	2	0550	359	105.	*	2	2050	539	0.	*	3	1150	719	0.
1	1455	180	280.	*	2	0555	360	102.	*	2	2055	540	0.	*	3	1155	720	0.
				*					*					*				

PEAK FLOW (CFS)	TIME (HR)		MAXIMUM AVERAGE FLOW 6-HR	24-HR	72-HR	59.92-HR
687.	4.92	(CFS)	627.	370.	159.	159.
		(INCHES)	0.591	1.393	1.497	1.497
		(AC-FT)	311.	733.	788.	788.

CUMULATIVE AREA = 9.87 SQ MI

1

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

OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
HYDROGRAPH AT	S30N	1227.	3.33	128.	32.	13.	0.65		
ROUTED TO	R30N	1126.	3.42	128.	32.	13.	0.65		
HYDROGRAPH AT	S31.1	395.	3.33	43.	11.	4.	0.27		
2 COMBINED AT	C31.1	1508.	3.33	171.	43.	17.	0.92		
HYDROGRAPH AT	S34.2	691.	3.33	73.	18.	7.	0.44		
2 COMBINED AT	C34.2	2177.	3.33	243.	61.	25.	1.36		
HYDROGRAPH AT	S35N	1298.	3.25	108.	27.	11.	0.55		
DIVERSION TO	D35NL	567.	3.25	47.	12.	5.	0.55		
HYDROGRAPH AT	D35NR	731.	3.25	60.	15.	6.	0.55		
ROUTED TO	R35NR	586.	3.33	60.	15.	6.	0.55		
HYDROGRAPH AT	S36.2	400.	3.25	34.	9.	3.	0.21		
2 COMBINED AT	C36.2	906.	3.25	94.	24.	10.	0.54		
DIVERSION TO	D36.2L	231.	3.25	9.	2.	1.	0.54		
HYDROGRAPH AT	D36.2R	675.	3.25	85.	21.	9.	0.54		
ROUTED TO	R36.2R	482.	3.67	85.	21.	9.	0.54		
HYDROGRAPH AT	S34.1	1831.	3.33	190.	48.	19.	1.16		
2 COMBINED AT	C34.1	1896.	3.33	273.	69.	28.	1.54		
2 COMBINED AT	HVDB-I	4015.	3.33	512.	130.	52.	2.90		
ROUTED TO	HVDB-O	142.	6.50	139.	119.	52.	2.90		
ROUTED TO	R34.1	142.	6.58	139.	119.	52.	2.90		
HYDROGRAPH AT	S36.1	159.	3.42	19.	5.	2.	0.14		
2 COMBINED AT	C36.1	250.	3.42	154.	123.	54.	3.04		
ROUTED TO	R36.1	249.	3.50	154.	123.	54.	3.04		
HYDROGRAPH AT	B35NL	567.	3.25	47.	12.	5.	0.55		

+	ROUTED TO	R35NL	351.	3.58	47.	12.	5.	0.55
+	HYDROGRAPH AT	B36.2L	231.	3.25	9.	2.	1.	0.54
+	ROUTED TO	R36.2L	103.	3.58	9.	2.	1.	0.54
+	HYDROGRAPH AT	S36R1A	652.	3.50	89.	23.	9.	0.63
+	4 COMBINED AT	C36R1A	1236.	3.50	295.	159.	68.	4.05
+	HYDROGRAPH AT	S36R1B	649.	3.42	83.	21.	8.	0.59
+	2 COMBINED AT	C36R1B	1811.	3.50	375.	179.	76.	4.64
+	HYDROGRAPH AT	S36R2A	280.	3.17	21.	5.	2.	0.13
+	2 COMBINED AT	C36R2A	1869.	3.50	392.	184.	78.	4.77
+	ROUTED TO	R36R2A	1869.	3.58	392.	184.	78.	4.77
+	HYDROGRAPH AT	S36R2B	264.	3.42	33.	8.	3.	0.24
+	2 COMBINED AT	C36R2B	2025.	3.58	424.	192.	82.	5.01
+	HYDROGRAPH AT	S51.1	1058.	3.50	162.	41.	16.	1.13
+	2 COMBINED AT	DVDB-I	2973.	3.58	578.	230.	97.	6.14
+	ROUTED TO	DVDB-O	261.	6.75	259.	220.	97.	6.14
+	DIVERSION TO	B51.1T	261.	6.75	259.	220.	97.	6.14
+	HYDROGRAPH AT	D51.1T	0.	0.08	0.	0.	0.	6.14
+	HYDROGRAPH AT	52D4	116.	3.25	11.	3.	1.	0.07
+	ROUTED TO	52D4R	106.	3.25	11.	3.	1.	0.07
+	HYDROGRAPH AT	52D4B	70.	3.17	6.	1.	1.	0.02
+	2 COMBINED AT	52D5C1	161.	3.25	17.	4.	2.	0.09
+	HYDROGRAPH AT	52D5A	79.	3.17	6.	2.	1.	0.02
+	ROUTED TO	52D5AR	75.	3.17	6.	2.	1.	0.02
+	2 COMBINED AT	52D5C2	217.	3.25	23.	6.	2.	0.12
+	ROUTED TO	52D5R	216.	3.25	23.	6.	2.	0.12
+	HYDROGRAPH AT	52C3	24.	3.08	2.	0.	0.	0.01
+	ROUTED TO	52C3R	23.	3.17	2.	0.	0.	0.01
+	HYDROGRAPH AT	52C3B	53.	3.08	4.	1.	0.	0.02
+	2 COMBINED AT	2C3BC1	74.	3.17	6.	1.	1.	0.02
+	2 COMBINED AT	2C3BC2	270.	3.17	29.	7.	3.	0.14
+	ROUTED TO	52C3BR	261.	3.25	29.	7.	3.	0.14

+	HYDROGRAPH AT	51C	166.	3.17	15.	4.	1.	0.10
+	DIVERSION TO	51C1DV	111.	3.17	10.	3.	1.	0.10
+	HYDROGRAPH AT	51C1D	55.	3.17	5.	1.	0.	0.10
+	ROUTED TO	51C1R	53.	3.25	5.	1.	0.	0.10
+	HYDROGRAPH AT	52C1	69.	3.17	5.	1.	0.	0.03
+	2 COMBINED AT	52C1C	106.	3.17	10.	2.	1.	0.06
+	ROUTED TO	52C1R	101.	3.25	10.	2.	1.	0.06
+	HYDROGRAPH AT	52C2A	35.	3.17	2.	1.	0.	0.02
+	2 COMBINED AT	52C2AC	125.	3.25	12.	3.	1.	0.08
+	HYDROGRAPH AT	52C2B	56.	3.17	4.	1.	0.	0.03
+	2 COMBINED AT	52C2BC	170.	3.17	16.	4.	2.	0.11
+	ROUTED TO	52C2BR	168.	3.25	16.	4.	2.	0.11
+	HYDROGRAPH AT	52C2C	46.	3.08	4.	1.	0.	0.01
+	2 COMBINED AT	52C2CC	194.	3.25	20.	5.	2.	0.12
+	ROUTED TO	52C2R	180.	3.25	20.	5.	2.	0.12
+	HYDROGRAPH AT	52C4	56.	3.17	4.	1.	0.	0.02
+	2 COMBINED AT	52C4C1	211.	3.25	24.	6.	2.	0.14
+	2 COMBINED AT	52C4C2	472.	3.25	53.	13.	5.	0.28
+	ROUTED TO	52C4R	462.	3.25	53.	14.	5.	0.28
+	HYDROGRAPH AT	52C13	69.	3.08	5.	1.	0.	0.02
+	DIVERSION TO	STORM	40.	3.08	4.	1.	0.	0.02
+	HYDROGRAPH AT	2C13DV	29.	3.08	1.	0.	0.	0.02
+	HYDROGRAPH AT	52C15	157.	3.08	13.	3.	1.	0.05
+	2 COMBINED AT	2C15C1	186.	3.08	13.	3.	1.	0.05
+	2 COMBINED AT	2C15C2	546.	3.17	66.	17.	7.	0.32
+	ROUTED TO	52C15R	544.	3.25	66.	17.	7.	0.32
+	HYDROGRAPH AT	52C14A	142.	3.17	11.	3.	1.	0.04
+	2 COMBINED AT	2C14AC	655.	3.17	78.	20.	8.	0.36
+	ROUTED TO	2C14AR	637.	3.17	78.	20.	8.	0.36
+	HYDROGRAPH AT	51C1DV	111.	3.17	10.	3.	1.	0.10
+	DIVERSION TO	51C2DV	30.	3.17	3.	1.	0.	0.10

+	HYDROGRAPH AT	51C2D	81.	3.17	7.	2.	1.	0.10
+	ROUTED TO	51C2R	78.	3.25	7.	2.	1.	0.10
+	HYDROGRAPH AT	52C5	40.	3.17	3.	1.	0.	0.02
+	2 COMBINED AT	52C5C	109.	3.17	10.	3.	1.	0.06
+	ROUTED TO	52C5R	104.	3.25	10.	3.	1.	0.06
+	HYDROGRAPH AT	52C6	82.	3.17	7.	2.	1.	0.04
+	2 COMBINED AT	52C6C	173.	3.25	17.	4.	2.	0.10
+	ROUTED TO	52C6R	165.	3.25	17.	4.	2.	0.10
+	HYDROGRAPH AT	51C2DV	30.	3.17	3.	1.	0.	0.10
+	ROUTED TO	51C3R	29.	3.25	3.	1.	0.	0.10
+	HYDROGRAPH AT	51B	596.	3.42	79.	20.	8.	0.57
+	DIVERSION TO	51B1DV	549.	3.42	72.	18.	7.	0.57
+	HYDROGRAPH AT	51B1D	48.	3.42	6.	2.	1.	0.57
+	ROUTED TO	51B1R	48.	3.42	6.	2.	1.	0.57
+	HYDROGRAPH AT	52C7	18.	3.08	1.	0.	0.	0.01
+	3 COMBINED AT	52C7C	76.	3.25	10.	3.	1.	0.07
+	ROUTED TO	52C7R	75.	3.33	10.	3.	1.	0.07
+	HYDROGRAPH AT	51B1DV	549.	3.42	72.	18.	7.	0.57
+	DIVERSION TO	51B2DV	461.	3.42	61.	15.	6.	0.57
+	HYDROGRAPH AT	51B2D	88.	3.42	12.	3.	1.	0.57
+	ROUTED TO	51B2R	88.	3.42	12.	3.	1.	0.57
+	HYDROGRAPH AT	52C8	21.	3.08	1.	0.	0.	0.01
+	2 COMBINED AT	52C8C	93.	3.42	13.	3.	1.	0.45
+	ROUTED TO	52C8R	92.	3.42	13.	3.	1.	0.45
+	2 COMBINED AT	52C9C1	163.	3.42	23.	6.	2.	0.52
+	ROUTED TO	52C9R1	162.	3.42	23.	6.	2.	0.52
+	HYDROGRAPH AT	52C9	174.	3.17	14.	3.	1.	0.07
+	2 COMBINED AT	52C9C2	255.	3.25	37.	9.	4.	0.59
+	ROUTED TO	52C9R2	254.	3.25	37.	9.	4.	0.59
+	2 COMBINED AT	2C10C1	418.	3.25	54.	14.	5.	0.69
+	ROUTED TO	2C10R1	412.	3.25	54.	14.	5.	0.69

+	HYDROGRAPH AT	52C10	28.	3.17	2.	1.	0.	0.01
+	2 COMBINED AT	2C10C2	428.	3.25	56.	14.	6.	0.70
+	HYDROGRAPH AT	52C11	96.	3.17	8.	2.	1.	0.04
+	ROUTED TO	2C11R1	88.	3.17	8.	2.	1.	0.04
+	HYDROGRAPH AT	52C13D	40.	3.08	4.	1.	0.	0.02
+	2 COMBINED AT	52C11C	128.	3.17	12.	3.	1.	0.07
+	ROUTED TO	2C11CR	120.	3.17	12.	3.	1.	0.07
+	2 COMBINED AT	2C11C2	541.	3.25	68.	17.	7.	0.77
+	ROUTED TO	2C11R2	530.	3.25	68.	17.	7.	0.77
+	HYDROGRAPH AT	52C12	119.	3.08	7.	2.	1.	0.02
+	2 COMBINED AT	52C12C	567.	3.25	75.	19.	8.	0.79
+	ROUTED TO	52C12R	549.	3.25	75.	19.	8.	0.79
+	HYDROGRAPH AT	52C14B	76.	3.08	6.	1.	1.	0.02
+	2 COMBINED AT	C14BC1	584.	3.25	81.	20.	8.	0.81
+	2 COMBINED AT	C14BC2	1200.	3.25	158.	40.	16.	1.17
+	ROUTED TO	52C14R	1194.	3.25	158.	40.	16.	1.17
+	HYDROGRAPH AT	51B2DV	461.	3.42	61.	15.	6.	0.57
+	DIVERSION TO	51B3DV	387.	3.42	51.	13.	5.	0.57
+	HYDROGRAPH AT	51B3D	74.	3.42	10.	2.	1.	0.57
+	ROUTED TO	51B3R	74.	3.42	10.	2.	1.	0.57
+	HYDROGRAPH AT	52B1	8.	3.08	1.	0.	0.	0.00
+	2 COMBINED AT	52B1C	76.	3.42	10.	3.	1.	0.07
+	ROUTED TO	52B1R	75.	3.42	10.	3.	1.	0.07
+	HYDROGRAPH AT	51B3DV	387.	3.42	51.	13.	5.	0.57
+	DIVERSION TO	51B4DV	317.	3.42	42.	11.	4.	0.57
+	HYDROGRAPH AT	51B4D	70.	3.42	9.	2.	1.	0.57
+	ROUTED TO	51B4R1	70.	3.42	9.	2.	1.	0.57
+	2 COMBINED AT	52B2C1	145.	3.42	20.	5.	2.	0.14
+	ROUTED TO	52B2R1	142.	3.42	20.	5.	2.	0.14
+	HYDROGRAPH AT	52B2	69.	3.17	5.	1.	1.	0.03
+	2 COMBINED AT	52B2C2	166.	3.42	25.	6.	3.	0.17

	ROUTED TO						
+	52B2R2	164.	3.42	25.	6.	3.	0.17
	ROUTED TO						
+	52B3R1	163.	3.42	25.	6.	3.	0.17
	HYDROGRAPH AT						
+	52B3	141.	3.17	12.	3.	1.	0.06
	2 COMBINED AT						
+	52B3C2	249.	3.25	37.	9.	4.	0.23
	ROUTED TO						
+	52B3R2	241.	3.33	37.	9.	4.	0.23
	HYDROGRAPH AT						
+	52B4	87.	3.17	7.	2.	1.	0.03
	2 COMBINED AT						
+	52B4C	284.	3.25	44.	11.	4.	0.26
	ROUTED TO						
+	52B4R	277.	3.25	44.	11.	4.	0.26
	HYDROGRAPH AT						
+	52B5	69.	3.08	5.	1.	1.	0.02
	2 COMBINED AT						
+	52B5C1	313.	3.25	49.	12.	5.	0.28
	2 COMBINED AT						
+	52B5C2	1496.	3.25	207.	52.	21.	1.45
	ROUTED TO						
+	52B5R	1474.	3.25	207.	53.	21.	1.45
	HYDROGRAPH AT						
+	51B4DV	317.	3.42	42.	11.	4.	0.57
	DIVERSION TO						
+	51B5DV	216.	3.42	28.	7.	3.	0.57
	HYDROGRAPH AT						
+	51B5D	102.	3.42	13.	3.	1.	0.57
	ROUTED TO						
+	51B5R	102.	3.42	13.	3.	1.	0.57
	HYDROGRAPH AT						
+	51B5DV	216.	3.42	28.	7.	3.	0.57
	DIVERSION TO						
+	51B6DV	114.	3.42	15.	4.	2.	0.57
	HYDROGRAPH AT						
+	51B6D	101.	3.42	13.	3.	1.	0.57
	ROUTED TO						
+	51B6R	101.	3.42	13.	3.	1.	0.57
	HYDROGRAPH AT						
+	51B6DV	114.	3.42	15.	4.	2.	0.57
	DIVERSION TO						
+	51B7DV	66.	3.42	9.	2.	1.	0.57
	HYDROGRAPH AT						
+	51B7D	48.	3.42	6.	2.	1.	0.57
	ROUTED TO						
+	51B7R1	48.	3.42	6.	2.	1.	0.57
	3 COMBINED AT						
+	51B7C	252.	3.42	33.	8.	3.	0.24
	ROUTED TO						
+	51B7R2	244.	3.42	33.	8.	3.	0.24
	HYDROGRAPH AT						
+	52B6	190.	3.17	15.	4.	2.	0.10
	2 COMBINED AT						
+	52B6C	313.	3.42	48.	12.	5.	0.34
	ROUTED TO						
+	52B6R	311.	3.42	48.	12.	5.	0.34
	HYDROGRAPH AT						
+	52B7	303.	3.17	24.	6.	2.	0.08
	2 COMBINED AT						
+	52B7C1	411.	3.25	72.	18.	7.	0.42

+	2 COMBINED AT	52B7C2	1871.	3.25	278.	71.	28.	1.87
+	HYDROGRAPH AT	52A2	263.	3.17	21.	5.	2.	0.06
+	2 COMBINED AT	52A2C2	2033.	3.25	299.	76.	30.	1.62
+	HYDROGRAPH AT	51B7DV	66.	3.42	9.	2.	1.	0.57
+	ROUTED TO	51B8R	66.	3.50	9.	2.	1.	0.57
+	HYDROGRAPH AT	52A1	340.	3.17	26.	6.	3.	0.13
+	2 COMBINED AT	52A1C	344.	3.17	34.	9.	3.	0.13
+	HYDROGRAPH AT	D51.1	261.	6.75	259.	220.	97.	6.14
+	2 COMBINED AT	C52A	411.	3.17	275.	227.	100.	6.27
+	2 COMBINED AT	C52	2251.	3.25	546.	295.	129.	7.92
+	ROUTED TO	R52	2168.	3.33	545.	295.	129.	7.92
+	DIVERSION TO	B52T	2168.	3.33	545.	295.	129.	7.92
+	HYDROGRAPH AT	D52T	0.	0.08	0.	0.	0.	7.92
+	2 COMBINED AT	CLEAR	0.	0.08	0.	0.	0.	14.06
+	HYDROGRAPH AT	37A	1164.	3.25	119.	30.	12.	0.68
+	DIVERSION TO	37AW	815.	3.25	83.	21.	8.	0.68
+	HYDROGRAPH AT	37AE	349.	3.25	36.	9.	4.	0.68
+	ROUTED TO	37AE1	342.	3.25	36.	9.	4.	0.68
+	HYDROGRAPH AT	SUB5N	70.	3.17	5.	1.	1.	0.03
+	2 COMBINED AT	CP5N	394.	3.25	41.	10.	4.	0.23
+	ROUTED TO	RET5N	357.	3.33	40.	10.	4.	0.23
+	ROUTED TO	R6N.1	294.	3.42	40.	10.	4.	0.23
+	HYDROGRAPH AT	SUB6B	74.	3.17	5.	1.	1.	0.03
+	ROUTED TO	SR6B	43.	3.25	5.	1.	1.	0.03
+	2 COMBINED AT	CP6.1	326.	3.42	45.	12.	5.	0.26
+	HYDROGRAPH AT	SUB1N	47.	3.17	3.	1.	0.	0.02
+	ROUTED TO	R2NA	46.	3.17	3.	1.	0.	0.02
+	HYDROGRAPH AT	SUB2NA	34.	3.17	2.	1.	0.	0.01
+	2 COMBINED AT	CP2NA	80.	3.17	6.	1.	1.	0.03
+	ROUTED TO	SR2NA	70.	3.25	4.	1.	0.	0.03
+	ROUTED TO	R2NB	59.	3.33	4.	1.	0.	0.03

+	HYDROGRAPH AT	SUB2NB	96.	3.17	8.	2.	1.	0.03
+	2 COMBINED AT	CP2NB	99.	3.33	12.	3.	1.	0.06
+	ROUTED TO	SR2NB	25.	3.75	11.	3.	1.	0.06
+	ROUTED TO	RCP4N	24.	3.75	11.	3.	1.	0.06
+	HYDROGRAPH AT	SUB6N	114.	3.17	8.	2.	1.	0.05
+	ROUTED TO	RET6N	0.	0.08	0.	0.	0.	0.05
+	ROUTED TO	RCP4N1	0.	0.08	0.	0.	0.	0.05
+	2 COMBINED AT	CP4N.1	24.	3.75	11.	3.	1.	0.11
+	HYDROGRAPH AT	SUB3N	67.	3.17	4.	1.	0.	0.03
+	ROUTED TO	RET3N	4.	4.17	3.	1.	0.	0.03
+	ROUTED TO	R4N	4.	4.25	3.	1.	0.	0.03
+	2 COMBINED AT	CP4N.2	27.	3.75	14.	4.	2.	0.14
+	HYDROGRAPH AT	SUB4N	80.	3.17	6.	1.	1.	0.03
+	2 COMBINED AT	CP4N	89.	3.17	19.	6.	2.	0.17
+	ROUTED TO	R6N	82.	3.17	19.	6.	2.	0.17
+	HYDROGRAPH AT	SUB6A	64.	3.08	4.	1.	0.	0.01
+	2 COMBINED AT	CP6.2	121.	3.17	23.	7.	3.	0.18
+	2 COMBINED AT	CP6N	376.	3.42	68.	18.	7.	0.45
+	ROUTED TO	RCP6N	373.	3.42	68.	18.	7.	0.45
+	HYDROGRAPH AT	SUB3C	55.	3.08	3.	1.	0.	0.01
+	2 COMBINED AT	CP3C	380.	3.42	70.	19.	8.	0.46
+	ROUTED TO	R3C	361.	3.50	70.	19.	8.	0.46
+	HYDROGRAPH AT	GC1018	101.	3.17	7.	2.	1.	0.04
+	HYDROGRAPH AT	GC1-9	58.	3.17	4.	1.	0.	0.03
+	HYDROGRAPH AT	SUB3S	33.	3.17	3.	1.	0.	0.01
+	4 COMBINED AT	CP3S	411.	3.50	84.	22.	9.	0.54
+	ROUTED TO	RT3S	409.	3.50	84.	22.	9.	0.54
+	HYDROGRAPH AT	SUB4S	87.	3.17	7.	2.	1.	0.03
+	ROUTED TO	RT4S	87.	3.17	7.	2.	1.	0.03
+	HYDROGRAPH AT	GC2-8	32.	3.17	2.	1.	0.	0.01
+	3 COMBINED AT	1PGC28	437.	3.50	93.	25.	10.	0.58

+	HYDROGRAPH AT	SCN5D	72.	3.25	7.	2.	1.	0.06
+	2 COMBINED AT	CN5D	200.	3.33	24.	6.	2.	0.14
+	2 COMBINED AT	CN5	835.	3.33	172.	45.	18.	1.11
+	HYDROGRAPH AT	SUB7A	27.	3.17	2.	1.	0.	0.01
+	ROUTED TO	SR7A	7.	3.42	2.	1.	0.	0.01
+	ROUTED TO	R10S	7.	3.58	2.	1.	0.	0.01
+	HYDROGRAPH AT	SUB10S	78.	3.17	6.	2.	1.	0.02
+	2 COMBINED AT	CP10S	81.	3.17	8.	2.	1.	0.03
+	HYDROGRAPH AT	SUB11S	118.	3.08	7.	2.	1.	0.02
+	ROUTED TO	R11S	88.	3.17	7.	2.	1.	0.02
+	2 COMBINED AT	C10SA	169.	3.17	15.	4.	2.	0.06
+	ROUTED TO	R10SA	173.	3.17	15.	4.	2.	0.06
+	HYDROGRAPH AT	GC45	45.	3.08	2.	1.	0.	0.01
+	2 COMBINED AT	CP45	196.	3.17	17.	4.	2.	0.07
+	ROUTED TO	RC45	161.	3.25	17.	4.	2.	0.07
+	HYDROGRAPH AT	SCN6D	70.	3.08	5.	1.	1.	0.02
+	2 COMBINED AT	CN6D	211.	3.17	22.	6.	2.	0.09
+	HYDROGRAPH AT	SCN6C	243.	3.25	21.	5.	2.	0.10
+	HYDROGRAPH AT	D52	2168.	3.33	545.	295.	129.	7.92
+	HYDROGRAPH AT	S53A	247.	3.25	26.	6.	3.	0.18
+	2 COMBINED AT	C53	2377.	3.33	569.	301.	131.	8.10
+	HYDROGRAPH AT	S53A1	446.	3.33	52.	13.	5.	0.33
+	2 COMBINED AT	C53A1	2783.	3.33	618.	313.	136.	8.43
+	HYDROGRAPH AT	SCN6B	158.	3.17	13.	3.	1.	0.05
+	2 COMBINED AT	C53A	2862.	3.33	629.	316.	137.	8.48
+	HYDROGRAPH AT	SCN6E	83.	3.33	11.	3.	1.	0.09
+	5 COMBINED AT	UHDB-I	3929.	3.33	839.	370.	159.	9.87
+	ROUTED TO	UHDB-O	687.	4.92	627.	370.	159.	9.87
+	HYDROGRAPH AT	S54	196.	3.25	20.	5.	2.	0.09
+	HYDROGRAPH AT	SCN6A	310.	3.25	31.	8.	3.	0.13
+	2 COMBINED AT	CN6A	505.	3.25	51.	13.	5.	0.22

+	HYDROGRAPH AT	SUB3D3	35.	3.17	2.	1.	0.	0.01
+	2 COMBINED AT	CPGC28	444.	3.50	95.	25.	10.	0.59
+	ROUTED TO	SRGC28	443.	3.25	95.	25.	10.	0.59
+	ROUTED TO	RT7S	431.	3.58	95.	25.	10.	0.59
+	HYDROGRAPH AT	GC7	31.	3.17	2.	1.	0.	0.01
+	2 COMBINED AT	CP7S	437.	3.58	97.	26.	10.	0.61
+	ROUTED TO	RC7S	391.	3.67	97.	26.	10.	0.61
+	HYDROGRAPH AT	SUB3B2	67.	3.17	6.	1.	1.	0.02
+	ROUTED TO	RB2E1	64.	3.17	6.	1.	1.	0.02
+	ROUTED TO	RB2E2	61.	3.25	6.	1.	1.	0.02
+	HYDROGRAPH AT	SUB3E1	67.	3.17	6.	1.	1.	0.02
+	2 COMBINED AT	1CPE31	125.	3.17	11.	3.	1.	0.05
+	ROUTED TO	RCE31	74.	3.42	11.	3.	1.	0.05
+	HYDROGRAPH AT	SUB3D2	58.	3.17	5.	1.	0.	0.02
+	ROUTED TO	RD2E2	56.	3.17	5.	1.	0.	0.02
+	HYDROGRAPH AT	SUB3E2	37.	3.08	3.	1.	0.	0.01
+	2 COMBINED AT	CP3E2	86.	3.17	7.	2.	1.	0.03
+	ROUTED TO	RC3E2	49.	3.42	7.	2.	1.	0.03
+	HYDROGRAPH AT	SUB3E3	60.	3.08	4.	1.	0.	0.02
+	ROUTED TO	RC3E3	28.	3.33	4.	1.	0.	0.02
+	HYDROGRAPH AT	SCN5C	317.	3.25	31.	8.	3.	0.26
+	5 COMBINED AT	CNC5	662.	3.42	148.	39.	16.	0.97
+	HYDROGRAPH AT	SUB8S	76.	3.17	6.	1.	1.	0.03
+	ROUTED TO	RGC36	64.	3.25	6.	1.	1.	0.03
+	HYDROGRAPH AT	GC36	77.	3.17	7.	2.	1.	0.04
+	2 COMBINED AT	C1GC36	141.	3.17	13.	3.	1.	0.07
+	HYDROGRAPH AT	SUB9S	68.	3.17	5.	1.	1.	0.02
+	ROUTED TO	R9S	69.	3.17	5.	1.	1.	0.02
+	2 COMBINED AT	CPGC36	210.	3.17	18.	4.	2.	0.09
+	ROUTED TO	SRGC36	202.	3.25	18.	4.	2.	0.09
+	ROUTED TO	R36	145.	3.33	18.	4.	2.	0.09

```
          2 COMBINED AT
+                                C1A       944.    3.25         663.        381.        164.      10.09
1

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

APPENDIX H

Interim Condition 100-Year, 24-Hour HEC-1 Output File Printout

```
1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*            MAY   1991             *
*          VERSION 4.0.1E           *
*     Lahey F77L-EM/32 version 5.01 *
*       Dodson & Associates, Inc.   *
*  RUN DATE  11/19/97  TIME  17:30:34 *
*************************************
```

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

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

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

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

```
1                                          HEC-1 INPUT                                                    PAGE  1

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

    1           ID    PIMA ROAD THREE BASINS                                  File: intrm-24.IH1
    2           ID    by  Stantech for the City of Scottsdale            Original: 08-07-97     mcg
    3           ID        Project:  28900051
    4           ID
    5           ID
    6           ID    100-YEAR, 24-HOUR STORM
    7           ID        10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
    8           ID        10% LEVEL DESIGN FOR DEER VALLEY DETENTION BASIN ALTERNATIVE 3
    9           ID        100% OF FLOWSPLITS ARE ROUTED TO DEER VALLEY DETENTION BASIN
   10           ID        10% LEVEL DESIGN FOR UNION HILLS DETENTION BASIN ALTERNATIVE 1B
   11           ID
   12           ID        INTERIM CONDITION --- NO POWER LINE CHANNEL:
   13           ID          GRAYHAWK RUNOFF RELEASED TO NATURAL WASHES AND ROUTED TO THE UNION
   14           ID          HILLS DETENTION BASIN.  PORTIONS OF THE GRAYHAWK MODEL THAT DO NOT
   15           ID          CONTRIBUTE TO THE WATERSHED AT UNION HILLS BASIN UNDER THIS CONDITION
   16           ID          ARE ELIMINATED FROM THIS MODEL.
   17           ID
                *DIAGRAM
   18           IT       5                    2000
   19           IO       5
                *

   20           KK    S30N
   21           KM     RUNOFF FROM SUBBASIN 30N
   22           BA  0.6518
   23           PH            11.5      .84     1.53    2.46    2.75    2.94    3.31    3.74    4.17
   24           LS              82       13               82      13
   25           UK     300   0.350     0.13       20
   26           UK     300   0.050     0.13       80
   27           RK    1550   0.069    0.045   0.0096    TRAP       0       12
   28           RK   10520   0.038    0.040             TRAP      15       15
                *

   29           KK    R30N
   30           KM     NORMAL DEPTH CHANNEL ROUTE FROM C30N TO C31.1 THROUGH PIMA CHANNEL
   31           RS       1    FLOW      -1
   32           RC   0.022   0.022    0.022     2470    0.01
   33           RX    1000    1012     1020     1028    1036    1044    1052    1064
   34           RY     107     104      102      100     100     102     104     107
                *

   35           KK   S31.1
   36           KM     RUNOFF FROM SUBBASIN 31.1
   37           BA  0.2663
   38           LS            76.6       13             76.6      13
   39           UK     300   0.567     0.13       10
   40           UK     300   0.050     0.13       90
   41           RK    1950   0.056    0.045   0.0147    TRAP       0       10
   42           RK    7600   0.035    0.040             TRAP      22        8
                *
1                                          HEC-1 INPUT                                                    PAGE  2

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

```
 43          KK   C31.1
 44          KM     COMBINE ROUTED HYDROGRAPH FROM S30N WITH RUNOFF FROM SUBBASIN 31.1
 45          HC       2
             *
             *  R31.1
             *   ****  TOO SHORT TO ROUTE  ****
             *     NORMAL DEPTH CHANNEL ROUTE FROM C31.1 TO C34.1 THROUGH PIMA CHANNEL
             *       1    FLOW      -1
             *  0.022   0.022   0.022    1500    0.01
             *   1000    1012    1020    1028    1048    1056    1064    1076
             *    107     104     102     100     100     102     104     107
             *

 46          KK   S34.2
 47          KM     RUNOFF FROM SUBBASIN 34.2
 48          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
 49          BA  0.4441
 50          LS            77.3      12            77.3      12
 51          UK      50    0.10    0.13      10
 52          UK     300   0.040    0.13      90
 53          RK    2200  0.0452   0.045  0.0538    TRAP       0      10
 54          RK    8150  0.0386   0.045            TRAP       0      10
             *

 55          KK   C34.2
 56          KM     COMBINE ROUTED HYDROGRAPH FROM C31.1 WITH RUNOFF FROM SUBBASIN 34.2
 57          HC       2
             *

 58          KK    S35N
 59          KM     RUNOFF FROM SUBBASIN 35N
 60          BA  0.5482
 61          LS              82      13              82      13
 62          UK     300   0.491    0.13      15
 63          UK     300   0.113    0.13      85
 64          RK    2700   0.079   0.045  0.0242    TRAP       3       6
 65          RK    5050   0.028   0.040            TRAP      15      15
             *

 66          KK   D35NR
 67          KM     DIVERSION JUST DOWNSTREAM OF THE ALMA SCHOOL ROAD CULVERT
 68          KM        RIGHT BRANCH IS ROUTED TO C36.2
 69          KM        LEFT BRANCH (CODED ON DQ RECORD) IS ROUTED TO C36R1
 70          DT   D35NL
 71          DI       0      10      66     168     343     581     805     977    1168    1320
 72          DQ       0      10      66     168     343     581     805     977    1168    1320
             *

 73          KK   R35NR
 74          KM     NORMAL DEPTH CHANNEL ROUTE FROM S35N TO C36.2
 75          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
 76          RS       1    FLOW      -1
 77          RC    0.06    0.04    0.06    3500  0.0343
 78          RX    1000    1006    1026    1027    1057    1058    1078    1084
1                                          HEC-1 INPUT                                                    PAGE  3

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

 79          RY     105     103     101     100     100     101     103     105
             *

 80          KK   S36.2
 81          KM     RUNOFF FROM SUBBASIN 36.2
 82          BA  0.2087
 83          LS            76.6      13            76.6      13
 84          UK     300   0.580    0.13       5
 85          UK     300   0.100    0.13      95
 86          RK    1800   0.036   0.045  0.0145    TRAP      10      10
 87          RK    3520   0.028   0.040            TRAP      20       6
             *

 88          KK   C36.2
 89          KM     COMBINE ROUTED HYDROGRAPH FROM S35N WITH RUNOFF FROM SUBBASIN 36.2
 90          HC       2
             *

 91          KK  D36.2R
 92          KM     DIVERSION AT DESERT HIGHLANDS DRIVE
 93          KM        RIGHT BRANCH, AT GOLF CART CROSSING IS ROUTED TO C34.1
 94          KM        LEFT BRANCH (CODED ON DQ RECORD) IS ROUTED TO C36R1
 95          DT  D36.2L
 96          DI       0      36     166     288     360     430     538     681     859    1074
 97          DQ       0      36     166     288     360     430     538     681     859    1074
             *

 98          KK  R36.2R
 99          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.2 TO C34.1
100          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
101          RS       4    FLOW      -1
102          RC    0.06    0.04    0.06    7800  0.0321
103          RX    1000    1043    1053    1068    1093    1098    1133    1218
104          RY   102.6   100.6   100.5     100     100   100.5   100.6   102.6
             *
```

```
105          KK   S34.1
106          KM     RUNOFF FROM SUBBASIN 34.1
107          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
108          BA  1.1635
109          LS            77.3      12            77.3      12
110          UK     .300   0.590    0.13      25
111          UK     .300   0.040    0.13      75
112          RK    2570   0.085   0.045  0.0214    TRAP       0      10
113          RK    8800  0.0325   0.040            TRAP      20      10
             *

114          KK   C34.1
115          KM     COMBINE ROUTED HYDROGRAPH FROM C36.2 W/RUNOFF FROM SUBBASIN 34.1
116          HC       2
             *
1                                          HEC-1 INPUT                                          PAGE  4

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

117          KK  HVDB-1
118          KM     COMBINE HYDROGRAPH FROM C34.2 W/ C34.1
119          HC       2
             *

120          KK  HVDB-O
121          KM     DETENTION BASIN AT HAPPY VALLEY ROAD - NONREGULATORY STRUCTURE
122          KM        PRINCIPAL SPILLWAY:  42" x 800' RCP WITH A SLOPE OF 0.5%
123          KM        EMERGENCY SPILLWAY:  200' x 1.5' RECT. WEIR - CREST ELEV = 2089.5
124          KM        13 ACRE-FEET OF STORAGE FOR SEDIMENTAION
125          RS       1    STOR      -1
126          SV       0     0.2     0.7     1.8     3.4     5.4    36.3    88.1   150.2   224.3
127          SV   240.0
128          SE    2065    2066    2067    2068    2069    2070    2075    2080    2085    2090
129          SE    2091
130          SQ       0      20      30      40      60      70      80      90     100     110
131          SQ     120     130     140   143.6     328   452.6   599.4     767   954.1  1160.2
132          SE  2065.0 2066.77 2067.45 2067.94 2068.95 2070.44 2072.26 2074.32 2076.62 2079.16
133          SE  2081.9 2084.98 2088.25  2089.5  2090.0  2090.2  2090.4  2090.6  2090.8    2091
             *

134          KK   R34.1
135          KM     NORMAL DEPTH CHANNEL ROUTE FROM C34.1 TO C36.1 THROUGH PIMA CHANNEL
136          RS       1    FLOW      -1
137          RC   0.022   0.022   0.022    2200    0.01
138          RX    1000    1012    1020    1028    1036    1044    1052    1064
139          RY     107     104     102     100     100     102     104     107
             *

140          KK   S36.1
141          KM     RUNOFF FROM SUBBASIN 36.1
142          BA  0.1394
143          LS            73.4      11
144          UK     300  0.0420   0.130     100
145          RK    2330  0.0320   0.045  0.0134    TRAP      10      30
146          RK    3200  0.0270   0.040            TRAP      20      30
             *

147          KK   C36.1
148          KM     COMBINE ROUTED HYDROGRAPH FROM C34.1 WITH RUNOFF FROM SUBBASIN 36.1
149          HC       2
             *

150          KK   R36.1
151          KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.1 TO C36R1 THROUGH PIMA CHANNEL
152          RS       1    FLOW      -1
153          RC   0.022   0.022   0.022    1520    0.01
154          RX    1000    1012    1020    1028    1036    1044    1052    1064
155          RY     107     104     102     100     100     102     104     107
             *
1                                          HEC-1 INPUT                                          PAGE  5

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

156          KK   B35NL
157          KM     BRING BACK DIVERTED HYDROGRAPH FROM C35N
158          DR   D35NL
             *

159          KK   R35NL
160          KM     NORMAL DEPTH CHANNEL ROUTE FROM S35N TO C36R1
161          KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
162          RS       5    FLOW      -1
163          RC    0.06    0.04    0.06   14480  0.0318
164          RX    1000    1040    1080    1086    1091    1097    1137    1174
165          RY     105     104     103     100     100     103     104     105
             *

166          KK  B36.2L
167          KM     BRING BACK DIVERTED HYDROGRAPH FROM C36.2
168          DR  D36.2L
```

```
                *
169             KK  R36.2L
170             KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.2 TO C36R1
171             KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
172             RS       3    FLOW      -1
173             RC    0.06    0.04    0.06   10160  0.0342
174             RX    1000    1030    1060    1066    1076    1082    1112    1142
175             RY     103   102.5     102     100     100     102   102.5     103
                *

176             KK  S36R1A
177             KM     RUNOFF FROM SUBBASIN 36R1A
178             KM        RAINFALL LOSSES FOR GREINER SUBBASINS 36.3, 36R1 AND 35R ARE AREA WEIGHT
179             BA  0.6310
180             LS            74.3      10
181             UK     300   0.020   0.130     100
182             RK    1420   0.032   0.045  0.0061    TRAP       0      13
183             RK   10800   0.033   0.040            TRAP      10       9
                *

184             KK  C36R1A
185             KM     COMBINE ROUTED HYDROGRAPH FROM C36.1, D35NL & D36.2L W/RUNOFF FROM S36R1A
186             KM        AREA IS AREA FROM C36.1 + S36R1 + 40% OF AREA FROM S35N + 30% OF AREA
187             KM        FROM C36.2
188             HC       4  4.0530
                *

189             KK  S36R1B
190             KM     RUNOFF FROM SUBBASIN 36R1B
191             KM        RAINFALL LOSSES FOR GREINER SUBBASINS 36.3, 36R1 AND 35R ARE AREA WEIGHT
192             BA  0.5863
193             LS            74.3      10
194             UK     300   0.020   0.130     100
195             RK    1420   0.032   0.045  0.0061    TRAP       0      13
196             RK    8500   0.033   0.040            TRAP      10       9
                *
1                                          HEC-1 INPUT                                          PAGE  6

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

197             KK  C36R1B
198             KM     COMBINE HYDROGRAPH FROM C36R1A W/RUNOFF FROM S36R1B AT C36R1B
199             HC       2  4.6393
                *
                * R36R1B
                *   ****  TOO SHORT TO ROUTE  ****
                *    NORMAL DEPTH CHANNEL ROUTE FROM C36R1B TO C36R2A THROUGH PIMA CHANNEL
                *       1    FLOW      -1
                *  0.022   0.022   0.022    1900    0.01
                *   1000    1012    1020    1028    1036    1044    1052    1064
                *    107     104     102     100     100     102     104     107
                *

200             KK  S36R2A
201             KM     RUNOFF FROM SUBBASIN 36R2A
202             BA  0.1325
203             LS              72      20
204             UK     100   0.045   0.130     100
205             RK    1900   0.032   0.017   0.015    TRAP      15       7
206             RK     800   0.030   0.035            TRAP      10       5
                *

207             KK  C36R2A
208             KM     COMBINE ROUTED HYDROGRAPH FROM C36R1B W/RUNOFF FROM SUBBASIN 36R2A
209             HC       2
                *

210             KK  R36R2A
211             KM     NORMAL DEPTH CHANNEL ROUTE FROM C36R2A TO C36R2B THROUGH PIMA CHANNEL
212             KM     ****  TOO SHORT TO ROUTE  ****
213             KM       1    FLOW      -1
214             KM   0.022   0.022   0.022    2130    0.01
215             KM    1000    1012    1020    1028    1036    1044    1052    1064
216             KM     107     104     102     100     100     102     104     107
217             KM
218             KM     LAG THE HYDROGRAPH BY ONE TIME STEP TO ACCOUNT FOR SERIES OF INDIVIDUAL
219             KM     ROUTING REACHES THAT ARE TOO SHORT TO ROUTE.
220             KM        ASSUME WAVE CELERITY = 15-20 fps AND TOTAL LENGTH OF 5030'
221             RT                      1
                *

222             KK  S36R2B
223             KM     RUNOFF FROM SUBBASIN 36R2A
224             BA  0.2417
225             LS              72      12
226             UK     280   0.045   0.100     100
227             RK    1900   0.032   0.017   0.015    TRAP      15       7
228             RK    7360   0.030   0.040            TRAP      30      10
                *
1                                          HEC-1 INPUT                                          PAGE  7
```

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

 229          KK  C36R2B
 230          KM     COMBINE ROUTED HYDROGRAPH FROM C36R2A W/RUNOFF FROM SUBBASIN 36R2B
 231          HC       2
              *

 232          KK   S51.1
 233          KM     RUNOFF FROM SUBBASIN 51.1
 234          KM        RAINFALL LOSSES FOR GREINER SUBBASINS 51.1 AND 49.1 ARE AREA WEIGHTED
 235          BA   1.130
 236          LS            73.9       12
 237          UK     300   0.037   0.130     100
 238          RK    1800   0.038   0.045  0.0161    TRAP       0       12
 239          RK   14400   0.032   0.040            TRAP      40       15
              *

 240          KK  DVDB-I
 241          KM     COMBINE HYDROGRAPH FROM C36R2 W/RUNOFF FROM SUBBASIN 51.1
 242          HC       2
              *

 243          KK  DVDB-O
 244          KM     DETENTION BASIN AT DEER VALLEY ROAD - NONREGULATORY STRUCTURE
 245          KM        PRINCIPAL SPILLWAY:  CONDUIT EXTENDING TO BEARDSLEY ROAD
 246          KM        EMERGENCY SPILLWAY:  200' x 1.5' RECT. WEIR - CREST ELEV = 1879.5
 247          KM        13 ACRE-FEET OF STORAGE FOR SEDIMENTAION
 248          RS       1    STOR      -1
 249          SV       0     0.2     0.7     1.7     3.5     6.1    38.6    86.9   143.2   209.9
 250          SV   224.1
 251          SE    1855    1856    1857    1858    1859    1860    1865    1870    1875    1880
 252          SE    1881
 253          SQ       0      20      40      60      80     100     120     140     160     180
 254          SQ     200     220     240     260  264.38  448.42   719.6     887    1074 1279.96
 255          SE    1855 1856.43 1857.53 1858.31 1858.95 1859.61 1860.29  1861.8 1863.71 1865.82
 256          SE  1868.1 1870.67 1873.43 1877.29  1879.5  1880.0  1880.4  1880.6  1880.8  1881.0
              *
              *  R51.1
              *     DEER VALLEY BASIN OUTLET CONDUIT TO THOMPSON PEAK PARKWAY
              *     COMBINE WITH RUNOFF FROM DC RANCH
              *       L = 2820 feet
              *

 257          KK  D51.1T
 258          KM     DIVERT 100% OF FLOW TO RETRIEVE AT THOMPSON PEAK PARKWAY
 259          DT  B51.1T
 260          DI       0   10000
 261          DQ       0   10000
              *
              *
              *     ****************  BEGIN DC RANCH WATERSHED  ****************
              *
              *       THE DC RANCH HEC-1 MODEL WAS DEVELOPED BY WOOD/PATEL ASSOCIATES
              *           WOOD/PATEL FILE NAME:  DC0721C.DAT
              *           MODEL DATE:            4 JANUARY 96
              *
```



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

 262          KK    52D4
 263          KM   RUNOFF FROM SUBBASIN 52D4
 264          BA    .070
 265          LS              75    14.5
 266          UK     120    .010     .15     100
 267          RK    3100    .035    .045            TRAP      30       10
              *

 268          KK   52D4R
 269          KM   ROUTE 52D4C THROUGH 52D5 TO CP 52D5C
 270          RK    1350    .033    .045            TRAP      10       10
              *

 271          KK   52D4B
 272          KM   RUNOFF FROM SUBBASIN 52D4B
 273          BA    .022
 274          LS              75      63
 275          UK     120    .010     .15     100
 276          RK    2200    .033    .045            TRAP      30       10
              *

 277          KK  52D5C1
 278          KM   COMBINE 52D4R AND 52D4B
 279          HC       2
              *

 280          KK   52D5A
 281          KM   RUNOFF FROM 52D5A
 282          BA   .0232
 283          LS              75      63
 284          UK     120    .010     .15     100
```

```
 285          RK    1300    .032    .045            TRAP      30      10
              *

 286          KK  52D5AR
 287          KM   ROUTE 52D5A THROUGH BEARDSLEY CHANNEL TO CP 52D5C2
 288          RK     400   .0143    .035            TRAP      50       4
              *

 289          KK  52D5C2
 290          KM   COMBINE 25D5C1 AND 52D5AR
 291          HC       2
              *

 292          KK   52D5R
 293          KM   ROUTE 52D5C IN BEARDSLEY CHANNEL TO CP 52C3BC2
 294          RK     240   .0143    .035            TRAP      50       4
              *
```



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

 295          KK    52C3
 296          KM   RUNOFF FROM SUBBASIN 52C3
 297          BA    .006
 298          LS              75      65
 299          UK     100     .02     .10     100
 300          RK     800    .033    .045            TRAP      30      10
              *

 301          KK   52C3R
 302          KM   ROUTE 52C3 THROUGH SUBBASIN 52C4 TO CP 52C4C1
 303          RK    1350    .034    .045            TRAP      10      10
              *

 304          KK   52C3B
 305          KM   RUNOFF FROM SUBBASIN 52C3B
 306          BA    .016
 307          LS              75      60
 308          UK     100     .02     .10     100
 309          RK    1400    .034    .045            TRAP      30      10
              *

 310          KK  2C3BC1
 311          KM   COMBINE 52C3B AND 52C3R
 312          HC       2
              *

 313          KK  2C3BC2
 314          KM   COMBINE 52C3BC1 AND 52C5R
 315          HC       2
              *

 316          KK  52C3BR
 317          KM   ROUTE 52C3BC2 IN BEARDSLEY CHANNEL TO CP 52C4C2
 318          RK     430   .0143    .035            TRAP      50       4
              *
              *

 319          KK     51C     SUB
 320          KM        RUNOFF FROM SUB 51C
 321          BA   .0972
 322          LS              74      15
 323          UK     100   .0213     .10     100
 324          RK    3900   .0375    .045            TRAP      30      10
              *

 325          KK   51C1D
 326          KM   DIVERT 67 PERCENT OF 51C TO WEST (33 PERCENT TO SOUTH)
 327          DT  51C1DV
 328          DI       0   10000
 329          DQ       0    6700
              *
```



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

 330          KK   51C1R
 331          KM   ROUTE 51C1D THROUGH SUBBASIN 52C1
 332          RK    1350   .0364    .045            TRAP      10      10
              *

 333          KK    52C1
 334          KM   RUNOFF FROM SUBBASIN 52C1
 335          BA    .029
 336          LS              75    20.5
 337          UK     100     .02     .10     100
 338          RK    1350    .021    .045            TRAP      30      10
              *

 339          KK   52C1C
 340          KM   COMBINE 51C1R AND 52C1
```

```
341          HC       2   .0611
             *

342          KK   52C1R
343          KM   ROUTE 52C1C THROUGH BASIN 52C2A TO CP 52C2BC
344          RK    1500    .033    .045            TRAP      10       10
             *

345          KK   52C2A
346          KM   RUNOFF FROM SUBBASIN 52C2A
347          BA    .019
348          LS              75       2
349          UK     100     .02     .10     100
350          RK    1500    .033    .045            TRAP      30       10
             *

351          KK  52C2AC
352          KM   COMBINE 52C2A AND 52C1R
353          HC       2
             *

354          KK   52C2B
355          KM   RUNOFF FROM SUBBASIN 52C2B
356          BA   .0275
357          LS              75      11
358          UK     100     .02     .10     100
359          RK    2000    .030    .045            TRAP      30       10
             *

360          KK  52C2BC
361          KM   COMBINE 52C2B AND 52C2AC
362          HC       2
             *
```



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

363          KK  52C2BR
364          KM   ROUTE 52C2BC THROUGH 52C2C TO CP 52C2CC
365          RK    1500    .040    .045            TRAP      10       10
             *

366          KK   52C2C
367          KM   RUNOFF FROM SUBBASIN 52C2C
368          BA    .014
369          LS              75      62
370          UK     100     .02     .10     100
371          RK    1500     .04    .045            TRAP      30       10
             *

372          KK  52C2CC
373          KM   COMBINE 52C2C AND 52C2BR
374          HC       2
             *

375          KK   52C2R
376          KM   ROUTE 52C2CC THROUGH SUBBASIN 52C4 TO CP 52C4C1
377          RK    1550    .030    .045            TRAP      10       10
             *

378          KK    52C4
379          KM   RUNOFF FROM SUBBASIN 52C4
380          BA    .017
381          LS              75      60
382          UK     100     .02     .10     100
383          RK    1550    .030    .045            TRAP      30       10
             *

384          KK  52C4C1
385          KM   COMBINE 52C4 AND 52C2R
386          HC       2
             *

387          KK  52C4C2
388          KM   COMBINE 52C4C1 AND 52C3BR
389          HC       2
             *

390          KK   52C4R
391          KM   ROUTE 52C4C2 WEST IN BEARDSLEY CHANNEL TO CP 52C15C2
392          RK     850   .0143    .035            TRAP      50        4
             *

393          KK   52C13
394          KM   RUNOFF FROM SUBBASIN 52C13
395          BA    .023
396          LS              75      31
397          UK     100     .02     .10     100
398          RK     950    .040    .045            TRAP      30       10
             *
```

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

 399          KK  2C13DV
 400          KM   DIVERT FIRST 40 CFS INTO STORM DRAIN; REMAINDER FLOWS OVER ROAD
 401          DT   STORM
 402          DI       0      40    1000
 403          DQ       0      40      40
              *
              * KK52C13R
              * KM ROUTE 52C13 THROUGH SUBBASIN 52C15 TO CP 52C15C1
              * RK  1800    .035    .045            TRAP      10      10
              *

 404          KK   52C15
 405          KM   RUNOFF FROM SUBBASIN 52C15
 406          BA    .046
 407          LS              75    64.4
 408          UK     100     .02     .10     100
 409          RK    2050    .036    .045            TRAP      30      10
              *

 410          KK  2C15C1
 411          KM   COMBINE 52C15 AND 52C13DV
 412          HC       2    .046
              *

 413          KK  2C15C2
 414          KM   COMBINE 52C15C1 AND 52C4R
 415          HC       2
              *

 416          KK  52C15R
 417          KM   ROUTE 52C15C2 IN BEARDSLEY CHANNEL TO CP 52C14C3
 418          RK     750   .0143    .035            TRAP      50       4
              *

 419          KK  52C14A
 420          KM   RUNOFF FROM SUBBASIN 52C14A
 421          BA    .041
 422          LS              75    67.7
 423          UK     100     .02     .10     100
 424          RK    2050    .031    .045            TRAP      30      10
              *

 425          KK  2C14AC
 426          KM   COMBINE 52C14A AND 52C15R
 427          HC       2
              *

 428          KK  2C14AR
 429          KM   ROUTE 52C14AC IN BEARDSLEY CHANNEL TO CP 52C14BC2
 430          RK     380   .0143    .035            TRAP      50       4
              *
              *
```



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

 431          KK  51C1DV
 432          KM   RETRIEVE DIVERTED FLOW
 433          DR  51C1DV
              *

 434          KK   51C2D
 435          KM   DIVERT 27 PERCENT OF 51C1DV TO WEST (73 PERCENT TO SOUTH)
 436          DT  51C2DV
 437          DI       0   10000
 438          DQ       0    2700
              *

 439          KK   51C2R
 440          KM   ROUTE 51C2D THROUGH SUBBASIN 52C5 TO CP 52C5C
 441          RK     700    .030    .045            TRAP      10      10
              *

 442          KK    52C5
 443          KM   RUNOFF FROM SUBBASIN 52C5
 444          BA    .016
 445          LS              75      27
 446          UK     100     .02     .10     100
 447          RK    1200     .03    .045            TRAP      30      10
              *

 448          KK   52C5C
 449          KM   COMBINE 51C2R AND 52C5
 450          HC       2   .0635
              *

 451          KK   52C5R
 452          KM   ROUTE 52C5C THROUGH SUBBASIN 52C6 TO CP 52C6C
 453          RK    3100    .035    .045            TRAP      10      10
```

```
                 *
454              KK    52C6
455              KM   RUNOFF FROM SUBBASIN 52C6
456              BA    .036
457              LS              75    31.4
458              UK     100     .02     .10     100
459              RK    3100    .035    .045            TRAP      30      10
                 *

460              KK   52C6C
461              KM   COMBINE 52C5R AND 52C6
462              HC       2
                 *

463              KK   52C6R
464              KM   ROUTE 52C6C THROUGH SUBBASIN 52C10 TO CP 52C10C2
465              RK     450    .032    .045            TRAP      10      10
                 *
1                                          HEC-1 INPUT                                                PAGE 14

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

466              KK  51C2DV
467              KM   RETRIEVE 52C2DV
468              DR  51C2DV
                 *

469              KK   51C3R
470              KM   ROUTE 52C2DV THROUGH SUBBASIN 52C7 TO CP 52C7C
471              RK     700    .040    .045            TRAP      10      10
                 *

472              KK     51B     SUB
473              KM        RUNOFF FROM SUB 51B
474              BA   .5711
475              LS       0    71.9    13.1
476              UK     100   .0213     .10     100
477              RK    8900   .0300    .045            TRAP      50      25
                 *

478              KK   51B1D
479              KM   DIVERT 92 PERCENT OF SUBBASIN 51B TO WEST (8 PERCENT TO SOUTH)
480              DT  51B1DV
481              DI       0   10000
482              DQ       0    9200
                 *

483              KK   51B1R
484              KM    ROUTE 51B1D THROUGH SUBBASIN 52C7 TO CP 52C7C
485              RK     450     .04    .045            TRAP      10      10
                 *

486              KK    52C7
487              KM   RUNOFF FROM SUBBASIN 52C7
488              BA    .006
489              LS              75      27
490              UK     100     .02     .10     100
491              RK     550     .04    .045            TRAP      30      10
                 *

492              KK   52C7C
493              KM   COMBINE 51B1R, 51C3R, AND 52C7
494              HC       3   .0693
                 *

495              KK   52C7R
496              KM   ROUTE 52C7C THROUGH SUBBASIN 52C9 TO CP 52C9C1
497              RK    1550    .036    .045            TRAP      10      10
                 *

498              KK  51B1DV
499              KM   RETRIEVE DIVERTED FLOW 51B1DV
500              DR  51B1DV
                 *
1                                          HEC-1 INPUT                                                PAGE 15

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

501              KK   51B2D
502              KM   DIVERT 84 PERCENT OF 51B1DV TO WEST (16 PERCENT TO SOUTH)
503              DT  51B2DV
504              DI       0   10000
505              DQ       0    8400
                 *

506              KK   51B2R
507              KM   ROUTE 51B2D THROUGH SUBBASIN 52C8 TO CP 52C8C
508              RK     750    .034    .045            TRAP      10      10
                 *
```

```
 509          KK    52C8
 510          KM   RUNOFF FROM SUBBASIN 52C8
 511          BA    .008
 512          LS              75      27
 513          UK     100     .02     .10     100
 514          RK     750    .034    .045            TRAP      30      10
              *

 515          KK   52C8C
 516          KM   COMBINE 51B2R AND 52C8
 517          HC       2   .4493
              *

 518          KK   52C8R
 519          KM   ROUTE 52C8C THROUGH SUBBASIN 52C9 TO CP 52C9C1
 520          RK    1100    .036    .045            TRAP      10      10
              *

 521          KK  52C9C1
 522          KM   COMBINE 52C7R AND 52C8R
 523          HC       2
              *

 524          KK  52C9R1
 525          KM   ROUTE 52C9C1 THROUGH SUBBASIN 52C9 TO CP 52C9C2
 526          RK    1050    .036    .045            TRAP      10      10
              *

 527          KK    52C9
 528          KM   RUNOFF FROM SUBBASIN 52C9
 529          BA    .069
 530          LS              75   31.85
 531          UK     100     .02     .10     100
 532          RK    3150    .036    .045            TRAP      30      10
              *

 533          KK  52C9C2
 534          KM   COMBINE 52C9R1 AND 52C9
 535          HC       2
              *
```



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

 536          KK  52C9R2
 537          KM   ROUTE 52C9C2 THROUGH SUBBASIN 52C10 TO CP 52C10C1
 538          RK     500    .032    .045            TRAP      10      10
              *

 539          KK  2C10C1
 540          KM   COMBINE 52C9R2 AND 52C6R
 541          HC       2
              *

 542          KK  2C10R1
 543          KM   ROUTE 52C10C1 THROUGH SUBBASIN 52C10 TO CP 52C10C2
 544          RK     300    .032    .045            TRAP      10      10
              *

 545          KK   52C10
 546          KM   RUNOFF FROM SUBBASIN 52C10
 547          BA    .014
 548          LS              75    7.85
 549          UK     100     .02     .10     100
 550          RK     800    .032    .045            TRAP      30      10
              *

 551          KK  2C10C2
 552          KM   COMBINE 52C10R1 AND 52C10
 553          HC       2
              *

 554          KK   52C11
 555          KM   RUNOFF FROM SUBBASIN 52C11
 556          BA   .0425
 557          LS              75      27
 558          UK     100     .02     .10     100
 559          RK    2800    .031    .045            TRAP      30      10
              *

 560          KK  2C11R1
 561          KM   PIPE ROUTE 52C11 TO CP 52C11C
 562          RK     650     .02    .045            CIRC       3
              *

 563          KK  52C13D
 564          KM   RETRIEVE DIVERTED FLOW
 565          DR   STORM
              *

 566          KK  52C11C
 567          KM   COMBINE 52C13D AND 52C11R1
```

```
 568          HC       2   .0655
              *
1                                          HEC-1 INPUT                                                PAGE 17

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

 569          KK  2C11CR
 570          KM   PIPE ROUTE 52C11C TO CP 52C11C2
 571          RK     750     .02    .045            CIRC       3
              *

 572          KK  2C11C2
 573          KM   COMBINE 52C11CR AND 52C10C2
 574          HC       2
              *

 575          KK  2C11R2
 576          KM   ROUTE 52C11C2 THROUGH SUBBASIN 52C12 TO CP 52C12C
 577          RK     700     .03    .045            TRAP      10       10
              *

 578          KK   52C12
 579          KM   RUNOFF FROM SUBBASIN 52C12
 580          BA    .023
 581          LS              75      85
 582          UK     100     .02     .10     100
 583          RK     900     .03    .045            TRAP      30       10
              *

 584          KK  52C12C
 585          KM   COMBINE 52C11R2 AND 52C12
 586          HC       2
              *

 587          KK  52C12R
 588          KM   ROUTE 52C12C THROUGH SUBBASIN 52C14 TO CP 52C14C1
 589          RK    1150    .029    .045            TRAP      10       10
              *

 590          KK  52C14B
 591          KM   RUNOFF FROM SUBBASIN 52C14B
 592          BA    .021
 593          LS              75      60
 594          UK     100     .02     .10     100
 595          RK    1250    .029    .045            TRAP      30       10
              *

 596          KK  C14BC1
 597          KM   COMBINE 52C14B AND 52C12R
 598          HC       2
              *

 599          KK  C14BC2
 600          KM   COMBINE 52C14BC1 AND 52C14AR
 601          HC       2
              *
1                                          HEC-1 INPUT                                                PAGE 18

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

 602          KK  52C14R
 603          KM   ROUTE 52C14C3 WEST IN BEARDSLEY CHANNEL TO CP 52B5C2
 604          RK     600   .0143    .035            TRAP      50        4
              *

 605          KK  51B2DV
 606          KM   RETRIEVE DIVERTED FLOW
 607          DR  51B2DV
              *

 608          KK   51B3D
 609          KM   DIVERT 84 PERCENT OF 51B2DV TO WEST (16 PERCENT TO SOUTH)
 610          DT  51B3DV
 611          DI       0   10000
 612          DQ       0    8400
              *

 613          KK   51B3R
 614          KM   ROUTE 51B3D THROUGH SUBBASIN 52B1 TO CP 52B1C
 615          RK     600    .039    .045            TRAP      10       10
              *

 616          KK    52B1
 617          KM   RUNOFF FROM SUBBASIN 52B1
 618          BA    .003
 619          LS              75      27
 620          UK     100     .02     .10     100
 621          RK     600    .039    .045            TRAP      30       10
              *

 622          KK   52B1C
```

```
 623          KM   COMBINE 51B3R AND 52B1
 624          HC       2   .0736
              *

 625          KK   52B1R
 626          KM   ROUTE 52B1C THROUGH SUBBASIN 52B2 TO CP 52B2C1
 627          RK     930    .037    .045            TRAP      10       10
              *

 628          KK  51B3DV
 629          KM   RETRIEVE DIVERTED FLOW 51B3DV
 630          DR  51B3DV
              *

 631          KK   51B4D
 632          KM   DIVERT 82 PERCENT OF 51B3DV TO WEST (18 PERCENT TO SOUTH)
 633          DT  51B4DV
 634          DI       0   10000
 635          DQ       0    8200
              *
1                                          HEC-1 INPUT                                          PAGE 19

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

 636          KK  51B4R1
 637          KM   ROUTE 51B4D THROUGH SUBBASIN 52B2 TO CP 52B2C1
 638          RK    1350    .037    .045            TRAP      10       10
              *

 639          KK  52B2C1
 640          KM   COMBINE 51B4R1 AND 52B1R
 641          HC       2   .1403
              *

 642          KK  52B2R1
 643          KM   ROUTE 52B2R1 THROUGH SUBBASIN 52B2 TO CP 52B2C2
 644          RK    1000    .037    .045            TRAP      10       10
              *

 645          KK    52B2
 646          KM   RUNOFF FROM SUBBASIN 52B2
 647          BA    .032
 648          LS              75      17
 649          UK     100     .02     .10     100
 650          RK    2350    .037    .045            TRAP      30       10
              *

 651          KK  52B2C2
 652          KM   COMBINE 52B2 AND 52B2R1
 653          HC       2
              *

 654          KK  52B2R2
 655          KM   ROUTE 52B2C2 THROUGH SUBBASIN 52B3 TO CP 52B3C2
 656          RK     850    .026    .045            TRAP      10       10
              *

 657          KK  52B3R1
 658          KM   ROUTE 52B3C1 THROUGH SUBBASIN 52B3 TO CP 52B3C2
 659          RK     500    .024    .045            TRAP      10       10
              *

 660          KK    52B3
 661          KM   RUNOFF FROM SUBBASIN 52B3
 662          BA    .062
 663          LS              75    31.8
 664          UK     100     .02     .10     100
 665          RK    3450    .030    .045            TRAP      30       10
              *

 666          KK  52B3C2
 667          KM   COMBINE 52B3 AND 52B3R1
 668          HC       2
              *
1                                          HEC-1 INPUT                                          PAGE 20

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

 669          KK  52B3R2
 670          KM   ROUTE 52B3C2 THROUGH 52B4 TO CP 52B4C
 671          RK    1700    .024    .045            TRAP      10       10
              *

 672          KK    52B4
 673          KM   RUNOFF FROM SUBBASIN 52B4
 674          BA    .026
 675          LS              75      62
 676          UK     100     .02     .10     100
 677          RK    1700    .024    .045            TRAP      30       10
              *
```

```
678          KK   52B4C
679          KM   COMBINE 52B4 AND 52B3R2
680          HC       2
             *

681          KK   52B4R
682          KM   ROUTE 52B4C THROUGH SUBBASIN 52B5 TO CP 52B5C1
683          RK     550    .027    .045            TRAP      10       10
             *

684          KK    52B5
685          KM   RUNOFF FROM SUBBASIN 52B5
686          BA    .021
687          LS              75    56.9
688          UK     100     .02     .10     100
689          RK    1400     .03    .045            TRAP      30       10
             *

690          KK  52B5C1
691          KM   COMBINE 52B5 AND 52B4R
692          HC       2
             *

693          KK  52B5C2
694          KM   COMBINE 52B5C1 AND 52C14R
695          HC       2
             *

696          KK   52B5R
697          KM   ROUTE 52B5C2 IN BEARDSLEY CHANNEL TO CP 52B7C2
698          RK    1100   .0143    .035            TRAP      50        4
             *

699          KK  51B4DV
700          KM   RETRIEVE DIVERTED FLOW 51B4DV
701          DR  51B4DV
             *
```



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

702          KK   51B5D
703          KM   DIVERT 68 PERCENT OF 51B4DV TO WEST (32 PERCENT TO SOUTH)
704          DT  51B5DV
705          DI       0   10000
706          DQ       0    6800
             *

707          KK   51B5R
708          KM   ROUTE 51B5D THROUGH SUBBASIN 52B6 TO CP 51B7C
709          RK    1250    .035    .045            TRAP      10       10
             *

710          KK  51B5DV
711          KM   RETRIEVE DIVERTED FLOW
712          DR  51B5DV
             *

713          KK   51B6D
714          KM   DIVERT 53 PERCENT OF 51B5DV TO WEST (47 PERCENT TO SOUTH)
715          DT  51B6DV
716          DI       0   10000
717          DQ       0    5300
             *

718          KK   51B6R
719          KM   ROUTE 51B6D THROUGH SUBBASIN 52B6 TO CP 51B7C
720          RK     925    .033    .045            TRAP      10       10
             *

721          KK  51B6DV
722          KM   RETRIEVE DIVERTED FLOW 51B6DV
723          DR  51B6DV
             *

724          KK   51B7D
725          KM   DIVERT 58 PERCENT OF 51B6DV TO WEST (42 PERCENT TO SOUTH)
726          DT  51B7DV
727          DI       0   10000
728          DQ       0    5800
             *

729          KK  51B7R1
730          KM   ROUTE 51B7D THROUGH SUBBASIN 52B6 TO CP 51B7C
731          RK     530    .033    .045            TRAP      10       10
             *

732          KK   51B7C
733          KM   COMBINE 51B7R1, 51B5R, AND 51B6R
734          HC       3   .2404
             *
```

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

 735          KK  51B7R2
 736          KM   ROUTE 51B7C THROUGH SUBBASIN 52B6 TO CP 52B6C
 737          RK    2300    .033    .045            TRAP      10      10
              *

 738          KK    52B6
 739          KM   RUNOFF FROM SUBBASIN 52B6
 740          BA    .096
 741          LS              75   13.55
 742          UK     100     .02     .10     100
 743          RK    3200    .033    .045            TRAP      30      10
              *

 744          KK   52B6C
 745          KM   COMBINE 51B7R2 AND 52B6
 746          HC       2
              *

 747          KK   52B6R
 748          KM   ROUTE 52B6C THROUGH SUBBASIN 52B7 TO CP 52B7C1
 749          RK    2750    .028    .045            TRAP      10      10
              *

 750          KK    52B7
 751          KM   RUNOFF FROM SUBBASIN 52B7
 752          BA    .080
 753          LS              75   78.45
 754          UK     100     .02     .10     100
 755          RK    2750    .028    .045            TRAP      30      10
              *

 756          KK  52B7C1
 757          KM   COMBINE 52B7 AND 52B6R
 758          HC       2
              *

 759          KK  52B7C2
 760          KM   COMBINE 52B7C1 AND 52B5R
 761          HC       2
              *

 762          KK    52A2
 763          KM   RUNOFF FROM SUBBASIN 52A2
 764          BA    .065
 765          LS              75    88.8
 766          UK     100     .02     .10     100
 767          RK    2900    .023    .045            TRAP      30      10
              *
```



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

 768          KK  52A2C2
 769          KM   COMBINE 52B7C2 AND 52A2
 770          HC       2    1.62
              *

 771          KK  51B7DV
 772          KM   RETRIEVE DIVERTED FLOW 51B7DV
 773          DR  51B7DV
              *

 774          KK   51B8R
 775          KM   ROUTE 51B7DV THROUGH SUBBASIN 52A1 TO CP 52A1C
 776          RK    3400    .033    .045            TRAP      10      10
              *

 777          KK    52A1
 778          KM   RUNOFF FROM SUBBASIN 52A1
 779          BA    .130
 780          LS              75   32.25
 781          UK     100     .02     .10     100
 782          RK    3400    .033    .045            TRAP      30      10
              *

 783          KK   52A1C
 784          KM   COMBINE 52A1 AND 51B8R
 785          HC       2
              *
              *
              *     ******************  END DC RANCH WATERSHED  ******************
              *
              *
              *     ******************  BEGIN GVSCE MODIFICATIONS  ******************
              *

 786          KK   D51.1
 787          KM   RETRIEVE DIVERTED FLOW
```

```
 788          DR  B51.1T
              *

 789          KK    C52A
 790          KM     COMBINE ROUTED HYDROGRAPH FROM C51.1 WITH HYDROGRAPH FROM C52A1C AT
 791          KM     THOMPSON PEAK PARKWAY
 792          HC       2  6.2735
              *
              *   R52A
              *     DEER VALLEY BASIN OUTLET CONDUIT TO OUTLET AT SIERRA PINTA CHANNEL
              *     COMBINE WITH RUNOFF FROM DC RANCH
              *       L = 3130 feet
              *
1                                          HEC-1 INPUT                                          PAGE 24

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

 793          KK     C52
 794          KM     COMBINE ROUTED HYDROGRAPH FROM C52A WITH HYDROGRAPH FROM C52A2C AT
 795          KM     BEARDSLEY ROAD
 796          HC       2  7.9160
              *

 797          KK     R52
 798          KM     NORMAL DEPTH CHANNEL ROUTE FROM C52 TO C53 THROUGH PIMA CHANNEL
 799          RS       1    FLOW      -1
 800          RC   0.022   0.022   0.022    4050    0.01
 801          RX    1000    1012    1020    1028    1058    1066    1074    1086
 802          RY     107     104     102     100     100     102     104     107
              *

 803          KK    D52T
 804          KM     DIVERT 100% OF FLOW TO RETRIEVE JUST U/S OF UNION HILLS DETENTION BASIN
 805          DT    B52T
 806          DI       0   10000
 807          DQ       0   10000
              *

 808          KK   CLEAR
 809          KM     CLEAR HYDROGRAPHS FROM STACK
 810          HC       2
              *
              *
              *     ****************  BEGIN GRAYHAWK WATERSHED  ****************
              *
              *       THE GRAYHAWK HEC-1 MODEL (VILLAGES II AND III) WAS DEVELOPED BY DEI
              *           DEI FILE NAME:  GH23FAB.H1I
              *           MODEL DATE:     21 MAY 96
              *

 811          KK     37A     SUB
 812          KM         RUNOFF FROM SUB-BASIN 37A
 813          BA   .6765
 814          LS              74    24.8
 815          UK      61   .0213     .10     100
 816          RK    4800   .0237    .045            TRAP      50     130
              *

 817          KK    37AE     DIV
 818          KM        SPLIT FLOWS AT SOUTH BOUNDARY OF SUB 37A FOR ROUTING TO DETENTION
 819          KM        BASIN 53R & 38R-1.  THIS DIVERT OPERATION REFLECTS THE BREAK IN THE
 820          KM        DEER VALLEY ROAD CHANNEL BETWEEN HAYDEN & PIMA ROADS.  THIS SPLIT IS
 821          KM        BASED ON NEW CORE NORTH PLAN DEVELOPED BY G.W. LARSON & ASSC., INC.
 822          KM        DATED 6/16/92.  DIVERT RATIO IS BASED ON APPROXIMATE D.A. FROM SUB 37A
 823          KM        THAT IS INTERCEPTED BY EACH CHANNEL SEGMENT ALONG DEER VALLEY ROAD.
 824          KM
 825          KM        (THIS SPLIT HAS BEEN UPDATED FROM THE OLP.6 MODEL TO REFLECT A 30% SPLIT
 826          KM        TO THE SOUTH AND A 70% SPLIT TO THE WEST FOR THIS STUDY AND IS BASED ON
 827          KM        UPSTREAM CONTRIBUTING WATERSHED AREA TO THIS CONCENTRATION POINT)
 828          DT    37AW
 829          DI       0     100     500    1000    1500
1                                          HEC-1 INPUT                                          PAGE 25

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

 830          DQ       0      70     350     700    1050
              *

 831          KK   37AE1      CP
 832          KM        ROUTE NON-DIVERTED FLOW FROM DIV 37AE THROUGH SUB 5N.  THIS IS A
 833          KM        PRELIMINARY CHANNEL CONFIGURATION FOR THE GOLF COURSE CHANNEL.
 834          RS       1    FLOW
 835          RC    .055    .045    .055     800    .025
 836          RX       0      16      26      30      40      44      54      70
 837          RY       6       2       2       0       0       2       2       6
              *

 838          KK   SUB5N
 839          KM        RUNOFF FROM SUBBASIN 5 IN NORTH 18 MODEL.
 840          BA   0.029
 841          LS              77      18
 842          UK     100    .013     .15     100
```

```
843          RK    1000   0.005    .018    .015    TRAP      50       20
844          RK     500    .015    .025            TRAP      10        4
             *

845          KK    CP5N
846          KM        ADD HYDROGRAPHS AT CP5N
847          HC       2   0.232
             *

848          KK   RET5N
849          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 5.  18" PIPE OUTFLOW WILL
850          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
851          RS       1    STOR       0       0
852          SV       0     .04     .33     .93     1.8    2.35    3.16     4.2     6.1
853          SQ       0       8      10      12      15      17     102     191     668
854          SE    1797    1798    1800    1802    1804    1805    1806    1807    1808
             *

855          KK   R6N.1
856          KM        ROUTE FLOW FROM CP5 TO CP6 IN NORTH 18 MODEL
857          KM        ASSUME CHANNEL IS SAME CONFIGURATION AS ABOVE FOR PROPOSED GOLF COURSE
858          KM        CHANNEL.
859          RS       1    FLOW
860          RC    .055    .045    .055    2200    .025
861          RX       0      16      26      30      40      44      54      70
862          RY       6       2       2       0       0       2       2       6
             *

863          KK   SUB6B
864          KM        RUNOFF FROM WEST PORTION OF EXISTING SUB6N ADJACENT TO CHANNEL
865          BA    .032
866          LS              81       0
867          UK     200    .025     .15     100
868          RK    1300    .015    .025            TRAP      10        4
             *
```



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

869          KK    SR6B
870          KM        ROUTE FLOW THROUGH RETENTION BASIN IN DRIVING RANGE CHANNEL
871          RS       1    STOR       0       0
872          SV       0     .17     .57    1.12    1.78
873          SQ       0       8      10     120     380
874          SE    1772    1773    1774    1775    1776
             *

875          KK   CP6.1
876          KM        ADD HYDROGRAPHS AT CP6.1
877          HC       2
             *

878          KK   SUB1N
879          KM        RUNOFF FROM SUBBASIN 1N
880          BA    .019
881          LS              77      18
882          UK     100    .013     .15     100
883          RK    1470   .0204    .018            TRAP      50       20
             *

884          KK    R2NA
885          KM        ROUTE FLOW FROM CP1 TO CP2NA
886          RS       1    FLOW
887          RC     .03     .03     .03     400    .025
888          RX       0       8      13      17      22      26      31      39
889          RY       4       2       2       0       0       2       2       4
             *

890          KK  SUB2NA
891          KM        RUNOFF FROM SUBBASIN 2NA
892          BA    .015
893          LS              81       0
894          UK     150    .013     .15     100
895          RK    1050   .0215    .025            TRAP      20        6
             *

896          KK   CP2NA
897          KM        ADD HYDROGRAPHS AT CP2NA
898          HC       2
             *

899          KK   SR2NA
900          KM        ROUTE FLOW THROUGH DETENTION BASIN IN SUB2NA
901          RS       1    STOR       0       0
902          SV       0    .076    .291    .708     1.2
903          SQ       0       0       0       0     160
904          SE    1772    1773    1774    1775    1776
             *
```



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

```
905          KK    R2NB
906          KM        ROUTE FLOW FROM CP2NA TO CP2NB
907          RS       1     FLOW
908          RC     .03      .03      .03     1050     .015
909          RX       0        8       13       17       22       26       31       39
910          RY       4        2        2        0        0        2        2        4
             *

911          KK  SUB2NB
912          KM        RUNOFF FROM SUBBASIN 2NB
913          BA     .03
914          LS                77       53
915          UK     150     .013      .15      100
916          RK    1200     .015     .025              TRAP       20       50
             *

917          KK   CP2NB
918          KM        ADD HYDROGRAPHS AT CP2NB
919          HC       2
             *

920          KK   SR2NB
921          KM        STORAGE ROUTE FLOW THROUGH DETENTION BASIN IN SUB2NB
922          RS       1     STOR        0        0
923          SV       0      .19      .69     1.66     3.23      4.5
924          SQ       0        2        8       12       17      170
925          SE    1796     1798     1800     1802     1804     1805
             *

926          KK   RCP4N
927          KM        ROUTE FLOW FROM CP2NB TO CP4N
928          RS       1     FLOW
929          RC     .03      .03      .03      740     .018
930          RX       0        8       13       17       22       26       31       39
931          RY       4        2        2        0        0        2        2        4
             *

932          KK   SUB6N
933          KM        RUNOFF FROM SUBBASIN 6 IN NORTH 18 MODEL.  TO LAKE NORTH OF CLUBHOUSE.
934          BA    .049
935          LS                81        0
936          UK     200     .025      .15      100
937          RK    1300     .015     .025              TRAP       10        4
             *

938          KK   RET6N
939          KM        RETENTION ROUTING THROUGH LAKE AT HOLE 18, NORTH COURSE.
940          RS       1     STOR
941          SV       0     3.01     6.64    10.75    13.09    15.90
942          SQ       0        0        0       10       26      100
943          SE    1782     1784     1786     1788     1789     1790
             *
```



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

944          KK  RCP4N1
945          KM        ROUTE FLOW FROM CP6N TO CP4N
946          RS       1     FLOW
947          RC     .03      .03      .03      550     .018
948          RX       0        8       13       17       22       26       31       39
949          RY       4        2        2        0        0        2        2        4
             *

950          KK  CP4N.1
951          KM        ADD HYDROGRAPHS AT CP4N.1
952          HC       2
             *

953          KK   SUB3N
954          KM        RUNOFF FROM SUBBASIN 3N, NORTH 18 MODEL
955          BA    .027
956          LS                81        0
957          UK     100      .02      .15      100
958          RK    2800   0.0207     .025              TRAP       10        4
             *

959          KK   RET3N
960          KM        ROUTE FLOW THROUGH RETENTION BASIN NO. 3.  18" PIPE OUTFLOW WILL
961          KM        BLEED FLOWS TO DRAIN THE BASIN AFTER THE STORM HAS PASSED.
962          RS       1     STOR        0        0
963          SV       0     1.73     8.97    13.32    15.74
964          SQ       0        4        7        9       11
965          SE    1793     1795     1800     1803     1804
             *

966          KK     R4N
967          KM        ROUTE FLOW FROM CP3N TO CP4N IN NORTH MODEL
968          RS       1     FLOW
969          RC    .035     .035     .035      950     .018
970          RX       0        8       13       17       22       26       31       39
```

```
 971          RY       4       2       2       0       0       2       2       4
              *

 972          KK  CP4N.2
 973          KM        ADD HYDROGRAPHS AT CPN.2
 974          HC       2
              *

 975          KK   SUB4N
 976          KM        RUNOFF FROM SUBBASIN 4N.
 977          BA    .032
 978          LS              77      18
 979          UK     100    .015     .15     100
 980          RK    1200   0.007    .018            TRAP      50      20
              *
1                                          HEC-1 INPUT                                                    PAGE 29

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

 981          KK    CP4N
 982          KM        ADD HYDROGRAPHS AT CP4N
 983          HC       2
              *

 984          KK     R6N
 985          KM        ROUTE FLOW FROM CP4N TO CP6N ALONG THOMPSON PEAK PKWY AT CLUBHOUSE
 986          RS       1    FLOW
 987          RC    .045    .035    .045     750    .025
 988          RX       0       8      13      17      22      26      31      39
 989          RY       4       2       2       0       0       2       2       4
              *

 990          KK   SUB6A
 991          KM        RUNOFF FROM SUBBASIN 6A (CLUBHOUSE AREA NORTH OF THOMPSON PEAK PKWY).
 992          BA    .013
 993          LS              83      68
 994          UK     100    .015     .12     100
 995          RK     800     .01    .025            TRAP       2       3
              *

 996          KK   CP6.2
 997          KM        ADD HYDROGRAPHS AT CP6.2
 998          HC       2
              *

 999          KK    CP6N
1000          KM        ADD HYDROGRAPHS AT CP6N
1001          HC       2
              *
              *       ABOVE DISCHARGE FROM NORTH 18 THROUGH BRIDGE AT TPP STATION 103+45
              *

1002          KK   RCP6N
1003          KM        ROUTE FLOW FROM CP6N TO CP3C
1004          RS       1    FLOW
1005          RC    .045    .035    .045     300    .015
1006          RX       0       8      13      17      37      45      51      59
1007          RY       4       2       2       0       0       2       2       4
              *

1008          KK   SUB3C
1009          KM        RUNOFF FROM SUBBASIN 3C, SOUTH COURSE AT MAINTENANCE FACILITY.
1010          BA   .0104
1011          LS              77      68
1012          UK     100    .025     .02     100
1013          RK     600    .015    .035            TRAP      50      20
              *
1                                          HEC-1 INPUT                                                    PAGE 30

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

1014          KK    CP3C
1015          KM        COMBINE NORTH COURSE HYDROGRAPH WITH FIRST SOUTH COURSE HYDROGRAPH
1016          HC       2
              *

1017          KK     R3C
1018          KM        ROUTE FLOW FROM SUB3C TO CP3 THROUGH GC1018
1019          KM        ASSUME CHANNEL IS SAME CONFIGURATION AS ABOVE FOR PROPOSED GOLF COURSE
1020          KM        CHANNEL.
1021          RS       1    FLOW
1022          RC    .055    .045    .055    2050    .025
1023          RX       0      20      30      40      60      70      80     100
1024          RY    1650    1746    1744    1742    1742    1744    1746    1750
              *

1025          KK  GC1018
1026          KM        RUNOFF FROM HOLES NO. 10, 18 AND DRIVING RANGE THAT CONTRIBUTE TO WASH
1027          BA    .044
1028          LS              81       0
1029          UK     200    .025     .15     100
```

```
1030          RK    1800   .0233    .025            TRAP      10       4
              *

1031          KK   GC1-9
1032          KM        RUNOFF FROM GOLF COURSE HOLES 1 & 9 CONTRIBUTING TO WASH
1033          BA    .026
1034          LS              81       0
1035          UK     200    .025     .15     100
1036          RK    2110    .022    .025            TRAP      10       4
              *

1037          KK   SUB3S
1038          KM        RUNOFF FROM SUB BASIN 3 SOUTH COURSE
1039          BA   .0102
1040          LS              77      53
1041          UK     100    .010     .15     100
1042          RK     930    .016    .025            TRAP      50      20
              *

1043          KK    CP3S
1044          KM        COMBINE HYDROGRAPHS AT CP3 SOUTH COURSE
1045          HC       4
              *

1046          KK    RT3S
1047          KM        ROUTE FLOW FROM CP3S TO CPGC28
1048          RS       1    FLOW       0       0
1049          RC    .055    .045    .055     900    .023
1050          RX       0      20      30      40      60      70      80     100
1051          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *
1                                          HEC-1 INPUT                                                    PAGE 31

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

1052          KK   SUB4S
1053          KM        RUNOFF FROM SUB BASIN 4 SOUTH COURSE
1054          BA   .0273
1055          LS              77      53
1056          UK     100    .010     .15     100
1057          RK    1780    .018    .015            TRAP      50      20
              *

1058          KK    RT4S
1059          KM        ROUTE FLOW FROM CP4S TO CPGC28
1060          RS       1    FLOW       0       0
1061          RC    .035    .035    .035     650    .015
1062          RX       0      20      30      40      45      55      65      75
1063          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *

1064          KK   GC2-8
1065          KM        RUNOFF FROM SOUTH GOLF COURSE HOLES NO. 2 AND 8
1066          BA    .014
1067          LS              81       0
1068          UK     200    .025     .15     100
1069          RK     980    .016    .025            TRAP      10       4
              *

1070          KK  1PGC28
1071          KM        ADD HYDROGRAPHS AT CPGC28 AT PROPOSED LOOP ROAD, SOUTH COURSE
1072          HC       3
              *

1073          KK  SUB3D3
1074          KM        RUNOFF FROM GRAYHAWK ROAD SOUTH OF THOMPOSON PEAK
1075          BA    .014
1076          LS              81       0
1077          UK      50    .015      .1     100
1078          RK    2450    .016    .025            TRAP       5       4
              *

1079          KK  CPGC28
1080          KM        ADD HYDROGRAPHS AT CPGC28 AT PROPOSED LOOP ROAD, SOUTH COURSE
1081          HC       2
              *

1082          KK  SRGC28
1083          KM        STORAGE THRU DETENTION BASIN ON HOLES 2 AND 8.
1084          RS       1    STOR       0       0
1085          SV       0    .018    .085     .22      .5     1.0     1.7    2.68     3.9
1086          SE    1706    1707    1708    1709    1710    1711    1712    1713    1714
1087          SQ       0      10      18      20      30     108     324     651    1070
              *
1                                          HEC-1 INPUT                                                    PAGE 32

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

1088          KK    RT7S
1089          KM        ROUTE FLOW FROM SRGC28 TO CP7S
1090          RS       1    STOR       0       0
```

```
1091          RC    .055    .045    .055    1700   .0187
1092          RX       0      20      30      40      60      70      80     100
1093          RY    1750    1746    1744    1742    1742    1744    1746    1750
              *

1094          KK     GC7
1095          KM        RUNOFF FROM SOUTH GOLF COURSE HOLE NO. 7
1096          BA   .0134
1097          LS              81       0
1098          UK     200    .025     .15     100
1099          RK    1380    .020    .025            TRAP      10       4
              *

1100          KK    CP7S
1101          KM        ADD HYDROGRAPHS AT CP7S ON SOUTH COURSE
1102          HC       2  0.6083
              *

1103          KK    RC7S
1104          KM    THIS OPERATION IS ADDED BY STANTECH
1105          KM       ROUTE CP7S THROUGH SUBBASIN CN5C TO UNION HILLS BASIN INLET
1106          RS       1    FLOW      -1
1107          RC    0.05    0.04    0.05    4920  0.0142
1108          RX    1000    1050    1100    1102    1122    1124    1174    1224
1109          RY     104     103     102     100     100     102     103     104
              *
              *
              * THIS PORTION OF MODEL TAKEN FROM,"DRAINAGE REPORT FOR VILLAGE 3 - PHASE 1",
              * APPROVED BY THE CITY OF SCOTTSDALE 7-19-95.  MODIFIED TO ACCOUNT FOR ASBUILT
              * CONDITION
              *
              *

1110          KK  SUB3B2
1111          KM        RUNOFF FROM SUBBASIN 3B2, PARCEL 3B.
1112          BA   .0246
1113          LS              77      40
1114          UD     .10
              *

1115          KK   RB2E1
1116          KM        1/2 OF ENTIRE ROUTING REACH FROM 3B2 TO CP3E1
1117          RS       1    FLOW      -1
1118          RC    0.03    0.03    0.03     800    0.02
1119          RX       0     0.5       1       7      17      24    24.5      25
1120          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *
```



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

1121          KK   RB2E2
1122          KM       SECOND 1/2 OF ENTIRE ROUTING REACH FROM 3B2 TO CP3E1
1123          RS       1    FLOW      -1
1124          RC    0.03    0.03    0.03     600    .015
1125          RX       0     0.5       1       7      17      24    24.5      25
1126          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1127          KK  SUB3E1
1128          KM        RUNOFF FROM SUBBASIN 3E1, PARCEL 3E.
1129          BA   .0246
1130          LS              77      40
1131          UD     .10
              *

1132          KK  1CPE31
1133          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3E1 ALONG THE POWER CORRIDOR
1134          HC       2
              *

1135          KK   RCE31
1136          KM    THIS OPERATION IS ADDED BY STANTECH
1137          KM       ROUTE 1CPE31 THROUGH SUBBASIN CN5C TO UNION HILLS BASIN INLET
1138          RS       2    FLOW      -1
1139          RC    0.05    0.04    0.05    6300  0.0127
1140          RX    1000    1050    1100    1102    1112    1114    1164    1214
1141          RY     104     103     102     100     100     102     103     104
              *

1142          KK  SUB3D2
1143          KM        RUNOFF FROM SUBBASIN 3D2, PARCEL 3D.
1144          BA    .022
1145          LS              77      35
1146          UD     .08
              *

1147          KK   RD2E2
1148          KM        ROUTE EXCESS FROM 3D2 TO CP3E2
1149          RS       1    FLOW      -1
1150          RC    0.03    0.03    0.03    1200   .0216
1151          RX       0     0.5       1       7      17      24    24.5      25
```

```
1152          RY     3.2     3.1     3.0     1.0     1.0     3.0     3.1     3.2
              *

1153          KK  SUB3E2
1154          KM        RUNOFF FROM SUBBASIN 3E2, PARCEL 3E.
1155          BA    .012
1156          LS              77      35
1157          UD     .06
              *
1                                          HEC-1 INPUT                                                    PAGE 34

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


1158          KK   CP3E2
1159          KM        ESTIMATED PEAK DISCHARGE RATE AT POINT CP3E2 ALONG THE POWER CORRIDOR
1160          HC       2
              *

1161          KK   RC3E2
1162          KM    THIS OPERATION IS ADDED BY STANTECH
1163          KM       ROUTE CP3E2 THROUGH SUBBASIN CN5C TO UNION HILLS BASIN INLET
1164          RS       2    FLOW      -1
1165          RC    0.05    0.04    0.05    5700  0.0140
1166          RX    1000    1050    1100    1102    1112    1114    1164    1214
1167          RY     104     103     102     100     100     102     103     104
              *

1168          KK  SUB3E3
1169          KM        RUNOFF FROM SUBBASIN 3E3, PARCEL 3E.
1170          BA    .020
1171          LS              77      32
1172          UD     .06
              *

1173          KK   RC3E3
1174          KM    THIS OPERATION IS ADDED BY STANTECH
1175          KM       ROUTE SUB3E3 THROUGH SUBBASIN CN5C TO UNION HILLS BASIN INLET
1176          RS       2    FLOW      -1
1177          RC    0.05    0.04    0.05    5020  0.0142
1178          RX    1000    1050    1100    1102    1112    1114    1164    1214
1179          RY     104     103     102     100     100     102     103     104
              *

1180          KK   SCN5C
1181          KM    THIS OPERATION IS ADDED BY STANTECH
1182          KM     RUNOFF FROM SUBBASIN CN5C
1183          BA  0.2602
1184          LS              74       0
1185          UK     240   0.021    0.13     100
1186          RK    1200   0.015   0.040  0.0248    TRAP       0       5
1187          RK    1500   0.005   0.030            TRAP       6       2
              *

1188          KK    CNC5
1189          KM     THIS OPERATION IS ADDED BY STANTECH
1190          KM      COMBINE ROUTED HYDROGRAPHS FROM CPE31, CP3E2, SUB3E3 AND CP7S W/RUNOFF
1191          KM      FROM SUBBASIN CN5C
1192          HC       5
              *
              *
              *       THIS ENDS THE PORTION OF THE MODEL TAKEN FROM DRAINAGE REPORT
              *       FOR VILLAGE 3 - PHASE I HEC-1 MODEL BY GILBERTSON ASSOC. INC.
              *       DATED 7-19-95
              *
              *
              * SUB1-2
              *       RUNOFF FROM SUB 1 AND 2, SOUTH COURSE MODEL
              *  .0558
              *              77      68
              *    200    .010     .15     100
              *   1370    .027    .015            TRAP      50      20
              *
              * GCRB18
              *       RUNOFF FROM GOLF COURSE CONTRIBUTING TO RETENTION BASIN AT HOLE NO. 18
              *       AND HOLE NO. 10, SOUTH COURSE
              *  .012
              *              81       0
              *    200    .025     .15     100
              *    300    .016    .025            TRAP      10       4
              *
              * CPRET1
              *       COMBINE HYDROGRAPHS AT RETENTION BASINS ON HOLE 18 & 10
              *      2
              *
              *  SR18S
              *       STORAGE ROUTE THRU RETENTION BASIN AT HOLE 18, SOUTH COURSE
              *      1    STOR       0       0
              *      0  1.7635  5.7722  12.174  21.337  28.849  30.151      32
              *   1725    1730    1735    1740    1745    1748    1749    1750
              *      0       0       0       0       0      42     386     900
              *
              *  SUB5S
```

```
*        RUNOFF FROM SUB 5S
*  .0263
*              77       31
*    100     .010      .15      100
*   1280     .007     .015             TRAP       50       20
*
* GC1216
*        RUNOFF FROM SOUTH GOLF COURSE HOLES 12, 16, AND 17
*  .0365
*              81        0
*    200     .025      .15      100
*   2200     .024     .025             TRAP       10        4
*
* GC1415
*        RUNOFF FROM SOUTH GOLF COURSE HOLES 13, 14, 15 AND RETENTION
*   .045
*              81        0
*    200     .025      .15      100
*   1300     .022     .025             TRAP       10        4
*
*  SUB6S
*        RUNOFF FROM SUB BASIN 6, SOUTH COURSE
*   .021
*              77       42
*    100     .010      .15      100
*   2150     .013     .025             TRAP       50       20
*
*  SUB7S
*        RUNOFF FROM SUB BASIN 7, SOUTH COURSE
*   .027
*              77       42
*    100     .010      .15      100
*   2080     .023     .025             TRAP       50       20
*
* CPRET2
*        COMBINE HYDROGRAPHS AT RETENTION BASIN 2, SOUTH COURSE
*       5
*
* SRRET2
*        STORAGE THRU RETENTION BASIN NO. 2, SOUTH COURSE
*       1    STOR        0        0
*       0    .617    3.474    9.858   20.063   35.353   52.685   57.749       62
*    1670    1675     1680     1685     1690     1695     1699     1700     1701
*       0       0        0        0        0        0       32      386      594
*
*       . NO FLOW RELEASED FROM RETENTION BASIN
*
*  CLEAR
*        THIS OPERATION IS ADDED BY GVSCE
*        CLEAR HYDROGRAPHS FROM THE STACK
*       2
*
```



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

1193          KK   SUB8S
1194          KM        RUNOFF FROM SUB BASIN 8, SOUTH COURSE
1195          BA   .0256
1196          LS              77       42
1197          UK     100     .010      .15      100
1198          RK    1600     .015     .025             TRAP       50       20
              *
1199          KK   RGC36
1200          KM        ROUTE SUB8S TO CPGC36
1201          RS       1    FLOW
1202          RC    .055     .045     .055      850      .02
1203          RX       0       16       26       30       40       44       54       70
1204          RY       6        2        2        0        0        2        2        6
              *
1205          KK    GC36
1206          KM        RUNOFF FROM SOUTH COURSE HOLES 3, 6, AND NORTH HALF OF HOLE 4.
1207          BA   .0406
1208          LS              81        0
1209          UK     200     .025      .15      100
1210          RK    2350     .015     .035             TRAP       10        4
              *
1211          KK  C1GC36
1212          KM        COMBINE SUBS 8 AND GC36
1213          HC       2
              *
1214          KK   SUB9S
1215          KM        RUNOFF FROM SUB BASIN 9, SOUTH COURSE
1216          BA    .021
1217          LS              77       53
1218          UK     100     .010      .15      100
1219          RK    1100     .013     .025             TRAP       50       20
              *
```

```
1220          KK     R9S
1221          KM        ROUTE SUB9S TO CPGC36
1222          RS       1    FLOW
1223          RC    .035    .035    .035     500     .02
1224          RX       0       8      12      16      18      22      26      30
1225          RY       6       4       3       2       2       3       4       6
              *

1226          KK  CPGC36
1227          KM        COMBINE SUBS 8 AND 9 SOUTH AND GC36
1228          HC       2
              *
```



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

1229          KK  SRGC36
1230          KM        STORAGE THRU DETENTION BASIN ON GC36
1231          RS       1    STOR       0       0
1232          SV       0    0.85     1.0
1233          SE    1664    1668    1669
1234          SQ       0      20     205
              *

1235          KK     R36
1236          KM    THIS OPERATION IS ADDED BY STANTECH
1237          KM       ROUTE SRGC36 THROUGH SUBBASIN CN5D TO UNION HILLS BASIN INLET
1238          RS       1    FLOW      -1
1239          RC    0.05    0.04    0.05    3240  0.0154
1240          RX    1000    1050    1100    1102    1112    1114    1164    1214
1241          RY     104     103     102     100     100     102     103     104
              *

1242          KK   SCN5D
1243          KM    THIS OPERATION IS ADDED BY STANTECH
1244          KM     RUNOFF FROM SUBBASIN CN5D (UNION HILLS DETENTION BASIN PARK)
1245          BA  0.0553
1246          LS              74       0
1247          UK     240   0.025    0.13     100
1248          RK    1200   0.015    0.04  0.0248    TRAP       0       5
1249          RK     600    0.01   0.035            TRAP       6       2
              *

1250          KK    CN5D
1251          KM    THIS OPERATION IS ADDED BY STANTECH
1252          KM     COMBINE ROUTED HYDROGRAPH FROM CP45 WITH RUNOFF FROM SCN5D
1253          HC       2
              *

1254          KK     CN5
1255          KM    THIS OPERATION IS ADDED BY STANTECH
1256          KM     COMBINE HYDROGRAPHS FROM CN5C AND CN5D AT WEST INLET TO UNION HILLS BASIN
1257          HC       2
              *

1258          KK   SUB7A
1259          KM        RUNOFF FROM SUB7A, SOUTH COURSE EAST SIDE ADJACENT TO PIMA ROAD
1260          BA   .0092
1261          LS              77      42
1262          UK     100    .025     .15     100
1263          RK     950    .015    .025            TRAP      50      20
              *

1264          KK    SR7A
1265          KM        STORAGE THRU DETENTION BASIN ON SUB7A
1266          RS       1    STOR       0       0
1267          SV       0     .68      .8
1268          SE    1700    1703    1704
1269          SQ       0      10     150
              *
```



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

1270          KK    R10S
1271          KM        ROUTE FLOW FROM CP7A TO CP10S
1272          RS       1    FLOW
1273          RC    .035    .035    .035    1400    .015
1274          RX       0       8      12      16      18      22      26      30
1275          RY       6       4       3       2       2       3       4       6
              *

1276          KK  SUB10S
1277          KM        RUNOFF FROM SUB BASIN 10, SOUTH COURSE
1278          BA   .0248
1279          LS              77      53
1280          UK     100    .010     .15     100
1281          RK    1150    .020    .025            TRAP      50      20
              *
```

```
1282        KK   CP10S
1283        KM        COMBINE HYDROGRAPHS AT CP10 SOUTH COURSE
1284        HC       2
            *

1285        KK  SUB11S
1286        KM        RUNOFF FROM SUB11, SOUTH COURSE
1287        BA   .0234
1288        LS              77      68
1289        UK     100    .015    .018     100
1290        RK    1050    .015    .025            TRAP     100      20
            *

1291        KK    R11S
1292        KM        ROUTE 11S IS ADDED BY GVSCE TO ROUTE THE RUNOFF FROM SUB11S TO THE
1293        KM        POWER LINE CHANNEL CROSSING AT HUALAPAI DR ALONG HUALAPAI DR.
1294        KM
1295        KM        ROUTE FLOW FROM SUB11S TO CPC5.
1296        RS       1    FLOW
1297        RC    .035    .035    .035     900    .015
1298        RX       0       8      12      16      18      22      26      30
1299        RY       6       4       3       2       2       3       4       6
            *

1300        KK   C10SA
1301        KM        COMBINE 10SA IS ADDED BY GVSCE
1302        KM        COMBINE ROUTED HYDROGRAPH FROM 11S WITH HYDROGRAPH FROM CP10S
1303        HC       2
            *

1304        KK   R10SA
1305        KM        ROUTE 10SA IS ADDED BY GVSCE IN ORDER TO ROUTE RUNOFF TO THE UNION
1306        KM        HILLS DETENTION BASIN VIA THE POWER LINE CHANNEL.
1307        KM
1308        KM        ROUTE FLOW FROM C10SAS TO CPC5.
1309        RS       1    FLOW
1310        RC    .035    .035    .035     900    .015
1311        RX       0       8      12      16      18      22      26      30
```



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

1312        RY       6       4       3       2       2       3       4       6
            *

1313        KK    GC45
1314        KM        RUNOFF FROM SOUTH COURSE HOLES 4 AND 5
1315        BA   .0127
1316        LS              81       0
1317        UK     200    .015    .025     100
1318        RK     550    .015    .035            TRAP      10       4
            *

1319        KK    CP45
1320        KM        COMBINE PC5 IS ADDED BY GVSCE TO ESTIMATE THE TOTAL FLOW IN THE POWER
1321        KM        LINE CHANNEL AT THE HUALAPAI CROSSING
1322        KM
1323        KM        COMBINE ROUTED HYDROGRAPH FROM C10SA AND CPC4A WITH HYDROGRAPHS FROM
1324        KM        CGC45, SRGC36 AND PC5
1325        HC       2
            *
            *     ******************  END GREYHAWK WATERSHED  ********************
            *

1326        KK    RC45
1327        KM       ROUTE CP45 THROUGH SUBBASIN CN6D TO UNION HILLS BASIN INLET
1328        RS       1    FLOW      -1
1329        RC    0.05    0.04    0.05    2060  0.0146
1330        RX    1000    1002    1004    1008    1018    1022    1072    1122
1331        RY     104     103     102     100     100     102     103     104
            *

1332        KK   SCN6D
1333        KM     RUNOFF FROM SUBBASIN CN6D (CAP TREATMENT PLANT)
1334        KM      TOTAL AREA = 0.0246 sm, 0.0045 sm OF THAT IS NON-CONTRIBUTING
1335        BA  0.0201
1336        LS              74      80              74       0
1337        UK     100    0.01    0.15      80
1338        UK     100   0.025    0.13      20
1339        RK     600   0.015   0.025  0.0036    TRAP       0       5
1340        RK     400    0.01   0.025            TRAP       6       2
            *

1341        KK    CN6D
1342        KM     COMBINE ROUTED HYDROGRAPH FROM CP45 W/RUNOFF FROM SCN6D AT NORTH INLET
1343        KM      TO UNION HILLS BASIN
1344        HC       2
            *

1345        KK   SCN6C
1346        KM     RUNOFF FROM SUBBASIN CN6C (WATER CAMPUS AND CAP TREATMENT PLANT)
1347        KM      TOTAL AREA = 0.1101 sm, 0.0093 sm OF THAT IS NON-CONTRIBUTING
1348        BA  0.1008
```

```
1349          LS              74       80              74       0
1350          UK     150    0.01     0.15      50
1351          UK     100   0.025     0.13      50
1352          RK    1140    0.01     0.03  0.0123    TRAP       5      10
1                                          HEC-1 INPUT                                                          PAGE 39

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

1353          RK    1320   0.015     0.04  0.0095    TRAP       0       5
1354          RK    1100   0.015    0.024            CIRC       5
              *

1355          KK     D52
1356          KM     BRING BACK DIVERTED HYDROGRAPH FROM R52
1357          DR    B52T
              *

1358          KK    S53A
1359          KM     RUNOFF FROM SUBBASIN 53A
1360          BA  0.1794
1361          LS              74       11
1362          UK     300   0.022     0.13     100
1363          RK    1475   0.026    0.045  0.0111    TRAP       3       5
1364          RK    1750   0.021     0.04            TRAP      25       5
              *

1365          KK     C53
1366          KM     COMBINE ROUTED HYDROGRAPH FROM FROM C52 WITH RUNOFF FROM SUBBASIN 53A
1367          HC       2  8.0954
              *
              *    R53
              *   ****  TOO SHORT TO ROUTE  ****
              *    NORMAL DEPTH CHANNEL ROUTE FROM C53 TO C53A1 THROUGH PIMA CHANNEL
              *      1    FLOW      -1
              *  0.022   0.022   0.022    1550    0.01
              *   1000    1012    1020    1028    1058    1066    1074    1086
              *    107     104     102     100     100     102     104     107
              *

1368          KK   S53A1
1369          KM     RUNOFF FROM SUBBASIN 53A1
1370          BA  0.3320
1371          LS              74       12              74      30
1372          UK     300   0.022     0.13      70
1373          UK     150   0.027     0.13      30
1374          RK    1250   0.023    0.045  0.0087    TRAP       4       5
1375          RK    5050   0.017     0.04            TRAP      35       5
              *

1376          KK   C53A1
1377          KM     COMBINE ROUTED HYDROGRAPH FROM C53 WITH RUNOFF FROM SUBBASSIN 53A1
1378          HC       2  8.4274
              *

1379          KK   SCN6B
1380          KM     RUNOFF FROM SUBBASIN CN6B (WATER CAMPUS)
1381          KM      TOTAL AREA = 0.0542 sm, 0.0022 sm OF THAT IS NON-CONTRIBUTING
1382          BA  0.0520
1383          LS              74       80              74       0
1384          UK     150    0.01     0.15      70
1385          UK     100   0.025     0.13      30
1386          RK     720    0.02     0.03  0.0084    TRAP       5      10
1387          RK     700    0.01    0.045  0.0050    TRAP       0      10
1                                          HEC-1 INPUT                                                          PAGE 40

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

1388          RK     440   0.009    0.035            TRAP       6       3
              *

1389          KK    C53A
1390          KM     COMBINE HYDROGRAPH FROM C53A WITH RUNOFF FROM SUBBASIN CN6B
1391          HC       2
              *

1392          KK   SCN6E
1393          KM     RUNOFF FROM SUBBASIN CN6E
1394          BA  0.0852
1395          LS              74        5
1396          UK     300    0.01     0.15     100
1397          RK    1400    0.01    0.035            TRAP      20       4
              *

1398          KK  UHDB-I
1399          KM     COMBINE HYDROGRAPHS FROM CN5, CN6D AND C53A W/RUNOFF FROM SCN6C AND SCN6E
1400          HC       5
              *

1401          KK  UHDB-O
1402          KO       1
1403          KM     DETENTION BASIN AT UNION HILLS ROAD - NONREGULATORY STRUCTURE
1404          KM        PRINCIPAL SPILLWAY:  CONDUIT EXTENDING TO USBR BASIN AT THE TPC
1405          KM        EMERGENCY SPILLWAY:  NO OVERTOPPING FOR 24-HOUR STORM
```

```
1406          KM        7 ACRE-FEET OF STORAGE FOR SEDIMENTAION
1407          RS       1    STOR      -1
1408          SV       0     1.6    41.7   137.3   246.6   371.0
1409          SE    1585    1590    1595    1600    1605    1610
1410          SQ       0      50     100     200     400     500     527     629     657     679
1411          SQ     698     800     814
1412          SE  1585.0 1587.03 1588.27 1590.10 1592.88 1594.32 1596.46 1601.65 1601.75 1601.85
1413          SE  1602.3 1608.62 1609.62
              *
              *    RC1
              *     UNION HILLS BASIN OUTLET CONDUIT TO INTERSECTION OF PIMA ROAD AND LOOP 101
              *       L =       feet
              *

1414          KK     S54
1415          KM     RUNOFF FROM SUBBASIN 54
1416          BA  0.0853
1417          LS              74      50
1418          UK     300   0.017    0.13     100
1419          RK    3460   0.012   0.040            TRAP       5       2
              *

1420          KK   SCN6A
1421          KM     RUNOFF FROM SUBBASIN CN6A
1422          BA  0.1335
1423          LS              74      50
1424          UK     300   0.017    0.13     100
1425          RK    1050   0.017   0.045  0.0057    TRAP       8      20
1426          RK    2250   0.012   0.040            TRAP      10       4
              *
```

1 HEC-1 INPUT PAGE 41

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

1427          KK    CN6A
1428          KM     COMBINE RUNOFF FROM  S54 WITH RUNOFF FROM SCN6A AT CN6A
1429          HC       2
              *

1430          KK     C1A
1431          KM     COMBINE ROUTED HYDROGRAPH FROM UHDB-O WITH HYDROGRAPH FROM CN6A AT C1A
1432          HC       2
              *
1433          ZZ
```

1

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

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

   20       S30N
              V
              V
   29       R30N
              .
              .
   35         .       S31.1
              .           .
              .           .
   43      C31.1............
              .
              .
   46         .       S34.2
              .           .
              .           .
   55      C34.2............
              .
              .
   58         .        S35N
              .           .
              .           .
   70         .           .-------->   D35NL
   66         .       D35NR
              .           V
              .           V
   73         .       R35NR
              .           .
              .           .
   80         .           .       S36.2
              .           .           .
              .           .           .
   88         .       C36.2............
              .           .
              .           .
   95         .           .-------->  D36.2L
   91         .      D36.2R
              .           V
              .           V
   98         .      R36.2R
              .           .
              .           .
```

```
105          .           .       S34.1
             .           .           .
             .           .           .
114          .       C34.1............
             .           .
             .           .
117     HVDB-I............
             V
             V
120     HVDB-O
             V
             V
134      R34.1
             .
             .
140          .       S36.1
             .           .
             .           .
147      C36.1............
             V
             V
150      R36.1
             .
             .
158          .           .<-------   D35NL
156          .       B35NL
             .           V
             .           V
159          .       R35NL
             .           .
             .           .
168          .           .           .<-------  D36.2L
166          .           .      B36.2L
             .           .           V
             .           .           V
169          .           .      R36.2L
             .           .           .
             .           .           .
176          .           .           .      S36R1A
             .           .           .           .
             .           .           .           .
184     C36R1A...................................
             .
             .
189          .      S36R1B
             .           .
             .           .
197     C36R1B............
             .
             .
200          .      S36R2A
             .           .
             .           .
207     C36R2A............
             V
             V
210     R36R2A
             .
             .
222          .      S36R2B
             .           .
             .           .
229     C36R2B............
             .
             .
232          .       S51.1
             .           .
             .           .
240     DVDB-I............
             V
             V
243     DVDB-O
             .
             .
259          .-------> B51.1T
257     D51.1T
             .
             .
262          .        52D4
             .           V
             .           V
268          .       52D4R
             .           .
             .           .
271          .           .       52D4B
             .           .           .
             .           .           .
277          .      52D5C1............
             .           .
             .           .
280          .           .       52D5A
             .           .           V
             .           .           V
```

```
286          .           .      52D5AR
             .           .          .
             .           .          .
289          .      52D5C2............
             .          V
             .          V
292          .       52D5R
             .           .
             .           .
295          .           .       52C3
             .           .          V
             .           .          V
301          .           .      52C3R
             .           .          .
             .           .          .
304          .           .          .       52C3B
             .           .          .          .
             .           .          .          .
310          .           .     2C3BC1...........
             .           .          .
             .           .          .
313          .      2C3BC2............
             .          V
             .          V
316          .      52C3BR
             .           .
             .           .
319          .           .        51C
             .           .          .
             .           .          .
327          .           .          .-------> 51C1DV
325          .           .      51C1D
             .           .          V
             .           .          V
330          .           .      51C1R
             .           .          .
             .           .          .
333          .           .          .        52C1
             .           .          .          .
             .           .          .          .
339          .           .      52C1C............
             .           .          V
             .           .          V
342          .           .      52C1R
             .           .          .
             .           .          .
345          .           .          .       52C2A
             .           .          .          .
             .           .          .          .
351          .           .     52C2AC............
             .           .          .
             .           .          .
354          .           .          .       52C2B
             .           .          .          .
             .           .          .          .
360          .           .     52C2BC............
             .           .          V
             .           .          V
363          .           .     52C2BR
             .           .          .
             .           .          .
366          .           .          .       52C2C
             .           .          .          .
             .           .          .          .
372          .           .     52C2CC............
             .           .          V
             .           .          V
375          .           .      52C2R
             .           .          .
             .           .          .
378          .           .          .        52C4
             .           .          .          .
             .           .          .          .
384          .           .     52C4C1............
             .           .          .
             .           .          .
387          .      52C4C2............
             .          V
             .          V
390          .       52C4R
             .           .
             .           .
393          .           .      52C13
             .           .          .
             .           .          .
401          .           .          .-------> STORM
399          .           .     2C13DV
             .           .          .
             .           .          .
404          .           .          .       52C15
             .           .          .          .
             .           .          .          .
410          .           .     2C15C1............
```

```
                .          .          .
                .          .          .
413             .     2C15C2...........
                .          V
                .          V
416             .     52C15R
                .          .
                .          .
419             .          .     52C14A
                .          .          .
                .          .          .
425             .     2C14AC...........
                .          V
                .          V
428             .     2C14AR
                .          .
                .          .
433             .          .          .<-------  51C1DV
431             .          .     51C1DV
                .          .          .
                .          .          .
436             .          .          .-------> 51C2DV
434             .          .      51C2D
                .          .          V
                .          .          V
439             .          .      51C2R
                .          .          .
                .          .          .
442             .          .          .        52C5
                .          .          .          .
                .          .          .          .
448             .          .      52C5C...........
                .          .          V
                .          .          V
451             .          .      52C5R
                .          .          .
                .          .          .
454             .          .          .        52C6
                .          .          .          .
                .          .          .          .
460             .          .      52C6C...........
                .          .          V
                .          .          V
463             .          .      52C6R
                .          .          .
                .          .          .
468             .          .          .          .<-------  51C2DV
466             .          .          .     51C2DV
                .          .          .          V
                .          .          .          V
469             .          .          .      51C3R
                .          .          .          .
                .          .          .          .
472             .          .          .          .        51B
                .          .          .          .          .
                .          .          .          .          .
480             .          .          .          .          .-------> 51B1DV
478             .          .          .          .      51B1D
                .          .          .          .          V
                .          .          .          .          V
483             .          .          .          .      51B1R
                .          .          .          .          .
                .          .          .          .          .
486             .          .          .          .          .        52C7
                .          .          .          .          .          .
                .          .          .          .          .          .
492             .          .          .      52C7C.......................
                .          .          .          V
                .          .          .          V
495             .          .          .      52C7R
                .          .          .          .
                .          .          .          .
500             .          .          .          .          .<-------  51B1DV
498             .          .          .          .     51B1DV
                .          .          .          .          .
                .          .          .          .          .
503             .          .          .          .          .-------> 51B2DV
501             .          .          .          .      51B2D
                .          .          .          .          V
                .          .          .          .          V
506             .          .          .          .      51B2R
                .          .          .          .          .
                .          .          .          .          .
509             .          .          .          .          .        52C8
                .          .          .          .          .          .
                .          .          .          .          .          .
515             .          .          .          .      52C8C...........
                .          .          .          .          V
                .          .          .          .          V
518             .          .          .          .      52C8R
                .          .          .          .          .
                .          .          .          .          .
521             .          .          .     52C9C1...........
```

```
                 .         .         .         V
                 .         .         .         V
524              .         .         .     52C9R1
                 .         .         .         .
                 .         .         .         .
527              .         .         .         .        52C9
                 .         .         .         .          .
                 .         .         .         .          .
533              .         .         .     52C9C2............
                 .         .         .         V
                 .         .         .         V
536              .         .         .     52C9R2
                 .         .         .         .
                 .         .         .         .
539              .         .   2C10C1............
                 .         .       V
                 .         .       V
542              .         .   2C10R1
                 .         .       .
                 .         .       .
545              .         .         .    52C10
                 .         .         .       .
                 .         .         .       .
551              .         .   2C10C2............
                 .         .       .
                 .         .       .
554              .         .         .    52C11
                 .         .         .       V
                 .         .         .       V
560              .         .         .    2C11R1
                 .         .         .       .
                 .         .         .       .
565              .         .         .       .          .<-------   STORM
563              .         .         .       .     52C13D
                 .         .         .       .          .
                 .         .         .       .          .
566              .         .         .     52C11C............
                 .         .         .       V
                 .         .         .       V
569              .         .         .    2C11CR
                 .         .         .       .
                 .         .         .       .
572              .         .   2C11C2............
                 .         .       V
                 .         .       V
575              .         .   2C11R2
                 .         .       .
                 .         .       .
578              .         .         .    52C12
                 .         .         .       .
                 .         .         .       .
584              .         .   52C12C............
                 .         .       V
                 .         .       V
587              .         .   52C12R
                 .         .       .
                 .         .       .
590              .         .         .    52C14B
                 .         .         .       .
                 .         .         .       .
596              .         .   C14BC1............
                 .         .       .
                 .         .       .
599              .   C14BC2............
                 .       V
                 .       V
602              .   52C14R
                 .       .
                 .       .
607              .         .<-------  51B2DV
605              .         .   51B2DV
                 .         .       .
                 .         .       .
610              .         .-------> 51B3DV
608              .         .   51B3D
                 .         .       V
                 .         .       V
613              .         .   51B3R
                 .         .       .
                 .         .       .
616              .         .         .    52B1
                 .         .         .       .
                 .         .         .       .
622              .         .   52B1C............
                 .         .       V
                 .         .       V
625              .         .   52B1R
                 .         .       .
                 .         .       .
630              .         .         .          .<-------  51B3DV
628              .         .         .    51B3DV
                 .         .         .       .
                 .         .         .       .
```

```
633          .          .          .          .-------> 51B4DV
631          .          .          .      51B4D
             .          .          .          V
             .          .          .          V
636          .          .          .     51B4R1
             .          .          .          .
             .          .          .          .
639          .          .     52B2C1...........
             .          .          V
             .          .          V
642          .          .     52B2R1
             .          .          .
             .          .          .
645          .          .          .       52B2
             .          .          .          .
             .          .          .          .
651          .          .     52B2C2...........
             .          .          V
             .          .          V
654          .          .     52B2R2
             .          .          V
             .          .          V
657          .          .     52B3R1
             .          .          .
             .          .          .
660          .          .          .       52B3
             .          .          .          .
             .          .          .          .
666          .          .     52B3C2...........
             .          .          V
             .          .          V
669          .          .     52B3R2
             .          .          .
             .          .          .
672          .          .          .       52B4
             .          .          .          .
             .          .          .          .
678          .          .     52B4C...........
             .          .          V
             .          .          V
681          .          .      52B4R
             .          .          .
             .          .          .
684          .          .          .       52B5
             .          .          .          .
             .          .          .          .
690          .          .     52B5C1...........
             .          .          .
             .          .          .
693          .     52B5C2...........
             .          V
             .          V
696          .      52B5R
             .          .
             .          .
701          .          .          .<-------  51B4DV
699          .          .     51B4DV
             .          .          .
             .          .          .
704          .          .          .-------> 51B5DV
702          .          .      51B5D
             .          .          V
             .          .          V
707          .          .      51B5R
             .          .          .
             .          .          .
712          .          .          .          .<-------  51B5DV
710          .          .          .     51B5DV
             .          .          .          .
             .          .          .          .
715          .          .          .          .-------> 51B6DV
713          .          .          .      51B6D
             .          .          .          V
             .          .          .          V
718          .          .          .      51B6R
             .          .          .          .
             .          .          .          .
723          .          .          .          .          .<-------  51B6DV
721          .          .          .          .     51B6DV
             .          .          .          .          .
             .          .          .          .          .
726          .          .          .          .          .-------> 51B7DV
724          .          .          .          .      51B7D
             .          .          .          .          V
             .          .          .          .          V
729          .          .          .          .     51B7R1
             .          .          .          .          .
             .          .          .          .          .
732          .          .      51B7C.......................
             .          .          V
             .          .          V
735          .          .     51B7R2
             .          .          .
```

```
738                                          52B6
744                                52B6C............
                                       V
                                       V
747                                52B6R
750                                          52B7
756                               52B7C1............
759                        52B7C2............
762                                 52A2
768                        52A2C2............
773                                       <-------  51B7DV
771                               51B7DV
                                       V
                                       V
774                                51B8R
777                                          52A1
783                                52A1C............
788                                                <-------  B51.1T
786                                          D51.1
789                                 C52A............
793                          C52............
                                 V
                                 V
797                          R52
805                          -------->    B52T
803                        D52T
808                 CLEAR............
811                          37A
828                          -------->    37AW
817                        37AE
                                 V
                                 V
831                       37AE1
838                                SUB5N
845                        CP5N............
                                 V
                                 V
848                       RET5N
                                 V
                                 V
855                       R6N.1
863                                SUB6B
                                       V
                                       V
869                                 SR6B
875                        CP6.1............
878                                SUB1N
                                       V
                                       V
884                                 R2NA
```

```
                .         .         .
                .         .         .
890             .         .         .      SUB2NA
                .         .         .          .
                .         .         .          .
896             .         .      CP2NA...........
                .         .         V
                .         .         V
899             .         .      SR2NA
                .         .         V
                .         .         V
905             .         .       R2NB
                .         .         .
                .         .         .
911             .         .         .      SUB2NB
                .         .         .          .
                .         .         .          .
917             .         .      CP2NB...........
                .         .         V
                .         .         V
920             .         .      SR2NB
                .         .         V
                .         .         V
926             .         .      RCP4N
                .         .         .
                .         .         .
932             .         .         .       SUB6N
                .         .         .           V
                .         .         .           V
938             .         .         .       RET6N
                .         .         .           V
                .         .         .           V
944             .         .         .      RCP4N1
                .         .         .          .
                .         .         .          .
950             .         .     CP4N.1...........
                .         .         .
                .         .         .
953             .         .         .       SUB3N
                .         .         .           V
                .         .         .           V
959             .         .         .       RET3N
                .         .         .           V
                .         .         .           V
966             .         .         .         R4N
                .         .         .          .
                .         .         .          .
972             .         .     CP4N.2...........
                .         .         .
                .         .         .
975             .         .         .       SUB4N
                .         .         .          .
                .         .         .          .
981             .         .       CP4N...........
                .         .         V
                .         .         V
984             .         .        R6N
                .         .         .
                .         .         .
990             .         .         .       SUB6A
                .         .         .          .
                .         .         .          .
996             .         .      CP6.2...........
                .         .         .
                .         .         .
999             .      CP6N...........
                .         V
                .         V
1002            .      RCP6N
                .         .
                .         .
1008            .         .      SUB3C
                .         .         .
                .         .         .
1014            .      CP3C...........
                .         V
                .         V
1017            .       R3C
                .         .
                .         .
1025            .         .     GC1018
                .         .         .
                .         .         .
1031            .         .         .       GC1-9
                .         .         .          .
                .         .         .          .
1037            .         .         .          .       SUB3S
                .         .         .          .          .
                .         .         .          .          .
1043            .      CP3S.....................................
                .         V
                .         V
1046            .      RT3S
```

```
                .         .
                .         .
1052            .         .      SUB4S
                .         .         V
                .         .         V
1058            .         .       RT4S
                .         .         .
                .         .         .
1064            .         .         .      GC2-8
                .         .         .         .
                .         .         .         .
1070            .     1PGC28.......................
                .         .
                .         .
1073            .         .     SUB3D3
                .         .         .
                .         .         .
1079            .     CPGC28............
                .         V
                .         V
1082            .     SRGC28
                .         V
                .         V
1088            .       RT7S
                .         .
                .         .
1094            .         .        GC7
                .         .         .
                .         .         .
1100            .       CP7S............
                .         V
                .         V
1103            .       RC7S
                .         .
                .         .
1110            .         .     SUB3B2
                .         .         V
                .         .         V
1115            .         .      RB2E1
                .         .         V
                .         .         V
1121            .         .      RB2E2
                .         .         .
                .         .         .
1127            .         .         .     SUB3E1
                .         .         .         .
                .         .         .         .
1132            .         .     1CPE31............
                .         .         V
                .         .         V
1135            .         .      RCE31
                .         .         .
                .         .         .
1142            .         .         .     SUB3D2
                .         .         .         V
                .         .         .         V
1147            .         .         .      RD2E2
                .         .         .         .
                .         .         .         .
1153            .         .         .         .     SUB3E2
                .         .         .         .         .
                .         .         .         .         .
1158            .         .         .      CP3E2............
                .         .         .         V
                .         .         .         V
1161            .         .         .      RC3E2
                .         .         .         .
                .         .         .         .
1168            .         .         .         .     SUB3E3
                .         .         .         .         V
                .         .         .         .         V
1173            .         .         .         .      RC3E3
                .         .         .         .         .
                .         .         .         .         .
1180            .         .         .         .         .      SCN5C
                .         .         .         .         .         .
                .         .         .         .         .         .
1188            .       CNC5.............................................
                .         .
                .         .
1193            .         .      SUB8S
                .         .         V
                .         .         V
1199            .         .      RGC36
                .         .         .
                .         .         .
1205            .         .         .       GC36
                .         .         .         .
                .         .         .         .
1211            .         .     C1GC36............
                .         .         .
                .         .         .
1214            .         .         .      SUB9S
```

```
                 .         .         .         V
                 .         .         .         V
1220             .         .         .        R9S
                 .         .         .         .
                 .         .         .         .
1226             .         .     CPGC36.........
                 .         .         V
                 .         .         V
1229             .         .     SRGC36
                 .         .         V
                 .         .         V
1235             .         .       R36
                 .         .         .
                 .         .         .
1242             .         .         .      SCN5D
                 .         .         .         .
                 .         .         .         .
1250             .         .       CN5D.........
                 .         .         .
                 .         .         .
1254             .       CN5.........
                 .         .
                 .         .
1258             .         .     SUB7A
                 .         .         V
                 .         .         V
1264             .         .      SR7A
                 .         .         V
                 .         .         V
1270             .         .      R10S
                 .         .         .
                 .         .         .
1276             .         .         .     SUB10S
                 .         .         .         .
                 .         .         .         .
1282             .         .     CP10S.........
                 .         .         .
                 .         .         .
1285             .         .         .     SUB11S
                 .         .         .         V
                 .         .         .         V
1291             .         .         .      R11S
                 .         .         .         .
                 .         .         .         .
1300             .         .     C10SA.........
                 .         .         V
                 .         .         V
1304             .         .     R10SA
                 .         .         .
                 .         .         .
1313             .         .         .      GC45
                 .         .         .         .
                 .         .         .         .
1319             .         .      CP45.........
                 .         .         V
                 .         .         V
1326             .         .      RC45
                 .         .         .
                 .         .         .
1332             .         .         .      SCN6D
                 .         .         .         .
                 .         .         .         .
1341             .         .      CN6D.........
                 .         .         .
                 .         .         .
1345             .         .         .      SCN6C
                 .         .         .         .
                 .         .         .         .
1357             .         .         .         .        .-------    B52T
1355             .         .         .         .      D52
                 .         .         .         .       .
                 .         .         .         .       .
1358             .         .         .         .       .       S53A
                 .         .         .         .       .         .
                 .         .         .         .       .         .
1365             .         .         .         .      C53.........
                 .         .         .         .       .
                 .         .         .         .       .
1368             .         .         .         .       .      S53A1
                 .         .         .         .       .         .
                 .         .         .         .       .         .
1376             .         .         .         .    C53A1........
                 .         .         .         .       .
                 .         .         .         .       .
1379             .         .         .         .       .      SCN6B
                 .         .         .         .       .         .
                 .         .         .         .       .         .
1389             .         .         .         .     C53A........
                 .         .         .         .       .
                 .         .         .         .       .
1392             .         .         .         .       .      SCN6E
                 .         .         .         .       .         .
                 .         .         .         .       .         .
```

```
1398          .      UHDB-I.............................................
              .          V
              .          V
1401          .      UHDB-O
              .          .
              .          .
1414          .          .         S54
              .          .           .
              .          .           .
1420          .          .           .       SCN6A
              .          .           .           .
              .          .           .           .
1427          .          .        CN6A............
              .          .           .
              .          .           .
1430          .        C1A............
```

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

```
1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)*
*            MAY   1991             *
*          VERSION 4.0.1E           *
*     Lahey F77L-EM/32 version 5.01 *
*       Dodson & Associates, Inc.   *
*  RUN DATE  11/19/97  TIME  17:30:34*
*************************************
```

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

```
PIMA ROAD THREE BASINS                          File: intrm-24.IH1
by  Stantech for the City of Scottsdale       Original: 08-07-97     mcg
    Project:  28900051

100-YEAR, 24-HOUR STORM
    10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
    10% LEVEL DESIGN FOR DEER VALLEY DETENTION BASIN ALTERNATIVE 3
    100% OF FLOWSPLITS ARE ROUTED TO DEER VALLEY DETENTION BASIN
    10% LEVEL DESIGN FOR UNION HILLS DETENTION BASIN ALTERNATIVE 1B

    INTERIM CONDITION --- NO POWER LINE CHANNEL:
      GRAYHAWK RUNOFF RELEASED TO NATURAL WASHES AND ROUTED TO THE UNION
      HILLS DETENTION BASIN.  PORTIONS OF THE GRAYHAWK MODEL THAT DO NOT
      CONTRIBUTE TO THE WATERSHED AT UNION HILLS BASIN UNDER THIS CONDITION
      ARE ELIMINATED FROM THIS MODEL.

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

    IT          HYDROGRAPH TIME DATA
                      NMIN          5  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1   0  STARTING DATE
                     ITIME       0000  STARTING TIME
                        NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      7   0  ENDING DATE
                    NDTIME       2235  ENDING TIME
                     ICENT         19  CENTURY MARK

                 COMPUTATION INTERVAL    0.08 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

        *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


        *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT


        *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


        *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

WARNING --- ROUTED OUTFLOW (     256.) IS GREATER THAN MAXIMUM OUTFLOW (     205.) IN STORAGE-OUTFLOW TABLE
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT
```

```
*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1

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

            **************
            *            *
1401 KK     *    UHDB-O  *
            *            *
            **************

1402 KO          OUTPUT CONTROL VARIABLES
                       IPRNT           1  PRINT CONTROL
```

```
            IPLOT          0  PLOT CONTROL
            QSCAL         0.  HYDROGRAPH PLOT SCALE
                DETENTION BASIN AT UNION HILLS ROAD - NONREGULATORY STRUCTURE
                   PRINCIPAL SPILLWAY:  CONDUIT EXTENDING TO USBR BASIN AT THE TPC
                   EMERGENCY SPILLWAY:  NO OVERTOPPING FOR 24-HOUR STORM
                   7 ACRE-FEET OF STORAGE FOR SEDIMENTAION

       HYDROGRAPH ROUTING DATA

1407 RS        STORAGE ROUTING
                     NSTPS          1  NUMBER OF SUBREACHES
                      ITYP       STOR  TYPE OF INITIAL CONDITION
                    RSVRIC      -1.00  INITIAL CONDITION
                         X       0.00  WORKING R AND D COEFFICIENT

1408 SV         STORAGE       0.0       1.6      41.7     137.3     246.6     371.0

1409 SE       ELEVATION   1585.00   1590.00   1595.00   1600.00   1605.00   1610.00

1410 SQ       DISCHARGE        0.       50.      100.      200.      400.      500.      527.      629.      657.      679.
                             698.      800.      814.

1412 SE       ELEVATION   1585.00   1587.03   1588.27   1590.10   1592.88   1594.32   1596.46   1601.65   1601.75   1601.85
                          1602.30   1608.62   1609.62
```

***

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	0.00	0.65	1.05	1.60	2.40	24.70	36.25	41.70	69.61	137.30
OUTFLOW	0.00	50.00	100.00	194.54	200.00	400.00	500.00	508.58	527.00	596.57
ELEVATION	1585.00	1587.03	1588.27	1590.00	1590.10	1592.88	1594.32	1595.00	1596.46	1600.00
STORAGE	173.37	175.56	177.74	187.58	246.60	336.67	361.55	371.00		
OUTFLOW	629.00	657.00	679.00	698.00	741.58	800.00	814.00	819.32		
ELEVATION	1601.65	1601.75	1601.85	1602.30	1605.00	1608.62	1609.62	1610.00		

****

HYDROGRAPH AT STATION UHDB-O

****

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.0	1585.0	3		0735	668	0.	0.0	1585.0	5		15101335		0.	0.0	1585.0
1		0005	2	0.	0.0	1585.0	3		0740	669	0.	0.0	1585.0	5		15151336		0.	0.0	1585.0
1		0010	3	0.	0.0	1585.0	3		0745	670	0.	0.0	1585.0	5		15201337		0.	0.0	1585.0
1		0015	4	0.	0.0	1585.0	3		0750	671	0.	0.0	1585.0	5		15251338		0.	0.0	1585.0
1		0020	5	0.	0.0	1585.0	3		0755	672	0.	0.0	1585.0	5		15301339		0.	0.0	1585.0
1		0025	6	0.	0.0	1585.0	3		0800	673	0.	0.0	1585.0	5		15351340		0.	0.0	1585.0
1		0030	7	0.	0.0	1585.0	3		0805	674	0.	0.0	1585.0	5		15401341		0.	0.0	1585.0
1		0035	8	0.	0.0	1585.0	3		0810	675	0.	0.0	1585.0	5		15451342		0.	0.0	1585.0
1		0040	9	0.	0.0	1585.0	3		0815	676	0.	0.0	1585.0	5		15501343		0.	0.0	1585.0
1		0045	10	0.	0.0	1585.0	3		0820	677	0.	0.0	1585.0	5		15551344		0.	0.0	1585.0
1		0050	11	0.	0.0	1585.0	3		0825	678	0.	0.0	1585.0	5		16001345		0.	0.0	1585.0
1		0055	12	1.	0.0	1585.0	3		0830	679	0.	0.0	1585.0	5		16051346		0.	0.0	1585.0
1		0100	13	1.	0.0	1585.0	3		0835	680	0.	0.0	1585.0	5		16101347		0.	0.0	1585.0
1		0105	14	1.	0.0	1585.0	3		0840	681	0.	0.0	1585.0	5		16151348		0.	0.0	1585.0
1		0110	15	1.	0.0	1585.1	3		0845	682	0.	0.0	1585.0	5		16201349		0.	0.0	1585.0
1		0115	16	2.	0.0	1585.1	3		0850	683	0.	0.0	1585.0	5		16251350		0.	0.0	1585.0
1		0120	17	2.	0.0	1585.1	3		0855	684	0.	0.0	1585.0	5		16301351		0.	0.0	1585.0
1		0125	18	2.	0.0	1585.1	3		0900	685	0.	0.0	1585.0	5		16351352		0.	0.0	1585.0
1		0130	19	3.	0.0	1585.1	3		0905	686	0.	0.0	1585.0	5		16401353		0.	0.0	1585.0
1		0135	20	4.	0.0	1585.1	3		0910	687	0.	0.0	1585.0	5		16451354		0.	0.0	1585.0
1		0140	21	4.	0.1	1585.2	3		0915	688	0.	0.0	1585.0	5		16501355		0.	0.0	1585.0
1		0145	22	5.	0.1	1585.2	3		0920	689	0.	0.0	1585.0	5		16551356		0.	0.0	1585.0
1		0150	23	6.	0.1	1585.2	3		0925	690	0.	0.0	1585.0	5		17001357		0.	0.0	1585.0
1		0155	24	6.	0.1	1585.3	3		0930	691	0.	0.0	1585.0	5		17051358		0.	0.0	1585.0
1		0200	25	7.	0.1	1585.3	3		0935	692	0.	0.0	1585.0	5		17101359		0.	0.0	1585.0
1		0205	26	8.	0.1	1585.3	3		0940	693	0.	0.0	1585.0	5		17151360		0.	0.0	1585.0
1		0210	27	9.	0.1	1585.3	3		0945	694	0.	0.0	1585.0	5		17201361		0.	0.0	1585.0
1		0215	28	9.	0.1	1585.4	3		0950	695	0.	0.0	1585.0	5		17251362		0.	0.0	1585.0
1		0220	29	10.	0.1	1585.4	3		0955	696	0.	0.0	1585.0	5		17301363		0.	0.0	1585.0
1		0225	30	11.	0.1	1585.4	3		1000	697	0.	0.0	1585.0	5		17351364		0.	0.0	1585.0
1		0230	31	11.	0.1	1585.5	3		1005	698	0.	0.0	1585.0	5		17401365		0.	0.0	1585.0
1		0235	32	12.	0.2	1585.5	3		1010	699	0.	0.0	1585.0	5		17451366		0.	0.0	1585.0
1		0240	33	12.	0.2	1585.5	3		1015	700	0.	0.0	1585.0	5		17501367		0.	0.0	1585.0
1		0245	34	13.	0.2	1585.5	3		1020	701	0.	0.0	1585.0	5		17551368		0.	0.0	1585.0
1		0250	35	13.	0.2	1585.5	3		1025	702	0.	0.0	1585.0	5		18001369		0.	0.0	1585.0
1		0255	36	14.	0.2	1585.6	3		1030	703	0.	0.0	1585.0	5		18051370		0.	0.0	1585.0
1		0300	37	15.	0.2	1585.6	3		1035	704	0.	0.0	1585.0	5		18101371		0.	0.0	1585.0
1		0305	38	15.	0.2	1585.6	3		1040	705	0.	0.0	1585.0	5		18151372		0.	0.0	1585.0
1		0310	39	16.	0.2	1585.6	3		1045	706	0.	0.0	1585.0	5		18201373		0.	0.0	1585.0
1		0315	40	16.	0.2	1585.7	3		1050	707	0.	0.0	1585.0	5		18251374		0.	0.0	1585.0
1		0320	41	17.	0.2	1585.7	3		1055	708	0.	0.0	1585.0	5		18301375		0.	0.0	1585.0
1		0325	42	18.	0.2	1585.7	3		1100	709	0.	0.0	1585.0	5		18351376		0.	0.0	1585.0
1		0330	43	18.	0.2	1585.7	3		1105	710	0.	0.0	1585.0	5		18401377		0.	0.0	1585.0
1		0335	44	19.	0.2	1585.8	3		1110	711	0.	0.0	1585.0	5		18451378		0.	0.0	1585.0
1		0340	45	19.	0.3	1585.8	3		1115	712	0.	0.0	1585.0	5		18501379		0.	0.0	1585.0
1		0345	46	20.	0.3	1585.8	3		1120	713	0.	0.0	1585.0	5		18551380		0.	0.0	1585.0
1		0350	47	21.	0.3	1585.8	3		1125	714	0.	0.0	1585.0	5		19001381		0.	0.0	1585.0
1		0355	48	21.	0.3	1585.9	3		1130	715	0.	0.0	1585.0	5		19051382		0.	0.0	1585.0

1	0400	49	22.	0.3	1585.9	*	3	1135	716	0.	0.0	1585.0	*	5	19101383	0.	0.0	1585.0
1	0405	50	23.	0.3	1585.9	*	3	1140	717	0.	0.0	1585.0	*	5	19151384	0.	0.0	1585.0
1	0410	51	24.	0.3	1586.0	*	3	1145	718	0.	0.0	1585.0	*	5	19201385	0.	0.0	1585.0
1	0415	52	24.	0.3	1586.0	*	3	1150	719	0.	0.0	1585.0	*	5	19251386	0.	0.0	1585.0
1	0420	53	25.	0.3	1586.0	*	3	1155	720	0.	0.0	1585.0	*	5	19301387	0.	0.0	1585.0
1	0425	54	26.	0.3	1586.0	*	3	1200	721	0.	0.0	1585.0	*	5	19351388	0.	0.0	1585.0
1	0430	55	27.	0.3	1586.1	*	3	1205	722	0.	0.0	1585.0	*	5	19401389	0.	0.0	1585.0
1	0435	56	27.	0.4	1586.1	*	3	1210	723	0.	0.0	1585.0	*	5	19451390	0.	0.0	1585.0
1	0440	57	28.	0.4	1586.1	*	3	1215	724	0.	0.0	1585.0	*	5	19501391	0.	0.0	1585.0
1	0445	58	29.	0.4	1586.2	*	3	1220	725	0.	0.0	1585.0	*	5	19551392	0.	0.0	1585.0
1	0450	59	30.	0.4	1586.2	*	3	1225	726	0.	0.0	1585.0	*	5	20001393	0.	0.0	1585.0
1	0455	60	30.	0.4	1586.2	*	3	1230	727	0.	0.0	1585.0	*	5	20051394	0.	0.0	1585.0
1	0500	61	31.	0.4	1586.3	*	3	1235	728	0.	0.0	1585.0	*	5	20101395	0.	0.0	1585.0
1	0505	62	32.	0.4	1586.3	*	3	1240	729	0.	0.0	1585.0	*	5	20151396	0.	0.0	1585.0
1	0510	63	32.	0.4	1586.3	*	3	1245	730	0.	0.0	1585.0	*	5	20201397	0.	0.0	1585.0
1	0515	64	33.	0.4	1586.3	*	3	1250	731	0.	0.0	1585.0	*	5	20251398	0.	0.0	1585.0
1	0520	65	34.	0.4	1586.4	*	3	1255	732	0.	0.0	1585.0	*	5	20301399	0.	0.0	1585.0
1	0525	66	35.	0.4	1586.4	*	3	1300	733	0.	0.0	1585.0	*	5	20351400	0.	0.0	1585.0
1	0530	67	35.	0.5	1586.4	*	3	1305	734	0.	0.0	1585.0	*	5	20401401	0.	0.0	1585.0
1	0535	68	36.	0.5	1586.5	*	3	1310	735	0.	0.0	1585.0	*	5	20451402	0.	0.0	1585.0
1	0540	69	36.	0.5	1586.5	*	3	1315	736	0.	0.0	1585.0	*	5	20501403	0.	0.0	1585.0
1	0545	70	37.	0.5	1586.5	*	3	1320	737	0.	0.0	1585.0	*	5	20551404	0.	0.0	1585.0
1	0550	71	38.	0.5	1586.5	*	3	1325	738	0.	0.0	1585.0	*	5	21001405	0.	0.0	1585.0
1	0555	72	38.	0.5	1586.5	*	3	1330	739	0.	0.0	1585.0	*	5	21051406	0.	0.0	1585.0
1	0600	73	39.	0.5	1586.6	*	3	1335	740	0.	0.0	1585.0	*	5	21101407	0.	0.0	1585.0
1	0605	74	39.	0.5	1586.6	*	3	1340	741	0.	0.0	1585.0	*	5	21151408	0.	0.0	1585.0
1	0610	75	40.	0.5	1586.6	*	3	1345	742	0.	0.0	1585.0	*	5	21201409	0.	0.0	1585.0
1	0615	76	40.	0.5	1586.6	*	3	1350	743	0.	0.0	1585.0	*	5	21251410	0.	0.0	1585.0
1	0620	77	41.	0.5	1586.7	*	3	1355	744	0.	0.0	1585.0	*	5	21301411	0.	0.0	1585.0
1	0625	78	41.	0.5	1586.7	*	3	1400	745	0.	0.0	1585.0	*	5	21351412	0.	0.0	1585.0
1	0630	79	42.	0.5	1586.7	*	3	1405	746	0.	0.0	1585.0	*	5	21401413	0.	0.0	1585.0
1	0635	80	43.	0.6	1586.7	*	3	1410	747	0.	0.0	1585.0	*	5	21451414	0.	0.0	1585.0
1	0640	81	43.	0.6	1586.8	*	3	1415	748	0.	0.0	1585.0	*	5	21501415	0.	0.0	1585.0
1	0645	82	44.	0.6	1586.8	*	3	1420	749	0.	0.0	1585.0	*	5	21551416	0.	0.0	1585.0
1	0650	83	45.	0.6	1586.8	*	3	1425	750	0.	0.0	1585.0	*	5	22001417	0.	0.0	1585.0
1	0655	84	45.	0.6	1586.8	*	3	1430	751	0.	0.0	1585.0	*	5	22051418	0.	0.0	1585.0
1	0700	85	46.	0.6	1586.9	*	3	1435	752	0.	0.0	1585.0	*	5	22101419	0.	0.0	1585.0
1	0705	86	47.	0.6	1586.9	*	3	1440	753	0.	0.0	1585.0	*	5	22151420	0.	0.0	1585.0
1	0710	87	48.	0.6	1586.9	*	3	1445	754	0.	0.0	1585.0	*	5	22201421	0.	0.0	1585.0
1	0715	88	48.	0.6	1587.0	*	3	1450	755	0.	0.0	1585.0	*	5	22251422	0.	0.0	1585.0
1	0720	89	49.	0.6	1587.0	*	3	1455	756	0.	0.0	1585.0	*	5	22301423	0.	0.0	1585.0
1	0725	90	50.	0.6	1587.0	*	3	1500	757	0.	0.0	1585.0	*	5	22351424	0.	0.0	1585.0
1	0730	91	51.	0.7	1587.1	*	3	1505	758	0.	0.0	1585.0	*	5	22401425	0.	0.0	1585.0
1	0735	92	53.	0.7	1587.1	*	3	1510	759	0.	0.0	1585.0	*	5	22451426	0.	0.0	1585.0
1	0740	93	54.	0.7	1587.1	*	3	1515	760	0.	0.0	1585.0	*	5	22501427	0.	0.0	1585.0
1	0745	94	55.	0.7	1587.2	*	3	1520	761	0.	0.0	1585.0	*	5	22551428	0.	0.0	1585.0
1	0750	95	56.	0.7	1587.2	*	3	1525	762	0.	0.0	1585.0	*	5	23001429	0.	0.0	1585.0
1	0755	96	57.	0.7	1587.2	*	3	1530	763	0.	0.0	1585.0	*	5	23051430	0.	0.0	1585.0
1	0800	97	58.	0.7	1587.2	*	3	1535	764	0.	0.0	1585.0	*	5	23101431	0.	0.0	1585.0
1	0805	98	59.	0.7	1587.2	*	3	1540	765	0.	0.0	1585.0	*	5	23151432	0.	0.0	1585.0
1	0810	99	60.	0.7	1587.3	*	3	1545	766	0.	0.0	1585.0	*	5	23201433	0.	0.0	1585.0
1	0815	100	61.	0.7	1587.3	*	3	1550	767	0.	0.0	1585.0	*	5	23251434	0.	0.0	1585.0
1	0820	101	62.	0.7	1587.3	*	3	1555	768	0.	0.0	1585.0	*	5	23301435	0.	0.0	1585.0
1	0825	102	63.	0.8	1587.3	*	3	1600	769	0.	0.0	1585.0	*	5	23351436	0.	0.0	1585.0
1	0830	103	64.	0.8	1587.4	*	3	1605	770	0.	0.0	1585.0	*	5	23401437	0.	0.0	1585.0
1	0835	104	65.	0.8	1587.4	*	3	1610	771	0.	0.0	1585.0	*	5	23451438	0.	0.0	1585.0
1	0840	105	66.	0.8	1587.4	*	3	1615	772	0.	0.0	1585.0	*	5	23501439	0.	0.0	1585.0
1	0845	106	67.	0.8	1587.5	*	3	1620	773	0.	0.0	1585.0	*	5	23551440	0.	0.0	1585.0
1	0850	107	68.	0.8	1587.5	*	3	1625	774	0.	0.0	1585.0	*	6	00001441	0.	0.0	1585.0
1	0855	108	70.	0.8	1587.5	*	3	1630	775	0.	0.0	1585.0	*	6	00051442	0.	0.0	1585.0
1	0900	109	71.	0.8	1587.5	*	3	1635	776	0.	0.0	1585.0	*	6	00101443	0.	0.0	1585.0
1	0905	110	72.	0.8	1587.6	*	3	1640	777	0.	0.0	1585.0	*	6	00151444	0.	0.0	1585.0
1	0910	111	73.	0.8	1587.6	*	3	1645	778	0.	0.0	1585.0	*	6	00201445	0.	0.0	1585.0
1	0915	112	75.	0.8	1587.6	*	3	1650	779	0.	0.0	1585.0	*	6	00251446	0.	0.0	1585.0
1	0920	113	76.	0.9	1587.7	*	3	1655	780	0.	0.0	1585.0	*	6	00301447	0.	0.0	1585.0
1	0925	114	77.	0.9	1587.7	*	3	1700	781	0.	0.0	1585.0	*	6	00351448	0.	0.0	1585.0
1	0930	115	79.	0.9	1587.7	*	3	1705	782	0.	0.0	1585.0	*	6	00401449	0.	0.0	1585.0
1	0935	116	80.	0.9	1587.8	*	3	1710	783	0.	0.0	1585.0	*	6	00451450	0.	0.0	1585.0
1	0940	117	82.	0.9	1587.8	*	3	1715	784	0.	0.0	1585.0	*	6	00501451	0.	0.0	1585.0
1	0945	118	83.	0.9	1587.8	*	3	1720	785	0.	0.0	1585.0	*	6	00551452	0.	0.0	1585.0
1	0950	119	85.	0.9	1587.9	*	3	1725	786	0.	0.0	1585.0	*	6	01001453	0.	0.0	1585.0
1	0955	120	86.	0.9	1587.9	*	3	1730	787	0.	0.0	1585.0	*	6	01051454	0.	0.0	1585.0
1	1000	121	88.	0.9	1588.0	*	3	1735	788	0.	0.0	1585.0	*	6	01101455	0.	0.0	1585.0
1	1005	122	89.	1.0	1588.0	*	3	1740	789	0.	0.0	1585.0	*	6	01151456	0.	0.0	1585.0
1	1010	123	91.	1.0	1588.1	*	3	1745	790	0.	0.0	1585.0	*	6	01201457	0.	0.0	1585.0
1	1015	124	93.	1.0	1588.1	*	3	1750	791	0.	0.0	1585.0	*	6	01251458	0.	0.0	1585.0
1	1020	125	95.	1.0	1588.2	*	3	1755	792	0.	0.0	1585.0	*	6	01301459	0.	0.0	1585.0
1	1025	126	97.	1.0	1588.2	*	3	1800	793	0.	0.0	1585.0	*	6	01351460	0.	0.0	1585.0
1	1030	127	100.	1.0	1588.3	*	3	1805	794	0.	0.0	1585.0	*	6	01401461	0.	0.0	1585.0
1	1035	128	103.	1.1	1588.3	*	3	1810	795	0.	0.0	1585.0	*	6	01451462	0.	0.0	1585.0
1	1040	129	106.	1.1	1588.4	*	3	1815	796	0.	0.0	1585.0	*	6	01501463	0.	0.0	1585.0
1	1045	130	109.	1.1	1588.4	*	3	1820	797	0.	0.0	1585.0	*	6	01551464	0.	0.0	1585.0
1	1050	131	113.	1.1	1588.5	*	3	1825	798	0.	0.0	1585.0	*	6	02001465	0.	0.0	1585.0
1	1055	132	116.	1.1	1588.6	*	3	1830	799	0.	0.0	1585.0	*	6	02051466	0.	0.0	1585.0
1	1100	133	121.	1.2	1588.6	*	3	1835	800	0.	0.0	1585.0	*	6	02101467	0.	0.0	1585.0
1	1105	134	125.	1.2	1588.7	*	3	1840	801	0.	0.0	1585.0	*	6	02151468	0.	0.0	1585.0
1	1110	135	131.	1.2	1588.8	*	3	1845	802	0.	0.0	1585.0	*	6	02201469	0.	0.0	1585.0
1	1115	136	137.	1.3	1588.9	*	3	1850	803	0.	0.0	1585.0	*	6	02251470	0.	0.0	1585.0
1	1120	137	144.	1.3	1589.1	*	3	1855	804	0.	0.0	1585.0	*	6	02301471	0.	0.0	1585.0
1	1125	138	152.	1.4	1589.2	*	3	1900	805	0.	0.0	1585.0	*	6	02351472	0.	0.0	1585.0
1	1130	139	161.	1.4	1589.4	*	3	1905	806	0.	0.0	1585.0	*	6	02401473	0.	0.0	1585.0
1	1135	140	173.	1.5	1589.6	*	3	1910	807	0.	0.0	1585.0	*	6	02451474	0.	0.0	1585.0
1	1140	141	191.	1.6	1589.9	*	3	1915	808	0.	0.0	1585.0	*	6	02501475	0.	0.0	1585.0

1	1145	142	196.	1.8	1590.0	*	3	1920	809	0.	0.0	1585.0	*	6	02551476	0.	0.0	1585.0
1	1150	143	200.	2.4	1590.1	*	3	1925	810	0.	0.0	1585.0	*	6	03001477	0.	0.0	1585.0
1	1155	144	211.	3.6	1590.2	*	3	1930	811	0.	0.0	1585.0	*	6	03051478	0.	0.0	1585.0
1	1200	145	232.	6.0	1590.5	*	3	1935	812	0.	0.0	1585.0	*	6	03101479	0.	0.0	1585.0
1	1205	146	290.	12.4	1591.3	*	3	1940	813	0.	0.0	1585.0	*	6	03151480	0.	0.0	1585.0
1	1210	147	435.	28.7	1593.4	*	3	1945	814	0.	0.0	1585.0	*	6	03201481	0.	0.0	1585.0
1	1215	148	518.	55.6	1595.7	*	3	1950	815	0.	0.0	1585.0	*	6	03251482	0.	0.0	1585.0
1	1220	149	543.	85.6	1597.3	*	3	1955	816	0.	0.0	1585.0	*	6	03301483	0.	0.0	1585.0
1	1225	150	571.	112.9	1598.7	*	3	2000	817	0.	0.0	1585.0	*	6	03351484	0.	0.0	1585.0
1	1230	151	595.	136.0	1599.9	*	3	2005	818	0.	0.0	1585.0	*	6	03401485	0.	0.0	1585.0
1	1235	152	613.	155.5	1600.8	*	3	2010	819	0.	0.0	1585.0	*	6	03451486	0.	0.0	1585.0
1	1240	153	627.	171.6	1601.6	*	3	2015	820	0.	0.0	1585.0	*	6	03501487	0.	0.0	1585.0
1	1245	154	692.	184.6	1602.2	*	3	2020	821	0.	0.0	1585.0	*	6	03551488	0.	0.0	1585.0
1	1250	155	703.	195.0	1602.6	*	3	2025	822	0.	0.0	1585.0	*	6	04001489	0.	0.0	1585.0
1	1255	156	710.	203.2	1603.0	*	3	2030	823	0.	0.0	1585.0	*	6	04051490	0.	0.0	1585.0
1	1300	157	714.	209.7	1603.3	*	3	2035	824	0.	0.0	1585.0	*	6	04101491	0.	0.0	1585.0
1	1305	158	718.	214.8	1603.5	*	3	2040	825	0.	0.0	1585.0	*	6	04151492	0.	0.0	1585.0
1	1310	159	721.	219.1	1603.7	*	3	2045	826	0.	0.0	1585.0	*	6	04201493	0.	0.0	1585.0
1	1315	160	725.	223.6	1603.9	*	3	2050	827	0.	0.0	1585.0	*	6	04251494	0.	0.0	1585.0
1	1320	161	728.	228.5	1604.2	*	3	2055	828	0.	0.0	1585.0	*	6	04301495	0.	0.0	1585.0
1	1325	162	732.	233.8	1604.4	*	3	2100	829	0.	0.0	1585.0	*	6	04351496	0.	0.0	1585.0
1	1330	163	736.	238.9	1604.6	*	3	2105	830	0.	0.0	1585.0	*	6	04401497	0.	0.0	1585.0
1	1335	164	739.	243.6	1604.9	*	3	2110	831	0.	0.0	1585.0	*	6	04451498	0.	0.0	1585.0
1	1340	165	742.	247.8	1605.0	*	3	2115	832	0.	0.0	1585.0	*	6	04501499	0.	0.0	1585.0
1	1345	166	745.	251.5	1605.2	*	3	2120	833	0.	0.0	1585.0	*	6	04551500	0.	0.0	1585.0
1	1350	167	747.	254.6	1605.3	*	3	2125	834	0.	0.0	1585.0	*	6	05001501	0.	0.0	1585.0
1	1355	168	748.	257.2	1605.4	*	3	2130	835	0.	0.0	1585.0	*	6	05051502	0.	0.0	1585.0
1	1400	169	750.	259.5	1605.5	*	3	2135	836	0.	0.0	1585.0	*	6	05101503	0.	0.0	1585.0
1	1405	170	751.	261.4	1605.6	*	3	2140	837	0.	0.0	1585.0	*	6	05151504	0.	0.0	1585.0
1	1410	171	752.	263.0	1605.7	*	3	2145	838	0.	0.0	1585.0	*	6	05201505	0.	0.0	1585.0
1	1415	172	753.	264.2	1605.7	*	3	2150	839	0.	0.0	1585.0	*	6	05251506	0.	0.0	1585.0
1	1420	173	754.	265.2	1605.7	*	3	2155	840	0.	0.0	1585.0	*	6	05301507	0.	0.0	1585.0
1	1425	174	754.	265.9	1605.8	*	3	2200	841	0.	0.0	1585.0	*	6	05351508	0.	0.0	1585.0
1	1430	175	754.	266.4	1605.8	*	3	2205	842	0.	0.0	1585.0	*	6	05401509	0.	0.0	1585.0
1	1435	176	755.	266.7	1605.8	*	3	2210	843	0.	0.0	1585.0	*	6	05451510	0.	0.0	1585.0
1	1440	177	755.	266.9	1605.8	*	3	2215	844	0.	0.0	1585.0	*	6	05501511	0.	0.0	1585.0
1	1445	178	755.	266.8	1605.8	*	3	2220	845	0.	0.0	1585.0	*	6	05551512	0.	0.0	1585.0
1	1450	179	755.	266.7	1605.8	*	3	2225	846	0.	0.0	1585.0	*	6	06001513	0.	0.0	1585.0
1	1455	180	754.	266.4	1605.8	*	3	2230	847	0.	0.0	1585.0	*	6	06051514	0.	0.0	1585.0
1	1500	181	754.	265.9	1605.8	*	3	2235	848	0.	0.0	1585.0	*	6	06101515	0.	0.0	1585.0
1	1505	182	754.	265.4	1605.8	*	3	2240	849	0.	0.0	1585.0	*	6	06151516	0.	0.0	1585.0
1	1510	183	753.	264.8	1605.7	*	3	2245	850	0.	0.0	1585.0	*	6	06201517	0.	0.0	1585.0
1	1515	184	753.	264.1	1605.7	*	3	2250	851	0.	0.0	1585.0	*	6	06251518	0.	0.0	1585.0
1	1520	185	752.	263.3	1605.7	*	3	2255	852	0.	0.0	1585.0	*	6	06301519	0.	0.0	1585.0
1	1525	186	752.	262.5	1605.6	*	3	2300	853	0.	0.0	1585.0	*	6	06351520	0.	0.0	1585.0
1	1530	187	751.	261.5	1605.6	*	3	2305	854	0.	0.0	1585.0	*	6	06401521	0.	0.0	1585.0
1	1535	188	751.	260.5	1605.6	*	3	2310	855	0.	0.0	1585.0	*	6	06451522	0.	0.0	1585.0
1	1540	189	750.	259.4	1605.5	*	3	2315	856	0.	0.0	1585.0	*	6	06501523	0.	0.0	1585.0
1	1545	190	749.	258.3	1605.5	*	3	2320	857	0.	0.0	1585.0	*	6	06551524	0.	0.0	1585.0
1	1550	191	748.	257.0	1605.4	*	3	2325	858	0.	0.0	1585.0	*	6	07001525	0.	0.0	1585.0
1	1555	192	748.	255.8	1605.4	*	3	2330	859	0.	0.0	1585.0	*	6	07051526	0.	0.0	1585.0
1	1600	193	747.	254.4	1605.3	*	3	2335	860	0.	0.0	1585.0	*	6	07101527	0.	0.0	1585.0
1	1605	194	746.	253.1	1605.3	*	3	2340	861	0.	0.0	1585.0	*	6	07151528	0.	0.0	1585.0
1	1610	195	745.	251.6	1605.2	*	3	2345	862	0.	0.0	1585.0	*	6	07201529	0.	0.0	1585.0
1	1615	196	744.	250.1	1605.1	*	3	2350	863	0.	0.0	1585.0	*	6	07251530	0.	0.0	1585.0
1	1620	197	743.	248.6	1605.1	*	3	2355	864	0.	0.0	1585.0	*	6	07301531	0.	0.0	1585.0
1	1625	198	742.	247.0	1605.0	*	4	0000	865	0.	0.0	1585.0	*	6	07351532	0.	0.0	1585.0
1	1630	199	741.	245.4	1604.9	*	4	0005	866	0.	0.0	1585.0	*	6	07401533	0.	0.0	1585.0
1	1635	200	740.	243.8	1604.9	*	4	0010	867	0.	0.0	1585.0	*	6	07451534	0.	0.0	1585.0
1	1640	201	738.	242.1	1604.8	*	4	0015	868	0.	0.0	1585.0	*	6	07501535	0.	0.0	1585.0
1	1645	202	737.	240.4	1604.7	*	4	0020	869	0.	0.0	1585.0	*	6	07551536	0.	0.0	1585.0
1	1650	203	736.	238.7	1604.6	*	4	0025	870	0.	0.0	1585.0	*	6	08001537	0.	0.0	1585.0
1	1655	204	734.	236.9	1604.6	*	4	0030	871	0.	0.0	1585.0	*	6	08051538	0.	0.0	1585.0
1	1700	205	733.	235.1	1604.5	*	4	0035	872	0.	0.0	1585.0	*	6	08101539	0.	0.0	1585.0
1	1705	206	732.	233.2	1604.4	*	4	0040	873	0.	0.0	1585.0	*	6	08151540	0.	0.0	1585.0
1	1710	207	730.	231.4	1604.3	*	4	0045	874	0.	0.0	1585.0	*	6	08201541	0.	0.0	1585.0
1	1715	208	729.	229.5	1604.2	*	4	0050	875	0.	0.0	1585.0	*	6	08251542	0.	0.0	1585.0
1	1720	209	728.	227.6	1604.1	*	4	0055	876	0.	0.0	1585.0	*	6	08301543	0.	0.0	1585.0
1	1725	210	726.	225.6	1604.0	*	4	0100	877	0.	0.0	1585.0	*	6	08351544	0.	0.0	1585.0
1	1730	211	725.	223.7	1604.0	*	4	0105	878	0.	0.0	1585.0	*	6	08401545	0.	0.0	1585.0
1	1735	212	723.	221.7	1603.9	*	4	0110	879	0.	0.0	1585.0	*	6	08451546	0.	0.0	1585.0
1	1740	213	722.	219.7	1603.8	*	4	0115	880	0.	0.0	1585.0	*	6	08501547	0.	0.0	1585.0
1	1745	214	720.	217.7	1603.7	*	4	0120	881	0.	0.0	1585.0	*	6	08551548	0.	0.0	1585.0
1	1750	215	719.	215.7	1603.6	*	4	0125	882	0.	0.0	1585.0	*	6	09001549	0.	0.0	1585.0
1	1755	216	717.	213.6	1603.5	*	4	0130	883	0.	0.0	1585.0	*	6	09051550	0.	0.0	1585.0
1	1800	217	716.	211.5	1603.4	*	4	0135	884	0.	0.0	1585.0	*	6	09101551	0.	0.0	1585.0
1	1805	218	714.	209.4	1603.3	*	4	0140	885	0.	0.0	1585.0	*	6	09151552	0.	0.0	1585.0
1	1810	219	713.	207.3	1603.2	*	4	0145	886	0.	0.0	1585.0	*	6	09201553	0.	0.0	1585.0
1	1815	220	711.	205.2	1603.1	*	4	0150	887	0.	0.0	1585.0	*	6	09251554	0.	0.0	1585.0
1	1820	221	709.	203.1	1603.0	*	4	0155	888	0.	0.0	1585.0	*	6	09301555	0.	0.0	1585.0
1	1825	222	708.	200.9	1602.9	*	4	0200	889	0.	0.0	1585.0	*	6	09351556	0.	0.0	1585.0
1	1830	223	706.	198.8	1602.8	*	4	0205	890	0.	0.0	1585.0	*	6	09401557	0.	0.0	1585.0
1	1835	224	705.	196.6	1602.7	*	4	0210	891	0.	0.0	1585.0	*	6	09451558	0.	0.0	1585.0
1	1840	225	703.	194.4	1602.6	*	4	0215	892	0.	0.0	1585.0	*	6	09501559	0.	0.0	1585.0
1	1845	226	701.	192.2	1602.5	*	4	0220	893	0.	0.0	1585.0	*	6	09551560	0.	0.0	1585.0
1	1850	227	700.	190.0	1602.4	*	4	0225	894	0.	0.0	1585.0	*	6	10001561	0.	0.0	1585.0
1	1855	228	698.	187.9	1602.3	*	4	0230	895	0.	0.0	1585.0	*	6	10051562	0.	0.0	1585.0
1	1900	229	694.	185.7	1602.2	*	4	0235	896	0.	0.0	1585.0	*	6	10101563	0.	0.0	1585.0
1	1905	230	690.	183.5	1602.1	*	4	0240	897	0.	0.0	1585.0	*	6	10151564	0.	0.0	1585.0
1	1910	231	686.	181.3	1602.0	*	4	0245	898	0.	0.0	1585.0	*	6	10201565	0.	0.0	1585.0
1	1915	232	682.	179.2	1601.9	*	4	0250	899	0.	0.0	1585.0	*	6	10251566	0.	0.0	1585.0
1	1920	233	672.	177.1	1601.8	*	4	0255	900	0.	0.0	1585.0	*	6	10301567	0.	0.0	1585.0
1	1925	234	651.	175.1	1601.7	*	4	0300	901	0.	0.0	1585.0	*	6	10351568	0.	0.0	1585.0

1	1930	235	629.	173.2	1601.6	*	4	0305	902	0.	0.0	1585.0	*	6	10401569	0.	0.0	1585.0
1	1935	236	627.	171.4	1601.6	*	4	0310	903	0.	0.0	1585.0	*	6	10451570	0.	0.0	1585.0
1	1940	237	626.	169.6	1601.5	*	4	0315	904	0.	0.0	1585.0	*	6	10501571	0.	0.0	1585.0
1	1945	238	624.	167.8	1601.4	*	4	0320	905	0.	0.0	1585.0	*	6	10551572	0.	0.0	1585.0
1	1950	239	622.	166.0	1601.3	*	4	0325	906	0.	0.0	1585.0	*	6	11001573	0.	0.0	1585.0
1	1955	240	621.	164.2	1601.2	*	4	0330	907	0.	0.0	1585.0	*	6	11051574	0.	0.0	1585.0
1	2000	241	619.	162.4	1601.1	*	4	0335	908	0.	0.0	1585.0	*	6	11101575	0.	0.0	1585.0
1	2005	242	618.	160.6	1601.1	*	4	0340	909	0.	0.0	1585.0	*	6	11151576	0.	0.0	1585.0
1	2010	243	616.	158.9	1601.0	*	4	0345	910	0.	0.0	1585.0	*	6	11201577	0.	0.0	1585.0
1	2015	244	614.	157.1	1600.9	*	4	0350	911	0.	0.0	1585.0	*	6	11251578	0.	0.0	1585.0
1	2020	245	613.	155.3	1600.8	*	4	0355	912	0.	0.0	1585.0	*	6	11301579	0.	0.0	1585.0
1	2025	246	611.	153.5	1600.7	*	4	0400	913	0.	0.0	1585.0	*	6	11351580	0.	0.0	1585.0
1	2030	247	610.	151.8	1600.7	*	4	0405	914	0.	0.0	1585.0	*	6	11401581	0.	0.0	1585.0
1	2035	248	608.	150.0	1600.6	*	4	0410	915	0.	0.0	1585.0	*	6	11451582	0.	0.0	1585.0
1	2040	249	606.	148.2	1600.5	*	4	0415	916	0.	0.0	1585.0	*	6	11501583	0.	0.0	1585.0
1	2045	250	605.	146.5	1600.4	*	4	0420	917	0.	0.0	1585.0	*	6	11551584	0.	0.0	1585.0
1	2050	251	603.	144.7	1600.3	*	4	0425	918	0.	0.0	1585.0	*	6	12001585	0.	0.0	1585.0
1	2055	252	602.	143.0	1600.3	*	4	0430	919	0.	0.0	1585.0	*	6	12051586	0.	0.0	1585.0
1	2100	253	600.	141.3	1600.2	*	4	0435	920	0.	0.0	1585.0	*	6	12101587	0.	0.0	1585.0
1	2105	254	599.	139.5	1600.1	*	4	0440	921	0.	0.0	1585.0	*	6	12151588	0.	0.0	1585.0
1	2110	255	597.	137.8	1600.0	*	4	0445	922	0.	0.0	1585.0	*	6	12201589	0.	0.0	1585.0
1	2115	256	595.	136.1	1599.9	*	4	0450	923	0.	0.0	1585.0	*	6	12251590	0.	0.0	1585.0
1	2120	257	594.	134.4	1599.8	*	4	0455	924	0.	0.0	1585.0	*	6	12301591	0.	0.0	1585.0
1	2125	258	592.	132.7	1599.8	*	4	0500	925	0.	0.0	1585.0	*	6	12351592	0.	0.0	1585.0
1	2130	259	590.	131.0	1599.7	*	4	0505	926	0.	0.0	1585.0	*	6	12401593	0.	0.0	1585.0
1	2135	260	588.	129.3	1599.6	*	4	0510	927	0.	0.0	1585.0	*	6	12451594	0.	0.0	1585.0
1	2140	261	587.	127.6	1599.5	*	4	0515	928	0.	0.0	1585.0	*	6	12501595	0.	0.0	1585.0
1	2145	262	585.	125.9	1599.4	*	4	0520	929	0.	0.0	1585.0	*	6	12551596	0.	0.0	1585.0
1	2150	263	583.	124.2	1599.3	*	4	0525	930	0.	0.0	1585.0	*	6	13001597	0.	0.0	1585.0
1	2155	264	581.	122.5	1599.2	*	4	0530	931	0.	0.0	1585.0	*	6	13051598	0.	0.0	1585.0
1	2200	265	580.	120.8	1599.1	*	4	0535	932	0.	0.0	1585.0	*	6	13101599	0.	0.0	1585.0
1	2205	266	578.	119.2	1599.1	*	4	0540	933	0.	0.0	1585.0	*	6	13151600	0.	0.0	1585.0
1	2210	267	576.	117.5	1599.0	*	4	0545	934	0.	0.0	1585.0	*	6	13201601	0.	0.0	1585.0
1	2215	268	575.	115.8	1598.9	*	4	0550	935	0.	0.0	1585.0	*	6	13251602	0.	0.0	1585.0
1	2220	269	573.	114.2	1598.8	*	4	0555	936	0.	0.0	1585.0	*	6	13301603	0.	0.0	1585.0
1	2225	270	571.	112.5	1598.7	*	4	0600	937	0.	0.0	1585.0	*	6	13351604	0.	0.0	1585.0
1	2230	271	569.	110.9	1598.6	*	4	0605	938	0.	0.0	1585.0	*	6	13401605	0.	0.0	1585.0
1	2235	272	568.	109.3	1598.5	*	4	0610	939	0.	0.0	1585.0	*	6	13451606	0.	0.0	1585.0
1	2240	273	566.	107.6	1598.4	*	4	0615	940	0.	0.0	1585.0	*	6	13501607	0.	0.0	1585.0
1	2245	274	564.	106.0	1598.4	*	4	0620	941	0.	0.0	1585.0	*	6	13551608	0.	0.0	1585.0
1	2250	275	563.	104.4	1598.3	*	4	0625	942	0.	0.0	1585.0	*	6	14001609	0.	0.0	1585.0
1	2255	276	561.	102.8	1598.2	*	4	0630	943	0.	0.0	1585.0	*	6	14051610	0.	0.0	1585.0
1	2300	277	559.	101.2	1598.1	*	4	0635	944	0.	0.0	1585.0	*	6	14101611	0.	0.0	1585.0
1	2305	278	558.	99.6	1598.0	*	4	0640	945	0.	0.0	1585.0	*	6	14151612	0.	0.0	1585.0
1	2310	279	556.	98.0	1597.9	*	4	0645	946	0.	0.0	1585.0	*	6	14201613	0.	0.0	1585.0
1	2315	280	555.	96.5	1597.9	*	4	0650	947	0.	0.0	1585.0	*	6	14251614	0.	0.0	1585.0
1	2320	281	553.	94.9	1597.8	*	4	0655	948	0.	0.0	1585.0	*	6	14301615	0.	0.0	1585.0
1	2325	282	551.	93.3	1597.7	*	4	0700	949	0.	0.0	1585.0	*	6	14351616	0.	0.0	1585.0
1	2330	283	550.	91.8	1597.6	*	4	0705	950	0.	0.0	1585.0	*	6	14401617	0.	0.0	1585.0
1	2335	284	548.	90.2	1597.5	*	4	0710	951	0.	0.0	1585.0	*	6	14451618	0.	0.0	1585.0
1	2340	285	547.	88.7	1597.5	*	4	0715	952	0.	0.0	1585.0	*	6	14501619	0.	0.0	1585.0
1	2345	286	545.	87.2	1597.4	*	4	0720	953	0.	0.0	1585.0	*	6	14551620	0.	0.0	1585.0
1	2350	287	543.	85.7	1597.3	*	4	0725	954	0.	0.0	1585.0	*	6	15001621	0.	0.0	1585.0
1	2355	288	542.	84.1	1597.2	*	4	0730	955	0.	0.0	1585.0	*	6	15051622	0.	0.0	1585.0
2	0000	289	540.	82.6	1597.1	*	4	0735	956	0.	0.0	1585.0	*	6	15101623	0.	0.0	1585.0
2	0005	290	539.	81.1	1597.1	*	4	0740	957	0.	0.0	1585.0	*	6	15151624	0.	0.0	1585.0
2	0010	291	537.	79.6	1597.0	*	4	0745	958	0.	0.0	1585.0	*	6	15201625	0.	0.0	1585.0
2	0015	292	536.	78.1	1596.9	*	4	0750	959	0.	0.0	1585.0	*	6	15251626	0.	0.0	1585.0
2	0020	293	534.	76.7	1596.8	*	4	0755	960	0.	0.0	1585.0	*	6	15301627	0.	0.0	1585.0
2	0025	294	533.	75.2	1596.8	*	4	0800	961	0.	0.0	1585.0	*	6	15351628	0.	0.0	1585.0
2	0030	295	531.	73.7	1596.7	*	4	0805	962	0.	0.0	1585.0	*	6	15401629	0.	0.0	1585.0
2	0035	296	530.	72.2	1596.6	*	4	0810	963	0.	0.0	1585.0	*	6	15451630	0.	0.0	1585.0
2	0040	297	528.	70.7	1596.5	*	4	0815	964	0.	0.0	1585.0	*	6	15501631	0.	0.0	1585.0
2	0045	298	527.	69.2	1596.4	*	4	0820	965	0.	0.0	1585.0	*	6	15551632	0.	0.0	1585.0
2	0050	299	526.	67.7	1596.4	*	4	0825	966	0.	0.0	1585.0	*	6	16001633	0.	0.0	1585.0
2	0055	300	525.	66.1	1596.3	*	4	0830	967	0.	0.0	1585.0	*	6	16051634	0.	0.0	1585.0
2	0100	301	524.	64.6	1596.2	*	4	0835	968	0.	0.0	1585.0	*	6	16101635	0.	0.0	1585.0
2	0105	302	523.	63.1	1596.1	*	4	0840	969	0.	0.0	1585.0	*	6	16151636	0.	0.0	1585.0
2	0110	303	522.	61.5	1596.0	*	4	0845	970	0.	0.0	1585.0	*	6	16201637	0.	0.0	1585.0
2	0115	304	521.	59.9	1596.0	*	4	0850	971	0.	0.0	1585.0	*	6	16251638	0.	0.0	1585.0
2	0120	305	520.	58.4	1595.9	*	4	0855	972	0.	0.0	1585.0	*	6	16301639	0.	0.0	1585.0
2	0125	306	519.	56.8	1595.8	*	4	0900	973	0.	0.0	1585.0	*	6	16351640	0.	0.0	1585.0
2	0130	307	517.	55.2	1595.7	*	4	0905	974	0.	0.0	1585.0	*	6	16401641	0.	0.0	1585.0
2	0135	308	516.	53.6	1595.6	*	4	0910	975	0.	0.0	1585.0	*	6	16451642	0.	0.0	1585.0
2	0140	309	515.	52.0	1595.5	*	4	0915	976	0.	0.0	1585.0	*	6	16501643	0.	0.0	1585.0
2	0145	310	514.	50.4	1595.5	*	4	0920	977	0.	0.0	1585.0	*	6	16551644	0.	0.0	1585.0
2	0150	311	513.	48.8	1595.4	*	4	0925	978	0.	0.0	1585.0	*	6	17001645	0.	0.0	1585.0
2	0155	312	512.	47.1	1595.3	*	4	0930	979	0.	0.0	1585.0	*	6	17051646	0.	0.0	1585.0
2	0200	313	511.	45.5	1595.2	*	4	0935	980	0.	0.0	1585.0	*	6	17101647	0.	0.0	1585.0
2	0205	314	510.	43.9	1595.1	*	4	0940	981	0.	0.0	1585.0	*	6	17151648	0.	0.0	1585.0
2	0210	315	509.	42.3	1595.0	*	4	0945	982	0.	0.0	1585.0	*	6	17201649	0.	0.0	1585.0
2	0215	316	507.	40.7	1594.9	*	4	0950	983	0.	0.0	1585.0	*	6	17251650	0.	0.0	1585.0
2	0220	317	504.	39.0	1594.7	*	4	0955	984	0.	0.0	1585.0	*	6	17301651	0.	0.0	1585.0
2	0225	318	502.	37.4	1594.5	*	4	1000	985	0.	0.0	1585.0	*	6	17351652	0.	0.0	1585.0
2	0230	319	497.	35.9	1594.3	*	4	1005	986	0.	0.0	1585.0	*	6	17401653	0.	0.0	1585.0
2	0235	320	483.	34.3	1594.1	*	4	1010	987	0.	0.0	1585.0	*	6	17451654	0.	0.0	1585.0
2	0240	321	471.	32.9	1593.9	*	4	1015	988	0.	0.0	1585.0	*	6	17501655	0.	0.0	1585.0
2	0245	322	459.	31.5	1593.7	*	4	1020	989	0.	0.0	1585.0	*	6	17551656	0.	0.0	1585.0
2	0250	323	448.	30.2	1593.6	*	4	1025	990	0.	0.0	1585.0	*	6	18001657	0.	0.0	1585.0
2	0255	324	437.	29.0	1593.4	*	4	1030	991	0.	0.0	1585.0	*	6	18051658	0.	0.0	1585.0
2	0300	325	427.	27.8	1593.3	*	4	1035	992	0.	0.0	1585.0	*	6	18101659	0.	0.0	1585.0
2	0305	326	417.	26.7	1593.1	*	4	1040	993	0.	0.0	1585.0	*	6	18151660	0.	0.0	1585.0
2	0310	327	408.	25.7	1593.0	*	4	1045	994	0.	0.0	1585.0	*	6	18201661	0.	0.0	1585.0

2	0315	328	400.	24.7	1592.9	*	4	1050 995	0.	0.0	1585.0	*	6	18251662	0.	0.0	1585.0
2	0320	329	392.	23.8	1592.8	*	4	1055 996	0.	0.0	1585.0	*	6	18301663	0.	0.0	1585.0
2	0325	330	384.	22.9	1592.7	*	4	1100 997	0.	0.0	1585.0	*	6	18351664	0.	0.0	1585.0
2	0330	331	376.	22.0	1592.5	*	4	1105 998	0.	0.0	1585.0	*	6	18401665	0.	0.0	1585.0
2	0335	332	369.	21.3	1592.5	*	4	1110 999	0.	0.0	1585.0	*	6	18451666	0.	0.0	1585.0
2	0340	333	362.	20.5	1592.4	*	4	11151000	0.	0.0	1585.0	*	6	18501667	0.	0.0	1585.0
2	0345	334	356.	19.8	1592.3	*	4	11201001	0.	0.0	1585.0	*	6	18551668	0.	0.0	1585.0
2	0350	335	350.	19.1	1592.2	*	4	11251002	0.	0.0	1585.0	*	6	19001669	0.	0.0	1585.0
2	0355	336	344.	18.5	1592.1	*	4	11301003	0.	0.0	1585.0	*	6	19051670	0.	0.0	1585.0
2	0400	337	339.	17.9	1592.0	*	4	11351004	0.	0.0	1585.0	*	6	19101671	0.	0.0	1585.0
2	0405	338	334.	17.3	1592.0	*	4	11401005	0.	0.0	1585.0	*	6	19151672	0.	0.0	1585.0
2	0410	339	329.	16.8	1591.9	*	4	11451006	0.	0.0	1585.0	*	6	19201673	0.	0.0	1585.0
2	0415	340	325.	16.3	1591.8	*	4	11501007	0.	0.0	1585.0	*	6	19251674	0.	0.0	1585.0
2	0420	341	320.	15.8	1591.8	*	4	11551008	0.	0.0	1585.0	*	6	19301675	0.	0.0	1585.0
2	0425	342	316.	15.4	1591.7	*	4	12001009	0.	0.0	1585.0	*	6	19351676	0.	0.0	1585.0
2	0430	343	313.	14.9	1591.7	*	4	12051010	0.	0.0	1585.0	*	6	19401677	0.	0.0	1585.0
2	0435	344	309.	14.5	1591.6	*	4	12101011	0.	0.0	1585.0	*	6	19451678	0.	0.0	1585.0
2	0440	345	305.	14.2	1591.6	*	4	12151012	0.	0.0	1585.0	*	6	19501679	0.	0.0	1585.0
2	0445	346	302.	13.8	1591.5	*	4	12201013	0.	0.0	1585.0	*	6	19551680	0.	0.0	1585.0
2	0450	347	299.	13.4	1591.5	*	4	12251014	0.	0.0	1585.0	*	6	20001681	0.	0.0	1585.0
2	0455	348	296.	13.1	1591.4	*	4	12301015	0.	0.0	1585.0	*	6	20051682	0.	0.0	1585.0
2	0500	349	293.	12.8	1591.4	*	4	12351016	0.	0.0	1585.0	*	6	20101683	0.	0.0	1585.0
2	0505	350	290.	12.5	1591.4	*	4	12401017	0.	0.0	1585.0	*	6	20151684	0.	0.0	1585.0
2	0510	351	288.	12.2	1591.3	*	4	12451018	0.	0.0	1585.0	*	6	20201685	0.	0.0	1585.0
2	0515	352	286.	11.9	1591.3	*	4	12501019	0.	0.0	1585.0	*	6	20251686	0.	0.0	1585.0
2	0520	353	283.	11.7	1591.3	*	4	12551020	0.	0.0	1585.0	*	6	20301687	0.	0.0	1585.0
2	0525	354	281.	11.4	1591.2	*	4	13001021	0.	0.0	1585.0	*	6	20351688	0.	0.0	1585.0
2	0530	355	279.	11.2	1591.2	*	4	13051022	0.	0.0	1585.0	*	6	20401689	0.	0.0	1585.0
2	0535	356	277.	11.0	1591.2	*	4	13101023	0.	0.0	1585.0	*	6	20451690	0.	0.0	1585.0
2	0540	357	275.	10.8	1591.1	*	4	13151024	0.	0.0	1585.0	*	6	20501691	0.	0.0	1585.0
2	0545	358	273.	10.6	1591.1	*	4	13201025	0.	0.0	1585.0	*	6	20551692	0.	0.0	1585.0
2	0550	359	271.	10.4	1591.1	*	4	13251026	0.	0.0	1585.0	*	6	21001693	0.	0.0	1585.0
2	0555	360	270.	10.2	1591.1	*	4	13301027	0.	0.0	1585.0	*	6	21051694	0.	0.0	1585.0
2	0600	361	268.	10.0	1591.0	*	4	13351028	0.	0.0	1585.0	*	6	21101695	0.	0.0	1585.0
2	0605	362	267.	9.8	1591.0	*	4	13401029	0.	0.0	1585.0	*	6	21151696	0.	0.0	1585.0
2	0610	363	265.	9.7	1591.0	*	4	13451030	0.	0.0	1585.0	*	6	21201697	0.	0.0	1585.0
2	0615	364	264.	9.5	1591.0	*	4	13501031	0.	0.0	1585.0	*	6	21251698	0.	0.0	1585.0
2	0620	365	262.	9.4	1591.0	*	4	13551032	0.	0.0	1585.0	*	6	21301699	0.	0.0	1585.0
2	0625	366	261.	9.2	1590.9	*	4	14001033	0.	0.0	1585.0	*	6	21351700	0.	0.0	1585.0
2	0630	367	260.	9.1	1590.9	*	4	14051034	0.	0.0	1585.0	*	6	21401701	0.	0.0	1585.0
2	0635	368	259.	8.9	1590.9	*	4	14101035	0.	0.0	1585.0	*	6	21451702	0.	0.0	1585.0
2	0640	369	257.	8.8	1590.9	*	4	14151036	0.	0.0	1585.0	*	6	21501703	0.	0.0	1585.0
2	0645	370	256.	8.7	1590.9	*	4	14201037	0.	0.0	1585.0	*	6	21551704	0.	0.0	1585.0
2	0650	371	255.	8.6	1590.9	*	4	14251038	0.	0.0	1585.0	*	6	22001705	0.	0.0	1585.0
2	0655	372	254.	8.4	1590.9	*	4	14301039	0.	0.0	1585.0	*	6	22051706	0.	0.0	1585.0
2	0700	373	253.	8.3	1590.8	*	4	14351040	0.	0.0	1585.0	*	6	22101707	0.	0.0	1585.0
2	0705	374	252.	8.2	1590.8	*	4	14401041	0.	0.0	1585.0	*	6	22151708	0.	0.0	1585.0
2	0710	375	251.	8.1	1590.8	*	4	14451042	0.	0.0	1585.0	*	6	22201709	0.	0.0	1585.0
2	0715	376	250.	8.0	1590.8	*	4	14501043	0.	0.0	1585.0	*	6	22251710	0.	0.0	1585.0
2	0720	377	249.	7.9	1590.8	*	4	14551044	0.	0.0	1585.0	*	6	22301711	0.	0.0	1585.0
2	0725	378	248.	7.8	1590.8	*	4	15001045	0.	0.0	1585.0	*	6	22351712	0.	0.0	1585.0
2	0730	379	247.	7.7	1590.8	*	4	15051046	0.	0.0	1585.0	*	6	22401713	0.	0.0	1585.0
2	0735	380	247.	7.6	1590.7	*	4	15101047	0.	0.0	1585.0	*	6	22451714	0.	0.0	1585.0
2	0740	381	246.	7.5	1590.7	*	4	15151048	0.	0.0	1585.0	*	6	22501715	0.	0.0	1585.0
2	0745	382	245.	7.4	1590.7	*	4	15201049	0.	0.0	1585.0	*	6	22551716	0.	0.0	1585.0
2	0750	383	244.	7.3	1590.7	*	4	15251050	0.	0.0	1585.0	*	6	23001717	0.	0.0	1585.0
2	0755	384	243.	7.2	1590.7	*	4	15301051	0.	0.0	1585.0	*	6	23051718	0.	0.0	1585.0
2	0800	385	242.	7.1	1590.7	*	4	15351052	0.	0.0	1585.0	*	6	23101719	0.	0.0	1585.0
2	0805	386	242.	7.0	1590.7	*	4	15401053	0.	0.0	1585.0	*	6	23151720	0.	0.0	1585.0
2	0810	387	241.	7.0	1590.7	*	4	15451054	0.	0.0	1585.0	*	6	23201721	0.	0.0	1585.0
2	0815	388	240.	6.9	1590.7	*	4	15501055	0.	0.0	1585.0	*	6	23251722	0.	0.0	1585.0
2	0820	389	239.	6.8	1590.6	*	4	15551056	0.	0.0	1585.0	*	6	23301723	0.	0.0	1585.0
2	0825	390	239.	6.7	1590.6	*	4	16001057	0.	0.0	1585.0	*	6	23351724	0.	0.0	1585.0
2	0830	391	238.	6.6	1590.6	*	4	16051058	0.	0.0	1585.0	*	6	23401725	0.	0.0	1585.0
2	0835	392	237.	6.6	1590.6	*	4	16101059	0.	0.0	1585.0	*	6	23451726	0.	0.0	1585.0
2	0840	393	237.	6.5	1590.6	*	4	16151060	0.	0.0	1585.0	*	6	23501727	0.	0.0	1585.0
2	0845	394	236.	6.4	1590.6	*	4	16201061	0.	0.0	1585.0	*	6	23551728	0.	0.0	1585.0
2	0850	395	235.	6.3	1590.6	*	4	16251062	0.	0.0	1585.0	*	7	00001729	0.	0.0	1585.0
2	0855	396	235.	6.3	1590.6	*	4	16301063	0.	0.0	1585.0	*	7	00051730	0.	0.0	1585.0
2	0900	397	234.	6.2	1590.6	*	4	16351064	0.	0.0	1585.0	*	7	00101731	0.	0.0	1585.0
2	0905	398	233.	6.1	1590.6	*	4	16401065	0.	0.0	1585.0	*	7	00151732	0.	0.0	1585.0
2	0910	399	233.	6.0	1590.6	*	4	16451066	0.	0.0	1585.0	*	7	00201733	0.	0.0	1585.0
2	0915	400	232.	6.0	1590.5	*	4	16501067	0.	0.0	1585.0	*	7	00251734	0.	0.0	1585.0
2	0920	401	231.	5.9	1590.5	*	4	16551068	0.	0.0	1585.0	*	7	00301735	0.	0.0	1585.0
2	0925	402	231.	5.8	1590.5	*	4	17001069	0.	0.0	1585.0	*	7	00351736	0.	0.0	1585.0
2	0930	403	230.	5.8	1590.5	*	4	17051070	0.	0.0	1585.0	*	7	00401737	0.	0.0	1585.0
2	0935	404	230.	5.7	1590.5	*	4	17101071	0.	0.0	1585.0	*	7	00451738	0.	0.0	1585.0
2	0940	405	229.	5.6	1590.5	*	4	17151072	0.	0.0	1585.0	*	7	00501739	0.	0.0	1585.0
2	0945	406	228.	5.6	1590.5	*	4	17201073	0.	0.0	1585.0	*	7	00551740	0.	0.0	1585.0
2	0950	407	228.	5.5	1590.5	*	4	17251074	0.	0.0	1585.0	*	7	01001741	0.	0.0	1585.0
2	0955	408	227.	5.4	1590.5	*	4	17301075	0.	0.0	1585.0	*	7	01051742	0.	0.0	1585.0
2	1000	409	227.	5.4	1590.5	*	4	17351076	0.	0.0	1585.0	*	7	01101743	0.	0.0	1585.0
2	1005	410	226.	5.3	1590.5	*	4	17401077	0.	0.0	1585.0	*	7	01151744	0.	0.0	1585.0
2	1010	411	225.	5.2	1590.5	*	4	17451078	0.	0.0	1585.0	*	7	01201745	0.	0.0	1585.0
2	1015	412	225.	5.2	1590.4	*	4	17501079	0.	0.0	1585.0	*	7	01251746	0.	0.0	1585.0
2	1020	413	224.	5.1	1590.4	*	4	17551080	0.	0.0	1585.0	*	7	01301747	0.	0.0	1585.0
2	1025	414	224.	5.0	1590.4	*	4	18001081	0.	0.0	1585.0	*	7	01351748	0.	0.0	1585.0
2	1030	415	223.	5.0	1590.4	*	4	18051082	0.	0.0	1585.0	*	7	01401749	0.	0.0	1585.0
2	1035	416	223.	4.9	1590.4	*	4	18101083	0.	0.0	1585.0	*	7	01451750	0.	0.0	1585.0
2	1040	417	222.	4.8	1590.4	*	4	18151084	0.	0.0	1585.0	*	7	01501751	0.	0.0	1585.0
2	1045	418	221.	4.8	1590.4	*	4	18201085	0.	0.0	1585.0	*	7	01551752	0.	0.0	1585.0
2	1050	419	221.	4.7	1590.4	*	4	18251086	0.	0.0	1585.0	*	7	02001753	0.	0.0	1585.0
2	1055	420	220.	4.6	1590.4	*	4	18301087	0.	0.0	1585.0	*	7	02051754	0.	0.0	1585.0

2	1100	421	220.	4.6	1590.4	*	4	18351088	0.	0.0	1585.0	*	7	02101755	0.	0.0	1585.0
2	1105	422	219.	4.5	1590.4	*	4	18401089	0.	0.0	1585.0	*	7	02151756	0.	0.0	1585.0
2	1110	423	218.	4.4	1590.4	*	4	18451090	0.	0.0	1585.0	*	7	02201757	0.	0.0	1585.0
2	1115	424	218.	4.4	1590.3	*	4	18501091	0.	0.0	1585.0	*	7	02251758	0.	0.0	1585.0
2	1120	425	217.	4.3	1590.3	*	4	18551092	0.	0.0	1585.0	*	7	02301759	0.	0.0	1585.0
2	1125	426	217.	4.3	1590.3	*	4	19001093	0.	0.0	1585.0	*	7	02351760	0.	0.0	1585.0
2	1130	427	216.	4.2	1590.3	*	4	19051094	0.	0.0	1585.0	*	7	02401761	0.	0.0	1585.0
2	1135	428	215.	4.1	1590.3	*	4	19101095	0.	0.0	1585.0	*	7	02451762	0.	0.0	1585.0
2	1140	429	215.	4.1	1590.3	*	4	19151096	0.	0.0	1585.0	*	7	02501763	0.	0.0	1585.0
2	1145	430	214.	4.0	1590.3	*	4	19201097	0.	0.0	1585.0	*	7	02551764	0.	0.0	1585.0
2	1150	431	214.	3.9	1590.3	*	4	19251098	0.	0.0	1585.0	*	7	03001765	0.	0.0	1585.0
2	1155	432	213.	3.9	1590.3	*	4	19301099	0.	0.0	1585.0	*	7	03051766	0.	0.0	1585.0
2	1200	433	212.	3.8	1590.3	*	4	19351100	0.	0.0	1585.0	*	7	03101767	0.	0.0	1585.0
2	1205	434	212.	3.7	1590.3	*	4	19401101	0.	0.0	1585.0	*	7	03151768	0.	0.0	1585.0
2	1210	435	211.	3.7	1590.3	*	4	19451102	0.	0.0	1585.0	*	7	03201769	0.	0.0	1585.0
2	1215	436	211.	3.6	1590.2	*	4	19501103	0.	0.0	1585.0	*	7	03251770	0.	0.0	1585.0
2	1220	437	210.	3.5	1590.2	*	4	19551104	0.	0.0	1585.0	*	7	03301771	0.	0.0	1585.0
2	1225	438	209.	3.5	1590.2	*	4	20001105	0.	0.0	1585.0	*	7	03351772	0.	0.0	1585.0
2	1230	439	209.	3.4	1590.2	*	4	20051106	0.	0.0	1585.0	*	7	03401773	0.	0.0	1585.0
2	1235	440	208.	3.3	1590.2	*	4	20101107	0.	0.0	1585.0	*	7	03451774	0.	0.0	1585.0
2	1240	441	208.	3.3	1590.2	*	4	20151108	0.	0.0	1585.0	*	7	03501775	0.	0.0	1585.0
2	1245	442	207.	3.2	1590.2	*	4	20201109	0.	0.0	1585.0	*	7	03551776	0.	0.0	1585.0
2	1250	443	206.	3.1	1590.2	*	4	20251110	0.	0.0	1585.0	*	7	04001777	0.	0.0	1585.0
2	1255	444	206.	3.1	1590.2	*	4	20301111	0.	0.0	1585.0	*	7	04051778	0.	0.0	1585.0
2	1300	445	205.	3.0	1590.2	*	4	20351112	0.	0.0	1585.0	*	7	04101779	0.	0.0	1585.0
2	1305	446	205.	2.9	1590.2	*	4	20401113	0.	0.0	1585.0	*	7	04151780	0.	0.0	1585.0
2	1310	447	204.	2.9	1590.2	*	4	20451114	0.	0.0	1585.0	*	7	04201781	0.	0.0	1585.0
2	1315	448	203.	2.8	1590.1	*	4	20501115	0.	0.0	1585.0	*	7	04251782	0.	0.0	1585.0
2	1320	449	203.	2.7	1590.1	*	4	20551116	0.	0.0	1585.0	*	7	04301783	0.	0.0	1585.0
2	1325	450	202.	2.7	1590.1	*	4	21001117	0.	0.0	1585.0	*	7	04351784	0.	0.0	1585.0
2	1330	451	202.	2.6	1590.1	*	4	21051118	0.	0.0	1585.0	*	7	04401785	0.	0.0	1585.0
2	1335	452	201.	2.5	1590.1	*	4	21101119	0.	0.0	1585.0	*	7	04451786	0.	0.0	1585.0
2	1340	453	200.	2.4	1590.1	*	4	21151120	0.	0.0	1585.0	*	7	04501787	0.	0.0	1585.0
2	1345	454	200.	2.4	1590.1	*	4	21201121	0.	0.0	1585.0	*	7	04551788	0.	0.0	1585.0
2	1350	455	199.	2.3	1590.1	*	4	21251122	0.	0.0	1585.0	*	7	05001789	0.	0.0	1585.0
2	1355	456	199.	2.2	1590.1	*	4	21301123	0.	0.0	1585.0	*	7	05051790	0.	0.0	1585.0
2	1400	457	198.	2.2	1590.1	*	4	21351124	0.	0.0	1585.0	*	7	05101791	0.	0.0	1585.0
2	1405	458	198.	2.1	1590.1	*	4	21401125	0.	0.0	1585.0	*	7	05151792	0.	0.0	1585.0
2	1410	459	197.	2.0	1590.1	*	4	21451126	0.	0.0	1585.0	*	7	05201793	0.	0.0	1585.0
2	1415	460	197.	1.9	1590.0	*	4	21501127	0.	0.0	1585.0	*	7	05251794	0.	0.0	1585.0
2	1420	461	196.	1.9	1590.0	*	4	21551128	0.	0.0	1585.0	*	7	05301795	0.	0.0	1585.0
2	1425	462	196.	1.8	1590.0	*	4	22001129	0.	0.0	1585.0	*	7	05351796	0.	0.0	1585.0
2	1430	463	195.	1.7	1590.0	*	4	22051130	0.	0.0	1585.0	*	7	05401797	0.	0.0	1585.0
2	1435	464	195.	1.6	1590.0	*	4	22101131	0.	0.0	1585.0	*	7	05451798	0.	0.0	1585.0
2	1440	465	192.	1.6	1589.9	*	4	22151132	0.	0.0	1585.0	*	7	05501799	0.	0.0	1585.0
2	1445	466	185.	1.5	1589.8	*	4	22201133	0.	0.0	1585.0	*	7	05551800	0.	0.0	1585.0
2	1450	467	183.	1.5	1589.8	*	4	22251134	0.	0.0	1585.0	*	7	06001801	0.	0.0	1585.0
2	1455	468	182.	1.5	1589.8	*	4	22301135	0.	0.0	1585.0	*	7	06051802	0.	0.0	1585.0
2	1500	469	181.	1.5	1589.8	*	4	22351136	0.	0.0	1585.0	*	7	06101803	0.	0.0	1585.0
2	1505	470	181.	1.5	1589.7	*	4	22401137	0.	0.0	1585.0	*	7	06151804	0.	0.0	1585.0
2	1510	471	180.	1.5	1589.7	*	4	22451138	0.	0.0	1585.0	*	7	06201805	0.	0.0	1585.0
2	1515	472	179.	1.5	1589.7	*	4	22501139	0.	0.0	1585.0	*	7	06251806	0.	0.0	1585.0
2	1520	473	179.	1.5	1589.7	*	4	22551140	0.	0.0	1585.0	*	7	06301807	0.	0.0	1585.0
2	1525	474	178.	1.5	1589.7	*	4	23001141	0.	0.0	1585.0	*	7	06351808	0.	0.0	1585.0
2	1530	475	178.	1.5	1589.7	*	4	23051142	0.	0.0	1585.0	*	7	06401809	0.	0.0	1585.0
2	1535	476	177.	1.5	1589.7	*	4	23101143	0.	0.0	1585.0	*	7	06451810	0.	0.0	1585.0
2	1540	477	176.	1.5	1589.7	*	4	23151144	0.	0.0	1585.0	*	7	06501811	0.	0.0	1585.0
2	1545	478	176.	1.5	1589.7	*	4	23201145	0.	0.0	1585.0	*	7	06551812	0.	0.0	1585.0
2	1550	479	175.	1.5	1589.6	*	4	23251146	0.	0.0	1585.0	*	7	07001813	0.	0.0	1585.0
2	1555	480	174.	1.5	1589.6	*	4	23301147	0.	0.0	1585.0	*	7	07051814	0.	0.0	1585.0
2	1600	481	174.	1.5	1589.6	*	4	23351148	0.	0.0	1585.0	*	7	07101815	0.	0.0	1585.0
2	1605	482	173.	1.5	1589.6	*	4	23401149	0.	0.0	1585.0	*	7	07151816	0.	0.0	1585.0
2	1610	483	172.	1.5	1589.6	*	4	23451150	0.	0.0	1585.0	*	7	07201817	0.	0.0	1585.0
2	1615	484	171.	1.5	1589.6	*	4	23501151	0.	0.0	1585.0	*	7	07251818	0.	0.0	1585.0
2	1620	485	171.	1.5	1589.6	*	4	23551152	0.	0.0	1585.0	*	7	07301819	0.	0.0	1585.0
2	1625	486	170.	1.5	1589.5	*	5	00001153	0.	0.0	1585.0	*	7	07351820	0.	0.0	1585.0
2	1630	487	169.	1.4	1589.5	*	5	00051154	0.	0.0	1585.0	*	7	07401821	0.	0.0	1585.0
2	1635	488	168.	1.4	1589.5	*	5	00101155	0.	0.0	1585.0	*	7	07451822	0.	0.0	1585.0
2	1640	489	167.	1.4	1589.5	*	5	00151156	0.	0.0	1585.0	*	7	07501823	0.	0.0	1585.0
2	1645	490	166.	1.4	1589.5	*	5	00201157	0.	0.0	1585.0	*	7	07551824	0.	0.0	1585.0
2	1650	491	165.	1.4	1589.5	*	5	00251158	0.	0.0	1585.0	*	7	08001825	0.	0.0	1585.0
2	1655	492	164.	1.4	1589.4	*	5	00301159	0.	0.0	1585.0	*	7	08051826	0.	0.0	1585.0
2	1700	493	163.	1.4	1589.4	*	5	00351160	0.	0.0	1585.0	*	7	08101827	0.	0.0	1585.0
2	1705	494	163.	1.4	1589.4	*	5	00401161	0.	0.0	1585.0	*	7	08151828	0.	0.0	1585.0
2	1710	495	162.	1.4	1589.4	*	5	00451162	0.	0.0	1585.0	*	7	08201829	0.	0.0	1585.0
2	1715	496	161.	1.4	1589.4	*	5	00501163	0.	0.0	1585.0	*	7	08251830	0.	0.0	1585.0
2	1720	497	160.	1.4	1589.4	*	5	00551164	0.	0.0	1585.0	*	7	08301831	0.	0.0	1585.0
2	1725	498	159.	1.4	1589.3	*	5	01001165	0.	0.0	1585.0	*	7	08351832	0.	0.0	1585.0
2	1730	499	158.	1.4	1589.3	*	5	01051166	0.	0.0	1585.0	*	7	08401833	0.	0.0	1585.0
2	1735	500	157.	1.4	1589.3	*	5	01101167	0.	0.0	1585.0	*	7	08451834	0.	0.0	1585.0
2	1740	501	156.	1.4	1589.3	*	5	01151168	0.	0.0	1585.0	*	7	08501835	0.	0.0	1585.0
2	1745	502	155.	1.4	1589.3	*	5	01201169	0.	0.0	1585.0	*	7	08551836	0.	0.0	1585.0
2	1750	503	154.	1.4	1589.3	*	5	01251170	0.	0.0	1585.0	*	7	09001837	0.	0.0	1585.0
2	1755	504	153.	1.4	1589.2	*	5	01301171	0.	0.0	1585.0	*	7	09051838	0.	0.0	1585.0
2	1800	505	152.	1.4	1589.2	*	5	01351172	0.	0.0	1585.0	*	7	09101839	0.	0.0	1585.0
2	1805	506	151.	1.3	1589.2	*	5	01401173	0.	0.0	1585.0	*	7	09151840	0.	0.0	1585.0
2	1810	507	151.	1.3	1589.2	*	5	01451174	0.	0.0	1585.0	*	7	09201841	0.	0.0	1585.0
2	1815	508	150.	1.3	1589.2	*	5	01501175	0.	0.0	1585.0	*	7	09251842	0.	0.0	1585.0
2	1820	509	149.	1.3	1589.2	*	5	01551176	0.	0.0	1585.0	*	7	09301843	0.	0.0	1585.0
2	1825	510	148.	1.3	1589.1	*	5	02001177	0.	0.0	1585.0	*	7	09351844	0.	0.0	1585.0
2	1830	511	147.	1.3	1589.1	*	5	02051178	0.	0.0	1585.0	*	7	09401845	0.	0.0	1585.0
2	1835	512	146.	1.3	1589.1	*	5	02101179	0.	0.0	1585.0	*	7	09451846	0.	0.0	1585.0
2	1840	513	145.	1.3	1589.1	*	5	02151180	0.	0.0	1585.0	*	7	09501847	0.	0.0	1585.0

2	1845 514	144.	1.3	1589.1	*	5	02201181	0.	0.0	1585.0	*	7	09551848	0.	0.0	1585.0
2	1850 515	143.	1.3	1589.1	*	5	02251182	0.	0.0	1585.0	*	7	10001849	0.	0.0	1585.0
2	1855 516	142.	1.3	1589.0	*	5	02301183	0.	0.0	1585.0	*	7	10051850	0.	0.0	1585.0
2	1900 517	141.	1.3	1589.0	*	5	02351184	0.	0.0	1585.0	*	7	10101851	0.	0.0	1585.0
2	1905 518	140.	1.3	1589.0	*	5	02401185	0.	0.0	1585.0	*	7	10151852	0.	0.0	1585.0
2	1910 519	139.	1.3	1589.0	*	5	02451186	0.	0.0	1585.0	*	7	10201853	0.	0.0	1585.0
2	1915 520	137.	1.3	1589.0	*	5	02501187	0.	0.0	1585.0	*	7	10251854	0.	0.0	1585.0
2	1920 521	136.	1.3	1588.9	*	5	02551188	0.	0.0	1585.0	*	7	10301855	0.	0.0	1585.0
2	1925 522	135.	1.2	1588.9	*	5	03001189	0.	0.0	1585.0	*	7	10351856	0.	0.0	1585.0
2	1930 523	133.	1.2	1588.9	*	5	03051190	0.	0.0	1585.0	*	7	10401857	0.	0.0	1585.0
2	1935 524	132.	1.2	1588.8	*	5	03101191	0.	0.0	1585.0	*	7	10451858	0.	0.0	1585.0
2	1940 525	130.	1.2	1588.8	*	5	03151192	0.	0.0	1585.0	*	7	10501859	0.	0.0	1585.0
2	1945 526	129.	1.2	1588.8	*	5	03201193	0.	0.0	1585.0	*	7	10551860	0.	0.0	1585.0
2	1950 527	127.	1.2	1588.8	*	5	03251194	0.	0.0	1585.0	*	7	11001861	0.	0.0	1585.0
2	1955 528	126.	1.2	1588.7	*	5	03301195	0.	0.0	1585.0	*	7	11051862	0.	0.0	1585.0
2	2000 529	124.	1.2	1588.7	*	5	03351196	0.	0.0	1585.0	*	7	11101863	0.	0.0	1585.0
2	2005 530	123.	1.2	1588.7	*	5	03401197	0.	0.0	1585.0	*	7	11151864	0.	0.0	1585.0
2	2010 531	121.	1.2	1588.7	*	5	03451198	0.	0.0	1585.0	*	7	11201865	0.	0.0	1585.0
2	2015 532	118.	1.2	1588.6	*	5	03501199	0.	0.0	1585.0	*	7	11251866	0.	0.0	1585.0
2	2020 533	115.	1.1	1588.5	*	5	03551200	0.	0.0	1585.0	*	7	11301867	0.	0.0	1585.0
2	2025 534	110.	1.1	1588.5	*	5	04001201	0.	0.0	1585.0	*	7	11351868	0.	0.0	1585.0
2	2030 535	104.	1.1	1588.3	*	5	04051202	0.	0.0	1585.0	*	7	11401869	0.	0.0	1585.0
2	2035 536	98.	1.0	1588.2	*	5	04101203	0.	0.0	1585.0	*	7	11451870	0.	0.0	1585.0
2	2040 537	92.	1.0	1588.1	*	5	04151204	0.	0.0	1585.0	*	7	11501871	0.	0.0	1585.0
2	2045 538	86.	0.9	1587.9	*	5	04201205	0.	0.0	1585.0	*	7	11551872	0.	0.0	1585.0
2	2050 539	78.	0.9	1587.7	*	5	04251206	0.	0.0	1585.0	*	7	12001873	0.	0.0	1585.0
2	2055 540	71.	0.8	1587.6	*	5	04301207	0.	0.0	1585.0	*	7	12051874	0.	0.0	1585.0
2	2100 541	64.	0.8	1587.4	*	5	04351208	0.	0.0	1585.0	*	7	12101875	0.	0.0	1585.0
2	2105 542	57.	0.7	1587.2	*	5	04401209	0.	0.0	1585.0	*	7	12151876	0.	0.0	1585.0
2	2110 543	51.	0.7	1587.0	*	5	04451210	0.	0.0	1585.0	*	7	12201877	0.	0.0	1585.0
2	2115 544	46.	0.6	1586.9	*	5	04501211	0.	0.0	1585.0	*	7	12251878	0.	0.0	1585.0
2	2120 545	42.	0.5	1586.7	*	5	04551212	0.	0.0	1585.0	*	7	12301879	0.	0.0	1585.0
2	2125 546	39.	0.5	1586.6	*	5	05001213	0.	0.0	1585.0	*	7	12351880	0.	0.0	1585.0
2	2130 547	35.	0.5	1586.4	*	5	05051214	0.	0.0	1585.0	*	7	12401881	0.	0.0	1585.0
2	2135 548	31.	0.4	1586.3	*	5	05101215	0.	0.0	1585.0	*	7	12451882	0.	0.0	1585.0
2	2140 549	28.	0.4	1586.1	*	5	05151216	0.	0.0	1585.0	*	7	12501883	0.	0.0	1585.0
2	2145 550	24.	0.3	1586.0	*	5	05201217	0.	0.0	1585.0	*	7	12551884	0.	0.0	1585.0
2	2150 551	20.	0.3	1585.8	*	5	05251218	0.	0.0	1585.0	*	7	13001885	0.	0.0	1585.0
2	2155 552	17.	0.2	1585.7	*	5	05301219	0.	0.0	1585.0	*	7	13051886	0.	0.0	1585.0
2	2200 553	14.	0.2	1585.6	*	5	05351220	0.	0.0	1585.0	*	7	13101887	0.	0.0	1585.0
2	2205 554	12.	0.2	1585.5	*	5	05401221	0.	0.0	1585.0	*	7	13151888	0.	0.0	1585.0
2	2210 555	9.	0.1	1585.4	*	5	05451222	0.	0.0	1585.0	*	7	13201889	0.	0.0	1585.0
2	2215 556	8.	0.1	1585.3	*	5	05501223	0.	0.0	1585.0	*	7	13251890	0.	0.0	1585.0
2	2220 557	6.	0.1	1585.2	*	5	05551224	0.	0.0	1585.0	*	7	13301891	0.	0.0	1585.0
2	2225 558	5.	0.1	1585.2	*	5	06001225	0.	0.0	1585.0	*	7	13351892	0.	0.0	1585.0
2	2230 559	4.	0.1	1585.2	*	5	06051226	0.	0.0	1585.0	*	7	13401893	0.	0.0	1585.0
2	2235 560	3.	0.0	1585.1	*	5	06101227	0.	0.0	1585.0	*	7	13451894	0.	0.0	1585.0
2	2240 561	2.	0.0	1585.1	*	5	06151228	0.	0.0	1585.0	*	7	13501895	0.	0.0	1585.0
2	2245 562	2.	0.0	1585.1	*	5	06201229	0.	0.0	1585.0	*	7	13551896	0.	0.0	1585.0
2	2250 563	2.	0.0	1585.1	*	5	06251230	0.	0.0	1585.0	*	7	14001897	0.	0.0	1585.0
2	2255 564	1.	0.0	1585.1	*	5	06301231	0.	0.0	1585.0	*	7	14051898	0.	0.0	1585.0
2	2300 565	1.	0.0	1585.0	*	5	06351232	0.	0.0	1585.0	*	7	14101899	0.	0.0	1585.0
2	2305 566	1.	0.0	1585.0	*	5	06401233	0.	0.0	1585.0	*	7	14151900	0.	0.0	1585.0
2	2310 567	1.	0.0	1585.0	*	5	06451234	0.	0.0	1585.0	*	7	14201901	0.	0.0	1585.0
2	2315 568	1.	0.0	1585.0	*	5	06501235	0.	0.0	1585.0	*	7	14251902	0.	0.0	1585.0
2	2320 569	0.	0.0	1585.0	*	5	06551236	0.	0.0	1585.0	*	7	14301903	0.	0.0	1585.0
2	2325 570	0.	0.0	1585.0	*	5	07001237	0.	0.0	1585.0	*	7	14351904	0.	0.0	1585.0
2	2330 571	0.	0.0	1585.0	*	5	07051238	0.	0.0	1585.0	*	7	14401905	0.	0.0	1585.0
2	2335 572	0.	0.0	1585.0	*	5	07101239	0.	0.0	1585.0	*	7	14451906	0.	0.0	1585.0
2	2340 573	0.	0.0	1585.0	*	5	07151240	0.	0.0	1585.0	*	7	14501907	0.	0.0	1585.0
2	2345 574	0.	0.0	1585.0	*	5	07201241	0.	0.0	1585.0	*	7	14551908	0.	0.0	1585.0
2	2350 575	0.	0.0	1585.0	*	5	07251242	0.	0.0	1585.0	*	7	15001909	0.	0.0	1585.0
2	2355 576	0.	0.0	1585.0	*	5	07301243	0.	0.0	1585.0	*	7	15051910	0.	0.0	1585.0
3	0000 577	0.	0.0	1585.0	*	5	07351244	0.	0.0	1585.0	*	7	15101911	0.	0.0	1585.0
3	0005 578	0.	0.0	1585.0	*	5	07401245	0.	0.0	1585.0	*	7	15151912	0.	0.0	1585.0
3	0010 579	0.	0.0	1585.0	*	5	07451246	0.	0.0	1585.0	*	7	15201913	0.	0.0	1585.0
3	0015 580	0.	0.0	1585.0	*	5	07501247	0.	0.0	1585.0	*	7	15251914	0.	0.0	1585.0
3	0020 581	0.	0.0	1585.0	*	5	07551248	0.	0.0	1585.0	*	7	15301915	0.	0.0	1585.0
3	0025 582	0.	0.0	1585.0	*	5	08001249	0.	0.0	1585.0	*	7	15351916	0.	0.0	1585.0
3	0030 583	0.	0.0	1585.0	*	5	08051250	0.	0.0	1585.0	*	7	15401917	0.	0.0	1585.0
3	0035 584	0.	0.0	1585.0	*	5	08101251	0.	0.0	1585.0	*	7	15451918	0.	0.0	1585.0
3	0040 585	0.	0.0	1585.0	*	5	08151252	0.	0.0	1585.0	*	7	15501919	0.	0.0	1585.0
3	0045 586	0.	0.0	1585.0	*	5	08201253	0.	0.0	1585.0	*	7	15551920	0.	0.0	1585.0
3	0050 587	0.	0.0	1585.0	*	5	08251254	0.	0.0	1585.0	*	7	16001921	0.	0.0	1585.0
3	0055 588	0.	0.0	1585.0	*	5	08301255	0.	0.0	1585.0	*	7	16051922	0.	0.0	1585.0
3	0100 589	0.	0.0	1585.0	*	5	08351256	0.	0.0	1585.0	*	7	16101923	0.	0.0	1585.0
3	0105 590	0.	0.0	1585.0	*	5	08401257	0.	0.0	1585.0	*	7	16151924	0.	0.0	1585.0
3	0110 591	0.	0.0	1585.0	*	5	08451258	0.	0.0	1585.0	*	7	16201925	0.	0.0	1585.0
3	0115 592	0.	0.0	1585.0	*	5	08501259	0.	0.0	1585.0	*	7	16251926	0.	0.0	1585.0
3	0120 593	0.	0.0	1585.0	*	5	08551260	0.	0.0	1585.0	*	7	16301927	0.	0.0	1585.0
3	0125 594	0.	0.0	1585.0	*	5	09001261	0.	0.0	1585.0	*	7	16351928	0.	0.0	1585.0
3	0130 595	0.	0.0	1585.0	*	5	09051262	0.	0.0	1585.0	*	7	16401929	0.	0.0	1585.0
3	0135 596	0.	0.0	1585.0	*	5	09101263	0.	0.0	1585.0	*	7	16451930	0.	0.0	1585.0
3	0140 597	0.	0.0	1585.0	*	5	09151264	0.	0.0	1585.0	*	7	16501931	0.	0.0	1585.0
3	0145 598	0.	0.0	1585.0	*	5	09201265	0.	0.0	1585.0	*	7	16551932	0.	0.0	1585.0
3	0150 599	0.	0.0	1585.0	*	5	09251266	0.	0.0	1585.0	*	7	17001933	0.	0.0	1585.0
3	0155 600	0.	0.0	1585.0	*	5	09301267	0.	0.0	1585.0	*	7	17051934	0.	0.0	1585.0
3	0200 601	0.	0.0	1585.0	*	5	09351268	0.	0.0	1585.0	*	7	17101935	0.	0.0	1585.0
3	0205 602	0.	0.0	1585.0	*	5	09401269	0.	0.0	1585.0	*	7	17151936	0.	0.0	1585.0
3	0210 603	0.	0.0	1585.0	*	5	09451270	0.	0.0	1585.0	*	7	17201937	0.	0.0	1585.0
3	0215 604	0.	0.0	1585.0	*	5	09501271	0.	0.0	1585.0	*	7	17251938	0.	0.0	1585.0
3	0220 605	0.	0.0	1585.0	*	5	09551272	0.	0.0	1585.0	*	7	17301939	0.	0.0	1585.0
3	0225 606	0.	0.0	1585.0	*	5	10001273	0.	0.0	1585.0	*	7	17351940	0.	0.0	1585.0

3	0230 607	0.	0.0	1585.0	*	5	10051274	0.	0.0	1585.0	*	7	17401941	0.	0.0	1585.0
3	0235 608	0.	0.0	1585.0	*	5	10101275	0.	0.0	1585.0	*	7	17451942	0.	0.0	1585.0
3	0240 609	0.	0.0	1585.0	*	5	10151276	0.	0.0	1585.0	*	7	17501943	0.	0.0	1585.0
3	0245 610	0.	0.0	1585.0	*	5	10201277	0.	0.0	1585.0	*	7	17551944	0.	0.0	1585.0
3	0250 611	0.	0.0	1585.0	*	5	10251278	0.	0.0	1585.0	*	7	18001945	0.	0.0	1585.0
3	0255 612	0.	0.0	1585.0	*	5	10301279	0.	0.0	1585.0	*	7	18051946	0.	0.0	1585.0
3	0300 613	0.	0.0	1585.0	*	5	10351280	0.	0.0	1585.0	*	7	18101947	0.	0.0	1585.0
3	0305 614	0.	0.0	1585.0	*	5	10401281	0.	0.0	1585.0	*	7	18151948	0.	0.0	1585.0
3	0310 615	0.	0.0	1585.0	*	5	10451282	0.	0.0	1585.0	*	7	18201949	0.	0.0	1585.0
3	0315 616	0.	0.0	1585.0	*	5	10501283	0.	0.0	1585.0	*	7	18251950	0.	0.0	1585.0
3	0320 617	0.	0.0	1585.0	*	5	10551284	0.	0.0	1585.0	*	7	18301951	0.	0.0	1585.0
3	0325 618	0.	0.0	1585.0	*	5	11001285	0.	0.0	1585.0	*	7	18351952	0.	0.0	1585.0
3	0330 619	0.	0.0	1585.0	*	5	11051286	0.	0.0	1585.0	*	7	18401953	0.	0.0	1585.0
3	0335 620	0.	0.0	1585.0	*	5	11101287	0.	0.0	1585.0	*	7	18451954	0.	0.0	1585.0
3	0340 621	0.	0.0	1585.0	*	5	11151288	0.	0.0	1585.0	*	7	18501955	0.	0.0	1585.0
3	0345 622	0.	0.0	1585.0	*	5	11201289	0.	0.0	1585.0	*	7	18551956	0.	0.0	1585.0
3	0350 623	0.	0.0	1585.0	*	5	11251290	0.	0.0	1585.0	*	7	19001957	0.	0.0	1585.0
3	0355 624	0.	0.0	1585.0	*	5	11301291	0.	0.0	1585.0	*	7	19051958	0.	0.0	1585.0
3	0400 625	0.	0.0	1585.0	*	5	11351292	0.	0.0	1585.0	*	7	19101959	0.	0.0	1585.0
3	0405 626	0.	0.0	1585.0	*	5	11401293	0.	0.0	1585.0	*	7	19151960	0.	0.0	1585.0
3	0410 627	0.	0.0	1585.0	*	5	11451294	0.	0.0	1585.0	*	7	19201961	0.	0.0	1585.0
3	0415 628	0.	0.0	1585.0	*	5	11501295	0.	0.0	1585.0	*	7	19251962	0.	0.0	1585.0
3	0420 629	0.	0.0	1585.0	*	5	11551296	0.	0.0	1585.0	*	7	19301963	0.	0.0	1585.0
3	0425 630	0.	0.0	1585.0	*	5	12001297	0.	0.0	1585.0	*	7	19351964	0.	0.0	1585.0
3	0430 631	0.	0.0	1585.0	*	5	12051298	0.	0.0	1585.0	*	7	19401965	0.	0.0	1585.0
3	0435 632	0.	0.0	1585.0	*	5	12101299	0.	0.0	1585.0	*	7	19451966	0.	0.0	1585.0
3	0440 633	0.	0.0	1585.0	*	5	12151300	0.	0.0	1585.0	*	7	19501967	0.	0.0	1585.0
3	0445 634	0.	0.0	1585.0	*	5	12201301	0.	0.0	1585.0	*	7	19551968	0.	0.0	1585.0
3	0450 635	0.	0.0	1585.0	*	5	12251302	0.	0.0	1585.0	*	7	20001969	0.	0.0	1585.0
3	0455 636	0.	0.0	1585.0	*	5	12301303	0.	0.0	1585.0	*	7	20051970	0.	0.0	1585.0
3	0500 637	0.	0.0	1585.0	*	5	12351304	0.	0.0	1585.0	*	7	20101971	0.	0.0	1585.0
3	0505 638	0.	0.0	1585.0	*	5	12401305	0.	0.0	1585.0	*	7	20151972	0.	0.0	1585.0
3	0510 639	0.	0.0	1585.0	*	5	12451306	0.	0.0	1585.0	*	7	20201973	0.	0.0	1585.0
3	0515 640	0.	0.0	1585.0	*	5	12501307	0.	0.0	1585.0	*	7	20251974	0.	0.0	1585.0
3	0520 641	0.	0.0	1585.0	*	5	12551308	0.	0.0	1585.0	*	7	20301975	0.	0.0	1585.0
3	0525 642	0.	0.0	1585.0	*	5	13001309	0.	0.0	1585.0	*	7	20351976	0.	0.0	1585.0
3	0530 643	0.	0.0	1585.0	*	5	13051310	0.	0.0	1585.0	*	7	20401977	0.	0.0	1585.0
3	0535 644	0.	0.0	1585.0	*	5	13101311	0.	0.0	1585.0	*	7	20451978	0.	0.0	1585.0
3	0540 645	0.	0.0	1585.0	*	5	13151312	0.	0.0	1585.0	*	7	20501979	0.	0.0	1585.0
3	0545 646	0.	0.0	1585.0	*	5	13201313	0.	0.0	1585.0	*	7	20551980	0.	0.0	1585.0
3	0550 647	0.	0.0	1585.0	*	5	13251314	0.	0.0	1585.0	*	7	21001981	0.	0.0	1585.0
3	0555 648	0.	0.0	1585.0	*	5	13301315	0.	0.0	1585.0	*	7	21051982	0.	0.0	1585.0
3	0600 649	0.	0.0	1585.0	*	5	13351316	0.	0.0	1585.0	*	7	21101983	0.	0.0	1585.0
3	0605 650	0.	0.0	1585.0	*	5	13401317	0.	0.0	1585.0	*	7	21151984	0.	0.0	1585.0
3	0610 651	0.	0.0	1585.0	*	5	13451318	0.	0.0	1585.0	*	7	21201985	0.	0.0	1585.0
3	0615 652	0.	0.0	1585.0	*	5	13501319	0.	0.0	1585.0	*	7	21251986	0.	0.0	1585.0
3	0620 653	0.	0.0	1585.0	*	5	13551320	0.	0.0	1585.0	*	7	21301987	0.	0.0	1585.0
3	0625 654	0.	0.0	1585.0	*	5	14001321	0.	0.0	1585.0	*	7	21351988	0.	0.0	1585.0
3	0630 655	0.	0.0	1585.0	*	5	14051322	0.	0.0	1585.0	*	7	21401989	0.	0.0	1585.0
3	0635 656	0.	0.0	1585.0	*	5	14101323	0.	0.0	1585.0	*	7	21451990	0.	0.0	1585.0
3	0640 657	0.	0.0	1585.0	*	5	14151324	0.	0.0	1585.0	*	7	21501991	0.	0.0	1585.0
3	0645 658	0.	0.0	1585.0	*	5	14201325	0.	0.0	1585.0	*	7	21551992	0.	0.0	1585.0
3	0650 659	0.	0.0	1585.0	*	5	14251326	0.	0.0	1585.0	*	7	22001993	0.	0.0	1585.0
3	0655 660	0.	0.0	1585.0	*	5	14301327	0.	0.0	1585.0	*	7	22051994	0.	0.0	1585.0
3	0700 661	0.	0.0	1585.0	*	5	14351328	0.	0.0	1585.0	*	7	22101995	0.	0.0	1585.0
3	0705 662	0.	0.0	1585.0	*	5	14401329	0.	0.0	1585.0	*	7	22151996	0.	0.0	1585.0
3	0710 663	0.	0.0	1585.0	*	5	14451330	0.	0.0	1585.0	*	7	22201997	0.	0.0	1585.0
3	0715 664	0.	0.0	1585.0	*	5	14501331	0.	0.0	1585.0	*	7	22251998	0.	0.0	1585.0
3	0720 665	0.	0.0	1585.0	*	5	14551332	0.	0.0	1585.0	*	7	22301999	0.	0.0	1585.0
3	0725 666	0.	0.0	1585.0	*	5	15001333	0.	0.0	1585.0	*	7	22352000	0.	0.0	1585.0
3	0730 667	0.	0.0	1585.0	*	5	15051334	0.	0.0	1585.0	*					

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 755.	14.67		735.	494.	194.	84.
		(INCHES)	2.817	7.572	8.932	8.932
		(AC-FT)	365.	980.	1156.	1156.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
267.	14.67	239.	103.	35.	15.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
1605.81	14.67	1604.61	1597.09	1589.89	1587.12

CUMULATIVE AREA = 2.43 SQ MI

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

*** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION= 1

1

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

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	S30N	1262.	12.33	151.	44.	15.	0.65		
+	ROUTED TO	R30N	1236.	12.33	151.	44.	15.	0.65		
+									103.91	12.33
+	HYDROGRAPH AT	S31.1	444.	12.33	52.	15.	5.	0.27		
+	2 COMBINED AT	C31.1	1681.	12.33	203.	60.	20.	0.92		
+	HYDROGRAPH AT	S34.2	750.	12.33	88.	26.	9.	0.44		
+	2 COMBINED AT	C34.2	2431.	12.33	291.	85.	29.	1.36		
+	HYDROGRAPH AT	S35N	1348.	12.25	127.	37.	12.	0.55		
+	DIVERSION TO	D35NL	1348.	0.08	127.	37.	12.	0.55		
+	HYDROGRAPH AT	D35NR	0.	0.08	0.	0.	0.	0.55		
+	ROUTED TO	R35NR	0.	0.08	0.	0.	0.	0.55		
+									100.00	0.00
+	HYDROGRAPH AT	S36.2	431.	12.25	41.	12.	4.	0.21		
+	2 COMBINED AT	C36.2	431.	12.25	41.	12.	4.	0.76		
+	DIVERSION TO	D36.2L	431.	0.08	41.	12.	4.	0.76		
+	HYDROGRAPH AT	D36.2R	0.	0.08	0.	0.	0.	0.76		
+	ROUTED TO	R36.2R	0.	0.08	0.	0.	0.	0.76		
+									100.00	0.00
+	HYDROGRAPH AT	S34.1	2117.	12.25	232.	68.	23.	1.16		
+	2 COMBINED AT	C34.1	2117.	12.25	232.	68.	23.	1.92		
+	2 COMBINED AT	HVDB-I	4403.	12.33	522.	154.	51.	3.28		
+	ROUTED TO	HVDB-O	141.	15.50	140.	126.	51.	3.28		
+									2088.42	15.50
+	ROUTED TO	R34.1	141.	15.58	140.	126.	51.	3.28		
+									101.48	15.58
+	HYDROGRAPH AT	S36.1	180.	12.42	24.	7.	2.	0.14		
+	2 COMBINED AT	C36.1	288.	12.42	159.	132.	54.	3.42		
+	ROUTED TO	R36.1	285.	12.42	159.	132.	54.	3.42		
+									102.06	12.42
+	HYDROGRAPH AT	B35NL	1348.	12.25	127.	37.	12.	0.00		
+	ROUTED TO	R35NL	726.	12.75	127.	37.	12.	0.00		
+									103.95	12.75
	HYDROGRAPH AT									

+		B36.2L	431.	12.25	41.	12.	4.	0.00	
	ROUTED TO								
+		R36.2L	279.	12.50	41.	12.	4.	0.00	
+									102.00 12.50
	HYDROGRAPH AT								
+		S36R1A	797.	12.42	111.	33.	11.	0.63	
	4 COMBINED AT								
+		C36R1A	1825.	12.50	436.	212.	81.	4.05	
	HYDROGRAPH AT								
+		S36R1B	767.	12.42	103.	30.	10.	0.59	
	2 COMBINED AT								
+		C36R1B	2544.	12.42	538.	242.	91.	4.64	
	HYDROGRAPH AT								
+		S36R2A	289.	12.17	24.	7.	2.	0.13	
	2 COMBINED AT								
+		C36R2A	2620.	12.42	561.	248.	94.	4.77	
	ROUTED TO								
+		R36R2A	2620.	12.50	561.	248.	94.	4.77	
	HYDROGRAPH AT								
+		S36R2B	329.	12.33	40.	12.	4.	0.24	
	2 COMBINED AT								
+		C36R2B	2835.	12.50	600.	260.	98.	5.01	
	HYDROGRAPH AT								
+		S51.1	1296.	12.50	199.	59.	20.	1.13	
	2 COMBINED AT								
+		DVDB-I	4131.	12.50	799.	318.	118.	6.14	
	ROUTED TO								
+		DVDB-O	880.	13.42	408.	285.	118.	6.14	
+									1880.59 13.42
	DIVERSION TO								
+		B51.1T	880.	0.08	408.	285.	118.	6.14	
	HYDROGRAPH AT								
+		D51.1T	0.	0.08	0.	0.	0.	6.14	
	HYDROGRAPH AT								
+		52D4	127.	12.25	13.	4.	1.	0.07	
	ROUTED TO								
+		52D4R	124.	12.25	13.	4.	1.	0.07	
	HYDROGRAPH AT								
+		52D4B	65.	12.17	6.	2.	1.	0.02	
	2 COMBINED AT								
+		52D5C1	178.	12.25	19.	6.	2.	0.09	
	HYDROGRAPH AT								
+		52D5A	75.	12.17	6.	2.	1.	0.02	
	ROUTED TO								
+		52D5AR	72.	12.17	6.	2.	1.	0.02	
	2 COMBINED AT								
+		52D5C2	232.	12.25	25.	8.	3.	0.12	
	ROUTED TO								
+		52D5R	231.	12.25	25.	8.	3.	0.12	
	HYDROGRAPH AT								
+		52C3	23.	12.08	2.	1.	0.	0.01	
	ROUTED TO								
+		52C3R	21.	12.17	2.	1.	0.	0.01	
	HYDROGRAPH AT								
+		52C3B	52.	12.08	4.	1.	0.	0.02	
	2 COMBINED AT								
+		2C3BC1	71.	12.17	6.	2.	1.	0.02	
	2 COMBINED AT								
+		2C3BC2	288.	12.17	31.	10.	3.	0.14	
	ROUTED TO								
+		52C3BR	276.	12.25	31.	10.	3.	0.14	
	HYDROGRAPH AT								
+		51C	197.	12.17	18.	5.	2.	0.10	

+	DIVERSION TO	51C1DV	132.	12.17	12.	4.	1.	0.10
+	HYDROGRAPH AT	51C1D	65.	12.17	6.	2.	1.	0.10
+	ROUTED TO	51C1R	60.	12.25	6.	2.	1.	0.10
+	HYDROGRAPH AT	52C1	71.	12.17	6.	2.	1.	0.03
+	2 COMBINED AT	52C1C	121.	12.17	12.	3.	1.	0.13
+	ROUTED TO	52C1R	111.	12.25	12.	3.	1.	0.13
+	HYDROGRAPH AT	52C2A	40.	12.17	3.	1.	0.	0.02
+	2 COMBINED AT	52C2AC	140.	12.17	15.	4.	1.	0.15
+	HYDROGRAPH AT	52C2B	62.	12.17	5.	1.	0.	0.03
+	2 COMBINED AT	52C2BC	202.	12.17	20.	6.	2.	0.17
+	ROUTED TO	52C2BR	188.	12.25	20.	6.	2.	0.17
+	HYDROGRAPH AT	52C2C	45.	12.08	4.	1.	0.	0.01
+	2 COMBINED AT	52C2CC	213.	12.25	24.	7.	2.	0.19
+	ROUTED TO	52C2R	209.	12.25	23.	7.	2.	0.19
+	HYDROGRAPH AT	52C4	54.	12.17	5.	1.	0.	0.02
+	2 COMBINED AT	52C4C1	240.	12.25	28.	8.	3.	0.20
+	2 COMBINED AT	52C4C2	516.	12.25	59.	18.	6.	0.34
+	ROUTED TO	52C4R	509.	12.25	60.	18.	6.	0.34
+	HYDROGRAPH AT	52C13	73.	12.08	5.	2.	1.	0.02
+	DIVERSION TO	STORM	40.	12.08	4.	1.	0.	0.02
+	HYDROGRAPH AT	2C13DV	33.	12.08	1.	0.	0.	0.02
+	HYDROGRAPH AT	52C15	151.	12.08	13.	4.	1.	0.05
+	2 COMBINED AT	2C15C1	184.	12.08	13.	4.	1.	0.07
+	2 COMBINED AT	2C15C2	596.	12.17	73.	22.	8.	0.41
+	ROUTED TO	52C15R	591.	12.25	73.	22.	8.	0.41
+	HYDROGRAPH AT	52C14A	136.	12.17	12.	4.	1.	0.04
+	2 COMBINED AT	2C14AC	699.	12.17	85.	26.	9.	0.45
+	ROUTED TO	2C14AR	680.	12.17	85.	26.	9.	0.45
+	HYDROGRAPH AT	51C1DV	132.	12.17	12.	4.	1.	0.00
+	DIVERSION TO	51C2DV	36.	12.17	3.	1.	0.	0.00
+	HYDROGRAPH AT	51C2D	96.	12.17	9.	3.	1.	0.00

+	ROUTED TO	51C2R	85.	12.17	9.	3.	1.	0.00
+	HYDROGRAPH AT	52C5	41.	12.17	3.	1.	0.	0.02
+	2 COMBINED AT	52C5C	126.	12.17	12.	4.	1.	0.02
+	ROUTED TO	52C5R	125.	12.25	12.	4.	1.	0.02
+	HYDROGRAPH AT	52C6	87.	12.17	8.	2.	1.	0.04
+	2 COMBINED AT	52C6C	196.	12.25	20.	6.	2.	0.05
+	ROUTED TO	52C6R	189.	12.25	20.	6.	2.	0.05
+	HYDROGRAPH AT	51C2DV	36.	12.17	3.	1.	0.	0.00
+	ROUTED TO	51C3R	31.	12.25	3.	1.	0.	0.00
+	HYDROGRAPH AT	51B	712.	12.33	95.	29.	10.	0.57
+	DIVERSION TO	51B1DV	655.	12.33	88.	26.	9.	0.57
+	HYDROGRAPH AT	51B1D	57.	12.33	8.	2.	1.	0.57
+	ROUTED TO	51B1R	56.	12.33	8.	2.	1.	0.57
+	HYDROGRAPH AT	52C7	19.	12.08	1.	0.	0.	0.01
+	3 COMBINED AT	52C7C	90.	12.25	12.	4.	1.	0.58
+	ROUTED TO	52C7R	87.	12.33	12.	4.	1.	0.58
+	HYDROGRAPH AT	51B1DV	655.	12.33	88.	26.	9.	0.00
+	DIVERSION TO	51B2DV	550.	12.33	74.	22.	7.	0.00
+	HYDROGRAPH AT	51B2D	105.	12.33	14.	4.	1.	0.00
+	ROUTED TO	51B2R	103.	12.33	14.	4.	1.	0.00
+	HYDROGRAPH AT	52C8	23.	12.08	2.	1.	0.	0.01
+	2 COMBINED AT	52C8C	110.	12.33	16.	5.	2.	0.01
+	ROUTED TO	52C8R	107.	12.33	16.	5.	2.	0.01
+	2 COMBINED AT	52C9C1	194.	12.33	28.	8.	3.	0.59
+	ROUTED TO	52C9R1	190.	12.33	28.	8.	3.	0.59
+	HYDROGRAPH AT	52C9	182.	12.17	15.	5.	2.	0.07
+	2 COMBINED AT	52C9C2	293.	12.17	43.	13.	4.	0.65
+	ROUTED TO	52C9R2	291.	12.25	43.	13.	4.	0.65
+	2 COMBINED AT	2C10C1	480.	12.25	63.	19.	6.	0.71
+	ROUTED TO	2C10R1	476.	12.25	63.	19.	6.	0.71
+	HYDROGRAPH AT	52C10	32.	12.08	2.	1.	0.	0.01

+	2 COMBINED AT	2C10C2	492.	12.25	65.	20.	7.	0.72
+	HYDROGRAPH AT	52C11	102.	12.17	9.	3.	1.	0.04
+	ROUTED TO	2C11R1	96.	12.17	9.	3.	1.	0.04
+	HYDROGRAPH AT	52C13D	40.	12.08	4.	1.	0.	0.00
+	2 COMBINED AT	52C11C	136.	12.17	13.	4.	1.	0.04
+	ROUTED TO	2C11CR	128.	12.17	13.	4.	1.	0.04
+	2 COMBINED AT	2C11C2	608.	12.25	79.	24.	8.	0.76
+	ROUTED TO	2C11R2	600.	12.25	79.	24.	8.	0.76
+	HYDROGRAPH AT	52C12	111.	12.08	7.	2.	1.	0.02
+	2 COMBINED AT	52C12C	635.	12.25	86.	26.	9.	0.79
+	ROUTED TO	52C12R	621.	12.25	86.	26.	9.	0.79
+	HYDROGRAPH AT	52C14B	73.	12.08	6.	2.	1.	0.02
+	2 COMBINED AT	C14BC1	655.	12.25	92.	28.	9.	0.81
+	2 COMBINED AT	C14BC2	1323.	12.25	176.	54.	18.	1.26
+	ROUTED TO	52C14R	1318.	12.25	176.	54.	18.	1.26
+	HYDROGRAPH AT	51B2DV	550.	12.33	74.	22.	7.	0.00
+	DIVERSION TO	51B3DV	462.	12.33	62.	19.	6.	0.00
+	HYDROGRAPH AT	51B3D	88.	12.33	12.	4.	1.	0.00
+	ROUTED TO	51B3R	87.	12.33	12.	4.	1.	0.00
+	HYDROGRAPH AT	52B1	9.	12.08	1.	0.	0.	0.00
+	2 COMBINED AT	52B1C	89.	12.33	12.	4.	1.	0.00
+	ROUTED TO	52B1R	87.	12.33	12.	4.	1.	0.00
+	HYDROGRAPH AT	51B3DV	462.	12.33	62.	19.	6.	0.00
+	DIVERSION TO	51B4DV	379.	12.33	51.	15.	5.	0.00
+	HYDROGRAPH AT	51B4D	83.	12.33	11.	3.	1.	0.00
+	ROUTED TO	51B4R1	81.	12.33	11.	3.	1.	0.00
+	2 COMBINED AT	52B2C1	168.	12.33	24.	7.	2.	0.00
+	ROUTED TO	52B2R1	163.	12.42	24.	7.	2.	0.00
+	HYDROGRAPH AT	52B2	75.	12.17	6.	2.	1.	0.03
+	2 COMBINED AT	52B2C2	194.	12.33	30.	9.	3.	0.04
+	ROUTED TO	52B2R2	191.	12.33	30.	9.	3.	0.04

+	ROUTED TO	52B3R1	189.	12.42	30.	9.	3.	0.04
+	HYDROGRAPH AT	52B3	150.	12.17	14.	4.	1.	0.06
+	2 COMBINED AT	52B3C2	288.	12.25	43.	13.	4.	0.10
+	ROUTED TO	52B3R2	278.	12.33	43.	13.	4.	0.10
+	HYDROGRAPH AT	52B4	85.	12.17	7.	2.	1.	0.03
+	2 COMBINED AT	52B4C	325.	12.25	50.	15.	5.	0.12
+	ROUTED TO	52B4R	318.	12.25	50.	15.	5.	0.12
+	HYDROGRAPH AT	52B5	67.	12.08	6.	2.	1.	0.02
+	2 COMBINED AT	52B5C1	352.	12.25	56.	17.	6.	0.14
+	2 COMBINED AT	52B5C2	1670.	12.25	232.	71.	24.	1.40
+	ROUTED TO	52B5R	1648.	12.25	232.	71.	24.	1.40
+	HYDROGRAPH AT	51B4DV	379.	12.33	51.	15.	5.	0.00
+	DIVERSION TO	51B5DV	258.	12.33	35.	10.	3.	0.00
+	HYDROGRAPH AT	51B5D	121.	12.33	16.	5.	2.	0.00
+	ROUTED TO	51B5R	118.	12.33	16.	5.	2.	0.00
+	HYDROGRAPH AT	51B5DV	258.	12.33	35.	10.	3.	0.00
+	DIVERSION TO	51B6DV	137.	12.33	18.	5.	2.	0.00
+	HYDROGRAPH AT	51B6D	121.	12.33	16.	5.	2.	0.00
+	ROUTED TO	51B6R	119.	12.33	16.	5.	2.	0.00
+	HYDROGRAPH AT	51B6DV	137.	12.33	18.	5.	2.	0.00
+	DIVERSION TO	51B7DV	79.	12.33	11.	3.	1.	0.00
+	HYDROGRAPH AT	51B7D	57.	12.33	8.	2.	1.	0.00
+	ROUTED TO	51B7R1	57.	12.33	8.	2.	1.	0.00
+	3 COMBINED AT	51B7C	293.	12.33	40.	12.	4.	0.00
+	ROUTED TO	51B7R2	286.	12.42	40.	12.	4.	0.00
+	HYDROGRAPH AT	52B6	215.	12.17	18.	5.	2.	0.10
+	2 COMBINED AT	52B6C	372.	12.33	58.	17.	6.	0.10
+	ROUTED TO	52B6R	368.	12.42	58.	17.	6.	0.10
+	HYDROGRAPH AT	52B7	285.	12.17	24.	8.	3.	0.08
+	2 COMBINED AT	52B7C1	485.	12.25	81.	25.	8.	0.18
+	2 COMBINED AT	52B7C2	2133.	12.25	314.	96.	32.	1.58

+	HYDROGRAPH AT	52A2	244.	12.17	21.	7.	2.	0.06	
+	2 COMBINED AT	52A2C2	2285.	12.25	334.	103.	35.	1.64	
+	HYDROGRAPH AT	51B7DV	79.	12.33	11.	3.	1.	0.00	
+	ROUTED TO	51B8R	78.	12.42	11.	3.	1.	0.00	
+	HYDROGRAPH AT	52A1	353.	12.17	29.	9.	3.	0.13	
+	2 COMBINED AT	52A1C	365.	12.17	39.	12.	4.	0.13	
+	HYDROGRAPH AT	D51.1	880.	13.42	408.	285.	118.	0.00	
+	2 COMBINED AT	C52A	906.	13.42	433.	294.	122.	0.13	
+	2 COMBINED AT	C52	2691.	12.25	759.	387.	156.	1.77	
+	ROUTED TO	R52	2587.	12.33	758.	387.	156.	1.77	
+									103.85 12.33
+	DIVERSION TO	B52T	2587.	0.08	758.	387.	156.	1.77	
+	HYDROGRAPH AT	D52T	0.	0.08	0.	0.	0.	1.77	
+	2 COMBINED AT	CLEAR	0.	0.08	0.	0.	0.	7.92	
+	HYDROGRAPH AT	37A	1212.	12.25	136.	41.	14.	0.68	
+	DIVERSION TO	37AW	848.	12.25	95.	29.	10.	0.68	
+	HYDROGRAPH AT	37AE	364.	12.25	41.	12.	4.	0.68	
+	ROUTED TO	37AE1	369.	12.25	41.	12.	4.	0.68	
+									2.60 12.25
+	HYDROGRAPH AT	SUB5N	75.	12.17	6.	2.	1.	0.03	
+	2 COMBINED AT	CP5N	420.	12.25	47.	14.	5.	0.71	
+	ROUTED TO	RET5N	378.	12.33	44.	14.	5.	0.71	
+									1807.39 12.33
+	ROUTED TO	R6N.1	323.	12.42	44.	14.	5.	0.71	
+									2.47 12.42
+	HYDROGRAPH AT	SUB6B	80.	12.17	7.	2.	1.	0.03	
+	ROUTED TO	SR6B	60.	12.25	7.	2.	1.	0.03	
+									1774.46 12.25
+	2 COMBINED AT	CP6.1	356.	12.42	51.	16.	5.	0.74	
+	HYDROGRAPH AT	SUB1N	48.	12.17	4.	1.	0.	0.02	
+	ROUTED TO	R2NA	49.	12.17	4.	1.	0.	0.02	
+									1.05 12.17
+	HYDROGRAPH AT	SUB2NA	37.	12.17	3.	1.	0.	0.01	
+	2 COMBINED AT	CP2NA	86.	12.17	7.	2.	1.	0.03	
+	ROUTED TO	SR2NA	73.	12.25	6.	2.	1.	0.03	

+									1775.46	12.25
+	ROUTED TO	R2NB	69.	12.25	6.	2.	1.	0.03		
+									1.44	12.25
+	HYDROGRAPH AT	SUB2NB	94.	12.17	8.	2.	1.	0.03		
+	2 COMBINED AT	CP2NB	129.	12.25	14.	4.	1.	0.06		
+	ROUTED TO	SR2NB	41.	12.58	13.	4.	1.	0.06		
+									1804.16	12.58
+	ROUTED TO	RCP4N	41.	12.58	13.	4.	1.	0.06		
+									1.05	12.58
+	HYDROGRAPH AT	SUB6N	121.	12.17	10.	3.	1.	0.05		
+	ROUTED TO	RET6N	0.	0.08	0.	0.	0.	0.05		
+									1785.53	94.00
+	ROUTED TO	RCP4N1	0.	0.08	0.	0.	0.	0.05		
+	2 COMBINED AT	CP4N.1	41.	12.58	13.	4.	1.	0.11		
+	HYDROGRAPH AT	SUB3N	72.	12.17	6.	2.	1.	0.03		
+	ROUTED TO	RET3N	4.	13.08	4.	2.	1.	0.03		
+									1795.10	13.17
+	ROUTED TO	R4N	4.	13.17	3.	2.	1.	0.03		
+									0.29	13.25
+	2 COMBINED AT	CP4N.2	45.	12.58	17.	6.	2.	0.14		
+	HYDROGRAPH AT	SUB4N	81.	12.17	7.	2.	1.	0.03		
+	2 COMBINED AT	CP4N	92.	12.17	23.	8.	3.	0.17		
+	ROUTED TO	R6N	90.	12.17	23.	8.	3.	0.17		
+									1.57	12.17
+	HYDROGRAPH AT	SUB6A	60.	12.08	4.	1.	0.	0.01		
+	2 COMBINED AT	CP6.2	127.	12.17	27.	9.	3.	0.18		
+	2 COMBINED AT	CP6N	410.	12.42	78.	25.	8.	0.92		
+	ROUTED TO	RCP6N	408.	12.42	78.	25.	8.	0.92		
+									2.10	12.42
+	HYDROGRAPH AT	SUB3C	53.	12.08	3.	1.	0.	0.01		
+	2 COMBINED AT	CP3C	414.	12.42	80.	26.	9.	0.93		
+	ROUTED TO	R3C	397.	12.42	80.	26.	9.	0.93		
+									1672.38	12.42
+	HYDROGRAPH AT	GC1018	110.	12.17	9.	3.	1.	0.04		
+	HYDROGRAPH AT	GC1-9	65.	12.17	5.	2.	1.	0.03		
+	HYDROGRAPH AT	SUB3S	32.	12.17	3.	1.	0.	0.01		
+	4 COMBINED AT	CP3S	462.	12.42	97.	31.	10.	1.01		
	ROUTED TO									

+		RT3S	456.	12.50	97.	31.	10.	1.01	
+									1744.14 12.50
	HYDROGRAPH AT								
+		SUB4S	85.	12.17	7.	2.	1.	0.03	
	ROUTED TO								
+		RT4S	85.	12.17	7.	2.	1.	0.03	
+									1743.42 12.17
	HYDROGRAPH AT								
+		GC2-8	35.	12.17	3.	1.	0.	0.01	
	3 COMBINED AT								
+		1PGC28	488.	12.42	107.	34.	11.	1.05	
	HYDROGRAPH AT								
+		SUB3D3	36.	12.17	3.	1.	0.	0.01	
	2 COMBINED AT								
+		CPGC28	497.	12.42	110.	35.	12.	1.07	
	ROUTED TO								
+		SRGC28	498.	12.25	110.	35.	12.	1.07	
+									1712.53 12.25
	ROUTED TO								
+		RT7S	490.	12.50	109.	35.	12.	1.07	
+									1744.31 12.50
	HYDROGRAPH AT								
+		GC7	33.	12.17	3.	1.	0.	0.01	
	2 COMBINED AT								
+		CP7S	501.	12.33	112.	35.	12.	1.08	
	ROUTED TO								
+		RC7S	441.	12.67	111.	35.	12.	1.08	
+									102.51 12.67
	HYDROGRAPH AT								
+		SUB3B2	68.	12.17	6.	2.	1.	0.02	
	ROUTED TO								
+		RB2E1	65.	12.17	6.	2.	1.	0.02	
+									1.89 12.17
	ROUTED TO								
+		RB2E2	61.	12.25	6.	2.	1.	0.02	
+									1.93 12.25
	HYDROGRAPH AT								
+		SUB3E1	68.	12.17	6.	2.	1.	0.02	
	2 COMBINED AT								
+		1CPE31	126.	12.17	12.	4.	1.	0.05	
	ROUTED TO								
+		RCE31	76.	12.42	12.	4.	1.	0.05	
+									101.43 12.42
	HYDROGRAPH AT								
+		SUB3D2	59.	12.17	5.	2.	1.	0.02	
	ROUTED TO								
+		RD2E2	58.	12.17	5.	2.	1.	0.02	
+									1.82 12.17
	HYDROGRAPH AT								
+		SUB3E2	38.	12.08	3.	1.	0.	0.01	
	2 COMBINED AT								
+		CP3E2	87.	12.17	8.	2.	1.	0.03	
	ROUTED TO								
+		RC3E2	51.	12.42	8.	2.	1.	0.03	
+									101.09 12.42
	HYDROGRAPH AT								
+		SUB3E3	61.	12.08	5.	1.	0.	0.02	
	ROUTED TO								
+		RC3E3	30.	12.33	5.	1.	0.	0.02	
+									100.79 12.33
	HYDROGRAPH AT								
+		SCN5C	406.	12.25	41.	12.	4.	0.26	
	5 COMBINED AT								
+		CNC5	753.	12.33	176.	55.	18.	1.45	
	HYDROGRAPH AT								
+		SUB8S	76.	12.17	6.	2.	1.	0.03	

+	ROUTED TO	RGC36	65.	12.17	6.	2.	1.	0.03	
+									1.16 12.17
+	HYDROGRAPH AT	GC36	95.	12.17	8.	2.	1.	0.04	
+	2 COMBINED AT	C1GC36	160.	12.17	15.	4.	1.	0.07	
+	HYDROGRAPH AT	SUB9S	66.	12.17	6.	2.	1.	0.02	
+	ROUTED TO	R9S	68.	12.17	6.	2.	1.	0.02	
+									3.46 12.17
+	2 COMBINED AT	CPGC36	228.	12.17	20.	6.	2.	0.09	
+	ROUTED TO	SRGC36	256.	12.17	20.	6.	2.	0.09	
+									1669.27 12.17
+	ROUTED TO	R36	156.	12.33	20.	6.	2.	0.09	
+									102.05 12.33
+	HYDROGRAPH AT	SCN5D	89.	12.17	9.	2.	1.	0.06	
+	2 COMBINED AT	CN5D	237.	12.25	29.	9.	3.	0.14	
+	2 COMBINED AT	CN5	967.	12.33	205.	63.	21.	1.59	
+	HYDROGRAPH AT	SUB7A	27.	12.17	2.	1.	0.	0.01	
+	ROUTED TO	SR7A	8.	12.42	2.	1.	0.	0.01	
+									1702.27 12.42
+	ROUTED TO	R10S	7.	12.58	2.	1.	0.	0.01	
+									2.59 12.58
+	HYDROGRAPH AT	SUB10S	77.	12.17	7.	2.	1.	0.02	
+	2 COMBINED AT	CP10S	80.	12.17	9.	3.	1.	0.03	
+	HYDROGRAPH AT	SUB11S	112.	12.08	7.	2.	1.	0.02	
+	ROUTED TO	R11S	84.	12.17	7.	2.	1.	0.02	
+									3.69 12.17
+	2 COMBINED AT	C10SA	163.	12.17	16.	5.	2.	0.06	
+	ROUTED TO	R10SA	168.	12.17	16.	5.	2.	0.06	
+									4.25 12.17
+	HYDROGRAPH AT	GC45	48.	12.08	3.	1.	0.	0.01	
+	2 COMBINED AT	CP45	191.	12.17	18.	6.	2.	0.07	
+	ROUTED TO	RC45	158.	12.25	18.	6.	2.	0.07	
+									101.95 12.25
+	HYDROGRAPH AT	SCN6D	68.	12.08	6.	2.	1.	0.02	
+	2 COMBINED AT	CN6D	211.	12.17	24.	7.	2.	0.09	
+	HYDROGRAPH AT	SCN6C	242.	12.25	23.	7.	2.	0.10	
+	HYDROGRAPH AT	D52	2587.	12.33	758.	387.	156.	0.00	
+	HYDROGRAPH AT	S53A	302.	12.25	32.	9.	3.	0.18	

```
          2 COMBINED AT
+                          C53      2868.   12.25        790.       396.       159.       0.18
          HYDROGRAPH AT
+                         S53A1      516.   12.33         62.        19.         6.       0.33
          2 COMBINED AT
+                         C53A1     3372.   12.25        852.       414.       165.       0.51
          HYDROGRAPH AT
+                         SCN6B      157.   12.17         13.         4.         1.       0.05
          2 COMBINED AT
+                          C53A     3500.   12.25        864.       417.       167.       0.56
          HYDROGRAPH AT
+                         SCN6E      103.   12.25         14.         4.         1.       0.09
          5 COMBINED AT
+                         UHDB-I     4977.   12.25       1128.       495.       194.       2.43
          ROUTED TO
+                         UHDB-O      755.   14.67        735.       494.       194.       2.43
+                                                                                      1605.81       14.67
          HYDROGRAPH AT
+                           S54      196.   12.25         21.         7.         2.       0.09
          HYDROGRAPH AT
+                         SCN6A      309.   12.25         33.        10.         3.       0.13
          2 COMBINED AT
+                          CN6A      505.   12.25         54.        17.         6.       0.22
          2 COMBINED AT
+                           C1A     1022.   12.25        768.       509.       200.       2.65
1

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

APPENDIX I

Happy Valley Detention Basin Worst Case
100-Year, 24-Hour HEC-1 Output File Printout

```
1*************************************
*                                   *
*   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *
*              MAY   1991           *
*           VERSION 4.0.1E          *
*     Lahey F77L-EM/32 version 5.01 *
*       Dodson & Associates, Inc.   *
* RUN DATE  11/11/97  TIME  16:14:50 *
*************************************
```

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

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

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

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

```
1                                    HEC-1 INPUT                                    PAGE  1

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

    1           ID    PIMA ROAD THREE BASINS                          File: HAPPY-24.IH1
    2           ID    by  Stantech for the City of Scottsdale       Original: 08-07-97     mcg
    3           ID        Project:  28900051
    4           ID
    5           ID
    6           ID    100-YEAR, 24-HOUR STORM
    7           ID        10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
    8           ID        100% OF FLOWSPLITS ARE ROUTED TO HAPPY VALLEY DETENTION BASIN
    9           ID
                *DIAGRAM
   10           IT       5                    2000
   11           IO       5
                *

   12           KK    S30N
   13           KM     RUNOFF FROM SUBBASIN 30N
   14           BA  0.6518
   15           PH            11.5      .84    1.53    2.46    2.75    2.94    3.31    3.74    4.17
   16           LS              82       13              82      13
   17           UK     300   0.350    0.13      20
   18           UK     300   0.050    0.13      80
   19           RK    1550   0.069   0.045  0.0096    TRAP       0      12
   20           RK   10520   0.038   0.040            TRAP      15      15
                *

   21           KK    R30N
   22           KM     NORMAL DEPTH CHANNEL ROUTE FROM C30N TO C31.1 THROUGH PIMA CHANNEL
   23           RS       1    FLOW      -1
   24           RC   0.022   0.022   0.022    2470    0.01
   25           RX    1000    1012    1020    1028    1036    1044    1052    1064
   26           RY     107     104     102     100     100     102     104     107
                *

   27           KK   S31.1
   28           KM     RUNOFF FROM SUBBASIN 31.1
   29           BA  0.2663
   30           LS            76.6       13            76.6      13
   31           UK     300   0.567    0.13      10
   32           UK     300   0.050    0.13      90
   33           RK    1950   0.056   0.045  0.0147    TRAP       0      10
   34           RK    7600   0.035   0.040            TRAP      22       8
                *

   35           KK   C31.1
   36           KM     COMBINE ROUTED HYDROGRAPH FROM S30N WITH RUNOFF FROM SUBBASIN 31.1
   37           HC       2
                *
                *  R31.1
                *   ****  TOO SHORT TO ROUTE  ****
                *    NORMAL DEPTH CHANNEL ROUTE FROM C31.1 TO C34.1 THROUGH PIMA CHANNEL
                *       1    FLOW      -1
                *  0.022   0.022   0.022    1500    0.01
                *   1000    1012    1020    1028    1048    1056    1064    1076
                *    107     104     102     100     100     102     104     107
                *
1                                    HEC-1 INPUT                                    PAGE  2
```

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

 38           KK   S34.2
 39           KM     RUNOFF FROM SUBBASIN 34.2
 40           KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
 41           BA  0.4441
 42           LS            77.3      12             77.3      12
 43           UK      50    0.10    0.13      10
 44           UK     300   0.040    0.13      90
 45           RK    2200  0.0452   0.045  0.0538    TRAP       0      10
 46           RK    8150  0.0386   0.045            TRAP       0      10
              *

 47           KK   C34.2
 48           KM     COMBINE ROUTED HYDROGRAPH FROM C31.1 WITH RUNOFF FROM SUBBASIN 34.2
 49           HC       2
              *

 50           KK    S35N
 51           KM     RUNOFF FROM SUBBASIN 35N
 52           BA  0.5482
 53           LS              82      13              82      13
 54           UK     300   0.491    0.13      15
 55           UK     300   0.113    0.13      85
 56           RK    2700   0.079   0.045  0.0242    TRAP       3       6
 57           RK    5050   0.028   0.040            TRAP      15      15
              *

 58           KK   D35NR
 59           KM     DIVERSION JUST DOWNSTREAM OF THE ALMA SCHOOL ROAD CULVERT
 60           KM        RIGHT BRANCH IS ROUTED TO C36.2
 61           KM        100% OF FLOWSPLIT IS ROUTED TO HAPPY VALLEY DETENTION BASIN
 62           DT   D35NL
 63           DI       0      10      66     168     343     581     805     977    1168    1320
 64           DQ       0       0       0       0       0       0       0       0       0       0
              *

 65           KK   R35NR
 66           KM     NORMAL DEPTH CHANNEL ROUTE FROM S35N TO C36.2
 67           KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
 68           RS       1    FLOW      -1
 69           RC    0.06    0.04    0.06    3500  0.0343
 70           RX    1000    1006    1026    1027    1057    1058    1078    1084
 71           RY     105     103     101     100     100     101     103     105
              *

 72           KK   S36.2
 73           KM     RUNOFF FROM SUBBASIN 36.2
 74           BA  0.2087
 75           LS            76.6      13             76.6      13
 76           UK     300   0.580    0.13       5
 77           UK     300   0.100    0.13      95
 78           RK    1800   0.036   0.045  0.0145    TRAP      10      10
 79           RK    3520   0.028   0.040            TRAP      20       6
              *
```



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

 80           KK   C36.2
 81           KM     COMBINE ROUTED HYDROGRAPH FROM S35N WITH RUNOFF FROM SUBBASIN 36.2
 82           HC       2
              *

 83           KK  D36.2R
 84           KM     DIVERSION AT DESERT HIGHLANDS DRIVE
 85           KM        RIGHT BRANCH, AT GOLF CART CROSSING IS ROUTED TO C34.1
 86           KM        100% OF FLOWSPLIT IS ROUTED TO HAPPY VALLEY DETENTION BASIN
 87           DT  D36.2L
 88           DI       0      36     166     288     360     430     538     681     859    1074
 89           DQ       0       0       0       0       0       0       0       0       0       0
              *

 90           KK  R36.2R
 91           KM     NORMAL DEPTH CHANNEL ROUTE FROM C36.2 TO C34.1
 92           KM        SOURCE: 1993 MAPPING (2' CI) PROVIDED BY COS
 93           RS       4    FLOW      -1
 94           RC    0.06    0.04    0.06    7800  0.0321
 95           RX    1000    1043    1053    1068    1093    1098    1133    1218
 96           RY   102.6   100.6   100.5     100     100   100.5   100.6   102.6
              *

 97           KK   S34.1
 98           KM     RUNOFF FROM SUBBASIN 34.1
 99           KM        RAINFALL LOSSES FOR GREINER SUBBASINS 31.2 AND 34.1 ARE WEIGHTED BY AREA
100           BA  1.1635
101           LS            77.3      12             77.3      12
102           UK     300   0.590    0.13      25
103           UK     300   0.040    0.13      75
104           RK    2570   0.085   0.045  0.0214    TRAP       0      10
105           RK    8800  0.0325   0.040            TRAP      20      10
```

```
                    *
 106                KK   C34.1
 107                KM     COMBINE ROUTED HYDROGRAPH FROM C36.2 W/RUNOFF FROM SUBBASIN 34.1
 108                HC       2
                    *

 109                KK  HVDB-I
 110                KM     COMBINE HYDROGRAPH FROM C34.2 W/ C34.1
 111                HC       2
                    *

 112                KK  HVDB-O
 113                KO       1
 114                KM     DETENTION BASIN AT HAPPY VALLEY ROAD - NONREGULATORY STRUCTURE
 115                KM        PRINCIPAL SPILLWAY:  42" x 800' RCP WITH A SLOPE OF 0.5%
 116                KM        EMERGENCY SPILLWAY:  200' x 1.5' RECT. WEIR - CREST ELEV = 2089.5
 117                KM        13 ACRE-FEET OF STORAGE FOR SEDIMENTAION
 118                RS       1    STOR      -1
 119                SV       0     0.2     0.7     1.8     3.4     5.4    36.3    88.1   150.2   224.3
 120                SV   240.0
 121                SE    2065    2066    2067    2068    2069    2070    2075    2080    2085    2090
1                                                HEC-1 INPUT                                                PAGE  4

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

 122                SE    2091
 123                SQ       0      20      30      40      60      70      80      90     100     110
 124                SQ     120     130     140   143.6     328   452.6   599.4     767   954.1  1160.2
 125                SE  2065.0 2066.77 2067.45 2067.94 2068.95 2070.44 2072.26 2074.32 2076.62 2079.16
 126                SE  2081.9 2084.98 2088.25  2089.5  2090.0  2090.2  2090.4  2090.6  2090.8    2091
                    *
 127                ZZ
1
              SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

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

   12         S30N
                V
                V
   21         R30N
                .
                .
   27           .       S31.1
                .           .
                .           .
   35       C31.1............
                .
                .
   38           .       S34.2
                .           .
                .           .
   47       C34.2............
                .
                .
   50           .        S35N
                .           .
                .           .
   62           .           .-------->   D35NL
   58           .       D35NR
                .           V
                .           V
   65           .       R35NR
                .           .
                .           .
   72           .           .       S36.2
                .           .           .
                .           .           .
   80           .       C36.2............
                .           .
                .           .
   87           .           .-------->  D36.2L
   83           .      D36.2R
                .           V
                .           V
   90           .      R36.2R
                .           .
                .           .
   97           .           .       S34.1
                .           .           .
                .           .           .
  106           .       C34.1............
                .           .
                .           .
  109       HVDB-I............
                V
                V
  112       HVDB-O

 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1*************************************                                    *************************************
```

```
*                                        *                                        *                                        *
*  FLOOD HYDROGRAPH PACKAGE  (HEC-1)     *                                        *   U.S. ARMY CORPS OF ENGINEERS         *
*            MAY  1991                   *                                        *   HYDROLOGIC ENGINEERING CENTER        *
*          VERSION 4.0.1E                *                                        *         609 SECOND STREET              *
*    Lahey F77L-EM/32 version 5.01       *                                        *      DAVIS, CALIFORNIA 95616           *
*      Dodson & Associates, Inc.         *                                        *          (916) 551-1748                *
*  RUN DATE  11/11/97  TIME  16:14:50    *                                        *                                        *
*****************************************                                        *****************************************


                        PIMA ROAD THREE BASINS                                  File: HAPPY-24.IH1
                        by  Stantech for the City of Scottsdale            Original: 08-07-97     mcg
                            Project:  28900051

                        100-YEAR, 24-HOUR STORM
                            10% LEVEL DESIGN FOR HAPPY VALLEY DETENTION BASIN
                            100% OF FLOWSPLITS ARE ROUTED TO HAPPY VALLEY DETENTION BASIN

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

    IT          HYDROGRAPH TIME DATA
                      NMIN          5  MINUTES IN COMPUTATION INTERVAL
                     IDATE      1   0  STARTING DATE
                     ITIME       0000  STARTING TIME
                        NQ       2000  NUMBER OF HYDROGRAPH ORDINATES
                    NDDATE      7   0  ENDING DATE
                    NDTIME       2235  ENDING TIME
                     ICENT         19  CENTURY MARK

                  COMPUTATION INTERVAL    0.08 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

        *** FDKRUT - NEWTON RAPHSON FAILEDFIXED POINT ITERATION USED - ITERATION=  1


        *** FDKRUT WARNING TIME STEP CALCULATION FAILED TO CONVERGE. STABILITY PROBLEMS MAY RESULT


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


            *************
            *           *
112 KK      *   HVDB-O  *
            *           *
            *************

113 KO          OUTPUT CONTROL VARIABLES
                     IPRNT          1  PRINT CONTROL
                     IPLOT          0  PLOT CONTROL
                     QSCAL         0.  HYDROGRAPH PLOT SCALE
                           DETENTION BASIN AT HAPPY VALLEY ROAD - NONREGULATORY STRUCTURE
                              PRINCIPAL SPILLWAY:  42" x 800' RCP WITH A SLOPE OF 0.5%
                              EMERGENCY SPILLWAY:  200' x 1.5' RECT. WEIR - CREST ELEV = 2089.5
                              13 ACRE-FEET OF STORAGE FOR SEDIMENTAION

              HYDROGRAPH ROUTING DATA

118 RS          STORAGE ROUTING
                     NSTPS          1  NUMBER OF SUBREACHES
                      ITYP       STOR  TYPE OF INITIAL CONDITION
                    RSVRIC      -1.00  INITIAL CONDITION
                         X       0.00 WORKING R AND D COEFFICIENT

119 SV            STORAGE        0.0       0.2       0.7       1.8       3.4       5.4      36.3      88.1     150.2     224.3
                               240.0

121 SE          ELEVATION     2065.00   2066.00   2067.00   2068.00   2069.00   2070.00   2075.00   2080.00   2085.00   2090.00
                              2091.00

123 SQ          DISCHARGE         0.       20.       30.       40.       60.       70.       80.       90.      100.      110.
                                120.      130.      140.      144.      328.      453.      599.      767.      954.     1160.
```

125 SE	ELEVATION	2065.00	2066.77	2067.45	2067.94	2068.95	2070.44	2072.26	2074.32	2076.62	2079.16
		2081.90	2084.98	2088.25	2089.50	2090.00	2090.20	2090.40	2090.60	2090.80	2091.00

***

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	0.00	0.20	0.59	0.70	1.19	1.73	1.80	3.32	3.40	5.40
OUTFLOW	0.00	11.30	20.00	23.38	30.00	40.00	41.19	60.00	60.34	67.05
ELEVATION	2065.00	2066.00	2066.77	2067.00	2067.45	2067.94	2068.00	2068.95	2069.00	2070.00
STORAGE	8.12	19.37	32.10	36.30	53.08	79.40	88.10	111.70	149.95	150.20
OUTFLOW	70.00	80.00	90.00	92.96	100.00	110.00	113.07	120.00	130.00	130.06
ELEVATION	2070.44	2072.26	2074.32	2075.00	2076.62	2079.16	2080.00	2081.90	2084.98	2085.00
STORAGE	198.37	216.89	224.30	227.44	230.58	233.72	236.86	240.00		
OUTFLOW	140.00	143.60	328.00	452.60	599.40	767.00	954.10	1160.20		
ELEVATION	2088.25	2089.50	2090.00	2090.20	2090.40	2090.60	2090.80	2091.00		

HYDROGRAPH AT STATION HVDB-O

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1		0000	1	0.	0.0	2065.0	3		0735	668	0.	0.0	2065.0	5		1510	1335	0.	0.0	2065.0
1		0005	2	0.	0.0	2065.0	3		0740	669	0.	0.0	2065.0	5		1515	1336	0.	0.0	2065.0
1		0010	3	0.	0.0	2065.0	3		0745	670	0.	0.0	2065.0	5		1520	1337	0.	0.0	2065.0
1		0015	4	0.	0.0	2065.0	3		0750	671	0.	0.0	2065.0	5		1525	1338	0.	0.0	2065.0
1		0020	5	0.	0.0	2065.0	3		0755	672	0.	0.0	2065.0	5		1530	1339	0.	0.0	2065.0
1		0025	6	0.	0.0	2065.0	3		0800	673	0.	0.0	2065.0	5		1535	1340	0.	0.0	2065.0
1		0030	7	0.	0.0	2065.0	3		0805	674	0.	0.0	2065.0	5		1540	1341	0.	0.0	2065.0
1		0035	8	0.	0.0	2065.0	3		0810	675	0.	0.0	2065.0	5		1545	1342	0.	0.0	2065.0
1		0040	9	0.	0.0	2065.0	3		0815	676	0.	0.0	2065.0	5		1550	1343	0.	0.0	2065.0
1		0045	10	0.	0.0	2065.0	3		0820	677	0.	0.0	2065.0	5		1555	1344	0.	0.0	2065.0
1		0050	11	0.	0.0	2065.0	3		0825	678	0.	0.0	2065.0	5		1600	1345	0.	0.0	2065.0
1		0055	12	0.	0.0	2065.0	3		0830	679	0.	0.0	2065.0	5		1605	1346	0.	0.0	2065.0
1		0100	13	0.	0.0	2065.0	3		0835	680	0.	0.0	2065.0	5		1610	1347	0.	0.0	2065.0
1		0105	14	0.	0.0	2065.0	3		0840	681	0.	0.0	2065.0	5		1615	1348	0.	0.0	2065.0
1		0110	15	0.	0.0	2065.0	3		0845	682	0.	0.0	2065.0	5		1620	1349	0.	0.0	2065.0
1		0115	16	0.	0.0	2065.0	3		0850	683	0.	0.0	2065.0	5		1625	1350	0.	0.0	2065.0
1		0120	17	0.	0.0	2065.0	3		0855	684	0.	0.0	2065.0	5		1630	1351	0.	0.0	2065.0
1		0125	18	0.	0.0	2065.0	3		0900	685	0.	0.0	2065.0	5		1635	1352	0.	0.0	2065.0
1		0130	19	0.	0.0	2065.0	3		0905	686	0.	0.0	2065.0	5		1640	1353	0.	0.0	2065.0
1		0135	20	0.	0.0	2065.0	3		0910	687	0.	0.0	2065.0	5		1645	1354	0.	0.0	2065.0
1		0140	21	0.	0.0	2065.0	3		0915	688	0.	0.0	2065.0	5		1650	1355	0.	0.0	2065.0
1		0145	22	0.	0.0	2065.0	3		0920	689	0.	0.0	2065.0	5		1655	1356	0.	0.0	2065.0
1		0150	23	0.	0.0	2065.0	3		0925	690	0.	0.0	2065.0	5		1700	1357	0.	0.0	2065.0
1		0155	24	0.	0.0	2065.0	3		0930	691	0.	0.0	2065.0	5		1705	1358	0.	0.0	2065.0
1		0200	25	0.	0.0	2065.0	3		0935	692	0.	0.0	2065.0	5		1710	1359	0.	0.0	2065.0
1		0205	26	0.	0.0	2065.0	3		0940	693	0.	0.0	2065.0	5		1715	1360	0.	0.0	2065.0
1		0210	27	1.	0.0	2065.0	3		0945	694	0.	0.0	2065.0	5		1720	1361	0.	0.0	2065.0
1		0215	28	1.	0.0	2065.1	3		0950	695	0.	0.0	2065.0	5		1725	1362	0.	0.0	2065.0
1		0220	29	1.	0.0	2065.1	3		0955	696	0.	0.0	2065.0	5		1730	1363	0.	0.0	2065.0
1		0225	30	1.	0.0	2065.1	3		1000	697	0.	0.0	2065.0	5		1735	1364	0.	0.0	2065.0
1		0230	31	1.	0.0	2065.1	3		1005	698	0.	0.0	2065.0	5		1740	1365	0.	0.0	2065.0
1		0235	32	1.	0.0	2065.1	3		1010	699	0.	0.0	2065.0	5		1745	1366	0.	0.0	2065.0
1		0240	33	1.	0.0	2065.1	3		1015	700	0.	0.0	2065.0	5		1750	1367	0.	0.0	2065.0
1		0245	34	1.	0.0	2065.1	3		1020	701	0.	0.0	2065.0	5		1755	1368	0.	0.0	2065.0
1		0250	35	2.	0.0	2065.1	3		1025	702	0.	0.0	2065.0	5		1800	1369	0.	0.0	2065.0
1		0255	36	2.	0.0	2065.2	3		1030	703	0.	0.0	2065.0	5		1805	1370	0.	0.0	2065.0
1		0300	37	2.	0.0	2065.2	3		1035	704	0.	0.0	2065.0	5		1810	1371	0.	0.0	2065.0
1		0305	38	2.	0.0	2065.2	3		1040	705	0.	0.0	2065.0	5		1815	1372	0.	0.0	2065.0
1		0310	39	3.	0.0	2065.2	3		1045	706	0.	0.0	2065.0	5		1820	1373	0.	0.0	2065.0
1		0315	40	3.	0.1	2065.3	3		1050	707	0.	0.0	2065.0	5		1825	1374	0.	0.0	2065.0
1		0320	41	3.	0.1	2065.3	3		1055	708	0.	0.0	2065.0	5		1830	1375	0.	0.0	2065.0
1		0325	42	3.	0.1	2065.3	3		1100	709	0.	0.0	2065.0	5		1835	1376	0.	0.0	2065.0
1		0330	43	4.	0.1	2065.3	3		1105	710	0.	0.0	2065.0	5		1840	1377	0.	0.0	2065.0
1		0335	44	4.	0.1	2065.4	3		1110	711	0.	0.0	2065.0	5		1845	1378	0.	0.0	2065.0
1		0340	45	4.	0.1	2065.4	3		1115	712	0.	0.0	2065.0	5		1850	1379	0.	0.0	2065.0
1		0345	46	5.	0.1	2065.4	3		1120	713	0.	0.0	2065.0	5		1855	1380	0.	0.0	2065.0
1		0350	47	5.	0.1	2065.4	3		1125	714	0.	0.0	2065.0	5		1900	1381	0.	0.0	2065.0
1		0355	48	5.	0.1	2065.5	3		1130	715	0.	0.0	2065.0	5		1905	1382	0.	0.0	2065.0
1		0400	49	6.	0.1	2065.5	3		1135	716	0.	0.0	2065.0	5		1910	1383	0.	0.0	2065.0
1		0405	50	6.	0.1	2065.5	3		1140	717	0.	0.0	2065.0	5		1915	1384	0.	0.0	2065.0
1		0410	51	6.	0.1	2065.5	3		1145	718	0.	0.0	2065.0	5		1920	1385	0.	0.0	2065.0
1		0415	52	6.	0.1	2065.6	3		1150	719	0.	0.0	2065.0	5		1925	1386	0.	0.0	2065.0
1		0420	53	7.	0.1	2065.6	3		1155	720	0.	0.0	2065.0	5		1930	1387	0.	0.0	2065.0
1		0425	54	7.	0.1	2065.6	3		1200	721	0.	0.0	2065.0	5		1935	1388	0.	0.0	2065.0
1		0430	55	7.	0.1	2065.6	3		1205	722	0.	0.0	2065.0	5		1940	1389	0.	0.0	2065.0
1		0435	56	7.	0.1	2065.7	3		1210	723	0.	0.0	2065.0	5		1945	1390	0.	0.0	2065.0
1		0440	57	8.	0.1	2065.7	3		1215	724	0.	0.0	2065.0	5		1950	1391	0.	0.0	2065.0
1		0445	58	8.	0.1	2065.7	3		1220	725	0.	0.0	2065.0	5		1955	1392	0.	0.0	2065.0
1		0450	59	8.	0.1	2065.7	3		1225	726	0.	0.0	2065.0	5		2000	1393	0.	0.0	2065.0
1		0455	60	8.	0.1	2065.7	3		1230	727	0.	0.0	2065.0	5		2005	1394	0.	0.0	2065.0
1		0500	61	8.	0.1	2065.7	3		1235	728	0.	0.0	2065.0	5		2010	1395	0.	0.0	2065.0
1		0505	62	9.	0.2	2065.8	3		1240	729	0.	0.0	2065.0	5		2015	1396	0.	0.0	2065.0
1		0510	63	9.	0.2	2065.8	3		1245	730	0.	0.0	2065.0	5		2020	1397	0.	0.0	2065.0
1		0515	64	9.	0.2	2065.8	3		1250	731	0.	0.0	2065.0	5		2025	1398	0.	0.0	2065.0
1		0520	65	9.	0.2	2065.8	3		1255	732	0.	0.0	2065.0	5		2030	1399	0.	0.0	2065.0
1		0525	66	9.	0.2	2065.8	3		1300	733	0.	0.0	2065.0	5		2035	1400	0.	0.0	2065.0

1	0530	67	9.	0.2	2065.8	*	3	1305	734	0.	0.0	2065.0	*	5	20401401	0.	0.0	2065.0
1	0535	68	9.	0.2	2065.8	*	3	1310	735	0.	0.0	2065.0	*	5	20451402	0.	0.0	2065.0
1	0540	69	10.	0.2	2065.8	*	3	1315	736	0.	0.0	2065.0	*	5	20501403	0.	0.0	2065.0
1	0545	70	10.	0.2	2065.9	*	3	1320	737	0.	0.0	2065.0	*	5	20551404	0.	0.0	2065.0
1	0550	71	10.	0.2	2065.9	*	3	1325	738	0.	0.0	2065.0	*	5	21001405	0.	0.0	2065.0
1	0555	72	10.	0.2	2065.9	*	3	1330	739	0.	0.0	2065.0	*	5	21051406	0.	0.0	2065.0
1	0600	73	10.	0.2	2065.9	*	3	1335	740	0.	0.0	2065.0	*	5	21101407	0.	0.0	2065.0
1	0605	74	10.	0.2	2065.9	*	3	1340	741	0.	0.0	2065.0	*	5	21151408	0.	0.0	2065.0
1	0610	75	10.	0.2	2065.9	*	3	1345	742	0.	0.0	2065.0	*	5	21201409	0.	0.0	2065.0
1	0615	76	10.	0.2	2065.9	*	3	1350	743	0.	0.0	2065.0	*	5	21251410	0.	0.0	2065.0
1	0620	77	10.	0.2	2065.9	*	3	1355	744	0.	0.0	2065.0	*	5	21301411	0.	0.0	2065.0
1	0625	78	11.	0.2	2065.9	*	3	1400	745	0.	0.0	2065.0	*	5	21351412	0.	0.0	2065.0
1	0630	79	11.	0.2	2065.9	*	3	1405	746	0.	0.0	2065.0	*	5	21401413	0.	0.0	2065.0
1	0635	80	11.	0.2	2066.0	*	3	1410	747	0.	0.0	2065.0	*	5	21451414	0.	0.0	2065.0
1	0640	81	11.	0.2	2066.0	*	3	1415	748	0.	0.0	2065.0	*	5	21501415	0.	0.0	2065.0
1	0645	82	11.	0.2	2066.0	*	3	1420	749	0.	0.0	2065.0	*	5	21551416	0.	0.0	2065.0
1	0650	83	11.	0.2	2066.0	*	3	1425	750	0.	0.0	2065.0	*	5	22001417	0.	0.0	2065.0
1	0655	84	11.	0.2	2066.0	*	3	1430	751	0.	0.0	2065.0	*	5	22051418	0.	0.0	2065.0
1	0700	85	11.	0.2	2066.0	*	3	1435	752	0.	0.0	2065.0	*	5	22101419	0.	0.0	2065.0
1	0705	86	11.	0.2	2066.0	*	3	1440	753	0.	0.0	2065.0	*	5	22151420	0.	0.0	2065.0
1	0710	87	12.	0.2	2066.0	*	3	1445	754	0.	0.0	2065.0	*	5	22201421	0.	0.0	2065.0
1	0715	88	12.	0.2	2066.0	*	3	1450	755	0.	0.0	2065.0	*	5	22251422	0.	0.0	2065.0
1	0720	89	12.	0.2	2066.0	*	3	1455	756	0.	0.0	2065.0	*	5	22301423	0.	0.0	2065.0
1	0725	90	12.	0.2	2066.1	*	3	1500	757	0.	0.0	2065.0	*	5	22351424	0.	0.0	2065.0
1	0730	91	12.	0.2	2066.1	*	3	1505	758	0.	0.0	2065.0	*	5	22401425	0.	0.0	2065.0
1	0735	92	12.	0.2	2066.1	*	3	1510	759	0.	0.0	2065.0	*	5	22451426	0.	0.0	2065.0
1	0740	93	12.	0.3	2066.1	*	3	1515	760	0.	0.0	2065.0	*	5	22501427	0.	0.0	2065.0
1	0745	94	13.	0.3	2066.1	*	3	1520	761	0.	0.0	2065.0	*	5	22551428	0.	0.0	2065.0
1	0750	95	13.	0.3	2066.1	*	3	1525	762	0.	0.0	2065.0	*	5	23001429	0.	0.0	2065.0
1	0755	96	13.	0.3	2066.2	*	3	1530	763	0.	0.0	2065.0	*	5	23051430	0.	0.0	2065.0
1	0800	97	13.	0.3	2066.2	*	3	1535	764	0.	0.0	2065.0	*	5	23101431	0.	0.0	2065.0
1	0805	98	13.	0.3	2066.2	*	3	1540	765	0.	0.0	2065.0	*	5	23151432	0.	0.0	2065.0
1	0810	99	14.	0.3	2066.2	*	3	1545	766	0.	0.0	2065.0	*	5	23201433	0.	0.0	2065.0
1	0815	100	14.	0.3	2066.2	*	3	1550	767	0.	0.0	2065.0	*	5	23251434	0.	0.0	2065.0
1	0820	101	14.	0.3	2066.2	*	3	1555	768	0.	0.0	2065.0	*	5	23301435	0.	0.0	2065.0
1	0825	102	14.	0.3	2066.3	*	3	1600	769	0.	0.0	2065.0	*	5	23351436	0.	0.0	2065.0
1	0830	103	15.	0.3	2066.3	*	3	1605	770	0.	0.0	2065.0	*	5	23401437	0.	0.0	2065.0
1	0835	104	15.	0.4	2066.3	*	3	1610	771	0.	0.0	2065.0	*	5	23451438	0.	0.0	2065.0
1	0840	105	15.	0.4	2066.3	*	3	1615	772	0.	0.0	2065.0	*	5	23501439	0.	0.0	2065.0
1	0845	106	15.	0.4	2066.4	*	3	1620	773	0.	0.0	2065.0	*	5	23551440	0.	0.0	2065.0
1	0850	107	16.	0.4	2066.4	*	3	1625	774	0.	0.0	2065.0	*	6	00001441	0.	0.0	2065.0
1	0855	108	16.	0.4	2066.4	*	3	1630	775	0.	0.0	2065.0	*	6	00051442	0.	0.0	2065.0
1	0900	109	16.	0.4	2066.4	*	3	1635	776	0.	0.0	2065.0	*	6	00101443	0.	0.0	2065.0
1	0905	110	16.	0.4	2066.5	*	3	1640	777	0.	0.0	2065.0	*	6	00151444	0.	0.0	2065.0
1	0910	111	17.	0.4	2066.5	*	3	1645	778	0.	0.0	2065.0	*	6	00201445	0.	0.0	2065.0
1	0915	112	17.	0.5	2066.5	*	3	1650	779	0.	0.0	2065.0	*	6	00251446	0.	0.0	2065.0
1	0920	113	17.	0.5	2066.5	*	3	1655	780	0.	0.0	2065.0	*	6	00301447	0.	0.0	2065.0
1	0925	114	18.	0.5	2066.6	*	3	1700	781	0.	0.0	2065.0	*	6	00351448	0.	0.0	2065.0
1	0930	115	18.	0.5	2066.6	*	3	1705	782	0.	0.0	2065.0	*	6	00401449	0.	0.0	2065.0
1	0935	116	18.	0.5	2066.6	*	3	1710	783	0.	0.0	2065.0	*	6	00451450	0.	0.0	2065.0
1	0940	117	19.	0.5	2066.6	*	3	1715	784	0.	0.0	2065.0	*	6	00501451	0.	0.0	2065.0
1	0945	118	19.	0.5	2066.7	*	3	1720	785	0.	0.0	2065.0	*	6	00551452	0.	0.0	2065.0
1	0950	119	19.	0.6	2066.7	*	3	1725	786	0.	0.0	2065.0	*	6	01001453	0.	0.0	2065.0
1	0955	120	20.	0.6	2066.7	*	3	1730	787	0.	0.0	2065.0	*	6	01051454	0.	0.0	2065.0
1	1000	121	20.	0.6	2066.8	*	3	1735	788	0.	0.0	2065.0	*	6	01101455	0.	0.0	2065.0
1	1005	122	21.	0.6	2066.8	*	3	1740	789	0.	0.0	2065.0	*	6	01151456	0.	0.0	2065.0
1	1010	123	21.	0.6	2066.9	*	3	1745	790	0.	0.0	2065.0	*	6	01201457	0.	0.0	2065.0
1	1015	124	22.	0.6	2066.9	*	3	1750	791	0.	0.0	2065.0	*	6	01251458	0.	0.0	2065.0
1	1020	125	22.	0.7	2066.9	*	3	1755	792	0.	0.0	2065.0	*	6	01301459	0.	0.0	2065.0
1	1025	126	23.	0.7	2067.0	*	3	1800	793	0.	0.0	2065.0	*	6	01351460	0.	0.0	2065.0
1	1030	127	24.	0.7	2067.0	*	3	1805	794	0.	0.0	2065.0	*	6	01401461	0.	0.0	2065.0
1	1035	128	24.	0.7	2067.0	*	3	1810	795	0.	0.0	2065.0	*	6	01451462	0.	0.0	2065.0
1	1040	129	24.	0.8	2067.1	*	3	1815	796	0.	0.0	2065.0	*	6	01501463	0.	0.0	2065.0
1	1045	130	25.	0.8	2067.1	*	3	1820	797	0.	0.0	2065.0	*	6	01551464	0.	0.0	2065.0
1	1050	131	25.	0.9	2067.1	*	3	1825	798	0.	0.0	2065.0	*	6	02001465	0.	0.0	2065.0
1	1055	132	26.	0.9	2067.2	*	3	1830	799	0.	0.0	2065.0	*	6	02051466	0.	0.0	2065.0
1	1100	133	27.	1.0	2067.2	*	3	1835	800	0.	0.0	2065.0	*	6	02101467	0.	0.0	2065.0
1	1105	134	28.	1.0	2067.3	*	3	1840	801	0.	0.0	2065.0	*	6	02151468	0.	0.0	2065.0
1	1110	135	29.	1.1	2067.4	*	3	1845	802	0.	0.0	2065.0	*	6	02201469	0.	0.0	2065.0
1	1115	136	31.	1.2	2067.5	*	3	1850	803	0.	0.0	2065.0	*	6	02251470	0.	0.0	2065.0
1	1120	137	33.	1.4	2067.6	*	3	1855	804	0.	0.0	2065.0	*	6	02301471	0.	0.0	2065.0
1	1125	138	36.	1.5	2067.7	*	3	1900	805	0.	0.0	2065.0	*	6	02351472	0.	0.0	2065.0
1	1130	139	39.	1.7	2067.9	*	3	1905	806	0.	0.0	2065.0	*	6	02401473	0.	0.0	2065.0
1	1135	140	42.	1.9	2068.1	*	3	1910	807	0.	0.0	2065.0	*	6	02451474	0.	0.0	2065.0
1	1140	141	46.	2.2	2068.2	*	3	1915	808	0.	0.0	2065.0	*	6	02501475	0.	0.0	2065.0
1	1145	142	50.	2.5	2068.5	*	3	1920	809	0.	0.0	2065.0	*	6	02551476	0.	0.0	2065.0
1	1150	143	57.	3.1	2068.8	*	3	1925	810	0.	0.0	2065.0	*	6	03001477	0.	0.0	2065.0
1	1155	144	62.	4.0	2069.3	*	3	1930	811	0.	0.0	2065.0	*	6	03051478	0.	0.0	2065.0
1	1200	145	67.	5.8	2070.1	*	3	1935	812	0.	0.0	2065.0	*	6	03101479	0.	0.0	2065.0
1	1205	146	72.	10.1	2070.8	*	3	1940	813	0.	0.0	2065.0	*	6	03151480	0.	0.0	2065.0
1	1210	147	82.	21.7	2072.6	*	3	1945	814	0.	0.0	2065.0	*	6	03201481	0.	0.0	2065.0
1	1215	148	97.	44.8	2075.8	*	3	1950	815	0.	0.0	2065.0	*	6	03251482	0.	0.0	2065.0
1	1220	149	108.	75.4	2078.8	*	3	1955	816	0.	0.0	2065.0	*	6	03301483	0.	0.0	2065.0
1	1225	150	118.	105.6	2081.4	*	3	2000	817	0.	0.0	2065.0	*	6	03351484	0.	0.0	2065.0
1	1230	151	125.	132.3	2083.6	*	3	2005	818	0.	0.0	2065.0	*	6	03401485	0.	0.0	2065.0
1	1235	152	131.	155.3	2085.3	*	3	2010	819	0.	0.0	2065.0	*	6	03451486	0.	0.0	2065.0
1	1240	153	135.	174.8	2086.7	*	3	2015	820	0.	0.0	2065.0	*	6	03501487	0.	0.0	2065.0
1	1245	154	138.	190.7	2087.7	*	3	2020	821	0.	0.0	2065.0	*	6	03551488	0.	0.0	2065.0
1	1250	155	141.	203.6	2088.6	*	3	2025	822	0.	0.0	2065.0	*	6	04001489	0.	0.0	2065.0
1	1255	156	143.	213.9	2089.3	*	3	2030	823	0.	0.0	2065.0	*	6	04051490	0.	0.0	2065.0
1	1300	157	267.	221.8	2089.8	*	3	2035	824	0.	0.0	2065.0	*	6	04101491	0.	0.0	2065.0
1	1305	158	443.	227.2	2090.2	*	3	2040	825	0.	0.0	2065.0	*	6	04151492	0.	0.0	2065.0
1	1310	159	586.	230.3	2090.4	*	3	2045	826	0.	0.0	2065.0	*	6	04201493	0.	0.0	2065.0
1	1315	160	660.	231.7	2090.5	*	3	2050	827	0.	0.0	2065.0	*	6	04251494	0.	0.0	2065.0

1	1320	161	680.	232.1	2090.5	*	3	2055	828	0.	0.0	2065.0	*	6	04301495	0.	0.0	2065.0
1	1325	162	669.	231.9	2090.5	*	3	2100	829	0.	0.0	2065.0	*	6	04351496	0.	0.0	2065.0
1	1330	163	640.	231.3	2090.4	*	3	2105	830	0.	0.0	2065.0	*	6	04401497	0.	0.0	2065.0
1	1335	164	605.	230.7	2090.4	*	3	2110	831	0.	0.0	2065.0	*	6	04451498	0.	0.0	2065.0
1	1340	165	570.	230.0	2090.4	*	3	2115	832	0.	0.0	2065.0	*	6	04501499	0.	0.0	2065.0
1	1345	166	536.	229.2	2090.3	*	3	2120	833	0.	0.0	2065.0	*	6	04551500	0.	0.0	2065.0
1	1350	167	502.	228.5	2090.3	*	3	2125	834	0.	0.0	2065.0	*	6	05001501	0.	0.0	2065.0
1	1355	168	471.	227.8	2090.2	*	3	2130	835	0.	0.0	2065.0	*	6	05051502	0.	0.0	2065.0
1	1400	169	444.	227.2	2090.2	*	3	2135	836	0.	0.0	2065.0	*	6	05101503	0.	0.0	2065.0
1	1405	170	422.	226.7	2090.2	*	3	2140	837	0.	0.0	2065.0	*	6	05151504	0.	0.0	2065.0
1	1410	171	401.	226.1	2090.1	*	3	2145	838	0.	0.0	2065.0	*	6	05201505	0.	0.0	2065.0
1	1415	172	381.	225.6	2090.1	*	3	2150	839	0.	0.0	2065.0	*	6	05251506	0.	0.0	2065.0
1	1420	173	363.	225.2	2090.1	*	3	2155	840	0.	0.0	2065.0	*	6	05301507	0.	0.0	2065.0
1	1425	174	346.	224.8	2090.0	*	3	2200	841	0.	0.0	2065.0	*	6	05351508	0.	0.0	2065.0
1	1430	175	330.	224.4	2090.0	*	3	2205	842	0.	0.0	2065.0	*	6	05401509	0.	0.0	2065.0
1	1435	176	320.	224.0	2090.0	*	3	2210	843	0.	0.0	2065.0	*	6	05451510	0.	0.0	2065.0
1	1440	177	310.	223.6	2090.0	*	3	2215	844	0.	0.0	2065.0	*	6	05501511	0.	0.0	2065.0
1	1445	178	301.	223.2	2089.9	*	3	2220	845	0.	0.0	2065.0	*	6	05551512	0.	0.0	2065.0
1	1450	179	291.	222.8	2089.9	*	3	2225	846	0.	0.0	2065.0	*	6	06001513	0.	0.0	2065.0
1	1455	180	282.	222.5	2089.9	*	3	2230	847	0.	0.0	2065.0	*	6	06051514	0.	0.0	2065.0
1	1500	181	273.	222.1	2089.9	*	3	2235	848	0.	0.0	2065.0	*	6	06101515	0.	0.0	2065.0
1	1505	182	265.	221.8	2089.8	*	3	2240	849	0.	0.0	2065.0	*	6	06151516	0.	0.0	2065.0
1	1510	183	257.	221.4	2089.8	*	3	2245	850	0.	0.0	2065.0	*	6	06201517	0.	0.0	2065.0
1	1515	184	249.	221.1	2089.8	*	3	2250	851	0.	0.0	2065.0	*	6	06251518	0.	0.0	2065.0
1	1520	185	242.	220.8	2089.8	*	3	2255	852	0.	0.0	2065.0	*	6	06301519	0.	0.0	2065.0
1	1525	186	235.	220.6	2089.7	*	3	2300	853	0.	0.0	2065.0	*	6	06351520	0.	0.0	2065.0
1	1530	187	228.	220.3	2089.7	*	3	2305	854	0.	0.0	2065.0	*	6	06401521	0.	0.0	2065.0
1	1535	188	222.	220.0	2089.7	*	3	2310	855	0.	0.0	2065.0	*	6	06451522	0.	0.0	2065.0
1	1540	189	216.	219.8	2089.7	*	3	2315	856	0.	0.0	2065.0	*	6	06501523	0.	0.0	2065.0
1	1545	190	210.	219.6	2089.7	*	3	2320	857	0.	0.0	2065.0	*	6	06551524	0.	0.0	2065.0
1	1550	191	205.	219.4	2089.7	*	3	2325	858	0.	0.0	2065.0	*	6	07001525	0.	0.0	2065.0
1	1555	192	200.	219.2	2089.7	*	3	2330	859	0.	0.0	2065.0	*	6	07051526	0.	0.0	2065.0
1	1600	193	195.	219.0	2089.6	*	3	2335	860	0.	0.0	2065.0	*	6	07101527	0.	0.0	2065.0
1	1605	194	191.	218.8	2089.6	*	3	2340	861	0.	0.0	2065.0	*	6	07151528	0.	0.0	2065.0
1	1610	195	187.	218.6	2089.6	*	3	2345	862	0.	0.0	2065.0	*	6	07201529	0.	0.0	2065.0
1	1615	196	183.	218.5	2089.6	*	3	2350	863	0.	0.0	2065.0	*	6	07251530	0.	0.0	2065.0
1	1620	197	179.	218.3	2089.6	*	3	2355	864	0.	0.0	2065.0	*	6	07301531	0.	0.0	2065.0
1	1625	198	175.	218.2	2089.6	*	4	0000	865	0.	0.0	2065.0	*	6	07351532	0.	0.0	2065.0
1	1630	199	172.	218.0	2089.6	*	4	0005	866	0.	0.0	2065.0	*	6	07401533	0.	0.0	2065.0
1	1635	200	169.	217.9	2089.6	*	4	0010	867	0.	0.0	2065.0	*	6	07451534	0.	0.0	2065.0
1	1640	201	165.	217.8	2089.6	*	4	0015	868	0.	0.0	2065.0	*	6	07501535	0.	0.0	2065.0
1	1645	202	162.	217.6	2089.6	*	4	0020	869	0.	0.0	2065.0	*	6	07551536	0.	0.0	2065.0
1	1650	203	159.	217.5	2089.5	*	4	0025	870	0.	0.0	2065.0	*	6	08001537	0.	0.0	2065.0
1	1655	204	156.	217.4	2089.5	*	4	0030	871	0.	0.0	2065.0	*	6	08051538	0.	0.0	2065.0
1	1700	205	154.	217.3	2089.5	*	4	0035	872	0.	0.0	2065.0	*	6	08101539	0.	0.0	2065.0
1	1705	206	151.	217.2	2089.5	*	4	0040	873	0.	0.0	2065.0	*	6	08151540	0.	0.0	2065.0
1	1710	207	148.	217.1	2089.5	*	4	0045	874	0.	0.0	2065.0	*	6	08201541	0.	0.0	2065.0
1	1715	208	146.	217.0	2089.5	*	4	0050	875	0.	0.0	2065.0	*	6	08251542	0.	0.0	2065.0
1	1720	209	144.	216.9	2089.5	*	4	0055	876	0.	0.0	2065.0	*	6	08301543	0.	0.0	2065.0
1	1725	210	144.	216.8	2089.5	*	4	0100	877	0.	0.0	2065.0	*	6	08351544	0.	0.0	2065.0
1	1730	211	144.	216.7	2089.5	*	4	0105	878	0.	0.0	2065.0	*	6	08401545	0.	0.0	2065.0
1	1735	212	144.	216.5	2089.5	*	4	0110	879	0.	0.0	2065.0	*	6	08451546	0.	0.0	2065.0
1	1740	213	144.	216.4	2089.5	*	4	0115	880	0.	0.0	2065.0	*	6	08501547	0.	0.0	2065.0
1	1745	214	143.	216.3	2089.5	*	4	0120	881	0.	0.0	2065.0	*	6	08551548	0.	0.0	2065.0
1	1750	215	143.	216.1	2089.4	*	4	0125	882	0.	0.0	2065.0	*	6	09001549	0.	0.0	2065.0
1	1755	216	143.	215.9	2089.4	*	4	0130	883	0.	0.0	2065.0	*	6	09051550	0.	0.0	2065.0
1	1800	217	143.	215.7	2089.4	*	4	0135	884	0.	0.0	2065.0	*	6	09101551	0.	0.0	2065.0
1	1805	218	143.	215.6	2089.4	*	4	0140	885	0.	0.0	2065.0	*	6	09151552	0.	0.0	2065.0
1	1810	219	143.	215.4	2089.4	*	4	0145	886	0.	0.0	2065.0	*	6	09201553	0.	0.0	2065.0
1	1815	220	143.	215.1	2089.4	*	4	0150	887	0.	0.0	2065.0	*	6	09251554	0.	0.0	2065.0
1	1820	221	143.	214.9	2089.4	*	4	0155	888	0.	0.0	2065.0	*	6	09301555	0.	0.0	2065.0
1	1825	222	143.	214.7	2089.4	*	4	0200	889	0.	0.0	2065.0	*	6	09351556	0.	0.0	2065.0
1	1830	223	143.	214.4	2089.3	*	4	0205	890	0.	0.0	2065.0	*	6	09401557	0.	0.0	2065.0
1	1835	224	143.	214.2	2089.3	*	4	0210	891	0.	0.0	2065.0	*	6	09451558	0.	0.0	2065.0
1	1840	225	143.	213.9	2089.3	*	4	0215	892	0.	0.0	2065.0	*	6	09501559	0.	0.0	2065.0
1	1845	226	143.	213.6	2089.3	*	4	0220	893	0.	0.0	2065.0	*	6	09551560	0.	0.0	2065.0
1	1850	227	143.	213.3	2089.3	*	4	0225	894	0.	0.0	2065.0	*	6	10001561	0.	0.0	2065.0
1	1855	228	143.	213.0	2089.2	*	4	0230	895	0.	0.0	2065.0	*	6	10051562	0.	0.0	2065.0
1	1900	229	143.	212.7	2089.2	*	4	0235	896	0.	0.0	2065.0	*	6	10101563	0.	0.0	2065.0
1	1905	230	143.	212.4	2089.2	*	4	0240	897	0.	0.0	2065.0	*	6	10151564	0.	0.0	2065.0
1	1910	231	143.	212.1	2089.2	*	4	0245	898	0.	0.0	2065.0	*	6	10201565	0.	0.0	2065.0
1	1915	232	143.	211.7	2089.2	*	4	0250	899	0.	0.0	2065.0	*	6	10251566	0.	0.0	2065.0
1	1920	233	143.	211.3	2089.1	*	4	0255	900	0.	0.0	2065.0	*	6	10301567	0.	0.0	2065.0
1	1925	234	142.	211.0	2089.1	*	4	0300	901	0.	0.0	2065.0	*	6	10351568	0.	0.0	2065.0
1	1930	235	142.	210.6	2089.1	*	4	0305	902	0.	0.0	2065.0	*	6	10401569	0.	0.0	2065.0
1	1935	236	142.	210.2	2089.0	*	4	0310	903	0.	0.0	2065.0	*	6	10451570	0.	0.0	2065.0
1	1940	237	142.	209.8	2089.0	*	4	0315	904	0.	0.0	2065.0	*	6	10501571	0.	0.0	2065.0
1	1945	238	142.	209.4	2089.0	*	4	0320	905	0.	0.0	2065.0	*	6	10551572	0.	0.0	2065.0
1	1950	239	142.	209.0	2089.0	*	4	0325	906	0.	0.0	2065.0	*	6	11001573	0.	0.0	2065.0
1	1955	240	142.	208.6	2088.9	*	4	0330	907	0.	0.0	2065.0	*	6	11051574	0.	0.0	2065.0
1	2000	241	142.	208.2	2088.9	*	4	0335	908	0.	0.0	2065.0	*	6	11101575	0.	0.0	2065.0
1	2005	242	142.	207.7	2088.9	*	4	0340	909	0.	0.0	2065.0	*	6	11151576	0.	0.0	2065.0
1	2010	243	142.	207.3	2088.9	*	4	0345	910	0.	0.0	2065.0	*	6	11201577	0.	0.0	2065.0
1	2015	244	142.	206.9	2088.8	*	4	0350	911	0.	0.0	2065.0	*	6	11251578	0.	0.0	2065.0
1	2020	245	142.	206.4	2088.8	*	4	0355	912	0.	0.0	2065.0	*	6	11301579	0.	0.0	2065.0
1	2025	246	141.	206.0	2088.8	*	4	0400	913	0.	0.0	2065.0	*	6	11351580	0.	0.0	2065.0
1	2030	247	141.	205.5	2088.7	*	4	0405	914	0.	0.0	2065.0	*	6	11401581	0.	0.0	2065.0
1	2035	248	141.	205.1	2088.7	*	4	0410	915	0.	0.0	2065.0	*	6	11451582	0.	0.0	2065.0
1	2040	249	141.	204.6	2088.7	*	4	0415	916	0.	0.0	2065.0	*	6	11501583	0.	0.0	2065.0
1	2045	250	141.	204.2	2088.6	*	4	0420	917	0.	0.0	2065.0	*	6	11551584	0.	0.0	2065.0
1	2050	251	141.	203.7	2088.6	*	4	0425	918	0.	0.0	2065.0	*	6	12001585	0.	0.0	2065.0
1	2055	252	141.	203.2	2088.6	*	4	0430	919	0.	0.0	2065.0	*	6	12051586	0.	0.0	2065.0
1	2100	253	141.	202.7	2088.5	*	4	0435	920	0.	0.0	2065.0	*	6	12101587	0.	0.0	2065.0
1	2105	254	141.	202.3	2088.5	*	4	0440	921	0.	0.0	2065.0	*	6	12151588	0.	0.0	2065.0

1	2110	255	141.	201.8	2088.5	*	4	0445	922	0.	0.0	2065.0	*	6	12201589	0.	0.0	2065.0
1	2115	256	141.	201.3	2088.4	*	4	0450	923	0.	0.0	2065.0	*	6	12251590	0.	0.0	2065.0
1	2120	257	140.	200.8	2088.4	*	4	0455	924	0.	0.0	2065.0	*	6	12301591	0.	0.0	2065.0
1	2125	258	140.	200.3	2088.4	*	4	0500	925	0.	0.0	2065.0	*	6	12351592	0.	0.0	2065.0
1	2130	259	140.	199.8	2088.3	*	4	0505	926	0.	0.0	2065.0	*	6	12401593	0.	0.0	2065.0
1	2135	260	140.	199.3	2088.3	*	4	0510	927	0.	0.0	2065.0	*	6	12451594	0.	0.0	2065.0
1	2140	261	140.	198.8	2088.3	*	4	0515	928	0.	0.0	2065.0	*	6	12501595	0.	0.0	2065.0
1	2145	262	140.	198.3	2088.2	*	4	0520	929	0.	0.0	2065.0	*	6	12551596	0.	0.0	2065.0
1	2150	263	140.	197.8	2088.2	*	4	0525	930	0.	0.0	2065.0	*	6	13001597	0.	0.0	2065.0
1	2155	264	140.	197.3	2088.2	*	4	0530	931	0.	0.0	2065.0	*	6	13051598	0.	0.0	2065.0
1	2200	265	140.	196.8	2088.1	*	4	0535	932	0.	0.0	2065.0	*	6	13101599	0.	0.0	2065.0
1	2205	266	140.	196.3	2088.1	*	4	0540	933	0.	0.0	2065.0	*	6	13151600	0.	0.0	2065.0
1	2210	267	139.	195.8	2088.1	*	4	0545	934	0.	0.0	2065.0	*	6	13201601	0.	0.0	2065.0
1	2215	268	139.	195.2	2088.0	*	4	0550	935	0.	0.0	2065.0	*	6	13251602	0.	0.0	2065.0
1	2220	269	139.	194.7	2088.0	*	4	0555	936	0.	0.0	2065.0	*	6	13301603	0.	0.0	2065.0
1	2225	270	139.	194.2	2088.0	*	4	0600	937	0.	0.0	2065.0	*	6	13351604	0.	0.0	2065.0
1	2230	271	139.	193.7	2087.9	*	4	0605	938	0.	0.0	2065.0	*	6	13401605	0.	0.0	2065.0
1	2235	272	139.	193.1	2087.9	*	4	0610	939	0.	0.0	2065.0	*	6	13451606	0.	0.0	2065.0
1	2240	273	139.	192.6	2087.9	*	4	0615	940	0.	0.0	2065.0	*	6	13501607	0.	0.0	2065.0
1	2245	274	139.	192.1	2087.8	*	4	0620	941	0.	0.0	2065.0	*	6	13551608	0.	0.0	2065.0
1	2250	275	139.	191.5	2087.8	*	4	0625	942	0.	0.0	2065.0	*	6	14001609	0.	0.0	2065.0
1	2255	276	138.	191.0	2087.8	*	4	0630	943	0.	0.0	2065.0	*	6	14051610	0.	0.0	2065.0
1	2300	277	138.	190.4	2087.7	*	4	0635	944	0.	0.0	2065.0	*	6	14101611	0.	0.0	2065.0
1	2305	278	138.	189.9	2087.7	*	4	0640	945	0.	0.0	2065.0	*	6	14151612	0.	0.0	2065.0
1	2310	279	138.	189.4	2087.6	*	4	0645	946	0.	0.0	2065.0	*	6	14201613	0.	0.0	2065.0
1	2315	280	138.	188.8	2087.6	*	4	0650	947	0.	0.0	2065.0	*	6	14251614	0.	0.0	2065.0
1	2320	281	138.	188.3	2087.6	*	4	0655	948	0.	0.0	2065.0	*	6	14301615	0.	0.0	2065.0
1	2325	282	138.	187.7	2087.5	*	4	0700	949	0.	0.0	2065.0	*	6	14351616	0.	0.0	2065.0
1	2330	283	138.	187.2	2087.5	*	4	0705	950	0.	0.0	2065.0	*	6	14401617	0.	0.0	2065.0
1	2335	284	138.	186.6	2087.5	*	4	0710	951	0.	0.0	2065.0	*	6	14451618	0.	0.0	2065.0
1	2340	285	137.	186.1	2087.4	*	4	0715	952	0.	0.0	2065.0	*	6	14501619	0.	0.0	2065.0
1	2345	286	137.	185.5	2087.4	*	4	0720	953	0.	0.0	2065.0	*	6	14551620	0.	0.0	2065.0
1	2350	287	137.	184.9	2087.3	*	4	0725	954	0.	0.0	2065.0	*	6	15001621	0.	0.0	2065.0
1	2355	288	137.	184.4	2087.3	*	4	0730	955	0.	0.0	2065.0	*	6	15051622	0.	0.0	2065.0
2	0000	289	137.	183.8	2087.3	*	4	0735	956	0.	0.0	2065.0	*	6	15101623	0.	0.0	2065.0
2	0005	290	137.	183.2	2087.2	*	4	0740	957	0.	0.0	2065.0	*	6	15151624	0.	0.0	2065.0
2	0010	291	137.	182.7	2087.2	*	4	0745	958	0.	0.0	2065.0	*	6	15201625	0.	0.0	2065.0
2	0015	292	137.	182.1	2087.2	*	4	0750	959	0.	0.0	2065.0	*	6	15251626	0.	0.0	2065.0
2	0020	293	137.	181.5	2087.1	*	4	0755	960	0.	0.0	2065.0	*	6	15301627	0.	0.0	2065.0
2	0025	294	136.	180.9	2087.1	*	4	0800	961	0.	0.0	2065.0	*	6	15351628	0.	0.0	2065.0
2	0030	295	136.	180.4	2087.0	*	4	0805	962	0.	0.0	2065.0	*	6	15401629	0.	0.0	2065.0
2	0035	296	136.	179.8	2087.0	*	4	0810	963	0.	0.0	2065.0	*	6	15451630	0.	0.0	2065.0
2	0040	297	136.	179.1	2087.0	*	4	0815	964	0.	0.0	2065.0	*	6	15501631	0.	0.0	2065.0
2	0045	298	136.	178.5	2086.9	*	4	0820	965	0.	0.0	2065.0	*	6	15551632	0.	0.0	2065.0
2	0050	299	136.	177.9	2086.9	*	4	0825	966	0.	0.0	2065.0	*	6	16001633	0.	0.0	2065.0
2	0055	300	136.	177.2	2086.8	*	4	0830	967	0.	0.0	2065.0	*	6	16051634	0.	0.0	2065.0
2	0100	301	136.	176.6	2086.8	*	4	0835	968	0.	0.0	2065.0	*	6	16101635	0.	0.0	2065.0
2	0105	302	135.	175.9	2086.7	*	4	0840	969	0.	0.0	2065.0	*	6	16151636	0.	0.0	2065.0
2	0110	303	135.	175.2	2086.7	*	4	0845	970	0.	0.0	2065.0	*	6	16201637	0.	0.0	2065.0
2	0115	304	135.	174.5	2086.6	*	4	0850	971	0.	0.0	2065.0	*	6	16251638	0.	0.0	2065.0
2	0120	305	135.	173.8	2086.6	*	4	0855	972	0.	0.0	2065.0	*	6	16301639	0.	0.0	2065.0
2	0125	306	135.	173.0	2086.5	*	4	0900	973	0.	0.0	2065.0	*	6	16351640	0.	0.0	2065.0
2	0130	307	135.	172.3	2086.5	*	4	0905	974	0.	0.0	2065.0	*	6	16401641	0.	0.0	2065.0
2	0135	308	134.	171.5	2086.4	*	4	0910	975	0.	0.0	2065.0	*	6	16451642	0.	0.0	2065.0
2	0140	309	134.	170.7	2086.4	*	4	0915	976	0.	0.0	2065.0	*	6	16501643	0.	0.0	2065.0
2	0145	310	134.	170.0	2086.3	*	4	0920	977	0.	0.0	2065.0	*	6	16551644	0.	0.0	2065.0
2	0150	311	134.	169.2	2086.3	*	4	0925	978	0.	0.0	2065.0	*	6	17001645	0.	0.0	2065.0
2	0155	312	134.	168.4	2086.2	*	4	0930	979	0.	0.0	2065.0	*	6	17051646	0.	0.0	2065.0
2	0200	313	134.	167.6	2086.2	*	4	0935	980	0.	0.0	2065.0	*	6	17101647	0.	0.0	2065.0
2	0205	314	133.	166.8	2086.1	*	4	0940	981	0.	0.0	2065.0	*	6	17151648	0.	0.0	2065.0
2	0210	315	133.	166.0	2086.1	*	4	0945	982	0.	0.0	2065.0	*	6	17201649	0.	0.0	2065.0
2	0215	316	133.	165.1	2086.0	*	4	0950	983	0.	0.0	2065.0	*	6	17251650	0.	0.0	2065.0
2	0220	317	133.	164.3	2086.0	*	4	0955	984	0.	0.0	2065.0	*	6	17301651	0.	0.0	2065.0
2	0225	318	133.	163.5	2085.9	*	4	1000	985	0.	0.0	2065.0	*	6	17351652	0.	0.0	2065.0
2	0230	319	133.	162.7	2085.8	*	4	1005	986	0.	0.0	2065.0	*	6	17401653	0.	0.0	2065.0
2	0235	320	132.	161.8	2085.8	*	4	1010	987	0.	0.0	2065.0	*	6	17451654	0.	0.0	2065.0
2	0240	321	132.	161.0	2085.7	*	4	1015	988	0.	0.0	2065.0	*	6	17501655	0.	0.0	2065.0
2	0245	322	132.	160.2	2085.7	*	4	1020	989	0.	0.0	2065.0	*	6	17551656	0.	0.0	2065.0
2	0250	323	132.	159.3	2085.6	*	4	1025	990	0.	0.0	2065.0	*	6	18001657	0.	0.0	2065.0
2	0255	324	132.	158.5	2085.6	*	4	1030	991	0.	0.0	2065.0	*	6	18051658	0.	0.0	2065.0
2	0300	325	132.	157.6	2085.5	*	4	1035	992	0.	0.0	2065.0	*	6	18101659	0.	0.0	2065.0
2	0305	326	131.	156.8	2085.4	*	4	1040	993	0.	0.0	2065.0	*	6	18151660	0.	0.0	2065.0
2	0310	327	131.	155.9	2085.4	*	4	1045	994	0.	0.0	2065.0	*	6	18201661	0.	0.0	2065.0
2	0315	328	131.	155.1	2085.3	*	4	1050	995	0.	0.0	2065.0	*	6	18251662	0.	0.0	2065.0
2	0320	329	131.	154.2	2085.3	*	4	1055	996	0.	0.0	2065.0	*	6	18301663	0.	0.0	2065.0
2	0325	330	131.	153.4	2085.2	*	4	1100	997	0.	0.0	2065.0	*	6	18351664	0.	0.0	2065.0
2	0330	331	131.	152.5	2085.2	*	4	1105	998	0.	0.0	2065.0	*	6	18401665	0.	0.0	2065.0
2	0335	332	130.	151.6	2085.1	*	4	1110	999	0.	0.0	2065.0	*	6	18451666	0.	0.0	2065.0
2	0340	333	130.	150.8	2085.0	*	4	11151000		0.	0.0	2065.0	*	6	18501667	0.	0.0	2065.0
2	0345	334	130.	149.9	2085.0	*	4	11201001		0.	0.0	2065.0	*	6	18551668	0.	0.0	2065.0
2	0350	335	130.	149.1	2084.9	*	4	11251002		0.	0.0	2065.0	*	6	19001669	0.	0.0	2065.0
2	0355	336	130.	148.2	2084.8	*	4	11301003		0.	0.0	2065.0	*	6	19051670	0.	0.0	2065.0
2	0400	337	129.	147.3	2084.8	*	4	11351004		0.	0.0	2065.0	*	6	19101671	0.	0.0	2065.0
2	0405	338	129.	146.5	2084.7	*	4	11401005		0.	0.0	2065.0	*	6	19151672	0.	0.0	2065.0
2	0410	339	129.	145.6	2084.6	*	4	11451006		0.	0.0	2065.0	*	6	19201673	0.	0.0	2065.0
2	0415	340	129.	144.7	2084.6	*	4	11501007		0.	0.0	2065.0	*	6	19251674	0.	0.0	2065.0
2	0420	341	128.	143.9	2084.5	*	4	11551008		0.	0.0	2065.0	*	6	19301675	0.	0.0	2065.0
2	0425	342	128.	143.0	2084.4	*	4	12001009		0.	0.0	2065.0	*	6	19351676	0.	0.0	2065.0
2	0430	343	128.	142.2	2084.4	*	4	12051010		0.	0.0	2065.0	*	6	19401677	0.	0.0	2065.0
2	0435	344	128.	141.3	2084.3	*	4	12101011		0.	0.0	2065.0	*	6	19451678	0.	0.0	2065.0
2	0440	345	128.	140.4	2084.2	*	4	12151012		0.	0.0	2065.0	*	6	19501679	0.	0.0	2065.0
2	0445	346	127.	139.6	2084.1	*	4	12201013		0.	0.0	2065.0	*	6	19551680	0.	0.0	2065.0
2	0450	347	127.	138.7	2084.1	*	4	12251014		0.	0.0	2065.0	*	6	20001681	0.	0.0	2065.0
2	0455	348	127.	137.9	2084.0	*	4	12301015		0.	0.0	2065.0	*	6	20051682	0.	0.0	2065.0

2	0500	349	127.	137.0	2083.9	*	4	12351016	0.	0.0	2065.0	*	6	20101683	0.	0.0	2065.0
2	0505	350	126.	136.1	2083.9	*	4	12401017	0.	0.0	2065.0	*	6	20151684	0.	0.0	2065.0
2	0510	351	126.	135.3	2083.8	*	4	12451018	0.	0.0	2065.0	*	6	20201685	0.	0.0	2065.0
2	0515	352	126.	134.4	2083.7	*	4	12501019	0.	0.0	2065.0	*	6	20251686	0.	0.0	2065.0
2	0520	353	126.	133.6	2083.7	*	4	12551020	0.	0.0	2065.0	*	6	20301687	0.	0.0	2065.0
2	0525	354	125.	132.7	2083.6	*	4	13001021	0.	0.0	2065.0	*	6	20351688	0.	0.0	2065.0
2	0530	355	125.	131.9	2083.5	*	4	13051022	0.	0.0	2065.0	*	6	20401689	0.	0.0	2065.0
2	0535	356	125.	131.0	2083.5	*	4	13101023	0.	0.0	2065.0	*	6	20451690	0.	0.0	2065.0
2	0540	357	125.	130.2	2083.4	*	4	13151024	0.	0.0	2065.0	*	6	20501691	0.	0.0	2065.0
2	0545	358	125.	129.3	2083.3	*	4	13201025	0.	0.0	2065.0	*	6	20551692	0.	0.0	2065.0
2	0550	359	124.	128.5	2083.3	*	4	13251026	0.	0.0	2065.0	*	6	21001693	0.	0.0	2065.0
2	0555	360	124.	127.6	2083.2	*	4	13301027	0.	0.0	2065.0	*	6	21051694	0.	0.0	2065.0
2	0600	361	124.	126.8	2083.1	*	4	13351028	0.	0.0	2065.0	*	6	21101695	0.	0.0	2065.0
2	0605	362	124.	125.9	2083.0	*	4	13401029	0.	0.0	2065.0	*	6	21151696	0.	0.0	2065.0
2	0610	363	124.	125.1	2083.0	*	4	13451030	0.	0.0	2065.0	*	6	21201697	0.	0.0	2065.0
2	0615	364	123.	124.2	2082.9	*	4	13501031	0.	0.0	2065.0	*	6	21251698	0.	0.0	2065.0
2	0620	365	123.	123.4	2082.8	*	4	13551032	0.	0.0	2065.0	*	6	21301699	0.	0.0	2065.0
2	0625	366	123.	122.6	2082.8	*	4	14001033	0.	0.0	2065.0	*	6	21351700	0.	0.0	2065.0
2	0630	367	123.	121.7	2082.7	*	4	14051034	0.	0.0	2065.0	*	6	21401701	0.	0.0	2065.0
2	0635	368	122.	120.9	2082.6	*	4	14101035	0.	0.0	2065.0	*	6	21451702	0.	0.0	2065.0
2	0640	369	122.	120.1	2082.6	*	4	14151036	0.	0.0	2065.0	*	6	21501703	0.	0.0	2065.0
2	0645	370	122.	119.2	2082.5	*	4	14201037	0.	0.0	2065.0	*	6	21551704	0.	0.0	2065.0
2	0650	371	122.	118.4	2082.4	*	4	14251038	0.	0.0	2065.0	*	6	22001705	0.	0.0	2065.0
2	0655	372	122.	117.6	2082.4	*	4	14301039	0.	0.0	2065.0	*	6	22051706	0.	0.0	2065.0
2	0700	373	121.	116.7	2082.3	*	4	14351040	0.	0.0	2065.0	*	6	22101707	0.	0.0	2065.0
2	0705	374	121.	115.9	2082.2	*	4	14401041	0.	0.0	2065.0	*	6	22151708	0.	0.0	2065.0
2	0710	375	121.	115.1	2082.2	*	4	14451042	0.	0.0	2065.0	*	6	22201709	0.	0.0	2065.0
2	0715	376	121.	114.2	2082.1	*	4	14501043	0.	0.0	2065.0	*	6	22251710	0.	0.0	2065.0
2	0720	377	120.	113.4	2082.0	*	4	14551044	0.	0.0	2065.0	*	6	22301711	0.	0.0	2065.0
2	0725	378	120.	112.6	2082.0	*	4	15001045	0.	0.0	2065.0	*	6	22351712	0.	0.0	2065.0
2	0730	379	120.	111.8	2081.9	*	4	15051046	0.	0.0	2065.0	*	6	22401713	0.	0.0	2065.0
2	0735	380	120.	110.9	2081.8	*	4	15101047	0.	0.0	2065.0	*	6	22451714	0.	0.0	2065.0
2	0740	381	120.	110.1	2081.8	*	4	15151048	0.	0.0	2065.0	*	6	22501715	0.	0.0	2065.0
2	0745	382	119.	109.3	2081.7	*	4	15201049	0.	0.0	2065.0	*	6	22551716	0.	0.0	2065.0
2	0750	383	119.	108.5	2081.6	*	4	15251050	0.	0.0	2065.0	*	6	23001717	0.	0.0	2065.0
2	0755	384	119.	107.7	2081.6	*	4	15301051	0.	0.0	2065.0	*	6	23051718	0.	0.0	2065.0
2	0800	385	119.	106.9	2081.5	*	4	15351052	0.	0.0	2065.0	*	6	23101719	0.	0.0	2065.0
2	0805	386	118.	106.1	2081.4	*	4	15401053	0.	0.0	2065.0	*	6	23151720	0.	0.0	2065.0
2	0810	387	118.	105.2	2081.4	*	4	15451054	0.	0.0	2065.0	*	6	23201721	0.	0.0	2065.0
2	0815	388	118.	104.4	2081.3	*	4	15501055	0.	0.0	2065.0	*	6	23251722	0.	0.0	2065.0
2	0820	389	118.	103.6	2081.2	*	4	15551056	0.	0.0	2065.0	*	6	23301723	0.	0.0	2065.0
2	0825	390	117.	102.8	2081.2	*	4	16001057	0.	0.0	2065.0	*	6	23351724	0.	0.0	2065.0
2	0830	391	117.	102.0	2081.1	*	4	16051058	0.	0.0	2065.0	*	6	23401725	0.	0.0	2065.0
2	0835	392	117.	101.2	2081.1	*	4	16101059	0.	0.0	2065.0	*	6	23451726	0.	0.0	2065.0
2	0840	393	117.	100.4	2081.0	*	4	16151060	0.	0.0	2065.0	*	6	23501727	0.	0.0	2065.0
2	0845	394	116.	99.6	2080.9	*	4	16201061	0.	0.0	2065.0	*	6	23551728	0.	0.0	2065.0
2	0850	395	116.	98.8	2080.9	*	4	16251062	0.	0.0	2065.0	*	7	00001729	0.	0.0	2065.0
2	0855	396	116.	98.0	2080.8	*	4	16301063	0.	0.0	2065.0	*	7	00051730	0.	0.0	2065.0
2	0900	397	116.	97.2	2080.7	*	4	16351064	0.	0.0	2065.0	*	7	00101731	0.	0.0	2065.0
2	0905	398	116.	96.4	2080.7	*	4	16401065	0.	0.0	2065.0	*	7	00151732	0.	0.0	2065.0
2	0910	399	115.	95.6	2080.6	*	4	16451066	0.	0.0	2065.0	*	7	00201733	0.	0.0	2065.0
2	0915	400	115.	94.8	2080.5	*	4	16501067	0.	0.0	2065.0	*	7	00251734	0.	0.0	2065.0
2	0920	401	115.	94.1	2080.5	*	4	16551068	0.	0.0	2065.0	*	7	00301735	0.	0.0	2065.0
2	0925	402	115.	93.3	2080.4	*	4	17001069	0.	0.0	2065.0	*	7	00351736	0.	0.0	2065.0
2	0930	403	114.	92.5	2080.4	*	4	17051070	0.	0.0	2065.0	*	7	00401737	0.	0.0	2065.0
2	0935	404	114.	91.7	2080.3	*	4	17101071	0.	0.0	2065.0	*	7	00451738	0.	0.0	2065.0
2	0940	405	114.	90.9	2080.2	*	4	17151072	0.	0.0	2065.0	*	7	00501739	0.	0.0	2065.0
2	0945	406	114.	90.1	2080.2	*	4	17201073	0.	0.0	2065.0	*	7	00551740	0.	0.0	2065.0
2	0950	407	113.	89.4	2080.1	*	4	17251074	0.	0.0	2065.0	*	7	01001741	0.	0.0	2065.0
2	0955	408	113.	88.6	2080.0	*	4	17301075	0.	0.0	2065.0	*	7	01051742	0.	0.0	2065.0
2	1000	409	113.	87.8	2080.0	*	4	17351076	0.	0.0	2065.0	*	7	01101743	0.	0.0	2065.0
2	1005	410	113.	87.0	2079.9	*	4	17401077	0.	0.0	2065.0	*	7	01151744	0.	0.0	2065.0
2	1010	411	112.	86.2	2079.8	*	4	17451078	0.	0.0	2065.0	*	7	01201745	0.	0.0	2065.0
2	1015	412	112.	85.5	2079.7	*	4	17501079	0.	0.0	2065.0	*	7	01251746	0.	0.0	2065.0
2	1020	413	112.	84.7	2079.7	*	4	17551080	0.	0.0	2065.0	*	7	01301747	0.	0.0	2065.0
2	1025	414	112.	83.9	2079.6	*	4	18001081	0.	0.0	2065.0	*	7	01351748	0.	0.0	2065.0
2	1030	415	111.	83.2	2079.5	*	4	18051082	0.	0.0	2065.0	*	7	01401749	0.	0.0	2065.0
2	1035	416	111.	82.4	2079.5	*	4	18101083	0.	0.0	2065.0	*	7	01451750	0.	0.0	2065.0
2	1040	417	111.	81.6	2079.4	*	4	18151084	0.	0.0	2065.0	*	7	01501751	0.	0.0	2065.0
2	1045	418	111.	80.9	2079.3	*	4	18201085	0.	0.0	2065.0	*	7	01551752	0.	0.0	2065.0
2	1050	419	110.	80.1	2079.2	*	4	18251086	0.	0.0	2065.0	*	7	02001753	0.	0.0	2065.0
2	1055	420	110.	79.4	2079.2	*	4	18301087	0.	0.0	2065.0	*	7	02051754	0.	0.0	2065.0
2	1100	421	110.	78.6	2079.1	*	4	18351088	0.	0.0	2065.0	*	7	02101755	0.	0.0	2065.0
2	1105	422	109.	77.9	2079.0	*	4	18401089	0.	0.0	2065.0	*	7	02151756	0.	0.0	2065.0
2	1110	423	109.	77.1	2078.9	*	4	18451090	0.	0.0	2065.0	*	7	02201757	0.	0.0	2065.0
2	1115	424	109.	76.4	2078.9	*	4	18501091	0.	0.0	2065.0	*	7	02251758	0.	0.0	2065.0
2	1120	425	109.	75.6	2078.8	*	4	18551092	0.	0.0	2065.0	*	7	02301759	0.	0.0	2065.0
2	1125	426	108.	74.9	2078.7	*	4	19001093	0.	0.0	2065.0	*	7	02351760	0.	0.0	2065.0
2	1130	427	108.	74.1	2078.7	*	4	19051094	0.	0.0	2065.0	*	7	02401761	0.	0.0	2065.0
2	1135	428	108.	73.4	2078.6	*	4	19101095	0.	0.0	2065.0	*	7	02451762	0.	0.0	2065.0
2	1140	429	107.	72.6	2078.5	*	4	19151096	0.	0.0	2065.0	*	7	02501763	0.	0.0	2065.0
2	1145	430	107.	71.9	2078.4	*	4	19201097	0.	0.0	2065.0	*	7	02551764	0.	0.0	2065.0
2	1150	431	107.	71.2	2078.4	*	4	19251098	0.	0.0	2065.0	*	7	03001765	0.	0.0	2065.0
2	1155	432	107.	70.4	2078.3	*	4	19301099	0.	0.0	2065.0	*	7	03051766	0.	0.0	2065.0
2	1200	433	106.	69.7	2078.2	*	4	19351100	0.	0.0	2065.0	*	7	03101767	0.	0.0	2065.0
2	1205	434	106.	69.0	2078.2	*	4	19401101	0.	0.0	2065.0	*	7	03151768	0.	0.0	2065.0
2	1210	435	106.	68.3	2078.1	*	4	19451102	0.	0.0	2065.0	*	7	03201769	0.	0.0	2065.0
2	1215	436	105.	67.5	2078.0	*	4	19501103	0.	0.0	2065.0	*	7	03251770	0.	0.0	2065.0
2	1220	437	105.	66.8	2077.9	*	4	19551104	0.	0.0	2065.0	*	7	03301771	0.	0.0	2065.0
2	1225	438	105.	66.1	2077.9	*	4	20001105	0.	0.0	2065.0	*	7	03351772	0.	0.0	2065.0
2	1230	439	105.	65.4	2077.8	*	4	20051106	0.	0.0	2065.0	*	7	03401773	0.	0.0	2065.0
2	1235	440	104.	64.6	2077.7	*	4	20101107	0.	0.0	2065.0	*	7	03451774	0.	0.0	2065.0
2	1240	441	104.	63.9	2077.7	*	4	20151108	0.	0.0	2065.0	*	7	03501775	0.	0.0	2065.0
2	1245	442	104.	63.2	2077.6	*	4	20201109	0.	0.0	2065.0	*	7	03551776	0.	0.0	2065.0

2	1250	443	104.	62.5	2077.5	*	4	20251110	0.	0.0	2065.0	*	7	04001777	0.	0.0	2065.0
2	1255	444	103.	61.8	2077.5	*	4	20301111	0.	0.0	2065.0	*	7	04051778	0.	0.0	2065.0
2	1300	445	103.	61.1	2077.4	*	4	20351112	0.	0.0	2065.0	*	7	04101779	0.	0.0	2065.0
2	1305	446	103.	60.4	2077.3	*	4	20401113	0.	0.0	2065.0	*	7	04151780	0.	0.0	2065.0
2	1310	447	102.	59.7	2077.3	*	4	20451114	0.	0.0	2065.0	*	7	04201781	0.	0.0	2065.0
2	1315	448	102.	59.0	2077.2	*	4	20501115	0.	0.0	2065.0	*	7	04251782	0.	0.0	2065.0
2	1320	449	102.	58.3	2077.1	*	4	20551116	0.	0.0	2065.0	*	7	04301783	0.	0.0	2065.0
2	1325	450	102.	57.6	2077.1	*	4	21001117	0.	0.0	2065.0	*	7	04351784	0.	0.0	2065.0
2	1330	451	101.	56.9	2077.0	*	4	21051118	0.	0.0	2065.0	*	7	04401785	0.	0.0	2065.0
2	1335	452	101.	56.2	2076.9	*	4	21101119	0.	0.0	2065.0	*	7	04451786	0.	0.0	2065.0
2	1340	453	101.	55.5	2076.8	*	4	21151120	0.	0.0	2065.0	*	7	04501787	0.	0.0	2065.0
2	1345	454	101.	54.8	2076.8	*	4	21201121	0.	0.0	2065.0	*	7	04551788	0.	0.0	2065.0
2	1350	455	100.	54.1	2076.7	*	4	21251122	0.	0.0	2065.0	*	7	05001789	0.	0.0	2065.0
2	1355	456	100.	53.4	2076.6	*	4	21301123	0.	0.0	2065.0	*	7	05051790	0.	0.0	2065.0
2	1400	457	100.	52.7	2076.6	*	4	21351124	0.	0.0	2065.0	*	7	05101791	0.	0.0	2065.0
2	1405	458	100.	52.0	2076.5	*	4	21401125	0.	0.0	2065.0	*	7	05151792	0.	0.0	2065.0
2	1410	459	99.	51.3	2076.5	*	4	21451126	0.	0.0	2065.0	*	7	05201793	0.	0.0	2065.0
2	1415	460	99.	50.7	2076.4	*	4	21501127	0.	0.0	2065.0	*	7	05251794	0.	0.0	2065.0
2	1420	461	99.	50.0	2076.3	*	4	21551128	0.	0.0	2065.0	*	7	05301795	0.	0.0	2065.0
2	1425	462	98.	49.3	2076.3	*	4	22001129	0.	0.0	2065.0	*	7	05351796	0.	0.0	2065.0
2	1430	463	98.	48.6	2076.2	*	4	22051130	0.	0.0	2065.0	*	7	05401797	0.	0.0	2065.0
2	1435	464	98.	47.9	2076.1	*	4	22101131	0.	0.0	2065.0	*	7	05451798	0.	0.0	2065.0
2	1440	465	98.	47.3	2076.1	*	4	22151132	0.	0.0	2065.0	*	7	05501799	0.	0.0	2065.0
2	1445	466	97.	46.6	2076.0	*	4	22201133	0.	0.0	2065.0	*	7	05551800	0.	0.0	2065.0
2	1450	467	97.	45.9	2075.9	*	4	22251134	0.	0.0	2065.0	*	7	06001801	0.	0.0	2065.0
2	1455	468	97.	45.3	2075.9	*	4	22301135	0.	0.0	2065.0	*	7	06051802	0.	0.0	2065.0
2	1500	469	96.	44.6	2075.8	*	4	22351136	0.	0.0	2065.0	*	7	06101803	0.	0.0	2065.0
2	1505	470	96.	43.9	2075.7	*	4	22401137	0.	0.0	2065.0	*	7	06151804	0.	0.0	2065.0
2	1510	471	96.	43.3	2075.7	*	4	22451138	0.	0.0	2065.0	*	7	06201805	0.	0.0	2065.0
2	1515	472	96.	42.6	2075.6	*	4	22501139	0.	0.0	2065.0	*	7	06251806	0.	0.0	2065.0
2	1520	473	95.	42.0	2075.5	*	4	22551140	0.	0.0	2065.0	*	7	06301807	0.	0.0	2065.0
2	1525	474	95.	41.3	2075.5	*	4	23001141	0.	0.0	2065.0	*	7	06351808	0.	0.0	2065.0
2	1530	475	95.	40.7	2075.4	*	4	23051142	0.	0.0	2065.0	*	7	06401809	0.	0.0	2065.0
2	1535	476	95.	40.0	2075.4	*	4	23101143	0.	0.0	2065.0	*	7	06451810	0.	0.0	2065.0
2	1540	477	94.	39.4	2075.3	*	4	23151144	0.	0.0	2065.0	*	7	06501811	0.	0.0	2065.0
2	1545	478	94.	38.7	2075.2	*	4	23201145	0.	0.0	2065.0	*	7	06551812	0.	0.0	2065.0
2	1550	479	94.	38.1	2075.2	*	4	23251146	0.	0.0	2065.0	*	7	07001813	0.	0.0	2065.0
2	1555	480	93.	37.4	2075.1	*	4	23301147	0.	0.0	2065.0	*	7	07051814	0.	0.0	2065.0
2	1600	481	93.	36.8	2075.0	*	4	23351148	0.	0.0	2065.0	*	7	07101815	0.	0.0	2065.0
2	1605	482	93.	36.1	2075.0	*	4	23401149	0.	0.0	2065.0	*	7	07151816	0.	0.0	2065.0
2	1610	483	92.	35.5	2074.9	*	4	23451150	0.	0.0	2065.0	*	7	07201817	0.	0.0	2065.0
2	1615	484	92.	34.9	2074.8	*	4	23501151	0.	0.0	2065.0	*	7	07251818	0.	0.0	2065.0
2	1620	485	92.	34.2	2074.7	*	4	23551152	0.	0.0	2065.0	*	7	07301819	0.	0.0	2065.0
2	1625	486	91.	33.6	2074.6	*	5	00001153	0.	0.0	2065.0	*	7	07351820	0.	0.0	2065.0
2	1630	487	91.	33.0	2074.5	*	5	00051154	0.	0.0	2065.0	*	7	07401821	0.	0.0	2065.0
2	1635	488	90.	32.4	2074.4	*	5	00101155	0.	0.0	2065.0	*	7	07451822	0.	0.0	2065.0
2	1640	489	90.	31.7	2074.3	*	5	00151156	0.	0.0	2065.0	*	7	07501823	0.	0.0	2065.0
2	1645	490	89.	31.1	2074.2	*	5	00201157	0.	0.0	2065.0	*	7	07551824	0.	0.0	2065.0
2	1650	491	89.	30.5	2074.1	*	5	00251158	0.	0.0	2065.0	*	7	08001825	0.	0.0	2065.0
2	1655	492	88.	29.9	2074.0	*	5	00301159	0.	0.0	2065.0	*	7	08051826	0.	0.0	2065.0
2	1700	493	88.	29.3	2073.9	*	5	00351160	0.	0.0	2065.0	*	7	08101827	0.	0.0	2065.0
2	1705	494	87.	28.7	2073.8	*	5	00401161	0.	0.0	2065.0	*	7	08151828	0.	0.0	2065.0
2	1710	495	87.	28.1	2073.7	*	5	00451162	0.	0.0	2065.0	*	7	08201829	0.	0.0	2065.0
2	1715	496	86.	27.5	2073.6	*	5	00501163	0.	0.0	2065.0	*	7	08251830	0.	0.0	2065.0
2	1720	497	86.	26.9	2073.5	*	5	00551164	0.	0.0	2065.0	*	7	08301831	0.	0.0	2065.0
2	1725	498	85.	26.3	2073.4	*	5	01001165	0.	0.0	2065.0	*	7	08351832	0.	0.0	2065.0
2	1730	499	85.	25.7	2073.3	*	5	01051166	0.	0.0	2065.0	*	7	08401833	0.	0.0	2065.0
2	1735	500	85.	25.1	2073.2	*	5	01101167	0.	0.0	2065.0	*	7	08451834	0.	0.0	2065.0
2	1740	501	84.	24.6	2073.1	*	5	01151168	0.	0.0	2065.0	*	7	08501835	0.	0.0	2065.0
2	1745	502	84.	24.0	2073.0	*	5	01201169	0.	0.0	2065.0	*	7	08551836	0.	0.0	2065.0
2	1750	503	83.	23.4	2072.9	*	5	01251170	0.	0.0	2065.0	*	7	09001837	0.	0.0	2065.0
2	1755	504	83.	22.8	2072.8	*	5	01301171	0.	0.0	2065.0	*	7	09051838	0.	0.0	2065.0
2	1800	505	82.	22.3	2072.7	*	5	01351172	0.	0.0	2065.0	*	7	09101839	0.	0.0	2065.0
2	1805	506	82.	21.7	2072.6	*	5	01401173	0.	0.0	2065.0	*	7	09151840	0.	0.0	2065.0
2	1810	507	81.	21.2	2072.5	*	5	01451174	0.	0.0	2065.0	*	7	09201841	0.	0.0	2065.0
2	1815	508	81.	20.6	2072.5	*	5	01501175	0.	0.0	2065.0	*	7	09251842	0.	0.0	2065.0
2	1820	509	81.	20.0	2072.4	*	5	01551176	0.	0.0	2065.0	*	7	09301843	0.	0.0	2065.0
2	1825	510	80.	19.5	2072.3	*	5	02001177	0.	0.0	2065.0	*	7	09351844	0.	0.0	2065.0
2	1830	511	80.	18.9	2072.2	*	5	02051178	0.	0.0	2065.0	*	7	09401845	0.	0.0	2065.0
2	1835	512	79.	18.4	2072.1	*	5	02101179	0.	0.0	2065.0	*	7	09451846	0.	0.0	2065.0
2	1840	513	79.	17.8	2072.0	*	5	02151180	0.	0.0	2065.0	*	7	09501847	0.	0.0	2065.0
2	1845	514	78.	17.3	2071.9	*	5	02201181	0.	0.0	2065.0	*	7	09551848	0.	0.0	2065.0
2	1850	515	78.	16.8	2071.8	*	5	02251182	0.	0.0	2065.0	*	7	10001849	0.	0.0	2065.0
2	1855	516	77.	16.2	2071.8	*	5	02301183	0.	0.0	2065.0	*	7	10051850	0.	0.0	2065.0
2	1900	517	77.	15.7	2071.7	*	5	02351184	0.	0.0	2065.0	*	7	10101851	0.	0.0	2065.0
2	1905	518	76.	15.2	2071.6	*	5	02401185	0.	0.0	2065.0	*	7	10151852	0.	0.0	2065.0
2	1910	519	76.	14.7	2071.5	*	5	02451186	0.	0.0	2065.0	*	7	10201853	0.	0.0	2065.0
2	1915	520	75.	14.1	2071.4	*	5	02501187	0.	0.0	2065.0	*	7	10251854	0.	0.0	2065.0
2	1920	521	75.	13.6	2071.3	*	5	02551188	0.	0.0	2065.0	*	7	10301855	0.	0.0	2065.0
2	1925	522	74.	13.1	2071.2	*	5	03001189	0.	0.0	2065.0	*	7	10351856	0.	0.0	2065.0
2	1930	523	74.	12.6	2071.2	*	5	03051190	0.	0.0	2065.0	*	7	10401857	0.	0.0	2065.0
2	1935	524	74.	12.1	2071.1	*	5	03101191	0.	0.0	2065.0	*	7	10451858	0.	0.0	2065.0
2	1940	525	73.	11.6	2071.0	*	5	03151192	0.	0.0	2065.0	*	7	10501859	0.	0.0	2065.0
2	1945	526	73.	11.1	2070.9	*	5	03201193	0.	0.0	2065.0	*	7	10551860	0.	0.0	2065.0
2	1950	527	72.	10.6	2070.8	*	5	03251194	0.	0.0	2065.0	*	7	11001861	0.	0.0	2065.0
2	1955	528	72.	10.1	2070.8	*	5	03301195	0.	0.0	2065.0	*	7	11051862	0.	0.0	2065.0
2	2000	529	71.	9.6	2070.7	*	5	03351196	0.	0.0	2065.0	*	7	11101863	0.	0.0	2065.0
2	2005	530	71.	9.1	2070.6	*	5	03401197	0.	0.0	2065.0	*	7	11151864	0.	0.0	2065.0
2	2010	531	70.	8.6	2070.5	*	5	03451198	0.	0.0	2065.0	*	7	11201865	0.	0.0	2065.0
2	2015	532	70.	8.1	2070.4	*	5	03501199	0.	0.0	2065.0	*	7	11251866	0.	0.0	2065.0
2	2020	533	69.	7.7	2070.4	*	5	03551200	0.	0.0	2065.0	*	7	11301867	0.	0.0	2065.0
2	2025	534	69.	7.2	2070.3	*	5	04001201	0.	0.0	2065.0	*	7	11351868	0.	0.0	2065.0
2	2030	535	68.	6.7	2070.2	*	5	04051202	0.	0.0	2065.0	*	7	11401869	0.	0.0	2065.0
2	2035	536	68.	6.2	2070.1	*	5	04101203	0.	0.0	2065.0	*	7	11451870	0.	0.0	2065.0

2	2040 537	67.	5.8	2070.1	*	5	04151204	0.	0.0	2065.0	*	7	11501871	0.	0.0 2065.0
2	2045 538	67.	5.3	2070.0	*	5	04201205	0.	0.0	2065.0	*	7	11551872	0.	0.0 2065.0
2	2050 539	65.	4.9	2069.7	*	5	04251206	0.	0.0	2065.0	*	7	12001873	0.	0.0 2065.0
2	2055 540	64.	4.4	2069.5	*	5	04301207	0.	0.0	2065.0	*	7	12051874	0.	0.0 2065.0
2	2100 541	62.	4.0	2069.3	*	5	04351208	0.	0.0	2065.0	*	7	12101875	0.	0.0 2065.0
2	2105 542	61.	3.6	2069.1	*	5	04401209	0.	0.0	2065.0	*	7	12151876	0.	0.0 2065.0
2	2110 543	58.	3.1	2068.8	*	5	04451210	0.	0.0	2065.0	*	7	12201877	0.	0.0 2065.0
2	2115 544	53.	2.8	2068.6	*	5	04501211	0.	0.0	2065.0	*	7	12251878	0.	0.0 2065.0
2	2120 545	49.	2.4	2068.4	*	5	04551212	0.	0.0	2065.0	*	7	12301879	0.	0.0 2065.0
2	2125 546	45.	2.1	2068.2	*	5	05001213	0.	0.0	2065.0	*	7	12351880	0.	0.0 2065.0
2	2130 547	41.	1.8	2068.0	*	5	05051214	0.	0.0	2065.0	*	7	12401881	0.	0.0 2065.0
2	2135 548	36.	1.5	2067.8	*	5	05101215	0.	0.0	2065.0	*	7	12451882	0.	0.0 2065.0
2	2140 549	32.	1.3	2067.5	*	5	05151216	0.	0.0	2065.0	*	7	12501883	0.	0.0 2065.0
2	2145 550	29.	1.1	2067.4	*	5	05201217	0.	0.0	2065.0	*	7	12551884	0.	0.0 2065.0
2	2150 551	26.	0.9	2067.2	*	5	05251218	0.	0.0	2065.0	*	7	13001885	0.	0.0 2065.0
2	2155 552	24.	0.7	2067.0	*	5	05301219	0.	0.0	2065.0	*	7	13051886	0.	0.0 2065.0
2	2200 553	20.	0.6	2066.8	*	5	05351220	0.	0.0	2065.0	*	7	13101887	0.	0.0 2065.0
2	2205 554	17.	0.5	2066.5	*	5	05401221	0.	0.0	2065.0	*	7	13151888	0.	0.0 2065.0
2	2210 555	15.	0.3	2066.3	*	5	05451222	0.	0.0	2065.0	*	7	13201889	0.	0.0 2065.0
2	2215 556	12.	0.3	2066.1	*	5	05501223	0.	0.0	2065.0	*	7	13251890	0.	0.0 2065.0
2	2220 557	10.	0.2	2065.9	*	5	05551224	0.	0.0	2065.0	*	7	13301891	0.	0.0 2065.0
2	2225 558	7.	0.1	2065.6	*	5	06001225	0.	0.0	2065.0	*	7	13351892	0.	0.0 2065.0
2	2230 559	5.	0.1	2065.4	*	5	06051226	0.	0.0	2065.0	*	7	13401893	0.	0.0 2065.0
2	2235 560	3.	0.1	2065.3	*	5	06101227	0.	0.0	2065.0	*	7	13451894	0.	0.0 2065.0
2	2240 561	2.	0.0	2065.2	*	5	06151228	0.	0.0	2065.0	*	7	13501895	0.	0.0 2065.0
2	2245 562	1.	0.0	2065.1	*	5	06201229	0.	0.0	2065.0	*	7	13551896	0.	0.0 2065.0
2	2250 563	1.	0.0	2065.1	*	5	06251230	0.	0.0	2065.0	*	7	14001897	0.	0.0 2065.0
2	2255 564	1.	0.0	2065.1	*	5	06301231	0.	0.0	2065.0	*	7	14051898	0.	0.0 2065.0
2	2300 565	0.	0.0	2065.0	*	5	06351232	0.	0.0	2065.0	*	7	14101899	0.	0.0 2065.0
2	2305 566	0.	0.0	2065.0	*	5	06401233	0.	0.0	2065.0	*	7	14151900	0.	0.0 2065.0
2	2310 567	0.	0.0	2065.0	*	5	06451234	0.	0.0	2065.0	*	7	14201901	0.	0.0 2065.0
2	2315 568	0.	0.0	2065.0	*	5	06501235	0.	0.0	2065.0	*	7	14251902	0.	0.0 2065.0
2	2320 569	0.	0.0	2065.0	*	5	06551236	0.	0.0	2065.0	*	7	14301903	0.	0.0 2065.0
2	2325 570	0.	0.0	2065.0	*	5	07001237	0.	0.0	2065.0	*	7	14351904	0.	0.0 2065.0
2	2330 571	0.	0.0	2065.0	*	5	07051238	0.	0.0	2065.0	*	7	14401905	0.	0.0 2065.0
2	2335 572	0.	0.0	2065.0	*	5	07101239	0.	0.0	2065.0	*	7	14451906	0.	0.0 2065.0
2	2340 573	0.	0.0	2065.0	*	5	07151240	0.	0.0	2065.0	*	7	14501907	0.	0.0 2065.0
2	2345 574	0.	0.0	2065.0	*	5	07201241	0.	0.0	2065.0	*	7	14551908	0.	0.0 2065.0
2	2350 575	0.	0.0	2065.0	*	5	07251242	0.	0.0	2065.0	*	7	15001909	0.	0.0 2065.0
2	2355 576	0.	0.0	2065.0	*	5	07301243	0.	0.0	2065.0	*	7	15051910	0.	0.0 2065.0
3	0000 577	0.	0.0	2065.0	*	5	07351244	0.	0.0	2065.0	*	7	15101911	0.	0.0 2065.0
3	0005 578	0.	0.0	2065.0	*	5	07401245	0.	0.0	2065.0	*	7	15151912	0.	0.0 2065.0
3	0010 579	0.	0.0	2065.0	*	5	07451246	0.	0.0	2065.0	*	7	15201913	0.	0.0 2065.0
3	0015 580	0.	0.0	2065.0	*	5	07501247	0.	0.0	2065.0	*	7	15251914	0.	0.0 2065.0
3	0020 581	0.	0.0	2065.0	*	5	07551248	0.	0.0	2065.0	*	7	15301915	0.	0.0 2065.0
3	0025 582	0.	0.0	2065.0	*	5	08001249	0.	0.0	2065.0	*	7	15351916	0.	0.0 2065.0
3	0030 583	0.	0.0	2065.0	*	5	08051250	0.	0.0	2065.0	*	7	15401917	0.	0.0 2065.0
3	0035 584	0.	0.0	2065.0	*	5	08101251	0.	0.0	2065.0	*	7	15451918	0.	0.0 2065.0
3	0040 585	0.	0.0	2065.0	*	5	08151252	0.	0.0	2065.0	*	7	15501919	0.	0.0 2065.0
3	0045 586	0.	0.0	2065.0	*	5	08201253	0.	0.0	2065.0	*	7	15551920	0.	0.0 2065.0
3	0050 587	0.	0.0	2065.0	*	5	08251254	0.	0.0	2065.0	*	7	16001921	0.	0.0 2065.0
3	0055 588	0.	0.0	2065.0	*	5	08301255	0.	0.0	2065.0	*	7	16051922	0.	0.0 2065.0
3	0100 589	0.	0.0	2065.0	*	5	08351256	0.	0.0	2065.0	*	7	16101923	0.	0.0 2065.0
3	0105 590	0.	0.0	2065.0	*	5	08401257	0.	0.0	2065.0	*	7	16151924	0.	0.0 2065.0
3	0110 591	0.	0.0	2065.0	*	5	08451258	0.	0.0	2065.0	*	7	16201925	0.	0.0 2065.0
3	0115 592	0.	0.0	2065.0	*	5	08501259	0.	0.0	2065.0	*	7	16251926	0.	0.0 2065.0
3	0120 593	0.	0.0	2065.0	*	5	08551260	0.	0.0	2065.0	*	7	16301927	0.	0.0 2065.0
3	0125 594	0.	0.0	2065.0	*	5	09001261	0.	0.0	2065.0	*	7	16351928	0.	0.0 2065.0
3	0130 595	0.	0.0	2065.0	*	5	09051262	0.	0.0	2065.0	*	7	16401929	0.	0.0 2065.0
3	0135 596	0.	0.0	2065.0	*	5	09101263	0.	0.0	2065.0	*	7	16451930	0.	0.0 2065.0
3	0140 597	0.	0.0	2065.0	*	5	09151264	0.	0.0	2065.0	*	7	16501931	0.	0.0 2065.0
3	0145 598	0.	0.0	2065.0	*	5	09201265	0.	0.0	2065.0	*	7	16551932	0.	0.0 2065.0
3	0150 599	0.	0.0	2065.0	*	5	09251266	0.	0.0	2065.0	*	7	17001933	0.	0.0 2065.0
3	0155 600	0.	0.0	2065.0	*	5	09301267	0.	0.0	2065.0	*	7	17051934	0.	0.0 2065.0
3	0200 601	0.	0.0	2065.0	*	5	09351268	0.	0.0	2065.0	*	7	17101935	0.	0.0 2065.0
3	0205 602	0.	0.0	2065.0	*	5	09401269	0.	0.0	2065.0	*	7	17151936	0.	0.0 2065.0
3	0210 603	0.	0.0	2065.0	*	5	09451270	0.	0.0	2065.0	*	7	17201937	0.	0.0 2065.0
3	0215 604	0.	0.0	2065.0	*	5	09501271	0.	0.0	2065.0	*	7	17251938	0.	0.0 2065.0
3	0220 605	0.	0.0	2065.0	*	5	09551272	0.	0.0	2065.0	*	7	17301939	0.	0.0 2065.0
3	0225 606	0.	0.0	2065.0	*	5	10001273	0.	0.0	2065.0	*	7	17351940	0.	0.0 2065.0
3	0230 607	0.	0.0	2065.0	*	5	10051274	0.	0.0	2065.0	*	7	17401941	0.	0.0 2065.0
3	0235 608	0.	0.0	2065.0	*	5	10101275	0.	0.0	2065.0	*	7	17451942	0.	0.0 2065.0
3	0240 609	0.	0.0	2065.0	*	5	10151276	0.	0.0	2065.0	*	7	17501943	0.	0.0 2065.0
3	0245 610	0.	0.0	2065.0	*	5	10201277	0.	0.0	2065.0	*	7	17551944	0.	0.0 2065.0
3	0250 611	0.	0.0	2065.0	*	5	10251278	0.	0.0	2065.0	*	7	18001945	0.	0.0 2065.0
3	0255 612	0.	0.0	2065.0	*	5	10301279	0.	0.0	2065.0	*	7	18051946	0.	0.0 2065.0
3	0300 613	0.	0.0	2065.0	*	5	10351280	0.	0.0	2065.0	*	7	18101947	0.	0.0 2065.0
3	0305 614	0.	0.0	2065.0	*	5	10401281	0.	0.0	2065.0	*	7	18151948	0.	0.0 2065.0
3	0310 615	0.	0.0	2065.0	*	5	10451282	0.	0.0	2065.0	*	7	18201949	0.	0.0 2065.0
3	0315 616	0.	0.0	2065.0	*	5	10501283	0.	0.0	2065.0	*	7	18251950	0.	0.0 2065.0
3	0320 617	0.	0.0	2065.0	*	5	10551284	0.	0.0	2065.0	*	7	18301951	0.	0.0 2065.0
3	0325 618	0.	0.0	2065.0	*	5	11001285	0.	0.0	2065.0	*	7	18351952	0.	0.0 2065.0
3	0330 619	0.	0.0	2065.0	*	5	11051286	0.	0.0	2065.0	*	7	18401953	0.	0.0 2065.0
3	0335 620	0.	0.0	2065.0	*	5	11101287	0.	0.0	2065.0	*	7	18451954	0.	0.0 2065.0
3	0340 621	0.	0.0	2065.0	*	5	11151288	0.	0.0	2065.0	*	7	18501955	0.	0.0 2065.0
3	0345 622	0.	0.0	2065.0	*	5	11201289	0.	0.0	2065.0	*	7	18551956	0.	0.0 2065.0
3	0350 623	0.	0.0	2065.0	*	5	11251290	0.	0.0	2065.0	*	7	19001957	0.	0.0 2065.0
3	0355 624	0.	0.0	2065.0	*	5	11301291	0.	0.0	2065.0	*	7	19051958	0.	0.0 2065.0
3	0400 625	0.	0.0	2065.0	*	5	11351292	0.	0.0	2065.0	*	7	19101959	0.	0.0 2065.0
3	0405 626	0.	0.0	2065.0	*	5	11401293	0.	0.0	2065.0	*	7	19151960	0.	0.0 2065.0
3	0410 627	0.	0.0	2065.0	*	5	11451294	0.	0.0	2065.0	*	7	19201961	0.	0.0 2065.0
3	0415 628	0.	0.0	2065.0	*	5	11501295	0.	0.0	2065.0	*	7	19251962	0.	0.0 2065.0
3	0420 629	0.	0.0	2065.0	*	5	11551296	0.	0.0	2065.0	*	7	19301963	0.	0.0 2065.0
3	0425 630	0.	0.0	2065.0	*	5	12001297	0.	0.0	2065.0	*	7	19351964	0.	0.0 2065.0

3	0430	631	0.	0.0	2065.0	*	5	12051298	0.	0.0	2065.0	*	7	19401965	0.	0.0	2065.0
3	0435	632	0.	0.0	2065.0	*	5	12101299	0.	0.0	2065.0	*	7	19451966	0.	0.0	2065.0
3	0440	633	0.	0.0	2065.0	*	5	12151300	0.	0.0	2065.0	*	7	19501967	0.	0.0	2065.0
3	0445	634	0.	0.0	2065.0	*	5	12201301	0.	0.0	2065.0	*	7	19551968	0.	0.0	2065.0
3	0450	635	0.	0.0	2065.0	*	5	12251302	0.	0.0	2065.0	*	7	20001969	0.	0.0	2065.0
3	0455	636	0.	0.0	2065.0	*	5	12301303	0.	0.0	2065.0	*	7	20051970	0.	0.0	2065.0
3	0500	637	0.	0.0	2065.0	*	5	12351304	0.	0.0	2065.0	*	7	20101971	0.	0.0	2065.0
3	0505	638	0.	0.0	2065.0	*	5	12401305	0.	0.0	2065.0	*	7	20151972	0.	0.0	2065.0
3	0510	639	0.	0.0	2065.0	*	5	12451306	0.	0.0	2065.0	*	7	20201973	0.	0.0	2065.0
3	0515	640	0.	0.0	2065.0	*	5	12501307	0.	0.0	2065.0	*	7	20251974	0.	0.0	2065.0
3	0520	641	0.	0.0	2065.0	*	5	12551308	0.	0.0	2065.0	*	7	20301975	0.	0.0	2065.0
3	0525	642	0.	0.0	2065.0	*	5	13001309	0.	0.0	2065.0	*	7	20351976	0.	0.0	2065.0
3	0530	643	0.	0.0	2065.0	*	5	13051310	0.	0.0	2065.0	*	7	20401977	0.	0.0	2065.0
3	0535	644	0.	0.0	2065.0	*	5	13101311	0.	0.0	2065.0	*	7	20451978	0.	0.0	2065.0
3	0540	645	0.	0.0	2065.0	*	5	13151312	0.	0.0	2065.0	*	7	20501979	0.	0.0	2065.0
3	0545	646	0.	0.0	2065.0	*	5	13201313	0.	0.0	2065.0	*	7	20551980	0.	0.0	2065.0
3	0550	647	0.	0.0	2065.0	*	5	13251314	0.	0.0	2065.0	*	7	21001981	0.	0.0	2065.0
3	0555	648	0.	0.0	2065.0	*	5	13301315	0.	0.0	2065.0	*	7	21051982	0.	0.0	2065.0
3	0600	649	0.	0.0	2065.0	*	5	13351316	0.	0.0	2065.0	*	7	21101983	0.	0.0	2065.0
3	0605	650	0.	0.0	2065.0	*	5	13401317	0.	0.0	2065.0	*	7	21151984	0.	0.0	2065.0
3	0610	651	0.	0.0	2065.0	*	5	13451318	0.	0.0	2065.0	*	7	21201985	0.	0.0	2065.0
3	0615	652	0.	0.0	2065.0	*	5	13501319	0.	0.0	2065.0	*	7	21251986	0.	0.0	2065.0
3	0620	653	0.	0.0	2065.0	*	5	13551320	0.	0.0	2065.0	*	7	21301987	0.	0.0	2065.0
3	0625	654	0.	0.0	2065.0	*	5	14001321	0.	0.0	2065.0	*	7	21351988	0.	0.0	2065.0
3	0630	655	0.	0.0	2065.0	*	5	14051322	0.	0.0	2065.0	*	7	21401989	0.	0.0	2065.0
3	0635	656	0.	0.0	2065.0	*	5	14101323	0.	0.0	2065.0	*	7	21451990	0.	0.0	2065.0
3	0640	657	0.	0.0	2065.0	*	5	14151324	0.	0.0	2065.0	*	7	21501991	0.	0.0	2065.0
3	0645	658	0.	0.0	2065.0	*	5	14201325	0.	0.0	2065.0	*	7	21551992	0.	0.0	2065.0
3	0650	659	0.	0.0	2065.0	*	5	14251326	0.	0.0	2065.0	*	7	22001993	0.	0.0	2065.0
3	0655	660	0.	0.0	2065.0	*	5	14301327	0.	0.0	2065.0	*	7	22051994	0.	0.0	2065.0
3	0700	661	0.	0.0	2065.0	*	5	14351328	0.	0.0	2065.0	*	7	22101995	0.	0.0	2065.0
3	0705	662	0.	0.0	2065.0	*	5	14401329	0.	0.0	2065.0	*	7	22151996	0.	0.0	2065.0
3	0710	663	0.	0.0	2065.0	*	5	14451330	0.	0.0	2065.0	*	7	22201997	0.	0.0	2065.0
3	0715	664	0.	0.0	2065.0	*	5	14501331	0.	0.0	2065.0	*	7	22251998	0.	0.0	2065.0
3	0720	665	0.	0.0	2065.0	*	5	14551332	0.	0.0	2065.0	*	7	22301999	0.	0.0	2065.0
3	0725	666	0.	0.0	2065.0	*	5	15001333	0.	0.0	2065.0	*	7	22352000	0.	0.0	2065.0
3	0730	667	0.	0.0	2065.0	*	5	15051334	0.	0.0	2065.0	*					
						*						*					

****

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	166.58-HR
+ (CFS)	(HR)					
		(CFS)				
+ 680.	13.33		266.	163.	68.	29.
		(INCHES)	0.755	1.843	2.305	2.305
		(AC-FT)	132.	323.	404.	404.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (AC-FT)	(HR)				
232.	13.33	221.	166.	59.	26.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	166.58-HR
+ (FEET)	(HR)				
2090.50	13.33	2089.75	2085.83	2073.29	2068.58

CUMULATIVE AREA = 3.28 SQ MI

1

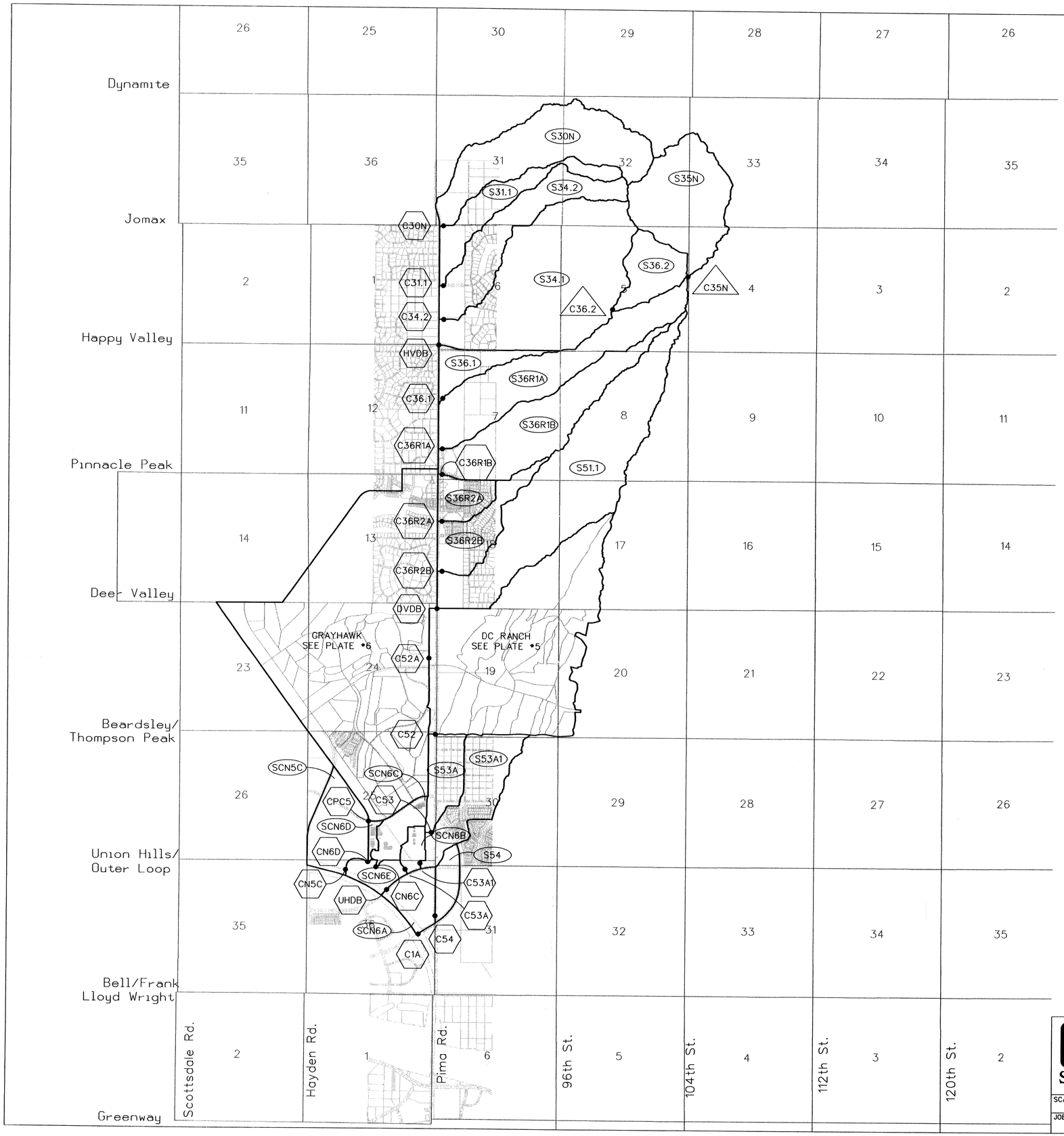
RUNOFF SUMMARY
FLOW IN CUBIC FEET PER SECOND
TIME IN HOURS, AREA IN SQUARE MILES

	OPERATION	STATION	PEAK FLOW	TIME OF PEAK	AVERAGE FLOW FOR MAXIMUM PERIOD 6-HOUR	24-HOUR	72-HOUR	BASIN AREA	MAXIMUM STAGE	TIME OF MAX STAGE
+	HYDROGRAPH AT	S30N	1262.	12.33	151.	44.	15.	0.65		
+	ROUTED TO	R30N	1236.	12.33	151.	44.	15.	0.65		
+									103.91	12.33
+	HYDROGRAPH AT	S31.1	444.	12.33	52.	15.	5.	0.27		
+	2 COMBINED AT	C31.1	1681.	12.33	203.	60.	20.	0.92		
+	HYDROGRAPH AT	S34.2	750.	12.33	88.	26.	9.	0.44		
+	2 COMBINED AT	C34.2	2431.	12.33	291.	85.	29.	1.36		
+	HYDROGRAPH AT	S35N	1348.	12.25	127.	37.	12.	0.55		
+	DIVERSION TO	D35NL	0.	12.25	0.	0.	0.	0.55		

```
          HYDROGRAPH AT
+                         D35NR     1348.  12.25       127.       37.       12.      0.55
          ROUTED TO
+                         R35NR     1130.  12.33       127.       37.       12.      0.55
+                                                                                   102.58      12.33
          HYDROGRAPH AT
+                         S36.2      431.  12.25        41.       12.        4.      0.21
          2 COMBINED AT
+                         C36.2     1542.  12.25       168.       49.       16.      0.76
          DIVERSION TO
+                        D36.2L        0.  12.25         0.        0.        0.      0.76
          HYDROGRAPH AT
+                        D36.2R     1542.  12.25       168.       49.       16.      0.76
          ROUTED TO
+                        R36.2R     1123.  12.58       168.       49.       16.      0.76
+                                                                                   101.80      12.58
          HYDROGRAPH AT
+                         S34.1     2117.  12.25       232.       68.       23.      1.16
          2 COMBINED AT
+                         C34.1     2311.  12.33       399.      117.       39.      1.92
          2 COMBINED AT
+                         HVDB-I    4742.  12.33       689.      203.       68.      3.28
          ROUTED TO
+                         HVDB-O     680.  13.33       266.      163.       68.      3.28
+                                                                                  2090.50      13.33
1
                                   SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                        (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                          INTERPOLATED TO
                                                                       COMPUTATION INTERVAL
          ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
                                                   PEAK                                     PEAK
                               (MIN)     (CFS)     (MIN)      (IN)    (MIN)     (CFS)     (MIN)       (IN)
            S30N   MANE         4.55   1279.20   736.28      2.53     5.00   1261.78    740.00       2.53

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.0000E+00 EXCESS=0.8806E+02 OUTFLOW=0.8790E+02 BASIN STORAGE=0.8003E-04 PERCENT ERROR=   0.2

            S31.1  MANE         3.95    454.64   739.32      2.15     5.00    444.42    740.00       2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.0000E+00 EXCESS=0.3068E+02 OUTFLOW=0.3058E+02 BASIN STORAGE=0.5201E-04 PERCENT ERROR=   0.3

            S34.2  MANE         3.87    779.44   736.87      2.18     5.00    750.17    740.00       2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.0000E+00 EXCESS=0.5173E+02 OUTFLOW=0.5159E+02 BASIN STORAGE=0.7029E-04 PERCENT ERROR=   0.3

            S35N   MANE         2.27   1438.45   731.99      2.53     5.00   1348.16    735.00       2.53

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.0000E+00 EXCESS=0.7407E+02 OUTFLOW=0.7404E+02 BASIN STORAGE=0.4486E-04 PERCENT ERROR=   0.0

            S36.2  MANE         1.79    446.93   733.84      2.16     5.00    430.98    735.00       2.16

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.0000E+00 EXCESS=0.2404E+02 OUTFLOW=0.2402E+02 BASIN STORAGE=0.2074E-04 PERCENT ERROR=   0.1

            S34.1  MANE         3.14   2155.37   737.88      2.18     5.00   2117.43    735.00       2.18

CONTINUITY SUMMARY (AC-FT) - INFLOW=0.0000E+00 EXCESS=0.1355E+03 OUTFLOW=0.1352E+03 BASIN STORAGE=0.1771E-03 PERCENT ERROR=   0.2


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

APPENDIX J

Diskette of HEC-1 Files



LEGEND

- Section Lines
- DC Ranch and Grayhawk Subbasin Boundary
- Subbasin Boundary
- S36.1 — Subbasin Identifier
- C34.2 — Concentration Point Identifier
- Concentration Point
- C36.2 — Flow Split Identifier
- Non-Contributing Areas

0 2000 4000 6000
SCALE FEET
HORIZ. 1"= 2000'

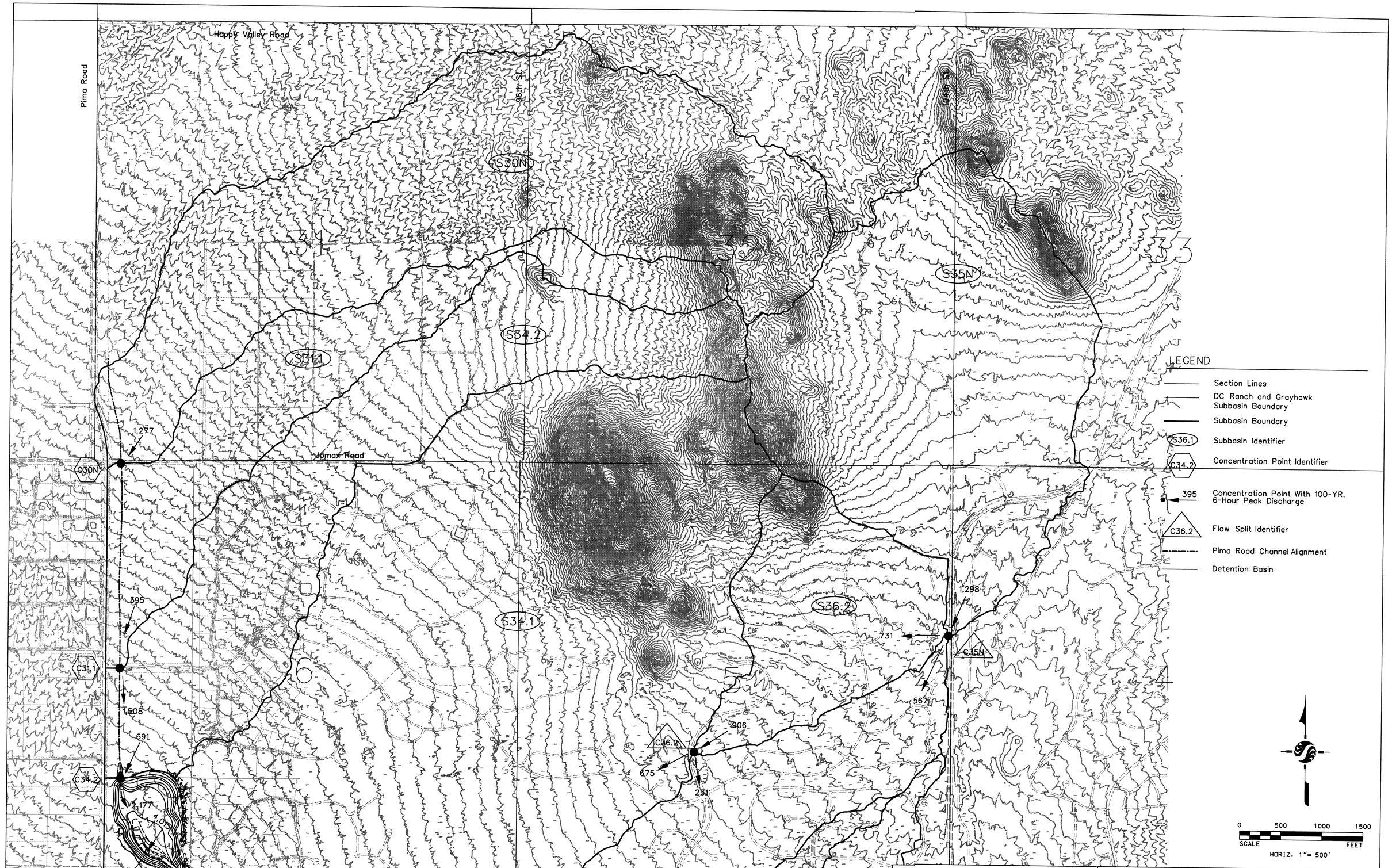
Stantech Consulting
7776 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044
Phone: (602) 438-2200
Fax: (602) 431-9562

SCALE	1"=2000'
JOB No.	28900051
SHEET No.	1 OF 1

PROJECT
PIMA ROAD THREE BASINS PROJECT
SYSTEM OPERATIONS DESIGN
AND HYDROLOGY REPORT

SUBJECT
PLATE 1
ULTIMATE CONDITION

The Desert Greenbelt
SCOTTSDALE ARIZONA



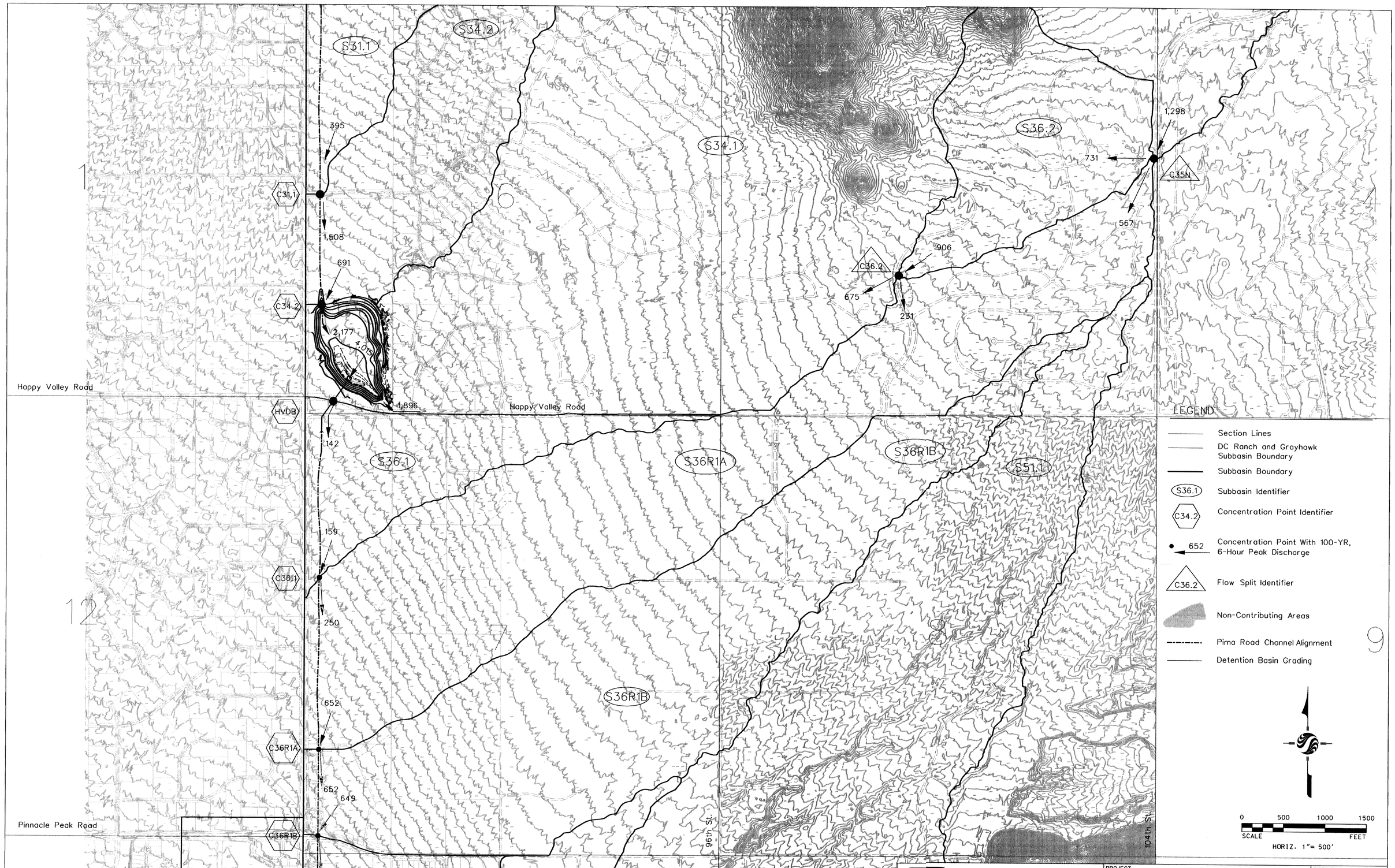
Stantech Consulting
7776 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044
Phone: (602) 438-2200
Fax: (602) 431-9562

SCALE	1"=500'
JOB No.	28900051
SHEET No.	1 OF 4

PROJECT
PIMA ROAD THREE BASINS PROJECT
SYSTEM OPERATIONS DESIGN
AND HYDROLOGY REPORT

SUBJECT
PLATE 2
DETAILED WATERSHED MAP

The Desert Greenbelt



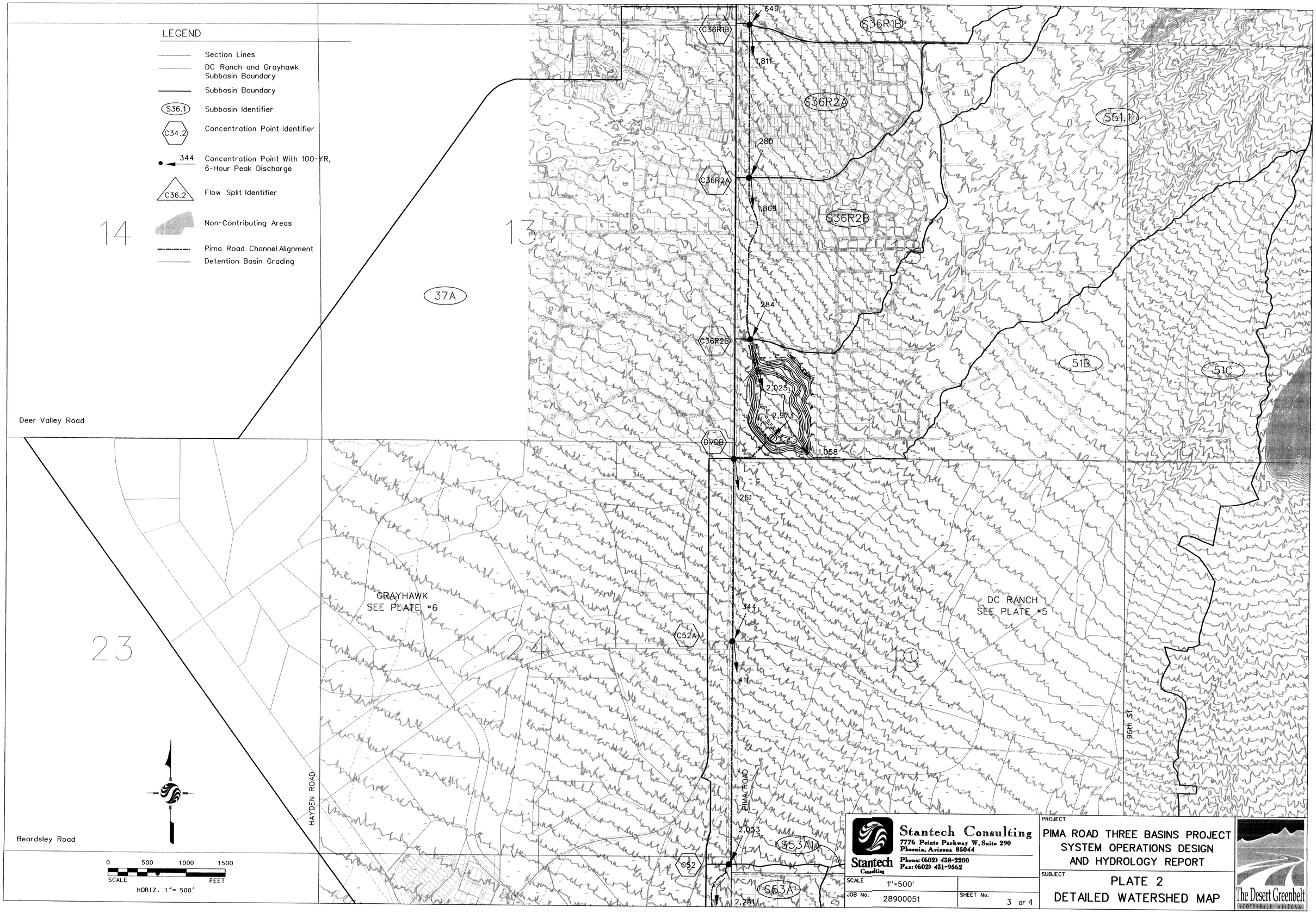
Stantech Consulting
7776 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044
Phone: (602) 438-2200
Fax: (602) 431-9562

SCALE	1"=500'
JOB No.	28900051
SHEET No.	2 OF 4

PROJECT
PIMA ROAD THREE BASINS PROJECT
SYSTEM OPERATIONS DESIGN
AND HYDROLOGY REPORT

SUBJECT
PLATE 2
DETAILED WATERSHED MAP

The Desert Greenbelt
SCOTTSDALE ARIZONA



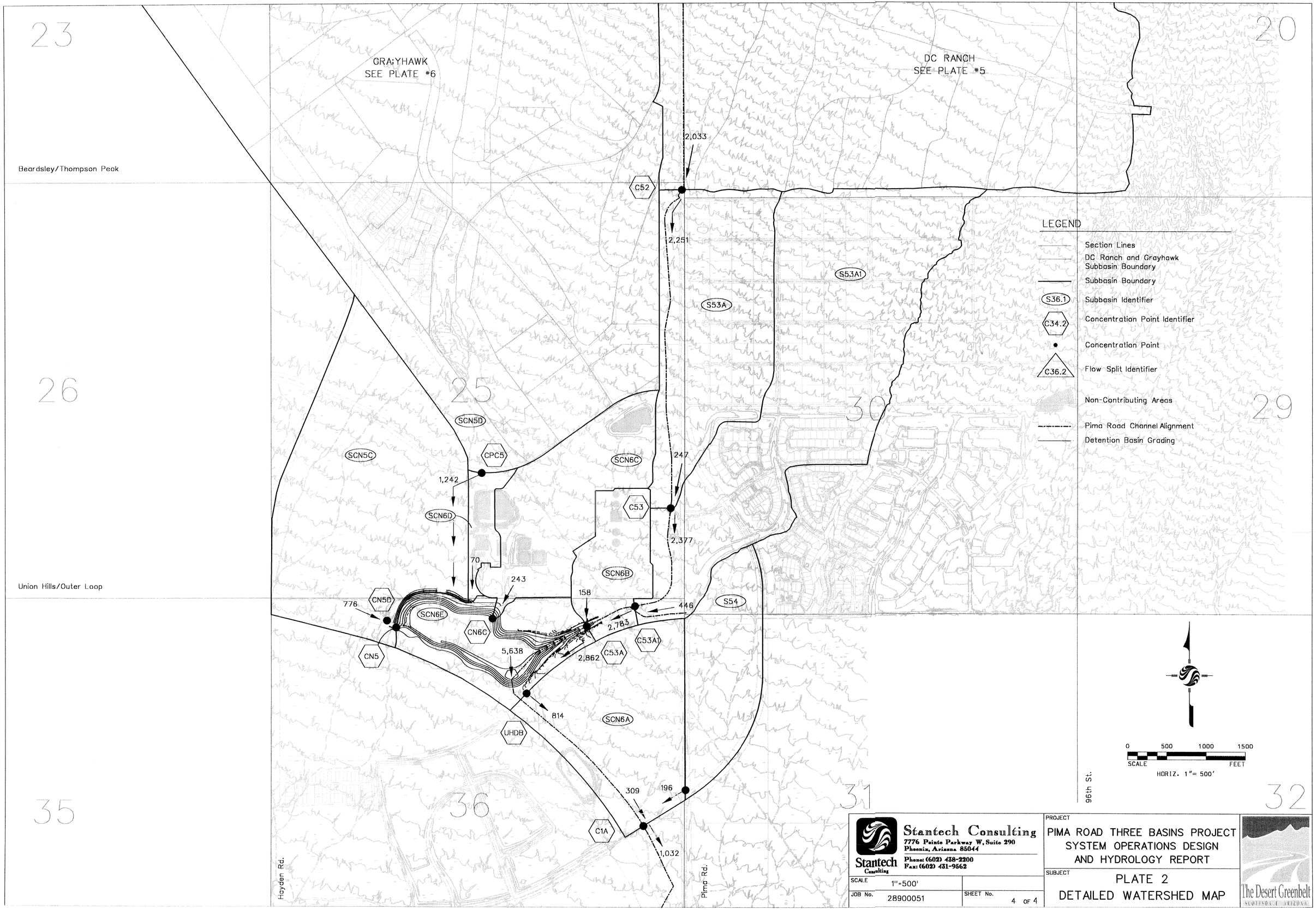
Stantech Consulting
7776 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044
Phone: (602) 438-2200
Fax: (602) 431-9562

SCALE	1"=500'
JOB No.	28900051
SHEET No.	3 OF 4

PROJECT
PIMA ROAD THREE BASINS PROJECT
SYSTEM OPERATIONS DESIGN
AND HYDROLOGY REPORT

SUBJECT
PLATE 2
DETAILED WATERSHED MAP

The Desert Greenbelt
SCOTTSDALE ARIZONA



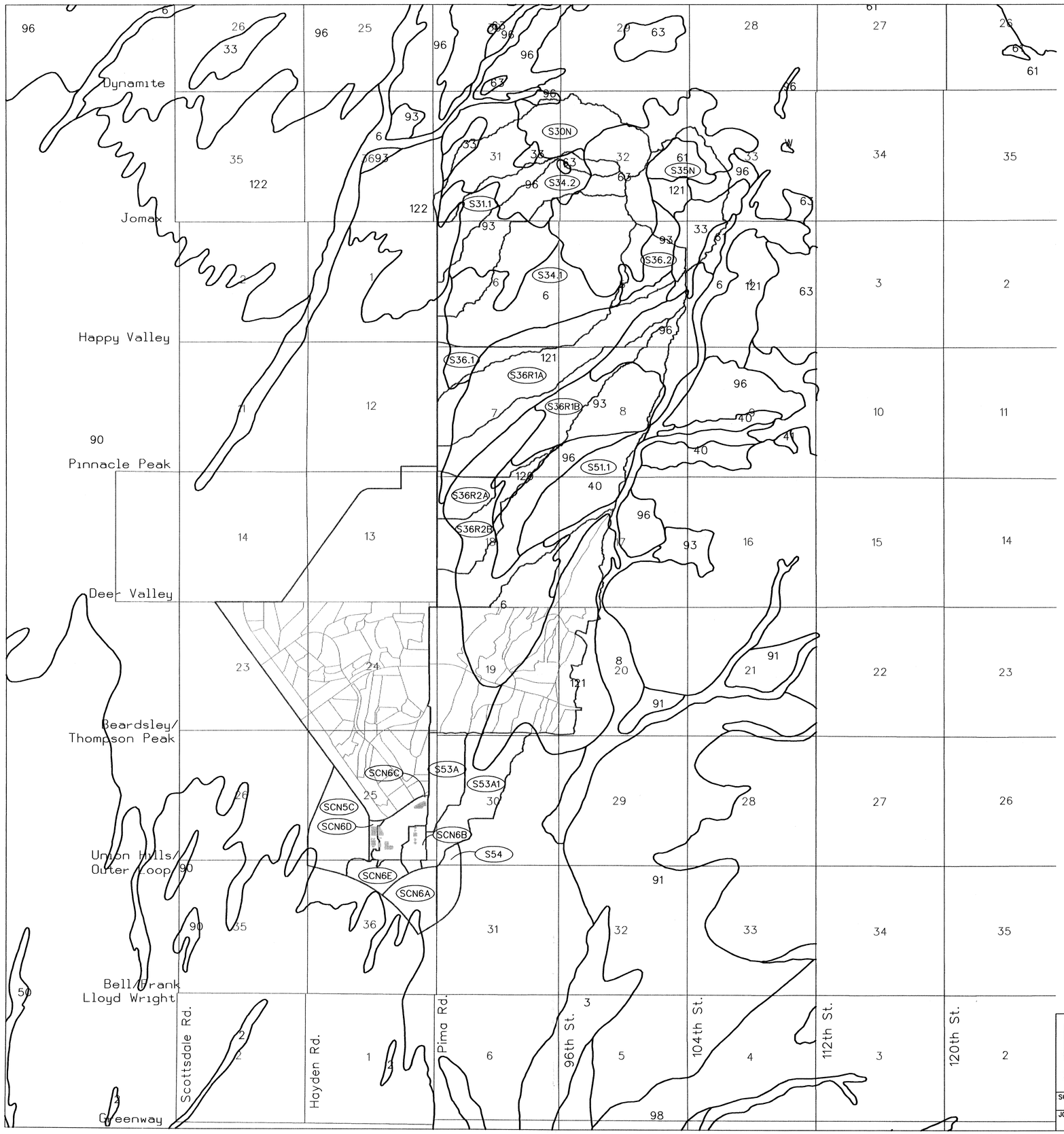
Stantech Consulting
7776 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044
Phone: (602) 438-2200
Fax: (602) 431-9562

SCALE 1"=500'	
JOB No. 28900051	SHEET No. 4 OF 4

PROJECT
PIMA ROAD THREE BASINS PROJECT
SYSTEM OPERATIONS DESIGN
AND HYDROLOGY REPORT

SUBJECT
PLATE 2
DETAILED WATERSHED MAP

The Desert Greenbelt
SCOTTSDALE, ARIZONA



LEGEND

- Section Lines
- DC Ranch and Grayhawk Subbasin Boundary
- Subbasin Boundary
- S51.1 Subbasin Identifier
- Soil Boundary
- 40 Soil Identifier
- Non-Contributing Area

0 2000 4000 6000
SCALE FEET
HORIZ. 1"= 2000'

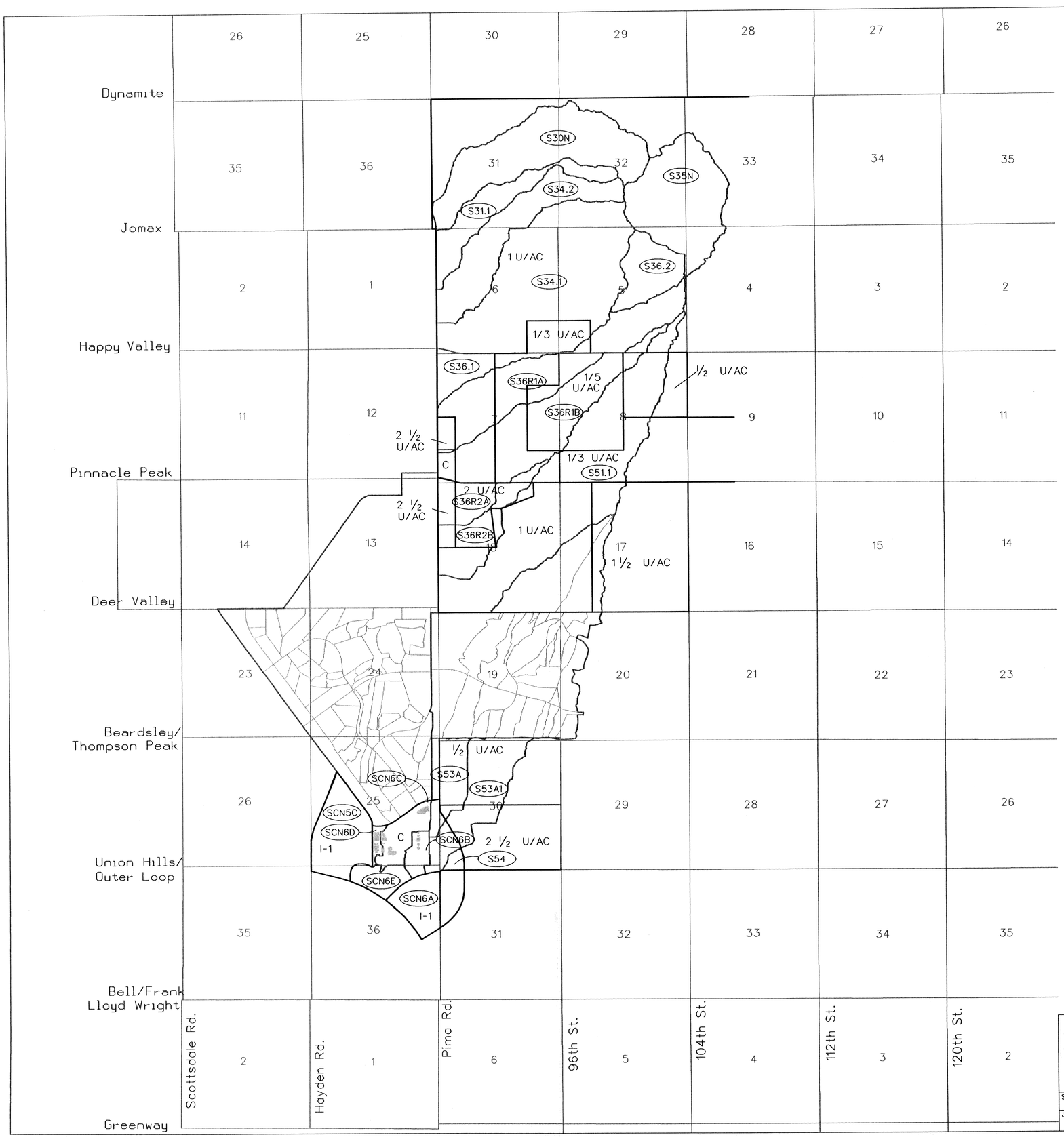
Stantech Consulting
7776 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044
Phone: (602) 438-2200
Fax: (602) 431-9562

SCALE	1"=2000'
JOB No.	28900051
SHEET No.	1 OF 1

PROJECT
PIMA ROAD THREE BASINS PROJECT
SYSTEM OPERATIONS DESIGN
AND HYDROLOGY REPORT

SUBJECT
PLATE 3
SOILS MAP

The Desert Greenbelt
SCOTTSDALE ARIZONA



LEGEND

- Section Lines
- DC Ranch and Grayhawk Subbasin Boundary
- Subbasin Boundary
- S51.1 — Subbasin Identifier
- Landuse Boundary
- 1 U/AC — Land Use Identification in Dwelling Units per Acre
- C — Commercial Land Use
- I-1 — Industrial Land Use
- Non-Contributing Area

0 2000 4000 6000
SCALE FEET
HORIZ. 1"= 2000'

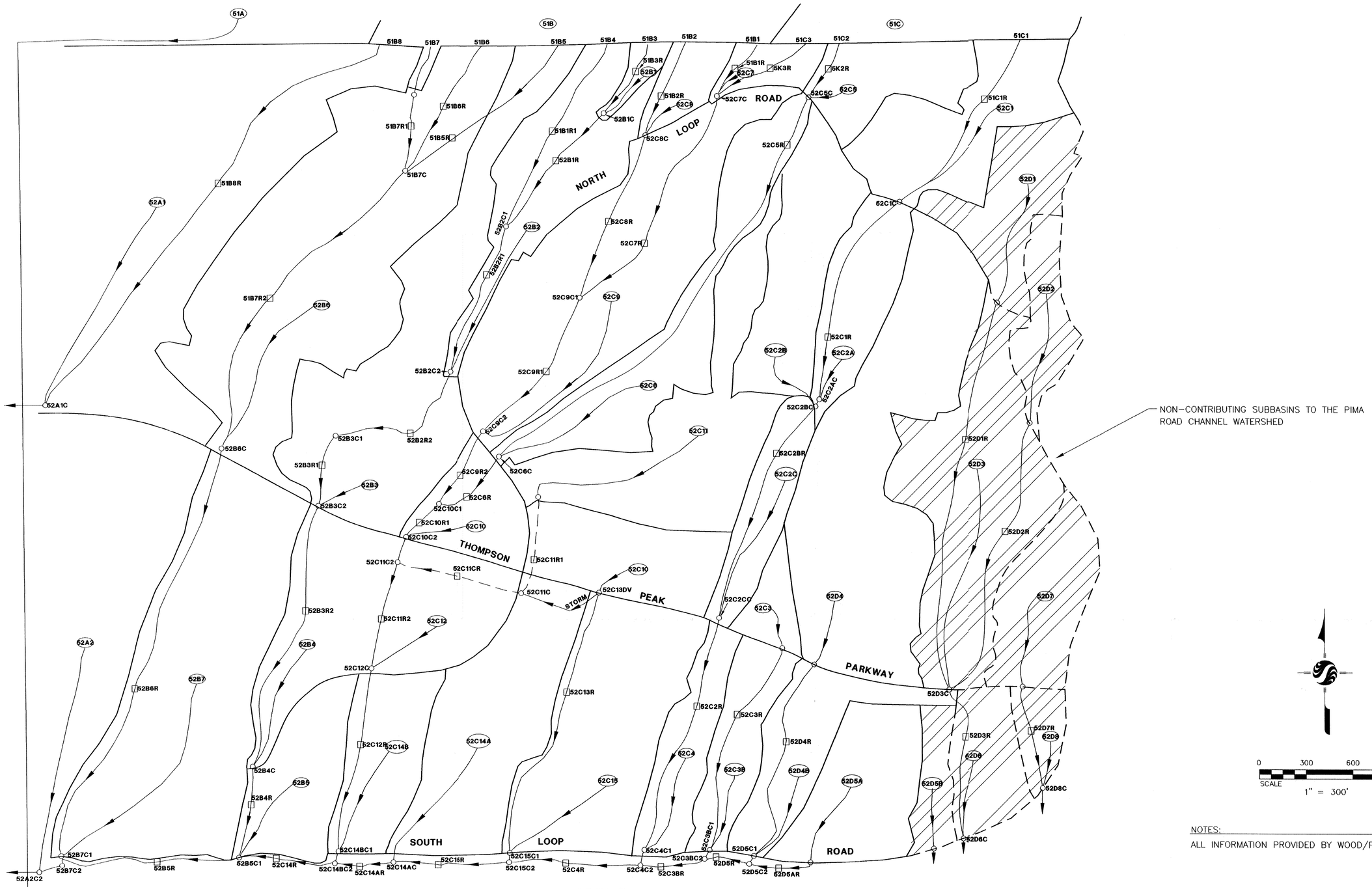
Stantech Consulting
7776 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044
Phone: (602) 438-2200
Fax: (602) 431-9562

SCALE	1"=2000'
JOB No.	28900051
SHEET No.	1 OF 1

PROJECT
PIMA ROAD THREE BASINS PROJECT
SYSTEM OPERATIONS DESIGN
AND HYDROLOGY REPORT

SUBJECT
PLATE 4
LAND USE MAP

The Desert Greenbelt
SCOTTSDALE ARIZONA



NOTES:

ALL INFORMATION PROVIDED BY WOOD/PATEL ASSOCIATES

LEGEND

- FLOW PATH
- SUBBASIN BOUNDARY
- NONCONTRIBUTING SUBBASINS TO THE PIMA ROAD CHANNEL WATERSHED
- 52C15 SUBBASIN IDENTIFIER
- ROUTE
- CONCENTRATION POINT

Stantech Consulting Inc.
7776 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044 USA
Phone: (602) 438-2200 Fax: (602) 431-9562
Fax: (602) 431-9609 (Land Development)

SCALE	N/A
JOB No.	28900051
SHEET No.	1 OF 1

PROJECT
PIMA ROAD THREE BASINS PROJECT SYSTEM OPERATIONS DESIGN AND HYDROLOGY REPORT

SUBJECT
PLATE 5
DC Ranch On-Site Watershed Map

The Desert Greenbelt
SCOTTSDALE, ARIZONA

DEER VALLEY ROAD ALIGNMENT
37AW Q100=637CFS
37AW
37AE Q100=334CFS
DEER VALLEY CHANNEL
Q100=779CFS
RET141 Q100= 617CFS
CP5N Q100= 377CFS
SUB5N
SUB1N
CP1N Q100=43CFS
SUB7N
PC1
SUB18NA
60CFS
SUB20N
SUB8NB
RET5N Q100=344CFS
SUB2NA
SUB18NB
26CFS
SUB19N
CP20
SUB13N
SUB8NA
SR2NA Q100=64CFS
SUB2NB
SUB8NC
SR8NB
SR8NA
SUB14N
SUB6N
SUB18NC
CP8NC SR8NC
Q100=18CFS
SUB6B
CP19
RET14 Q100= 56BCFS
GRAYHAWK DRIVE
CP2NB Q100= 97CFS
SUB3N
SUB10A
CP2N
RET3N
SR2NB Q100= 25CFS
Q100=4CFS
CP18N Q100= 615CFS
SUB12NA
SUB9N
SR12NA
RET6N Q100= 0CFS
SUB16NA
SUB10B
SR6B
27CFS
SUB4N
SUB12NB
SUB17NA
SUB6A
CP4N Q100=82CFS
CP10B Q100=212CFS
CP9N Q100=142CFS
CPC1 Q100= 710CFS
SR17NA
SUB16NB
SR12NB
SUB11NA
SUB17NB
HAYDEN ROAD
SUB17NC
SR17NB
SUB17A
CP6N Q100=368CFS
THOMPSON PEAK PARKWAY
SUB3C
16NA Q100= 39CFS
SUB11NC
SR11NA
145CFS
SUB11NB
16NB Q100= 44CFS
84CFS
SR11NB
GC1018
C16NA1 Q100= 725CFS
PC2
SR11NC
CP17A Q100=44CFS
SUB3D1
SUB16NC
Q100=72CFS
SUB1-2
SUB15N
SUB3B1
SUB3D2
C16NB1 Q100= 721CFS
CP16NC Q100= 100CFS
CP3B1 Q100= 51CFS
GC1-9
THOMPSON PEAK PARKWAY
GCRB18
SR18S Q100= 0 CFS OUTFLOW
C16NC1 Q100= 790CFS
SUB3B2
CP15N Q100=162CFS
SUB3D3
SUB3S
SRPC2 Q100=813CFS
CP3S Q100= 409CFS
SUB4S
SUB3F
INTERIM OUTFALL TO NATURAL GRADE. REFER TO POWER CORRIDOR PLANS BY GILBERTSON & ASSOC.
CP3F Q100= 157CFS
GC2-8
SUB3E1
SRGC28 Q100= 436CFS
GC1216
CP3E1 Q100= 117CFS
SUB5S
SUB3E2
CP3E2 Q100= 81CFS
GC1415
CHANNEL
SUB6S
GRAYHAWK DRIVE
SRRET2 Q100= 0 CFS OUTFLOW
SUB3E3
GC7
HAYDEN ROAD
CP3E3 Q100= 55CFS
SUB7S
CP7S Q100=438CFS
SUB8S
Q100= 70CFS
SUB7A
SUB9S
SUB11S
Q100= 64CFS
GC36
Q100= 103CFS
SUB10S
SRGC36 Q100=193CFS
CP10S Q100= 94CFS
GC45
HUALAPAI DRIVE
CGC45 Q100=40CFS
PIMA ROAD CHANNEL
PIMA ROAD
PIMA ROAD CHANNEL
PIMA ROAD

LEGEND

2a.	PARCEL OR TRACT NAME
→	FLOW DIRECTION
———	DRAINAGE BOUNDARY
GC36	BASIN IDENTIFICATION
● CP1	CONCENTRATION POINT
● DET1	DETENTION BASIN
Q100=700 CFS	100-YEAR, 6-HOUR PROPOSED PEAK DISCHARGE
▒	PROPOSED CHANNELS AND DETENTION BASINS

0 400 800 1200
SCALE FEET

NOTES:

1. ALL INFORMATION PROVIDED BY DEI PROFESSIONAL SERVICES.
2. ALL OFF-SITE DISCHARGES TO BE CONVEYED DOWN THE POWER LINE CHANNEL TO THE UNION HILLS DETENTION BASIN.

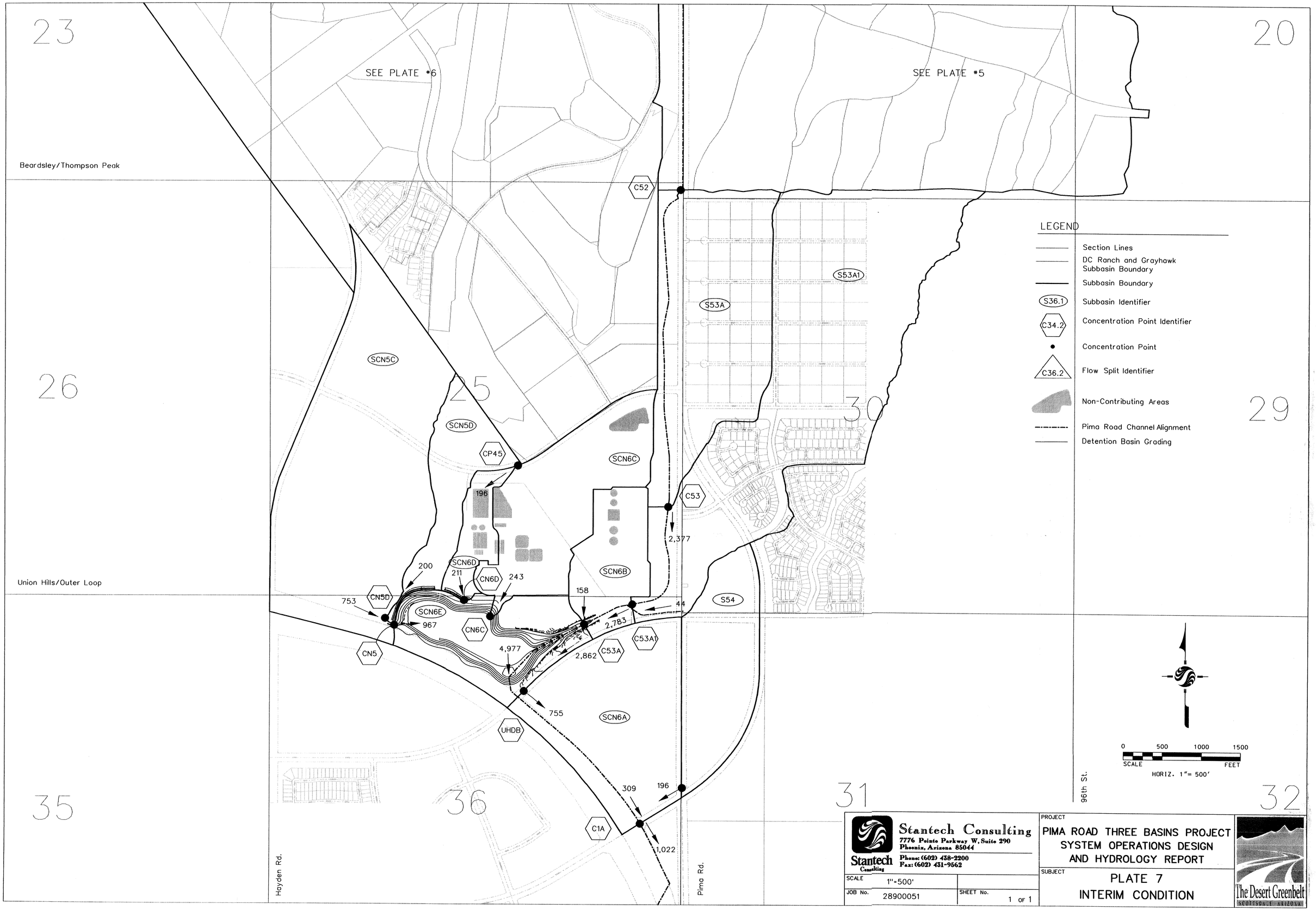
Stantech Consulting Inc.
7778 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044 USA
Phone: (602) 438-2200 Fax: (602) 431-9562
Fax: (602) 431-9609 (Land Development)

SCALE	1"=400'
JOB No.	28900051
SHEET No.	1 OF 1

PROJECT
PIMA ROAD THREE BASINS PROJECT SYSTEM OPERATIONS DESIGN AND HYDROLOGY REPORT

SUBJECT
PLATE 6
Grayhawk On-Site Watershed Map

The Desert Greenbelt
SCOTTSDALE, ARIZONA



Stantech Consulting
7776 Pointe Parkway W, Suite 290
Phoenix, Arizona 85044
Phone: (602) 438-2200
Fax: (602) 431-9562

SCALE 1"=500'	
JOB No. 28900051	SHEET No. 1 OF 1

PROJECT
PIMA ROAD THREE BASINS PROJECT
SYSTEM OPERATIONS DESIGN
AND HYDROLOGY REPORT

SUBJECT
PLATE 7
INTERIM CONDITION

The Desert Greenbelt
SCOTTSDALE, ARIZONA